APPENDIX C

Font in red underline represents new text.
Font in ~~red strikethrough~~ represents text being removed.
Font in blue underline is from the City's currently adopted CAO, MVMC Chapter 15.40

SHORELINE CRITICAL AREA REGULATIONS

All changes to Appendix C are taken from applicable sections of MVMC 15.40 (Critical Areas, Ordinance 3700, 2016; Ordinance 3509, 2010, and Ordinance 3722, 2017). The following sections of MVMC 15.40 are not included in Appendix C:

15.40.020 Applicability – Regulated and permitted activities.
15.40.130 Reasonable use exceptions, variances, and appeals.
15.40.135 Nonconforming uses and structures.
15.40.140 Vesting.
15.40.150 Enforcement.

In the event of any conflict between these regulations and any other regulations of the City, the regulations that provide greater protection of the shoreline shall prevail.

Commented [LWO1]: Per the DOE SMP Handbook Publication Number 11-06-010, the following must be removed during the incorporation of CAOs into SMPs:

- reasonable use exceptions
- administrative exemptions and waivers.
- The following other GMA authorized administrative provisions of a CAO are not applicable to an SMP:
  - Appeals
  - Permits
  - Penalties
  - Enforcement

Proposed integration of COA provisions option chosen "include the relevant portions of the CAO as an appendix and explain in the SMP that the appendix is specifically approved as part of the SMP."

I. REGULATION OF CRITICAL AREAS IN SHORELINE JURISDICTION

A. GENERAL PURPOSE

1. Protect the public health, safety, and welfare by avoiding or mitigating the potential adverse impacts of new development;

2. Educate the public as to the long-term importance of environmentally sensitive areas and the responsibilities of the city and private property owners to protect and preserve the natural environment for future generations;

3. Manage development activities to protect environmental quality;

4. Avoid, minimize, or mitigate potential unavoidable impacts to environmentally sensitive areas by regulating alterations in and adjacent to critical areas;

5. Provide city officials with the information they need to evaluate, approve, condition, or deny public or private development proposals;

6. Protect life, health, safety, welfare, and property by minimizing and managing the adverse environmental impacts of development within and adjacent to critical areas;

7. Effectively manage limited city resources by avoiding:

   a. Preventable maintenance and replacement of public facilities when critical area functioning is impaired;

   b. Unnecessary costs for public emergency rescue and relief operations; and

   c. Potential litigation on improper construction practices occurring in critical areas;

8. Alert realtors, appraisers, assessors, owners, and potential buyers or lessees to the development limitations in and adjacent to environmentally sensitive areas;

9. Provide predictability and consistency to the city's development review process; and

10. Assist or further the implementation of the policies of the city comprehensive plan, all city functional plans and policies, the State Growth Management Act, and the State Environmental Policy Act, Chapter 43.21C RCW.

B. AUTHORITY

Critical areas regulated under this chapter have been identified and defined in accordance with Chapter 36.70A RCW and include the following:

1. Aquifer Recharge Areas (See MVMC 15.40.050). Areas that have a critical recharging effect on aquifers used for potable water and maintenance of stream flows.

2. Geologic Hazard Areas (See MVMC 15.40.070). Areas susceptible to one or more of the following types of hazards shall be designated as a geologic hazard area (see also definitions MVMC 15.40.070(B)):

a. Erosion hazard;

b. Landslide hazard;

c. Seismic hazard;

d. Volcanic hazard; and

e. Alluvial fan hazard.

3. Fish and Wildlife Habitat Conservation Areas (See MVMC 15.40.080). Areas that have been identified through maps, databases, reports, or studies that include attributes such as comparatively high wildlife density, high wildlife species richness, significant wildlife breeding habitat, seasonal ranges or movement corridors of limited availability and/or high vulnerability, and that are associated with endangered, threatened or sensitive species, anadromous fish, or species of local importance (see full definitions MVMC 15.40.080(B)).

4. Wetlands (See MVMC 15.40.090). Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

C. APPLICABILITY

1. For the purposes of the Shoreline Master Program, "Shoreline Critical Areas," include regulated wetlands, shorelands, native growth protection areas, geologic hazard areas, flood hazard areas, aquifer recharge areas, and fish and wildlife habitat conservation areas located within the Shoreline Management Zone (SMZ).

2. All proposed development activities in regulated critical areas and associated buffers located within the SMZ shall comply with the requirements of the Shoreline Master Program (SMP) which include critical area regulations contained herein.

~~3. Expansion or alteration of existing uses in proximity to jurisdictional critical areas and associated buffers within the SMZ shall also comply with the requirements of these regulations.~~

~~4. Any person seeking to determine whether a proposed development activity or land area is subject to these regulations may request a determination from the Director of the Development Services Department.~~

D. SHORELINE ~~DEVELOPMENT~~ PERMIT REQUIRED

Prior to any alteration of a property containing or adjacent to critical areas in or adjacent to the SMZ, the property owner or designee must obtain a shoreline ~~development~~ permit, consistent with the requirements of the SMP.

1. No separate critical areas permit is required for a development proposal that requires a shoreline ~~development~~ permit(s).
2. Permitted activities under Section C (below): The Director shall determine whether to grant or deny a separate permit based upon compliance with applicable standards and regulations of the SMP.
3. If a Notice of Application is required for a shoreline ~~development~~ permit associated with a permitted activity in section C.4, the notice shall describe the critical area-related activity.

E. ACTIVITIES EXEMPT FROM SUBSTANTIAL SHORELINE DEVELOPMENT PERMIT REQUIREMENTS

1. Section III B. (1) of the SMP lists activities exempt from shoreline substantial development permits but may require a shoreline exemption ("exemption certificate"). Except in the case of public emergencies, existing and ongoing agricultural activities, and existing structures, surfaces, and activities, all activities in subsection '4' of this section, require that a ~~letter of administrative approval~~ shoreline exemption ("letter of approval") be obtained from the Director prior to construction or initiation of activities. When appropriate, a letter of approval may act as an exemption certificate.

F. ADMINISTRATION AND INTERPRETATION

1. Shoreline Administrator Interprets Chapter. The administrator is authorized to make interpretations of this chapter and to adopt and enforce rules and regulations supplemental to this chapter as he/she may deem necessary in order to clarify the application of the provisions of this chapter. Such interpretations, rules, and regulations shall be in conformity with the intent and purpose of this chapter.

2. Abrogation and Greater Restrictions. It is not intended that this chapter repeal, abrogate, or impair any existing city, state, or federal regulations. However, where this chapter imposes greater restrictions, the provisions of this chapter shall prevail.

3. Minimum Requirements. The provisions of this chapter shall be held to be minimum requirements in their interpretation and application and shall be liberally construed to serve the purposes of this chapter.

4. Absence of Valid Scientific Information. Where there is an absence of valid scientific information or incomplete scientific information relating to a critical area leading to uncertainty about the risk to critical area function or permitting an alteration of or impact to the critical area, the director shall:

a. Take a "precautionary" or a "no-risk approach" that appropriately limits development and land use activities until the uncertainty is sufficiently resolved, or determine that protection can be ensured by using an approach different from that derived from the best available science (BAS); provided, that the applicant demonstrates on the record how the alternative approach will protect the functions and values of the critical area; and

b. Require application of an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. An adaptive management program shall:

i. Address funding for the research component of the adaptive management program;

ii. Change course based on the results and interpretation of new information that resolves uncertainties;

iii. Commit to the appropriate time frame and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting protection of critical areas and anadromous fisheries; and

iv. The technical report supporting the alternative approach must identify triggers and benchmarks consistent with BAS principles, which may be used to measure progress and provide for restoration or replacement if necessary to achieve the adaptive management goals.

C. Compliance. The city shall not grant any approval or permit any regulated development activity in a critical area or associated buffer prior to fulfilling the requirements of the City of Mount Vernon Shoreline Master Program.

D. Reviewing Official. Wherever referenced in this section, reviewing official refers to the decision-making official or body authorized to grant permit approval for an activity.

E. Project Review and Approval Criteria. The city critical area program adopts a standard (see MVMC 15.40.080 and 15.40.090) approach to the use of buffers and mitigation in the protection of functions and values of wetlands and fish and wildlife habitat stream and riparian areas. As

such, the city manages impacts and improvements on a landscape scale citywide and within basins consistent with approved best available science principles as determined through a functional assessment model (subsection (F)(1) of this section). Projects requiring review and approval shall require a written finding that the project complies with the requirements of this chapter. Such finding and approval shall be determinative on the issue of compliance with critical area mitigation and protection of functions and values for all project purposes.

F. Site Evaluation Model.

1. The city adopts the hydrogeomorphic (HGM) functional assessment approach recommended by the U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Natural Resources Conservation Service, and other agencies. HGM assessment allows users to assess changes in ecosystem functions (hydrology, bio/geochemistry, plant community, and faunal support/habitat) when compared to local and/or regional referenced ecosystems. Mount Vernon has developed an HGM system of models that is specific to the pertinent waters/wetland subclasses within the city and/or urban growth area. Mount Vernon will use their HGM system rather than the Washington State Department of Ecology (DOE) wetland rating model for purposes of measuring both impacts to and benefits from activities in critical areas and buffers. The city's HGM system is titled "Operational Guidebook to Assessment of Riverine, Slope, and Depressional Waters/Wetlands Functions in the City of Mount Vernon, Washington; March 2008," and any subsequent updates; hereinafter referred to as the HGM manual.

2. The city adopts the Washington State Department of Ecology's "Stormwater Management Manual for Western Washington" (the entire five-volume technical manual, Publication No. 14-10-055) prepared and published in 2012, including any subsequent updates or amendments adopted by the city in Chapter 13.33 MVMC, as the best management practices guideline for storm water/erosion control in all developments subject to review under this chapter.

3. Best available science adopted for the Mount Vernon waters/wetlands reserve program shall be consistent with principles enunciated in:

a. Knudsen and Neff, Washington Department of Fish and Wildlife's "Management Recommendations for Washington's Priority Habitat: Riparian";

b. Committee on Wetland Mitigation, National Research Council, 2001, "Compensating for Wetland Loss under the Clean Water Act," National Academy Press, Washington, D.C.;

c. Brinson, M.M., F.R. Haner, L.C. Lee, W.L. Nutter, R.D. Rheinhardt, R.D. Smith, and D. Whigham, 1995, "A Guidebook for Application of Hydrogeomorphic Assessment to Riverine Wetlands," U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS, USA, Technical Report WRP-DE-11;

d. "Wetlands in Washington Volume I," Hruby, T., T. Granger, K. Brunner, S. Cooke, K. Dublonica, R. Gersib, T. Granger, L. Reinelt, K. Richter, D. Sheldon, E. Teachout, A. Wald, and F. Weinmann, 1999, "Methods for Assessing Wetland Functions, Volume 1:

Riverine and Depressional Wetlands in the Lowlands of Western Washington, Part 1: Assessment Methods," Washington State Department of Ecology Publication No. 99-115;

e. Environmental Laboratory, 1987, "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS;

f. U.S. Army Corps of Engineers, 2010, Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center;

g. Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10, March 2006, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance (Version 1). Washington State Department of Ecology Publication No. 06-06-011a, Olympia, WA; and

h. Hruby, T., 2014, Washington State Wetland Rating System for Western Washington: 2014 Update (Publication No. 14-06-029), Olympia, WA: Washington Department of Ecology.

4. The city has developed a set of recommended critical area and buffer development standards for restoration and enhancement activities required for mitigation pursuant to this chapter. They are compiled under the title of "Critical Areas Ordinance Restoration Guidebook: Guidelines, Recommended Techniques and Details for Restoration of Waters/Wetlands and their Buffers"; hereinafter referred to as the CAO guidebook. The CAO guidebook is available on the city's website or a paper copy is kept at the community and economic development department.

G. Peer Review. The director may require peer review of any critical area reports or work that is submitted to the city. The director has the discretion to choose the consultant who will complete the peer review. If peer review is required, then the applicant shall be responsible for paying the entire costs of the peer review.

II. GENERAL PERFORMANCE STANDARDS

A. PERFORMANCE STANDARDS

The performance standards for each critical area are specified in MVMC 15.40.050 through 15.40.090. Following are general performance standards that shall be applied in addition to the performance standards found within the SMP. Performance standards must be consistent with mitigation sequencing and no net loss criteria outlined in this SMP.

B. PROTECTION OF WETLANDS

Development within wetlands shall be avoided, and alterations prohibited unless permitted in accordance with ~~the requirements of these regulations and other~~ this SMP. ~~provisions.~~

C. PROTECTION OF FISH AND WILDLIFE HABITAT AREAS

Development within fish and wildlife habitat areas and associated buffers shall be avoided, and alterations prohibited unless permitted in accordance with the requirements of these regulations and other SMP provisions.

D. ALLOWED ALTERATIONS

Critical areas and associated buffers may be altered by authorized, shoreline development permits, shoreline exemptions ~~permitted or exempt activities as indicated herein,~~ or ~~through approval of~~ a shoreline variance. ~~if applicable.~~

E. LAND DIVISIONS AND LAND USE PERMITS

All proposed divisions of land and land uses (including, but not limited to long and short subdivisions, conditional use permits, special use permits, site plan reviews, and binding site plans) that include critical areas shall comply with the following procedures and development standards:

1. The open water area shall not be included when calculating the maximum density or minimum lot area;
2. Land division approvals shall be conditioned so that all required buffers are dedicated as open space tracts or an easement or covenant encumbering the buffer. Such dedication, easement or covenant shall be recorded together with the land division and represented on the final plat, short plat, or binding site plan;
3. The subdivision of land in wetlands is subject to the following:
    a. Land that is located wholly within a wetland may not be subdivided.
    b. Land that is located partially within a wetland may be subdivided; provided, that an accessible and contiguous portion of each new lot is located outside of the wetland.
    c. Access roads and utilities serving the proposed subdivision may be permitted within the wetland only if the City determines that no other feasible alternative exists and when consistent with these regulations.
4. To avoid the creation of nonconforming lots, each new lot shall contain at least one building site that meets the requirements of this chapter, including buffer requirements for wetlands and/or habitat conservation areas. This site must also have access and utility infrastructure locations that are suitable for development and do not adversely impact the fish and wildlife habitat conservation area;
5. After preliminary approval and prior to final land division approval, the Director may require the common boundary between a wetland and the adjacent lands be identified using permanent signs. In lieu of signs, alternative methods of wetland identification

may be approved when such methods are determined by the Director to provide adequate protection to the wetland.

F. ROAD/STREET REPAIR AND CONSTRUCTION

Any private or public road or street expansion or construction that is allowed in a critical area or its buffer shall comply with the following minimum development standards:

1. No other reasonable or feasible alternative exists and the road or street crossing serves multiple properties whenever possible;
2. Expansion or construction of any private or public road shall only be allowed when adverse impacts can be avoided;
3. Public and private roads should provide for other purposes, such as utility crossings, pedestrian or bicycle trails, viewing points, etc.;

~~Public trails across private property should be within recorded easements;~~

4. The road or street construction is the minimum necessary, as required by the Department of Public Works, and shall comply with City engineering standards; and,
5. Construction time limits shall be determined in consultation with the Washington Department of Fish and Wildlife and/or the Department of Ecology as appropriate, in order to avoid adverse impacts to habitat areas.

G. UTILITIES

Placement of utilities within designated critical areas and associated buffers may be allowed pursuant to a shoreline development permit, shoreline exemption, or shoreline variance, if consistent with the SMP and the following standards:

Commented [LWO2]: Acknowledges activities may be allow per shoreline applications outlined in the SMA.

1. Utilities maintenance activities involving no material change in size or function shall be allowed within a critical area and associated buffer, subject to best management practices;
2. Construction of utilities may be permitted in critical areas or associated buffer, only when no feasible or reasonable alternative location is available and the utility corridor meets the requirements for installation, replacement of vegetation, and maintenance, as outlined below;
3. Construction of sewer lines may be permitted in critical areas or associated buffer when the applicant demonstrates it is necessary to meet state and/or local health requirements, there are no other feasible alternatives available, and construction meets the requirements of this section. Joint use of a sewer utility corridor by other utilities may be allowed;
4. New utility corridors shall not be allowed in critical areas or associated buffers with known locations of federal or state-listed endangered, threatened, or sensitive species, heron rookeries, or nesting sites of raptors that are listed as state candidate species, except in those circumstances where an approved Habitat Management Plan (HMP) indicates that the utility corridor will not significantly impact the habitat area;
5. New utility corridor construction and maintenance shall protect critical areas and their buffers by the following:

a. New utility facilities, improvements, or upgrades to existing utility facilities should take place within existing improved rights-of-way or existing impervious surfaces so that they do not increase the amount of impervious surfaces within the critical area and buffer;

b. New utility corridors shall be aligned when possible to avoid cutting or root damage to trees greater than 12 inches in diameter at breast height (dbh, 4-1/2 feet) measured on the uphill side;

c. New utility corridors shall be re-vegetated with appropriate native or similar vegetation at not less than preconstruction vegetation densities or greater, immediately upon completion of construction, or as soon thereafter as possible, based on seasonal growing constraints. The utility shall ensure that such vegetation is maintained and survives or is replaced as necessary; and,

d. Any additional corridor access for maintenance shall be provided wherever possible at specific points rather than by parallel roads. If parallel roads are necessary, they shall be of a minimum width, but no greater than 15 feet and shall be contiguous to the location of the utility corridor on the side away from the critical area.

