

Title 112 CRITICAL AREAS¹

¹Editor's note(s)—Ord. No. 880, § 14, adopted September 12, 2017, repealed the former Title. 112, §§ 112.10.010—112.500.090, and enacted a new Title 112 as set out herein. The former Title 112 pertained to development regulations critical areas and natural resource lands. See Code Comparative Table for complete derivation.

CHAPTER 112.10 ENVIRONMENTAL REVIEW

112.10.010. Purpose.

The purpose of an environmental review is to coordinate the application of critical area protection standards and other environmental standards on a site. Environmental review of a project does not result in an application approval; it results in recommended critical area and environmental protections for an application.

(Ord. No. 880, § 14, 9-12-2017)

112.10.020. Authority.

The city may withhold, condition, or deny development permits or activity approvals to ensure that the proposed action is consistent with the provisions of this title and Title 110, State Environmental Policy Act (SEPA).

(Ord. No. 880, § 14, 9-12-2017)

112.10.030. Critical area reports.

A. *Applicability.*

1. If the proposed project is within, adjacent to, or is likely to impact a critical area, an applicant must provide a critical area report unless the community development director grants a waiver.
2. A required critical area report must be submitted and reviewed as part of an application for a permit or approval.

B. *Waivers.* The community development director may waive the requirement for a critical area report when the best available science shows that the proposed activity is unlikely to degrade the functions or values of the critical area. A waiver may be granted only if there is substantial evidence that all of the following requirements are met:

1. The critical area and buffer will not be altered;
2. The development proposal will not impact the critical area in a manner contrary to the purpose, intent, and requirements of this Chapter; and
3. The proposal is consistent with other applicable regulations and standards.

C. *Professional preparation required.*

1. Critical area reports must be prepared by a qualified professional with expertise in the relevant scientific discipline based on education, professional certifications, and experience in the field. A qualified professional must have:

- a. A B.S., B.A., or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology, or related field; and
- b. Two years of related work experience.

2. The following table identifies who is considered a qualified professional for each critical area:

Critical Area	Qualified Professional
---------------	------------------------

Wetland	Certified professional wetland scientist or a non-certified professional wetland scientist with at least 5 years of experience in the field of wetland science.
Critical Aquifer Recharge Area	Hydrogeologist, geologist, or engineer that is licensed in the state of Washington and has experience in preparing hydrogeologic assessments.
Fish and Wildlife Habitat Conservation Area	Biologist with experience preparing reports for the relevant type of habitat.
Geologically Hazardous Area	Engineer or geologist that is licensed in the state of Washington and has experience analyzing geologic, hydrologic, and ground water flood systems.
Frequently Flooded Area	Hydrologist or engineer that is licensed in the state of Washington and has experience in preparing flood hazard assessments.

- D. *Incorporate best available science.* The critical area report must use scientifically valid methods and studies in analyzing critical area data, field reconnaissance, and reference the source of science used. The critical area report must evaluate the proposal and all probable impacts to critical areas in accordance with the provisions of this chapter.
- E. *Minimum report contents.* At a minimum, the report must contain the following:
1. The name and contact information of the applicant, a description of the proposal, and permit type requested;
 2. The name, qualifications, and contact information for the primary author(s) of the report;
 3. Documentation of any fieldwork performed on the site, including the dates of any site visits.
 4. A site plan of the development proposal that includes:
 - a. A map to scale depicting critical areas and buffers within 300 feet of the project area, the development proposal, and any areas to be cleared. For critical areas and buffers that are not on the property subject to the request, estimate conditions within 300 feet of the project boundaries using the best available information; and
 - b. A description of the proposed stormwater management plan for the development and how impacts to drainage alterations will be accounted for;
 5. Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area;
 6. A statement specifying the accuracy of the report, and all assumptions made and relied upon;
 7. An assessment of the probable cumulative impacts to critical areas resulting from development of the site and the proposed development;
 8. An analysis of site development alternatives including a no development alternative;
 9. A description of reasonable efforts made to apply mitigation sequencing pursuant to TMC Section 112.10.040, Mitigation for Impacts to Critical Areas;
 10. Proposed mitigation plan, if applicable;
 11. A discussion of the standards applicable to the critical area and proposed activity;
 12. Financial guarantees pursuant to TMC Section 112.20.050.B. to ensure compliance; and
 13. Any additional information required for the critical area as specified in TMC Chapter 112.20.
- F. *Additional report contents.*

-
1. *Supplemental information.* Unless prohibited by another part of this Code, a critical area report may be supplemented by or composed 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 Community Development Director.
 2. *Habitat assessment.* A critical area report for a habitat conservation area must contain a habitat assessment. A habitat assessment evaluates the potential presence or absence of designated critical fish or wildlife species or habitat in the project area. At a minimum, a habitat assessment must include the following site- and proposal-related information:
 - a. *Vegetation.* Detailed description of vegetation on and adjacent to the project area and its associated buffer;
 - b. *Species.* Identification of any priority species or endangered, threatened, sensitive, or candidate species that have a primary association with habitat on or adjacent to the project area, and an assessment of potential project impacts to the use of the site by the species;
 - c. *Special management recommendations.* 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. *Impacts.* A detailed discussion of the direct and indirect potential impacts on habitat by the project, including potential impacts to water quality;
 - e. *Mitigation sequencing.* 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. *Management practices.* 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.* The city may require additional information be included in the critical area report. The additional information must be necessary for reviewing the proposed activity in accordance with this chapter. Additional information may include, but is not limited to, historical data, grading and drainage plans, and information specific to the type, location, and nature of the critical area.
- G. *Requirement modifications.*
1. *Geographic area.* The city 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. *Required contents.* The required contents of the critical area report may be modified as appropriate if:
 - a. The applicant consults with the city prior to or during preparation of the critical area report; and
 - b. In the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.
- H. *Hold harmless clauses.* Hold harmless clauses, disclaimers, and limitations are prohibited in a critical area report.
-

I. *Requirement modifications.*

1. *Geographic area.* The city 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. *Required contents.* The required contents of the critical area report may be modified as appropriate if:
 - a. The applicant consults with the city prior to or during preparation of the critical area report; and
 - b. In the judgment of a qualified professional, more or less information is required to adequately address the potential critical area impacts and required mitigation.

(Ord. No. 880, § 14, 9-12-2017)

112.10.040. Mitigating for impacts to critical areas.

- A. *Mitigation for impacts required.* Impacts that degrade the functions and values of a critical area or areas must be avoided if at all possible. If alteration to the critical area is unavoidable, all adverse impacts to critical areas and buffers must be mitigated using the best available science. The proposed mitigation must:
 1. Be in accordance with an approved critical area report and SEPA documents;
 2. Result in no net loss of critical area functions and values;
 3. Be in kind and on site, when possible;
 4. Be sufficient to maintain the functions and values of the critical area;
 5. Prevent risk from a hazard posed by a critical area; and
 6. Not be implemented until after city approval of a critical area report.
- B. *Mitigation sequencing.* Applicants must 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, the alteration must 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.
 7. Monitoring the hazard or other required mitigation and taking remedial action when necessary.

