

- Shoreline Master Program or restoration plan as appropriate for granting relief from shoreline regulations; and
3. The Shoreline Master Program or restoration plan includes policies addressing the nature of the relief and why, when, and how it would be applied. [Ord. 25-14 § 1.01]

**26.50.150 Shoreline moratorium.**

The City Council may adopt moratoria or other interim official controls as necessary and appropriate to implement the provisions of the Shoreline Management Act in accordance with RCW 90.58.590

**Chapter 26.60**  
**SENSITIVE AREAS**

The following sections of RMC Chapter 26.60 Sensitive Areas apply to Sensitive areas within Shoreline Management Act jurisdiction. [Ord. 25-14 § 1.01]

**26.60.010 General purpose and intent.**

A. Sensitive areas perform many important biological and physical functions that benefit the city of Richland and its residents. The City shall regulate in the shoreline jurisdiction all uses, activities, and development within, adjacent to, or likely to affect one or more sensitive areas, consistent with the provisions of RMC 26.60, Sensitive Areas.

These functions include, but are not limited to, the following (by type):

1. Wetlands: helping to maintain water quality; storing and conveying stormwater and flood water; recharging ground water; providing important wildlife habitat; and serving as areas for recreation, educational and scientific study, and aesthetic appreciation; and
2. Fish and wildlife habitat areas: maintaining species diversity and genetic diversity of local flora and fauna; providing opportunities for food, cover, nesting, breeding and movement for fish and wildlife; serving as areas for recreation, educational and scientific study and aesthetic appreciation; helping to maintain air and water quality; controlling erosion; and providing neighborhood separation and visual diversity within urban areas.
3. In addition, certain portions of the city of Richland are characterized by geologic hazards that pose a risk to public and private property, to human life and safety and to the natural systems that make up the environment of the city of Richland. These lands are affected by natural processes that make them susceptible to landslides, seismic activity, and/or severe erosion. The city of Richland maintains that protection of sensitive areas and regulation of geologic hazards are necessary to protect the public health, safety, and welfare.

B. This section of the Shoreline Master Program contains standards, guidelines, criteria and requirements intended to identify, analyze, and mitigate probable impacts to the city of Richland's sensitive areas and geologic hazard areas within the Shoreline Jurisdiction and to enhance and restore them when possible. The intent of these regulations, in concert with other Shoreline Master Program provisions, is to achieve no net loss of ecological function. In appropriate circumstances, impacts to sensitive

and geologic hazard areas that result from regulated activities may be minimized, rectified, reduced, and/or compensated for, consistent with these requirements. The city of Richland's goal shall be the protection of existing ecological functions and ecosystem-wide processes and restoration of degraded ecological functions and ecosystem-wide processes to achieve no net loss of shoreline ecological functions and to avoid probable impacts, to the extent feasible, to all sensitive areas.

C. It is the intent of this section to:

1. Implement the goals and policies of the city of Richland's comprehensive plan, including those goals and policies that pertain to natural features and environmental protection; aesthetics and community character; adequate housing and infrastructure; opportunities for economic development; creation of a balanced transportation system; adequate public facilities; and achievement of a mix of land use types and densities consistent with the city of Richland's land use plan;
2. Protect sensitive areas through the application of the most current, accurate, and complete scientific or technical information available as determined according to WAC 173-26-201(2)(a), and in consultation with state and federal agencies and other qualified professionals and integrate the full spectrum of state, tribal, and federal programs;
3. Comply with the Shoreline Management Act (RCW 90.58) and implementing rules;
4. Serve as a basis for exercise of the City's substantive authority under the State Environmental Policy Act (SEPA) and the City's SEPA rules;
5. Comply with the requirements of the Growth Management Act (RCW 36.70A) and implementing rules; and
6. Coordinate environmental review and permitting of proposals to avoid duplication and delay.

D. The city of Richland has mapping available from a variety of local, state, and federal information sources and based on topographic, geologic, hydrologic, and habitat characteristics that indicate where sensitive areas or geologic hazards may exist. Additional study and mapping are needed to verify that such conditions do prevail and are needed to identify other areas that are potentially sensitive areas. Maps and reference documents in the city of Richland's SMP Inventory, Characterization and Analysis report include this information. This mapping helps the City identify the potential presence of sensitive areas or the risks associated with developing lands subject to geologic hazards to the public. It should be noted that the boundaries of the sensitive areas and geologic hazard areas displayed on these maps are approximate and are not intended to be used for individual site assessment. When differences occur between what is illustrated on these maps and current site conditions, the actual presence or absence of environmentally sensitive areas or geologic hazard areas on the site shall determine the action to be taken. [Ord. 25-14 § 1.01]

#### **26.60.012 General applicability of these regulations.**

The provisions of these regulations shall apply to any activity that affects sensitive areas or their established buffers within the city's Shoreline Jurisdiction, and this provision applies whether or not a substantial development permit or other type of City approval is being sought. [Ord. 25-14 § 1.01]

**26.60.015 General relationship of regulations of one type of sensitive area protection to other regulations.**

These sensitive area regulations shall apply as an overlay and in addition to shoreline, zoning, land use, and other regulations established by the city of Richland. Areas characterized as sensitive may also be subject to other regulations established by this chapter due to the overlap or multiple functions of some sensitive or critical areas. For example, some landslide hazard areas (e.g., steep slopes) adjacent to wetlands may be regulated by buffering requirements according to the wetland management provisions of this chapter. Wetlands may be defined and regulated according to the wetland section and habitat management provisions of this chapter. In the event of any conflict between these regulations and any other regulations of the city of Richland, the regulations which provide greater protection to environmentally sensitive areas shall apply. [Ord. 25-14 § 1.01]

**Article II. Wetlands**

**26.60.020 Regulated activities in wetlands.**

The following activities which occur in conjunction with a development application within a wetland and its associated buffer, or outside a wetland or buffer, but affecting the wetland or buffer, shall be regulated pursuant to the standards of this chapter to achieve, at a minimum, no net loss of wetland area and ecological functions, including lost time when the wetland does not perform the function:

- A. Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;
- B. Dumping, discharging or filling with any material;
- C. Draining, flooding or disturbing the water level or water table;
- D. Driving, piling or placing obstructions;
- E. Constructing, reconstructing, demolishing or altering any structure or infrastructure; or if the activity results in greater impervious surface coverage;
- F. Destroying or altering vegetation, including through clearing, harvesting, shading or planting vegetation that would alter the character of wetland;
- G. Activities that result in significant changes in water temperature, physical or chemical characteristics of wetland water sources, including water quantity and quality as stated in Chapter 90.03 RCW and Chapter 173-201 WAC;
- H. Alteration of natural drainage patterns or any activity that results in a discharge of stormwater runoff into a wetland; and
- I. Any other activities affecting a wetland or wetland buffer not otherwise exempt from the provisions of this section. [Ord. 25-14 § 1.01]

**26.60.021 Exemptions and allowed uses in wetlands.**

- A. Wetlands. The following wetlands are exempt from the buffer provisions contained in this Chapter and the normal mitigation sequencing process in RMC 26.20.020 They may be filled if impacts are fully mitigated based on provisions in RMC 26.60.025 Wetland alteration and mitigation. In order to verify the following conditions, a critical area report for wetlands must be submitted.
  - 1. All isolated Category III and IV wetlands less than 1,000 square feet that:

- a. Are not associated with riparian areas or buffer
- b. Are not part of a wetland mosaic.
- c. Do not contain habitat identified as essential for local populations of priority species identified by Washington Department of Fish and Wildlife or species of local importance.
- d. Are not a vernal pool.
- e. Are not an alkali wetland
- f. Do not contain aspen stands

B. Activities Allowed in Wetlands. The activities listed below are allowed in wetlands. These activities do not require submission of a sensitive area report, except where such activities result in a loss of the functions and values of a wetland or wetland buffer. These activities include:

1. Those activities and uses conducted pursuant to the Washington State Forest Practices Act and its rules and regulations, WAC 222-12-030, where state law specifically exempts local authority, except those developments requiring local approval for Class 4 – General Forest Practice Permits (conversions) as defined in RCW 76.09 and WAC 222-12.
2. Conservation or preservation of soil, water, vegetation, fish, shellfish, and/or other wildlife that does not entail changing the structure or functions of the existing wetland.
3. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.
4. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland buffer, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column will be disturbed.
5. Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities shall occur in conjunction with removal of invasive plant species.
6. Educational and scientific research activities
7. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not expand the footprint or use of the facility or right-of-way.

C. Notwithstanding the exemptions provided by this chapter, any otherwise exempt activities occurring in or near wetlands shall comply with the intent of these standards

and shall consider on-site alternatives that achieve no net loss of ecological wetland functions. [Ord. 25-14 § 1.01]

**26.60.022 Wetland inventory maps.**

The approximate location and extent of wetlands within the city of Richland's planning area are shown on the sensitive areas maps adopted as part of this program, and provided in the City's SMP Inventory, Analysis and Characterization report. These maps shall be used only as a general guide for the assistance of property owners and the public, as the boundaries are generalized. The actual type, extent, and boundaries of wetlands shall be determined in the field by a qualified consultant according to the procedures, definitions, and criteria established by this chapter. In the event of any conflict between the wetland location or designation shown on the city of Richland's maps and the criteria or standards of this chapter, the results of applying the criteria and standards during the field investigation shall control.