6. Utility corridor maintenance shall include the following measure to protect critical areas:

a. Utility towers should be painted with brush, pad, or roller and should not be sandblasted or spray-painted, nor should lead-based paints be used.

b. Pesticides, Fertilizers, and Herbicides. No pesticides or fertilizers may be used in fish and wildlife conservation areas or their buffers, except those herbicides approved for such use and applied by a licensed applicator in accordance with the safe application practices on the label.

~~**H. PESTICIDES, FERTILIZERS AND HERBICIDES**~~

~~No pesticides, herbicides, or fertilizers may be used in critical areas, except those approved by the Environmental Protection Agency and approved under a Department of Ecology water quality modification permit for use in critical areas and associated buffers. Where approved, herbicides must be applied by a licensed applicator in accordance with the safe application practices on the label.~~

III. NATIVE GROWTH PROTECTION AREAS

A. APPLICABILITY

1. A Native Growth Protection Area shall be instituted when determined through permit review to be necessary to protect wetlands, consistent with Section IV, "Wetlands," below.

2. A Native Growth Protection Areas may be required for protection of habitat conservation areas consistent with Section V, "Fish and Wildlife Habitat Conservation Areas," below.

B. STANDARDS

1. Trees and ground cover shall be retained in designated Native Growth Protection Areas.
2. Activities allowed in Native Growth Protection Areas shall be consistent with applicable critical area regulations.
3. The City may require enhancement of Native Growth Protection Areas to improve functions and values of critical areas.

C. METHOD OF CREATION

1. Native Growth Protection Areas may be established by one of the following methods, or alternative approved by the Director, to reliably achieve the required protection:
   a. Conservation Easement: The permit holder shall, subject to the City's approval, convey to the City or other public or nonprofit entity specified by the City, a recorded easement for the protection of the critical area.
   b. Protective Easement: The permit holder shall establish and record a permanent and irrevocable easement on the property title of a parcel or tract of land containing a critical area when the easement has been created as a condition of a permit. Such protective easement shall be held by the current and future property owner, shall run with the land, and shall prohibit development, alteration, or disturbance within the easement except for purposes of habitat enhancement as part of an enhancement project that has received prior written approval from the City or from another agency with jurisdiction over such activity.
   c. Tract and Deed Restriction: The permit holder shall establish and record a permanent and irrevocable deed restriction on the property title of any wetland management tract or tracts created as a condition of a permit. Such deed restriction(s) shall prohibit development, alteration, or disturbance within the tract except for purposes of habitat enhancement as part of an enhancement project that has received prior written approval from the City or from another agency with jurisdiction over such activity. A covenant shall be placed on the tract restricting its separate sale. Each abutting lot owner or the homeowners' association shall have an undivided interest in the tract.
2. Fencing: The City may require permanent fencing of the Native Growth Protection Area containing critical areas when the Director determines there is a substantial likelihood of adverse impact through intrusion, and such fencing will not adversely impact habitat connectivity.
3. Signage required: The common boundary between a Native Growth Protection Area and the abutting land must be permanently identified. One sign shall be posted per lot, or every 150 feet, or as determined by the Director. Suggested wording is as follows:

"Protection of this natural area is in your care. Alteration or disturbance is prohibited by law."

4. Responsibility for maintenance: Responsibility for maintaining the Native Growth Protection Area easements or tracts shall be held by a homeowners' association, abutting lot owners, the permit applicant or designee, or other appropriate entity as approved by the City.
5. Maintenance covenant and note required: The following note shall appear on the face of all plats, short plats, planned unit developments, or other approved site plans containing separate Native Growth Protection Area easements or tracts, and shall also be recorded as a covenant running with the land on the title of record for all affected lots on the title:

> "MAINTENANCE RESPONSIBILITY: All owners of lots created by or benefiting from this City action abutting or including a native growth protection area easement [tract] are responsible for maintenance and protection of the easement [tract]. Maintenance includes ensuring that no alterations occur within the tract and that all vegetation remains undisturbed unless the express written authorization of the City has been received in advance."

6. Marking During Construction: The location of the outer extent of the critical areas not to be disturbed pursuant to an approved permit, shall be marked with barrier fencing, approved by the Community and Economic Development Department and easily visible in the field, to prevent unnecessary disturbance by individuals and equipment during the development or construction of the approved activity.

D. PERMANENT SIGNS AND FENCING

1. Permanent Signs
   a. As a condition of any permit or authorization issued pursuant to these regulations, the Director may require the applicant to install permanent signs along the boundary of critical area and associated buffer not to be disturbed.
   b. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post, or another non-treated material of equal durability. Signs must be posted at an interval of one per lot or every 50 feet, whichever is less, and must be maintained by the property owner in perpetuity. The sign shall be worded as follows, or with alternative language approved by the Director, and will identify the critical area:

Protected Critical Area
Do Not Disturb
Contact City of Mount Vernon
Department of Community & Economic Development
Regarding Uses and Restrictions

2. Fencing

   a. The Director shall determine if fencing is necessary to protect the functions and values of the critical area. If found to be necessary, any permit or authorization issued pursuant to these regulations shall be conditioned to require the applicant to install a permanent fence at the edge of the critical area when fencing will prevent future impacts to the critical area.

   b. Fencing installed as part of a proposed activity 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 critical area and associated buffer.

E. DISCRETIONARY – BUILDING OR DEVELOPMENT SETBACKS

The Director may require an additional building or activity setback from a critical area to ensure adequate protection of the wetland during construction and on-going maintenance of the activity. A requirement for an additional setback shall be based on the findings of a critical report or a peer review required for the activity based upon a unique impact of the project or need of the adjoining critical area not otherwise protected by this regulation.

F. MITIGATION MONITORING

A monitoring program shall be implemented to determine the success of mitigation projects required under these regulations. The monitoring program shall determine if the original goals and objectives are being met. The City reserves the right to select the consultant, at the applicant's expense, to perform the required monitoring. Monitoring shall be undertaken pursuant to the guidelines in section MVMC 15.40.120.H.

G. CRITICAL AREA DEVELOPMENT STANDARDS

Restoration, enhancement and development activities involving critical areas regulated under this section shall generally conform to the preferred standards found in the Critical Area Ordinance (CAO) Guidebook identified in MVMC 15.40.030.F.4. These standards shall be followed unless the Director determines that a proposed alternative achieves the equivalent performance and better serves the objectives of this section.

IV. AQUIFER RECHARGE AREA REGULATIONS

A. Description. Groundwater from aquifers provides a source of potable water and contributes to stream discharge/flow. Critical aquifer recharge areas contribute to the recharge of aquifers, springs and/or wells, but are susceptible to contamination of water supplies through infiltration of pollutants through the soil. A significant portion of the city's drinking water comes from groundwater supplies in aquifers. The city relies on Skagit County Public Utility District No. 1 for its potable water supply, supplemented by a limited number of private wells. Most wells in the city are used for groundwater monitoring. Some streams in the city or its urban growth area are designated as "low flow" by the Department of Ecology pursuant to Chapter 90.22 RCW and can be affected by changes in groundwater quantity. High value aquifer recharge areas coincide largely with mature forest vegetation.

B. Purpose. The purposes of the aquifer recharge area regulations are to:

1. Protect groundwater quality by maintaining the quantity of recharge;

2. Avoid or limit land use activities that pose potential risk of aquifer contamination;

3. Minimize or avoid adverse impacts to groundwater protection areas through the application of performance standards;

4. Help maintain stream base flow to support salmonids;

5. Provide incentives to retain forest habitat and protect ground and surface waters within a watershed by allowing innovative residential design and development techniques and limiting impervious surfaces; and

6. Comply with the requirements of the Federal Safe Drinking Water Act, Washington Administrative Code, and the requirements of the wellhead protection program.

C. Classification and Designation. Critical aquifer recharge areas are those land areas that contain hydrogeologic conditions that facilitate aquifer recharge and/or transmission of contaminants to an underlying aquifer. Critical aquifer recharge areas under this section may be established based on general criteria, specifically designated due to special circumstances, or based on scientific studies and mapping efforts. Factors considered in the identification of critical aquifer recharge areas include depth to water table, presence of highly permeable soils (specifically Group A hydrologic soils), presence of flat terrain, and the presence of more permeable surficial geology. Critical aquifer recharge areas may be placed in one of the following categories:

1. Category I Critical Aquifer Recharge Areas. Category I critical aquifer recharge areas are those areas where potential for certain land use activities to adversely affect groundwater is high. Category I critical aquifer recharge areas include:

a. Areas inside the five-year time-of-travel zone for Group A water system wells, calculated in accordance with the Washington State Source Water Assessment Program.

b. Ten-year time-of-travel zones in wellhead protection areas are included as critical aquifer recharge when a well draws its water from an aquifer that is at or above sea level and is without an overlying protective impermeable layer.

c. Areas identified as regionally significant aquifer recharge areas and identified as such by the city are:

(None are identified in Mount Vernon at this time. Future designations may occur.)

2. Category II Critical Aquifer Recharge Areas. Category II critical aquifer recharge areas are areas that provide recharge to aquifers that currently are or potentially will become potable water supplies and are vulnerable to contamination based on the type of land use activity. These include the following:

a. Highly Permeable Soils (Group A Hydrologic Soils). The general location and characteristics of Group A hydrologic soils in the city are given in the Soils Survey Skagit County by the U.S. Department of Agriculture, Natural Resources Conservation

Service (NRCS). The soil survey information is available at the community and economic development department.

b. Areas Above Shallow Principal Aquifers. Surface areas above shallow, principal aquifer(s) that are not separated from the underlying aquifers by an impermeable layer that provides adequate protection to preclude the proposed land use from contaminating the shallow aquifer(s) below are considered aquifer recharge areas of concern.

D. Development Standards.

1. Allowed Activities. Standards for development shall be in accordance with the provisions below and the requirements of other underlying city regulations. The following activities are allowed in critical aquifer recharge areas and do not require submission of a hydrogeologic assessment:

a. Construction of structures and improvements, including additions, resulting in less than five percent or 2,500 square feet (whichever is greater) total site impervious surface area that does not result in a change of use or increase the use of a hazardous substance.

b. Development and improvement of parks, recreation facilities, open space, or conservation areas resulting in less than five percent total site impervious surface area that does not increase the use of a hazardous substance.

c. On-site domestic septic systems releasing less than 14,500 gallons of effluent per day and that are limited to a maximum density of one system per one acre.

d. Residential Use of Pesticides and Nutrients. Application of household pesticides, herbicides, and fertilizers that does not exceed times and rates specified on the packaging.

e. Residential storage or use of petroleum and petroleum products.

f. Activities that have a potential contamination source below threshold amounts as set forth in applicable statutes of the Revised Code of Washington or local regulations. The purpose of this clause is to allow for small-scale and residential activities thought to have no significant impact to critical aquifer recharge areas.

2. Prohibited Activities. The following activities and uses are prohibited in Category I critical aquifer recharge areas:

a. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, and wood waste;

b. Underground Injection Wells. Wells which meet the requirements of Chapters 173-218 and 173-200 WAC with the exception of 5B22, 5D2, 5G30, 5W12, 5W32, 5R21, and 5S23;

c. Commercial mining and washing of metals, hard rock, sand, and gravel;

d. Chemical wood preservation and/or treatment facilities;

e. Storage, processing, or disposal of radioactive substances;

f. Commercial activities that are not connected to an available sanitary sewer system;

g. Use or storage of pesticides listed as "state restricted use pesticides" by Chapter 16-228 WAC;

h. Oil and gas drilling as defined in WAC 332-12-450 and Chapter 173-218 WAC;

i. Underground storage of hazardous substances as regulated by Chapter 173-360 WAC;

j. Use, storage, treatment, or production of perchloroethylene (PCE), other than in closed-loop systems that do not involve any discharge of PCE;

k. Petroleum refining, reprocessing, storage, and petroleum-product pipelines;

l. Electroplating/metal finishing;

m. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source; and

n. Activities that would significantly reduce the recharge to aquifers that are a source of significant base flow to a regulated stream.

E. Allowed Uses with Performance Standards.

1. General Requirements. Any activity not specifically exempted through MVMC 15.40.020(D) as allowed or prohibited may be permitted in a critical aquifer recharge area if all of the following criteria are met (a list of specific uses with a potential threat to groundwater can be found in subsection (E)(2) of this section):

a. Hydrogeologic Assessment.

i. For Category I aquifer recharge areas the applicant must show through a hydrogeologic assessment that the proposed activity will not cause significant impact to aquifer quality or recharge. The hydrogeologic assessment will be evaluated and treated as a special use review and be reviewed by the department, the health district, affected tribes, and affected water purveyors. An incompatible activity can be denied permit approval by the director.

ii. For Category II aquifer recharge areas a hydrogeologic assessment may be required. The scope of the report shall be based on site-specific conditions. The hydrogeologic assessment will be evaluated and treated as a special use review and be reviewed by the department, the health district, affected tribes, and affected water purveyors. An incompatible activity can be denied permit approval by the director. The need for additional information will be determined by the department, the health district, and the affected water purveyor. Based on the report, controls, mitigation, and/or other requirements will be established as a prerequisite for the development proposal being approved.

iii. A hydrogeologic assessment shall be prepared in accordance with the content and submittal requirements of MVMC 15.40.120(C); unless the director waives particular report requirements based on site-specific conditions.

b. The proposed activity must comply with the source water protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, Washington Department of Ecology, and the Skagit County health district.

c. The applicant must explore low impact development site design alternatives and implement them where economically feasible. Low impact development techniques in the most current edition of the Puget Sound Action Team Low Impact Development Technical Guidance Manual for Puget Sound can include, but are not limited to:

i. Rainwater harvesting;

ii. Reverse slope sidewalks;

iii. Vegetated roofs;

iv. Bioretention areas (rain gardens); and

v. Pervious pavement.

2. Potential Threats to Groundwater. Specific uses with potential threats to groundwater can include, but are not limited to, the following. Uses meeting the listed performance standards may be allowed if the criteria of this section are met.

a. Anything that is not exempt per MVMC 15.40.020(D).

b. All storage tanks proposed to be located in a critical aquifer recharge area must comply with local building code requirements and must conform to the following requirements:

i. All new above-ground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

(A) Not allow the release of a hazardous substance to the ground, groundwater, or surface waters;

(B) Have a primary containment area enclosing or underlying the tank or part thereof; and

(C) A secondary containment system either built into the tank structure or a dike system built outside the tank for all tanks.

c. Vehicle Repair and Servicing.

i. 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.

ii. No dry wells shall be allowed in critical aquifer recharge areas on sites used for vehicle repair and servicing. Dry wells existing on the site prior to facility establishment must be abandoned using techniques approved by the Department of Ecology prior to commencement of the proposed activity.

d. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the Departments of Ecology and Health.

i. Use of reclaimed water for surface percolation must meet the groundwater recharge criteria given in RCW 90.46.010(10) and 90.46.080(1). The State Department of Ecology may establish additional discharge limits in accordance with RCW 90.46.080(2).

ii. Direct injection must be in accordance with the standards developed by authority of RCW 90.46.042.

e. Automobile washers as defined in Chapter 173-216 WAC.

f. Chemical treatment storage and disposal facilities as defined in WAC 173-303-182.

g. Hazardous waste generators, including, but not limited to: boat repair shops, biological research facilities, dry cleaners, furniture stripping, motor vehicle service garages, photographic processing, printing and publishing shops, medical and dental facilities, etc., as defined in Chapter 173-303 WAC.

h. Junk yards and salvage yards as defined in Chapter 173-304 WAC, Best Management Practices to Prevent Stormwater Pollution at Vehicle Recycler Facilities (DOE publication number 94-146).

i. On-site sewage systems (large scale) as defined in Chapter 173-240 WAC.

j. On-site sewage systems (less than 14,500 gal/day) as defined in Chapter 246-272 WAC.

k. Pesticide storage and use as defined in Chapters 15.54 and 17.21 RCW.

l. Sawmills as defined in Chapters 173-303 and 173-304 WAC, DOE publication number 95-53, Best Management Practices to Prevent Stormwater Pollution at Log Yards.

m. Solid waste handling and recycling facilities as defined in Chapter 173-304 WAC.

n. Wastewater application to land surface as defined in Chapters 173-216 and 173-200 WAC, and DOE Land Application Guidelines, Best Management Practices for Irrigated Agriculture.

o. New impervious surface area exceeding 20,000 square feet.

p. Beneficial use of biosolids as defined in Chapter 173-308 WAC.

q. Golf courses, provided:

i. Fertilizer use is not above agronomic rates;

ii. Pesticides are managed and applied by properly licensed personnel, and use of all pesticides is approved by the affected water utility;

iii. The golf course allows for periodic monitoring by the department or an affected water utility.

r. Noncommercial gravel and sand mining, provided the extraction of materials remains no less than 10 feet above the level of the aquifer.

