APPENDIX B
CRITICAL AREAS REGULATIONS
CRITICAL AREAS REGULATION

1. INTRODUCTION. ................................................................. 3
   1.1 Purpose........................................................................... 3
   1.2 Permits.......................................................................... 4
   1.3 Protection....................................................................... 4
   1.4 Use of Best Available Information. ............................... 4

2. DEFINITIONS. ................................................................. 5

3. APPLICABILITY AND EXEMPTIONS. ................................. 6
   3.1 Applicability................................................................. 6
   3.2 Exemptions................................................................... 6

4. ADMINISTRATION.......................................................... 8
   4.1 Critical Area Reports—Requirements. ............................ 8
   4.2 Critical Area Report—Modifications. .............................. 9
   4.3 Mitigation Requirements. ............................................. 9
   4.4 Mitigation Sequencing.................................................. 10
   4.5 Mitigation Plan Requirements. .................................... 10
   4.6 Markers and Signs...................................................... 11
   4.7 Notice on Title............................................................ 12
   4.8 Setbacks...................................................................... 12

5. WETLANDS. ................................................................. 13
   5.2 Initial Project Review..................................................... 14
   5.3 Critical Area Report—Requirements for Wetlands. .......... 14
   5.4 Activities in Wetlands—General Requirements.............. 16
   5.5 Wetland Buffers.......................................................... 17
5.6 Signing and Fencing Wetlands. ................................................................. 22
5.7 Stormwater Management. ................................................................. 23
5.8 Wetland Mitigation. ................................................................. 23

6. CRITICAL AQUIFER RECHARGE AREAS............................................ 27
   6.2 Critical Area Report—Additional Requirements for Aquifer Recharge Areas. .. 27
   6.3 Performance Standards—General. ...................................................... 29
   6.4 Performance Standards for Specific Uses. ............................................. 29
   6.5 Prohibited Uses. ................................................................. 30

7. FREQUENTLY FLOODED AREAS......................................................... 31

8. GEOLOGICALLY HAZARDOUS AREAS............................................. 32
   8.2 Erosion and Landslide Hazard Areas. .................................................. 32
   8.3 Mapping of Hazards. ................................................................. 33
   8.4 Allowed Activities. ................................................................. 34
   8.5 Regulation. ................................................................. 34

9. DESIGNATION OF FISH AND WILDLIFE HABITAT CONSERVATION
   AREAS. ................................................................................................. 39
   9.2 Critical Area Report—Additional Requirements for Habitat Conservation Areas.. 40
   9.3 Performance Standards—General Requirements. ..................................... 41
   9.4 Performance Standards—Specific Habitats.............................................. 44
1. Introduction.

1.1 Purpose.

All new uses and development activities proposed for shoreline areas in the City of Woodland must comply with the provisions of the Washington State Shoreline Management Act (RCW 90.58), the Washington Administrative Code (WAC 173-26 and 173-27), the updated Woodland Shoreline Master Program, and the Woodland Municipal Code. In addition, it is important to note that in many instances, shoreline areas under the jurisdiction of the Shoreline Management Act (SMA) also involve critical areas, which are subject to protection under the provisions of the Washington State Growth Management Act (GMA). In those instances where the requirements of both the SMA and the GMA apply, the courts have ruled that the provisions of the SMA must prevail. As a result, any new use or development activity proposed for an area under the jurisdiction of the Shoreline Management Act that also involves one or more of the protected critical areas must also comply with the following regulations in this Appendix B. For new uses and development activities outside of shoreline jurisdiction that involve critical areas, please refer to Chapter 15.08 of the Woodland Municipal Code (WMC).

The City finds that critical areas provide a variety of valuable biological and physical functions that benefit the City and its residents. Critical areas may also pose a threat to human safety and public and/or private property. The purpose of these regulations includes, but is not limited to, the following:

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

B. Preserve and protect critical areas by regulating development within and adjacent to critical areas;

C. Mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas;

D. Prevent adverse cumulative impacts to wetlands, streams, shoreline environments, and fish and wildlife habitat;

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

F. Protect groundwater recharge capacity to the greatest extent practicable;

G. To strive for no net loss of the functions and values of wetlands within shoreline jurisdiction by requiring compensatory mitigation for unavoidable wetland impacts;
H. To designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values using the most current, accurate, and complete scientific and technical information available, while also allowing for reasonable use of private property.

1.2 Permits

No separate critical areas permit is required for a development proposal that requires a shoreline permit or Shoreline Letter of Exemption (SLE). All applicable critical areas requirements in Appendix B shall be incorporated into a Shoreline Substantial Development Permit (SSDP), Shoreline Conditional Use Permit (SCUP), Shoreline Variance, or SLE as applicable, and the applicable shoreline permit shall be obtained prior to undertaking any development activity regulated by the SMP.

1.3 Protection.

Any action taken pursuant to these regulations shall result in an equivalent or greater function of the critical area. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas.

1.4 Use of Best Available Information.

Critical area reports or decisions to alter critical areas shall rely on the most current, accurate, and complete scientific and technical information available to protect the functions and values of critical areas.
2. **Definitions.**

Definitions for Appendix B are located in Chapter 2 of this Shoreline Master Program.
3. Applicability and Exemptions.

3.1 Applicability.

A. All development proposals within the City of Woodland’s shoreline jurisdiction, whether public or private, shall comply with these regulations, whether or not a permit or authorization is required. For the purposes of these regulations, development proposals shall include, but are not limited to the following:

1. Any project or development that requires a federally issued permit;
2. Any project or development that requires compliance with the Washington State Shoreline Management Act (RCW 90.58) or Growth Management Act (RCW 36.70A);
3. Alteration of a wetland or riparian habitat area as defined herein;
4. Any project or development that requires a permit under the adopted building code;
5. Any development or use that requires approvals under existing or subsequently adopted Woodland codes and/or ordinances (e.g., subdivision, zoning, conditional use, etc.).

3.2 Exemptions.

A. Critical Areas Exemptions. The following development, activities, and associated uses shall be exempt from the requirements of the critical areas regulations; however, the critical areas exemptions do not include exemptions from the provisions of the Shoreline Master Program and are not exemptions from substantial development permits provided under WAC 173-27-040.

1. Installation, construction, or replacement of utility lines in improved right-of-way, not including electric substations.
2. The removal or control of noxious weeds not involving chemical application, excavation, mechanical weed control with the use of hand-held tools;
3. Regular landscape maintenance of ornamental ground cover or other vegetation in a critical area or buffer area, through replanting, trimming, or continued mowing, that was disturbed prior to the effective date of this Shoreline Master Program; provided, that no further disturbance is created.
4. Maintenance of intentionally created artificial wetlands or surface water systems including irrigation and drainage ditches, grass-lined swales and canals,
detention facilities, farm ponds, and landscape or ornamental amenities. Wetlands, natural streams, natural streams that are channelized, lakes or ponds created as mitigation for approved land use activities or that provide critical habitat are not exempt and shall be regulated according to the mitigation plan;

5. Minimal site investigative work required by the City, state or a federal agency, or any other applicant such as surveys, soil logs, percolation tests, and other related activities, provided that impacts on environmentally critical areas are minimized and disturbed areas are restored to the pre-existing level of function and value within one year after tests are concluded;

6. Passive recreational uses, sport fishing or hunting, scientific or educational study, or similar minimum impact activities;
4. Administration.

4.1 Critical Area Reports—Requirements.

A. Prepared by Qualified Professional. The applicant shall submit a critical area report prepared by a qualified professional.

B. Best Available Information. The critical area report shall use the most current, accurate, and complete scientific and technical information available in the analysis of critical area data and field reconnaissance. All scientific sources shall be referenced. The critical area report shall evaluate the proposal and all probable impacts to critical areas in accordance with this Program.

C. Minimum Report Contents. A critical area report shall contain, at a minimum:

1. A copy of the site plan, including identified critical areas, buffers, development proposal(s), limits of any proposed clearing, and a stormwater management plan;

2. The date the report was prepared;

3. The name(s) and qualifications of the person(s) preparing the report;

4. The dates and documentation of any fieldwork performed on the site;

5. Identification and characterization of all critical areas and buffers;

6. A statement specifying the accuracy of the report and all assumptions;

7. An analysis of development alternatives;

8. An assessment of the probable cumulative impacts to critical areas resulting from the proposed development;

9. A description of reasonable efforts made to apply mitigation sequencing to avoid, minimize, and mitigate impacts to critical areas;

10. Plans for mitigation to offset any impacts including, but not limited to:

   a. Impacts of any proposed development within or adjacent to a critical area or buffer,

   b. Impacts of any proposed alteration of a critical area or buffer by the proposed project;
11. A discussion of the performance standards and/or criteria in these Critical Areas Regulations applicable to the critical area and proposed activity;

12. Financial guarantees to ensure compliance; and

13. Any additional information required for the specific critical area as required by the corresponding regulations.

4.2 Critical Area Report—Modifications.

A. Study Area—Limitations. The Director of Public Works (Director) may modify the geographic area required to be addressed in the critical area report if:

1. Permission to access adjacent properties cannot be obtained. If critical areas are potentially present in such areas, observations from off-site or using digital resources may be used to assess the conditions; or

2. Only a limited portion of the site will be affected by the activity.

B. Required Contents—Modifications. The Director may modify the required contents of the critical area report if, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and mitigation.

