City of Yelm
Critical Areas Code

Updated
September 28, 2005

14.08.010 General Provisions

A. Purpose

1. The purpose of this Chapter is to designate and classify ecologically sensitive and hazardous areas and to protect these areas and their functions and values, while also allowing for reasonable use of private property.

2. This Chapter is to implement the goals, policies, guidelines, and requirements of the Yelm Comprehensive Plan and the Growth Management Act, Chapter 36.70A RCW.

3. Critical areas provide a variety of valuable and beneficial biological and physical functions that benefit the City and its residents, and/or may pose a threat to human safety or to public and private property.

4. By limiting development and alteration of critical areas, this Chapter seeks to:

   a. Protect members of the public and public resources and facilities from injury, loss of life, or property damage due to landslides and steep slope failures, erosion, seismic events, volcanic eruptions, or flooding;

   b. Maintain healthy, functioning ecosystems through the protection of unique, fragile, and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats, and to conserve the biodiversity of plant and animal species;

   c. Direct activities not dependent on critical areas resources to less ecologically sensitive sites and mitigate unavoidable impacts to critical areas by regulating alterations in and adjacent to critical areas; and

   d. Prevent cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat, and the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas.

5. The regulations of this Chapter are intended to protect critical areas in accordance with the Growth Management Act and through the application of the best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals.

6. This Chapter is to be administered with flexibility and attention to site-specific characteristics. It is not the intent of this Chapter to make a parcel of property unusable by denying its owner reasonable economic use of the property or to prevent the provision of public facilities and services necessary to support existing development and planned for by the community without decreasing current service levels below minimum standards.

B. Authority

1. As provided herein, the Director of Community Development is given the authority to interpret and apply, and the responsibility to enforce this Chapter to accomplish the stated purpose.

2. The City may withhold, condition, or deny development permits or activity approvals to ensure that the proposed action is consistent with this Chapter.

C. Relationship to Other Regulations

1. These critical areas regulations shall apply as an overlay and in addition to zoning and other development regulations adopted by the City.

2. When a property or development is subject to more than one critical area overlay or other regulations apply to a development, the more restrictive shall apply.

3. Compliance with the provisions of this Chapter does not constitute compliance with other

federal, state, and local regulations and permit requirements. The applicant is responsible for complying with these requirements, apart from the process established in this Chapter.

D. Unless otherwise indicated in this Chapter, the applicant shall be responsible for the initiation, preparation, submission, and expense of all required reports, assessment(s), studies, plans, reconnaissance(s), peer review(s) by qualified consultants, and other work prepared in support of or necessary to review the application.

E. Interpretation.

In the interpretation and application of this Chapter, the provisions of this Chapter shall be considered to be the minimum requirements necessary, shall be liberally construed to serve the purpose of this Chapter, and shall be deemed to neither limit nor repeal any other provisions under state statute.

F. Jurisdiction – Critical Areas.

1. The City shall regulate all uses, activities, and developments within, adjacent to, or likely to affect, one or more critical areas, consistent with the best available science and the provisions herein.

2. Critical areas regulated by this Chapter include:

   a. Wetlands;

   b. Critical aquifer recharge areas;

   c. Frequently flooded areas;

   d. Geologically hazardous areas; and

   e. Fish and wildlife habitat conservation areas.

3. All areas within the City meeting the definition of one or more critical areas, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.

4. Areas Adjacent to Critical Areas Subject to Regulation. Areas adjacent to critical areas shall be considered to be within the jurisdiction of these requirements and regulations. Adjacent shall mean any activity located:

   a. On a site immediately adjoining a critical area;

   b. A distance equal to or less than the required critical area buffer width and building setback;

   c. A distance equal to or less than one-half mile (2,640 feet) from a bald eagle nest;

   d. A distance equal to or less than three hundred (300) feet upland from a stream, wetland, or water body;

   e. Within the floodway, floodplain, or channel migration zone; or

   f. A distance equal to or less than two hundred (200) feet from a critical aquifer recharge area.

G. Protection of Critical Areas

Any action taken pursuant to this Chapter shall result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science. All actions and developments shall be designed and constructed to avoid, minimize, and restore all adverse impacts. Applicants must first demonstrate an inability to avoid or reduce impacts, before restoration and compensation of impacts will be allowed. No activity or use shall be allowed that results in a net loss of the functions or values of critical areas.

14.08.020 Best Available Science

A. Protect Functions and Values of Critical Areas With Special Consideration to Anadromous Fish. Critical area reports and decisions to alter critical areas shall rely on the best available science to protect the functions and values of critical areas and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish, such as salmon and bull trout, and their habitat.

B. Best Available Science to be Consistent With Criteria. The best available science is that scientific information applicable to the critical area prepared by local, state, or federal natural resource agencies, a qualified scientific professional, or team of qualified scientific professionals that is consistent with criteria established in WAC 365-195-900 through WAC 365-195-925.

C. Characteristics of a Valid Scientific Process. In the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions, and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas. To determine whether information received during the permit review process is reliable scientific information, the administrator shall determine whether the source of the information displays the characteristics of a valid scientific process. Such characteristics are as follows:

1. Peer Review. The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The proponents of the information have addressed the criticism of the peer reviewers. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed;

2. Methods. The methods used to obtain the information are clearly stated and reproducible. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to ensure their reliability and validity;

3. Logical Conclusions and Reasonable Inferences. The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained;

4. Quantitative Analysis. The data have been analyzed using appropriate statistical or quantitative methods;

5. Context. The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge; and

6. References. The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

D. Nonscientific Information. Nonscientific information may supplement scientific information, but it is not an adequate substitute for valid and available scientific information. Common sources of nonscientific information include anecdotal Information; non-expert opinion; and hearsay.

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

1. Take a "precautionary or a no-risk approach," that strictly limits development and land use activities until the uncertainty is sufficiently resolved; and

2. Require application of an effective adaptive management program that relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical

area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty. An adaptive management program shall:

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

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

c. Commit to the appropriate timeframe and scale necessary to reliably evaluate regulatory and nonregulatory actions affecting protection of critical areas and anadromous fisheries.

14.08.030 Applicability, Exemption, and Exceptions

A. Applicability

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

2. The City shall not approve any permit or otherwise issue any authorization to alter the condition of any land, water, or vegetation, or to construct or alter any structure or improvement in, over, or on a critical area or associated buffer, without first ensuring compliance with the requirements of this Chapter.

B. Exempt Activities and Impacts to Critical Areas.

All exempt activities shall use reasonable methods to avoid potential impacts to critical areas. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be restored, rehabilitated, or replaced.

C. Exempt Activities.

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

1. Emergencies. Those activities necessary to prevent an immediate threat to public health, safety, or welfare, or that pose an immediate risk of damage to private property and that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this Chapter.

   Emergency actions that create an impact to a critical area or its buffer shall use reasonable methods to address the emergency; in addition, they must have the least possible impact to the critical area or its buffer. The person or agency undertaking such action shall notify the City within one (1) working day following commencement of the emergency activity. Within thirty (30) days, the administrator shall determine if the action taken was within the scope of the emergency actions allowed in this Subsection.

   After the emergency, the person or agency undertaking the action shall fully fund and conduct necessary restoration and/or mitigation for any impacts to the critical area and buffers resulting from the emergency action in accordance with an approved critical area report and mitigation plan. The person or agency undertaking the action shall apply for review, and the alteration, critical area report, and mitigation plan shall be reviewed by the City in accordance with the review procedures contained herein. Restoration and/or mitigation activities must be initiated within one (1) year of the date of the emergency, and completed in a timely manner;

2. Operation, Maintenance, or Repair. Operation, maintenance, or repair of existing structures, infrastructure improvements, utilities, public or private roads, dikes, levees, or drainage systems, that do not require construction permits, if the activity does not further alter or increase the impact to, or encroach further within, the critical area or buffer and there is no increased risk to life or property as a result of the proposed operation, maintenance, or repair.

3. Passive Outdoor Activities. Recreation, education, and scientific research activities that do not degrade the critical area.

D. Exception − Essential Public Facilities

1. If the application of this Chapter would prohibit a development proposal for an essential public facility the agency or utility may apply for an exception.

2. Exception Request and Review Process. An application for a exception shall be made to the City and shall include a critical area report. The administrator shall act on the exception request as part of the underlying permit approval based on the proposal's ability to comply with public agency and utility exception review criteria. The decision on the exception may be appealed pursuant to the appeal procedures of the underlying permit or approval.

4. Exception Criteria.

   a. There is no other practical alternative to the proposed development with less impact on the critical areas;

   b. The application of this Chapter would unreasonably restrict the ability to provide utility services to the public;

   c. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

   d. The proposal attempts to protect and mitigate impacts to the critical area functions and values consistent with the best available science; and

   e. The proposal is consistent with other applicable regulations and standards.

5. Burden of Proof. The burden of proof shall be on the applicant to show that the criteria are met.

E. Exception − Reasonable Use

1. If the application of this Chapter would deny all reasonable economic use of the subject property, the City shall determine if compensation is an appropriate action, or the property owner may apply for an exception.

2. Exception Request and Review Process. An application for a reasonable use exception shall be made to the City and shall include a critical area report. The administrator shall prepare a recommendation to the Hearing Examiner based on the proposal's ability to comply with reasonable use exception criteria.

3. Hearing Examiner Review. The Hearing Examiner shall review the application and conduct a public hearing. The Hearing Examiner shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all of the reasonable use exception review criteria.

4. Reasonable Use Review Criteria. :

   a. The application of this Chapter would deny all reasonable economic use of the property;

   b. No other reasonable economic use of the property has less impact on the critical area;

   c. The proposed impact to the critical area is the minimum necessary to allow for reasonable economic use of the property;

   d. The inability of the applicant to derive reasonable economic use of the property is not the result of actions by the applicant after the effective date of this Chapter, or its predecessor;

   e. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

   f. The proposal will result in no net loss of critical area functions and values consistent with the best available science; or

   g. The proposal is consistent with other applicable regulations and standards.

E. Burden of Proof. The burden of proof shall be on the applicant to show the exception meets the criteria for approval.

14.08.040 Allowed Activities

A. Critical Area Report. Activities allowed under this Chapter shall have been reviewed and permitted or approved by the City, but do not require submittal of a separate critical area report, unless required previously for an underlying permit. The administrator may apply conditions to the underlying permit or approval to ensure that the allowed activity is consistent with the provisions of this Chapter to protect critical areas.

B. Required Use of Best Management Practices. All allowed activities shall be conducted using the best management practices, that result in the least amount of impact to the critical areas. The City shall observe the use of best management practices to ensure that the activity does not result in degradation to the critical area. Any incidental damage to, or alteration of, a critical area shall be restored, rehabilitated, or replaced.