-
8. Mitigation for individual actions may include a combination of the above measures.
 - C. *Mitigation plan.* When mitigation is required, the critical area report must include a mitigation plan that addresses all of the following:
 1. *Environmental goals and objectives.* A written report identifying environmental goals and objectives of the mitigation proposed, which must be related to the functions and values of the impacted critical area.
 2. *Anticipated impacts and mitigation measures.* A description of the anticipated impacts to the critical areas, the mitigating actions proposed, and the purposes of the mitigation measures. The description of impacts must include:
 - i. Site selection criteria;
 - ii. Compensation goals;
 - iii. Resource functions; and
 - iv. Dates for beginning and completion of site compensation construction activities.
 3. *Best available science.* 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.
 4. *Success analysis.* An analysis of the likelihood of mitigation success.
 5. *Performance standards.* The mitigation plan must include specific, measurable criteria for evaluating whether or not the goals and objectives of the mitigation project and the requirements of this Chapter have been met.
 6. *Detailed construction plans.* Written specifications, descriptions, drawings, and maps of the mitigation proposed. Detailed construction plans may include, but are not limited to:
 - a. The proposed construction sequence, timing, and duration;
 - b. Grading and excavation details;
 - c. Erosion and sediment control features;
 - d. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and
 - e. Measures to protect and maintain plants until established.
 - f. Detailed site diagrams and scaled cross-sectional drawings; or
 - g. Topographic maps showing slope percentage and final grade elevations.
 7. *Monitoring program.* A program for monitoring construction of the mitigation project and for assessing a completed project. A protocol must be provided that outlines:
 - a. The schedule for site monitoring (for example, monitoring will occur in years one, three, five, and seven after site construction);
 - b. How the monitoring data will be evaluated to determine if the performance standards are being met.
 8. *Contingency plan.* A list of potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.
 - D. *Financial guarantee.* A financial guarantee pursuant to TMC Section 112.20.050.B. may be required to ensure that the mitigation plan is fully implemented.
-

-
- E. *Monitoring reports.* Monitoring reports required by the monitoring program must be submitted as needed to document milestones, successes, problems, and contingency actions of the mitigation project. The mitigation project must be monitored for at least five years but may be monitored for a longer period if necessary to establish that performance standards have been met.

(Ord. No. 880, § 14, 9-12-2017)

112.10.050. Review process.

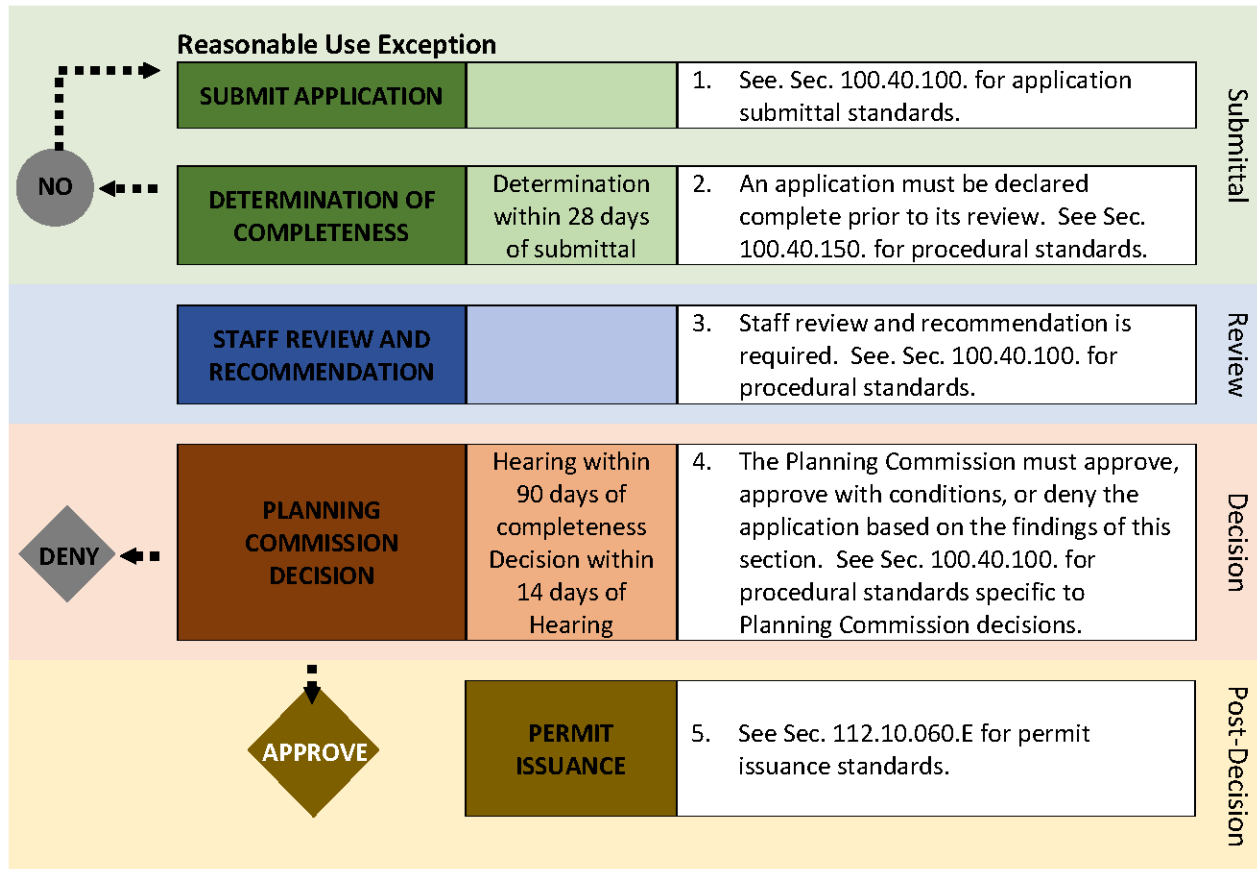
- A. *Purpose.* The city must determine whether the proposed activity and mitigation, if any, is consistent with the provisions of this chapter.
- B. *Findings.* A proposed activity and mitigation project may be approved upon finding:
1. The proposal minimizes the impact on critical areas in accordance with mitigation sequencing;
 2. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;
 3. The proposal is consistent with the general purposes of this chapter and the public interest;
 4. Any alterations permitted to the critical area are mitigated in accordance with mitigation requirements;
 5. 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
 6. The proposal is consistent with other applicable regulations and standards.
- C. *Conditions of approval.* 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.
- D. *Permit denials.* Except as provided for by this chapter, projects that cannot adequately mitigate their critical area impacts in the sequencing order of preferences must be denied.
- E. *Completion of the critical area review.* The city's determination regarding critical areas pursuant to this chapter must be final concurrent with the final decision to approve, condition, or deny the development proposal or other activity involved.
- F. *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.