C. Additional Information. The Director may require additional information to be included with the critical area report when deemed necessary to the review of the proposed project.

4.3 Mitigation Requirements.

A. The applicant shall avoid all impacts that degrade the functions and values of a critical area(s). Compensatory mitigation will be required for unavoidable alteration to a critical area or buffer resulting from a development proposal, in accordance with this Program.

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

C. No mitigation shall be implemented until after the City has approved the applicable shoreline permit or SLE that includes a mitigation plan. All mitigation shall be in accordance with the provisions of this Program and approved critical area report.
4.4 Mitigation Sequencing.

A. Applicants shall demonstrate that all reasonable efforts have been made to avoid or minimize impacts to critical areas. When alteration to a critical area is proposed, such alteration shall be mitigated in the following order of preference:

1. Avoid the impacts altogether by not taking an action or parts of an action.

2. Minimize impacts by limiting the degree or magnitude of the action or its implementation, by using appropriate technology, or by taking steps such as project redesign, relocation, or timing to avoid or reduce impacts.

3. Repair, rehabilitate, or restore the affected environment (wetlands, critical aquifer recharge areas, frequently flooded areas, habitat conservation areas) to historical conditions or conditions existing prior to project initiation.

4. Minimize or eliminate the hazard by restoring or stabilizing the hazard area through engineered or other approved methods.

5. Reduce or eliminate the impact or hazard over time by preservation and maintenance operations during the life of the action.

6. Compensate for the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, or habitat conservation areas by replacing, enhancing, or providing like resources or environments.

7. Monitor the mitigation and provide remedial action when necessary.

4.5 Mitigation Plan Requirements.

When compensatory mitigation is required, the applicant shall submit a mitigation plan as part of a critical area report. The plan shall include:

A. Environmental Goals and Objectives. The mitigation plan shall include a written report that identifies the environmental goals and objectives of the proposed compensation, including:

1. A description of the anticipated impacts to the critical area(s) and the proposed mitigation actions. Compensation measures shall include site-selection criteria, compensation goals, identification of resource functions, and projected dates for beginning and completion of site construction and compensation activities. The goals and objectives shall be related to the functions and values of the impacted critical area;

2. A review of the most current, accurate, and complete scientific and technical information available supporting the proposed mitigation;
3. A narrative of the author's experience to date in restoring or creating the type of critical area proposed;

4. An analysis of the likelihood of success of the compensation project.

B. Performance Standards. The mitigation plan shall include specific criteria that are measurable for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained and that the requirements of this Program have been met.

C. Detailed Construction Plans. The mitigation plan shall include written specifications and descriptions of the proposed mitigation, including, but not limited to:

1. Grading and excavation details;

2. Erosion- and sediment-control measures;

3. Planting plans showing plant species, locations, quantities, sizes, spacing, and density;

4. Proposed construction timing, sequence, and duration;

5. Measures to protect and maintain plants until established;

6. Detailed site diagrams, topographic maps showing slopes in two-foot intervals, final grade elevations, and any other appropriate drawings.

D. Monitoring Program. A mitigation-monitoring program shall be included with any mitigation plan. The monitoring program shall be prepared by the qualified professional who prepared the mitigation plan. The report shall document site performance in relation to performance standards and contingency actions implemented to compensate for mitigation shortfalls. The site shall be monitored for a period to establish that performance standards have been met, and not for a period of less than five years.

E. Contingency Plan. The mitigation plan shall include a contingency plan that identifies potential courses of action, and any corrective measures to be taken if monitoring indicates that project performance standards are not being met.

F. Financial Guarantees. The mitigation plan shall include financial guarantees, if necessary, to ensure that the mitigation plan is fully implemented.

4.6 Markers and Signs.

A. Critical area boundaries shall be permanently delineated using iron or concrete markers in accordance with survey standards.
B. The outer boundary of a critical area buffer on the development site shall be identified with brightly colored construction fencing and temporary signs prior to any site development or alteration. Permanent signs may be required by the Director upon completion of the project.

**4.7 Notice on Title.**

A. Notice of the existence of a critical area and/or buffer on a site shall be recorded on the property title. The restriction shall state that limitations to development may exist due to the presence of a critical area and/or buffer.

B. The applicant shall submit a copy of the recorded deed restriction prior to final project approval.

**4.8 Setbacks.**

A. Unless otherwise allowed in this Program, buildings and other structures shall be set back a distance of fifteen (15) feet from the edges of all critical area buffers or critical area if no buffer is required.

B. The following may be allowed in these 15-foot setback areas dependent upon shoreline environmental designation:

1. Landscaping;

2. Building overhangs not greater than eighteen inches; and/or

3. Driveways and patios provided runoff does not affect the critical area.
5. **Wetlands.**

A. **Designating Wetlands.** Wetlands are those areas, designated in accordance with the currently approved Federal Wetland Delineation Manual and applicable regional supplement, that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include, but are not limited to: swamps, marshes, bogs, ponds, and similar areas. All areas within the City’s shoreline jurisdiction meeting the wetland designation criteria in the Federal Wetland Delineation Manual and applicable regional supplement, regardless of presence or absence of formal documented identification, are hereby designated critical areas and are subject to the provisions of this Program.

B. **Wetland Ratings.** Wetlands shall be rated according to the Washington State Department of Ecology wetland rating system found in the Washington State Wetland Rating System for Western Washington: 2014 Update (Ecology Publication #14-06-007), or as revised. This document contains the definitions and methods for determining whether the criteria below are met.

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

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

**Category III.** Category III wetlands are: (1) wetlands with a moderate level of functions (scoring between 16 and 19 points) that have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

**Category IV.** Category IV wetlands have the lowest levels of functions (scoring fewer than 16 points) and are often heavily disturbed. These are wetlands that we should
be able to replace, or in some cases to improve. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree.

C. Date of Rating. Wetland rating categories shall be applied as the wetland exists on the date of the adoption of the rating system, as the wetland naturally changes thereafter, or as the wetland changes in accordance with permitted activities. Illegal modifications to wetlands shall not result in changes to wetland rating categories.

5.2 Initial Project Review.

A. Wetlands shall be identified and designated through a site assessment utilizing the definitions, methods, and standards as set forth in the Federal Wetland Delineation Manual and applicable regional supplement.

B. A site visit shall be conducted by the Director or qualified designee to confirm the presence or absence of wetland indicators listed in the critical areas identification checklist (see Subsection 8.6.1.B in this Program) or identified in the State Environmental Policy Act (SEPA) checklist. The site visit shall be used to determine whether a wetland or wetland buffer area are within two hundred feet of a proposed project or activity. A confirmation that a wetland is present or that the proposed project may impact a wetland or its buffer will then require a professional site assessment. The Director shall use the following map references to assist in making a determination: (1) National Wetland Inventory Map; and (2) any records of previously mapped wetlands.

5.3 Critical Area Report—Requirements for Wetlands.

In addition to the general critical area report requirements of Section 3.3 of this Appendix B, wetland critical area reports must meet the requirements of this Section. Critical area reports that include two or more types of critical areas must meet the report requirements for each type of critical area. If a wetland critical area report is required, it must be prepared by a qualified professional meeting the requirements defined in Chapter 2 of this Program, and the report shall meet the following requirements:

A. Area Addressed in Wetland Critical Area Report. The following areas shall be addressed in a wetland critical area report:

1. The project area of the proposed activity;

2. All wetlands and recommended buffers within three hundred (300) feet of the project area; and

3. All shoreline areas, water features, floodplains, and other critical areas and related buffers within two hundred feet of the project area.
B. Narrative. The report narrative must include each of the following:

1. Location information (legal description, parcel number and address);
2. List of all property owners;
3. Site characteristics, including topography, total acreage, delineated wetland acreage, other water bodies, vegetation, soil types, etc., and distances to and sizes of other off-site wetlands and water bodies within one-quarter mile of the subject wetland;
4. Identification of the wetland's rating as defined in these regulations;
5. Analysis of functions and values of existing wetlands, including flood control, water quality, aquifer recharge, fish and wildlife habitat, and hydrologic characteristics;
6. A complete description of the proposed project and its potential impacts to wetlands and buffers and, if applicable, adjacent off-site wetlands and buffers, including construction impacts;
7. Discussion of project alternatives, including total avoidance of impacts to wetland areas;
8. If mitigation for wetland impacts is proposed, a description and analysis of that mitigation;
9. A wetland buffer recommendation and rationale for the buffer size determination;
10. Documentation of any fieldwork performed on the site, including field data sheets for delineations, rating system forms, baseline hydrologic data, etc.; and
11. A list of management practices that will be used to protect and maintain the quality of the wetland and/or covenants and restrictions that will be used in managing the wetland.

C. Vicinity map drawn to scale and including a north arrow, public roads, and other known landmarks in the vicinity.

D. National Wetlands Inventory Map (U.S. Fish and Wildlife Service) and/or a Cowlitz County wetland inventory map identifying wetlands on or adjacent to the site.