3. Affected Agency Review. The city will notify Skagit County health district and affected water utilities and will request them to comment during the preliminary phases of the city's review process on all proposed projects defined in subsections (C)(1) and (2) of this section.

4. Inspection. City personnel may inspect at reasonable times, upon presentation of credentials, as part of its wellhead protection program any activity that is known to manage or potentially manage hazardous materials.

V. FLOOD HAZARD REGULATIONS

All regulated activities in flood hazard areas shall comply with Chapter 15.07 MVMC, Shoreline Master Program, and Chapter 15.36 MVMC, Floodplain Management Standards.

Commented [LWO3]: Question for DOE, in Appendix C- should the City insert MVMC 15.36?

VI. GEOLOGICAL HAZARD AND HILLSIDE DEVELOPMENT STANDARDS

A. Purpose. The purposes of the geologic hazard and hillside development regulations are to:

1. Minimize damage due to landslide, erosion, subsidence, and alluvial fans through the control of development; and

2. Reduce the risks to the city and its citizens from development occurring on unstable slopes; and

3. Control erosion and sediment runoff from development.

B. Classification. Geologic hazards are classified into the following areas:

1. Erosion Hazard Areas. An area that contains one or more of the following characteristics:

a. Those areas containing soils that, according to the U.S. Natural Resource Conservation Service Survey, have severe to very severe erosion hazard potential; and/or

b. Those project areas that fall within any soil sloping greater than or equal to 30 percent; and/or

c. Those areas that may be considered to have an erosion hazard as a result of rapid stream incision or stream bank erosion.

2. Landslide Hazard Areas. An area that exhibits one or more of the following characteristics:

a. Contains or lies within 200 feet from slopes having the following characteristics: gradients of 15 percent or greater intersecting geologic contacts with permeable sediments overlying low permeability sediment or bedrock and springs or groundwater seepage are present; and/or

b. Contains or lies within 200 feet from any area having a 40 percent slope or steeper and with a vertical relief of 10 feet or more; and/or

c. Contains or lies within 200 feet from areas of historic failure such as areas designated as quaternary earth slumps, earthflows, mudflows, lahars, debris flows, rock slides, landslides or other slope failures on maps or technical reports published by the U.S. Geological Survey such as topographic or geologic maps, or the Geology and Earth Resources Division of the Washington Department of Natural Resources, or other documents authorized by government agencies; and/or

d. Contains or lies within 200 feet from areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action. Such area shall be addressed as a flood hazard consistent with this chapter; and/or

e. Areas that have shown movement (e.g., slides, rotational or mass failures, subsidence) during the Holocene epoch (i.e., the last 8,000 through 10,000 years) or that are underlain or covered by wastage debris of that epoch; and/or

f. Contains or lies within 200 feet from slopes that are parallel or sub-parallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials; and/or

g. Contains or lies within 200 feet from slopes with a gradient greater than 80 percent and subject to rock fall during seismic shaking.

3. Seismic Hazard Areas. Seismic hazard areas shall include areas that are subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction or surface faulting as follows:

a. Areas that have a potential for soil liquefaction and soil strength loss during ground shaking as identified on the city of Mount Vernon Soil Liquefaction Potential Map derived from Washington State Department of Natural Resources data or as identified by investigative maps or studies by the United States Geologic Survey.

b. Areas located on a Holocene fault line as indicated on investigative maps or described in studies by the United States Geologic Survey, Geology and Earth Resources Division of the Washington Department of Natural Resources, or other documents authorized by government agencies, or as identified in the field.

4. Volcanic Hazard Areas. Volcanic hazard areas include those lands identified as a volcanic hazard zone for Glacier Peak, Washington (USGS Open-File Report 95-499); or in a volcanic hazard area of Mount Baker, Washington (USGS Open-File Report 95-498).

5. Alluvial Fan Hazard Areas. Areas within or 200 feet from an alluvial fan as designated on the Skagit County Alluvial Fan Study Orthophoto Maps. An alluvial fan is an accumulation of sediment deposited by a stream where it issues from steep, confined hill slopes onto a floodplain or valley floor. The sediment mass includes rock, mud, woody debris, and other accumulations. The depositional mechanism is the decrease in gradient that causes the material to stop its downhill course. Repeated debris flows tend to obstruct the channel, forcing the material to find a new path of least resistance.

C. Geologic Hazard Areas Performance Standards.

1. General. Whenever a proposed development activity requires a development permit and a geologic hazard is present on the site of the proposed development or on abutting or adjacent sites within 200 feet of the subject site, a geotechnical study/geologic hazard report shall be required consistent with the detailed report requirements in MVMC 15.40.120(B).

a. Geologic hazard reports shall demonstrate all of the following criteria are met:

i. The proposal will not increase the threat of the geological hazard to adjacent properties beyond predevelopment conditions; and

ii. The proposal will not adversely impact other critical areas; and

iii. The development can be safely accommodated on the site.

b. The geologic hazard report shall be prepared in accordance with generally accepted geotechnical practices and stamped by a professional engineer licensed in the state of Washington. If the study involves geologic evaluations or interpretations, the report shall be reviewed and approved by a geologist. Further recommendations, additions or exceptions to the original report based on the plans, site conditions, or other supporting data shall be signed and sealed by the geotechnical engineer. If the geotechnical engineer who reviews the plans and specifications is not the same engineer who prepared the geotechnical report, the new engineer shall, in a letter to the city accompanying the plans and specifications, express his or her agreement or disagreement with the recommendations in the geotechnical report and state that the plans and specifications conform to his or her recommendations.

c. Upon review of geotechnical studies, the director may apply conditions of approval to mitigate adverse environmental impacts and to meet the criteria in this chapter. Such conditions may include, but are not limited to, construction techniques, design, drainage,

project size/configuration, or seasonal constraints on development. Additional possible conditions may be listed under the performance standards for each hazard type.

d. Slopes between 15 and 40 Percent. A geotechnical study shall address the hillside development standards for properties containing slopes between 15 and 40 percent.

e. Mitigation Plan Required. A mitigation plan shall be required by the director if alteration of the geologic hazard area is proposed and mitigation measures need to be established for the regulated activity. A mitigation plan is only required for slopes between 15 and 40 percent if the geotechnical report identifies a need for requirements beyond the hillside development standards.

f. Geotechnical Study or Mitigation Plan Waiver. May only be waived by the director when the applicant provides satisfactory evidence that:

i. The geologic hazard or slope between 15 and 40 percent does not intrude on the applicant's lot, and based on evidence submitted, the proposal will not result in significant adverse impacts to nearby geologic hazard areas or other slopes between 15 and 40 percent; or

ii. Applicable data and analysis appropriate to the project proposed exists and an additional study is not necessary.

g. Peer Review. Peer review of the applicant's geotechnical report may be required by the city at the applicant's expense.

2. Erosion and Landslide Hazard Areas. Regulated development activities shall be subject to the following:

a. A temporary erosion and sedimentation control plan prepared in accordance with the best management practices (BMPs) set forth in the applicable section(s) of the Washington State Department of Ecology's Stormwater Manual adopted within this chapter under MVMC 15.40.030(F)(2).

b. A drainage plan for the collection, transport, treatment, discharge and/or recycle of water in accordance with the requirements of the Mount Vernon storm water regulations in accordance with the BMPs set forth in the applicable section(s) of the Washington State Department of Ecology's Stormwater Manual adopted within this chapter under MVMC 15.40.030(F)(2).

c. All proposals involving excavations and placement of fills shall be subject to structural review under the appropriate provisions as found in the currently adopted building code of Mount Vernon.

d. All infiltration systems, such as storm water detention and retention facilities, and curtain drains utilizing buried pipe or French drains, are prohibited in erosion and landslide hazard areas and their buffers unless a site assessment report indicates such facilities or systems will not affect slope stability and the systems are designed by a

licensed civil engineer. The engineer shall also certify that the system and/or facilities are installed as designed.

e. Vegetation Removal and Replanting. Removal of vegetation shall be minimal in erosion and landslide hazard areas. Any replanting that occurs shall consist of trees, shrubs, and ground cover that meets the objectives of erosion prevention and site stabilization, does not require permanent irrigation for long-term survival, and, if the removal and replanting are occurring inside a stream or wetland buffer, the plantings are suitable for that critical area and buffer function.

f. Additional Requirements – Landslide Hazard Areas.

i. Surface drainage shall not be directed across the face of a landslide hazard (including bluffs or ravines). If drainage must be discharged from the hazard area into adjacent waters, it shall be collected above the hazard and directed to the water by tight line drain and provided with an energy dissipating device at the point of discharge.

ii. A minimum buffer with a width of 50 feet shall be established from the top, toe and all edges of all landslide hazardous areas. Existing native vegetation shall be maintained in accordance with mitigation recommendations within the buffer area. The buffer may be reduced to a minimum of 10 feet when an applicant demonstrates to the director that the reduction will adequately protect the proposed development, adjacent developments and uses and the subject critical area. The buffer may be increased by the director when determined necessary to prevent risk of damage to proposed and existing development. Normal nondestructive pruning and trimming of vegetation for maintenance purposes, or thinning of limbs of individual trees to provide a view corridor, shall not be subject to these buffer requirements.

3. Seismic Hazard Areas. Structural development proposals shall meet all applicable provisions of the building code as adopted by the city. The director shall evaluate the geologic hazard area report and condition permit approvals to minimize the risk on both the subject property and affected adjacent properties.

4. Volcanic Hazard Areas.

a. Critical Facilities. Critical facilities on sites containing areas susceptible to inundation due to volcanic hazards shall require an evacuation and emergency management plan. The applicant for critical facilities shall evaluate the risk of inundation or flooding resulting from mudflows originating on Mount Baker in a geotechnical report, and identify any engineering or other mitigation measures as appropriate. Mitigation plans may be required. The geologic hazard report shall be subject to third party review.

b. Other. Meet the requirements of the city's flood hazard regulations in Chapter 15.36 MVMC.

5. Alluvial Fan Hazard Areas. Based upon the results of the geologic hazard report and third party review, the director shall require conditions of approval for developments on sites that

include or are affected by alluvial fan hazards. Conditions may include, but are not limited to, vegetation enhancement, slope stabilization, buffer zones, or other requirements.

D. Hillside Development Standards. While slopes of less than 40 percent are not defined by this chapter as environmentally sensitive, improper development or construction on such slopes may cause erosion, flooding, property damage, and damage to environmentally sensitive areas regulated by this chapter. Development on hillsides with slopes of 15 percent or greater shall comply with the following requirements, unless specifically exempted by another provision of this chapter:

1. Submittal Requirements. Proposals that include clearing, grading, filling, excavation, construction, paving, or removal of vegetation, on slopes between 15 percent and 39.99 percent, are subject to the following:

a. Preparation of a geotechnical report prepared by a licensed professional engineer that contains a description of how the proposed development and its associated grading plan will or will not impact each of the following on the subject property and adjoining properties:

i. Slope stability, erosion, and landslide hazards;

ii. Drainage, surface and subsurface hydrology, and water quality; and

iii. Existing vegetation as it relates to wetlands, steep slopes, soil stability, and natural habitat value.

b. Recommended methods for mitigating identified impacts and a description of how these mitigation measures may impact adjacent properties.

2. Conditions. Based upon the results of the geotechnical report, the director may require conditions of approval including, but not limited to, vegetation enhancement, slope stabilization, restriction on clearing area or time of year, and/or other requirements.

~~VII.~~ WETLANDS ~~STANDARDS~~

A. DESCRIPTION

1. Wetlands are those areas, designated in accordance with the "Washington State Wetland Identification and Delineation Manual" as required by RCW 36.70A.175, that are inundated or saturated by surface or ground 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.
2. Wetlands help to maintain water quality; store and convey stormwater and floodwater; recharge ground water; provide important fish and wildlife habitat; and serve as areas for recreation, education, scientific study and aesthetic appreciation.
3. The City's overall goal is to achieve no net loss of wetlands. This goal shall be implemented through retention and restoration of the function and value of wetlands within the City.

4. Wetlands serve to moderate runoff volume and flow rates; reduce sediment, chemical nutrient and toxic pollutants; provide shading to maintain desirable water temperatures; provide habitat for wildlife; protect wetland resources from harmful intrusion; and generally preserve the ecological integrity of the wetland area.

B. PURPOSE

The purposes of the wetland regulations are to:

1. Ensure that development activities in or affecting wetlands do not threaten public safety, cause nuisances, or destroy or degrade natural wetland functions and values;
2. Protect wetlands by regulating development activities within and around them;
3. Protect the public from costs associated with repair of downstream properties resulting from erosion and flooding due to the loss of water storage capacity provided by wetlands; and,
4. Prevent the net loss of wetland acreage and functions.

C. CLASSIFICATION AND DESIGNATION

Wetland ratings: Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system found in the "Washington State Wetland Rating System for Western Washington" (Department of Ecology Publication No. 14-06-029, effective January 2015 ~~04-06-025~~) or as amended hereafter. These documents contain the definitions and methods for determining if the criteria below are met.

1. Wetland Rating Categories.
   a. Category I: Category I wetlands are those that meet any of the following criteria:
      i. Represent a unique or rare wetland type; or
      ii. Are more sensitive to disturbance than most wetlands; or
      iii. Are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or
      iv. Are providing a high level of functions, scoring twenty-three ~~seventy~~ (23~~70~~) points or more out of twenty-seven ~~one hundred~~ (27~~100~~) (DOE Wetlands Rating System, 201~~0~~4); or
      v. Are characterized as a national heritage wetland; or
      vi. Are characterized as a bog; or
      vii. Are over one (1) acre and characterized as a mature and old-growth forested wetland.
   b. Category II. Category II wetlands are those wetlands that are not Category I wetlands and that meet any of the following criteria:
      i. Provide high levels of some functions, being difficult, though not impossible to replace; or
      ii. Perform most functions relatively well, scoring 20 to 22 points out of 27

(DOE Wetlands Rating System, 2014).~~OE Wetlands Rating System, 2004).~~

c. Category III. Category III wetlands are those wetlands that are not Category I or

II wetlands, and that meet the following criterion: ~~to provide moderate levels of functions, scoring between thirty (30) through fifty (50) out of one hundred (100) points (DOE Wetlands Rating System, 2004).~~

i. Provide moderate levels of functions, scoring 16 to 19 points out of 27 (DOE Wetlands Rating System, 2014).

d. Category IV. Category IV wetlands are those that meet the following criterion:

ii. provide low levels of functions, scoring less than thirty (30) out of one hundred (100) points (DOE Wetlands Rating System, 2004).

2. Date of Wetland Rating

Wetland rating categories shall be applied as the wetland exists on the date of adoption of the rating system by the City, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities. Wetland rating categories shall not change due to illegal modifications.

D. WETLAND REPORTS

i. Report required: Subject to the provisions of section (D)(3) below, a wetland report pursuant to the guidelines in MVMC 15.40.120.G addressing a wetland's classification and delineation shall be prepared by an applicant as follows:

a. Wetland report identifying classification: An applicant shall be required to conduct a study to determine the classification of the wetland if the subject property or project area is both within the SMZ and within 150 feet of a wetland, even if the wetland is not located on the subject property, but it is determined that alterations of the subject property are likely to impact the wetland in question or its buffer. Wetland classification shall be performed as described in MVMC 15.40.090(C), and the report shall include a completed wetland rating form. If there is a potential Category I or II wetland within 300 feet of a proposed project, the City may require an applicant to conduct a study, even if the wetland is not located on the subject property, but it is determined that alterations of the subject property are likely to impact the wetland in question or its buffer. A wetland report shall be prepared by a certified professional at the applicant's expense.

b. Wetland report identifying delineation: A wetland delineation is required for any portion of a wetland on the subject property that will be impacted by the permitted activities. For the purpose of regulation, the exact location of the wetland edge shall be determined by the wetlands specialist hired at the expense of the applicant through the performance of a field investigation using the procedures provided in the Hydrogeomorphic (HGM) manual.

ii. Wetland mitigation plan required: The applicant shall be required to prepare a wetland mitigation plan per MVMC 15.40.120(H), if impacts are identified within a

wetland classification or delineation report, or if a wetland buffer alteration is proposed. The approval of the wetland mitigation plan by the Director shall be based on the criteria located in MVMC 15.40.040, 15.40.080, 15.40.110, and 15.40.120(H).

iii. Report waived:

a. A wetland classification or delineation report may only be waived by the Director when the applicant provides satisfactory evidence that:

i. A public road, building or other physical barrier exists between the wetland and the proposed activity;

ii. The wetland does not intrude on the site of the proposed project, and based on evidence submitted, the proposal will not result in significant adverse impacts to nearby wetlands regulated under this section; or

iii. Applicable data and analysis appropriate to the project proposed exists and an additional study is not necessary, consistent with current rating system and mitigation standards.

b. The wetland mitigation plan may only be waived by the Director when applicable data and analysis appropriate to the project proposed exists and an additional report is not necessary, consistent with current rating system and mitigation standards.

c. Period of validity for wetland reports: Reports submitted and reviewed are valid for up to five (5) years from date of study completion as approved by the City unless the Director determines that conditions have changed significantly and a new or amended study is required.

d. Independent secondary review: Peer review of the wetland report may be required by the City at the applicant's expense.