(Ord. No. 880, § 14, 9-12-2017)

112.10.060. Reasonable use exception.

- A. *Purpose.* The intent of the city is that every landowner in the city enjoy reasonable use of their land. The procedures set forth in this Section are intended to permit landowners who believe they have been deprived of the reasonable use of their land to apply to the city for relief from application of this chapter. Applications for a reasonable use exception automatically constitute an application for a variance to reduce front, side, or rear yard setback requirements. Reductions in setback requirements must be given preference over granting a reasonable use exception.
- B. *Applicability.* An application may be made for a reasonable use exception for new construction, expansions, additions, replacements, and redevelopment projects.
- C. *Findings.*

-
1. *Essential public facilities.* A reasonable use exception may be approved for an essential public facility upon finding:
 - 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.
 2. *All other exception requests.* A reasonable use exception may be approved for all other requests upon finding:
 - a. The application of this division 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;
 - e. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site; and
 - f. The proposal will result in no net loss of critical area functions and values consistent with the best available science, or the proposal is consistent with other applicable regulations and standards.
 - D. *Effect.* Approval of a reasonable use exception does not permit any physical development, use, development option, or subdivision that has not been approved pursuant to these LDRs and does not ensure approval of any future application.
 - E. *Permit issuance.* An approved reasonable use exception must not commence or be acted upon until the permit is issued.
 1. Within 14 days of fulfillment of all conditions of approval that must be met prior to permit issuance, the community development director must issue the permit to the applicant, and make a copy available at the city for review during normal business hours.
 2. The permit must include any outstanding conditions of approval.
 - F. *Review process.* All steps and deadlines in the following chart are required unless noted otherwise. An applicant must complete each step before moving to the step below.



(Ord. No. 880, § 14, 9-12-2017)

CHAPTER 112.20. CRITICAL AREAS

112.20.010. Purpose and general provisions.

- A. *Purpose.* State law (WAC 365-190-080) requires communities to protect critical areas. In order to protect ecologically sensitive and hazardous areas, protect their functions and values, and to allow reasonable use of private property, this chapter establishes protection standards for critical areas and regulates physical development, activity, and use within, adjacent to, or likely to affect critical areas.
- B. *Findings.* Critical areas provide valuable biological and physical functions that benefit the city and its residents. Critical areas may also pose a threat to human safety or to public and private property. The beneficial functions and values provided by critical areas include, but are not limited to:
 1. Water quality protection and enhancement.
 2. Fish and wildlife habitat.
 3. Flood water storage.
 4. Flood water conveyance and attenuation.
 5. Ground water recharge and discharge.

Created: 2025-03-27 14:35:26 [EST]

(Supp. No. 5)

-
6. Erosion control.
 7. Protection from hazards.
 8. Recreational opportunities.
 - C. *Establishment of critical areas.*
 1. 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.
 2. All areas within the city that meet the definition of at least one critical area, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter.
 3. Areas adjacent to critical areas are also subject to the standards of this chapter. Adjacent means any activity located:
 - a. On a site bordering a critical area;
 - b. Within the critical area's buffer or building setback;
 - c. Within 300 feet upland from a stream, wetland, or water body;
 - d. Within the floodplain; or
 - e. Within 200 feet of a critical aquifer recharge area.
 - D. *Relationship to other regulations.*
 1. These critical areas regulations apply as an overlay in addition to zoning and other 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 applies.
 3. Compliance with the provisions of this chapter does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required. The applicant is responsible for complying with these requirements in addition to the process established in this chapter.
 - E. *Interpretation.* In the interpretation and application of this chapter, the provisions of this chapter are:
 1. Considered the minimum requirements necessary;
 2. Are liberally construed to serve the purpose of this chapter; and
 3. Do not limit or repeal any other provisions under state statute.
 - F. *Protection of critical areas.*
 1. *Equivalent or greater functions.* Any action taken pursuant to this Chapter must result in equivalent or greater functions and values of the critical areas associated with the proposed action, as determined by the best available science.
 2. *Mitigation sequencing required.* All actions and developments must be designed and constructed to avoid, minimize, and restore all adverse impacts. Applicants must first demonstrate an inability to avoid
-

or reduce impacts, before restoring and compensating for impacts will be allowed. Activities or uses that result in a net loss of the functions or values of critical areas are prohibited.

- G. *Title notification.* Activity in critical areas may require a notice to title, recorded with the Thurston County auditor.

(Ord. No. 880, § 14, 9-12-2017)

112.20.020. Best available science.

- A. *Definition.* 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 365-195-925.
- B. *Sources.* 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 (now the Washington State Department of Commerce) and as updated, amended or replaced.
- 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 community development director must 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 opinions, 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 Community Development Director must:
1. Take a precautionary or 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 non-regulatory 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 must:
 - 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 non-regulatory actions affecting protection of critical areas and anadromous fisheries.

(Ord. No. 880, § 14, 9-12-2017)

112.20.030. Applicability, exemptions, and exceptions.

A. *Applicability.*

1. A critical area or buffer must not be altered by any person, company, agency, or applicant except as consistent with the purposes and requirements of this chapter. The provisions of this chapter apply to all:
 - a. Lands, uses, and development activity;
 - b. Structures and facilities in the city, whether or not a permit or authorization is required; and
 - c. Persons, firms, partnerships, corporations, groups, governmental agencies, or other entities that own, lease, or administer land within the City.
2. *Compliance required.* The city must ensure compliance with the requirements of this chapter prior to approving a permit or otherwise issuing authorization to:
 - a. Alter the condition of land, water, or vegetation; or
 - b. Construct or alter structures or improvements in, over, or on a critical area or associated buffer.

B. *Exemptions.*

1. *Impacts to critical areas.* All exempted activities must use reasonable methods to avoid potential impacts to critical areas. To be exempt from this chapter does not give permission to degrade a critical area or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity must be restored, rehabilitated, or replaced at the responsible party's expense.
2. *Exempt activities.* The following developments, activities, and associated uses are exempt from the provisions of this chapter, provided they are otherwise consistent with the provisions of other local, state, and federal laws and requirements:
 - a. *Emergencies.* 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 require corrective or

preventative action in a timeframe too short to allow for compliance with the requirements of this chapter must meet the following standards:

- i. *Minimize impacts.* Emergency actions that create an impact to a critical area or its buffer must use reasonable methods to address the emergency while minimizing possible impacts to the critical area or its buffer.
- ii. *Notification and determination.* The person or agency undertaking emergency action must notify the city within one working day following initiating such action. Within 30 days, the city will determine if the action taken was within the scope of the emergency actions allowed in this subsection. If the city determines that the action taken, or any part of the action taken, was beyond the scope of an allowed emergency action, then enforcement provisions of TMC Section 100.30.130, enforcement, apply.
- iii. *Restoration/mitigation required.*
 - a) After the emergency, the person or agency undertaking the action must 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.
 - b) The person or agency undertaking the action must apply for review of the work. The city will review the alteration, critical area report, and mitigation plan in accordance with the review procedures contained herein.
 - c) Restoration and/or mitigation activities must be initiated within one year of the date of the emergency, and completed in a timely manner;
- b. *Operation, maintenance, or repair.* Operation, maintenance, or repair of existing structures, infrastructure improvements, utilities, public or private roads, and drainage systems may be exempt provided the activity:
 - i. Does not require construction permits;
 - ii. Does not further alter or increase the impact to or encroach further within a critical area or buffer; and
 - iii. Does not increase risks to life or property; and
- c. *Passive outdoor activities.* Recreation, education, and scientific research activities that do not degrade the critical area, including fishing, hiking, and bird watching are exempt.
- C. *Exceptions.*
 - 1. *Public agencies and utilities.* If the application of this chapter would prohibit a development proposal by a public agency or public utility, the agency or utility may apply for an exception pursuant to TMC Section 112.10.060.
 - 2. *Reasonable use.* If the application of this chapter would deny all reasonable economic use of the subject property, the city must determine if compensation is an appropriate action, or the property owner may apply for an exception pursuant to TMC Section 112.10.060.

(Ord. No. 880, § 14, 9-12-2017)

112.20.040. Allowed activities.

- A. *Critical area report.* Activities allowed under this chapter must be reviewed and approved by the city, but do not require submittal of a separate critical area identification form or critical area report, unless required

previously for the underlying permit. The city 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. *Best management practices required.*

1. All allowed activities must be conducted using the best management practices that result in the least amount of impact to the critical areas. Best management practices must be used for the following:
 - a. Tree and vegetation protection;
 - b. Construction management;
 - c. Erosion and sedimentation control;
 - d. Water quality protection; and
 - e. Regulation of chemical applications.
2. The city must 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 must be restored, rehabilitated, or replaced at the responsible party's expense.

C. *Allowed activities.* The following activities are allowed in critical areas:

1. *Permit requests following critical area review.* Development permits and approvals that involve both discretionary land use approvals and construction approvals if all 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 has 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. *Modifications 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, provided:
 - a. There is no increased risk to life or property as a result of the proposed modification or replacement; and
 - b. For structures substantially damaged by fire, flood, or act of nature, restoration must be initiated within one year 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.* Except for substations, replacement, modification, installation, or construction of utility facilities, lines, pipes, mains, equipment, or appurtenances may be allowed provided:
 - a. Such facilities are located within the improved portion of the public right-of-way or a city-authorized private roadway;

-
- b. The activity does not alter a wetland, watercourse, or result in the transport of sediment or increased stormwater;
 - c. Critical area and/or buffer widths are increased, where possible, equal to the width of the right-of-way improvement, including disturbed areas;
 - d. Native vegetation is retained or replanted wherever possible along the right-of-way improvement and resulting disturbance; and
 - e. Invasive species are removed.
4. *Minor utility projects.* Utility projects that have minor or temporary impacts to critical areas, such as the placement of a utility pole, street sign, anchor, vault, or other small component of a utility facility, may be allowed provided:
- a. The activity involves disturbance of an area less than 75 square feet;
 - b. There is no practical alternative to the proposed activity with less impact on critical areas;
 - c. The utility project does not significantly impact the function or values of critical areas, is constructed with best management practices, and additional restoration measures are provided; and
 - d. The activity does not result in sediment transport or increased stormwater runoff.
5. *Public and private pedestrian trails.* Public and private pedestrian trails that are not located in wetlands, fish and wildlife habitat conservation areas, or their buffers, may be allowed subject to the following:
- a. The trail surface meets all other requirements including water quality standards set forth in the locally adopted stormwater management regulations;
 - b. Critical area and/or buffer widths are 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 are 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.* Upon approval from the city, the following vegetation removal activities in a critical area or its buffer may be allowed:
- 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*);
 - iv. Evergreen blackberry (*Rubus laciniatus*); and
 - v. Scotch broom (*Cytisus scoparius*);
 - b. The removal of trees from critical areas and buffers that are hazardous and pose a threat to public safety or 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 is 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 may be removed or converted to wildlife snags;
 - iii. All vegetation cut (tree stems, branches, etc.) must 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 must replace any trees that are removed with new trees at a ratio of two replacement trees for each tree removed (2:1) within one year in accordance with an approved restoration plan.
 - a) 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.
 - b) Replacement trees must be species that are native and indigenous to the site and a minimum of one inch in diameter-at-breast height (dbh) for deciduous trees and a minimum of six 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 must be consulted to determine timing and how best to minimize impacts; and
 - vi. Hazard trees.
 - a) Hazard trees may be removed or pruned by the landowner prior to receiving written approval from the city only if the hazard tree poses:
 - 1) An imminent threat or danger to public health or safety;
 - 2) An imminent threat to public or private property; or
 - 3) An imminent threat of serious environmental degradation.
 - b) Within 14 days of removing a hazard tree, the landowner must 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 found in RCW 76.09. The removed vegetation must be replaced in-kind or with similar native species within one year in accordance with an approved restoration plan; and
 - d. The necessary removal of vegetation or woody debris from a habitat conservation area or wetland as part of an approved alteration or as otherwise provided;
 - 7. *Chemical applications.* The application of herbicides, pesticides, organic or mineral-derived fertilizers, or other hazardous substances, if necessary, as approved by the city and consistent with state department of fish and wildlife management recommendations, state department of agriculture regulations, state department of ecology regulations, and the U.S. Environmental Protection Agency regulations;
 - 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 must be minimized and disturbed areas must immediately be restored; and
 - 9. *Boundary markers.* Construction or modification of boundary markers.
-

(Ord. No. 880, § 14, 9-12-2017)

112.20.050. Critical area protective measures.

A. *Critical area markers and signs.*

1. The boundary at the outer edge of critical area tracts and easements must be delineated with permanent survey stakes as established by local survey standards.
2. The boundary at the outer edge of the critical area or buffer must be identified with temporary signs prior to any site alteration. The temporary signs must be replaced with permanent signs prior to occupancy or use of the site.
3. These provisions may be modified by the community development director as necessary to ensure protection of sensitive features or wildlife needs.

B. *Financial guarantee to ensure mitigation, maintenance, and monitoring.*

1. When required mitigation is not completed prior to final permit approval, the city must 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 must post a financial guarantee in a form and amount deemed acceptable by the city to ensure mitigation is fully functional.
2. The bond must be in the amount of 150 percent 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. Financial guarantees must remain in effect until the city determines in writing that the standards bonded for have been met. Bonds or other security must be held by the city for a minimum of five years to ensure that the required mitigation has been fully implemented and demonstrated to function, and may be held for longer periods when necessary.
4. Depletion, failure, or collection of bond funds do not discharge the obligation of an applicant or violator to complete required mitigation, maintenance, monitoring, or restoration.
5. Public development proposals may be exempt from having to provide a financial guarantee if public funds have previously been committed for mitigation, maintenance, monitoring, or restoration.
6. Any failure to satisfy critical area requirements established by law or condition including, but not limited to, the failure to provide a monitoring report within 30 days after it is due or comply with other provisions of an approved mitigation plan constitute a default. The city may demand payment of any financial guarantees or require other action authorized by city code or any other law.
7. Funds recovered pursuant to this section must be used to complete the required mitigation.