C. Allowed Activities. The following activities are allowed:

1. Permit Requests Subsequent to Previous Critical Area Review. Development permits and approvals that involve both discretionary land use approvals, and construction approvals if all of the following conditions have been met:

    a. The provisions of this Chapter have been previously addressed as part of another approval;

    b. There have been no material changes in the potential impact to the critical area or buffer since the prior review;

    c. There is no new information available that is applicable to any critical area review of the site or particular critical area;

    d. The permit or approval has not expired or, if no expiration date, no more than five years have elapsed since the issuance of that permit or approval; and

    e. Compliance with any standards or conditions placed upon the prior permit or approval has been achieved or secured;

2. Modification to Existing Structures. Structural modification of, addition to, or replacement of an existing legally constructed structure that does not further alter or increase the impact to the critical area or buffer and there is no increased risk to life or property as a result of the proposed modification or replacement, provided that restoration of structures substantially damaged by fire, flood, or act of nature must be initiated within 18 months of the date of such damage, as evidenced by the issuance of a valid building permit, and diligently pursued to completion;

3. Activities Within the Improved Right-of-Way. Replacement, modification, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances, not including substations, when such facilities are located within the improved portion of the public right-of-way or a City authorized private roadway except those activities that alter a wetland or watercourse, such as culverts or bridges, or result in the transport of sediment or increased stormwater; subject to the following:

    a. Critical area and/or buffer widths shall be increased, where possible, equal to the width of the right-of-way improvement, including disturbed areas; and

    b. Retention and replanting of native vegetation shall occur wherever possible along the right-of-way improvement and resulting disturbance;

4. Minor Utility Projects. Utility projects which have minor or short-duration impacts to critical areas, as determined by the administrator in accordance with the criteria below, and which do not significantly impact the function or values of a critical area(s), provided that such projects are constructed with best management practices and additional restoration measures are provided. Minor activities shall not result in the transport of sediment or increased stormwater. Such allowed minor utility projects shall meet the following criteria:

a. There is no practical alternative to the proposed activity with less impact on critical areas;

b. The activity involves the placement of a utility pole, street signs, anchor, or vault or other small component of a utility facility; and

c. The activity involves disturbance of an area less than 75 square feet;

5. Public and Private Pedestrian Trails. Public and private pedestrian trails, except in wetlands, fish and wildlife habitat conservation areas, or their buffers, subject to the following:

a. The trail surface shall meet all other requirements including water quality standards set forth in the [locally adopted stormwater management regulations];

b. Critical area and/or buffer widths shall be increased, where possible, equal to the width of the trail corridor, including disturbed areas; and

c. Trails proposed to be located in landslide or erosion hazard areas shall be constructed in a manner that does not increase the risk of landslide or erosion and in accordance with an approved geotechnical report;

6. Select Vegetation Removal Activities. The following vegetation removal activities, provided that no vegetation shall be removed from a critical area or its buffer without approval from the administrator:

a. The removal of the following vegetation with hand labor and light equipment:

i. Invasive and noxious weeds;

ii. English Ivy (Hedera helix);

iii. Himalayan blackberry (Rubus discolor, R. procerus); and

iv. Evergreen blackberry (Rubus laciniatus);

b. The removal of trees from critical areas and buffers that are hazardous, posing a threat to public safety, or posing an imminent risk of damage to private property, provided that:

i. The applicant submits a report from a certified arborist, registered landscape architect, or professional forester that documents the hazard and provides a replanting schedule for the replacement trees;

ii. Tree cutting shall be limited to pruning and crown thinning, unless otherwise justified by a qualified professional. Where pruning or crown thinning is not sufficient to address the hazard, trees should be removed or converted to wildlife snags;

iii. All vegetation cut (tree stems, branches, etc.) shall be left within the critical area or buffer unless removal is warranted due to the potential for disease or pest transmittal to other healthy vegetation;

iv. The landowner shall replace any trees that are removed with new trees at a ratio of two replacement trees for each tree removed (2:1) within one (1) year in accordance with an approved restoration plan. Replacement trees may be planted at a different, nearby location if it can be determined that planting in the same location would create a new hazard or potentially damage the critical area. Replacement trees shall be species that are native and indigenous to the site and a minimum of one (1) inch in diameter-at-breast height (dbh) for deciduous trees and a minimum of six (6) feet in height for evergreen trees as measured from the top of the root ball;

v. If a tree to be removed provides critical habitat, such as an eagle perch, a qualified wildlife biologist shall be consulted to determine timing and methods or removal that will minimize impacts; and

vi. Hazard trees determined to pose an imminent threat or danger to public health or safety, to public or private property, or of serious environmental degradation may be removed or pruned by the landowner prior to receiving written approval from City provided that within fourteen (14) days following such action, the landowner shall submit a restoration plan that demonstrates compliance with the provisions of this Chapter.

c. Measures to control a fire or halt the spread of disease or damaging insects consistent with the state Forest Practices Act; Chapter 76.09 RCW, [and local forest practices regulations if adopted] provided that the removed vegetation shall be replaced in-kind or with similar native species within one (1) year in accordance with an approved restoration plan; and

d. Unless otherwise provided, or as a necessary part of an approved alteration, removal of any vegetation or woody debris from a habitat conservation area or wetland shall be prohibited;

7. Chemical Applications. The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, as approved by the City, provided that their use shall be restricted in accordance with state Department of Fish and Wildlife Management Recommendations and the regulations of the state Department of Agriculture and the U.S. Environmental Protection Agency;

8. Minor Site Investigative Work. Work necessary for land use submittals, such as surveys, soil logs, percolation tests, and other related activities, where such activities do not require construction of new roads or significant amounts of excavation. In every case, impacts to the critical area shall be minimized and disturbed areas shall be immediately restored; and

9. Navigational Aids and Boundary Markers. Construction or modification of navigational aids and boundary markers.

14.08.050 Critical Areas Review Process

A. Critical Areas Report - Requirements

1. Preparation by Qualified Professional. If required by the administrator, the applicant shall submit a critical area report prepared by a qualified professional as defined herein.

2. Incorporating Best Available Science. The critical area report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance and reference the source of science used. The critical area report shall evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this Chapter.

3. Minimum Report Contents. At a minimum, the report shall contain the following:

   a. The name and contact information of the applicant, a description of the proposal, and identification of the permit requested;

   b. A copy of the site plan for the development proposal including:

      i. A map to scale depicting critical areas, buffers, the development proposal, and any areas to be cleared; and

      ii. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations.

   c. The dates, names, and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;

   d. Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area;

   e. A statement specifying the accuracy of the report, and all assumptions made and relied upon;

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

   g. An analysis of site development alternatives including a no development alternative;

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

   i. Plans for adequate mitigation, as needed, to offset any impacts, in accordance with Mitigation Plan Requirements, including, but not limited to:

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

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

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

   k. Financial guarantees to ensure compliance; and

   l. Any additional information required for the critical area as specified in the corresponding chapter.

   m. Unless otherwise provided, a critical area report may be supplemented by or composed, in whole or in part, of any reports or studies required by other laws and regulations or previously prepared for and applicable to the development proposal site, as approved by the administrator.

B. Critical Area Report – Modifications to Requirements

1. Limitations to Study Area. The administrator may limit the required geographic area of the critical area report as appropriate if:

   a. The applicant, with assistance from the City, cannot obtain permission to access properties adjacent to the project area; or

   b. The proposed activity will affect only a limited part of the subject site.

2. Modifications to Required Contents. The applicant may consult with the administrator prior to or during preparation of the critical area report to obtain City approval of modifications to the required contents of the report where, in the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

3. Additional Information Requirements. The administrator may require additional information to be included in the critical area report when determined to be necessary to the review of the proposed activity in accordance with this Chapter. Additional information that may be required, includes, but is not limited to:

   a. Historical data, including original and subsequent mapping, aerial photographs, data compilations and summaries, and available reports and records relating to the site or past operations at the site;

   b. Grading and drainage plans; and

   c. Information specific to the type, location, and nature of the critical area.

C. Mitigation Requirements

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

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

3. Mitigation shall not be implemented until after City approval of a critical area report that includes a mitigation plan, and mitigation shall be in accordance with the provisions of the approved critical area report.

D. Mitigation Sequencing. Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized, or compensated for in the following sequential order of preference:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;

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

3. Rectifying the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;

4. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;

5. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;

6. Compensating for the impact to wetlands, critical aquifer recharge areas, frequently flooded areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and

7. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Mitigation for individual actions may include a combination of the above measures.

E. Mitigation Plan Requirements. When mitigation is required, the applicant shall submit for approval by City a mitigation plan as part of the critical area report. The mitigation plan shall include:

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

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

b. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in restoring or creating the type of critical area proposed; and

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

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

e. Detailed Construction Plans. The mitigation plan shall include written specifications and descriptions of the mitigation proposed, such as:

i. The proposed construction sequence, timing, and duration;

ii. Grading and excavation details;

iii. Erosion and sediment control features;

iv. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and

v. Measures to protect and maintain plants until established.

These written specifications shall be accompanied by detailed site diagrams, scaled cross-sectional drawings, topographic maps showing slope percentage and final grade elevations, and any other drawings appropriate to show construction techniques or anticipated final outcome.

F. Monitoring Program. The mitigation plan shall include a program for monitoring construction of the compensation project and for assessing a completed project. A protocol shall be included outlining the schedule for site monitoring (for example, monitoring shall occur in years 1, 3, 5, and 7 after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation project shall be monitored for a period necessary to establish that

performance standards have been met, but not for a period less than five (5) years.

G. Contingency Plan. The mitigation plan shall include identification of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.

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

14.08.060 Determination Process

A. Determination. The administrator shall make a determination as to whether the proposed activity and mitigation, if any, is consistent with the provisions of this Chapter. The administrator's determination shall be based on the Review Criteria.

B. Review Criteria

1. Any alteration to a critical area, unless otherwise provided for in this Chapter, shall be reviewed and approved, approved with conditions, or denied based on the proposal's ability to comply with all of the following criteria:

   a. The proposal minimizes the impact on critical areas in accordance with Mitigation Sequencing;

   b. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;

   c. The proposal is consistent with the general purposes of this Chapter and the public interest;

   d. Any alterations permitted to the critical area are mitigated in accordance with Mitigation Requirements;

   e. The proposal protects the critical area functions and values consistent with the best available science and results in no net loss of critical area functions and values; and

   f. The proposal is consistent with other applicable regulations and standards.

2. The City may condition the proposed activity as necessary to mitigate impacts to critical areas and to conform to the standards required by this Chapter.

3. Except as provided for by this Chapter, any project that cannot adequately mitigate its impacts to critical areas in the sequencing order of preferences shall be denied.

C. Completion of the Critical Area Review. The City's determination regarding critical areas pursuant to this Chapter shall be final concurrent with the final decision to approve, condition, or deny the development proposal or other activity involved.

D. Appeals. Any decision to approve, condition, or deny a development proposal or other activity based on the requirements of this Chapter may be appealed according to, and as part of, the appeal procedure for the permit or approval involved.

14.08.070 Modifications and Variances

A. Modifications to the prescriptive standards for the protection of critical areas may be authorized by the City. The Site Plan Review Committee shall review the request and make a written finding that the request meets or fails to meet the modification criteria as part of the underlying permit approval.

B. Modification Criteria. A modification may be granted only if the applicant demonstrates that the requested modification includes the best available science and gives special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish habitat.

C. Variances from the standards of this Chapter may be authorized by the City in accordance with the procedures set forth in Chapter 2.26 Yelm Municipal Code. The Hearing Examiner shall review the request and make a written finding that the request meets or fails to meet the variance criteria.