**26.60.023 Rating – Categories of wetland.**

Wetlands shall be designated Category I, Category II, Category III, or Category IV according to the following criteria:

A. Category I, II, III, and IV are set forth in the Washington State Department of Ecology's Washington State Wetlands Rating System for Eastern Washington (Annotated Version), Publication #04-06-015, August 2004, Annotated March 2007, as may be amended in the future (hereinafter referred to as the Ecology Wetlands Rating System).

**26.60.024 Wetland buffer areas.**

A. The establishment of wetland buffer areas shall be required for all development proposals and activities adjacent to wetlands to protect the integrity, function, and value of the wetland. Buffers shall consist of an undisturbed area of vegetation established to protect the functions and values of the wetland. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided. Buffers shall be determined in conjunction with considerations of wetland type and quality, approved wetland alterations, and required mitigation measures. Buffers are not intended to be established or to function independently of the wetland they are established to protect; the establishment of a buffer shall not operate to prevent a use or activity that would otherwise be permitted in the wetland subject to mitigation.

B. Buffers shall be measured from the wetland edge as delineated using the Washington State Wetlands Identification and Delineation Manual and marked in the field. Required buffer widths shall be determined according to the proposed land use (Table 26.60.024 (C)) and the wetland category (Table 26.60.024 (D)).

C. The following table describes the types of land use:

**Table 26.60.024 C. Land Use Intensity Table**

<u>Level of Impact from Proposed Change in Land Use</u>	<u>Types of Land Use Based on Common Zoning Designations</u>
<u>High</u>	<ul style="list-style-type: none"> <li>• <u>Commercial</u></li> <li>• <u>Urban</u></li> <li>• <u>Industrial</u></li> <li>• <u>Institutional</u></li> <li>• <u>Retail sales</u></li> <li>• <u>Residential (more than 1 unit/acre)</u></li> <li>• <u>High-intensity recreation (golf courses, ball fields, etc.)</u></li> </ul>
<u>Moderate</u>	<ul style="list-style-type: none"> <li>• <u>Residential (1 unit/acre or less)</u></li> <li>• <u>Moderate-intensity open space (parks with biking, jogging, etc.)</u></li> <li>• <u>Paved driveways and gravel driveways serving 3 or more residences</u></li> <li>• <u>Paved trails</u></li> </ul>
<u>Low</u>	<ul style="list-style-type: none"> <li>• <u>Low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.)</u></li> <li>• <u>Timber management</u></li> <li>• <u>Gravel driveways serving 2 or fewer residences</u></li> <li>• <u>Unpaved trails</u></li> <li>• <u>Utility corridor without a maintenance road and little or no vegetation management.</u></li> </ul>

D. The following buffer widths are established:

**Table 26.60.024 D. Wetland Buffer Widths**

<u>Wetland Characteristics</u>	<u>Buffer Width by Impact of Proposed Land Use</u>	<u>Other Measures Recommended for Protection</u>
<b><i>Category IV Wetlands (For wetlands scoring less than 30 points or more for all functions)</i></b>		
<u>Score for all 3 basic functions is less than 30 points</u>	<u>Low – 25 ft</u> <u>Moderate – 40 ft</u> <u>High – 50 ft</u>	<u>No recommendations at this time</u>
<b><i>Category III Wetlands (For wetlands scoring 30-50 points or more for all functions)</i></b>		
<u>Moderate level of function for habitat (score for habitat 20-28 points)</u>	<u>Low – 75 ft</u> <u>Moderate – 110 ft</u> <u>High – 150 ft</u>	<u>No recommendations at this time</u>
<u>Not meeting above characteristic</u>	<u>Low – 40 ft</u> <u>Moderate – 60 ft</u> <u>High – 80 ft</u>	<u>No recommendations at this time</u>
<b><i>Category II Wetlands (For wetlands that score 51-69 points or more for all functions or having the “Special Characteristics” identified in the rating system)</i></b>		
<u>High level of function for habitat (score for habitat 29-36 points)</u>	<u>Low – 100 ft</u> <u>Moderate – 150 ft</u> <u>High – 200 ft</u>	<u>Maintain connections to other habitat areas.</u>
<u>Moderate level of function for habitat (score for habitat 20-28 points)</u>	<u>Low – 75 ft</u> <u>Moderate – 110 ft</u> <u>High – 150 ft</u>	<u>No recommendations at this time</u>
<u>High level of function for water quality improvement and low for habitat (score for water quality 24-32 points; habitat less than 20 points)</u>	<u>Low – 50 ft</u> <u>Moderate – 75 ft</u> <u>High – 100 ft</u>	<u>No additional surface discharges of untreated runoff</u>
<u>Riparian forest</u>	<u>Buffer width to be based on score for habitat functions or water quality functions</u>	<u>Riparian forest wetlands need to be protected at a watershed or subbasin scale</u>  <u>Other protection based on needs to protect habitat and/or water quality functions</u>
<u>Not meeting above characteristic</u>	<u>Low – 50 ft</u> <u>Moderate – 75 ft</u> <u>High – 100 ft</u>	<u>No recommendations at this time</u>
<b><i>Category I Wetlands (For wetlands that score 70 points or more for all functions or having the “Special Characteristics” identified in the rating system)</i></b>		
<u>Natural Heritage Wetlands</u>	<u>Low – 125 ft</u> <u>Moderate – 190 ft</u> <u>High – 250 ft</u>	<u>No additional surface discharges to wetland or its tributaries.</u> <u>No septic systems within 300 ft of wetland.</u> <u>Restore degraded parts of buffer.</u>
<u>High level of function for habitat (score for habitat 29-36 points)</u>	<u>Low – 100 ft</u> <u>Moderate – 150 ft</u> <u>High – 200 ft</u>	<u>Restore degraded parts of buffer.</u> <u>Maintain connections to other habitat areas</u>
<u>Moderate level of function for habitat (score for habitat 20-28 points)</u>	<u>Low – 75 ft</u> <u>Moderate – 110 ft</u>	<u>No recommendations at this time</u>

<u>Wetland Characteristics</u>	<u>Buffer Width by Impact of Proposed Land Use</u>	<u>Other Measures Recommended for Protection</u>
	High – 150 ft	
High level of function for water quality improvement (24-32 points) and low for habitat (less than 20 points)	Low – 50 ft Moderate – 75 ft High – 100 ft	No additional surface discharges of untreated runoff
Not meeting above characteristics	Low – 50 ft Moderate – 75 ft High – 100 ft	No recommendations at this time

[Ord. 25-14 § 1.01]

**26.60.025 Buffer modifications.**

A. Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:

1. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a “dual-rated” wetland with a Category I area adjacent to a lower rated area.
2. The buffer is increased adjacent to the higher functioning area of habitat or more sensitive portion of the wetland and decreased adjacent to the lower functioning or less sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.
3. The total area of the buffer after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either ¾ of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

B. Averaging for proposed land uses may be allowed when all of the following are met:

1. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.
2. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.
3. The total buffer area after averaging is equal to the area required without averaging.
4. The buffer at its narrowest point is never less than either ¾ of the required width or 75 feet for Category I and II, 50 feet for Category III, and 25 feet for Category IV, whichever is greater.

C. Reduction in buffer width based on reducing the intensity of impacts from proposed land uses

1. The buffer widths recommended for proposed land uses with high-intensity impacts to wetlands can be reduced to those recommended for moderate-intensity impacts under the following conditions:
  - a. For wetlands that score moderate or high for habitat (20 points or more for the habitat functions), the width of the buffer can be reduced if both of the following criteria are met:

- i. A relatively undisturbed, vegetated corridor at least 100 feet wide is protected between the wetland and any other Priority Habitats as defined by the Washington State Department of Fish and Wildlife (“relatively undisturbed” and “vegetated corridor” are defined in questions H 2.1 and H 2.2.1 of the Washington State Wetland Rating System for Eastern Washington – Revised (Hruby 2004a), or latest update). Priority Habitats in eastern Washington include:
  - Wetlands
  - Riparian zones
  - Cliffs
  - Urban natural open space
- ii. The corridor must be protected for the entire distance between the wetland and the Priority Habitat by some type of legal protection such as a conservation easement.
- iii. Measures to minimize the impacts of different land uses on wetlands, such as the examples summarized in Table 26.60.025 D, are applied.
- b. For wetlands that score fewer than 20 points for habitat, the buffer width can be reduced to that required for moderate land-use impacts by applying measures to minimize the impacts of the proposed land uses (see examples in Table 26.60.025 D).