C. *Critical area inspections.* Reasonable access to the site must 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.

(Ord. No. 880, § 14, 9-12-2017)

112.20.060. Wetlands.

A. *Definition.* Wetlands are 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.

1. *Includes:*

Created: 2025-03-27 14:35:26 [EST]

(Supp. No. 5)

-
- a. Swamps.
 - b. Marshes.
 - c. Bogs.
 2. *Does not include:*
 - a. 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.
 - b. Wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway.
 3. *May include:*
 - a. Artificial wetlands intentionally created for wetland mitigation purposes.
 - B. *Designation.* All areas within the city meeting the wetland designation criteria in the approved federal wetland delineation manual and applicable regional supplements are hereby designated critical areas and are subject to the provisions of this chapter.
 - C. *Delineation.* Wetlands must be identified and delineated in accordance with the approved federal wetland delineation manual and applicable regional supplement. Wetland delineations are valid for five years.
 - D. *Rating.*
 1. Wetlands must be rated according to the Washington State Department of Ecology wetland rating system found in the Washington State Wetland Rating System for Western Washington (Ecology Publication #14-06-029) or as revised by Ecology. This document contains the definitions and methods for determining if the criteria below are met.
 - a. *Category I wetlands.*
 - i. *Definition.* Category I wetlands are those that:
 - a) Represent a unique or rare wetland type; or
 - b) Are more sensitive to disturbance than most wetlands; or
 - c) Are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or
 - d) Provide a high level of functions.
 - ii. *Presence.* Category I wetlands may be located within the city. Wetlands of high conservation value can be designated based on the presence of a rare plant, rare or high-quality common plant community, or both. There are no known rare plants or high-quality wetland plant communities known to occur in the city or its vicinity.
 - b. *Category II wetlands.*
 - i. *Definition.* Category II wetlands are those that are difficult, though not impossible to replace, and provide high levels of some functions.
 - ii. *Presence.* Category II wetlands may be located within the city.
 - c. *Category III wetlands.*

-
- i. *Definition.* Category III wetlands are wetlands with a moderate level of functions that can often be adequately replaced with a well-planned mitigation project and small interdunal wetlands one acre or less in size.
 - ii. *Presence.* Category III wetlands are likely located within the city.
 - d. *Category IV wetlands.*
 - i. *Definition.* Category IV wetlands are wetlands that have the lowest levels of functions and are often heavily disturbed.
 - ii. *Presence.* Category IV wetlands are likely located within the city.
 - 2. *Illegal modifications.* Illegal modifications made by the applicant or with the applicant's knowledge do not change the wetland's rating.
 - E. *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 Section 112.20.040, allowed activities. An activity listed below does not require a critical area report except when the activity results in a loss of functions or values of a wetland or wetland buffer. Activities allowed in wetlands include:
 - 1. *Conservation.* Soil, water, vegetation, fish, shellfish, and other wildlife conservation or preservation that does not entail changing the structure or functions of the existing wetland.
 - 2. *Low-impact harvesting.* Harvesting wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require soil tilling, crop planting, chemical applications, or wetland alterations as a result of changing topography, water conditions, or water sources.
 - 3. *Utilities.* 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. *Wetland enhancement by removing nonnative invasive species.* Weeding is restricted to hand removal and weeded material must be removed from the site. Bare areas that remain after weed removal must be revegetated with native shrubs and trees at natural densities. Some hand seeding may also be done over the bare areas with native herbs.
 - F. *Supplemental information for wetland reports.* In addition to the requirements of Section 112.10.030, critical area reports, a wetland report must also include the following:
 - 1. Existing wetland acreage;
 - 2. A list of all local, state, and/or federal wetland-related permit(s) required for the project;
 - 3. Documentation of any fieldwork performed on the site must include field data sheets for delineations, rating system forms, baseline hydrologic data, etc.
 - 4. A description of the methodologies used to conduct the wetland delineations, wetland ratings, or impact analyses, including references.
 - 5. Wetland rating, including a description of and score for each function, per Section 112.20.060.D of this chapter;
 - 6. Vegetative, faunal, and hydrologic characteristics;
 - 7. To the extent possible, hydrologic information such as estimated water depths within the wetland and estimated hydroperiod patterns based on visual cues;

-
8. An evaluation of the functions of the wetland and its buffer. Include references for the method used and data sheets.
 9. A habitat and native vegetation conservation strategy that addresses methods to protect and enhance on-site habitat and wetland functions.
 - G. *Compensatory Mitigation*. Mitigation is required according to the sequence outlined in Section 112.10.040, mitigating for impacts. Where impacts to wetlands are unavoidable, compensatory mitigation measures may be utilized and must be consistent with this subsection.
 1. *Compensating for lost or affected functions*. The proposed compensatory mitigation must achieve functional equivalency or represent an improvement over existing functions except in the following situations:
 - a. *Minimal Functions*. The lost wetland provides minimal functions; and
 - i. The proposed mitigation represents equivalent functions or an improvement over existing functions; or
 - ii. The proposed mitigation will provide functions shown to be limiting within a watershed through a formal Washington State watershed assessment plan or protocol.
 - b. *Out-of-kind mitigation*. Out-of-kind mitigation will best meet formally identified watershed goals, such as replacement of historically diminished wetland types.
 2. *On-site mitigation wherever feasible*. On-site mitigation must be provided wherever feasible. Where it is demonstrated that on-site mitigation is not feasible, off-site mitigation may be allowed.
 3. *Mitigation Plan*. In addition to the requirements outlined in Section 112.10.040.C., wetland mitigation plans must:
 - a. Be consistent with the publication *Wetland Mitigation in Washington State - Part 2: Developing Mitigation Plans* (Ecology Publication #06-06-011b) or as revised by Ecology;
 - b. Identify how construction of mitigation projects will be timed to reduce impacts to existing wildlife and vegetation; and
 - c. Include a monitoring plan that ensures the goals of the proposed mitigation have been met. Monitoring must occur for at least five years but may be required for a longer period of time to ensure that lost or affected functions have been fully compensated for.
 4. *Mitigation action preference*. Mitigation actions that require compensation by restoring, creating, enhancing, or protecting must occur in the following order of preference:
 - a. *Restoration*. Restoration may involve one or more of the following:
 - i. Re-establishing wetlands that used to exist. Re-establishing wetlands results in an increase in wetland area and functions.
 - ii. Rehabilitating existing wetlands that are degraded. Rehabilitation increases wetland functions but does not increase the wetland area.
 - b. *Creation/establishment*. Creating or establishing a new wetland area in a location where it did not previously exist. Creating or establishing a wetland area results in an increase in wetland area and functions.
 - c. *Enhancement*. Enhancing a wetland to intensify or improve specific function(s) or to change the growth stage or composition of the vegetation present. Enhancement is undertaken for specified purposes. Enhancing a wetland results in a change in wetland function(s) but may lead to a

decline in other wetland functions. Enhancing a wetland does not result in an increase in wetland area.