D. Variance Criteria. A variance may be granted only if the applicant demonstrates that the requested action conforms to all of the criteria set forth as follows:

1. Special conditions and circumstances exist that are peculiar to the land, the lot, or something inherent in the land, and that are not applicable to other lands in the same district;

2. The special conditions and circumstances do not result from the actions of the applicant;

3. A literal interpretation of the provisions of this Chapter would deprive the applicant of all reasonable economic uses and privileges permitted to other properties in the vicinity and zone of the subject property under the terms of this Chapter, and the variance requested is the minimum necessary to provide the applicant with such rights;

4. Granting the variance requested will not confer on the applicant any special privilege that is denied by this Chapter to other lands, structures, or buildings under similar circumstances;

5. The granting of the variance is consistent with the general purpose and intent of this Chapter, and will not further degrade the functions or values of the associated critical areas or otherwise be materially detrimental to the public welfare or injurious to the property or improvements in the vicinity of the subject property;

6. The decision to grant the variance includes the best available science and gives special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish habitat.

E. Conditions May Be Required. In granting any modification or variance, the City may prescribe such conditions and safeguards as are necessary to secure adequate protection of critical areas from adverse impacts, and to ensure conformity with this Chapter.

F. Time Limit. A modification or variance shall be valid for the time period of the underlying permit approval.

G. Burden of Proof. The burden of proof shall be on the applicant to bring forth evidence in support of the application and upon which any decision has to be made on the application.

14.08.080 Unauthorized Critical Area Alterations and Enforcement

A. When a critical area or its buffer has been altered in violation of this Chapter, all ongoing development work shall stop and the critical area shall be restored. The City shall have the authority to issue a stop work order to cease all ongoing development work, and order restoration, rehabilitation, or replacement measures at the owner's or other responsible party's expense to compensate for violation of provisions of this Chapter.

B. Requirement for Restoration Plan. All development work shall remain stopped until a restoration plan is prepared and approved by City. Such a plan shall be prepared by a qualified professional using the best available science and shall describe how the actions proposed meet the minimum performance standards. The administrator shall, at the violator's expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. Minimum Performance Standards for Restoration

1. For alterations to critical aquifer recharge areas, frequently flooded areas, wetlands, and habitat conservation areas, the following minimum performance standards shall be met for the restoration of a critical area, provided that if the violator can demonstrate that greater functional and habitat values can be obtained, these standards may be modified:

   a. The historic structural and functional values shall be restored, including water quality and habitat functions;

   b. The historic soil types and configuration shall be replicated;

   c. The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration; and

   d. Information demonstrating compliance with the requirements for Mitigation Plans shall be submitted to the administrator.

2. For alterations to flood and geological hazards, the following minimum performance standards shall be met for the restoration of a critical area, provided that, if the violator can demonstrate that greater safety can be obtained, these standards may be modified:

   a. The hazard shall be reduced to a level equal to, or less than, the pre-development hazard;

   b. Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and

   c. The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.

D. Site Inspection. The administrator is authorized to make site inspections and take such actions as are necessary to enforce this Chapter. The administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

E. Penalties. Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the state of Washington. The City may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Chapter. The civil penalty shall be assessed at a maximum rate of $250.00 dollars per day per violation.

14.08.090 General Critical Area Protective Measures

A. Critical Area Markers and Signs

1. The boundary at the outer edge of critical area tracts and easements shall be delineated with permanent survey stakes, using iron or concrete markers as established by local survey standards.

2. The boundary at the outer edge of the critical area or buffer shall be identified with temporary signs prior to any site alteration. Such temporary signs shall be replaced with permanent signs prior to occupancy or use of the site.

3. These provisions may be modified by the administrator as necessary to ensure protection of sensitive features or wildlife needs.

B. Financial Guarantee to Ensure Mitigation, Maintenance, and Monitoring

1. When mitigation required pursuant to a development proposal is not completed prior to the City final permit approval, such as final plat approval or final building inspection, the City shall require the applicant to post a financial guarantee in a form and amount deemed acceptable by the City. If the development proposal is subject to mitigation, the applicant shall post a financial guarantee security in a form and amount deemed acceptable by the City to ensure mitigation is fully functional.

2. The bond shall be in the amount of one hundred and fifty percent (150%) of the estimated cost of the uncompleted actions or the estimated cost of restoring the functions and values of the critical area that are at risk, whichever is greater.

3. The bond shall be in the form of a assignment of savings account in the City trust fund.

4. Financial Guarantees shall remain in effect until the City determines, in writing, that the standards bonded for have been met. Bonds or other security shall be held by the City for a minimum of five (5) years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods when necessary.

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

6. Public development proposals shall be relieved from having to comply with the bonding requirements of this Section if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.

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

8. Any funds recovered pursuant to this Section shall be used to complete the required mitigation.

B. Critical Area Inspections. Reasonable access to the site shall be provided to the City, state, and federal agency review staff for the purpose of inspections during any proposal review, restoration, emergency action, or monitoring period.

14.08.100 Wetlands

A. Designating Wetlands. Wetlands are those areas, designated in accordance with the Washington State Wetland Identification and Delineation Manual (1997), that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. All areas within the City meeting the wetland designation criteria in the Identification and Delineation Manual, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter.

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 documents or as revised by Ecology.

1. Wetland Rating Categories

a. Category I. Category I wetlands are those that:

i. represent a unique or rare wetland type; or

ii. are more sensitive to disturbance than most wetlands; or

iii. are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or

iv. provide a high level of functions. These include estuarine wetlands, Natural Heritage wetlands, bogs, mature and old-growth forested wetland, wetlands in coastal lagoons and wetlands that score more than 70 points in the 2004 rating system.

i.

b. Category II. Category II wetlands are difficult, though not impossible to, replace, and provide high levels of some functions. Category II wetlands in western Washington include wetlands scoring between 51- 69 points in the 2004 rating system.

i.

c. Category III. Category III wetlands are with a moderate level of functions (scores between 30 – 50 points). Wetlands scoring between 30 – 50 points generally have been disturbed in some ways and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.

d. Category IV. Category IV wetlands have the lowest levels of functions (scores less than 30 points) and are often heavvily disturbed.

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

C. Mapping. The approximate location and extent of wetlands are shown on the critical area maps prepared by the Community Development Department. These maps are to be used as a guide for the City, project applicants, and/or property owners, and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

The exact location of a wetland's boundary shall be determined through the performance of a field investigation by a qualified professional wetland scientist applying the Washington State Wetlands Identification and Delineation Manual as required by RCW 36.70A.175.

D. Activities Allowed in Wetlands. The activities listed below are allowed in wetlands in addition to those activities listed in, and consistent with, the provisions established in Allowed Activities, and

do not require submission of a critical area report, except where such activities result in a loss to the functions and values of a wetland or wetland buffer. These activities include:

1. Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife that does not entail changing the structure or functions of the existing wetland.

2. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources.

3. Drilling for utilities under a wetland provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed.

4. Enhancement of a wetland through the removal of non-native invasive species. Weeding shall be restricted to hand removal and weed material shall be removed from the site. Bare areas that remain after weed removal shall be re-vegetated with native shrubs and trees at natural densities. Some hand seeding may also be done over the bare areas with native herbs.

E. Critical Area Report – Additional Requirements for Wetlands.

1. Area Addressed in Critical Area Report. The following areas shall be addressed in a critical area report for wetlands:

   a. The project area of the proposed activity;

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

   c. All shoreline areas, water features, floodplains, and other critical areas, and related buffers within three hundred (300) feet of the project area.

2. Wetland analysis.

   a. A written assessment and accompanying maps of the wetlands and buffers within three hundred (300) feet of the project area, including the following information at a minimum:

      i. Wetland delineation and required buffers;

      ii. Existing wetland acreage;

      iii. Wetland category;

      iv. Vegetative, faunal, and hydrologic characteristics;

      v. Soil and substrate conditions;

      vi. Topographic elevations, at two-foot contours, and

      vii. A discussion of the water sources supplying the wetland and documentation of hydrologic regime (locations of inlet and outlet features, water depths throughout the wetland, evidence of recharge or discharge, evidence of water depths throughout the year – drift lines, algal layers, moss lines, and sediment deposits).

   b. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land use activity.

   c. A habitat and native vegetation conservation strategy that addresses methods to

protect and enhance on-site habitat and wetland functions.

d. Functional evaluation for the wetland and adjacent buffer using a local or state agency staff-recognized method and including the reference of the method and all data sheets.

e. Proposed mitigation, if needed, including a written assessment and accompanying maps of the mitigation area, including the following information at a minimum:

i. Existing and proposed wetland acreage;

ii. Vegetative and faunal conditions;

iii. Surface and subsurface hydrologic conditions including an analysis of existing and future hydrologic regime and proposed hydrologic regime for enhanced, created, or restored mitigation areas;

iv. Relationship within watershed and to existing waterbodies;

v. Soil and substrate conditions, topographic elevations;

vi. Existing and proposed adjacent site conditions;

vii. Required wetland buffers (including any buffer reduction and mitigation proposed to increase the plant densities, remove weedy vegetation, and replant the buffers);

viii. Property ownership; and

ix. Associated wetlands and related wetlands that may be greater than three hundred (300) feet from the subject project.

f. A scale map of the development proposal site and adjacent area. A discussion of ongoing management practices that will protect wetlands after the project site has been developed; including proposed monitoring and maintenance programs.

g. A bond estimate for the installation (including site preparation, plant materials and installation, fertilizers, mulch, stakes) and the proposed monitoring and maintenance work for the required number of years.

h. Title Notification. All activity in critical area protection areas shall be accompanied by a Chapter.

F. Wetland Performance Standards – General Requirements

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

2. Activities and uses shall be prohibited in wetlands and wetland buffers, except as provided for in this Chapter.

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

4. Category II and III Wetlands.

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

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

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

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

5. Category IV Wetlands. Activities and uses that result in unavoidable and necessary impacts may be permitted in Category IV wetlands and associated buffers in accordance with an approved critical area report and mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the acreage and loss functions will be provided.

6. Wetland Buffers

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

i. Category I

Natural Heritage Wetlands	250 feet
Bogs	250 feet
High level of function for habitat (score of 29 – 36 points)	300 feet
Moderate level of function for habitat (score of 20-28 points)	150 feet
High level of function for water quality improvement (24- 32 points) and low for habitat (less than 20 points)	100 feet
Not meeting any other characteristics	100 feet

ii. Category II

High level of function for habitat (score of 29 – 36 points)	300 feet
Moderate level of function for habitat (score of 20 – 28 points)	150 feet
High level of function for water quality improvement and low for habitat (score for water quality 24-32 points and habitat less than 20 points)	100 feet
Not meeting any other characteristics	100 feet

iii. Category III

Moderate level of function for habitat (score of 20 – 28 points)	150 feet
Not meeting above characteristic	80 feet

iv. Category IV

Score for all three basic functions less than 30 points	50 feet

b. Measurement of Wetland Buffers. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category and the proposed land use.