D. Examples of measures to minimize impacts to wetlands from changes in land uses with high impacts. [Ord. 25-14 § 1.01]

**Table 26.60.025 D. Examples of measures to minimize impacts to wetlands from changes in land uses with high impacts**

<u>Examples of Disturbance</u>	<u>Activities and Uses that Cause Disturbances</u>	<u>Examples of Measures to Minimize Impacts</u>
<u>Lights</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Warehouses</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Direct lights away from wetland</u></li> </ul>
<u>Noise</u>	<ul style="list-style-type: none"> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Locate activity that generates noise away from wetland</u></li> </ul>
<u>Toxic runoff*</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Roads</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> <li>• <u>Application of agricultural pesticides</u></li> <li>• <u>Landscaping</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</u></li> <li>• <u>Establish covenants limiting use of pesticides within 150 ft of wetland</u></li> <li>• <u>Apply integrated pest management</u></li> </ul>
<u>Stormwater runoff</u>	<ul style="list-style-type: none"> <li>• <u>Parking lots</u></li> <li>• <u>Roads</u></li> <li>• <u>Manufacturing</u></li> <li>• <u>Residential areas</u></li> <li>• <u>Commercial</u></li> </ul>	<ul style="list-style-type: none"> <li>• <u>Retrofit stormwater detention and treatment for roads and existing adjacent development</u></li> <li>• <u>Prevent channelized flow from lawns that directly enters the buffer</u></li> </ul>

	<ul style="list-style-type: none"> <li>• <a href="#">Landscaping</a></li> </ul>	
<a href="#">Change in water regime</a>	<ul style="list-style-type: none"> <li>• <a href="#">Impermeable surfaces</a></li> <li>• <a href="#">Lawns</a></li> <li>• <a href="#">Tilling</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</a></li> </ul>
<a href="#">Pets and human disturbance</a>	<ul style="list-style-type: none"> <li>• <a href="#">Residential areas</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Use privacy fencing; plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion; place wetland and its buffer in a separate tract</a></li> </ul>
<a href="#">Dust</a>	<ul style="list-style-type: none"> <li>• <a href="#">Tilled fields</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Use BMPs to control dust</a></li> </ul>
<p>* <a href="#">These examples are not necessarily adequate for minimizing toxic runoff if threatened or endangered species are present at the site.</a></p>		

E. The minimum buffer width stated in Table 26.60.024 D Wetland Buffer Widths shall be increased when the qualified consultant determines, based upon a site-specific wetland analysis, that impacts on the wetland from a proposed development can only be mitigated by a greater buffer width. The standard wetland buffer width shall be increased:

1. When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse wetland impacts; or
2. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or
3. When the wetland provides habitat for a species that is particularly sensitive to disturbance (such as a threatened or endangered species), the width of the buffer should be increased to provide adequate protection for the species based on its particular life-history needs.
4. When the minimum buffer for a wetland extends into an area with a slope of greater than 25 percent, the buffer shall be the greater of:
  - a. The minimum buffer for that particular wetland; or
  - b. Twenty-five feet beyond the point where the slope becomes 25 percent or less.

F. Low impact uses and activities (see Table 25.50.090 (C)) that are consistent with the purpose and function of the wetland buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the wetland. Examples of uses and activities that may be permitted in appropriate cases, based on guidance in the Wetlands and CAO Guidance for Small Cities, Eastern Washington version (dated January 2010, revised October 2012, as may be amended in the future), include pedestrian trails, viewing platforms, stormwater management facilities such as grass-lined swales, and utility easements. Uses permitted within the buffer shall be located in the outer portion of the buffer as far as possible from the wetland.

G. A variance from buffer width requirements may be granted by the city of Richland upon a demonstration by the applicant that the Shoreline variance criteria are met per RMC 26.50.060. [Ord. 25-14 § 1.01]

### **26.60.026 Wetland alteration and mitigation.**

- A. All adverse impacts to wetland functions and values shall be mitigated. Mitigation actions by an applicant or property owner shall occur in the following priority sequence per RMC 26.20.020.B Ecological Functions, No Net Loss (Mitigation Sequence).
- B. Where impacts cannot be avoided, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards, and criteria of this section. These shall include consideration of alternative site plans and building layouts and/or reduction in the density or scope of the proposal.
- C. Alteration of wetlands and/or their buffers may be permitted by the City subject to the following criteria:
  1. Category I Wetlands. Alterations of Type I wetlands shall be avoided. .
  2. Category II Wetlands.
    - a. Any proposed alteration and mitigation shall comply with the requirements of this section through RMC 26.60.027 Mitigation standards, criteria, and plan requirements; and
    - b. No net loss of wetland function and value will occur due to the alteration.
  3. Category III Wetlands.
    - a. The proposed mitigation complies with the requirements of this section through RMC 26.60.028 Mitigation standards, criteria, and plan requirements; and
    - b. Where enhancement is proposed, replacement ratios comply with the requirements of RMC 26.60.028 Mitigation standards, criteria, and plan requirements (C) Wetland Replacement Ratios. [Ord. 25-14 § 1.01]

### **26.60.027 Stormwater runoff.**

New development within 150 feet of a wetland buffer shall contain stormwater runoff within the developed portions of the site. No stormwater runoff shall drain into the wetland. Deviations from this standard may be approved by the City; provided, that a study undertaken by a qualified consultant in accordance with the provisions of RMC 26.60.028 indicates that the potential discharge of stormwater runoff from a development site into a wetland is adequately mitigated to protect the functions and values of the wetland. In the case of a Category 3 or Category 4 wetland, stormwater management facilities may be located within the outer 25 percent of the required wetland buffer; provided, that a determination is made that no other location is feasible and the location of such facilities will not have an adverse impact on the functions and values of the wetland [Ord. 25-14 § 1.01].

### **26.60.028 Mitigation standards, criteria, and plan requirements.**

#### A. Location and Timing of Mitigation.

1. Location of Compensatory Mitigation. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of a through d below apply. In that case, mitigation may be allowed off site within the subwatershed of the impact site. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advanced mitigation.

- a. There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity).
  - b. On-site mitigation would require elimination of high-quality upland habitat.
  - c. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the altered wetland.
  - d. Off-site locations shall be in the same sub-drainage basin unless:
    - i. Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the City and strongly justify location of mitigation at another site.
    - ii. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced) that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source[s] and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which would require the construction of berms to hold the water.
2. Timing of Compensatory Mitigation. It is desirable that compensatory mitigation projects be completed prior to activities that will disturb wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.
  3. The Administrator may authorize a one-time, temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified wetland professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window, or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). 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, or general welfare of the public. The

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

**B. Mitigation Performance Standards.**

1. Adverse impacts to wetlands functions and values shall be mitigated. Mitigation actions shall be implemented in the preferred sequence identified in RMC 26.20.020 Ecological Functions. Proposals which include less preferred and/or compensatory mitigation shall demonstrate that:
  - a. All feasible and reasonable measures will be taken to reduce impacts and losses to the original wetland. Describe how preferred order of wetlands mitigation was followed: 1) restoration (including reestablishment and rehabilitation); 2) creation (establishment); 3) enhancement in combination with restoration or creation; and 4) preservation of high quality, at risk wetlands.
  - b. Compensatory mitigation shall be allowed only after mitigation sequencing is applied and higher priority means of mitigation are determined to be infeasible, and shall achieve equivalent or greater wetland ecological functions.
  - c. No overall net loss will occur in wetland functions and values; and
  - d. The restored, created, or enhanced wetland will be as persistent and sustainable as the wetland it replaces.

**C. Wetland Replacement Ratios.**

1. Where wetlands alterations are permitted by the City the applicant shall restore or create equivalent areas of wetlands in order to compensate for wetland losses. Equivalent areas shall be determined according to acreage, function, type, location, timing factors, and projected success of restoration or creation.
2. The following acreage replacement ratios shall be applied.

**Table 26.60.027: Mitigation ratios for eastern Washington<sup>1</sup>**

<u>Category and Type of Wetland Impacts</u>	<u>Re-establishment or Creation</u>	<u>Rehabilitation Only<sup>2</sup></u>	<u>Re-establishment or Creation (R/C) and Rehabilitation (RH)<sup>2</sup></u>	<u>Re-establishment or Creation (R, C) and Enhancement (E)<sup>2</sup></u>	<u>Enhancement Only<sup>2</sup></u>
<u>All Category IV</u>	<u>1.5:1</u>	<u>3:1</u>	<u>1:1 R/C and 1:1 RH</u>	<u>1:1 R/C and 2:1 E</u>	<u>6:1</u>
<u>All Category III</u>	<u>2:1</u>	<u>4:1</u>	<u>1:1 R/C and 2:1 RH</u>	<u>1:1 R/C and 4:1 E</u>	<u>8:1</u>
<u>Category II Forested</u>	<u>4:1</u>	<u>8:1</u>	<u>1:1 R/C and 4:1 RH</u>	<u>1:1 R/C and 6:1 E</u>	<u>16:1</u>
<u>Category II Vernal Pool</u>	<u>2:1 Compensation must be seasonally ponded wetland</u>	<u>4:1 Compensation must be seasonally ponded wetland</u>	<u>1:1 R/C and 2:1 RH</u>	<u>Case-by-case</u>	<u>Case-by-case</u>
<u>All other</u>	<u>3:1</u>	<u>6:1</u>	<u>1:1 R/C and</u>	<u>1:1 R/C and 8:1</u>	<u>12:1</u>