E. Site Map. This map must be drawn to a usable scale, one inch equals one hundred feet or better, and must include a north arrow and all of the following requirements:

12. Site boundary/property lines and dimensions;
13. Wetland boundaries based upon a wetland specialist's delineation, and depicting sample points and differing wetland types if any;

14. Recommended wetland buffer boundary;

15. Buffers for off-site critical areas that extend onto the project site;

16. Internal property lines such as rights-of-way, easements, etc.;

17. Existing physical features of the site, including buildings and other structures, fences, roads, utilities, parking lots, water bodies, etc.;

18. The development proposal, including grading and clearing limits;

19. Topographic contours at five-foot intervals.

F. An on-site wetland delineation performed by a qualified expert. The wetland boundaries shall be staked and flagged. The report shall include photos documenting the wetland boundaries have been staked and flagged.

G. Additional Information. When appropriate, the Director may also require the critical area report to include an evaluation by the State Department of Ecology or an independent qualified expert regarding the applicant’s analysis and the effectiveness of any proposed mitigating measures or programs, and to include any recommendations as appropriate.

5.4 Activities in Wetlands—General Requirements.

A. Activities within wetland or wetland buffer areas may be permitted only if the applicant can show that the proposed activity will not degrade the functions and values of the wetland and/or other critical areas.

B. Activities and uses shall be prohibited within wetlands and wetland buffer areas except as permitted in this Program.

C. Category I Wetlands. Alteration of Category I wetlands and their buffers is prohibited unless the alteration would improve habitat to threatened or endangered species that use the wetland and/or its buffer. This habitat improvement must be demonstrated in the wetland critical areas report and the mitigation plan, if any.

D. Category II and III Wetlands. The following standards shall apply to activities within Category II and III wetlands and wetland buffers:

1. Water-dependent activities may be allowed when no practical alternatives having less adverse impact on the wetland are available and appropriate mitigation measures are proposed; and

2. Nonwater-dependent activities are prohibited unless:
a. All alternative designs of the proposed project to avoid adverse impacts to the wetland or wetland buffer are not feasible and appropriate mitigation measures are proposed.

b. Category IV Wetlands. Activities and uses may be permitted in Category IV wetlands that result in unavoidable impacts in accordance with an approved critical area report and mitigation plan, and only if the proposed activity is the only reasonable alternative available.

5.5 Wetland Buffers.

A. Measurement of Wetland Buffers. All buffers shall be measured from the wetland boundary as surveyed in the field. Buffer widths shall be determined according to wetland category, habitat score and/or water quality score, and intensity of the proposed land use. The buffer of a created, restored, or enhanced wetland shall be in conformance with the expected category of the wetland upon maturity.

B. Standard Buffer Widths. The standard buffer width is intended to protect the wetland functions and values in relation to the project intensity at the time of the proposed activity. Required buffer widths are as follows:

<table>
<thead>
<tr>
<th>Wetland Category</th>
<th>Wetland Characteristics</th>
<th>Buffer Widths by Impact of Proposed Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>Bogs and Wetlands of High Conservation Value</td>
<td>Low - 125 feet Moderate - 190 feet High - 250 feet</td>
</tr>
<tr>
<td></td>
<td>High level of function for habitat (score for habitat 8-9 points)</td>
<td>Low - 150 feet Moderate - 225 feet High - 300 feet</td>
</tr>
<tr>
<td></td>
<td>Moderate level of function for habitat (score for habitat 5-7 points)</td>
<td>Low - 75 feet Moderate - 110 feet High - 150 feet</td>
</tr>
<tr>
<td></td>
<td>High level of function for water quality improvement (8-9 points) and low for habitat (&lt;5 points)</td>
<td>Low - 50 feet Moderate - 75 feet High - 100 feet</td>
</tr>
<tr>
<td></td>
<td>Not meeting any of the above characteristics</td>
<td>Low - 50 feet Moderate - 75 feet High - 100 feet</td>
</tr>
<tr>
<td>Category II</td>
<td>High level of function for habitat (score for habitat 8-9 points)</td>
<td>Low - 150 feet Moderate - 225 feet High - 300 feet</td>
</tr>
<tr>
<td></td>
<td>Moderate level of function for habitat (score for habitat 5-7 points)</td>
<td>Low - 75 feet</td>
</tr>
</tbody>
</table>
### Wetland Characteristics

<table>
<thead>
<tr>
<th>Wetland Category</th>
<th>Wetland Characteristics</th>
<th>Buffer Widths by Impact of Proposed Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Moderate - 110 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 150 feet</td>
</tr>
<tr>
<td>Category I</td>
<td>High level of function for water quality improvement and low for habitat (score for water quality 8-9 points; habitat &lt;5 points)</td>
<td>Low - 50 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 75 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 100 feet</td>
</tr>
<tr>
<td></td>
<td>Not meeting above characteristics</td>
<td>Low - 50 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 75 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 100 feet</td>
</tr>
<tr>
<td>Category II</td>
<td>High level of function for habitat (score for habitat 8-9 points)</td>
<td>Low - 150 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 225 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 300 feet</td>
</tr>
<tr>
<td></td>
<td>Moderate level of function for habitat (score for habitat 5-7 points)</td>
<td>Low - 75 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 110 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 150 feet</td>
</tr>
<tr>
<td></td>
<td>Not meeting above characteristic</td>
<td>Low - 40 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 60 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 80 feet</td>
</tr>
<tr>
<td>Category III</td>
<td>Score for all 3 basic functions is less than 16 points</td>
<td>Low - 25 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate - 40 feet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High - 50 feet</td>
</tr>
</tbody>
</table>

C. Increased Wetland Buffer Widths. The Director shall require increased buffer widths when recommendations by a qualified professional biologist and the most current, accurate, and complete scientific and technical information available indicate that increased buffer widths are necessary to protect the wetland. An increase in buffer width will be required if any of the following criteria is met:

1. An increased buffer area is necessary to protect other critical areas within the same project area;

2. The buffer area or adjacent uplands have a slope greater than fifteen percent or the buffer is susceptible to erosion where standard erosion controls will not prevent adverse impacts to the wetland;

3. The buffer is insufficiently vegetated. Where an increased buffer is recommended due to insufficient vegetation cover, a vegetation planting plan may be implemented as an alternative to the increased buffer width. A vegetation planting plan shall not result in a decrease in the buffer area. The vegetation planting plan shall include measures for monitoring and maintenance of the vegetated area.

D. Reduced Width Based on Modification of Land Use Intensity. 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, and only after submittal of a critical areas report prepared by a qualified professional that provides clear justification for the reduced buffer:

1. For wetlands that score moderate or high for habitat (5 points or more for the habitat functions), the width of the buffer can be reduced if both of the following criteria are met:

a. A relatively undisturbed, vegetated corridor at least one hundred feet wide is protected between the wetland and any other priority habitats as defined by the Washington 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 Western Washington—Revised). The corridor must be continuous with both the wetland and the priority habitat and be protected for the entire distance between the wetland and the priority habitat by some type of legal protection such as a conservation easement.

b. All applicable measures to minimize the impacts of adjacent land uses on wetlands, such as the examples summarized in Table B-2, are applied.

Table B-2 Examples of Measures to Minimize Intensity of Impacts to Wetlands from Adjacent Land Use
(This is not a complete list of measures.)

<table>
<thead>
<tr>
<th>Examples of Disturbance</th>
<th>Activities and Uses that Cause Disturbances</th>
<th>Examples of Measures to Minimize Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights</td>
<td>Parking lots</td>
<td>Direct lights away from wetland</td>
</tr>
<tr>
<td></td>
<td>Warehouses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential</td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>Manufacturing</td>
<td>Locate activity that generates noise away from wetland</td>
</tr>
<tr>
<td></td>
<td>Residential</td>
<td></td>
</tr>
<tr>
<td>Toxic runoff*</td>
<td>Parking lots</td>
<td>Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</td>
</tr>
<tr>
<td></td>
<td>Roads</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential areas</td>
<td>Establish covenants limiting use of pesticides within 150 feet of wetland</td>
</tr>
<tr>
<td></td>
<td>Application of agricultural pesticides</td>
<td>Apply integrated pest management</td>
</tr>
<tr>
<td></td>
<td>Landscaping</td>
<td></td>
</tr>
<tr>
<td>Stormwater runoff</td>
<td>Parking lots</td>
<td>Retrofit stormwater detention and treatment for roads and existing adjacent development</td>
</tr>
<tr>
<td></td>
<td>Roads</td>
<td>Prevent channelized flow from lawns that directly enters the buffer</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residential areas</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Commercial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Landscaping</td>
<td></td>
</tr>
<tr>
<td>Change in water regime</td>
<td>Impermeable surfaces</td>
<td>Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</td>
</tr>
<tr>
<td></td>
<td>Lawns</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tilling</td>
<td></td>
</tr>
</tbody>
</table>
2. For wetlands that score fewer than 5 points for habitat, the buffer width can be reduced to that required for moderate land-use impacts by applying all applicable measures to minimize the impacts of the proposed land uses (see examples in Table B-2).

3. The minimum buffer width at its narrowest point shall not be less than the low-intensity land use buffer widths listed in Table B-1.