The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers.

c. Increased Wetland Buffer Widths. The administrator shall require increased buffer widths in accordance with the recommendations of an experienced, qualified professional wetland scientist, and the best available science on a case-by-case basis when a larger buffer is necessary to protect wetland functions and values based on site-specific characteristics. This determination shall be based on one or more of the following criteria:

   i. A larger buffer is needed to protect other critical areas;

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

   iii. The buffer area has minimal vegetative cover. In lieu of increasing the buffer width where existing buffer vegetation is inadequate to protect the wetland functions and values, implementation of a buffer planting plan may substitute. Where a buffer planting plan is proposed, it shall include densities that are not less than three (3) feet on center for shrubs and eight (8) feet on center for trees and require monitoring and maintenance to ensure success. Existing buffer vegetation is considered "inadequate" and will need to be enhanced through additional native plantings and (if appropriate) removal of non-native plants when: (1) non-native or invasive plant species provide the dominant cover, (2) vegetation is lacking due to disturbance and wetland resources could be adversely affected, or (3) enhancement plantings in the buffer could significantly improve buffer functions.

d. Wetland Buffer Width Averaging. The administrator may allow modification of the standard wetland buffer width in accordance with an approved critical area report and the best available science on a case-by-case basis by averaging buffer widths. Averaging of buffer widths may only be allowed where a qualified professional wetland scientist demonstrates that:

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

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

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

   v. The buffer width is not reduced to less than 75 percent (75%) of the standard width or thirty-five (35) feet.

e. Buffer Consistency. All mitigation sites shall have buffers consistent with the buffer requirements of this Chapter.

f. Buffer Maintenance. Except as otherwise specified or allowed in accordance with this Chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. Removal of invasive non-native weeds is required for the duration of the mitigation bond.

g. Buffer Uses. The following uses may be permitted within a wetland buffer in

accordance with the review procedures of this Chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

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

ii. Passive Recreation. Passive recreation facilities designed and in accordance with an approved critical area report.

G. Performance Standards – Compensatory Mitigation Requirements. Compensatory mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with the state Department of Ecology Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals, 1994, as revised.

1. Mitigation Shall Be Required in the Following Order of Preference:

a. Avoiding the impact altogether by not taking a certain action or parts of an action.

b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts.

c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

d. Reducing or eliminating the impact over time by preservation and maintenance operations.

e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.

2. Mitigation for Lost or Affected Functions. Compensatory mitigation actions shall address functions affected by the alteration to achieve functional equivalency or improvement and shall provide similar wetland functions as those lost, except when:

a. The lost wetland provides minimal functions as determined by a site-specific function assessment, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington state watershed assessment plan or protocol; or

b. Out-of-kind replacement will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.

3. Preference of Mitigation Actions. Mitigation actions that require compensation by replacing, enhancing, or substitution shall occur in the following order of preference:

a. Restoring wetlands on upland sites that were formerly wetlands.

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

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

4. Type and Location of Mitigation. Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be either in-kind and on-site, or in-kind and within the same stream reach, sub-basin, or drift cell. Mitigation actions shall be conducted within the

same sub-drainage basin and on the site as the alteration except when the all of the following apply:

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

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

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

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

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

5. Mitigation Timing. Mitigation projects shall be completed with an approved monitoring plan prior to activities that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the activity or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

The administrator may authorize a one-time temporary delay, up to one-hundred-twenty (120) days, in completing minor construction and landscaping when environmental conditions could produce a high probability of failure or significant construction difficulties. The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, and general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the mitigation plan. The justification must be verified and approved by the City and include a financial guarantee.

6. Mitigation Ratios

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

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

b. Increased Replacement Ratio. The administrator may increase the ratios under the following circumstances:

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

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

c. Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or

d. The impact was an unauthorized impact.

7. Wetlands Enhancement as Mitigation

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

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

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

H. Performance Standards – Land Divisions. The division, redivision, or adjusting of boundary lines of land in wetlands and associated buffers is subject to the following:

1. Land that is located wholly within a wetland or its buffer may not be subdivided.

2. Land that is located partially within a wetland or its buffer may be subdivided provided that an accessible and contiguous portion of each new lot is:

a. Located outside of the wetland and its buffer; and

b. Meets the minimum lot size requirements of [locally adopted zoning dimensions].

3. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only if the City determines that no other feasible alternative exists and when consistent with this Chapter.

14.08.110 Critical Aquifer Recharge Areas

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

B. Designation of Critical Aquifer Recharge Areas. The entire City of Yelm and its Urban Growth Area is identified as a highly susceptible Critical Aquifer Recharge Area.

C. Performance Standards – General Requirements

1. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely effect the recharging of the aquifer.

2. The proposed activity must comply with the water source protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, and the Thurston County Environmental Health Division.

3. All new development, redevelopment, and small parcel development shall meet the water quality requirements of the Stormwater Manual as adopted by the City of Yelm.

D. Performance Standards – Specific Uses

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

a. Underground Tanks. All new underground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

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

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

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

b. Aboveground Tanks. All new aboveground storage facilities proposed for use in the storage of hazardous substances or hazardous wastes shall be designed and constructed so as to:

i. Not allow the release of a hazardous substance to the ground, ground waters, or surface waters;

ii. Have a primary containment area enclosing or underlying the tank or part thereof; and

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

2. Vehicle Repair and Servicing

a. Vehicle repair and servicing must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment

should leaks occur.

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

3. Use of Reclaimed Water for Surface Percolation or Direct Recharge. Water reuse projects for reclaimed water must be in accordance with the adopted water or sewer comprehensive plans that have been approved by the state departments of Ecology and Health.

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

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

14.08.120 Frequently Flooded Areas

A. Designation of Frequently Flooded Areas Frequently flooded areas shall include areas Identified on the Flood Insurance Map(s) and areas mapped by Thurston County as high ground water flood hazard areas. The Flood Insurance Maps and high ground water maps are hereby adopted by reference, declared part of this Chapter, and are available for public review at the City.

B. Flood Elevation Data. When base flood elevation data is not available (A and V zones), the administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other official source, in order to administer this Chapter.

C. Maintenance of Records. Where base flood elevation data is provided through the Flood Insurance Study or required through this Chapter, the administrator shall obtain and record the flood elevation certificates of all new or substantially improved structures, and whether or not the structure contains a basement. The administrator shall also maintain for public inspection all records of floodplain hazards, certificates of flood proofing, and flood elevation data.

D. Performance Standards – General Requirements. The following standards shall be adhered to in all frequently flooded areas, except as otherwise provide for in this Chapter.

1. Approval of work in a frequently flooded area. Prior to any clearing, grading, dumping, drilling, dredging, filling, or the construction or reconstruction of any structure, the City shall have approved through the underlying permit or through approval of a critical areas report that the standards for development within a frequently flooded area have been met.

2. No activity within a frequently flooded area shall increase the base flood elevation.

E. Performance Standards – General Requirements in FEMA designated 100 year floodplain.

1. Structures Shall Be Located Outside the Floodplain. All structures, utilities, and other improvements shall be located on the buildable portion of the site out of the floodplain unless there is no buildable site area out of the floodplain. For sites with no buildable area out of the floodplain, structures, utilities, and other improvements shall be placed on the highest land on the site, oriented parallel to flow rather than perpendicular, and sited as far from the watercourse and other critical areas as possible. If the administrator detects any evidence of active hyporheic exchange on a site, the development shall be located to minimize disruption of such exchange.

2. Methods That Minimize Flood Damage. All new construction and substantial improvements shall be constructed using flood resistant materials and using methods and practices that minimize flood damage.

3. Utility Protection. Electrical, heating, ventilation, plumbing, air-conditioning equipment, and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

4. Elevation Certificate Following Construction. Following construction of a structure within the floodplain where the base flood elevation is provided, the applicant shall obtain an elevation certificate that records the elevation of the lowest floor. The elevation certificate shall be completed by a surveyor or engineer licensed in the state of Washington and shall be submitted to the City for recording.

5. Anchoring

a. Anchoring Requirement. All new construction and substantial improvements within the floodplain shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

b. Manufactured Homes. All manufactured homes placed within the floodplain must be anchored to prevent flotation, collapse, or lateral movement and shall be installed using methods and practices that minimize flood damage. Anchoring

methods may include, but are not limited to, use of over-the-top or frame ties to ground anchors.

6. Fill and Grading. Fill and grading with the floodplain shall only occur after a determination that the fill or grading will not block side channels, inhibit channel migration, increase the base flood elevation, or be within a channel migration zone.

F. Performance Standards – Specific Uses in the FEMA Designated 100 year floodplain. Specific uses shall adhere to the following relevant standards, in addition to the general standards.

1. Divisions of Land.

a. All new divisions of land, including subdivisions, short subdivisions, boundary line adjustments, binding site plans, and master planned communities shall not create any building lot for commercial or residential purposes with any portion within the floodplain.

b. Floodplain areas shall be dedicated as open space.

c. No infrastructure required for the subdivision with the exception of utility transport lines identified by the appropriate utility capital facilities plan shall be located within the floodplain.

d. Subdivisions and short subdivisions shall be designed to minimize or eliminate flood damage and impacts to floodplain functions and values. Public utilities and facilities that are installed as part of such subdivisions, such as sewer, gas, electrical, and water systems, shall be located and constructed to also minimize flood damage and impacts to floodplain functions and values. Subdivisions should be designed using natural features of the landscape and should not incorporate flood protection changes.

e. Subdivisions and short subdivisions shall have adequate natural surface water drainage to reduce exposure to flood hazards; and

f. Subdivisions and short subdivisions shall show the 100-year floodplain, floodway, and channel migration zone on the preliminary and final plat and short plat maps and designate such areas as “no build,” when applicable.

2. Utilities

a. Infiltration of Flood Waters. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

b. Sanitary Sewage Systems. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters.

c. On-Site Waste Disposal Systems. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New on-site sewage disposal systems are prohibited within the floodplain.

3. Residential Construction on lots created prior to 1999.

a. Must be Above Base Flood Elevation. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated one (1) foot or more above the base flood elevation.

b. Areas Below the Lowest Floor. Fully enclosed areas below the lowest floor that are subject to flooding shall only be allowed when designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or must meet or exceed the following minimum criteria:

i. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;

ii. The bottom of all openings shall be no higher than one (1) foot above grade; and

iii. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

c. Manufactured Homes Must be Elevated. All manufactured homes to be placed or substantially improved shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated one (1) foot or more above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

4. Nonresidential Construction on lots created prior to 1999.

a. Above Base Flood Elevation. New construction and substantial improvement of any commercial, industrial, or other nonresidential structure shall either have the lowest floor, including basement, elevated one foot (1) or more above the base flood elevation, or, together with attendant utility and sanitary facilities, shall:

i. Be floodproofed so that below one (1) foot or more above the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

ii. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

iii. Be certified by a registered professional engineer or architect that the design and methods of construction are in accordance with accepted standards of practice for meeting provisions of this Subsection based on their development and/or review of the structural design, specifications, and plans.

b. Areas Below the Lowest Floor. Fully enclosed areas below the lowest floor that are not floodproofed shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or must meet or exceed the following minimum criteria:

i. A minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding shall be provided;

ii. The bottom of all openings shall be no higher than one (1) foot above grade; and

iii. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

G. Performance Standards – General requirements in High Ground Water Hazard Areas.

1. Flood elevations. The base flood elevation for high ground water flood hazard areas corresponds to the elevation of the outer edge of the high ground water flood hazard area.

2. Delineation of the base flood elevation. Applicants shall submit to the approval authority hydrologic and hydrogeologic studies as necessary to delineate the high ground water flood hazard area and the base flood elevation.

3. No development shall locate within fifty feet, measured on a horizontal plane, from the outer edge of the high ground water hazard area or extending to a ground elevation two feet above the base flood elevation, whichever is less.