<u>Category and Type of Wetland Impacts</u>	<u>Re-establishment or Creation</u>	<u>Rehabilitation Only<sup>2</sup></u>	<u>Re-establishment or Creation (R/C) and Rehabilitation (RH)<sup>2</sup></u>	<u>Re-establishment or Creation (R, C) and Enhancement (E)<sup>2</sup></u>	<u>Enhancement Only<sup>2</sup></u>
Category II			4:1 RH	E	
Category I Forested	6:1	12:1	1:1 R/C and 10:1 RH	1:1 R/C and 20:1 E	24:1
Category I based on score for functions	4:1	8:1	1:1 R/C and 6:1 RH	1:1 R/C and 12:1 E	16:1
Category I Natural Heritage site	Not considered possible <sup>3</sup>	6:1 Rehabilitation of a Natural Heritage site	R/C Not considered possible <sup>3</sup>	R/C Not considered possible <sup>3</sup>	Case-by-base
Category I Alkali	Not considered possible <sup>3</sup>	6:1 Rehabilitation of an alkali wetland	R/C Not considered possible <sup>3</sup>	R/C Not considered possible <sup>3</sup>	Case-by-case
Category I Bog	Not considered possible <sup>3</sup>	6:1 Rehabilitation of a bog	R/C Not considered possible <sup>3</sup>	R/C Not considered possible <sup>3</sup>	Case-by-case

1. Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1b, Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance--Version 1, (Ecology Publication #06-06-011a, Olympia, WA, March 2006 or as revised).
2. These ratios are based on the assumption that the rehabilitation or enhancement actions implemented represent the average degree of improvement possible for the site. Proposals to implement more effective rehabilitation or enhancement actions may result in a lower ratio, while less effective actions may result in a higher ratio. The distinction between rehabilitation and enhancement is not clear-cut. Instead, rehabilitation and enhancement actions span a continuum. Proposals that fall within the gray area between rehabilitation and enhancement will result in a ratio that lies between the ratios for rehabilitation and the ratios for enhancement.
3. Natural Heritage sites, alkali wetland, and bogs are considered irreplaceable wetlands because they perform some functions that cannot be replaced through compensatory mitigation. Impacts to such wetlands would therefore result in a net loss of some functions no matter what kind of compensation is proposed.

**Reference:**

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 #06-06-011a. Olympia, WA.

3. Credit/Debit Method. To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance “Wetland Mitigation in Washington State Parts I and II” (Ecology Publication #06-06-011a-b, Olympia, WA, March, 2006), the administrator may allow mitigation based on the “credit/debit” method developed by the Department of Ecology in “Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Eastern Washington: Final Report” (Ecology Publication #11-06-015, August 2012, or as revised). [Ord. 25-14 § 1.01]

**26.60.029 Wetland mitigation plan requirements.**

Where it is determined by the city that compensatory wetland mitigation is required or appropriate, a mitigation plan shall be prepared consistent with the provisions below and shall also meet the minimum requirements contained in the Wetlands and CAO Guidance

for Small Cities, Eastern Washington version (dated January 2010, revised October 2012, and as amended in the future). The purpose of the plan is to prescribe mitigation to compensate for impacts to the wetland functions, values, and acreage as a result of the proposed action. This plan shall consider the chemical, physical, and biological impacts on the wetland system using a recognized wetlands assessment methodology and/or best professional judgment. The mitigation plan shall be prepared in two phases, a conceptual phase and a detailed phase.

A. Conceptual Plan – Standards and Criteria. The applicant shall prepare a conceptual mitigation plan for submission to the City at a premitigation conference. The conceptual mitigation plan shall include:

1. General goals of the mitigation plan;
2. A review of literature or experience to date in restoring or creating the type of wetland proposed;
3. Location of proposed wetland compensation area;
4. General hydrologic patterns on the site following construction;
5. Nature of compensation, including wetland types (in-kind), general plant selection and justification, approximate project sequencing and schedule, and approximate size of the new wetland buffer;
6. A conceptual maintenance plan; and
7. Conceptual monitoring and contingency plan.

B. Detailed Plan – Standards and Criteria. Following acceptance of the conceptual mitigation plan by the City, the applicant will prepare a detailed mitigation plan. Each detailed plan shall contain, at a minimum, the following seven components, and shall be consistent with the standards in 26.60.023 through 26.60.028:

1. A clear statement of the objectives of the mitigation. The goals of the mitigation plan should be stated in terms of the new wetland functions and values compared to the functions and values of the original wetland. Objectives should include:
2. Qualitative and quantitative standards for success of the project, including hydrologic characteristics (water depths, water quality, hydroperiod/hydrocycle characteristics, flood storage capacity); vegetative characteristics (community types, species composition, density, and spacing); faunal characteristics, and final topographic elevations.
3. An ecological assessment of the wetland values and wetland buffers that will be lost as a result of the activities, and of the replacement wetlands and buffers, including but not limited to the following:
  - a. Acreage of project;
  - b. Existing functions and values;
  - c. Sizes of wetlands, wetland buffers, and areas to be altered;
  - d. Vegetative characteristics, including community type, areal coverage, species composition, and density;
  - e. Habitat type(s) to be enhanced, restored, or created; and
  - f. Dates for beginning and completion of the mitigation project, and sequence of construction activities.
4. A statement of the location, elevation, and hydrology of the new site, including the following:
  - a. Relationship of the project to the watershed and existing water bodies;

- b. Topography of site using the smallest readily available intervals, preferably one-foot contour intervals but two-foot is acceptable;
  - c. Water level data, including depth and duration of seasonally high water table;
  - d. Water flow patterns;
  - e. Grading, filling and excavation, including a description of imported soils;
  - f. Irrigation requirements, if any;
  - g. Water pollution mitigation measures during construction;
  - h. Areal coverage of planted areas to open water areas (if any open water is to be present); and
  - i. Appropriate buffers.
5. A planting plan, describing what will be planted, and where and when the planting will occur, as follows:
    - a. Soils and substrate characteristics;
    - b. Specify substrate stockpiling techniques; and
    - c. Planting instructions, including species, stock type and size, density or spacing of plants, and water and nutrient requirements.
  6. A monitoring and maintenance plan, consistent with RMC 26.60.031.
    - a. Specify procedures for monitoring and site maintenance; including control of invasive species and
    - b. Submit monitoring reports to the City.
  7. A contingency plan, consistent with these regulations.
  8. A detailed budget for implementation of the mitigation plan, including monitoring, maintenance, and contingency phases.
  9. A guarantee, in the form of a bond or other security device in a form and amount acceptable to the city attorney, assuring that the work will be performed as planned and approved, consistent with these regulations and including monitoring, maintenance and contingency. [Ord. 25-14 § 1.01].

**26.60.030 Performance standards for wetlands mitigation planning.**

- A. The following performance standards shall be incorporated into mitigation plans submitted to the city of Richland:
  1. Plants should be indigenous to the region (not introduced or foreign species);
  2. Plants should be adaptable to a broad range of water depths;
  3. Plants should be commercially available or available from local sources;
  4. Plant species high in food and cover value for fish and wildlife are recommended, when possible;
  5. Plants should be mostly perennial species;
  6. Avoid committing significant areas of site to species that have questionable potential for successful establishment;
  7. Plant selection must be approved by wetlands biologist/ecologist;
  8. Water depth is not to exceed six and one-half feet (two meters);
  9. The grade or slope that water flows through the wetland is not to exceed six percent;
  10. Slopes within the wetland basin and the buffer zone should not be steeper than 3:1 (horizontal to vertical);

11. The substrate should consist of a minimum of one foot, in depth, of clean (uncontaminated with chemicals, or solid/hazardous wastes) inorganic/organic materials;
  12. Planting densities and placement of plants should be determined by a qualified professional and shown on the design plans;
  13. The wetland (excluding the buffer area) should not contain more than 60 percent open water as measured at the seasonal high water mark;
  14. Minimum buffer widths should extend from the wetland boundary in accordance with buffer requirements in Table 26.60.024 D Wetland Buffer Widths for the proposed category rating of the wetland that will be created.
  15. The planting plan must be approved by the deputy city manager for community and development services or consultant acting on behalf of the city;
  16. Stockpiling should be confined to upland areas and contract specifications should limit stockpile durations to less than four weeks;
  17. Planting instructions which describe proper placement, diversity, and spacing of seeds, tubers, bulbs, rhizomes, sprigs, plugs, and transplanted stock;
  18. Apply controlled release fertilizer, if reasonable and prudent, at the time of planting and afterward only as plant conditions warrant (determined during the monitoring process);
  19. Install an irrigation system, if necessary, for initial establishment period; and
  20. Construction specifications and methods must be approved by a qualified consultant and the City.
- B. On completion of construction, the wetland mitigation project must be signed off by the applicant's qualified consultant and the City. Signature will indicate that the construction has been completed as planned and all design elements have been fully and correctly implemented. If there have been changes in the implementation of the plan, a written explanation from the consulting biologist must be included. [Ord. 25-14 § 1.01].