E. DEVELOPMENT STANDARDS

1. Activities may only be permitted in a wetland if the applicant can show that the proposed activity will not degrade the functions and functional performance of the wetland.

2. Activities and uses shall be prohibited in wetlands, except as provided for herein.

3. Category I wetlands: Activities and uses shall be prohibited from Category I wetlands. ~~, except as provided for in the public agency and utility exception, reasonable use exception, and variance sections of the MVMC~~.

4. Category II and III wetlands: With respect to activities proposed in Category II and III wetlands, the following standards shall apply:

a. Water-dependent activities may be allowed where there are no feasible alternatives that would have a less adverse impact on the wetland, its buffers, and other wetlands.

Where non-water-dependent activities are proposed, it shall be presumed that alternative locations are available, and activities and uses shall be prohibited, unless the applicant demonstrates that:

i. The basic project purpose cannot reasonably be accomplished by successfully avoiding the wetland, or result in less adverse impact on a wetland on another site or sites in the general region;

ii. All alternative designs of the project as proposed that would avoid or result in less of an adverse impact on a wetland or its buffer, such as a reduction in the size, scope, configuration, or density of the project, are not feasible; and

iii. Full compensation for the acreage and loss functions will be provided under the terms established under sections (G)(6) and (G)(7) below.

5. Category IV wetlands: 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 wetland report and mitigation plan, if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the acreage and loss functions will be provided under the terms established under sections (G)(6) and (G)(7) below.

F. STANDARD WETLAND BUFFERS

1. Standard buffer widths: The 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 planted to maintain the standard width. Required standard wetland buffers, based on wetland category, are as follows:

Wetland Category	Standard Buffer
I	200 ft.
II	100 ft.
III	75 ft.
IV	50 ft.

2. Measurement of wetland buffers: All buffers shall be measured horizontally from a perpendicular line established at the wetland edge as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers.

3. Increased wetland buffer widths: The Director shall require increased buffer widths in accordance with the recommendations of an experienced, certified professional wetland scientist, and the best available science on a case-by-case basis when a larger buffer is necessary to protect wetland functions and values based on site-specific

characteristics. This determination shall be based on one or more of the following criteria:

a. A larger buffer is needed to protect other wetlands;

b. The buffer or adjacent uplands has a slope greater than 15 percent or is susceptible to erosion and standard erosion-control measures will not prevent adverse impacts to the wetland;

c. The buffer area has minimal vegetative cover. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to protect the wetland functions and values, implementation of a buffer planting plan may substitute**.** Where a buffer planting plan is proposed, it shall include plant densities that are in conformance with the recommendations of the Critical Area Ordinance (CAO) Guidebook and CAO Guidebook requirements for monitoring and maintenance to ensure success.

d. Existing buffer vegetation is considered "inadequate" and will need to be enhanced through additional native plantings and (if appropriate) removal of nonnative plants when:

   i. Nonnative or invasive plant species provide the dominant cover,

   ii. Vegetation is lacking due to disturbance and wetland resources could be adversely affected, or

   iii. Enhancement plantings in the buffer could significantly improve buffer functions.

e. An increase in buffer width onsite or restoration of existing buffer required under this section shall be directed to modifications reasonably necessary to mitigate impacts created by the proposed development and roughly proportional to the scope and scale of the impacts created by the proposed development.

4. Wetland buffer width averaging: The Director may allow modification of the standard wetland buffer width in accordance with an approved wetland report and the best available science on a case-by-case basis by averaging buffer widths. Averaging of buffer widths may only be allowed where the applicant and a certified professional wetland scientist demonstrates that:

a. No feasible site design exists without buffer averaging;

b. It will not reduce wetland functions or functional performance;

c. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

d. The total area contained in the buffer area after averaging is no less than that which would be contained within the standard buffer; and,

e. The buffer width is not reduced to less than 75 percent of the standard buffer width, applicable to Category I, II, or III wetlands or 35 feet for Category IV wetlands.

5. Buffer consistency: All mitigation sites shall have buffers consistent with the buffer requirements of these regulations.
6. Buffer maintenance: Except as otherwise specified or allowed in accordance with this title, wetland buffers shall be retained in an undisturbed or enhanced condition. Removal of invasive non-native weeds is required for the duration of the mitigation bond.

G. STANDARD MITIGATION REQUIREMENTS – WETLANDS

Compensatory mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with the State Department of Ecology publication "Wetland Mitigation in Washington State," 2006 (Publication Nos. 06-06-011a and 06-06-011b), or as revised.

1. Mitigation includes the following alternatives. The priority shall be as follows, but may be modified where functions and values are retained, restored, or enhanced by alternate systems:
   a. Avoiding the impact altogether by not taking a certain action or parts of an action.
   b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.
   c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
   d. Reducing or eliminating the impact over time by preservation and maintenance operations.
   e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.
2. Mitigation for lost or affected functions: Compensatory mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement and shall provide similar wetland functions as those lost, except when:
   a. The lost wetland provides minimal functions as determined by a site-specific function assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington State watershed assessment plan or protocol; or
   b. Out-of-kind replacement will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.
3. Preference of mitigation actions: Mitigation actions that require compensation by replacing, enhancing, or substitution shall occur in the following order of preference:
   a. Restoring wetlands on upland sites that were formerly wetlands.
   b. Creating wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native 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 being designed.

c. Enhancing significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

4. Type and location of mitigation: Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be either in-kind and on-site, or in-kind and within the same stream reach or sub-basin. Mitigation actions shall be conducted within the same sub-basin and on the site as the alteration, except when all of the following apply:

   a. There are no reasonable on-site or sub-basin opportunities or the on-site and sub-basin opportunities do not have a high likelihood of success, after a determination of the natural capacity of the site to mitigate for the impacts. Consideration should include: anticipated wetland mitigation replacement ratios, buffer conditions and proposed widths, hydrogeomorphic classes of on-site wetlands when restored, proposed flood storage capacity, proposed water quality improvements, potential to mitigate riparian fish and wildlife impacts (such as connectivity);

   b. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and,

   c. Off-site locations shall be in the same sub-basin unless:

      i. Established watershed goals for water quality, flood or conveyance, habitat, or other wetland functions have been established and strongly justify location of mitigation at another site; or

      ii. Credits from a state-certified wetland mitigation bank are used as mitigation and the use of credits is consistent with the terms of the bank's certification.

5. Mitigation timing: Mitigation and monitoring plans shall be approved prior to initiation of activities that will disturb wetlands. Mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

   a. The Director may authorize a one-time temporary delay, up to 120 days, in completing minor construction and landscaping when environmental conditions could produce a high probability of failure or significant construction difficulties. The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, and general welfare of the public.

   b. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the mitigation plan. The justification must be verified and approved by the City and include a financial guarantee.

6. Mitigation Ratios:

   a. Acreage replacement ratios: The following ratios shall apply to creation or restoration that is in-kind, within the same drainage basin, is the same category, is timed prior to or concurrent with alteration, and has a high probability of success. These ratios do not apply to remedial actions resulting from unauthorized alterations; greater ratios shall apply in those cases. These ratios do not apply to the use of credits from a state-certified wetland mitigation bank. When credits from a certified bank are used, replacement ratios should be consistent with the requirements of the bank's certification. The first number specifies the acreage of replacement wetlands and the second specifies the acreage of wetlands altered.

Category I	6-to-1
Category II	3-to-1
Category III	2-to-1
Category IV	1.5-to-1

   b. Increased replacement ratio. The Director may increase the ratios under the following circumstances:

      i. Uncertainty exists as to the probable success of the proposed restoration or creation;

      ii. A significant period of time will elapse between impact and replication of wetland functions;

      iii. Proposed mitigation, without increase, will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

      iv. The impact was an unauthorized impact.

7. Wetlands Enhancement as Mitigation:

   a. Impacts to wetland functions may be mitigated by enhancement of existing significantly degraded wetlands, but must be used in conjunction with restoration and/or creation. Applicants proposing to enhance wetlands must produce a wetland report that identifies how enhancement will increase the functions of the degraded wetland and how this increase will adequately mitigate for the loss of wetland area and function at the impact site.

   b. At a minimum, enhancement acreage shall be double the acreage required for creation or restoration under subsection G.6 of this section. The ratios shall be greater than double the required acreage where the enhancement proposal would result in minimal gain in the performance of wetland functions and/or result in the reduction of other wetland functions currently being provided in the wetland.

c. Mitigation ratios for enhancement in combination with other forms of mitigation shall range from 6:1 to 3:1 and be limited to Class III and Class IV wetlands.

d. Any approval under subsections (b) and (c) above shall be consistent with Table 1a of "Wetland Mitigation in Washington State, Part I" (Ecology, et al., 2006)

8. Wetland Mitigation Banks:

a. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands ~~(but not wetland buffers)~~ when:

i. The bank is certified under Chapter 173-700 WAC;

ii. The Director determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and,

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

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

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

VIII. SUBMITTAL REQUIREMENTS, REPORTS, STUDIES AND PLANS

A. General Requirements. When a regulated critical area or associated buffer is identified, the following procedures apply:

1. Preapplication Consultation. Any person seeking a permit from the city to develop properties known or suspected to have critical areas present shall schedule a preapplication conference with the city pursuant to adopted scheduling procedures. Preapplication consultation and planning will help applicants identify regulatory requirements under this section and assure integration of critical area planning into overall project design.

2. Submittal Requirements.

a. Plans. When an application is submitted for any regulated activity, the location of the critical areas and buffers on the site shall be indicated on the plans submitted based upon an inventory provided by a certified professional, as identified in subsections B through G of this section.

b. Waivers. The director may waive any of the requirements of this subsection if the size and complexity of the project do not warrant a step in the proceeding, as identified in subsections B through G of this section.

c. Independent Secondary Review. When appropriate due to the type of critical area present, or project area conditions, the director has the authority to require the applicant to prepare and/or fund additional analyses or activities, including, but not limited to:

i. An evaluation by an independent certified professional regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate. This shall be paid at the applicant's expense, and the director shall select the third party review professional. Independent review shall be required for activities that are altering a critical area or buffer and are required to prepare supplemental studies and/or mitigation plans. Independent review for standard studies is discretionary and may be required by the director; and/or

ii. A request for consultation with the State of Washington Department of Fish and Wildlife, Washington State Department of Ecology, State Department of Natural Resources, Skagit System Cooperative, the Upper Skagit Tribe, or other appropriate agency.

3. Fees. See Chapter 14.15 MVMC.

4. Combined Systems. Where streams, ponds, and wetlands function jointly on a property and/or adjoining properties, such systems shall be addressed as a single system for purposes of all required reports and approvals.

B. Geotechnical Study/Geologic Hazard Report. A study that includes soils and slope stability analysis, boring and test pit logs, and recommendations on slope setbacks, foundation design, retaining wall design, material selection, and all other pertinent elements. The preparation and content requirements in the table below shall also apply.

Table 15.40.120(A), Geotechnical Report – Detailed Requirements

Report Preparation/Content Requirements	Erosion	Landslide	Seismic	Volcanic Hazards	Alluvial Fan
1. Characterize soils, geology and drainage.	X	X	X	X	X
2. Describe and depict all natural and manmade features within 200 feet of the site boundary.	X	X	X	X	X
3. Identify any areas that have previously been disturbed or degraded by human activity or natural processes.	X	X	X	X	X
4. Characterize groundwater conditions including the presence of any public or private wells within 1,000 feet of the site.	X	X	X		X
5. Provide a site evaluation review of available information regarding the site.	X	X	X	X	X
6. Conduct a surface reconnaissance of the site and adjacent areas.	X	X	X		X
7. Conduct a subsurface exploration of soils and hydrologic conditions.	X	X	X		X
8. Provide a slope stability analysis.	X	X			X
9. Address principles of erosion control in proposal design including: Plan the development to fit the topography, drainage patterns, soils and natural vegetation on site; Minimize the extent of the area exposed at one time and the duration of the exposure; Stabilize and protect disturbed areas as soon as possible; Keep runoff velocities low; Protect disturbed areas from storm water runoff; Retain the sediment within the site area; Design a thorough maintenance and follow-up inspection program to ensure	X	X			X

Report Preparation/Content Requirements	Erosion	Landslide	Seismic	Volcanic Hazards	Alluvial Fan
erosion control practices are effective.					
10. Provide an evaluation of site response and liquefaction potential relative to the proposed development.			X		
11. Conduct sufficient subsurface exploration to provide a site coefficient (S) for use in the adopted building code to the satisfaction of the building official.			X		
12. Provide an analysis of proposed clearing, grading and construction activities including construction scheduling. Analyze potential direct and indirect on-site and off-site impacts from development.	X	X	X		X
13. Propose mitigation measures, such as any special construction techniques, monitoring or inspection programs, erosion or sedimentation programs during and after construction, surface water management controls, buffers, remediation, stabilization, etc.	X	X	X	X	X
14. Critical facilities on sites containing areas susceptible to inundation due to volcanic hazards shall require an evacuation and emergency management plan. The applicant for critical facilities shall evaluate the risk of inundation or flooding resulting from mudflows originating on Mount Baker in a geotechnical report, and identify any engineering or other mitigation measures as appropriate.				X	

Note: An "X" indicates that the requirement applies in the identified critical area.

C. Hydrogeologic Assessment. The assessment shall address the impact the proposed land use will have on both the quality and quantity of the water transmitted to the aquifer.

1. The assessment shall be submitted to the department and shall address, at a minimum, the following criteria:

a. Surficial soil type and geologic setting;

b. Location and identification of wells within 1,000 feet of the site;

c. Location and identification of surface water bodies and springs within 1,000 feet of the site with recharge potential, unless geologic features in the basin make it clear that a larger area is hydraulically connected to any fish bearing stream in the affected basin;

d. Description of underlying aquifers and aquitards, including water level, gradients, and flow direction;

e. Available surface water and groundwater quality data;

f. Effects of the proposed development on water quality;

g. Sampling schedules required to assure water quality;

h. Discussion of the effects of the proposed development on the groundwater resource;

i. Recommendations on appropriate best management practices (BMPs), based on the applicable section(s) of the Washington State Department of Ecology's Stormwater Manual adopted within this chapter under MVMC 15.40.030(F)(2), or mitigation to assure no significant degradation of groundwater quality;

j. Other information as required by the Skagit County health district; and

k. The assessment shall also address the types of pesticides, herbicides, and fertilizers that can safely be used for the care of landscaping proposed by the applicant.

2. The hydrogeologic assessment shall be prepared by a professional geologist/hydrologist or by a soil scientist with a strong background in geology (see definition of "Certified professional" in MVMC 15.40.170(B)).

3. Applications for development or operations with underground storage of petroleum products will be processed using the appropriate procedure as specified in existing Mount Vernon ordinances.

4. Analysis for a specific parcel(s), using the criteria outlined below, will be employed to confirm if the soils present require a recharge area designation. Data collection will include, at a minimum, six soil logs to a depth of 10 feet (or to a depth of four feet below the lowest proposed excavation point, whichever is greater) for each acre in the parcel(s) being evaluated. At least one well, 200 feet or greater in depth with an adequate drilling report, must be available within one mile. The associated data shall be analyzed and included in the hydrogeologic assessment to determine the presence of highly permeable soils with the recharge area designation.

D. Habitat Management Plan. A habitat management plan (HMP) is a site investigation to evaluate the potential presence or absence of a regulated fish or wildlife species or habitat affecting a subject property and proposed development.