4. The bottom of any infiltration facility for stormwater discharge shall be located at least 6 feet above the base flood elevation.

H. Uses and Activities Prohibited From Frequently Flooded Areas

1. Critical Facilities. Critical facilities are prohibited from frequently flooded areas to prevent damage to such facilities, to avoid costs that will be incurred by the public, and to maintain functionality of such facilities during flood events. If such a prohibition is unreasonable, an allowance for critical facilities in frequently flooded areas with the following specific conditions:

   a. Construction of new critical facilities shall be permissible within frequently flooded areas if no feasible alternative site is available.

   b. Critical facilities constructed within frequently flooded areas shall have the lowest floor elevated three (3) feet or more above the level of the base flood elevation (100-year flood).

   c. Floodproofing and sealing measures must be taken to ensure that toxic substances will not be displaced by or released into flood waters.

   d. Access routes elevated to or above the level of the base flood elevation shall be provided to all critical facilities to the extent possible.

2. Wells Used for Potable Water. Water wells shall be located on high ground and are prohibited from being within the floodway.

3. On-Site Sewage Disposal Systems. On-site sewage disposal systems are prohibited from the floodway, the channel migration zone, and the ten-year floodplain elevation.

14.08.130 Geologically Hazardous Areas

A. Designation of Geologically Hazardous Areas. Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Such incompatible development may not only place itself at risk, but also may increase the hazard to surrounding development and use.

B. Designation of Specific Hazard Areas

1. Erosion Hazard Areas. Erosion hazard areas are at least those areas identified by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard. Erosion hazard areas are also those areas impacted by shore land and/or stream bank erosion and those areas within a river's channel migration zone.

2. Landslide Hazard Areas. Landslide hazard areas are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Example of these may include, but are not limited to the following:

   a. Areas of historic failures

   b. Areas with all three of the following characteristics:

      i. Slopes steeper than fifteen percent (15%);

      ii. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and

      iii. Springs or ground water seepage.

   c. Areas that have shown movement during the Holocene epoch (from ten thousand years ago to the present) or that are underlain or covered by mass wastage debris of that epoch;

   d. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;

   e. Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;

   f. Areas potentially unstable because of rapid stream incision, stream bank erosion, and undercutting by wave action;

   g. Areas that show evidence of, or are at risk from snow avalanches;

   h. Areas located in a canyon or on an active alluvial fan, presently or potentially subject to inundation by debris flows or catastrophic flooding; and

   i. Any area with a slope of forty percent (40%) or steeper and with a vertical relief of ten (10) or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and is measured by averaging the inclination over at least ten (10) feet of vertical relief.

3. Seismic Hazard Areas. Seismic hazard areas are areas subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement, soil liquefaction, lateral spreading, or surface faulting. One indicator of potential for future earthquake damage is a record of earthquake damage in the past. Ground shaking is the primary cause of earthquake damage in Washington. The strength of ground shaking is primarily affected by:

   a. The magnitude of an earthquake;

b. The distance from the source of an earthquake;

c. The type of thickness of geologic materials at the surface; and

d. The type of subsurface geologic structure.

C. Mapping of Geologically Hazardous Areas.

1. The approximate location and extent of geologically hazardous areas are shown on the adopted critical area maps.

2. These maps are to be used as a guide for the City, project applicants and/or property owners and may be continuously updated as new critical areas are identified. They are a reference and do not provide a final critical area designation.

D. Performance Standards – General Requirements

1. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:

a. Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;

b. Will not adversely impact other critical areas;

c. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and

d. Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.

2. Critical Facilities Prohibited. Critical facilities shall not be sited within geologically hazardous areas unless there is no other practical alternative.

3. Buffer Requirement. A buffer shall be established from all edges of landslide hazard areas. The size of the buffer shall be determined by the administrator to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the development, based upon review of and concurrence with a critical area report prepared by a qualified professional.

a. Minimum Buffer. The minimum buffer shall be equal to the height of the slope.

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

c. Increased Buffer. The buffer may be increased where the administrator determines a larger buffer is necessary to prevent risk of damage to proposed and existing development;

4. Alterations. Alterations of an erosion or landslide hazard area and/or buffer may only occur for activities for which a hazards analysis is submitted and certifies that:

a. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;

b. The development will not decrease slope stability on adjacent properties; and

c. Such alterations will not adversely impact other critical areas;

5. Vegetation Retention. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited;

6. Seasonal Restriction. Clearing shall be allowed only from May 1 to October 1 of each

year provided that the City may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions, except that timber harvest, not including brush clearing or stump removal, may be allowed pursuant to an approved forest practice permit issued by the City or the Washington State Department of Natural Resources;

7. Utility Lines and Pipes. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available. The line or pipe shall be located above ground and properly anchored and/or designed so that it will continue to function in the event of an underlying slide. Stormwater conveyance shall be allowed only through a high-density polyethylene pipe with fuse-welded joints, or similar product that is technically equal or superior;

8. Point Discharges. Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area shall be prohibited.

9. Division of Land. The division of land in landslide hazard areas and associated buffers is subject to the following:

   a. Land that is located wholly within a landslide hazard area or its buffer may not be subdivided. Land that is located partially within a landslide hazard area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of, and will not affect, the landslide hazard or its buffer.

   b. Access roads and utilities may be permitted within the landslide hazard area and associated buffers if the City determines that no other feasible alternative exists; and

E. Prohibited Development. On-site sewage disposal systems, including drain fields, shall be prohibited within erosion and landslide hazard areas and related buffers.

14.08.140 Fish and Wildlife Habitat Conservation Areas

A. Designation of Fish And Wildlife Habitat Conservation Areas

1. Fish and wildlife habitat conservation areas include:

a. Areas With Which State or Federally Designated Endangered, Threatened, and Sensitive Species Have a Primary Association.

i. Federally designated endangered and threatened species are those fish and wildlife species identified by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that are in danger of extinction or threatened to become endangered.

ii. State designated endangered, threatened, and sensitive species are those fish and wildlife species native to the state of Washington identified by the Washington Department of Fish and Wildlife, that are in danger of extinction, threatened to become endangered, vulnerable, or declining and are likely to become endangered or threatened in a significant portion of their range within the state without cooperative management or removal of threats.

b. State Priority Habitats and Areas Associated With State Priority Species. Priority habitats and species are considered to be priorities for conservation and management. Priority species require protective measures for their perpetuation due to their population status, sensitivity to habitat alteration, and/or recreational, commercial, or tribal importance. Priority habitats are those habitat types or elements with unique or significant value to a diverse assemblage of species. A priority habitat may consist of a unique vegetation type or dominant plant species, a described successional stage, or a specific structural element. Priority habitats and species are identified by the state Department of Fish and Wildlife.

c. Naturally Occurring Ponds Under Twenty Acres. Naturally occurring ponds are those ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds. Naturally occurring ponds do not include ponds deliberately designed and created from dry sites, such as canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities, unless such artificial ponds were intentionally created for mitigation.

d. Waters of the State. Waters of the state include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

e. Areas of Rare Plant Species and High Quality Ecosystems. Areas of rare plant species and high quality ecosystems are identified by the Washington State Department of Natural Resources through the Natural Heritage Program.

f. Land Useful or Essential for Preserving Connections between Habitat Blocks and Open Spaces.

2. All areas within the City meeting one or more of these criteria, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this Chapter and shall be managed consistent with the best available science.

3. Mapping. The approximate location and extent of habitat conservation areas are shown on the critical area maps adopted by the City.

B. Critical Area Report – Additional Requirements for Habitat Conservation Areas.

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

a. The project area of the proposed activity;

b. All habitat conservation areas and recommended buffers within three hundred (300) feet of the project area; and

c. All shoreline areas, floodplains, other critical areas, and related buffers within three hundred (300) feet of the project area.

2. Habitat Assessment. A habitat assessment is an investigation of the project area to evaluate the potential presence or absence of designated critical fish or wildlife species or habitat. A critical area report for a habitat conservation area shall contain an assessment of habitats including the following site- and proposal-related information at a minimum:

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

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

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

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

e. A discussion of measures, including avoidance, minimization, and mitigation, proposed to preserve existing habitats and restore any habitat that was degraded prior to the current proposed land use activity and to be conducted in accordance with Mitigation Sequencing; and

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

3. Additional Information May Be Required. When appropriate due to the type of habitat or species present or the project area conditions, the administrator may also require the habitat management plan to include:

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

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

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

C. Performance Standards – General Requirements.

1. Non-indigenous Species. No plant, wildlife, or fish species not indigenous to the region shall be introduced into a habitat conservation area unless authorized by a state or federal permit or approval.

2. Mitigation and Contiguous Corridors. Mitigation sites shall be located to preserve or achieve contiguous wildlife habitat corridors in accordance with a mitigation plan that is part of an approved critical area report to minimize the isolating effects of development on habitat areas, so long as mitigation of aquatic habitat is located within the same aquatic ecosystem as the area disturbed.

3. Approvals of Activities. The administrator shall condition approvals of activities allowed within or adjacent to a habitat conservation area or its buffers, as necessary to minimize or mitigate any potential adverse impacts. Conditions shall be based on the best available science and may include, but are not limited to, the following:

    a. Establishment of buffer zones;

    b. Preservation of critically important vegetation and/or habitat features such as snags and downed wood;

    c. Limitation of access to the habitat area, including fencing to deter unauthorized access;

    d. Seasonal restriction of construction activities;

    e. Establishment of a duration and timetable for periodic review of mitigation activities; and

    f. Requirement of a performance bond, when necessary, to ensure completion and success of proposed mitigation.

4. Mitigation and Equivalent or Greater Biological Functions. Mitigation of alterations to habitat conservation areas shall achieve equivalent or greater biologic and hydrologic functions and shall include mitigation for adverse impacts upstream or downstream of the development proposal site. Mitigation shall address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.

5. Approvals and the Best Available Science. Any approval of alterations or impacts to a habitat conservation area shall be supported by the best available science.

6. Buffers

    a. Establishment of Buffers. The administrator shall require the establishment of buffer areas for activities adjacent to habitat conservation areas when needed to protect habitat conservation areas. Buffers shall consist of an undisturbed area of native vegetation or areas identified for restoration established to protect the integrity, functions, and values of the affected habitat. Required buffer widths shall reflect the sensitivity of the habitat and the type and intensity of human activity proposed to be conducted nearby and shall be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife. Habitat conservation areas and their buffers shall be preserved in perpetuity through the use of native growth protection areas and critical area tracts.

    b. Seasonal Restrictions. When a species is more susceptible to adverse impacts during specific periods of the year, seasonal restrictions may apply. Larger buffers may be required and activities may be further restricted during the specified season.

    c. Habitat Buffer Averaging. The administrator may allow the recommended habitat area buffer width to be reduced in accordance with a critical area report, the best available science, and the management recommendations issued by the Washington Department of Fish and Wildlife, only if:

        i. It will not reduce stream or habitat functions;

        ii. It will not adversely affect salmonid habitat;

        iii. It will provide additional natural resource protection, such as buffer enhancement;

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

v. The buffer area width is not reduced by more than twenty-five percent (25%) in any location.