**26.60.031 Wetland monitoring program and contingency plan.**

- A. A monitoring program shall be implemented to determine the success of the mitigation project and any necessary corrective actions. This chapter shall determine if the original goals and objectives are being met.
- B. A contingency plan shall be established for compensation in the event that the mitigation project is inadequate or fails. A performance and maintenance bond or other acceptable security device is required to ensure the applicant's compliance with the terms of the mitigation agreement. The amount of the performance and maintenance bond shall equal 125 percent of the cost of the mitigation project for a period of five years. The City may agree to reduce the bond in phases in proportion to work successfully completed over the period of the bond.
  1. During monitoring, scientific procedures for establishing the success or failure of the project must be used;
  2. For vegetation determinations, permanent sampling points shall be established;
  3. Vegetative success will be defined as 80 percent per year survival of planted trees and shrubs and 80 percent per year cover of desirable understory or emergent species;

4. Submit monitoring reports on the current status of the mitigation project to the City. The reports are to be prepared by a qualified consultant and reviewed by the city's consultant and should include monitoring information on wildlife, vegetation, water quality, water flow, stormwater storage and conveyance, and existing or potential degradation, and shall be produced on the following schedule:
  - a. At the time of construction;
  - b. Thirty days after planting;
  - c. Early in the growing season of the first year;
  - d. End of the growing season of the first year;
  - e. Twice the second year; and
  - f. Annually thereafter;
5. Monitor for five growing seasons. If the mitigation goals are not obtained within the initial 5 year period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals agreed to in the mitigation plan are achieved;
6. If necessary, correct for failures in the mitigation project;
7. Replace dead or undesirable vegetation with appropriate plantings, based on the approved planting plan or 26.60.029;
8. Repair damages caused by erosion, settling, or other geomorphological processes;
9. Redesign mitigation project (if necessary) and implement the new design; and
10. Correction procedures shall be approved by a qualified consultant and the City. [Ord. 25-14 § 1.01].

#### **26.60.032 Unauthorized alterations and enforcement.**

- A. When a wetland or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored. The City shall have the authority to issue a "stop-work" order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Chapter.
- B. Requirement for Restoration Plan. All development work shall remain stopped until a restoration plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described in Subsection C. The Administrator shall, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.
- C. Minimum Performance Standards for Restoration. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can demonstrate that greater functions and habitat values can be obtained, these standards may be modified:
  1. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.
  2. The historic soil types and configuration shall be restored to the extent practicable.
  3. The wetland and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.

4. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the Administrator.
- D. Site Investigations. The Administrator is authorized to make site inspections and take such actions as necessary to enforce this Chapter. The Administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.
- E. Penalties. See Section 26.60.084 (B).
- F. If the wetland affected cannot be restored, money from any associated penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The City may coordinate its preservation or restoration activities with others to optimize the effectiveness of the restoration action. [Ord. 25-14 § 1.01].

### **Article III. Fish and wildlife habitat areas.**

#### **26.60.040 Exemption from fish and wildlife regulations.**

- A. See RMC 26.60.02122 for general exemptions to all sensitive areas.
- B. The following activities shall be exempt from the provisions of this chapter related to fish and wildlife habitat, provided they are conducted using best management practices:
1. Activities involving artificially created habitat, including but not limited to grass-lined swales, irrigation and drainage ditches, detention facilities such as reservoirs, ponds, and landscape features, except for habitat areas created as mitigation.
- C. Notwithstanding the exemption provided by this section, any otherwise exempt activities occurring in or near critical habitat areas shall comply with the intent of these standards and shall consider on-site alternatives that avoid or minimize potential habitat impacts. [Ord. 25-14 § 1.01].

#### **26.60.041 Fish and wildlife habitat inventory maps.**

The approximate location and extent of habitat areas within the city of Richland's planning area are shown on the maps adopted as part of this program, as provided in the City's SMP Inventory, Analysis and Characterization report. These maps shall be used as a general guide only for the assistance of property owners and other interested parties; boundaries are generalized. The actual type, extent, and boundaries of habitat areas shall be determined by a qualified professional according to the procedures, definitions, and criteria established by this article. In the event of any conflict between the habitat location or type shown on the city of Richland's maps and the criteria or standards of this article, the criteria and standards resulting from the field investigation shall control. [Ord. 25-14 § 1.01].

#### **26.60.042 Fish and wildlife habitat buffer areas.**

A. The establishment of buffer areas shall be required for regulated activities in or adjacent to habitat areas. Buffer shall consist of an undisturbed area of native vegetation established to protect the integrity, functions, and values of the affected habitat. Enhancement of buffers may be required if a portion of the buffer has been cleared, or if tree cover is substantially less than a native climax community.

B. The following buffer widths are established:

**Table 26.60.42. Riparian Buffer Width**

<u>Regulatory Reach (see Environment Designation with Regulatory Reaches Map)</u>	<u>Riparian Buffer Width (Feet)<sup>12</sup></u>
<u>A, C, I, T</u>	<u>50</u>
<u>B, U and all other Natural environment designation areas within various regulatory reaches except Reach Q</u>	<u>Entire shoreline jurisdiction</u>
<u>D, N, O, P,</u>	<u>75 except where roadway, canal, paved trail or parking area encroaches and then waterward edge of facility maintenance area, as applicable</u>
<u>E, F</u>	<u>100</u>
<u>G, I</u>	<u>75 except where roadway, canal, levee, paved trail or parking area encroaches and then waterward edge of facility maintenance area, as applicable</u>
<u>H, J, K</u>	<u>100 except where roadway, canal, levee, paved trail or parking area encroaches and then waterward edge of facility maintenance area, as applicable</u>
<u>L, Q, S</u>	<u>Waterward edge of existing levee, paved trail and/or parking maintenance area, as applicable</u>
<u>M</u>	<u>50 or waterward edge of existing levee, paved trail and/or parking maintenance area, as applicable</u>
<u>R</u>	<u>From the OHWM to the federal/private property boundary line<sup>3</sup></u>
<u>(1) Measured from the OHWM or top of bank, as applicable</u>	
<u>(2) Accompanied by other sensitive area protections and stormwater management measures, as applicable</u>	
<u>(3) Administrative Buffer Adjustments do not apply.</u>	

C. Buffers shall be measured, on a horizontal plane, from the OHWM as delineated by a qualified consultant. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby. Buffers shall be determined by the City based on information in the wildlife report supplemented by its own investigations, the sensitivity and value of the habitat areas, the intensity and design of the proposed use, and adjacent uses and activities.

D. Administrative Buffer Adjustments.

1. The required buffer widths established in this SMP may be modified by the Shoreline Administrator for a development on existing legal lots of record in place at the time of adoption of this program, in accordance with the provisions of this section only where the applicant demonstrates all of the following:
    - a. Averaging is necessary to avoid an extraordinary hardship to the applicant caused by circumstances peculiar to the property, and no feasible alternative exists;
    - b. The designated buffer area contains variations in sensitivity to ecological impacts due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation;
    - c. The total area contained within the buffer after averaging is no less than that contained within the standard buffer prior to averaging;
    - d. The minimum buffer width at its narrowest point shall not be less than seventy five (75) percent of the buffer width established under this SMP; and
    - e. The buffer width averaging does not result in a net loss of ecological function.
  2. Standard Buffer Reduction. Reductions of up to twenty-five (25) percent of the standard buffer may be approved if the applicant demonstrates to the satisfaction of the Shoreline Administrator that a mitigation plan developed by a qualified professional pursuant to GCC 24.12.520 (g) indicates that enhancing the buffer (by removing invasive plants or impervious surfaces, planting native vegetation, or installing habitat features or other means) will result in a reduced buffer that functions at a higher level than the existing standard buffer.
  3. In-fill Development. In an effort to facilitate in-fill development in approved plats, the County may approve requests to reduce the standard shoreline buffers up to a maximum of fifty (50) percent for a new single-family residence and appurtenant structures in accordance with the following criteria:
    - a. Where there are single-family residences within 150 feet on either side of the proposed residence in an existing plat, the buffer shall be determined as the greater of one of the following three options: 1) a common line drawn between the nearest corners of the nearest residence; 2) a common line calculated by the average of the nearest residence's existing buffer; or 3) a fifty (50) percent reduction of the standard buffer.
    - b. Where there is only a residence located within 150 feet on one side of the proposed residence in an existing plat, the standard buffer shall be determined as the greater of a common line drawn between the nearest corner of the nearest residence and the nearest point of the standard buffer on the adjacent vacant lot, a common line calculated by the average of the nearest residence's setback and the standard buffer for the adjacent vacant lot, or a fifty (50) percent reduction of the standard buffer.
- E. The buffer width stated in subsection (B) of this section shall be increased when the qualified consultant determines, based upon a site-specific habitat analysis, that impacts on the habitat from a proposed development can only be mitigated by a greater buffer width. The standard habitat buffer width shall be increased:
1. When the adjacent land is susceptible to severe erosion and erosion control measures will not effectively prevent adverse habitat impacts; or

2. When the standard buffer has minimal or degraded vegetative cover that cannot be improved through enhancement; or
  3. When the wetland provides habitat for a species that is particularly sensitive to disturbance (such as a threatened or endangered species), the width of the buffer should be increased to provide adequate protection for the species based on its particular, life-history needs; or
  4. When the minimum buffer for a habitat extends into an area with a slope of greater than twenty- five (25) percent, the buffer shall be the greater of:
    - a. The minimum buffer for that particular habitat; or
    - b. Twenty-five (25) feet beyond the point where the slope becomes twenty-five (25) percent or less.
- F. Low impact uses and activities which are consistent with the purpose and function of the habitat buffer and do not detract from its integrity may be permitted within the buffer depending on the sensitivity of the habitat involved. Examples of uses and activities which may be permitted in appropriate cases include pedestrian trails, viewing platforms, stormwater management facilities such as grass-lined swales and utility easements. [Ord. 25-14 § 1.01].