- d. *Protection/maintenance.* Protecting/maintaining a wetland removes a threat to or prevents the decline of the wetland. Protection/maintenance does not result in an increase in wetland area but may, over time, result in an increase of wetland functions.

5. *Mitigation ratios.*

- a. *Minimum ratios.* The following table identifies the minimum amount of mitigation required based on the type of mitigation proposed.

Mitigation Ratio Based on Action (acres proposed per acre impacted)			
Wetland Category	Re-Establishment or Creation	Rehabilitation	Enhancement
Category I	4:1	8:1	16:1
Category II	3:1	6:1	12:1
Category III	2:1	4:1	8:1
Category IV	1.5:1	3:1	6:1

- b. *Ratio increases.* The community development director may increase the mitigation ratio or require a different mitigation action under the following circumstances:

- i. The proposed impacts are to a category I bog, natural heritage site, or mature forested wetland;
- ii. Uncertainty exists as to the probable success of the proposed restoration or creation;
- iii. A significant period of time will elapse between the wetland impact and the replication of wetland functions;
- iv. Proposed mitigation will result in a lower category wetland or reduced functions relative to the wetland being impacted; or
- v. The impact was not authorized when it occurred.

- c. *Approved mitigation ratio alternatives.* As an alternative to the table above, the community development director may allow mitigation based on the credit/debit method outlined in *Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report* (Ecology Publication #10-06-011), or as revised by Ecology.

H. *Buffers.*

1. *Required buffers.* All physical development and use is required to be set back from wetlands a distance based on the wetland rating and habitat score as follows:

Wetland Category	Required Buffer Based on Habitat Score			
	3-4	5	6-7	8-9
I	100'	140'	220'	300'
II	100'	140'	220'	300'
III	80'	140'	220'	300'
IV	50'	50'	50'	50'

2. *Measurement.* All buffers must be measured perpendicular from the wetland boundary as surveyed in the field.

-
- a. Buffers for a required mitigation site shall be based on subsection H.1. above.
 - b. Buffers must be fully vegetated in order to be included in buffer area calculations. Lawns, walkways, driveways, and other mowed or paved areas shall not be considered buffers or included in buffer area calculations.
 - 3. *Buffer increases.* Buffer widths may be increased on a case-by-case basis as determined by the Community Development Director when a larger buffer is necessary to protect wetland functions and values. This determination must be supported by appropriate documentation showing that it is reasonably related to protection of the functions and values of the wetland. The documentation must include, but is not limited to, the following information:
 - a. The wetland is used by a state or federally listed plant or animal species or has essential or outstanding habitat for those species, or has unusual nesting or resting sites such as heron rookeries or raptor nesting trees; or
 - b. The adjacent land is susceptible to severe erosion, and erosion-control measures will not effectively prevent adverse wetland impacts; or
 - c. The adjacent land has minimal vegetative cover or slopes greater than 30 percent.
 - 4. *Buffer averaging.*
 - a. *Wetland protection.* Buffer averaging to improve wetland protection may be permitted when all of the following conditions are met:
 - i. The wetland has significant differences in characteristics that affect its habitat functions, such as a wetland with a forested component adjacent to a degraded emergent component or a "dual-rated" wetland with a category I area adjacent to a lower-rated area.
 - ii. The buffer is increased adjacent to the higher-functioning area of habitat or more-sensitive portion of the wetland and decreased adjacent to the lower-functioning or less-sensitive portion as demonstrated by a critical areas report from a qualified wetland professional.
 - iii. The total area of the buffer after averaging is equal to the area required without averaging.
 - iv. The buffer at its narrowest point is never less than either 75 percent of the required width or 75 feet for category I and II, 50 feet for category III, and 25 feet for category IV, whichever is greater.
 - b. *Reasonable use.* Averaging to allow reasonable use of a parcel may be permitted when all of the following are met:
 - i. There are no feasible alternatives to the site design that could be accomplished without buffer averaging.
 - ii. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.
 - iii. The total buffer area after averaging is equal to the area required without averaging.
 - iv. The buffer at its narrowest point is never less than either 75 percent of the required width or 75 feet for category I and II, 50 feet for category III and 25 feet for category IV, whichever is greater.
 - 5. *Maintenance.* Except as otherwise specified or allowed in accordance with this chapter, wetland buffers must be retained in an undisturbed or enhanced condition. Removal of invasive non-native weeds is required for the duration of the mitigation bond.
-

-
6. *Impacts.* Impacts to buffers must be mitigated at a rate of one acre of mitigation for one acre of impact. Buffer mitigation must replace those buffer functions lost from development.
 7. *Overlapping critical area buffers.* If buffers for two contiguous critical areas overlap (such as buffers for a wildlife habitat area and a wetland), the wider buffer applies.

(Ord. No. 880, § 14, 9-12-2017)

112.20.070. Critical aquifer recharge areas (CARAs).

- A. *Definition.* Critical aquifer recharge areas are areas with a critical recharging effect on aquifers used for potable water, as defined by WAC 365-190-030(3). 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.
 1. *Includes:*
 - a. Wellhead protection areas, as identified in the City of Tenino Water Plan and mapped by Washington State Department of Health.
 - b. Areas having an extreme or high susceptibility to contamination, as identified by the Thurston Geodata Center.
 - B. *Designation.* 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. Critical aquifer recharge areas must be managed consistent with the best available science.
 - C. *Standards.*
 1. *Activities.*
 - a. Activities may only be permitted in a critical aquifer recharge area if the applicant can show that the proposed activity will not cause contaminants to enter the aquifer and that the proposed activity will not adversely affect the recharging of the aquifer.
 - b. Activities must comply with the water source protection requirements and recommendations of the U.S. Environmental Protection Agency, Washington State Department of Health, and the Environmental Health Division of Thurston County Public Health and Human Services Department.
 2. *Storage tanks.* 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 must 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 must 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.
3. *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. Dry wells are prohibited 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.
4. *Residential use of pesticides and nutrients.* Application of household pesticides, herbicides, and fertilizers must not exceed times and rates specified on the packaging.
5. *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 RCW 90.46.010(10) and 90.46.080(1). The State Department of Ecology may establish additional discharge limits in accordance with RCW 90.46.080(2).
 - b. Direct injection must be in accordance with the standards developed by authority of RCW 90.46.042.