7. Divisions of Land. The subdivision and short subdivision of land in fish and wildlife habitat conservation areas and associated buffers is subject to the following:

a. Land that is located wholly within a habitat conservation area or its buffer may not be subdivided.

b. Land that is located partially within a habitat conservation area or its buffer may be divided provided that the developable portion of each new lot and its access is located outside of the habitat conservation area or its buffer and meets the minimum lot size requirements.

c. Access roads and utilities serving the proposed may be permitted within the habitat conservation area and associated buffers only if the City determines that no other feasible alternative exists and when consistent with this Chapter.

D. Performance Standards – Specific Habitats

1. Endangered, Threatened, and Sensitive Species

a. No development shall be allowed within a habitat conservation area or buffer with which state or federally endangered, threatened, or sensitive species have a primary association, except that which is provided for by a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency.

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

c. Bald eagle habitat shall be protected pursuant to the Washington State Bald Eagle Protection Rules (WAC 232-12-292). Whenever activities are proposed adjacent to a verified nest territory or communal roost, a habitat management plan shall be developed by a qualified professional. Activities are adjacent to bald eagle sites when they are within eight hundred (800) feet or within one half mile (2,640 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.

2. Riparian Habitat Areas. Unless otherwise allowed in this Chapter, all structures and activities shall be located outside of the riparian habitat area.

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

b. A Riparian Habitat Area Width of 150 feet is established along Yelm Creek and Thompson Creek, both Type 5, intermittent streams with low mass wasting potential.

c. Increased Riparian Habitat Area Widths. The recommended riparian habitat area widths shall be increased, as follows:

i. When the administrator determines that the recommended width is insufficient to prevent habitat degradation and to protect the structure and functions of the habitat area;

ii. When the frequently flooded area exceeds the recommended riparian habitat area width, the riparian habitat area shall extend to the outer edge of the frequently flooded area;

iii. When the habitat area is within an erosion or landslide hazard area, or buffer, the riparian habitat area width shall be the recommended distance, or the erosion or landslide hazard area or buffer, whichever is greater.

d. Riparian Habitat Area Width Averaging. The administrator may allow the recommended riparian habitat area width to be reduced in accordance with a critical area report only if:

i. The width reduction will not reduce stream or habitat functions, including those of nonfish habitat;

ii. The width reduction will not degrade the habitat, including habitat for anadromous fish;

iii. The proposal will provide additional habitat protection;

iv. The total area contained in the riparian habitat area of each stream on the development proposal site is not decreased;

v. The recommended riparian habitat area width is not reduced by more than twenty-five percent (25%) in any one location;

vi. The width reduction will not be located within another critical area or associated buffer; and

vii. The reduced riparian habitat area width is supported by the best available science.

e. Riparian Habitat Mitigation. Mitigation of adverse impacts to riparian habitat areas shall result in equivalent functions and values on a per function basis, be located as near the alteration as feasible, and be located in the same sub-drainage basin as the habitat impacted.

f. Alternative Mitigation for Riparian Habitat Areas. The performance standards set forth in this Subsection may be modified at the City's discretion if the applicant demonstrates that greater habitat functions, on a per function basis, can be obtained in the affected sub-drainage basin as a result of alternative mitigation measures.

4. Aquatic Habitat. The following specific activities may be permitted within a riparian habitat area, pond, lake, water of the state, and marine habitat or associated buffer.

a. Clearing and Grading. When clearing and grading is permitted as part of an authorized activity or as otherwise allowed in these standards, the following shall apply:

i. Grading is allowed only during the dry season, which is typically regarded as beginning on May 1 and ending on October 1 of each year, provided that the City may extend or shorten the dry season on a case-by-case basis, determined on actual weather conditions.

ii. Filling or modification of a wetland or wetland buffer is permitted only if it is conducted as part of an approved wetland alteration.

iii. The soil duff layer shall remain undisturbed to the maximum extent

possible. Where feasible, any soil disturbed shall be redistributed to other areas of the project area.

iv. The moisture-holding capacity of the topsoil layer shall be maintained by minimizing soil compaction or reestablishing natural soil structure and infiltrative capacity on all areas of the project area not covered by impervious surfaces.

v. Erosion and sediment control that meets or exceeds the standards set forth in the [locally adopted stormwater management regulations] shall be provided.

b. Shoreline Erosion Control Measures. New, replacement, or substantially improved shoreline erosion control measures may be permitted in accordance with an approved critical area report that demonstrates the following:

i. Natural shoreline processes will be maintained. The project will not result in increased beach erosion or alterations to, or loss of, shoreline substrate within one-quarter (1/4) mile of the project area.

ii. The shoreline erosion control measures will not degrade fish or wildlife habitat conservation areas or associated wetlands.

iii. Adequate mitigation measures ensure that there is no net loss of the functions or values of intertidal habitat or riparian habitat as a result of the proposed shoreline erosion control measures.

iv. The proposed shoreline erosion control measures do not result in alteration of intertidal migration corridors.

c. Streambank Stabilization. Streambank stabilization to protect new structures from future channel migration is not permitted except when such stabilization is achieved through bioengineering or soft armoring techniques in accordance with an approved critical area report.

d. Roads, Trails, Bridges, and Rights-of-Way. Construction of trails, roadways, and minor road bridging, less than or equal to thirty (30) feet wide, may be permitted in accordance with an approved critical area report subject to the following standards:

i. There is no other feasible alternative route with less impact on the environment;

ii. The crossing minimizes interruption of downstream movement of wood and gravel;

iii. Roads in riparian habitat areas or their buffers shall not run parallel to the water body;

iv. Trails shall be located on the outer edge of the riparian area or buffer, except for limited viewing platforms and crossings;

v. Crossings, where necessary, shall only occur as near to perpendicular with the water body as possible;

vi. Mitigation for impacts is provided pursuant to a mitigation plan of an approved critical area report;

vii. Road bridges are designed according to the Washington Department of Fish and Wildlife Fish Passage Design at Road Culverts, 1999, and the National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings, 2000; and

vii. Trails and associated viewing platforms shall not be made of continuous

impervious materials.

e. Utility Facilities. New utility lines and facilities may be permitted to cross watercourses in accordance with an approved critical area report, if they comply with the following standards:

i. Fish and wildlife habitat areas shall be avoided to the maximum extent possible;

ii. Installation shall be accomplished by boring beneath the scour depth and hyporheic zone of the water body and channel migration zone, where feasible;

iii. The utilities shall cross at an angle greater than sixty (60) degrees to the centerline of the channel in streams or perpendicular to the channel centerline whenever boring under the channel is not feasible;

iv. Crossings shall be contained within the footprint of an existing road or utility crossing where possible;

v. The utility route shall avoid paralleling the stream or following a down-valley course near the channel; and

vi. The utility installation shall not increase or decrease the natural rate of shore migration or channel migration.

f. Public Flood Protection Measures. New public flood protection measures and expansion of existing ones may be permitted, subject to the City's review and approval of a critical area report and the approval of a Federal Biological Assessment by the federal agency responsible for reviewing actions related to a federally listed species.

g. Instream Structures. Instream structures, such as, but not limited to, high flow bypasses, sediment ponds, instream ponds, retention and detention facilities, tide gates, dams, and weirs, shall be allowed only as part of an approved watershed basin restoration project approved by the City and upon acquisition of any required state or federal permits. The structure shall be designed to avoid modifying flows and water quality in ways that may adversely affect habitat conservation areas.

h. Stormwater Conveyance Facilities. Conveyance structures may be permitted in accordance with an approved critical area report subject to the following standards:

i. No other feasible alternatives with less impact exist;

ii. Mitigation for impacts is provided;

iii. Stormwater conveyance facilities shall incorporate fish habitat features; and

iv. Vegetation shall be maintained and, if necessary, added adjacent to all open channels and ponds in order to retard erosion, filter out sediments, and shade the water.

i. On-Site Sewage Systems and Wells

i. New on-site sewage systems and individual wells may be permitted in accordance with an approved critical area report only if accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system.

ii. Repairs to failing on-site sewage systems associated with an existing structure shall be accomplished by utilizing one of the following methods

that result in the least impact:

Connection to an available public sanitary sewer system;

Replacement with a new on-site sewage system located in a portion of the site that has already been disturbed by development and is located landward as far as possible, provided the proposed sewage system is in compliance with local health regulations; or

Repair to the existing on-site septic system.

14.08.150 Definitions.

Words not defined in this Chapter shall be as defined in the City code, the Washington Administrative Code, or the Revised Code of Washington. Words not found in either code shall be as defined in the Webster's Third New International Dictionary, latest edition.

Adaptive Management – Adaptive management relies on scientific methods to evaluate how well regulatory and nonregulatory actions protect the critical area. An adaptive management program is a formal and deliberate scientific approach to taking action and obtaining information in the face of uncertainty.

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

Anadromous Fish – Fish that spawn and rear in freshwater and mature in the marine environment. While Pacific salmon die after their first spawning, adult char (bull trout) can live for many years, moving in and out of saltwater and spawning each year. The life history of Pacific salmon and char contains critical periods of time when these fish are more susceptible to environmental and physical damage than at other times. The life history of salmon, for example, contains the following stages: upstream migration of adults, spawning, inter-gravel incubation, rearing, smoltification (the time period needed for juveniles to adjust their body functions to live in the marine environment), downstream migration, and ocean rearing to adults.

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

Aquifer, Confined – An aquifer bounded above and below by beds of distinctly lower permeability than that of the aquifer itself and that contains ground water under sufficient pressure for the water to rise above the top of the aquifer.

Aquifer Recharge Areas – Areas that, due to the presence of certain soils, geology, and surface water, act to recharge ground water by percolation.

Aquifer, Sole Source – An area designated by the U.S. Environmental Protection Agency under the Safe Drinking Water Act of 1974, Section 1424(e). The aquifer(s) must supply fifty percent (50%) or more of the drinking water for an area without a sufficient replacement available.

Aquifer Susceptibility – The ease with which contaminants can move from the land surface to the aquifer based solely on the types of surface and subsurface materials in the area. Susceptibility usually defines the rate at which a contaminant will reach an aquifer unimpeded by chemical interactions with the vadose zone media.

Aquifer, Unconfined – An aquifer not bounded above by a bed of distinctly lower permeability than that of the aquifer itself and containing ground water under pressure approximately equal to that of the atmosphere. This term is synonymous with the term "water table aquifer."

Base Flood – A flood event having a one percent (1%) chance of being equaled or exceeded in any given year, also referred to as the 100-year flood. Designations of base flood areas on flood insurance map(s) always include the letters A or V.

Best Available Science – Current scientific information used in the process to designate, protect, or restore critical areas, that is derived from a valid scientific process as defined by WAC 365-195-900 through 925. Sources of the best available science are included in Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas published by the Washington State Department of Community, Trade and Economic Development.

Best Management Practices (BMPs) – Conservation practices or systems of practices and management measures that:

A. Control soil loss and reduce water quality degradation caused by high concentrations of

nutrients, animal waste, toxics, and sediment;

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

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

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

Biodiversity – The variety of animal and plant life and its ecological processes and interconnections − represented by the richness of ecological systems and the life that depends on them, including human life and economies.

Buffer or Buffer Zone – An area that is contiguous to and protects a critical area which is required for the continued maintenance, functioning, and/or structural stability of a critical area.

Compensation Project – Actions necessary to replace project-induced critical area and buffer losses, including land acquisition, planning, construction plans, monitoring, and contingency actions.