#### **26.60.043 Fish and wildlife habitat alteration.**

- A. Adverse impacts to habitat functions and values shall be mitigated. Mitigation actions by an applicant or property owner shall occur per in accordance with RMC 26.20.020 Ecological Functions, No Net Loss including the specified mitigation sequence.
- B. Where impacts cannot be avoided, the applicant or property owner shall seek to implement other appropriate mitigation actions in compliance with the intent, standards, and criteria of this section. Mitigation shall meet the criteria of RMC 26.20.020 Ecological Functions, No Net Loss including the specified mitigation sequence. In an individual case, these actions may include consideration of alternative site plans and layouts, reductions in the density or scope of the proposal.
- C. Alteration of habitat and/or their buffers may be permitted by the City subject to the following standards:
  1. Critical Habitat. Alterations of critical habitat shall be avoided, subject to the reasonable use provisions of this chapter.
  2. Secondary Habitat. Alterations of secondary habitat may be permitted; provided, that the applicant mitigates adverse impacts consistent with the performance standards and other requirements of this chapter. [Ord. 25-14 § 1.01].

#### **26.60.044 Fish and wildlife habitat performance standards and incentives.**

- A. The performance standards and criteria contained in this section shall be incorporated into plans submitted for regulated activities and shall:
  1. Consider habitat in site planning and design;
  2. Locate buildings and structures in a manner that preserves and minimizes adverse impacts to important habitat areas;
  3. Integrate retained habitat into open space and landscaping, consistent with the provisions of all open space and landscaping requirements;
  4. Consolidate habitat and vegetated open space in contiguous blocks where feasible;

5. Locate habitat contiguous to other habitat areas, open space or landscaped areas to contribute to a continuous system or corridor that provides connections to adjacent habitat areas and allows movement of wildlife;
  6. Use native species in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers;
  7. Emphasize heterogeneity and structural diversity of vegetation in landscaping and food producing plants beneficial to wildlife;
  8. Remove and/or control any noxious or undesirable species of plants and animals;
  9. Preserve significant trees and/or snags, preferably in groups, consistent with achieving the objectives of these standards;
  10. Buffers shall be preserved and shall be surveyed, staked, and fenced prior to any constructed work, including grading and clearing, may take place on the site; and
  11. Temporary erosion and sedimentation controls, pursuant to an approved plan, shall be implemented during construction.
- B. A vegetation management plan shall be submitted consistent with the requirements, goals, and standards of this chapter. The plan shall reflect the report prepared pursuant to RMC 22.10.310. Any required mitigation, including supplemental buffer plantings, shall be guaranteed by a bond or other acceptable security device is required to ensure bond or other security device shall be required to assuring successful establishment including an appropriate monitoring period. The amount of the performance and maintenance bond shall equal 125 percent of the cost of the mitigation project for a period of five years. The City may agree to reduce the bond in phases in proportion to work successfully completed over the period of the bond.
- C. As an incentive to encourage preservation of secondary habitat as defined in this article, the net amount of landscaping required by the city of Richland may be reduced by one-quarter acre for each one acre of secondary habitat and buffer preserved on the site; however, that amount cannot exceed 50 percent of the amount of required landscaping. The reduction shall be calculated on the basis of square feet of habitat preserved or enhanced and square feet required. Habitat and habitat buffer that is enhanced by the applicant may also qualify for this reduction. Preservation of secondary habitat shall be execution of an easement or other protective device acceptable to the city of Richland. [Ord. 25-14 § 1.01].

#### **Article IV. Geologic Hazard Areas**

##### **26.60.050 Identification and definition.**

- A. Geologic hazard areas identification and designation shall be consistent with the minimum guideline classifications established in WAC 365-190-080(4), which include any future amendments to the code. Areas that are susceptible to one or more of the following types of hazards shall be classified as a geologic hazard area:
1. Erosion hazard;
  2. Landslide hazard;
  3. Seismic hazard; and
  4. Mine hazard.

- B. Erosion Hazard Areas. Those areas that are identified by the United States Department of Agriculture Soil Conservation Service as having a severe rill and inter-rill erosion hazard.
- C. Landslide Hazard Areas. Those areas that are potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Landslide hazard areas include, but are not limited to, the following types of areas:
1. Areas delineated by the United States Department of Agriculture Soil Conservation Service as having a severe limitation for building site development;
  2. Areas designated as quaternary slumps, earthflows, mudflows, lahars, or landslides on maps published by the United States Geological Survey or Department of Natural Resources Division of Geology and Earth Resources;
  3. Areas with all three of the following characteristics:
    - a. Areas with slope steeper than 15 percent;
    - b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
    - c. Springs or ground water seepage;
  4. Areas that have shown movement during the holocene epoch (from 10,000 years ago to the present) or which are underlain or covered by mass wastage debris of that epoch;
  5. Areas with slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
  6. Areas with slopes having gradients steeper than 80 percent subject to rockfall during seismic shaking;
  7. Areas potentially unstable as a result of rapid stream incision, stream bank erosion and undercutting by wave action;
  8. Areas that show evidence of, or on, an active alluvial fan presently or potentially subject to inundation by debris flows or catastrophic flooding; or
  9. Areas with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief.
- D. Seismic Hazard Areas. Those areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by: (1) magnitude of an earthquake; (2) distance from the source of an earthquake; (3) type of thickness of geologic materials at the surface; and (4) type of subsurface geologic structure.
- E. Mine Hazard Areas. Those areas underlain by, adjacent to, or affected by mine working areas as designated by the Washington State Department of Natural Resources. [Ord. 25-14 § 1.01].

**26.60.051 Applicability to geological hazards.**

The provisions of this article shall apply to any activity that occurs in or within 200 feet of a geologic hazard area unless otherwise exempt. These activities include but are not limited to the following:

- A. Removing, excavating, disturbing or dredging soil, sand, gravel, minerals, organic matter or materials of any kind;
- B. Dumping, discharging or filling with any material;
- C. Driving piling or placing obstructions;
- D. Constructing, reconstructing, demolishing, or altering the size of any structure or infrastructure which has an adverse effect on a geologic hazard area; destroying or altering vegetation through clearing or harvesting; and any project permit established in Chapter 19.20 RMC. [Ord. 25-14 § 1.01].

**26.60.052 Geologic hazard inventory maps.**

The approximate location and extent of geologic hazard areas within the city of Richland's planning area are shown on the sensitive areas maps adopted as part of this program, as provided in the City's SMP Inventory, Analysis and Characterization report. These maps should be used as a general guide only for the assistance of property owners and the city of Richland to identify and designate geologic hazard areas. [Ord. 25-14 § 1.01].

**26.60.053 Preliminary assessment.**

- A. The city of Richland shall conduct a preliminary assessment of the proposed activity. The preliminary assessment shall consist of reviewing geologic hazard inventory maps as provided in the City's SMP Inventory, Analysis and Characterization report, conducting an on-site evaluation, and, if necessary, consulting with state and/or federal agencies to determine whether there is reasonable evidence that a proposed activity is within 200 feet of a geologic hazard area. In the event there is a disagreement as to whether the activity is within 200 feet of a geologic hazard area, a geologic report prepared by a qualified consultant as defined in RMC 26.80 shall be required, at the property owner or applicant's expense, to determine this issue.
- B. If it is determined that there is reasonable evidence that a proposed activity is within 200 feet of a geologic hazard area, then geologic reports and studies are required at the property owner or applicant's expense. [Ord. 25-14 § 1.01].

**26.60.054 Geologic reports and studies.**

Geologic studies and reports shall comply with the requirements established in RMC 26.60.081.6. Permit process and application requirements. [Ord. 25-14 § 1.01].