1. The assessment of habitats for the site and project shall at a minimum include the following information:

a. A map prepared at an easily readable scale, showing:

i. The location of the proposed development site;

ii. Property boundaries;

iii. The relationship of the site to surrounding topographic, water, and cultural features;

iv. Proposed building locations and arrangements; and

v. A legend which includes a complete legal description, acreage of the parcel, scale, north arrow, and date of map revision;

b. Detailed description of vegetation on and adjacent to the project area and its associated buffer;

c. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and assessment of potential project impacts to the use of the site by the species;

d. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitats located on or adjacent to the project area;

e. A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;

f. Enhancement of existing degraded buffer area and replanting of the disturbed buffer area with native vegetation;

g. The use of alternative on-site wastewater systems in order to minimize site clearing;

h. Retention of existing native vegetation on other portions of the site in order to offset habitat loss from buffer reduction;

i. The need for fencing and signage along the buffer edge;

j. A discussion of measures, including avoidance, minimization, and mitigation proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with the mitigation sequencing required by this chapter; and

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

2. When appropriate due to the type of habitat or species present or the project conditions, the director may also require the habitat management plan to include:

a. An evaluation by an independent certified professional regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs, to include any recommendations as appropriate;

b. A request for consultation with the Washington Department of Fish and Wildlife or the local Native American Indian tribe or other appropriate agency; and

c. Detailed surface and subsurface hydrologic features both on and adjacent to the site.

3. Mitigation Measures. Possible mitigation measures to be included in the report, or required by the director, could include, but are not limited to:

a. Establishment of buffer zones;

b. Preservation of critically important plants and trees;

c. Limitation of access to habitat areas;

d. Seasonal restriction of construction activities;

e. Establishing phased development requirements; and

f. Monitoring plan for a period necessary to establish that performance standards have been met. Generally this will be for a period of seven to 10 years.

4. HMP Adequacy. The HMP shall demonstrate to the satisfaction of the city that the habitat functions and values are improved by implementation of the HMP. If there is a disagreement between the city and the applicant as to the adequacy of the HMP, the issue of plan adequacy shall be resolved by consulting with the appropriate federal or state agency. If the federal or state agencies are not available in a timely manner, the applicant may choose to have the city refer the HMPs to a third-party consultant at the expense of the applicant. After consultation with such state departments or third-party consultant, the director shall make a final decision on the adequacy of the HMP.

5. Timing. An HMP must be developed and approved either prior to preliminary plat approval or issuance of the building permit, as applicable, and must be implemented before the city grants either final plat approval or an occupancy permit, as applicable.

6. Any project that requires an HMP shall not be considered SEPA exempt and the HMP shall be processed along with appropriate SEPA review and agency comment as required by Chapter 197-11 WAC.

E. Stream Study, Standard. A report shall be prepared by a qualified professional, unless otherwise determined by the director, and include the following information:

1. Site Map. Site map(s) indicating, at a scale no smaller than one inch equals 20 feet (unless otherwise approved by the director):

a. The entire parcel of land owned by the applicant, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

b. The ordinary high water mark (OHWM) determined in the field by a certified professional (the OHWM must also be flagged in the field);

c. Stream classification, as recorded in city inventories (if unclassified, see subsection (F)(1) of this section);

d. Topography of the site and abutting lands in relation to the stream(s) and its/their management zone(s) at contour intervals of two feet where slopes are less than 10 percent, and of five feet where slopes are 10 percent or greater;

e. One-hundred-year floodplain and floodway boundaries, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

f. Site drainage patterns, using arrows to indicate the direction of major drainage flow;

g. Top view and typical cross-section views of the stream, banks, and management zones to scale;

h. The vegetative cover of the entire site, including the stream or lake, banks, riparian area, and/or abutting wetland areas, extending 100 feet upstream and downstream from

the property line. Include position, species, and size of all trees at least four inches dbh that are within the inner and outer riparian management zone;

i. The location, width, depth, and length of all existing and proposed structures, roads, storm water management facilities, wastewater treatment and installations in relation to the stream/lake and its/their management zones; and

j. Location of site access, ingress and egress.

2. Grading Plan. A grading plan prepared in accordance with MVMC and Mount Vernon engineering standards and as required by staff through the preapplication review process, and showing contour intervals of two feet where slopes are less than 10 percent, and of five feet where slopes are 10 percent or greater.

3. Stream Assessment Narrative. A narrative report shall be prepared to accompany the site plan that describes:

a. The stream classification as recorded in city inventories;

b. The vegetative cover of the site, including the stream or lake, banks, riparian area, wetland areas, and flood hazard areas extending 100 feet upstream and downstream from the property line;

c. The ecological functions currently provided by the stream/lake and existing riparian area;

d. Observed or reported fish and wildlife that make use of the area including, but not limited to, salmonids, mammals, and bird nesting, breeding, and feeding/foraging areas; and

e. Measures to protect trees and vegetation.

F. Stream Study, Supplemental. The application shall include the following information:

1. Unclassified Stream Assessment. If the site contains an unclassified stream, a certified professional shall provide a proposed classification of the stream(s) based on the city's adopted rating system in MVMC 15.40.090(C)(1) and a rationale for the proposed rating.

2. Alterations to Stream and/or Management Zones. A supplemental report prepared by a certified professional shall evaluate alternative methods of developing the property using the following criteria for justification:

a. Avoid any disturbances to the stream or management zone;

b. Minimize any stream or management zone impacts;

c. Compensate for any stream or management zone impacts;

d. Restore any stream or management zone area impacted or lost temporarily; and

e. Enhance degraded stream habitat to compensate for lost functions and values.

3. Impact Evaluation.

a. An impact evaluation for any unavoidable impacts prepared by a certified professional, to include:

i. Identification, by characteristics and quantity, of the resources (stream, lake) and corresponding functional values found on the site;

ii. Evaluation of alternative locations, design modifications, or alternative methods of development to determine which option(s) reduce(s) the impacts on the identified resource(s) and functional values of the site;

iii. Determination of the alternative that best meets the applicable approval criteria and identify significant detrimental impacts that are unavoidable; and

iv. To the extent that the site resources and functional values are part of a larger natural system such as a watershed, the evaluation must also consider the cumulative impacts on that system.

b. For a violation, the impact evaluation must also include:

i. Description, by characteristics and quantity, of the resource(s) and functional values, on the site prior to the violations, including, but not limited to: shade/temperature regulation, input of organic material and nutrients, contribution of large woody debris (LWD), improvements to water quality, bank stabilization, wildlife habitat, microclimate, and groundwater; and

ii. Determination of the impact of the violation on the resource(s) and functional values.

G. Wetland Assessment. A wetland assessment includes the following:

1. A description of the project and maps at a scale no smaller than one inch equals 200 feet showing the entire parcel of land owned by the applicant and the wetland boundary delineated by a qualified wetlands ecologist, and pursuant to MVMC 15.40.040;

2. A description of the vegetative cover of the wetland and adjacent area including identification of the dominant plant and animal species, consistent with published delineation standards (Corps of Engineers delineation manual, 1987; Corps of Engineers Regional Supplement, 2010). Copies of the wetland delineation data sheets and rating forms should be included as an appendix to the wetland assessment;

3. A site plan for the proposed activity at a scale no smaller than one inch equals 200 feet showing the location, width, depth and length of all existing and proposed structures, roads, storm water management facilities, sewage treatment and installations within the wetland and its buffer;

4. The exact locations and specifications for all activities associated with site development including the type, extent, and method of operations;

5. Elevations of the site and adjacent lands within the wetland and its buffer at contour intervals of no greater than five feet or at a contour interval appropriate to the site topography and acceptable to the city;

6. Top view and typical cross-section views of the wetland and its buffer to scale;

7. The purposes of the project and, if a variance is being requested, an explanation of why the proposed activity cannot be located at another site;

8. If wetland mitigation is proposed, a mitigation plan that includes baseline information, an identification of direct and indirect impacts of the project to the wetland area and wetland functions, environmental goals and objectives, performance standards, construction plans, maintenance and monitoring programs, and a contingency plan; and

9. Alternative Methods of Development. If wetland changes are proposed, the applicant shall evaluate alternative methods of developing the property using the following criteria in this order:

a. Avoid any disturbance to the wetland or buffer;

b. Minimize any wetland or buffer impacts;

c. Compensate for any wetland or buffer impacts;

d. Restore any wetlands or buffer impacted or lost temporarily;

e. Create new wetlands and buffers for those lost; and

f. In addition to restoring a wetland or creating a wetland, enhance an existing degraded wetland to compensate for lost functions and values.

This evaluation shall be submitted to the director. Any proposed alteration of wetlands shall be evaluated by the director using the above hierarchy.

10. Such other information as may be needed by the city, including but not limited to an assessment of wetland functional characteristics, including a discussion of the methodology used; a study of hazards if present on site, the effect of any protective measures that might be taken to reduce such hazards; and any other information deemed necessary to verify compliance with the provisions of this section.

H. Mitigation and Monitoring Plans.

1. Baseline Information.

a. A written assessment and accompanying maps of the impacted critical area including, at a minimum, a critical area delineation by a qualified specialist; existing critical area acreage; vegetative, faunal, and hydrologic characteristics; an identification of direct and indirect impacts of the project on the critical area; associated buffers and their functions; soil and substrata conditions; topographic elevations; and proposed restoration area.

b. If the mitigation site is different from the impacted critical area site, the assessment should include at a minimum: existing acreage; vegetative, faunal, and hydrologic conditions; relationship within the watershed and to existing water bodies; soil and substrata conditions; topographic elevations; existing and proposed adjacent site conditions; buffers; and site ownership.

2. Environmental Goals and Objectives. A written report by a qualified specialist shall be provided identifying goals and objectives of the mitigation plan and describing:

a. The purposes of the restoration measures, including a description of site selection criteria; identification of restoration goals; identification of target evaluation species and ecological functions; dates for beginning and completion; and a complete description of the structure and functions sought in the restoration area or site. The goals and objectives shall be related to the functions and values of the impacted critical area and associated buffer, or if off site and/or out-of-kind, the type of critical area to be emulated; and

b. A review of the best available science and author's experience to date in restoring or creating the type of critical area functions proposed shall be provided. An analysis of the likelihood of success of the restoration project shall be provided based on the experiences of comparable projects, preferably those in the same drainage basin, if any. An analysis of the likelihood of persistence of the created or restored critical area and buffer functions shall be provided based on such factors as surface and groundwater supply and flow patterns, dynamics of the critical area ecosystem, sediment or pollutant influx and/or erosion, periodic flooding and drought, etc., presence of invasive flora or fauna, potential human or animal disturbance, and previous comparable projects, if any.

3. Performance Standards. Specific criteria shall be provided for evaluating whether or not the goals and objectives of the project are achieved and for beginning remedial action or contingency measures. Such criteria may include water quality standards, survival rates of planted vegetation, species abundance and diversity targets, habitat diversity indices, or other ecological, geological or hydrological criteria. These criteria will be evaluated and reported pursuant to subsection (H)(5) of this section, Monitoring Program. An assessment of the project's likelihood of success in achieving the goals and objectives of the mitigation plan should be included.

4. Detailed Techniques and Plans. Written specifications and descriptions of restoration techniques shall be provided including the proposed construction sequence; grading and excavation details; erosion and sediment control features needed for construction and long-term survival; a planting plan specifying plant species, quantities, locations, size, spacing, and density; source of plant materials, propagates, or seeds; water and nutrient requirements for planting; where appropriate, measures to protect plants from predation; specification of substrata stockpiling techniques, if necessary, and planting instructions; and any other techniques or details appropriate to restoration construction. These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, and topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques and/or anticipated final outcome. The

city may request such other information as needed to determine the adequacy of a mitigation plan.

5. Monitoring Program. A program outlining the approach for monitoring construction and development of the restoration project and for assessing a completed project shall be provided in the mitigation plan. Monitoring and its associated reports of the critical area mitigation areas shall be completed by an agency or consultant selected by the city. Any maintenance required as a result of the monitoring, per performance standards set by the city, can be completed by the applicant and approved by the entity that completes the monitoring for the city; or the entity completing the monitoring can also complete any required work at the sole expense of the applicant. A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years one, three, five, and seven after site construction). Monitoring shall be on a yearly basis, with the first year's worth of monitoring/reporting paid for before any work commences on the site, and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the restoration project. The restoration project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five years, or 10 years in special circumstances such as scrub shrub or forested wetlands. The cost of all required years of monitoring shall be the responsibility of the applicant. Monitoring may include, but is not limited to:

a. Establishing vegetation plots to track changes in plant species composition and density over time;

b. Using photo reference points to evaluate vegetation community response;

c. Sampling surface and subsurface waters to determine pollutant loading, and changes from the natural variability of background conditions (i.e., pH, nutrients, heavy metals);

d. Measuring base flow rates and storm water runoff to model and evaluate hydrologic and water quality predictions;

e. Measuring sedimentation rates; and

f. Sampling fish and wildlife populations to determine habitat utilization, species abundance, and diversity.

6. Contingency Plan. Should include an evaluation of the potential need for remedial action or contingency measures and an identification of potential courses of action, and any corrective measures to be taken when monitoring or evaluation indicates project performance standards are not being met.

7. Permit Conditions. Any restoration project prepared for mitigation and approved by the city shall become part of the application for the underlying project permit approval.

8. Demonstration of Competence. A demonstration of financial resources, administrative, supervisory, and technical competence and scientific expertise of sufficient standing to successfully execute the restoration project shall be provided.

9. Performance Surety. The cost of planting, labor, earthwork, etc., necessary for mitigation shall be estimated by the project proponent and reviewed by the city. The cost of monitoring and maintenance shall be established by the city based upon a cost estimate provided by the agency or consultant the city selects to perform monitoring and maintenance work. All mitigation and buffer enhancement shall be completed prior to final plat approval and/or building occupancy depending on the type of application. However, when improvements cannot be completed prior to final acceptance due to weather conditions that could negatively affect the success of the project, a performance surety may be used. The performance surety shall equal 150 percent of the cost of the mitigation project, and the required improvements shall be installed in a satisfactory manner within six months or less. To ensure that monitoring/reporting and maintenance work is paid for and/or completed, two separate financial securities in the form of bonds or cash deposits shall be provided to the city prior to any work commencing on the site. They are:

a. Maintenance Surety.

i. A maintenance surety shall be required on all mitigation and buffer enhancement projects to ensure that the improvement successfully survives the monitoring periods set above.

ii. The amount of the maintenance surety shall be calculated by taking the annual cost of the maintenance (determined by the city based upon an estimate provided by the agency or consultant that will be performing this work) and adding to it the cost of the plants, earthwork, and labor to install the mitigation project (provided by the applicant's critical area consultant) multiplied by the number of years of the required maintenance minus one (because the applicant will be required to pay for the first year of maintenance in advance) and then multiplied by 0.60 (60 percent).

b. Monitoring Surety.

i. A monitoring surety shall be required on all mitigation and buffer enhancement projects to ensure that these projects are adequately monitored.

ii. The amount of the monitoring surety shall be calculated by taking the annual monitoring cost (determined by the city based upon an estimate provided by the agency or consultant that will be performing this work) multiplied by the number of years of the required monitoring minus one (because the applicant will be required to pay for the first year of maintenance upfront) multiplied by one and one-half (or 150 percent).

c. Upfront Monitoring and Maintenance Costs. The applicant shall pay for the first year of monitoring and maintenance of the project, as determined by the city based upon an estimate provided by the agency or consultant that will be performing this work, prior to project approval.

10. Long-Term Maintenance. To ensure the long-term success of the mitigation plan, the applicant or their successors shall be responsible for the long-term maintenance of the habitat

area and its associated buffer. The habitat and buffer shall be kept clear of weeds, invasive plant material, lawn clippings, junk, debris, intrusions or similar.

Commented [LWO4]: Following sections removed from CAO, MVMC 15.40:

15.40.130 Reasonable use exceptions, variances, appeals.
15.40.135 Nonconforming uses and structures.
15.40.140 Vesting.
15.40.150 Enforcement.

IX. FISH AND WILDLIFE HABITAT CONSERVATION AREAS

A. DESCRIPTION AND PURPOSE:

The intent of these regulations is to protect functions and values for waters, riparian habitat, resident and anadromous fish, and wildlife conservation areas. The primary purpose of this section is to minimize development impacts to habitat conservation areas in the Shoreline Management Zone and to:

1. Protect federal and state listed habitats and species and give special attention to protection or enhancement of anadromous fish populations; and,
2. Maintain a diversity of species and habitat within the City; and,
3. Coordinate habitat protection to maintain and provide habitat connections; and,
4. Help maintain air and water quality, and control erosion.

These standards, guidelines, criteria, and requirements intended to identify, evaluate and mitigate potential impacts to habitat conservation areas within the Shoreline Management Zone and associated critical areas and to provide guidelines to enhance degraded habitat and streams where feasible. In such circumstances, impacts resulting from regulated activities may be minimized, rectified, reduced and/or compensated for, consistent with these regulations. The intent of these regulations is to manage land so as to maintain fish and wildlife species in suitable habitats according to their natural geographic distribution so that isolated sub-populations are not created and achieve no net loss in fish or wildlife habitat or stream functions. Interpretations of these regulations shall be made to conform to the requirements of WAC 365-190-080.