E. Averaging of Buffer Widths. The Director may allow for the standard buffer width to be averaged in accordance with an approved critical area report on a case-by-case basis. Averaging of buffer widths shall be allowed only when a qualified wetlands professional demonstrates that:

1. Averaging will not reduce wetland functions or values;

2. The wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places due to varying wetland quality;

3. A maximum of twenty-five percent (25%) of the total required buffer area on the site (after all reductions are applied) may be averaged;

4. Wetland buffer width averaging and buffer width reduction provisions cannot be combined. The two separate provisions may be used to adjust buffers on the same wetland in different areas, but cannot be used in the same location on a wetland.

5. The total area of the averaged buffer is not less than would be contained if there were no buffer averaging; and

6. The buffer width at its narrowest point is never less than ¾ of the required width according to Table B-1 or 25 feet, whichever is wider.

F. Buffer Conditions Shall Be Maintained. Wetland buffers in their natural state shall not be altered and shall be maintained in an undisturbed condition except as allowed in this Program. Planting of native plants and control of non-native invasive plants using hand tools is allowed.

G. Buffers for Mitigation Wetlands. Any wetland that is created, restored, or enhanced as compensation for approved regulated wetland alterations shall have the
standard buffer required for the category of the created, restored, or enhanced wetland.

H. Altered Wetland and/or Buffer Areas. Wetlands or buffer areas that have been altered and have lost ecological functions and values are encouraged to be restored in order to replace these lost functions. Prior to the issuance of a development permit that is proposed adjacent to degraded wetlands or buffers, the property owner may agree to undertake restoration activities or authorize such activities to occur (including access to the property), through an approved legal device such as a conservation program or restoration effort, or by legal agreement with restoration agencies or groups.

I. Functionally Isolated Buffer Areas. Areas that are functionally separated from a wetland and do not protect the wetland from adverse impacts due to preexisting roads, structures, or vertical separation shall be excluded from buffers otherwise required by this Program on a case-by-case basis subject to a critical area report and review as determined by the Director.

J. Use of Buffer Areas. The following uses may be permitted within a required wetland buffer unless otherwise prohibited:

1. Conservation and Restoration Activities. Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.

2. Passive Recreation. Passive recreation in accordance with an approved critical area report. Such activities include but are not limited to:

   a. Walking paths or trails (no motorized use) located in the outer twenty-five (25) percent of the buffer area. Trails shall, be placed on existing road grades, utility corridors, or any other previously disturbed area outside of the buffer, unless demonstrated that no other feasible location exist, and may need to be enhanced with screening. When demonstrated that there is no feasible location outside of the buffer, trails or paths may be placed within the outer 25% of a wetland buffer area shall be planned to minimize removal of vegetation (trees, shrubs, etc.) and important wildlife habitat. Trail widths shall not be wider than three (3) feet for private trail and ten (10) feet for public use or publicly owned trails. Trail surfaces shall be composed of natural materials (e.g., gravel, rock, bark), and permanent surfacing materials (asphalt or concrete) shall require a variance. No construction or surfacing materials shall significantly alter the existing drainage or negatively affect the wetland or buffer area;

   b. Wildlife viewing structures, platforms, interpretive areas, picnic areas, benches, and associated activities shall be designed and located to
minimize disturbance to wildlife habitat and/or wetland and/or buffer values or functions;

c. Access to fishing areas.

3. Hazard Tree Removal. When a tree within a wetland buffer poses a threat to human life or property, the Director may allow the falling of such a danger or hazard tree subject to the following criteria:

a. Tree removal shall be the minimum necessary to balance the protection of the wetland or buffer area with the protection of life or property;

b. For every hazard tree removed, a minimum of two trees shall be planted as mitigation.

4. Stormwater Management Facilities. Stormwater management facilities such as bioswales or retention ponds may be allowed within the outer twenty-five (25) percent of the required buffer area for Category III and IV wetlands only, provided that:

a. No other location is feasible; and

b. Locating such facilities within the buffer area will not degrade the wetland values or functions or alter the hydroporid of the wetland or adversely affect water quality; and

c. Compensatory mitigation shall be included for all losses of wetland function as a result of the stormwater management facility.

5.6 Signing and Fencing Wetlands.

A. Temporary Markers. The perimeter of a wetland or buffer area and the limit of the wetland or buffer area to be disturbed pursuant to an approved permit shall be marked in the field in such a way as to discourage unauthorized disturbance of the wetland or buffer area. Temporary marking shall be maintained throughout the permitted activity and shall not be removed until final inspections are completed and approved permanent signs, if required, are in place. The location of temporary markers shall be shown on all site plans and final plats associated with the proposal. Temporary markers shall be composed of one-half inch galvanized pipe or equivalent monument, at least eighteen inches long, and shall show above the surface or surrounding vegetation at least five inches. Temporary markers shall be spaced no more than fifty feet apart or as determined by the Director.

B. Permanent Signs. The Director may require the applicant to install permanent signs along the boundary of wetlands or buffer areas as a condition of any permit.
C. Temporary Fencing. High-visibility construction fencing shall be installed at the outer edge of wetland buffers prior to and remain in place during the proposed activity to prevent access and to protect the wetland and buffer. The Director may waive this requirement if an alternative to fencing that achieves the same objective is proposed and approved.

D. Permanent Fencing. The Director may require the wetland and/or buffer area to be fenced for any proposed project. If required, permanent fencing shall be installed at the applicant's expense.

5.7 Stormwater Management.

The following stormwater management standards are required for development in or near wetlands:

A. New developments shall utilize best management practices to minimize stormwater quantity and quality impacts to wetlands, both during and following construction.

B. Stormwater runoff from new development shall not significantly change the rate of flow or the hydroperiod, which is the seasonal period and duration of water saturation or inundation, nor decrease the water quality of wetlands.

C. Authorized modifications of wetlands or buffer areas for construction of discharge from drainage facilities shall not adversely affect wetland hydrologic functions.

D. Developments that handle, store, dispose of, transport, or generate substances or wastes defined as "dangerous" or "extremely dangerous" wastes under WAC 173-303 (regardless of quantity) shall not allow direct precipitation or stormwater runoff to contact such substances where stored on-site.

E. The Washington State Department of Ecology's Stormwater Manual shall be the standard reference when implementing a stormwater management plan unless the Director authorizes an alternative approach.

5.8 Wetland Mitigation.

A. Mitigation Sequencing. As a condition of any shoreline permit allowing for the alteration of wetlands, the applicant will engage in the restoration, creation, or enhancement of wetlands in order to offset the impacts resulting from the alteration. An appropriate mitigation plan shall be developed by a qualified professional, and shall be approved by the Director. Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized or compensated for in the following order or preference:
1. Avoid the impact completely by not taking certain action or parts of the action;

2. Minimize impacts by reducing the magnitude of the action or by avoiding or reducing impacts;

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

4. Reduce or eliminate the impact over time by preservation, restoration and maintenance;

5. Compensate for the impact by replacing, enhancing, and/or the affected area;

6. Monitor the impacted area and take appropriate corrective measures.

B. Mitigation Ratios. Any wetland that is degraded as a result of a permitted or non-permitted activity shall be mitigated through wetland restoration, creation, and/or enhancement at an area equal to or greater than the wetland area that was altered in order to compensate for losses to wetland acreage or functions according to the following ratios:

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

C. Wetland Enhancement. Applicants proposing to enhance wetlands using the ratios provided in Subsection B, shall also present an enhancement program designed by a qualified professional with experience in wetland enhancement. If any of the following conditions exist, acreage ratios may be increased up to one hundred percent at the recommendation of a qualified professional and approval of the Director:

1. High degree of uncertainty as to the probable success of the proposed enhancement;
2. Significant (greater than twelve months) period of time between destruction and enhancement of wetland functions; and/or

3. Projected losses in functional value and other uses, such as recreation, scientific research and education, are relatively high.

D. Decreased Replacement Ratio. The replacement ratio for any type of wetland mitigation may be decreased only under the following circumstances:

1. Scientifically supported evidence that demonstrates that no net loss of wetland function or value would result under the decreased ratio;

2. In all cases a minimum ratio of 1:1 shall be required.

E. In-Kind/Out-of-Kind Mitigation. In-kind mitigation shall be provided except where the applicant can demonstrate that either:

   1. The wetland system was already degraded prior to any activity, and out-of-kind replacement will result in a wetland with greater functions and values; or

   2. Technical problems such as exotic vegetation and changes in watershed hydrology make implementation of in-kind mitigation infeasible.

F. On-Site/Off-Site Mitigation. On-site mitigation shall be provided except where the applicant can demonstrate that:

   1. The hydrology and ecosystem of the original wetland will not be damaged by the loss of the on-site wetland; and

   2. On-site mitigation is not scientifically feasible due to problems with hydrology, soils, or factors such as other potentially adverse impacts from surrounding land uses or on-site mitigation would require elimination of or result in adverse impacts to high-quality upland habitat; and

   3. Existing functional values at the site of the proposed off-site mitigation are significantly greater than the lost on-site wetland functional and values; and

   4. One of the following applies:

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

      b. Credits from a state-certified wetland mitigation bank are used as mitigation, and the use of credits is consistent with the terms of the bank’s certification under Chapter 173-700 WAC.
G. Timing of Mitigation. Mitigation shall be completed prior to activities that will impact wetlands where feasible. Bonding or other financial guarantee is required if mitigation projects cannot be completed prior to project completion. Mitigation projects shall be timed to reduce impacts to existing wildlife or vegetation. If wetland mitigation is not completed within one year of wetland impacts, mitigation ratios will be increased to offset temporal losses.