Compensatory Mitigation – Replacing project-induced losses or impacts to a critical area, and includes, but is not limited to, the following:

Restoration – Actions performed to reestablish wetland functional characteristics and processes that have been lost by alterations, activities, or catastrophic events within an area that no longer meets the definition of a wetland.

Enhancement – Actions performed to improve the condition of existing degraded wetlands so that the functions they provide are of a higher quality.

Preservation – Actions taken to ensure the permanent protection of existing, high-quality wetlands.

Critical Aquifer Recharge Area – Areas designated by WAC 365-190-080(2) that are determined to have a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2).

Critical Areas – Critical areas include any of the following areas or ecosystems: aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands, as defined in RCW 36.70A and this Chapter.

Critical Area Tract – Land held in private ownership and retained in an open condition in perpetuity for the protection of critical areas. Lands within this type of dedication may include but are not limited to, portions and combinations of forest habitats, grasslands, shrub steppe, on-site watersheds, 100-year floodplains, shorelines or shorelines of statewide significance, riparian areas, and wetlands.

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

Critical Species – All animal and plant species listed by the state or federal government as threatened or endangered.

Development – Any activity upon the land consisting of construction or alteration of structures, earth movement, dredging, dumping, grading, filling, mining, removal of any sand, gravel, or minerals, driving of piles, drilling operations, bulkheading, clearing of vegetation, or other land disturbance. Development includes the storage or use of equipment or materials inconsistent with the existing use. Development also includes approvals issued by the City that binds land to specific patterns of use, including but not limited to, subdivisions, short subdivisions, zone changes, conditional use permits, and binding site plans. Development activity does not include the following activities:

A. Interior building improvements.

B. Exterior structure maintenance activities, including painting and roofing.

C. Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning, and weeding.

D. Maintenance of the following existing facilities that does not expand the affected area: septic tanks (routine cleaning); wells; individual utility service connections; and individual cemetery plots in established and approved cemeteries.

Development Permit – Any permit issued by the City, or other authorized agency, for construction, land use, or the alteration of land.

Emergent Wetland – A wetland with at least thirty percent (30%) of the surface area covered by erect, rooted, herbaceous vegetation extending above the water surface as the uppermost vegetative strata.

Erosion Hazard Areas – At least those areas identified by the U.S. Department of Agriculture National Resources Conservation Service as having a "severe" rill and inter-rill erosion hazard.

Essential Public Facility - Those facilities that are typically difficult to site, such as airports, state education facilities, state and local correctional facilities, state or regional transportation facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, and group homes. For Yelm, essential public facilities include such facilities as adequate administrative, public safety, and public works yard areas; wastewater disposal with reuse/recycle, areas; and water rights, storage, and transmission capabilities.Exotic – Any species of plants or animals, which are foreign to the planning area.

Fish and Wildlife Habitat Conservation Areas – Areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created as designated by WAC 365-190-080(5). These areas include:

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

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

C. Commercial and recreational shellfish areas;

D. Kelp and eelgrass beds;

E. Herring and smelt spawning areas;

F. Naturally occurring ponds under twenty (20) acres and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created from dry areas in order to mitigate impacts to ponds;

G. Waters of the state, including lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington;

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

I. State natural area preserves and natural resource conservation areas; and

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

Fish Habitat – Habitat that is used by fish at any life stage at any time of the year, including potential habitat likely to be used by fish that could be recovered by restoration or management and includes off-channel habitat.

Flood or Flooding – A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and/or the unusual and rapid accumulation of runoff of surface waters from any source.

Flood Insurance Map – The official map on which the Federal Insurance Administration has delineated the areas of special flood hazards and include the risk premium zones applicable to the community. Also known as “flood insurance rate map” or “FIRM.”

Flood Insurance Study – The official report provided by the Federal Insurance Administration that includes flood profiles, the Flood Boundary-Floodway Map, and the water surface elevation of the base flood.

Floodplain – The total land area adjoining a river, stream, watercourse, or lake subject to inundation by the base flood.

Flood Protection Elevation – The elevation that is one (1) foot above the base flood elevation.

Floodway – The channel of a river or other watercourse and the adjacent land area that must be reserved in order to discharge the base flood without cumulatively increasing the surface water elevation more that one (1) foot. Also known as the "zero rise floodway."

Forested Wetland – A wetland with at least thirty percent (30%) of the surface area covered by woody vegetation greater than twenty (20) feet in height that is at least partially rooted within the wetland.

Frequently Flooded Areas – Lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year and those lands that provide important flood storage, conveyance, and attenuation functions, as determined by the administrator in accordance with WAC 365-190-080(3). Frequently flooded areas perform important hydrologic functions and may present a risk to persons and property. Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

Functions and Values – The beneficial roles served by critical areas including, but are not limited to, water quality protection and enhancement; fish and wildlife habitat; food chain support; flood storage, conveyance and attenuation; ground water recharge and discharge; erosion control; wave attenuation; protection from hazards; historical, archaeological, and aesthetic value protection; educational opportunities; and recreation. These beneficial roles are not listed in order of priority. Critical area functions can be used to help set targets (species composition, structure, etc.) for managed areas, including mitigation sites.

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

Ground Water – Water in a saturated zone or stratum beneath the surface of land or a surface water body.

Ground Water Management Area – A specific geographic area or subarea designated pursuant to Chapter 173-100 WAC for which a ground water management program is required.

Ground Water Management Program – A comprehensive program designed to protect ground water quality, to ensure ground water quantity, and to provide for efficient management of water resources while recognizing existing ground water rights and meeting future needs consistent with local and state objectives, policies, and authorities within a designated ground water management area or subarea and developed pursuant to Chapter 173-100 WAC.

Ground Water, Perched – Ground water in a saturated zone is separated from the underlying main body of ground water by an unsaturated rock zone.

Growth Management Act – RCW 36.70A and 36.70B, as amended.

Habitat Conservation Areas – Areas designated as fish and wildlife habitat conservation areas.

Habitats of Local Importance – These areas include a seasonal range or habitat element with which a given species has a primary association, and which, if altered may reduce the likelihood that the

species will maintain and reproduce over the long-term. These might include areas of high relative density or species richness, breeding habitat, winter range, and movement corridors. These might also include habitats that are of limited availability or high vulnerability to alterations such as cliffs, talus, and wetlands. (WAC 365-190-030)

Hazard Areas – Areas designated as frequently flooded areas or geologically hazardous areas due to potential for erosion, landslide, seismic activity, mine collapse, or other geological condition.

Hazardous Substances – Any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or 173-303-100.

"High ground water flood hazard areas" means an area where flooding occurs as a result of subsurface geologic conditions that prevent recharging water from moving downward or laterally as fast as it enters the ground water system. The result is a rise in the ground water table and accumulation of surfacing ground water, typically intermixed with stormwater that cannot infiltrate, at low points on the ground's surface. Such ponding may persist over protracted periods of time.

High Quality Wetlands – Those wetlands that meet the following criteria:

A. No, or isolated, human alteration of the wetland topography;

B. No human-caused alteration of the hydrology or the wetland appears to have recovered from the alteration;

C. Low cover and frequency of exotic plant species;

D. Relatively little human-related disturbance of the native vegetation, or recovery from past disturbance;

E. If the wetland system is degraded, it still contains a viable and high quality example of a native wetland community; and

F. No known major water quality problems.

Historic Condition – Condition of the land, including flora, fauna, soil, topography, and hydrology that existed before the area and vicinity were developed or altered by human activity.

Hydric Soil – A soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part. The presence of hydric soil shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual.

Hydrologic Soil Groups – Soils grouped according to their runoff-producing characteristics under similar storm and cover conditions. Properties that influence runoff potential are depth to seasonally high water table, intake rate and permeability after prolonged wetting, and depth to a low permeable layer. Hydrologic soil groups are normally used in equations that estimate runoff from rainfall, but can be used to estimate a rate of water transmission in soil. There are four hydrologic soil groups:

Low Runoff potential and a high rate of infiltration potential;

Moderate Infiltration potential and a moderate rate of runoff potential;

Slow Infiltration potential and a moderate to high rate of runoff potential; and

High Runoff potential and very slow infiltration and water transmission rates.

Hydrophytic Vegetation – Macrophytic plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content. The presence of hydrophytic vegetation shall be determined following the methods described in the Washington State Wetland Identification and Delineation Manual.

Hyporheic Zone – The saturated zone located beneath and adjacent to streams that contains some portion of surface waters, serves as a filter for nutrients, and maintains water quality.

Impervious Surface – A hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development or that causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.

In-Kind Compensation – To replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity. It does not mean replacement "in-category."

Isolated Wetlands – Those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water.

Infiltration – The downward entry of water into the immediate surface of soil.

Inter-Rill – Areas subject to sheet wash.

Joint Aquatic Resource Permits Application – A single application form that may be used to apply for hydraulic project approvals, shoreline management permits, approvals of exceedance of water quality standards, water quality certifications, coast guard bridge permits, Washington State Department of Natural Resources use authorization, and U.S. Army Corps of Engineers permits.

Landslide Hazard Areas – Areas that are potentially subject to risk of mass movement due to a combination of geologic landslide resulting from a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, ground water, or other factors.

Mitigation – Avoiding, minimizing, or compensating for adverse critical areas impacts. Mitigation, in the following sequential order of preference, is:

A. Avoiding the impact altogether by not taking a certain action or parts of an action;

B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;

C. Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;

D. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;

E. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;

F. Compensating for the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and

G. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

Mitigation for individual actions may include a combination of the above measures.

Monitoring – Evaluating the impacts of development proposals on the biological, hydrological, and geological elements of such systems, and assessing the performance of required mitigation measures throughout the collection and analysis of data by various methods for the purpose of understanding and documenting changes in natural ecosystems and features, including gathering baseline data.

Native Vegetation – Plant species that are indigenous to the area in question.

Native Growth Protection Area (NGPA) – An area where native vegetation is preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water runoff and erosion, maintaining slope stability, buffering, and protecting plants and animal habitat;

Natural Waters – Waters, excluding water conveyance systems that are artificially constructed and actively maintained for irrigation.

Non-conformity – A legally established existing use or legally constructed structure that is not in compliance with current regulations.

Non-indigenous – See “Exotic.”

Off-Site Compensation – To replace critical areas away from the site on which a critical area has been impacted.

On-site Compensation – To replace critical areas at or adjacent to the site on which a critical areas has been impacted.

Out-of-Kind Compensation – To replace critical areas with substitute critical areas whose characteristics do not closely approximate those destroyed or degraded. It does not refer to replacement "out-of-category."

Perched Ground Water – See “Ground Water, Perched.”

Permeability – The capacity of an aquifer or confining bed to transmit water. It is a property of the aquifer or confining bed and is independent of the force causing movement.

Porous Soil Types – Soils, as identified by the National Resources Conservation Service, U.S. Department of Agriculture, that contain voids, pores, interstices, or other openings which allow the passing of water.

Practical Alternative – An alternative that is available and capable of being carried out after taking into consideration cost, existing technology, and logistics in light of overall project purposes, and has less impacts to critical areas.

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

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

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

A. A qualified professional for habitats must have a degree in biology and professional experience related to the subject species.

B. A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.

C. A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic

assessments.