**26.60.055 Administrative evaluation of geologic reports and studies.**

The city of Richland shall review the geologic reports and studies to determine the significant risks posed by the activity to life and property on and off the project site. The city of Richland may approve, conditionally approve or deny an activity, as appropriate, based on the degree to which significant risks are posed to public and private property and to the health and safety of the community. Conditional approval of the activity may include mitigation measures based on the geologic reports and studies. Where potential impacts of the activity cannot be effectively mitigated, or where the risk to public health, safety, and

welfare of the community is significant notwithstanding mitigation, the activity shall be denied. [Ord. 25-14 § 1.01].

#### **26.60.056 Assurance.**

The city of Richland may require assurance from the owner or applicant and/or its geologic consultant that the activity creates a minimal risk of danger to life or property on or off the project site. Such assurance may include the following:

- A. A letter from the geologic consultant who prepared the required study and report stating that the activity creates a minimal risk of danger to life or property on or off the project site; or
- B. A letter from the owner or applicant stating its understanding and acceptance of any risk of injury or damage associated with the activity and agreeing to notify any future purchasers of the site, portions of the site, or structures located on the site of the geologic hazard.

### **Article V. Critical Aquifer Recharge Areas Protection**

#### **26.60.057 Identification and definition.**

Critical aquifer recharge areas (CARAs) are defined as those areas having a critical recharging effect on aquifer use for potable water in community systems. CARAs are classified and designated as follows:

- A. Those areas designated as "Wellhead Protection Areas" pursuant to WAC 246-290-135(4) and the groundwater contribution area in WAC 246-291-100 (2)(e). Wellhead protection areas shall, for the purpose of this regulation, include the identified recharge areas associated with either Group A public water supply wells and those Group B wells with a wellhead protection plan filed with the City and/or Benton Franklin Health District; and
- B. Any land identified in the Soil Survey of Benton County as having high potential for aquifer recharge, as determined by the Administrator.

In order to protect the public health and safety, prevent degradation of ground water and for potentially usable potable water, and to provide for regulations that prevent and control risks to the degradation of ground water quality and quantity, development in CARAs shall be subject to the standards described in this section. [Ord. 25-14 § 1.01].

#### **26.60.058 Critical aquifer recharge area maps.**

The approximate location and extent of aquifer recharge areas within the city of Richland's shoreline planning area are shown on the sensitive areas maps adopted as part of this SMP, as provided in the City's SMP Inventory, Analysis and Characterization report. These maps should be used as a general guide only for the assistance of property owners and the city of Richland to identify and designate geologic hazard areas. [Ord. 25-14 § 1.01].

**26.60.059 General exemptions.**

The following activities shall be exempt from the CARA provisions of this section, provided they are conducted using best management practices for protecting surface and ground water quality:

- A. Single-family residential development.
- 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 do not increase the use of a hazardous substance.
- C. Group A public water system source development and associated infrastructure.
- D. Public water supply aquifer storage and recovery (ASR) facilities.
- E. Public water pipelines and supply storage structures.
- F. The following underground storage tank (UST) systems, including any piping connected thereto:
  - 1. Any UST system holding hazardous wastes subject to Subtitle C of the Federal Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances;
  - 2. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under Section 402 or 307(b) of the Clean Water Act;
  - 3. Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
  - 4. Any UST system whose capacity is one hundred ten (110) gallons or less;
  - 5. Any UST system that contains a de minimis concentration of regulated substances;
  - 6. Any emergency spill or overflow containment UST system that is expeditiously emptied after use;
  - 7. Farm or residential UST systems of one thousand one hundred (1,100) gallons or less capacity used for storing motor fuel for noncommercial purposes (i.e., not for resale);
  - 8. UST systems used for storing heating oil for consumptive use on the premises where stored; except that such systems which store in excess of one thousand one hundred (1,100) gallons are subject to the release reporting requirements of WAC 173-360-372;
  - 9. On-site domestic septic systems releasing less than five hundred (500) gallons of effluent per day and that are limited to a maximum density of one system per one acre;
  - 10. Any pipeline facility (including gathering lines) regulated under:
    - a. The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or
    - b. The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or
    - c. Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in Section 40.410.010(B)(3)(j)(1) or (2) of this definition;
  - 11. Surface impoundments, pits, ponds, or lagoons;
  - 12. Stormwater or wastewater collection systems;
  - 13. Flow-through process tanks;
  - 14. Liquid traps or associated gathering lines directly related to oil or gas production and gathering operations; or

15. Storage tanks situated in an underground area (such as a basement, cellar, vault, mineworking drift, shaft, or tunnel), if the storage tank is situated upon or above the surface of the floor. [Ord. 25-14 § 1.01].

**26.60.060 Reports and studies.**

Reports for CARAs shall be submitted to the City by the applicant for a development proposal activity not otherwise exempted as provided in Section 26.60.059 is proposed on a parcel within an aquifer recharge area. Requirements for a hydrogeologic assessment are found in Section 26.60.081, Permit process and application requirements.

**26.60.061 Performance standards.**

- A. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely affect the recharging of the aquifer.
- B. The proposed activity must comply with the water source protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, Washington State Department of Ecology, and the Benton County Health Department.
- C. The proposed activity must be designed and constructed in accordance with existing local, state and federal laws and regulations, and the Stormwater Management Manual for Eastern Washington, as amended (Ecology 2004) for those geographic areas covered under the Eastern Washington Phase II Municipal Stormwater Permit (Ecology 2007) or activities covered under the Ecology General Construction Permit (Ecology 2005) , and/or the locally adopted program, as applicable. [Ord. 25-14 § 1.01].

**26.60.062 Uses prohibited in critical aquifer recharge areas.**

The following activities and uses are prohibited in CARAs:

- A. Landfills. Landfills, including hazardous or dangerous waste, municipal solid waste, special waste, woodwaste, and inert and demolition waste landfills;
- B. Underground Injection Wells. Class I, III, and IV wells and subclasses 5F01, 5D03, 5F04, 5W09, 5W10, 5W11, 5W31, 5X13, 5X14, 5X15, 5W20, 5X28, and 5N24 of Class V wells;
- C. Mining in critical aquifer recharge areas determined to be highly susceptible or vulnerable in a public water system Wellhead Protection Plan.
1. Metals and hard rock mining;
2. Sand and gravel mining.
- D. Wood Treatment Facilities. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);
- E. Storage, Processing, or Disposal of Radioactive Substances. Facilities that store, process, or dispose of radioactive substances; and
- F. Other Prohibited Uses or Activities
1. Activities that would significantly reduce the recharge to aquifers currently or potentially used as a potable water source;
2. Activities that would significantly reduce the recharge to aquifers that are a source of significant baseflow to a regulated stream. [Ord. 25-14 § 1.01].

## **Article VI. Flood Hazard Areas**

### **26.60.070 Identification and definition.**

Frequently flooded areas shall be those floodways and associated floodplains designated by the Federal Emergency Management Agency (FEMA) flood hazard classifications as delineated on the most current available Flood Insurance Rate Maps for the City, or as subsequently revised by FEMA, as being within the 100-year flood plain, or those floodways and associated floodplains delineated by a comprehensive flood hazard management plan adopted by the City, as being within the 100-year floodplain or having experienced historic flooding; or channel migration zones (CMZ) identified through mapping provided in the City's SMP Inventory, Analysis and Characterization report. The CMZ is considered to be that area of a stream channel which may erode as a result of normal and naturally occurring processes and has been mapped consistent with WAC 173-26-221(3)(b). [Ord. 25-14 § 1.01].

### **26.60.071 Maps and References.**

- A. The approximate location and extent of flood hazard areas within the city of Richland's planning area are shown on the sensitive areas maps adopted as part of this SMP, including but not limited to the most current available FEMA Flood Insurance Rate Maps (FIRM) as provided in RMC 23.34.050 F district – Adoption of study designating areas of special flood hazard and Channel Migration Zone (CMZ) mapping provided in the City's SMP Inventory, Analysis and Characterization report. These maps should be used as a general guide only for the assistance of property owners and the city of Richland to identify and designate flood hazard areas.
- B. Applicants for shoreline development or modification may submit a site-specific CMZ study if they demonstrate these conditions do not exist on the subject property and the map is not accurate. The CMZ study must be prepared consistent with WAC 173-26-221(3)(b), and may include, but is not limited to, historic aerial photographs, topographic mapping, flooding records, and field verification. The CMZ must be prepared by a licensed geologist or engineer with at least five years of applied experience in assessing fluvial geomorphic processes and channel response. [Ord. 25-14 § 1.01].

### **26.60.072 Protection Standards.**

- A. All development within frequently flooded areas shall comply with the city code Chapters 23.12, Floodplain Use District and 23.34, Floodplain Combining District, the City Shoreline Master Program, the Uniform Building Code regarding structural safeguards to reduce risk to human life, health and property from flooding, and other pertinent ordinances and codes.
- B. Any use or development shall not alter the normal movement of surface water in a manner that would cause the unnatural diversion of floodwater to otherwise flood-free areas.
- C. CMZs shall be regulated as uses in Chapters 23.12, Floodplain Use District, and shall apply only to the Yakima River. [Ord. 25-14 § 1.01].