H. Components of Mitigation Plans. All wetland restoration, creation and/or enhancement projects required pursuant to this Program either as a permit condition or as the result of an enforcement action shall follow a mitigation plan approved by the City and shall be consistent with *Wetland Mitigation in Washington State – Part 2: Developing Mitigation Plans--Version 1*, (Ecology Publication #06-06-011b, Olympia, WA, March 2006 or as revised) and *Selecting Wetland Mitigation Sites Using a Watershed Approach* (Western Washington) (Publication #09-06-32, Olympia, WA, December 2009). The applicant or violator must receive written approval by the Director for the mitigation plan prior to the commencement of any wetland restoration, creation, or enhancement activity. The mitigation plan shall contain at least the following components:

1. Baseline Information. A written assessment and accompanying maps of the impacted wetland, including, at a minimum, wetland delineation; wetland rating, existing wetland acreage; proposed or unauthorized wetland impacts; vegetative, faunal, and hydrologic characteristics; soil and substrate conditions; and topographic elevations. If off-site mitigation is proposed, baseline information should also include surface hydrology, existing and proposed adjacent land uses, proposed buffers, and a list of all property owners within five hundred feet of the edge of the wetland.

2. Timing and Objectives. The following shall be submitted in writing: proposed timing of the mitigation and a complete description of the functions and values intended to be created or enhanced.

3. Monitoring. Mitigation monitoring shall be required for a period necessary to establish that performance standards have been met, but not for less than five years. If a scrub-shrub or forested vegetation community is proposed, monitoring may be required for ten years or more. The mitigation plan shall include monitoring elements that ensure certainty of success for the project’s natural resource values and functions. If the mitigation goals are not attained within the initial monitoring period, the applicant remains responsible for restoration of the natural resource values and functions until the mitigation goals in the mitigation plan are achieved.

Critical aquifer recharge areas are those areas with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2). Aquifer recharge areas have geologic conditions associated with infiltration rates that create a high potential for contamination of groundwater resources or contribute significantly to the replenishment of groundwater.

These regulations establish areas determined to be critical in maintaining both groundwater quantity and quality. The purpose of these regulations is to protect aquifer recharge areas from degradation or depletion resulting from new land use activities. Due to the exceptional susceptibility and/or vulnerability of groundwater underlying aquifer recharge areas to contamination and the importance of such groundwater as a source for public water supply, it is the intent of these regulations to safeguard groundwater resources by mitigating or precluding future discharges of contaminants from new land use activities.

A. Permitted Activities. The following activities are permitted within an aquifer recharge areas where no critical area report is required:

1. Construction of, or improvements to, single-family residences or other structures not greater than two thousand five hundred square feet or five percent impervious surface of the site, whichever is greater, that do not use or increase the use of hazardous materials;

2. Parks, recreation facilities, where no more than five percent of the site is impervious surface and, that do not use or increase the use of hazardous materials;

3. On-site septic systems and drain fields for residential uses;

6.2 Critical Area Report—Additional Requirements for Aquifer Recharge Areas.

In addition to the general critical report requirements of Section 3.3 of this Appendix B, proposed developments within critical aquifer recharge areas must also meet the following:

A. Prepared by Qualified Professional. A critical area report for an aquifer recharge area shall be prepared by a qualified professional who is licensed by the state as a hydrologist, geologist, or engineer and who has experience in preparing hydrologic assessments.

B. Assessment Required—Hydrologic. All proposed activities, except those permitted activities above, shall have a level one hydrological assessment prepared. A level two hydrologic assessment shall be required for the following activities:
1. Activities that result in five percent or more impervious surface area;

2. Any activity that diverts, alters, or reduces the flow of surface or groundwater or reduces aquifer recharge;

3. The use of hazardous substances other than household chemicals used in accordance with the package directions for domestic applications;

4. Injection wells, except domestic septic systems;

5. Any activity determined by the Director that may likely have an adverse effect on aquifer recharge or groundwater quality.

C. Level One Hydrologic Assessment. A level one hydrologic assessment shall include all of the following:

1. Geologic and hydrologic characteristics for the site and immediately surrounding areas, if applicable, and any surface aquifer recharge areas;

2. Groundwater depth and flow direction and quantity;

3. Data on springs or wells within one thousand feet of the site;

4. Location of other critical areas within one thousand feet of the site;

5. Water quality data;

6. Proposed best management practices for the project.

D. Level Two Hydrologic Assessment. In addition to the requirements of a level one hydrologic assessment, a level two hydrologic assessment shall also include all of the following:

1. Historic water quality data for the affected area for the past five years;

2. Provisions for a groundwater monitoring plan;

3. Effects the proposed project may have on groundwater quantity and quality, including:
   a. Evaluation of groundwater withdrawal effects on nearby wells or surface water;
   b. Evaluation of groundwater contamination from potential releases;
4. A spill plan identifying structures or equipment that may fail and result in an impact. A spill plan shall include provisions for regular inspections, repair, and replacement of structures or equipment.

6.3 Performance Standards—General.

A. Activities shall only be allowed in an aquifer recharge area if the applicant can demonstrate that the proposed activity will not cause contaminants to enter the groundwater or adversely affect aquifer recharge.

B. Proposed activities must comply with requirements of the EPA, Washington Department of Health, Department of Ecology, and Cowlitz County Health and Human Services.

6.4 Performance Standards for Specific Uses.

A. Storage Tanks. All storage tanks proposed to be located in an aquifer recharge area shall comply with the adopted building code requirements, applicable zoning, fire life safety requirements, and the following:

1. Underground Tanks. All new underground storage tanks that will contain hazardous substances shall be designed and constructed to:

   a. Prevent releases due to corrosion or structural fail for the life of the tank;
   
   b. Protect against corrosion or constructed of corrosion-resistant materials, or designed to prevent the release of any stored substance.

2. Aboveground Tanks. All new aboveground storage tanks that will contain hazardous substances shall be designed and constructed to:

   a. Not allow the release of hazardous substances to the ground or ground or surface waters;
   
   b. Contain spills using a primary containment area enclosing or underlying the tank;
   
   c. Contain spills using a secondary containment system either built into the tank structure or by a dike system constructed outside the tank.

B. Vehicle Repair and Servicing.

1. Vehicle service and repair shall be conducted over an impervious surface and within a covered structure capable of withstanding normal weather conditions. Chemicals used in vehicle repair and servicing shall be stored in a manner that is protected from the weather and provides containment from leaks or spills.
2. No dry wells shall be allowed in critical aquifer recharge areas on sites used for vehicle repair and servicing. Dry wells existing on a site proposed for vehicle repair shall be abandoned using methods approved by the Department of Ecology.

C. Reclaimed Water—Spreading or Injection. Reclaimed water projects must be in accordance with Department of Ecology requirements and approval.

6.5 Prohibited Uses.

A. The following activities are prohibited in an aquifer recharge area:

1. Landfills;

2. Underground injection wells;

3. Mining;

4. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces;

5. Storage or processing of radioactive materials;

6. Any activity that significantly reduces aquifer recharge, aquifer flow, or aquifer quantity or quality.
7. **Frequently Flooded Areas.**

A. Frequently Flooded Area Classifications and Designations. All lands identified in the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), as amended, and approved by the City, as within the one-hundred-year floodplain are designated as frequently flooded areas. These maps are based on the following:

1. Flood Insurance Study—Cowlitz County Unincorporated Areas;
2. Flood Insurance Study—City of Woodland.

B. Development Limitations. All development within designated frequently flooded areas shall be in compliance with the City of Woodland floodplain management ordinance, Chapter 14.40 of Woodland Municipal Code, as now or hereafter amended.
8. **Geologically Hazardous Areas.**

A. **Designation of Geologically Hazardous Areas.** Geologically hazardous areas pose a threat to the health and safety of the general public when incompatible development is sited in areas of significant hazard. Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake or other geological events. Development within a geologically hazardous area may not only pose a threat to that particular development, but to areas surrounding the development.

8.2 **Erosion and Landslide Hazard Areas.**

A. **General.**

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

2. Landslide hazard areas are areas potentially subject to the risk of mass movement due to geologic, topographic, and/or hydrologic factors.