(Ord. No. 880, § 14, 9-12-2017)

112.20.080. Frequently flooded areas.

- A. *Definition.* Frequently flooded areas are lands in the floodplain subject to a one percent or greater chance of flooding in any given year and lands that provide important flood storage, conveyance, and attenuation functions. Classifications of frequently flooded areas include, at a minimum, the 100-year floodplain designation of the Federal Emergency Management Agency and the National Flood Insurance Program.
- 1. *Includes:*
 - a. *Areas identified on the flood insurance map(s).* Areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for Thurston County, Washington and Incorporated Areas" dated October 16, 2012, and any revisions thereto, with accompanying flood insurance rate maps (FIRM) dated October 16, 2012, and any revisions thereto. The flood insurance study and accompanying map(s) are hereby adopted by reference, declared part of this chapter, and are available for public review at the city.
- B. *Designation.* Frequently flooded areas perform important hydrologic functions and may present a risk to persons and property. Frequently flooded areas are hereby designated critical areas and are subject to the provisions of this chapter and must be managed consistent with the best available science.

-
- C. *Maintenance of records.* Where base flood elevation data is provided through the flood insurance study or required through this chapter, the city must obtain and record the flood elevation certificates of all new or substantially improved structures, whether or not the structure contains a basement. The city must also maintain for public inspection all records of floodplain hazards, certificates of flood-proofing, and flood elevation data.
- D. *Standards.*
1. *Critical facilities prohibited.* Critical facilities are prohibited within frequently flooded areas unless there is no other practical alternative.
 2. *Septic systems prohibited.* On-site sewage disposal systems, including drain fields, are prohibited within the 100-year floodplain.
 3. *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.
 4. *Delineation of the base flood elevation.* Applicants must 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.
 5. *Buffer required.* A minimum buffer of 50 feet is required 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.
 6. *Infiltration basins.* The bottom of any infiltration facility for stormwater discharge must be located at least six feet above the base flood elevation.
 7. *Subdivision proposals.* Subdivision proposals must:
 - a. Be consistent with the need to minimize flood damage;
 - b. Have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
 - c. Must have adequate drainage provided to reduce exposure to flood damage.
 - d. Generate base flood elevation data when it is not available from another authoritative source.
 8. *Building permit review.* Where elevation data is not available either through the flood insurance study or from another authoritative source, applications for building permits must be reviewed to assure that proposed construction will be reasonably safe from flooding. The test of reasonableness is a local judgment and includes use of historical data, high water marks, photographs of past flooding, etc., where available. Failure to elevate at least two feet above grade in these zones may result in higher insurance rates.
 9. *Nonresidential construction.* All nonresidential construction must have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy, and 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 section based on their development and/or review of the structural design, specifications and plans.
- E. *Warning and disclaimer of liability.* The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This chapter does not create liability on the part of the
-

city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. No. 880, § 14, 9-12-2017)

112.20.090. Geologically hazardous areas.

- A. *Definition.* Geologically hazardous areas are areas that may not be suitable for development because of their susceptibility to erosion, sliding, earthquakes or other geological events.
1. *Includes:*
- a. *Erosion hazard areas.* Erosion hazard areas are those areas identified by the United States Department of Agriculture Soil Conservation Service as having a severe rill and inter-rill erosion hazard. Rill or inter-rill are areas subject to sheet wash, or steep-sided channels resulting from accelerated erosion. The city has limited lands that possess these characteristics, and will therefore regulate any potential erosion hazards through grade and fill regulations pursuant to Title 5, Buildings and Construction, and Title 109, Shoreline Designations.
 - b. *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 factors including, but not limited to, bedrock, soil, slope, slope aspect, structure, and hydrology. Examples of landslide hazard areas include, but are not limited to:
 - i. Areas of historic failures.
 - ii. Areas with all three of the following characteristics:
 - a) Slopes in excess of 15 percent;
 - b) Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - c) Springs or groundwater seepage.
 - iii. Areas that have shown movement during the Holocene epoch (from 10,000 years ago to the present) or which are underlain or covered by mass wastage debris of that epoch.
 - iv. Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials.
 - v. Slopes in excess of 80 percent that are subject to rockfall during seismic shaking.
 - vi. Areas with a slope of 40 percent or more that have a vertical relief of ten or more feet. This does not include 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 feet of vertical relief.
 - vii. Areas that include alluvial or colluvial fans located at the base of steep slopes and drainages.
 - c. *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:
 - i. The magnitude of an earthquake;

-
- ii. The distance from the source of an earthquake;
 - iii. The type of thickness of geologic materials at the surface; and
 - iv. The type of subsurface geologic structure.
- B. *Designation.* Geologically hazardous areas pose a threat to the health and safety of citizens when incompatible development is sited in areas of significant hazard. Incompatible development may place itself at risk and increase the hazard to surrounding developments and uses. 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 must be managed consistent with the best available science.
- C. *Standards.*
- 1. *Septic systems prohibited.* On-site sewage disposal systems, including drain fields, are prohibited within erosion and landslide hazard areas and related buffers.
 - 2. *Critical facilities prohibited.* Critical facilities are prohibited within geologically hazardous areas unless there is no other practical alternative.
 - 3. *Point discharges prohibited.* Point discharges from surface water facilities and roof drains onto or upstream from an erosion or landslide hazard area is prohibited.
 - 4. *Buffers.* Buffers are used to eliminate or minimize the risk of property damage, death, or injury resulting from landslides caused in whole or in part by the development. A buffer must be provided from all edges of landslide hazard areas.
 - a. *Minimum buffer.* The minimum buffer required is equal to the height of the slope.
 - b. *Buffer reduction.* The buffer may be reduced to a minimum of ten feet when a qualified professional demonstrates to the city's satisfaction that the reduction will adequately protect the proposed development, adjacent developments and uses, and the subject critical area.
 - c. *Buffer increases.* The city may require a wider buffer when it is necessary to prevent the risk of damage to proposed and existing development.
 - 5. *Alterations.* Alterations of geologically hazardous areas or associated buffers may be allowed only if a hazards analysis has been submitted and certifies that the alterations:
 - 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 to be safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.
 - e. The development will not increase surface water discharge or sedimentation to adjacent properties beyond pre-development conditions;
 - f. The development will not decrease slope stability on adjacent properties; and
 - 6. *Vegetation retention.* Removing vegetation in an erosion hazard area, landslide hazard area, or required buffer is prohibited unless otherwise provided for in this chapter or as part of an approved alteration.
 - 7. *Seasonal restriction.* Clearing may only be allowed during the dry season, generally from May 1st to October 1st of each year.
-

-
- a. The city may extend or shorten the dry season on a case-by-case basis depending on actual weather conditions.
 - b. Timber harvest, not including brush clearing or stump removal, may be allowed during other times of the year provided an approved forest practice permit has been issued by the Washington State Department of Natural Resources.
 - 8. *Utility lines and pipes.* Utility lines and pipes may be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available.
 - a. Lines or pipes in erosion and landslide hazard areas must be located above ground, properly anchored, and designed so that it will continue to function in the event of an underlying slide.
 - b. Stormwater conveyance in erosion and landslide hazard areas must be through a high-density polyethylene pipe with fuse-welded joints, or a similar product that is technically equal or superior.
 - 9. *Land divisions.*
 - a. Land that is located wholly within a landslide hazard area or its buffer must not be subdivided.
 - b. Land that is located partially within a landslide hazard area or its buffer may be divided; only if each resulting lot has sufficient buildable area outside of, and will not affect, the landslide hazard or its buffer.
 - c. Access roads and utilities serving the proposed subdivision may be permitted within the landslide hazard area and buffer only if the city determines that no other feasible alternative exists.