B. CLASSIFICATION AND DESIGNATION OF FISH AND WILDLIFE HABITAT CONSERVATION AREAS:

Classification and designation of fish and wildlife habitat conservation areas is an ongoing process; while not all of the following critical habitat conservation areas are known to exist in the SMZ, their designation here allows for future categorization for protection. The following categories shall be used for relevant development standards contained herein ~~of this chapter~~.

1. Streams: All streams that meet the criteria for F, Np or Ns waters as set forth in

   WAC 222-16-030 of the Department of Natural Resources Water Typing System. (The City classification system is consistent with the definitions as provided in WAC 222-16-030.)

2. Lakes 20 Acres and Greater in Surface Area. Those lakes defined as shorelines of the state in the Shoreline Management Act of 1971.

3. Lakes Less Than 20 Acres in Surface Area. Those lakes which meet the criteria for Type F, Np, and Ns waters as set forth in WAC 222-16-030 as amended. This includes lakes and ponds less than 20 acres in surface area and their submerged aquatic beds, lakes, and ponds planted with game fish by a governmental or tribal authority.

4. Class I Fish and Wildlife Conservation Areas, other than streams:

   a. Habitats and species recognized by federal or state agencies for federal and/or state-listed endangered, threatened and sensitive species that have primary association documented in maps or databases available to the City and that, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.

   b. Areas targeted for preservation by the federal, state, and/or local government that provide fish and wildlife habitat benefits, such as the shared strategy process for Puget Sound; and areas of primary association for anadromous fish and important waterfowl areas identified by the U.S. Fish and Wildlife Service.

   c. Areas that contain habitats and species of local importance. These critical areas are identified by the City, including but not limited to those habitats and species that, due to their population status or sensitivity to habitat manipulation, warrant protection. Habitats may include a seasonal range or habitat element with which a species has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long term. Habitats of local importance can include attributes such as comparatively high wildlife density, high wildlife species richness, significant wildlife breeding habitat, seasonal ranges or movement corridors of limited availability and/or high vulnerability. These habitats may include snag-rich mitigation sites and urban natural open spaces.

5. Class II Fish and Wildlife Conservation Areas, other than streams:

   a. Habitats for state-listed candidate and monitored species documented in maps or databases available to the City, which if altered, may reduce the likelihood that the species will maintain and reproduce over the long term.

   b. Habitats that have been identified through maps, databases, reports, or studies that include attributes such as comparatively high wildlife density, high wildlife species richness, significant wildlife breeding habitat, seasonal ranges or movement corridors of limited availability and/or high vulnerability. These habitats may include snag-rich mitigation sites, and urban natural open space.

6. Habitats and Species of Local Importance: The City should accept and consider nominations for habitat areas and species to be designated as locally important.

   a. Habitats and species to be designated shall exhibit the following characteristics:

      i. Local populations of native species are in danger of extirpation based on existing trends;

      ii. Local populations of native species that are likely to become endangered; or,

iii. Local populations of native species that are vulnerable or declining.

b. The species or habitat has recreation, commercial, game, tribal, or other special value.

c. Long-term persistence of a species locally is dependent on the protection, maintenance, and/or restoration of the nominated habitat.

d. Protection by other county, state, or federal policies, laws, regulations, or non-regulatory tools is not adequate to prevent degradation of the species or habitat in the City.

e. Without protection, there is likelihood that the species or habitat will be diminished locally over the long term.

f. Areas nominated to protect a particular habitat or species must represent either high-quality native habitat or habitat that has a high potential to recover to a suitable condition and which is of limited availability, highly vulnerable to alteration, or provides landscape connectivity that contributes to the integrity of the surrounding landscape.

g. Habitats and species may be nominated for designation by any person in accordance with the process in Chapter 15.40 MVMC, Appendix A.

C. PERFORMANCE STANDARDS - GENERAL:

A designated fish and wildlife habitat conservation area with its buffer is a critical area. Regulated uses identified within designated fish and wildlife habitat conservation areas shall comply with the performance standards outlined in this section.

1. Habitat Management Plan Required: If the City determines that impacts to habitats may occur as a result of a development project, a habitat management plan (HMP) shall be required in conformance with MVMC 15.40.120.D. The project proponent may choose to complete an HMP for a site-specific analysis to better determine the impact to habitat and to determine the appropriate buffer width and associated building setbacks for the project based on the site-specific analysis. The preparation and submission of this report is the responsibility of the applicant. The report shall rely on "best available science" as defined in WAC 365-195-900 through 365-195-925 and shall be prepared by a certified professional who is a biologist with five (5) years of experience preparing reports for the relevant type of habitat. The City may retain a qualified consultant at the applicant's expense to review and confirm the applicant's reports, studies and plans. The HMP shall clearly demonstrate that greater protection of the functions and values of critical areas can be achieved through the HMP than could be achieved through providing the prescribed habitat buffers and building setbacks. An applicant may propose to implement an HMP as a means to protect habitat buffers associated with streams and/or fish and wildlife conservation areas. Approval for an HMP shall not occur prior to the consultation with the appropriate federal or state agencies.

   a. Intent: HMPs are primarily intended as a means to restore or improve buffers that have been degraded by past activity, and should preserve, and not reduce, existing high-quality habitat buffers. While not primarily intended as a means to reduce

buffers, the HMP may propose a reduction of the habitat buffer width where it is shown that the HMP will comply with the other requirements of this section.

b. Effect of Buffers: An HMP shall provide habitat functions and values that are greater than would be provided by the prescribed habitat buffers. When habitat buffers are a component of an HMP, they shall be at least the minimum size necessary to accomplish the objectives of the HMP. The HMP may propose, but the City shall not require, a habitat buffer containing a greater area than is required by the prescribed habitat buffer.

c. Impact Mitigation: The HMP shall encompass an area large enough to provide mitigation for buffer reduction below the standard required buffers, and shall identify how the development impacts resulting from the proposed project will be mitigated as defined in section (E) below. The developer of the plan shall use the best available science in all facets of the analyses. The Washington Department of Fish and Wildlife priority habitat and species management recommendations, and/or bald eagle protection rules outlined in WAC 232-12-292, as amended, may serve as guidance for this report.

2. Endangered, Threatened, and Sensitive Species:

a. No development shall be allowed within a habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a habitat management plan (HMP) consistent with a habitat report identifying BMPs consistent with management guidelines recommended by state and federal agencies where present and otherwise consistent with best available science as established in the scientific literature for similar circumstances. Such plans shall identify the source of the recommendations and the key metrics by which success of the plan is to be measured and enforced.

b. Whenever activities are proposed adjacent to a habitat conservation area with which state or federally endangered, threatened, or sensitive species have a primary association, such area shall be protected through the application of protection measures in accordance with an HMP prepared by a certified professional and approved by the City. Approval for alteration of land adjacent to the habitat conservation area or its buffer shall not occur prior to consultation with the Washington Department of Fish and Wildlife for animal species, the Washington State Department of Natural Resources for plant species, and other appropriate federal or state agencies.

~~Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). Whenever activities are proposed adjacent to a verified nest, territory, or communal roost and, activities that are adjacent to bald eagle sites within 800 feet or within one half mile (2,640 feet) and in a shoreline foraging area shall require an approved HMP. The City shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the HMP by the Washington Department of Fish and Wildlife.~~

3. Anadromous Fish:
    a. All activities, uses, and alterations proposed to be located in water bodies used by anadromous fish or in areas that affect such water bodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:
        i. Activities shall be timed to occur only during the allowable work window as designated by the Washington Department of Fish and Wildlife for the applicable species;
        ii. If alternative alignment or location for the activity is not feasible, then activities shall be designed so that it will replace any affected functions and values with equivalent systems to avoid overall degradation to the functions and values of the fish habitat or other critical areas;
        iii. Shoreline erosion control measures shall be designed to use bioengineering methods or soft armoring techniques where such approaches are reasonably effective, according to an approved critical area report; and
        iv. Any impacts to the functions or values of the habitat conservation area are mitigated in accordance with an approved habitat management plan.
    b. Structures that prevent the migration of salmonids shall not be allowed in the portion of water bodies currently or historically used by anadromous fish. Fish bypass facilities shall be provided that allow the upstream or downstream migration of adult fish and shall prevent fry and juveniles migrating downstream from being trapped or harmed, or otherwise adversely affect the overall lifecycle of such fish.
    c. Fills, when authorized by the Shoreline Master Program, shall not adversely impact anadromous fish or their habitat or shall mitigate any unavoidable impacts and shall only be allowed for a water-dependent use.
4. Wetland Habitats: All proposed activities within or adjacent to habitat conservation areas containing wetlands shall conform to the wetland development performance standards set forth above, in Section III. If non-wetlands habitat and wetlands are present at the same location, the provisions of this section or the wetlands section, whichever provides greater protection to the habitat, apply. Where a wetland is divided by a right of way or other improvement, but functions as a single system, the system shall be scored as a whole and not in pieces.
5. Buffers and Associated Building Setback Areas: The distance shall be measured from the ordinary high water mark (OHWM) or from the top of the bank where the OHWM cannot be identified.
    a. Buffers shall remain undisturbed natural beach or vegetation areas except where the buffer can be enhanced to improve its functional attributes, as approved by the Director. Buffers shall be maintained along the perimeter of fish and wildlife habitat conservation areas, as listed below in Tables A and B of this section. Refuse shall not be placed in buffers. Alteration of buffer areas and building setbacks may be allowed for water-dependent and water-related activities and for

other property development authorized by the Shoreline Master Program, through an HMP, shoreline exemptions, standards for existing (nonconforming) development, and shoreline variances; provided, however, in each instance mitigation shall be required to replace affected functions and values within the affected zone.

b. "Minimum building setback" is the required horizontal distance between the finished exterior wall of a structure and the edge of the critical area of the lot on which the structure is located. All portions of a structure must be located away from the critical area edge or shoreline buffer edge, whichever is greater, a distance equal to or greater than the minimum setback. Uses not requiring a permit defined in the City Building Code may be permitted in the setback if the Director determines that such intrusions will not adversely impact the fish and wildlife habitat conservation area and other required SMZ setbacks are adhered to, or prescribes a plan to replace affected functions and values within the affected area.

6. Habitat Conservation Area Buffers. Habitat conservation area buffers shall be shown on the development site plans or final plat maps along with the notation requirements identified in this chapter.

   a. If an existing property has a previously delineated and approved fish and wildlife habitat conservation area and associated buffer by the City, the approved conservation area and buffer may remain in effect. Redevelopment, and/or additions outside of the existing footprint shall be subject to the previously approved buffer; however, a buffer enhancement plan may be required in accordance if the habitat buffer area has become degraded or is currently not functioning or if the habitat area and/or buffer may be negatively affected by proposed new development. If, according to the buffer enhancement plan, additional buffer mitigation is not sufficient to protect the habitat, the City may require larger buffers where it is necessary to protect habitat functions based on site-specific characteristics.

7. Class I Fish and Wildlife Conservation Areas: All development as described within this chapter or within 200 feet of designated Class I wildlife conservation areas shall adhere to the following standards:

   a. All sites with known locations of Class I fish and wildlife conservation areas or sites within 200 feet to known locations of Class I fish and wildlife conservation areas will require, for all development permits, the submittal and approval of a habitat management plan (HMP) as specified in section C.1 above. In the case of bald eagles, an approved bald eagle management plan by the Washington State Department of Fish and Wildlife, meeting the requirements and guidelines of the bald eagle protection rules (WAC 232-12-292), as now or hereafter amended shall satisfy the requirements for an HMP. The requirement for an HMP shall be determined during the State Environmental Policy Act (SEPA) environmental review on the project. No project falling within a Class I fish and wildlife habitat conservation area shall be exempt from SEPA-compliant environmental review.

b. All new development within 200 feet of habitat elements within which Class I fish and wildlife have a critical habitat may require the submittal of an HMP as specified in section C.1 above. The requirement for an HMP shall be determined during the SEPA-compliant environmental review of the project.

8. Class II Fish and Wildlife Conservation Area: All new development within Class II fish and wildlife conservation areas may require the submittal of an HMP as specified in section C.1 above if the Director determines that the activity is within a critical distance of a protected species for an activity which the species has a primary association. An HMP shall consider measures to retain and protect the wildlife habitat and shall consider effects of land use intensity, buffers, setbacks, impervious surfaces, erosion control and retention of native vegetation. The requirement for an HMP shall be determined during the SEPA/critical areas review on the project. No project falling within a Class II fish and wildlife habitat conservation area shall be exempt from SEPA review.

Table A, Wildlife Habitat Conservation Areas	
Class I	All developments within 200 ft. of a designated Class I wildlife habitat conservation area shall have buffer widths determined by a mandatory wildlife habitat management plan.
Class II	All development within a Class II wildlife habitat conservation area shall have the buffer widths be determined by the SEPA/critical area review on the project and may require a habitat management plan.

9. Other Allowed Uses in Fish and Wildlife Habitat Conservation Areas: Other activities may be allowed using the standard for a Category II wetland buffer.

D. PERFORMANCE STANDARDS – STREAMS:

1. The purposes of the stream regulations are to:

   a. Protect riparian habitat to provide bank and channel stability; sustained water supply; flood storage; recruitment of woody debris; leaf litter; nutrients; sediment and pollutant filtering; shade; shelter; and other functions that are important to both fish and wildlife; and,

   b. Prevent the loss of riparian acreage and functions and strive to achieve properly functioning conditions within a given stream segment where feasible; and,

   c. Designate and protect aquatic habitat for salmonid species; and,

   d. Give special attention to the protection or enhancement of anadromous fish.

2. Stream Studies:

   a. When Standard Stream Study Is Required: Subject to the provisions below, the applicant or project sponsors for activities requiring City approval shall be required to conduct a Standard Stream Study per MVMC 15.40.120(E) if a site contains a regulated stream or the project area is within 200 feet of a stream even

if the stream is not located on the subject property. Such a report shall be prepared by a certified professional at the applicant's expense.

b. When Supplemental Stream Study is Required: The applicant shall be required to conduct a Supplemental Stream Study per MVMC 15.40.120(F) if a site contains a stream or riparian management zone and alterations of the stream or alterations to management zones are proposed, either administratively or via a variance request. Such a report shall be prepared by a certified professional at the applicant's expense.

c. When Stream Mitigation Plan is Required: The applicant shall be required to conduct a Stream Mitigation Plan per MVMC 15.40.120(H) if impacts are identified within a Supplemental Stream Study. Such a report shall be prepared by a certified professional at the applicant's expense. The approval of the Mitigation Plan by the Director shall be based on the criteria located in MVMC 15.40.040, 15.40 ~~080,~~ .110, and 15.40.120(H).

d. Studies Waived:

i. Standard Stream Study: May only be waived by the Director when the applicant provides satisfactory evidence that:

(a) A public road, building or other long-term barrier exists between the stream and the proposed development activity; or,

(b) The stream or riparian management zone does not intrude on the applicant's property, and based on evidence submitted, the proposal will not result in significant adverse impacts to nearby streams regulated under this Chapter; or ,

(c) Applicable data and analysis appropriate to the project proposed exists and an additional study is not necessary.

ii. Supplemental Stream Study or Stream Mitigation Plan: May only be waived by the Director when applicable data and analysis appropriate to the project proposed exists and an additional report is not necessary.

e. Period of Validity for Stream Studies: Studies submitted and reviewed are valid for up to five (5) years from date of study completion as approved by the City, unless the Director determines that conditions have changed significantly and a new or amended study is required.

3. Stream Buffer Measurement. Streams shall be classified according to the stream type system as provided in WAC 222-16-031, Interim water typing system. Stream buffer areas are defined by these classifications, as shown in Table B of this section. Buffers shall be measured from the ordinary high water mark (OHWM) or from the top of the bank when the OHWM cannot be identified. The buffer width shall be increased to include streamside wetlands, which provide overflow storage for stormwater, feed water back to the stream during low flows, or provide shelter and food for fish. In braided channels, the OHWM or top of bank shall be defined so as to include the entire stream feature.