D. A qualified professional for wetlands means a professional wetland scientist certified by the Society of Wetland Scientists.

Reclaimed Water – Municipal wastewater effluent that has been adequately and reliability treated so that it is suitable for beneficial use. Following treatment it is no longer considered wastewater (treatment levels and water quality requirements are given in the water reclamation and reuse standards adopted by the state departments of Ecology and Health).

Repair or Maintenance – An activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the original design and drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

Restoration – Measures taken to restore an altered or damaged natural feature including:

A. Active steps taken to restore damaged wetlands, streams, protected habitat, or their buffers to the functioning condition that existed prior to an unauthorized alteration; and

B. Actions performed to reestablish structural and functional characteristics of the critical area that have been lost by alteration, past management activities, or catastrophic events.

Rills – Steep-sided channels resulting from accelerated erosion. A rill is generally a few inches deep and not wide enough to be an obstacle to farm machinery. Rill erosion tends to occur on slopes, particularly steep slopes with poor vegetative cover.

Riparian Habitat – Areas adjacent to aquatic systems with flowing water that contain elements of both aquatic and terrestrial ecosystems that mutually influence each other. The width of these areas extends to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or large woody material, nutrients, organic and inorganic debris, terrestrial insects, or habitat for riparian-associated wildlife. Widths shall be measured from the ordinary high water mark or from the top of bank if the ordinary high water mark cannot be identified. It includes the entire extent of the floodplain and the extent of vegetation adapted to wet conditions as well as adjacent upland plant communities that directly influence the stream system. Riparian habitat areas include those riparian areas severely altered or damaged due to human development activities.

River – See “Watercourse.”

Scientific Process – A valid scientific process is one that produces reliable information useful in understanding the consequences of a decision. The characteristics of a valid scientific process are as follows:

A. Peer Review. The information has been critically reviewed by other qualified scientific experts in that scientific discipline.

B. Methods. The methods that were used are standardized in the pertinent scientific discipline or the methods have been appropriately peer-reviewed to ensure their reliability and validity.

C. Logical Conclusions and Reasonable Inferences. The conclusions presented are based on reasonable assumptions supported by other studies and are logically and reasonably derived from the assumptions and supported by the data presented.

D. Quantitative Analysis. The data have been analyzed using appropriate statistical or quantitative methods.

E. Context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.

F. References. The assumptions, techniques, and conclusions are well referenced with citations to pertinent existing information.

Scrub-Shrub Wetland – A wetland with at least thirty percent (30%) of its surface area covered by woody vegetation less than twenty (20) feet in height as the uppermost strata.

Section 404 Permit – A permit issued by the U.S. Army Corps of Engineers for the placement of dredge or fill material or clearing in waters of the United States, including wetlands, in accordance with 33 USC § 1344. Section 404 permits may also be for endangered species consultation. They require a consultation under Section 7 of the Federal Endangered Species Act.

Seeps – A spot where water oozes from the earth, often forming the source of a small stream.

Seismic Hazard Areas – Areas that are subject to severe risk of damage as a result of earthquake-induced ground shaking, slope failure, settlement, or soil liquefaction.

Significant Portion of its Range – That portion of a species range likely to be essential to the long-term survival of the population in Washington.

Soil Survey – The most recent soil survey for the local area or county by the National Resources Conservation Service, U.S. Department of Agriculture.

Special Flood Hazard Areas – The land in the floodplain within an area subject to a one percent (1%) or greater chance of flooding in any given year. Designations of special flood hazard areas on flood insurance map(s) always include the letters A or V.

Special Protection Areas – Aquifer recharge areas defined by WAC 173-200-090 that require special consideration or increased protection because of unique characteristics, including, but not limited to:

A. Ground waters that support an ecological system requiring more stringent criteria than drinking water standards;

B. Ground water recharge areas and wellhead protection areas that are vulnerable to pollution because of hydrogeologic characteristics; and

C. Sole source aquifer status.

Sole Source Aquifer – See “Aquifer, Sole Source.”

Species – Any group of animals classified as a species or subspecies as commonly accepted by the scientific community.

Species, Endangered – Any fish or wildlife species that is threatened with extinction throughout all or a significant portion of its range and is listed by the state or federal government as an endangered species.

Species of Local Importance – Those species of local concern due to their population status or their sensitivity to habitat manipulation, or that are game species.

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

Species, Threatened – Any fish or wildlife species that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range without cooperative management or removal of threats, and is listed by the state or federal government as a threatened species.

Stream – See “Watercourse.”

Sub-drainage Basin or Subbasin – The drainage area of the highest order stream containing the subject property impact area. Stream order is the term used to define the position of a stream in the hierarchy of tributaries in the watershed. The smallest streams are the highest order (first order) tributaries. These are the upper watershed streams and have no tributaries of their own. When two first order streams meet, they form a second order stream, and when two second order

streams meet they become a third order stream, and so on.

Substantial Damage – Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent (50%) of the market value of the structure before the damage occurred.

Substantial Improvement – Any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure either: before the improvement or repair is started; or if the structure has been damaged and is being restored, before the damage occurred.

Unavoidable – Adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.

Vulnerability – The combined effect of susceptibility to contamination and the presence of potential contaminants.

Water Table – That surface in an unconfined aquifer at which the pressure is atmospheric. It is defined by the levels at which water stands in wells that penetrate the aquifer just far enough to hold standing water.

Water Table Aquifer – See “Aquifer, Unconfined.”

Water Typing System – Waters classified according to WAC 222-16-031 as follows:

A. Type 1 Water – All waters, within their ordinary high-water mark, as inventoried as "shorelines of the state" under Chapter 90.58 RCW and the rules promulgated pursuant to Chapter 90.58 RCW, but not including those waters’ associated wetlands as defined in Chapter 90.58 RCW.

B. Type 2 Water – Segments of natural waters that are not classified as Type 1 Water and have a high fish, wildlife, or human use. These are segments of natural waters and periodically inundated areas of their associated wetlands, which:

1. Are diverted for domestic use by more than one hundred (100) residential or camping units or by a public accommodation facility licensed to serve more than ten (10) persons, where such diversion is determined by the Washington State Department of Natural Resources to be a valid appropriation of water and only considered Type 2 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by fifty percent (50%), or whichever is less;

2. Are diverted for use by federal, state, tribal, or private fish hatcheries. Such waters shall be considered Type 2 Water upstream from the point of diversion for 1,500 feet, including tributaries if highly significant for protection of downstream water quality;

3. Are within a federal, state, local, or private campground having more than thirty (30) camping units: Provided, that the water shall not be considered to enter a campground until it reaches the boundary of the park lands available for public use and comes within one hundred (100) feet of a camping unit;

4. Are used by fish for spawning, rearing or migration. Waters having the following characteristics are presumed to have highly significant fish populations:

a. Stream segments having a defined channel twenty (20) feet or greater within the bankfull width and having a gradient of less than four percent (4%).

b. Lakes, ponds, or impoundments having a surface area of one (1) acre or greater at seasonal low water; or

5. Are used by fish for off-channel habitat. These areas are critical to the maintenance of optimum survival of fish. This habitat shall be identified based on the following criteria:

a. The site must be connected to a fish bearing stream and be accessible during some period of the year; and

b. The off-channel water must be accessible to fish through a drainage with less than a five percent (5%) gradient.

C. Type 3 Water – Segments of natural waters that are not classified as Type 1 or 2 Waters and have a moderate to slight fish, wildlife, and human use. These are segments of natural waters and periodically inundated areas of their associated wetlands which:

1. Are diverted for domestic use by more than ten (10) residential or camping units or by a public accommodation facility licensed to serve more than ten (10) persons, where such diversion is determined by the Washington State Department of Natural Resources to be a valid appropriation of water and the only practical water source for such users. Such waters shall be considered to be Type 3 Water upstream from the point of such diversion for 1,500 feet or until the drainage area is reduced by fifty percent (50%), whichever is less; or

2. Are used by fish for spawning, rearing, or migration. The requirements for determining fish use are described in the State Forest Practices Board Manual, Section 13. If fish use has not been determined:

a. Waters having the following characteristics are presumed to have fish use:

i. Stream segments having a defined channel of two (2) feet or greater within the bankfull width in Western Washington; or three (3) feet or greater in width in Eastern Washington; and having a gradient of sixteen percent (16%) or less;

ii. Stream segments having a defined channel or two (2) feet or greater within the bankfull width in Western Washington; or three (3) feet or greater within the bankfull width in Eastern Washington; and having a gradient greater than sixteen percent (16%) and less than or equal to twenty percent (20%), and having greater than fifty (50) acres in contributing basin size in Western Washington or greater than 175 acres contributing basin size in Eastern Washington, based on hydrographic boundaries;

iii. Ponds or impoundments having a surface area of less than one (1) acre at seasonal low water and having an outlet to a fish stream; and

iv. Ponds of impoundments having a surface area greater than one half (0.5) acre at seasonal low water.

b. The Washington State Department of Natural Resources shall waive or modify the characteristics in (a) of this Subsection where:

i. Waters have confirmed, long-term, naturally occurring water quality parameters incapable of supporting fish;

ii. Snowmelt streams have short flow cycles that do not support successful life history phases of fish. These streams typically have no flow in the winter months and discontinue flow by June 1; or

iii. Sufficient information about a geomorphic region is available to support a departure from the characteristics in (a) of this Subsection, as determined in consultation with the Washington Department of Fish and Wildlife, Washington State Department of Ecology, affected tribes, and interested parties.

D. Type 4 Water – All segments of natural waters within the bankfull width of defined channels that are perennial nonfish habitat streams. Perennial streams are waters that

do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type 4 Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow. If the uppermost point of perennial flow cannot be identified with simple, nontechnical observations (see State Forest Practices Board Manual, Section 23), then Type 4 Waters begin at a point along the channel where the contributing basin area is:

1. At least thirteen (13) acres in the Western Washington coastal zone (which corresponds to the Sitka spruce zone defined in Franklin and Dyrness, 1973);
2. At least fifty two (52) acres in other locations in Western Washington; or
3. At least three hundred (300) acres in Eastern Washington.

E. Type 5 Waters – All segments of natural waters within the bankfull width of the defined channels that are not Type 1, 2, 3, or 4 Waters. These are seasonal, nonfish habitat streams in which surface flow is not present for at least some portion of the year and are not located downstream from any stream reach that is a Type 4 Water. Type 5 Waters must be physically connected by an above-ground channel system to Type 1, 2, 3, or 4 Waters.

Watercourse – Any portion of a channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state including areas in which fish may spawn, reside, or through which they may pass, and tributary waters with defined beds or banks, which influence the quality of fish habitat downstream. This definition includes watercourses that flow on an intermittent basis or which fluctuate in level during the year and applies to the entire bed of such watercourse whether or not the water is at peak level. This definition does not include irrigation ditches, canals, stormwater run-off devices, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans.

Wetlands – Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas to mitigate the conversion of wetlands. For identifying and delineating a wetland, local government shall use the Washington State Wetland Identification and Delineation Manual.

Wetland Classes, Classes of Wetlands, or Wetland Types – The descriptive classes of the wetlands taxonomic classification system of the U.S. Fish and Wildlife Service (Cowardin, et al. 1979).

Wetland Edge – The boundary of a wetland as delineated based on the definitions contained in this Chapter.