B. **Classification.**

1. **Criteria.**

   a. Erosion hazard areas are identified by the presence of vegetative cover, soil texture, slope, and rainfall patterns, or human-induced changes to such characteristics, which create site conditions, which are vulnerable to erosion. Erosion hazard areas are those areas that are classified as having moderate to severe, or very severe erosion potential by the Natural Resources Conservation Service, United States Department of Agriculture (USDA).

   b. Landslide hazard areas are those areas meeting any of the following characteristics:

      i. **Areas of historic failures, such as:**

         (A) Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having "severe" limitation for building site development;

         (B) Those areas mapped by the Department of Ecology or the Washington Department of Natural Resources as unstable, unstable old slides, or unstable recent slides;
Areas designated as quaternary slumps, earthflows, mudflows, lahar, or landslides on maps published by the U.S. Geological Survey or Washington Department of Natural Resources.

ii. Areas with all three of the following characteristics:

(A) Slopes steeper than fifteen percent;
(B) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
(C) Springs or groundwater seepage.

iii. Slopes that are parallel or sub-parallel to planes of weakness, such as bedding planes, joint systems, and fault planes, in subsurface materials;

iv. Slopes having gradients steeper than eighty percent subject to rock fall during seismic shaking;

v. Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;

vi. Any area with a slope of thirty percent or steeper and with a vertical relief of ten or more feet. A slope is delineated by estimating the toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

8.3 Mapping of Hazards.

The following sources may be used to identify landslide and erosion hazard areas:

A. Soil Survey of Cowlitz Area, Washington, United States Department of Agriculture, February 1974;

B. Areas designated as slumps, earthflows, mudflows, lahar, or landslides on maps published by the U.S. Geological Survey or Washington Department of Natural Resources;

C. Washington Department of Natural Resources seismic hazard maps for Western Washington;

D. Federal Emergency Management Administration flood insurance maps;

E. Other maps or records of local geological hazard events.
8.4 Allowed Activities.

The Director may allow the following activities within geologically hazardous areas if the activity will not increase the risk of the hazard and it is demonstrated that structural stabilization to the shoreline will not be needed now or in the foreseeable future:

A. Construction of new buildings with less than two thousand five hundred (2,500) square feet of floor area or roof area, whichever is greater;

B. Additions to existing residences that are two hundred fifty (250) square feet or less; and

C. Installation of fences.

8.5 Regulation.

For all regulated activities proposed within landslide and erosion hazard areas, a geotechnical report prepared by a professional engineer licensed by the state of Washington with expertise in geotechnical engineering shall be submitted. Where the applicant can clearly demonstrate to the department through submittal of a geotechnical assessment that the regulated activity or any related site alterations will not occur within the landslide or erosion hazard area or any associated buffers, the requirements for a geotechnical report may be waived. A geotechnical assessment may be prepared by a professional engineer licensed by the state of Washington with expertise in geotechnical engineering. A geotechnical assessment may also be prepared by a professional geologist/hydrologist or soils scientist who has earned a bachelor's degree in geology, hydrology, soils science, or closely related field from an accredited college or university or equivalent educational training, and having five years' experience assessing erosion and landslide hazards.

A. Geotechnical Assessments.

1. If an applicant questions the presence of landslide or erosion hazard areas on a site, the applicant may submit a geotechnical assessment.

2. A geotechnical assessment shall include all of the following:

a. A description of the topography, surface and subsurface hydrology, soils, geology, and vegetation of the site;

b. An evaluation of the analysis area's inherent landslide and erosion hazards and any other critical areas and buffers, and any critical areas that may be likely to impact the site;

c. A site plan of the area delineating all areas of the site subject to landslide and erosion hazards, based on sources and criteria above;
d. The submittal must include a contour map of the proposed site, at a scale of one inch equals twenty feet or as deemed appropriate by the department. Slopes shall be clearly delineated for the ranges between fifteen percent and twenty-nine percent, and thirty percent or greater, including figures for area coverage of each slope category on the site. When site-specific conditions indicate the necessity, the department may require the topographic data to be field surveyed. When possible, the footprint of the proposed project shall be shown.

B. Geotechnical Reports. A geotechnical report shall be prepared by a professional engineer licensed by the state of Washington with experience in geotechnical engineering and shall address the existing geology, topographic and hydrologic conditions of the site, including an evaluation of the ability of the site to accommodate the proposed activity. The geotechnical report shall include at a minimum the following:

1. Site geology information required:
   a. Topographic Data. The submittal must include a contour map of the proposed site, at a scale of one inch equals twenty feet or as deemed appropriate by the department. Slopes shall be clearly delineated for the ranges between fifteen percent and twenty-nine percent, and thirty percent or greater, including figures for area coverage of each slope category on the site. When site-specific conditions indicate the necessity, the department may require the topographic data to be field surveyed. When possible, the footprint of the proposed project shall be shown;
   b. Subsurface Data. The submittal must include boring logs and exploration methods; soil and rock stratigraphy, groundwater levels, and seasonal changes of groundwater levels;
   c. Site History. The submittal must include a description of any prior grading, soil instability, or slope failure; and
   d. Seismic Hazard. The submittal shall include data concerning the vulnerability of the site to seismic events.

2. Geotechnical engineering information required:
   a. Slope stability studies and opinion(s) of slope stability;
   b. Proposed angles of cut and fill slopes and site grading requirements;
   c. Structural foundation requirements and estimated foundation settlements;
   d. Soil compaction criteria;
e. Proposed surface and subsurface drainage;

f. Lateral earth pressures;

g. Vulnerability of the site to erosion;

h. Suitability of on-site soil for use as fill;

i. Laboratory data and soil index properties for soil samples; and

j. Building limitations.

3. Where a valid geotechnical report has been prepared within the last five years for a specific site, and where the proposed land use activity and surrounding site conditions are unchanged, said report may be utilized and a new report may not be required. If any changed environmental conditions are associated with the site or surrounding the site, or the proposed activity has changed, the applicant shall submit an amendment to the geotechnical report.

4. The development proposal may be approved, approved with conditions, or denied based on the department’s evaluation of the ability of the proposed mitigation measures to reduce risks associated with the erosion and landslide hazard area.

5. Other critical areas or buffers on or adjacent to the site that may impact the proposal.

C. Standards. The department shall evaluate all geotechnical reports for landslide and erosion hazard areas to insure that the following standards are met:

1. Location and extent of development:

   a. The development shall be located to minimize disturbance and removal of vegetation;

   b. Structures shall be clustered where possible to reduce disturbance and maintain natural topographic character; and

   c. Structures shall conform to the natural contours of the slope, and foundations should be tiered where possible to conform to the existing topography of the site.

2. Design of development:

   a. All development proposals shall be designed to minimize the building footprint and other disturbed areas;
b. All development shall be designed to minimize impervious surfaces;

c. Roads, walkways, and parking areas shall be designed to parallel the natural contours; and

d. Access shall be in the least sensitive area of the site.

3. The Department may approve, approve with conditions, or deny development proposals based on these performance standards.

D. Buffer Requirements.

1. A buffer consisting of undisturbed natural vegetation and measured in a perpendicular direction from all landslide and erosion hazard areas shall be required. The buffer shall be from the top of the slope and toe of the slope of all landslide or erosion hazard areas that measure ten feet or more in vertical elevation change from top to toe of slope, as identified in the geotechnical report, maps, and field checking. The minimum buffer distance requirements from the top of slope and toe of slope of the landslide or erosion hazard areas shall be the same as for setbacks from slopes as identified in the Uniform Building Code.

2. To increase the functional attributes of the buffer, the Director may require that the buffer be enhanced through the planting of indigenous species.

3. The edge of the buffer area shall be clearly staked, flagged, and fenced prior to any clearing, grading or construction. The buffer markers shall be clearly visible, durable, and permanently affixed to the ground. Site clearing shall not commence until the engineer has submitted written notice to the Director that the buffer requirements of this Program have been met. The buffer shall be permanently protected through a protective easement or other appropriate permanent protective measure.

E. Modification to Buffer Width. When a geotechnical report demonstrates that a lesser buffer distance may be achieved through design and engineering solutions, such reduced buffer and design and engineering solutions may be permitted. If a geotechnical report demonstrates that a greater buffer distance is needed, the greater buffer shall be required.

F. Building Setback and Construction Near Buffer. The setback for any proposed building or impervious surface from a buffer area shall be the same setback as required for that zoning district or ten feet, whichever is greater. No building or impervious surface shall be constructed closer than ten feet to any buffer area. Clearing, grading, and filling within the required setback shall only be allowed if the applicant can demonstrate that vegetation within the buffer will not be damaged.
G. Erosion Control Plan. Erosion control plans shall be required for all regulated activities in erosion hazard areas.
9. Designation of Fish and Wildlife Habitat Conservation Areas.

A. Fish and wildlife habitat conservation areas include:

1. Areas with species designated by the state or federal government as endangered, threatened or sensitive:

   a. Federally designated endangered and threatened species are identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are threatened to become endangered or are in danger of extinction. U.S. Fish and Wildlife Service and the National Marine Fisheries Service should be consulted for current listings.

   b. State-designated endangered, threatened, and sensitive species are those species native to the state of Washington that are in danger of extinction, threatened to become endangered, vulnerable, or are declining and are likely to become endangered or threatened without cooperative management. The Washington Department of Fish and Wildlife maintains the most current listing and should be consulted for current listing status.

2. State priority habitats and areas associated with state priority species. Priority species require protection due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitat may consist of a specific structural element, successional state, unique vegetation, or dominant plant species. Priority habitats are identified by the Washington Department of Fish and Wildlife.