## **Article VII. General Information**

### **26.60.080 General exemptions.**

The following activities shall be exempt from the provisions of this chapter, provided they are conducted using best management practices:

- A. Existing and ongoing agricultural activities, as defined in RMC 26.70;
- B. Maintenance, operation and reconstruction of existing roads, streets, utilities, and associated structures; provided, that reconstruction of any structures may not increase the impervious area;
- C. Normal maintenance, repair and reconstruction of residential or commercial structures; provided, that reconstruction of any structures may not increase the impervious floor area;
- D. Site investigative work and studies necessary for preparing land use applications, including soils tests, water quality studies, wildlife studies and similar tests and investigations; provided, that any disturbance of sensitive areas shall be the minimum necessary to carry out the work or studies;
- E. Educational activities, scientific research, and outdoor recreational activities, including but not limited to interpretive fields, bird watching, fishing and hiking, that will not have a significant effect on the habitat area;
- F. Public agency emergency activities necessary to prevent an immediate threat to public health, safety or property, provided that retroactive mitigation is required to restore a site to a pre emergency response condition to ensure no net loss of ecological functions;
- G. Prior to the effective date of the ordinance codified in this chapter any of the following activities that have met all conditions of approval in a timely manner and are consistent with the reasonable use provisions of this chapter:
  - 1. Complete applications as defined by the appropriate ordinance;
  - 2. Approved preliminary plats; and
  - 3. Development of legally created lots which have been recorded with Benton County;
- H. Minor activities not mentioned above and determined by the community and development services group to pose minimal risk to the public health, safety, and general welfare. [Ord. 25-14 § 1.01].

### **26.60.081 Permit process and application requirements.**

- A. Preapplication Conference. All applicants are encouraged to meet with the planning and development services manager of the city of Richland or his or her representative prior to submitting an application subject to these regulations. The purpose of this meeting shall be to discuss the city of Richland's sensitive areas requirements, processes, and procedures; to review any conceptual site plans prepared by the applicant; to discuss appropriate investigative techniques and methodology; to identify potential impacts and mitigation measures; and to familiarize the applicant with state and federal programs, particularly those pertaining to wetlands. Such conference shall be for the convenience of the applicant and any recommendations shall not be binding on the applicant or the city of Richland.

B. Application Requirements. The information required by this section should be coordinated with reporting requirements required by this section for any other sensitive area located on the site.

1. Prior to the issuance of a SEPA threshold determination for a proposal, all Sensitive Area reports relevant to the site must be submitted to the city of Richland for review upon request of the planning and development services manager if such sensitive areas are indicated on any portion of the site. The purpose of the reports is to determine the extent and function sensitive areas where regulated activities are proposed. The reports will also be used by the city of Richland to determine the appropriate implementation of sensitive area regulations and the extent to which potential impacts of proposed activities are addressed by existing regulations that provide environmental analysis and measures that avoid or otherwise mitigate the probable specific adverse environmental impacts of proposed activities.
2. In addition, wetland boundaries and other relevant physical features must be staked and flagged in the field by a qualified consultant.
3. The report on any sensitive area shall include the following information:
  - a. Vicinity map;
  - b. A map showing:
    - i. Site boundary, property lines and roads;
    - ii. Internal property lines, rights-of-way, easements, etc.;
    - iii. Existing physical features of the site including buildings, fences, and other structures, roads, parking lots, utilities, water bodies, etc.;
    - iv. Contours at the smallest readily available intervals, preferably at five-foot intervals; and
    - v. For large (50 acres or larger) or complex projects with wetlands or habitat areas, an aerial photo with overlays displaying the site boundaries and wetland delineation or habitat area(s) may be required. Generally, an orthophotograph at a scale of one inch equals 400 feet or greater (such as one inch equals 200 feet) should be used. If an orthophotograph is not available, the center of a small scale (e.g., one inch equals 2,000 feet) aerial enlarged to one inch equals 400 feet may be used;
  - c. The report for any sensitive area must describe:
    - i. Locational information including legal description and address;
    - ii. All natural and manmade features within 150 feet of the site boundary;
    - iii. General site conditions including topography, acreage, and water bodies or wetlands; and
    - iv. Identification of any areas that have previously been disturbed or degraded by human activity or natural processes.
4. In addition to the general report requirements, a report on wetlands shall include the following information:
  - a. Delineated wetland boundary;
  - b. The wetland boundary must be accurately drawn at an appropriate engineering scale such that information shown is not cramped or illegible. The drawing shall be prepared by a surveyor. Generally, a scale of one inch equals 40 feet or greater (such as one inch equals 20 feet) should be used. Existing features must be distinguished from proposed features;

- c. Site designated on the wetlands areas maps described in RMC 26.60.022.022;
  - d. Hydrologic mapping showing patterns of water movement into, through, and out of the site area;
  - e. Location of all test holes and vegetation sample sites, numbered to correspond with flagging in the field and field data sheets;
  - f. Field data sheets from the Federal Manual, numbered to correspond with sample site locations as staked and flagged in the field; and describe:
    - i. Specific descriptions of plant communities, soils, and hydrology;
    - ii. A summary of existing wetland function and value; and
    - iii. A summary of proposed wetland and buffer alterations, impacts, and the need for the alterations as proposed. Potential impacts may include but are not limited to loss of flood storage potential, loss of wildlife habitat, expected decreases in species diversity or quantity, changes in water quality, increases in human intrusion, and impacts on associated wetland or water resources. If alteration of a Category I, II, III, or IV wetland is proposed, a wetland mitigation plan is required according to the standards of RMC 26.60.028 and 26.60.029.
    - iv. Describe how mitigation meets the criteria of RMC 26.20.020 Ecological Functions, No Net Loss including the specified mitigation sequence..
5. In addition to the general report requirements, a report on fish and wildlife habitats shall include the following information. (The level of detail contained in the report shall generally reflect the size and complexity of the proposal and the function and value of the habitat. The City may require field studies at the applicant's expense in appropriate cases.
- a. A map of vegetative cover types, reflecting the general boundaries of different plant communities on the site;
  - b. A description of the species typically associated with the cover types, including an identification of any critical wildlife species expected to be found;
  - c. The results of searches of Washington State Department of Natural Resource's Natural Heritage and Washington State Department of Wildlife's nongame data system databases, if available;
  - d. Additional information on species occurrence available from the city of Richland or Benton County; and
  - e. Include the following descriptions:
    - i. The layers, diversity and variety of habitat found on the site;
    - ii. Identification of edges between habitat types and any species commonly associated with that habitat;
    - iii. The location of any migration or movement corridors;
    - iv. A narrative summary of existing habitat functions and values; and
    - v. A summary of proposed habitat and buffer alterations, impacts, and mitigation. Potential impacts may include but are not limited to clearing of vegetation, fragmentation of wildlife habitat, expected decreases in species diversity or quantity, changes in water quality, increases in human intrusion, and impacts on wetlands or water resources.
    - vi. Describe how mitigation meets the criteria of RMC 26.20.020 Ecological Functions, No Net Loss including the specified mitigation sequence.

6. In addition to the general report requirements, applicants for activities within 200 feet of geologic hazard areas shall conduct technical studies and reports which include the following:
  - a. Review site history and available information;
  - b. Conduct a surface reconnaissance of the site and adjacent areas;
  - c. Conduct subsurface exploration suitable to the site and proposal to assess geotechnical geohydrologic conditions;
  - d. Conduct a detailed stability analysis of the existing landslide that demonstrates that the proposal will result in a suitable factor of safety during and following site development;
  - e. Characterize soils, geology and drainage;
  - f. Characterize ground water conditions including the presence of any public or private wells in the immediate vicinity; and
  - g. Analyze proposed clearing, grading and construction activities, including construction scheduling; potential direct and indirect, on-site and off-site, impacts from development; and proposed mitigation measures, including any special construction techniques, monitoring or inspection programs (during and after construction), and surface water management controls.
  - h. Evaluate the presence of geologic conditions giving rise to geologic hazards;
  - i. Evaluate the safety and appropriateness of the proposed activities;
  - j. Recommend appropriate construction practices, monitoring programs and other mitigating measures required to ensure achievement of the purpose and intent of these regulations. The format of any required reports shall be determined by the city of Richland;
  - k. Recommend surface water management controls during construction and operation;
  - l. Propose construction scheduling;
  - m. Recommend site monitoring and inspection during construction;
7. In addition to the general report requirements, a report for Critical Aquifer Recharge Areas must meet the following requirements:
  - a. Available information regarding geologic and hydrogeologic characteristics of the site including the surface location of all CARAs located on site or immediately adjacent to the site, and permeability of the unsaturated zone;
  - b. Ground water depth, flow direction, and gradient based on available information;
  - c. Currently available data on wells and springs within one thousand feet of the project area;
  - d. Location of other sensitive areas, including surface waters, within one thousand feet of the project area;
  - e. Available historic water quality data for the area to be affected by the proposed activity; and
  - f. Evaluation of the potential impact of the proposed development on groundwater quality, both short and long term, based on an assessment of the cumulative impacts of the proposal in combination with existing and potential future land use activities; and