Table B, Water Type Standard Buffer Widths			
Water Types	Attributes	Minimum Building Setback	Buffer Width Standard
F	Fish habitat waters	15 feet beyond buffer	150 feet
Np	Year-round, non-fish habitat	15 feet beyond buffer	50 feet
Ns	Seasonal, non-fish habitat	15 feet beyond buffer	35 feet

4. Buffer Conditions. Where existing buffer area plantings provide minimal vegetative cover and cannot meet the City's water quality standards or provide habitat functions (per the requirements of the Departments of Ecology and Fish and Wildlife), buffer enhancement shall be required. An increase in buffer width onsite or restoration of existing buffer required under this section shall be directed to modifications reasonably necessary to mitigate impacts created by the proposed development and roughly proportional to the scope and scale of the impacts created by the proposed development. Where buffer enhancement is required, a plan shall be prepared that includes plant densities that are in conformance with the recommendations in the CAO Guidebook. Monitoring and maintenance of plants shall be required in accordance with 15.40.120(H), Mitigation and Monitoring Plans. Existing buffer vegetation is considered "inadequate" and will require enhancement through additional native plantings and removal of nonnative plants when:
   a. Nonnative or invasive plant species provide the dominant cover;
   b. Vegetation is lacking due to disturbance and marine, stream, or habitat resources could be adversely affected; or,
   c. Enhancement plantings in the buffer could significantly improve buffer functions.
5. Buffer Averaging. Buffer widths may be modified by averaging, as long as the total area contained within the buffer after averaging is no less than the required buffer prior to averaging, and as set forth below. A buffer enhancement plan shall be required for any request for buffer averaging. The enhancement plan shall be similar to a mitigation plan, and include provisions for mitigation monitoring and contingency plans. Buffer width averaging shall be allowed only where the applicant demonstrates, through a report prepared by a qualified biologist or habitat specialist with five years experience, that:
   a. Buffer averaging is necessary to avoid a hardship caused by circumstances related to the property;
   b. The habitat contains variations in sensitivity due to existing physical characteristics, or the buffer varies in characteristics and it would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;

c. Lower intensity land uses would be located adjacent to areas where the buffer width is reduced;

d. The widest portion of the buffer shall be the area where the habitat is most sensitive;

e. Buffer width averaging will not adversely impact fish and wildlife habitat conservation areas; and,

f. The buffer width may be reduced by 35 percent of the standard buffer, but not less than 35 feet unless provided for by a habitat management plan.

6. Buffer Reduction. Buffers and associated building setbacks may be reduced where the applicant demonstrates through an approved HMP, relying on best available science and prepared by a qualified specialist with five years experience, that through buffer enhancement the smaller buffer would provide equal or better protection than the larger buffer. Enhancement techniques can include, but are not limited to:

a. Planting of native trees or shrubs, increasing the diversity of plant cover types, replacing exotic species with native species, or reestablishing fish areas adjacent to a marine shoreline or stream where one currently does not exist will result in improved function of the fish habitat;

b. Fish barrier removal to restore accessibility to resident or anadromous fish;

c. Fish habitat enhancement using log structures incorporated as part of a fish habitat enhancement plan;

d. Stream and/or retention/detention pond improvements:

i. Removal or modification of existing stream culverts (such as at road crossings) to improve fish passage and flow capabilities, or

ii. Upgrade of retention/detention facilities or other drainage facilities beyond required levels to provide a more naturalized habitat.

e. Removal of existing bulkheads to improve fish spawning and habitat areas;

f. Daylighting a stream that was previously culverted or piped, or daylighting box culverts or trestles.

E. STANDARD MITIGATION REQUIREMENTS AND CRITERIA:

1. The applicant shall avoid all impacts that degrade the functions and values of a critical area or areas. Unless otherwise provided herein, if alteration to the critical area is unavoidable, all adverse impacts to or from critical areas and buffers resulting from a development proposal or alteration shall be mitigated using the best available science in accordance with an approved habitat management plan and SEPA documents, so as to result in no net loss of critical area functions and values.

2. Mitigation shall be in-kind and on-site, when possible, and sufficient to maintain the functions and values of the critical area, and to prevent risk from a hazard posed by a critical area.

3. Mitigation shall not be implemented until after the City's approval of an HMP that includes a mitigation plan and mitigation shall be in accordance with the provisions of the approved HMP.
4. Mitigation Sequencing: Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized, or compensated for in the following sequential order of preference:
    a. Avoiding the impact altogether by not taking a certain action or parts of an action;
    b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
    c. Rectifying the impact to habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;
    d. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
    e. Compensating for the impact to habitat conservation areas by replacing, enhancing, or providing substitute resources or environments;
    f. Monitoring the hazard or other required mitigation and taking remedial action when necessary; and,
    g. Mitigation for individual actions may include a combination of the above measures.
5. Mitigation Plan: Mitigation Plans required under this section shall be prepared in conformance to the guidelines in Chapter 15.40.120(H).
6. Innovative Mitigation:
    a. The City may encourage, facilitate, and approve innovative mitigation projects that are based on the best available science. Advance mitigation or mitigation banking are examples of alternative mitigation projects allowed under the provisions of this section wherein a group of one or more applicants or an organization with demonstrated capability may undertake a mitigation project together if it is demonstrated that all of the following circumstances exist:
        i. Creation or enhancement of a larger system of critical areas and open space is preferable to the preservation of many individual habitat areas;
        ii. The group or organization demonstrates the organizational and fiscal capability to act cooperatively;
        iii. The group or organization demonstrates that long-term management of the habitat area will be provided; and,
        iv. There is a clear potential for success of the proposed mitigation at the identified mitigation site.

X. MAPS

A. The city's critical area reference maps are listed below as reference points only. The maps may be superseded by information generated as described in subsection B of this section.

1. Aquifer Recharge Areas: Plate 7 Land Cover Class/LandSAT Image 1998 in the City of Mount Vernon Draft Issue and Options: Critical Areas Regulations Update, by Jones and Stokes, March 2004.

2. Geologic Hazard Areas.

a. Plate 4. Surficial Geology, in the City of Mount Vernon Draft Issue and Options: Critical Areas Regulations Update, by Jones and Stokes, March 2004 (based upon Washington State Department of Natural Resources data).

b. Plate 5. Steep Slopes and Alluvium, in the City of Mount Vernon Draft Issue and Options: Critical Areas Regulations Update, by Jones and Stokes, March 2004 (based on a topographic map, an unpublished master's thesis, and the Skagit County Alluvial Fan Study Orthophoto Maps).

c. Plate 6. Soil Liquefaction Potential, in the City of Mount Vernon Draft Issue and Options: Critical Areas Regulations Update, by Jones and Stokes, March 2004 (based on Washington State Department of Natural Resources data, Hazard Mitigation Grant Program).

3. Habitat Conservation Areas. State of Washington Department of Fish and Wildlife, Priority Habitats and Species (PHS) Maps and Digital Data.

4. Streams.

a. Inventory and Evaluation of Streams and Riparian Habitats of Mount Vernon, Washington, by Shannon and Wilson, Inc., 2003.

b. For areas unaddressed by the mapping in D.1, Washington State Department of Natural Resources, Water Typing Maps.

5. Wetlands.

a. Wetland and Stream Inventory, City of Mount Vernon and Urban Growth Area, by Shannon and Wilson, January 2000.

b. National Wetland Inventory Maps, U.S. Department of the Interior.

B. The exact boundary of each critical area depicted on maps referenced herein is approximate and is intended only to provide an indication of the presence of a critical area on a particular site. It is recognized that not all critical areas are mapped. The lack of inclusion of a critical area on a map shall not relieve an applicant, project sponsor, or property owner from compliance with these critical area regulations. The inclusion of a critical area on the city maps shall be advisory, and if critical areas are not in fact present, the maps may be amended upon city acceptance of

reclassification requests or new data in accordance with any specific procedures or criteria herein. The applicability of these regulations shall be based upon the classification criteria for each critical area and the actual presence of critical areas on or in the vicinity of subject properties.

XI. DEFINITIONS

A. Land Cover Definitions.

"Aquatic areas" means areas classified as regulated streams and regulated wetlands.

"Impervious surfaces" means:

1. For the purposes of the stream and wetland regulations: a hard surface area that either prevents or retards the infiltration of water into the soil and movement of water through soil media. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, lawns, and oiled, macadam or other surfaces which impede the natural infiltration and movement of water. When such surfaces supported a permitted use on or before January 1, 2007, they shall be considered impervious surfaces. Earthwork (e.g., grading, filling, clearing preparatory to new development) does not create impervious surface.

2. For the purposes of aquifer protection regulations:

a. Impervious surfaces include those that have a lesser permeability than the undisturbed native soil, as indicated in Table 14 of the Soil Survey of Skagit County Area, Washington (USDA Soil Conservation Service, 1989).

b. Effective impervious surfaces are those impervious surfaces that are connected via sheet flow or discrete conveyance to a drainage system. Impervious surfaces on residential development sites are considered ineffective if the runoff is dispersed in accordance with "Full Dispersion" measures as described in the applicable sections of the Washington State Department of Ecology's Stormwater Manual adopted within this chapter under MVMC 15.40.030(F)(2), or an equivalent manual as determined by the director.

"Pervious surfaces" means vegetated areas that do not meet the definition of tree cover.

"Tree cover" means the area of cover provided by conifer or hardwood tree(s) greater than four inches dbh (diameter at breast height). Tree cover excludes the portion of the canopy that overlies impervious surface areas.

B. General Definitions.

"Activities, development" means the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any structure; any mining, excavation, landfill or land disturbance; division of a parcel of land into two or more parcels; and any use or extension of the use of land.

"Alluvial fan hazard" means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths.

"Alteration" means any human induced change in an existing condition of a critical area or its management zone or buffer. Alterations include, but are not limited to, grading, filling, channelizing, dredging, clearing (vegetation), construction, compaction, excavation, drainage or dewatering, or any other activity that changes the character of the critical area.

"Aquifer" means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

"Artificial channel" means a stream channel that is entirely constructed, but does not include relocated natural channels. Except where fish bearing, an artificial channel is not a critical area.

"Best management practices (BMPs)" means conservation practices or systems of practices and management measures that:

1. Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, and sediment;

2. Minimize adverse impacts to surface water and groundwater flow and circulation patterns and to the chemical, physical, and biological characteristics of wetlands;

3. Protect trees and vegetation designated to be retained during and following site construction and use native plant species appropriate to the site for revegetation of disturbed areas; and

4. Provide standards for proper use of chemical herbicides within critical areas.

"Buffer" means an area that is contiguous to and protects a critical area that is required for the continued maintenance, functioning, and/or structural stability of a critical area.

"Certified professional" means any person with the education, experience, and/or professional certification or licenses in a specialized field of study appropriate to the studies and analysis required, such as a wildlife biologist, hydrologist, hydrogeologist, wetland biologist, geotechnical engineer, or specialists in other disciplines.

"Critical areas" means wetlands, aquifer protection areas, fish and wildlife habitat, and frequently flooded and geologically hazardous areas as defined by the Growth Management Act.

"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 response installations, and installations that produce, use, or store hazardous materials or hazardous waste.

"DBH" means diameter breast height, which means the outside bark diameter at breast height. Breast height is defined as four and one-half feet (1.37 meters) above the ground on the uphill side of the tree.

"Development permit" means written permission, after appropriate review for type of application, from the appropriate decision-maker authorizing the division of a parcel of land, the construction, reconstruction, conversion, structural alteration, relocation or enlargement of any structure, utility, or any use or extension of the use of the land.

"Director" means the director of community and economic development for the city of Mount Vernon, or his/her designee.

"Drainage collection system" means a system for conveying, treating and detaining storm water runoff swales, ponds, and outfalls.

"Emergency" means an action that must be undertaken immediately or within a time frame too short to allow full compliance with this chapter, to avoid an immediate threat to public health or safety, to prevent an imminent danger to public or private property, or to prevent an imminent threat of serious environmental degradation.

"Fish and wildlife habitat conservation areas" are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; and areas with high relative population density or species richness. Counties and cities may also designate locally important habitats and species. "Habitats of local importance" designated as fish and wildlife habitat conservation areas include those areas found to be locally important by counties and cities. "Fish and wildlife habitat conservation areas" does not include such artificial features or constructs as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of, and are maintained by, a port district or an irrigation district or company.

"Forested area" means a treed area that functions, or which over time will be restored to function, as a mature forest characterized by an undisturbed understory.

"Geologically hazardous areas" means areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological events, 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 be at risk, but may also increase the hazard to surrounding development and use. Areas susceptible to one or more of the following types of hazards shall be designated as a geologically hazardous area:

1. Erosion hazard;

2. Liquefaction;

3. Landslide hazard;

4. Seismic hazard;

5. Volcanic hazard; and

6. Alluvial fan hazard.

"Innovative site design" means development techniques using creative approaches to site design, habitat and tree retention, significant reduction of impervious surfaces, and changes in traditional site features such as roads and structures in favor of natural habitat features that result in zero or near-zero drainage discharge from the site after development.

"Intermittent" means water is not present in the channel year round during years of normal or above normal rainfall.

"Normal rainfall" means rainfall that is at the mean or within one standard deviation of the mean of the accumulated annual rainfall record, based upon the water year for Skagit County as recorded at the Burlington/Mount Vernon, Skagit Regional Airport, Washington, United States.

"Ordinary high water mark" means, on lakes and streams, a mark 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 as of the effective date of regulations, as it may naturally change thereafter, or as it may change in accordance with permits issued by the city or state. Where the ordinary high water mark cannot be found, it shall be the stage of the 50 percent exceedance flow, according to the period of record of a measured or synthetic hydrograph. For braided streams, the ordinary high water mark is found on the banks forming the outer limits of the depression within which the braiding occurs.

"Perennial" means water that flows continuously.

"Primary association area" means the area used on a regular basis by, is in close association with, or is necessary for the proper functioning of, the habitat of a critical species. "Regular basis" means that the habitat area normally contains or is usually known to contain a critical species or, based on known habitat requirements of the species, the area is likely to contain the critical species. Regular basis is species and population dependent. Species that exist in low numbers may be present infrequently yet rely on certain habitat types.

"Priority habitat" means habitat type or elements with unique or significant value to one or more species as classified by the State Department of Fish and Wildlife. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element.

"Regulated activity" means all activities located within a regulated critical area or critical area buffer/management zone.

"Riparian area" means the upland area immediately adjacent to and paralleling a body of water, usually composed of trees, shrubs and other plants. Riparian functions include bank and channel stability, sustained water supply, flood storage, recruitment of woody debris, leaf litter, nutrients, sediment and pollutant filtering, shade, shelter, and other functions that are important to both fish and wildlife.

"Salmonid migration barrier" means an in-stream blockage that consists of a natural drop (no human influence) with an uninterrupted slope greater than 100 percent (45-degree angle) and a

height in excess of 11 vertical feet within anadromous salmon-bearing waters or a height in excess of three vertical feet within resident trout-only bearing waters. Constructed barriers to salmonid migration (e.g., culverts, weirs, etc.) shall be considered barriers to salmonid migration by this definition only if they were lawfully installed, present a complete barrier to salmonid passage based on hydraulic drop, water velocity, water depth, or any other feature that would prevent all salmonids from passing upstream; and in the opinion of the city reviewing official cannot be modified to provide salmonid passage without resulting in any of the following conditions:

1. Significant impacts to other environmental resources;

2. Significant impacts to major transportation and utility systems, or to the public health and safety;

3. Significant expense. For the purposes of this definition "significant expense" means a cost equal to or greater than 50 percent of the combined value of the proposed site buildings, structures, and/or site improvements, and existing buildings, structures, and/or site improvements to be retained.

"Species, priority" means any fish or wildlife species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels as classified by the Washington Department of Fish and Wildlife, including endangered, threatened, sensitive, candidate, and monitor species, and those of recreational, commercial, or tribal importance.

"Steep slopes" means slopes greater than 40 percent.

"Stream" means an area where surface waters flow sufficiently to produce a defined channel or bed. A defined channel or bed is an area that demonstrates clear evidence of the passage of water and includes, but is not limited to, bedrock channels, gravel beds, sand and silt beds, and defined channel swales. The channel or bed need not contain water year-round. This definition is not meant to include irrigation ditches, canals, storm or surface water runoff devices or other entirely artificial watercourses unless they are used by salmonids or used to convey streams that were naturally occurring prior to construction of such watercourses.

"Utilities" means utility lines and facilities related to the provision, distribution, collection, transmission or disposal of water, storm and sanitary sewage, oil, gas, power, telephone, and cable.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or

highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

C. Report Content Requirements.

1. Geotechnical Study. A study prepared in accordance with generally accepted geotechnical practices and stamped by a professional engineer licensed in the state of Washington that includes soils and slope stability analysis, boring and test pit logs, and recommendations on slope setbacks, foundation design, retaining wall design, material selection, and all other pertinent elements. If the evaluation involves geologic evaluations or interpretations, the report shall be reviewed and approved by a geologist. Further recommendations, additions or exceptions to the original report based on the plans, site conditions, or other supporting data shall be signed and sealed by the geotechnical engineer. If the geotechnical engineer who reviews the plans and specifications is not the same engineer who prepared the geotechnical report, the new engineer shall, in a letter to the city accompanying the plans and specifications, express his or her agreement or disagreement with the recommendations in the geotechnical report and state that the plans and specifications conform to his or her recommendations. The preparation and content requirements in Table 15.40.120(A), Geotechnical Report – Detailed Requirements, shall also apply.