3. Habitats and Species of Local Importance. Habitats and species of local importance shall include Washington Department of Fish and Wildlife priority habitats and species, candidate species, and any species identified by the City of Woodland or Clark or Cowlitz County.

4. Naturally Occurring Ponds Under Twenty Acres. Naturally occurring ponds do not include ponds intentionally created from dry sites such as retention ponds, dikes, or wastewater treatment facilities, or landscape amenities, unless such ponds were intentionally created as mitigation or as restoration.

5. Waters of the State. All watercourses under the jurisdiction of the state of Washington.

6. Lakes, ponds, streams and rivers stocked or planted with game fish by a governmental or tribal entity.
7. State natural areas and natural resource conservation areas as defined, established, and managed by the Washington Department of Natural Resources.

8. Essential land for preserving open spaces and connections between habitat blocks.

B. All areas within the City of Woodland meeting one or more of these criteria listed above, are hereby considered critical areas and are subject to this Program.

C. Mapping. The following critical area maps are hereby adopted:

1. Washington Department of Fish and Wildlife, priority habitat and species maps;
2. Washington Department of Natural Resources, official water type reference maps; and
3. Washington Department of Natural Resources, state natural area preserves and natural resource conservation area maps.

These maps are to be considered as references only and do not provide final critical area designation.

9.2 Critical Area Report—Additional Requirements for Habitat Conservation Areas.

In addition to the general critical area report requirements of Section 3.3 of this Appendix B, critical area reports for habitat conservation areas shall meet the requirements of this Section. Critical area reports for two or more types of critical areas must meet the report requirements for each relevant type of critical area.

A. Prepared by Qualified Professional. A critical report for a habitat conservation area shall be prepared by a qualified professional biologist with experience preparing reports for the appropriate type of habitat.

B. Area Addressed in Critical Area Report. The following areas shall be addressed in a critical area report for habitat conservation areas:

1. The total area of the proposed activity;
2. All habitat conservation areas and recommended buffers within two hundred feet of the project area; and
3. All shoreline areas, floodplains and other critical areas with related buffers within two hundred feet of the project area.

C. Habitat Assessment. A habitat assessment or investigation of the proposed project area that evaluates the presence of a potential fish or wildlife species or
habitat shall be prepared. A habitat conservation area report shall contain an assessment of following site and proposal related information:

1. Detailed description of vegetation and other habitat features on and adjacent to the proposed project area;

2. Identification of any species of local importance, priority species, or endangered, threatened, sensitive, or candidate species that have a primary association habitat on or adjacent to the proposed project area;

3. An assessment of potential impacts to the species by the proposed project;

4. A discussion of any federal, state, or local special management recommendation that have been developed for species or habitats on or adjacent to the proposed project;

5. A detailed discussion of the potential impacts to the habitat by the proposed project, including impacts to water quality or quantity;

6. A discussion of measures, including avoidance, minimization and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded in accordance with Section 3.6 (Mitigation sequencing) of this Appendix B;

7. A discussion of continuing management practices that will protect habitat after the project site has been developed, including monitoring and maintenance programs.

D. Additional Information Required. The Director may require additional information when the type of habitat or species dictates the need. The habitat management additional requirement shall include:

1. An evaluation by an independent qualified professional regarding the analysis and effectiveness of proposed mitigation or programs, including any recommendations as appropriate;

2. A request for consultation with the Washington Department of Fish and Wildlife; and

3. A detailed surface and subsurface hydrologic features both on and adjacent to the proposed project site.

9.3 Performance Standards—General Requirements.

A. Alterations Shall Not Degrade the Functions and Values of Habitat. A habitat conservation area may only be altered if the proposed alteration of the habitat
does not degrade the quality or quantity of functions or values of the habitat. All new structures are prohibited from habitat conservation areas except in accordance with this Program.

B. Nonindigenous Species Shall Not Be Introduced. Unless authorized by a state or federal permit of approval, no species not indigenous to the region shall be introduced into a habitat conservation area.

C. Mitigation, Contiguous Corridors. Mitigation sites shall be located so as to achieve continuous habitat corridors in accordance with an approved mitigation plan.

D. Approvals May Be Conditioned. The Director may condition approvals of allowed activities within or adjacent to habitat conservation areas or buffers. Conditions may include, but are not limited to, the following:

1. Establishment of buffer zones;
2. Preservation of critically important vegetation;
3. Limiting access, including fencing;
4. Seasonal restriction of construction activities;
5. Mitigation to compensate for lost habitat

E. Mitigation Shall Achieve Equivalent or Greater Functions. Mitigation activities shall achieve equivalent or greater biologic functions and shall include mitigation for adverse impacts upstream or downstream of the development site. Mitigation shall address each function.

F. Approval shall be supported by the most current, accurate, and complete scientific and technical information available.

G. Buffers.

1. The Director shall require buffer areas to be established for all activities in or adjacent to habitat conservation areas when needed for habitat protection. Buffers shall be undisturbed areas of native vegetation, or shall be areas identified for restoration, to protect the integrity, functions, and values of the affected habitat. Buffers shall reflect the sensitivity of the habitat and intensity of the proposed project, and shall be consistent with recommendations by the Washington Department of Fish and Wildlife. Buffers shall be preserved in perpetuity.

2. Seasonal Restrictions. If a species is more prone to disturbance during specific times of the year, seasonal restrictions may apply. Larger buffers may be required, and activities may be restricted during that specific season.
3. Habitat Buffer Averaging. The Director may allow the recommended buffer width to be reduced in accordance with an approved critical area report; the most current, accurate, and complete scientific and technical information available; and management recommendations by the Washington Department of Fish and Wildlife. Averaging may only occur if:

a. Averaging will not reduce habitat or stream functions;

b. It will not adversely affect salmonid habitat;

c. Additional natural resource protection such as buffer enhancement will be provided;

d. The total of the averaged buffer area is not less than what would be contained in the standard buffer;

e. The buffer area width is not reduced by more than twenty-five percent.

H. Signs and Fencing.

1. Temporary Markers. The outer perimeter of the habitat conservation area or buffer and the limits of the area to be disturbed shall be marked in such a way as to prevent unauthorized intrusion. The marking shall be verified by the Director prior to any activities taking place. Temporary marking shall be maintained throughout the project timeline until permanent signs, if required, are in place.

2. Permanent Signs. The Director may require permanent signs along the boundary of a habitat conservation area or buffer. The signs, if required, must be made of a durable material, mounted on a metal post. Signs shall be posted approximately fifty feet apart. The property owner shall maintain the signs.

3. Fencing.

a. The Director may require permanent fencing of a habitat conservation area or buffer when fencing will prevent future impacts to the area.

b. Permanent fencing shall be required if domestic grazing animals are present or may be introduced in the future.

c. If permanent fencing is required, it shall be the sole responsibility of the applicant to install and maintain.

d. Fencing shall not interfere with species migration and shall be installed in a manner that minimizes habitat impacts.

I. Subdivisions/Short Subdivisions.
a. Land that is located entirely within a habitat conservation area or its buffer shall not be subdivided. Buffer areas shall be identified on the face of subdivision maps and shall be protected in perpetuity with conservation covenants, deed restrictions, or other legally binding mechanisms.

b. Land that is located partially within a habitat conservation area or buffer may be divided provided an accessible portion of each new lot is located outside the conservation area or buffer and each established new lot can be reasonably developed within intrusion into the standard habitat buffer. A lot may be subdivided into lots outside the conservation area or buffer and a lot entirely within the buffer area, so long as the lot within the conservation area or buffer area is designated as not developable on the final plat.

c. Roads and utilities serving the proposed subdivision may only be permitted in the conservation area or buffer if the City determines that no other feasible alternative exists and adverse impacts to critical areas and buffers are fully mitigated in accordance with all mitigation and critical area report requirements of this Program.

### 9.4 Performance Standards—Specific Habitats.

A. Endangered, Threatened and Sensitive Species.

1. No development shall be allowed within a habitat conservation area or buffer where state or federally endangered, threatened, or sensitive species have a primary association.

2. Proposed activities adjacent to a conservation area where state or federally endangered, threatened, or sensitive species have a primary association shall be protected in accordance with an approved critical area report. No activity shall be permitted prior to consultation with the Washington Department of Fish and Wildlife and/or appropriate federal agency.

3. Bald eagle habitat shall be protected pursuant to Washington State Bald Eagle Protection Rules (WAC 232-12-292). For activities proposed adjacent to a verified nest or communal roost a habitat management plan shall be developed by a qualified professional. Activities are adjacent to a bald eagle site when they are within eight hundred feet or within two thousand six hundred forty feet and in a shoreline foraging area. The City shall verify the location of eagle management areas for each proposed activity. Approval of the activity shall not occur prior to approval of the habitat management plan by the Washington Department of Fish and Wildlife.

B. Anadromous Fish.
1. All activities, uses, and alterations proposed to be located within waterbodies used by anadromous fish or in areas that affect such waterbodies shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to the following:

   a. Activities shall be timed in accordance with the allowable work window as specified by the Washington Department of Fish and Wildlife for the applicable species;

   b. The activity is designed so it will not degrade the functions or values of the fish habitat or other critical areas;

   c. Any impacts to the functions or values are mitigated in accordance with an approved critical area report;

   d. Hydraulic project approval may be required from the Washington Department of Fish and Wildlife.