(Ord. No. 880, § 14, 9-12-2017)

112.20.100. Fish and wildlife habitat conservation areas.

- A. *Definition.* Fish and wildlife habitat conservation areas are areas necessary for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created.
- 1. *Includes:*
 - a. *Endangered, threatened, and sensitive species.* Habitat areas associated with state or federally designated endangered, threatened, and sensitive species. Designated species known to occur in the city or its vicinity include, but are not limited to, the following:
 - i. *Animals:*
 - a) Oregon Vesper Sparrow.
 - b) Mazama Pocket Gopher (Olympia, Tenino, and Yelm subspecies).
 - c) Taylor's Checkerspot Butterfly.
 - d) Mardon Skipper Butterfly.
 - ii. *Plants:*
 - a) Water Howellia.
 - b) Golden Paintbrush.
 - b. *Priority habitats and species.* Priority habitats and species, as identified by the Washington State Department of Fish and Wildlife. Priority habitats and species known to occur in the city or its vicinity include, but are not limited to, the following:

-
- i. *Habitats:*
 - a) Oregon White Oak Woodlands.
 - b) West Side Prairie.
 - c) Freshwater Wetlands.
 - ii. *Species:*
 - a) Western Gray Squirrel.
 - b) Oregon Vesper Sparrow.
 - c) Mazama Pocket Gopher.
 - c. *Rare plants and high-quality ecosystems.* Areas of rare plant species and high-quality ecosystems identified by the Washington State Department of Natural Resources through the Natural Heritage Program. Rare plant species known to occur in the city or its vicinity include, but are not limited to, the following:
 - i. White-Top Aster.
 - d. *Wildlife corridors and connections.* Land useful or essential for preserving connections between habitat areas and open spaces.
 - e. *Waters of the state.* Waters of the state, including but not limited to lakes, rivers, ponds, streams, inland waters, underground waters, and salt waters. Scatter Creek is classified as a water of the state. Standards for underground waters are addressed in Section 112.20.070, critical aquifer recharge areas.
 - f. *Ponds.* Naturally occurring ponds under 20 acres, including their submerged aquatic beds that provide fish or wildlife habitat and 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 intentionally created for mitigation purposes. Small ponds are known to occur in the city and its urban growth area.
 - B. *Designation.* All areas within the city meeting one or more of the criteria in subsection A. above, regardless of any formal identification, are hereby designated critical areas and are subject to the provisions of this chapter. Fish and wildlife habitat conservation areas must be managed consistent with the best available science.
 - C. *Standards.*
 - 1. *Indigenous species.* Only plant, wildlife, or fish species that are indigenous to the region may be introduced into a habitat conservation area unless otherwise authorized by a state or federal permit or approval.
 - 2. *Activity approvals.* The city may condition approval of activities that are allowed within or adjacent to a habitat conservation area or its buffers in order to minimize or mitigate any potential adverse impacts. Conditions must be based on the best available science.
 - 3. *Alteration approvals.* Any approval of alterations or impacts to a habitat conservation area must be supported by the best available science.
 - 4. *Mitigation.*
 - a. *Contiguous corridors.* Mitigation sites must be located to preserve or achieve contiguous wildlife habitat corridors in accordance with a mitigation plan.
-

-
- i. The mitigation plan must be submitted and approved as part of the critical area report to minimize the isolating effects of development on habitat areas.
 - ii. Aquatic habitat mitigation areas must be located within the same aquatic ecosystem as the area disturbed.
 - b. *Equivalent or greater biological functions.* Mitigation areas must:
 - i. Achieve functional equivalency or represent an improvement of existing biologic and hydrologic functions;
 - ii. Include mitigation for adverse impacts upstream or downstream from the development proposal site; and
 - iii. Address each function affected by the alteration to achieve functional equivalency or improvement on a per function basis.
 - 5. *Native growth protection areas required.* Habitat conservation areas and their buffers must be preserved in perpetuity through the use of native growth protection areas and critical area tracts. Native growth protection areas include areas where native vegetation is preserved for the purpose of preventing harm to property and the environment including, but not limited to, the following:
 - a. Controlling surface water runoff and erosion.
 - b. Maintaining slope stability.
 - c. Buffering.
 - d. Protecting plants and animal habitat.
 - 6. *Buffers.*
 - a. *Buffers Required.* Buffers are used to protect the integrity, functions, and values of each affected habitat. A buffer must be provided when it is needed to protect the habitat conservation area. Buffers must consist of an undisturbed area of native vegetation or areas identified for restoration.
 - b. *Buffer width.* Required buffer widths must reflect the sensitivity of the habitat as well as the type and intensity of human activity proposed. Buffer widths must be consistent with the management recommendations issued by the Washington Department of Fish and Wildlife.
 - c. *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.
 - d. *Buffer averaging.* The city may allow the recommended 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. Buffer averaging does not reduce stream or habitat functions;
 - ii. Buffer averaging provides additional natural resource protection, such as buffer enhancement;
 - iii. The total area contained in the buffer after averaging is no less than that which would be contained within the standard buffer; and
 - iv. The buffer width is not reduced by more than 25 percent in any location, as recommended by the Washington Department of Fish and Wildlife.
-

-
7. *Land divisions.*
- a. Land that is located wholly within a habitat conservation area or its buffer must not be subdivided.
 - b. Land that is located partially within a habitat conservation area or its buffer may be divided only if the developable portion of each new lot and its access is located outside of the habitat conservation area and buffer.
 - c. Access roads and utilities serving the proposed subdivision may be permitted within the habitat conservation area and buffer only if the City determines that no other feasible alternative exists.
8. *Endangered, threatened, and sensitive species.*
- a. *Development.* Only development consistent with a management plan established by the Washington Department of Fish and Wildlife or applicable state or federal agency may be allowed in a habitat conservation area or buffer associated with endangered, threatened, or sensitive species.
 - b. *Protection Measures.* Protection measures identified in a critical area report that has been approved by the city, must be utilized for habitat conservation areas associated with endangered, threatened, or sensitive species.
 - c. *Alterations to habitat conservation areas.* Approval to alter habitat conservation areas or buffers associated with endangered, threatened, or sensitive species will not occur prior to consulting with:
 - i. For animal species, the Washington Department of Fish and Wildlife;
 - ii. For plant species, the Washington State Department of Natural Resources; and
 - iii. Other appropriate federal or state agencies.
9. *Wetland habitats.* Activities within or adjacent to habitat conservation areas containing wetlands must conform to the wetland standards set forth in Section 112.20.060, wetlands. If non-wetland habitat and wetlands are present at the same location, the provisions of this section or the wetlands section, whichever provides greater protection to the habitat, apply.

(Ord. No. 880, § 14, 9-12-2017)