2. Habitat/Wildlife Assessment. A report prepared by a qualified fish and wildlife biologist with experience assessing the relevant species and habitats and including, at a minimum, the following requirements:

a. Site plan prepared in accordance with the requirements of the community and economic development department indicating all habitat conservation areas falling within 200 feet of the subject property;

b. Project narrative describing the proposal including, but not limited to, associated grading and filling, structures, utilities, adjacent land uses, description of vegetation both within and adjacent to the habitat conservation area, and when deemed necessary by the director, surface and subsurface hydrologic analysis;

c. Impact analysis identifying and documenting the presence of all habitat conservation areas and discussing the project's effects on the habitat conservation areas;

d. Regulatory analysis including a discussion of any federal, state, tribal, and/or local requirements or special management recommendations that have been developed for species and/or habitats located on the site;

e. Mitigation report including a discussion of proposed measures for mitigating adverse impacts of the project and an evaluation of their potential effectiveness. Measures may include, but are not limited to, establishment of buffer zones, preservation of critically important plants and trees, limitation of access to habitat areas, seasonal restrictions of construction activities, establishment of a timetable for periodic review of the plan and/or establishment of performance or maintenance bonds;

f. Management and maintenance practices including a discussion of ongoing maintenance practices that will assure protection of all fish and wildlife habitat

conservation areas on site after the project has been completed. This section should include a discussion of proposed monitoring criteria, methods and schedule.

3. Hydrogeologic Study. A report shall be prepared as follows:

a. The study shall be prepared by, or under the direction of, and signed by, a licensed hydrogeologist pursuant to Chapter 308-15 WAC.

b. Phase I Report Requirements. A Phase I reconnaissance level hydrogeologic report shall summarize existing information about the basic site hydrogeologic conditions such as soil types, land cover, likely groundwater flow directions and receiving waters, and which low impact development management practices will be implemented consistent with the Low Impact Development Technical Guidance Manual for Puget Sound, January 2005, or an equivalent manual as determined by the director.

c. Phase II Report Requirements. This report shall include:

i. A description of the geology and groundwater in the proposed permit area and adjacent areas down to and including the lowest aquifer that may be affected by the facility, including the following:

(A) The results of a sufficient number of test borings and core borings to accurately characterize geology, soils, groundwater flow, groundwater chemistry and flow systems of the proposed permit area and adjacent area, which shall be at least three test borings. The applicant shall include the actual surface elevations of the drill holes.

(B) The stratigraphy, lithologic, and physical characteristics and thickness of each stratum, including the location and depth of aquifers.

(C) The hydrologic characteristics of each aquifer described in subsection (C)(3)(c)(i)(B) of this section, including field test data for hydraulic conductivity, storage coefficient and transmissivity, groundwater hydraulic gradient and velocity. The description of these characteristics shall be based on multiple well aquifer tests if required by the city. The application shall include the procedures and calculations used to determine these characteristics.

(D) The geologic structure within the proposed permit area and adjacent area, and its relation to the regional geological structure.

(E) The aquifer characteristics necessary to accurately describe three-dimensional groundwater flow through the proposed permit area and adjacent area, including storage and discharge characteristics.

4. Stream Study, Standard. A report shall be prepared by a qualified professional, unless otherwise determined by the director, and include the following information:

a. Site Map. Site map(s) indicating, at a scale no smaller than one inch equals 20 feet (unless otherwise approved by the director):

i. The entire parcel of land owned by the applicant, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

ii. The ordinary high water mark (OHWM) determined in the field by a certified professional (the OHWM must also be flagged in the field);

iii. Stream classification, as recorded in city inventories (if unclassified, see subsection (C)(5)(a) of this section);

iv. Topography of the site and abutting lands in relation to the stream(s) and its/their management zone(s) at contour intervals of two feet where slopes are less than 10 percent, and of five feet where slopes are 10 percent or greater;

v. One-hundred-year floodplain and floodway boundaries, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

vi. Site drainage patterns, using arrows to indicate the direction of major drainage flow;

vii. Top view and typical cross-section views of the stream, banks, and management zones to scale;

viii. The vegetative cover of the entire site, including the stream or lake, banks, riparian area, and/or abutting wetland areas, extending 100 feet upstream and downstream from the property line. Include position, species, and size of all trees at least four inches dbh that are within the inner and outer riparian management zone;

ix. The location, width, depth, and length of all existing and proposed structures, roads, storm water management facilities, wastewater treatment and installations in relation to the stream/lake and its/their management zones; and

x. Location of site access, ingress, and egress.

b. Grading Plan. A grading plan prepared in accordance with MVMC and Mount Vernon engineering standards and as required by staff through the preapplication review process, and showing contour intervals of two feet where slopes are less than 10 percent, and of five feet where slopes are 10 percent or greater.

c. Stream Assessment Narrative. A narrative report shall be prepared to accompany the site plan that describes:

i. The stream classification as recorded in city inventories;

ii. The vegetative cover of the site, including the stream or lake, banks, riparian area, wetland areas, and flood hazard areas extending 100 feet upstream and downstream from the property line;

iii. The ecological functions currently provided by the stream/lake and existing riparian area;

iv. Observed or reported fish and wildlife that make use of the area including, but not limited to, salmonids, mammals, and bird nesting, breeding, and feeding/foraging areas; and

v. Measures to protect trees and vegetation.

5. Stream Study, Supplemental. The application shall include the following information:

a. Unclassified Stream Assessment. If the site contains an unclassified stream, a certified professional shall provide a proposed classification of the stream(s) based on the city's adopted rating system in MVMC 15.40.090(C)(1) and a rationale for the proposed rating.

b. Alterations to Stream and/or Management Zones. A supplemental report prepared by a certified professional shall evaluate alternative methods of developing the property using the following criteria for justification:

i. Avoid any disturbances to the stream or management zone;

ii. Minimize any stream or management zone impacts;

iii. Compensate for any stream or management zone impacts;

iv. Restore any stream or management zone area impacted or lost temporarily;

v. Enhance degraded stream habitat to compensate for lost functions and values.

c. Impact Evaluation.

i. An impact evaluation for any unavoidable impacts prepared by a certified professional, to include:

(A) Identification, by characteristics and quantity, of the resources (stream, lake) and corresponding functional values found on the site;

(B) Evaluation of alternative locations, design modifications, or alternative methods of development to determine which option(s) reduce(s) the impacts on the identified resource(s) and functional values of the site;

(C) Determination of the alternative that best meets the applicable approval criteria and identify significant detrimental impacts that are unavoidable; and

(D) To the extent that the site resources and functional values are part of a larger natural system such as a watershed, the evaluation must also consider the cumulative impacts on that system.

ii. For a violation, the impact evaluation must also include:

(A) Description, by characteristics and quantity, of the resource(s) and functional values, on the site prior to the violations, including, but not limited to: shade/temperature regulation, input of organic material and nutrients,

contribution of large woody debris (LWD), improvements to water quality, bank stabilization, wildlife habitat, microclimate, and groundwater; and

(B) Determination of the impact of the violation on the resource(s) and functional values.

6. Stream Mitigation Plan. The mitigation plan must ensure compensation for unavoidable significant adverse impacts that result from the chosen development alternative or from a violation as identified in the impact evaluation. A mitigation plan must include:

a. Site Map. Site map(s) indicating, at a scale no smaller than one inch equals 20 feet (unless otherwise approved by the director):

i. The entire parcel of land owned by the applicant, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

ii. The ordinary high water mark (OHWM) determined in the field by a certified professional (the OHWM must also be flagged in the field);

iii. Stream classification, as recorded in city inventories or as determined through a supplemental stream study approved by the director;

iv. Topography of the site and abutting lands in relation to the stream(s) and its/their management zones at contour intervals of two feet where slopes are less than 10 percent, and of five feet where slopes are 10 percent or greater;

v. One-hundred-year floodplain and floodway boundaries, including 100 feet of the abutting parcels through which the water body(ies) flow(s);

vi. Site drainage patterns, using arrows to indicate the direction of major drainage flow;

vii. Top view and typical cross-section views of the stream, banks, and management zones to scale;

viii. The vegetative cover of the entire site, including the stream or lake, banks, riparian area, and/or abutting wetland areas, extending 100 feet upstream and downstream from the property line. Include position, species, and size of all trees at least four inches dbh that are within the inner and outer riparian management zones;

ix. The location, width, depth, and length of all existing and proposed structures, roads, storm water management facilities, wastewater treatment and installations in relation to the stream/lake and its/their management zones;

x. Location of site access, ingress and egress;

xi. Indication of where proposed mitigation or remediation measures will take place on the site;

xii. Separate indication of areas where revegetation is to take place and areas where vegetation is anticipated to be removed; and

xiii. Any other areas of impact with clear indication of type and extent of impact indicated on site plan.

b. Mitigation narrative that includes the following elements:

i. Description of existing conditions on the site and associated water resource (baseline information);

ii. Resource(s) and functional values to be restored, created, or enhanced on the mitigation site(s);

iii. Documentation of coordination with appropriate local, regional, special district, state, and federal regulatory agencies;

iv. Construction schedule;

v. Operations and maintenance practices for protection and maintenance of the site;

vi. Environmental goals, objectives, and performance standards to be achieved by mitigation;

vii. Monitoring and evaluation procedures for a three-year period minimum, including minimum monitoring standards and timelines (i.e., annual, semi-annual, quarterly);

viii. Contingency plan with remedial actions for unsuccessful mitigation;

ix. Cost estimates for implementation of mitigation plan for purposes of calculating surety device;

x. Discussion of compliance with approval criteria; and

xi. A review of the best available science supporting the proposed request for a reduced standard and/or the method of impact mitigation; a description of the report author's experience to date in restoring or creating the type of critical area proposed; and an analysis of the likelihood of success of the compensation project.

7. Wetland Assessment. A wetland assessment includes the following:

a. A description of the project and maps at a scale no smaller than one inch equals 200 feet showing the entire parcel of land owned by the applicant and the wetland boundary delineated by a qualified wetlands ecologist, and pursuant to MVMC 15.40.040;

b. A description of the vegetative cover of the wetland and adjacent area including identification of the dominant plant and animal species, consistent with published delineation standards (Corps of Engineers delineation manual, 1987; Corps of Engineers Regional Supplement, 2010). Copies of the wetland delineation data sheets and rating forms should be included as an appendix to the wetland assessment;

c. A site plan for the proposed activity at a scale no smaller than one inch equals 200 feet showing the location, width, depth and length of all existing and proposed structures, roads, storm water management facilities, sewage treatment and installations within the wetland and its buffer;

d. The exact locations and specifications for all activities associated with site development including the type, extent and method of operations;

e. Elevations of the site and adjacent lands within the wetland and its buffer at contour intervals of no greater than five feet or at a contour interval appropriate to the site topography and acceptable to the city;

f. Top view and typical cross-section views of the wetland and its buffer to scale;

g. The purposes of the project and, if a variance is being requested, an explanation of why the proposed activity cannot be located at another site; and

h. If wetland mitigation is proposed, a mitigation plan that includes baseline information, an identification of direct and indirect impacts of the project to the wetland area and wetland functions, environmental goals and objectives, performance standards, construction plans, a monitoring program, and a contingency plan.

i. Alternative Methods of Development. If wetland changes are proposed, the applicant shall evaluate alternative methods of developing the property using the following criteria in this order:

i. Avoid any disturbances to the wetland or buffer;

ii. Minimize any wetland or buffer impacts;

iii. Compensate for any wetland or buffer impacts;

iv. Restore any wetlands or buffer impacted or lost temporarily;

v. Create new wetlands and buffers for those lost; and

vi. In addition to restoring a wetland or creating a wetland, enhance an existing degraded wetland to compensate for lost functions and values.

This evaluation shall be submitted to the director. Any proposed alteration of wetlands shall be evaluated by the director using the above hierarchy.

j. Such other information as may be needed by the city, including but not limited to an assessment of wetland functional characteristics, including a discussion of the methodology used; a study of hazards if present on site, the effect of any protective measures that might be taken to reduce such hazards; and any other information deemed necessary to verify compliance with the provisions of this section.

8. Wetland Mitigation Plan – Preliminary. A preliminary wetland mitigation plan shall include the following:

a. A conceptual site plan demonstrating sufficient area for replacement ratios;

b. Proposed planting scheme for created, restored, and enhanced wetlands; and

c. Written report consistent with final wetland mitigation plan requirements regarding baseline information, environmental goals and objectives, and performance standards.

9. Wetland Mitigation Plan – Final. A final wetland mitigation plan shall include:

a. Baseline Information. A written assessment and accompanying maps of the impacted wetland including, at a minimum, a wetland delineation by a qualified wetland specialist; existing wetland acreage; vegetative, faunal, and hydrologic characteristics; an identification of direct and indirect impacts of the project to the wetland area and wetland functions; soil and substrata conditions; topographic elevations and compensation site. If the mitigation site is different from the impacted wetland site, the assessment should include at a minimum: existing acreage; vegetative, faunal, and hydrologic conditions; relationship within the watershed and to existing water bodies; soil and substrata conditions, topographic elevations; existing and proposed adjacent site conditions; buffers; and ownership.

b. Environmental Goals and Objectives. A written report by a qualified wetland specialist shall be provided identifying goals and objectives of the mitigation plan and describing:

i. The purposes of the compensation measures including a description of site selection criteria, identification of compensation goals, identification of target evaluation species and resource functions, dates for beginning and completion, and a complete description of the structure and functional relationships sought in the new wetland. The goals and objectives shall be related to the functions and values of the original wetland or, if out-of-kind, the type of wetland to be emulated; and

ii. A review of the best available science and report author's experience to date in restoring or creating the type of wetland proposed shall be provided. An analysis of the likelihood of success of the compensation project at duplicating the original wetland shall be provided based on the experiences of comparable projects, preferably those in the same drainage basins, if any. An analysis of the likelihood of persistence of the created or restored wetland shall be provided based on such factors as surface and groundwater supply and flow patterns, dynamics of the wetland ecosystem, sediment or pollutant influx and/or erosion, periodic flooding and drought, etc., presence of invasive flora or fauna, potential human or animal disturbance, and previous comparable projects, if any.

c. Performance Standards. Specific criteria shall be provided for evaluating whether or not the goals and objectives of the project are achieved and for beginning remedial action or contingency measures. Such criteria may include water quality standards, survival rates of planted vegetation, species abundance and diversity targets, habitat diversity indices, or other ecological, geological or hydrological criteria. These criteria will be evaluated and reported pursuant to subsection (C)(9)(e) of this section,

Monitoring Program. An assessment of the project's success in achieving the goals and objectives of the mitigation plan should be included along with an evaluation of the need for remedial action or contingency measures.

d. Detailed Techniques and Plans. Written specifications and descriptions of compensation techniques shall be provided including the proposed construction sequence; grading and excavation details; erosion and sediment control features needed for wetland construction and long-term survival; a planting plan specifying plant species, quantities, locations, size, spacing, and density; source of plant materials, propagates, or seeds; water and nutrient requirements for planting; where appropriate, measures to protect plants from predation; specification of substrata stockpiling techniques and planting instructions; descriptions of water control structures and water level maintenance practices needed to achieve the necessary hydroperiod characteristics, etc. These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, and topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome. The plan shall provide for elevations that are appropriate for the desired habitat type(s) and that provide sufficient hydrologic data. The city may request such other information as needed to determine the adequacy of a mitigation plan.

e. Monitoring Program. A program outlining the approach for monitoring construction and development of the compensation project and for assessing a completed project shall be provided in the mitigation plan. Monitoring may include, but is not limited to:

i. Establishing vegetation plots to track changes in plant species composition and density over time;

ii. Using photo stations to evaluate vegetation community response;

iii. Sampling surface and subsurface waters to determine pollutant loading, and changes from the natural variability of background conditions (pH, nutrients, heavy metals);

iv. Measuring base flow rates and storm water runoff to model and evaluate hydrologic and water quality predictions;

v. Measuring sedimentation rates;

vi. Sampling fish and wildlife populations to determine habitat utilization, species abundance and diversity; and

vii. A description shall be included outlining how the monitoring data will be evaluated by agencies that are tracking the progress of the compensation project. A monitoring report shall be submitted consistent with the periods identified in MVMC 15.40.120(H). The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five years.

f. Contingency Plan. Identification of potential courses of action, and any corrective measures to be taken when monitoring or evaluation indicates project performance standards are not being met.

g. Permit Conditions. Any compensation project prepared for mitigation pursuant to MVMC 15.40.110 and approved by the city shall become part of the application for project approval.

h. Demonstration of Competence. A demonstration of financial resources, administrative, supervisory, and technical competence and scientific expertise of sufficient standing to successfully execute the compensation project shall be provided. A compensation project manager shall be named and the qualifications of each team member involved in preparing the mitigation plan and implementing and supervising the project shall be provided, including educational background and areas of expertise, training, and experience with comparable projects.

XII. SEVERABILITY

If any provision of this chapter or its application to any person or circumstance is held invalid, the remainder of this chapter or the application of the provision to other persons or circumstances is not affected.