C. Wetland Habitats. All proposed activities within or adjacent to habitat conservation areas containing wetlands shall conform to the wetland portion of this Appendix B. If wetland and non-wetland critical areas are present at the same location, the provisions that afford the greatest protection shall apply.

D. Riparian Habitat Areas. Unless otherwise allowed in this Program, all structures and activities shall be located outside of the RHA.

   1. Establishment of Riparian Habitat Areas. Riparian areas shall be established for habitats that include aquatic and terrestrial ecosystems that mutually benefit each other, and are located adjacent to rivers, perennial or intermittent streams, and springs.

   2. Riparian Habitat Area Widths. A riparian habitat shall have the width specified unless a greater width is required, or a lesser width is allowed. Widths shall be measured on a horizontal plane from the OWWM or from the top of the bank if the ordinary high water mark cannot be identified. Riparian habitat area widths shall be as shown in the following tables:

<table>
<thead>
<tr>
<th>Type</th>
<th>Stream Type</th>
<th>RHA Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>shorelines of the state</td>
<td>See Table B-4</td>
</tr>
<tr>
<td>F</td>
<td>other perennial or fish bearing streams</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5-20 feet wide</td>
<td>200 feet</td>
</tr>
<tr>
<td></td>
<td>&lt;5 feet wide</td>
<td>150 feet</td>
</tr>
<tr>
<td>Np</td>
<td>perennial nonfish habitat streams</td>
<td>100 feet</td>
</tr>
<tr>
<td>Ns</td>
<td>seasonal, nonfish habitat streams</td>
<td>75 feet</td>
</tr>
</tbody>
</table>
### Table B-4 Reach-Based Riparian Habitat Areas (RHA) for Shoreline Waters

<table>
<thead>
<tr>
<th>Reach Number</th>
<th>Waterbody</th>
<th>Shoreline Environment Designation</th>
<th>RHA Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-01</td>
<td>Horseshoe Lake</td>
<td>Residential</td>
<td>Where shoreline is adjacent to the road. The RHA extends from the OHWM to the boundary of the existing roadside operational area. Existing single-family lots – 25 feet Undeveloped parcels – 65 feet</td>
</tr>
<tr>
<td>W-02</td>
<td>Horseshoe Lake</td>
<td>Residential</td>
<td>50 feet</td>
</tr>
<tr>
<td>W-03</td>
<td>Horseshoe Lake</td>
<td>High Intensity</td>
<td>25 feet</td>
</tr>
<tr>
<td>W-04</td>
<td>Horseshoe Lake</td>
<td>Recreation</td>
<td>0 feet, see setback requirements in Table 7-1 of the SMP.</td>
</tr>
<tr>
<td>W-05</td>
<td>Horseshoe Lake</td>
<td>High Intensity</td>
<td>RHA extends from the OHWM to the boundary of the existing roadside operational area.</td>
</tr>
<tr>
<td>W-06</td>
<td>Horseshoe Lake</td>
<td>Residential</td>
<td>25 feet</td>
</tr>
<tr>
<td>W-07</td>
<td>Lewis River</td>
<td>High Intensity</td>
<td>150 feet; Maintain riparian vegetation consistent with guidelines for airport safety zones.</td>
</tr>
<tr>
<td>W-08</td>
<td>Lewis River</td>
<td>High Intensity</td>
<td>75 feet except where existing parcels are less than 200 feet deep. For parcels less than 200 feet deep, buffer is 30 percent of the parcel depth.</td>
</tr>
<tr>
<td>W-09</td>
<td>Lewis River</td>
<td>Parallel: Urban Conservancy between road and OHWM / High Intensity / Residential</td>
<td>RHA extends from the OHWM to the boundary of the waterward existing roadside operational area.</td>
</tr>
<tr>
<td>W-10</td>
<td>Lewis River</td>
<td>Parallel: Urban Conservancy between Floodway Boundary and OHWM / High Intensity / Residential</td>
<td>RHA extends from the OHWM to 10 feet landward of the FEMA Floodway, or 75 feet, whichever is greater.</td>
</tr>
<tr>
<td>W-11</td>
<td>Lewis River</td>
<td>Residential</td>
<td>100 feet, except where existing or approved platted lots are less than 200 feet deep. For parcels less than 200 feet deep, buffer is 30 percent of the parcel depth.</td>
</tr>
</tbody>
</table>

3. Riparian Habitat Required. An RHA shall apply only to projects permitted after the adoption date of this Program.

4. Increased Riparian Widths. Riparian habitat widths shall be increased when:

   a. The Director determines that the recommended width is insufficient to prevent habitat degradation and to protect the functions of the habitat area;
b. A channel migration zone exceeds the recommended riparian width. The width shall be extended to the outer edge of the channel migration zone;

c. The riparian area is in an area of high blowdown potential. The RHA shall be expanded an additional fifty feet (50) on the windward side;

d. The riparian area is within an erosion or landslide area. The buffer width will be that of the critical area affording the greatest protection.

5. Reduction of Habitat Buffer Widths. The Director may allow the standard or reach-based habitat buffer width to be reduced in accordance with an approved critical area report and the most current, accurate, and complete scientific and technical information available on a case-by-case basis when it is determined that a smaller area is adequate to protect the habitat functions and values based on site-specific characteristics and when all of the following criteria are met:

a. The critical area report provides a sound rationale for a reduced buffer based on the most current, accurate, and complete scientific and technical information available;

b. The existing buffer area is well-vegetated or will be significantly enhanced with native species and has less than a ten percent slope;

c. No direct or indirect, short-term or long-term, adverse impacts to habitats will result from the proposed activity;

d. As required by the Director, a five-year monitoring program of the buffer and habitat shall be included. Subsequent corrective actions may be required if adverse impacts to the habitats are discovered during the monitoring period;

e. In no case shall the standard buffer width be reduced by more than twenty-five (25) percent using this provision.

6. Riparian Habitat Area Width Averaging. The Director may allow the standard or reach-based riparian habitat area width to be averaged in accordance with a critical area report only if:

a. The reduction will not degrade the habitat;

b. The reduction will not reduce the stream or habitat functions;

c. The reduction will not reduce non-fish habitat functions;

d. Additional habitat protection will be provided;
e. The total area of the riparian area is not reduced by more than twenty-five (25) percent in any one location;

f. The total area of the riparian area is not decreased;

g. The reduction in width will not be within another critical area or buffer; and

h. The reduction in habitat area is supported by the most current, accurate, and complete scientific and technical information available.

7. Allowed Uses. The following uses are allowed in RHAs and building setbacks in all environment designations consistent with Table 7-1 of the SMP, provided that mitigation sequencing is demonstrated and any adverse impacts to ecological functions are mitigated.

a. Water-dependent uses. Water-dependent uses, modifications and activities may be located in shoreline buffers at the water’s edge without obtaining a Shoreline Variance Permit, provided the project submittal includes a critical area report, mitigates for impacts according to Section 6.1 of the SMP, and the project otherwise complies with this Program.

b. Accessories to water-dependent uses. Uses, developments and activities accessory to water-dependent uses should be located outside any applicable standard, reach-based or reduced shoreline buffer unless at least one of the following is met:

i. Proximity to the water-dependent project elements is critical to the successful implementation of the facility’s purpose and the elements are supportive of the water-dependent use and have no other utility (e.g., a road to a boat launch facility);

ii. The applicant’s lot/site has topographical constraints where no other location of the development is feasible (e.g., the water-dependent use or activity is located on a parcel entirely or substantially encumbered by the required buffer).

In these circumstances, uses and modifications accessory to water-dependent uses must be designed and located to minimize intrusion into the buffer. All other accessory uses, developments and activities proposed to be located in a shoreline buffer must obtain a Shoreline Variance unless otherwise allowed by other regulations in this Section or in this Program.

c. Linear transportation and utility crossings. New linear transportation and utility crossings may be located in shoreline buffers without obtaining a Shoreline Variance, provided the project complies with all other provisions of this Program.
d. Shoreline residential access. A private access pathway constructed of pervious materials may be installed, a maximum of four (4) feet wide, through the shoreline buffer to the OHWM. Impervious materials may be used only as needed to comply with ADA requirements to construct a safe, tiered pathway down a slope. A railing may be installed on one edge of the pathway, a maximum of 36 inches tall and of open construction. Pathways to the shoreline should take the most direct route feasible consistent with any applicable ADA standards.

8. Riparian Habitat Mitigation. Mitigation of adverse impacts shall result in equivalent functions and values on a per function basis. The mitigation shall be located as near the alteration as possible, and be located in the same sub-drainage basin as the impacted habitat.

9. Alternative Mitigation for Riparian Areas. If the applicant demonstrates that greater habitat functions can be obtained as a result of alternate mitigation measures, the Director may modify the requirements of the performance standards of this Section, including the RHA buffers.

10. Functionally Isolated Riparian Habitat Area. Areas which are functionally separated from a riparian habitat area due to preexisting roads, structures, or similar circumstances, shall be excluded from buffers otherwise required by this Program on a case-by-case basis subject to a critical area report and review as determined by the Director.