

**ADOPTED
Kittitas County Critical Areas regulations**

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Chapter 17A.01

GENERAL PROVISIONS

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17A.01.010 Purpose and Intent

The purpose of this Title is to establish regulations pertaining to development which protect designated critical areas, as defined by the Washington State Growth Management Act (GMA) (RCW 36.70A). The GMA requires the use of “best available science,” also as defined in that law, to establish local regulations which protect critical areas. GMA-designated critical areas, all of which are present in Kittitas County, include: Critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, geologically hazardous areas, and wetlands. The regulations of this Title are intended to:

1. Prevent degradation of critical areas;
2. Conserve, protect, and; where feasible, restore critical areas and their functions and values;
3. Protect unique, fragile and/or valuable elements of the environment, including ground and surface waters, anadromous fish species, and other fish and wildlife and their habitats;
4. Protect the public health, safety, and general welfare from hazards associated with critical areas;
5. Further the goals and objectives of the Kittitas County Comprehensive Plan and all of its elements;
6. Implement the goals and requirements of the Washington Growth Management Act (RCW Chapter 36.70A);
7. Allow for reasonable use of all properties in Kittitas County.

17A.01.020 Authority

1. As provided herein, the Director or his/her designee is given the authority to interpret and apply, and the responsibility to enforce this Title to accomplish the stated purpose.
2. The County may withhold, condition, or deny permits and/or approvals for development and alterations to ensure that the proposed development is consistent with this Title.

17A.01.030 Applicability

1. Except as provided in subsection 3 and 4 below, the provisions of this Title shall apply to any alteration or development within the unincorporated portion of Kittitas County, and outside of Shoreline jurisdiction, as determined by the Shoreline Master Program (KCC Title 17B). No development shall be constructed, located, extended, modified, converted, or altered, or land subdivided without full compliance with this Title.
2. Compliance with these regulations does not remove an applicant's obligation to comply with applicable provisions of any other Federal, State, or local law or regulation.
3. Private lands where existing agricultural activities are conducted, as defined in RCW 90.58.065, within the Upper Yakima and Alkali-Squilchuck WRIAs are managed by the Kittitas County Voluntary Stewardship Program (VSP), and not regulated by this Title.
4. Any activities, alterations or development located within any Shoreline of the State within the unincorporated portion of Kittitas County are subject to the provisions of the Shoreline Master Program (KCC Title 17B) and not this Title.

17A.01.040 Regulated Development and Alterations

The following development and alterations are regulated within critical areas and their riparian management zones and/or buffers, unless exempt by KCC 17A.01.050:

1. Removing, excavating, disturbing, or dredging soil, sand, gravel, minerals, organic matter, or materials of any kind;
2. Dumping, discharging, or filling;
3. Draining, flooding, or disturbing the water level or water table;
4. Driving piling or placing obstructions, including placement of utilities;
5. Constructing, reconstructing, demolishing, or altering the size of any structure or infrastructure;
6. Altering the character and/or functions and values of a regulated area by destroying or altering vegetation through clearing, harvesting, cutting, intentional burning, shading, or planting;
7. The division of land pursuant to KCC Title 16; and
8. The creation of impervious surfaces regulated under KCC 12.06.

17A.01.050 Exemptions

1. **Exemption Request and Review Process.** The proponent of the alteration or development may submit a written request for Determination of exemption eligibility to the director that describes the alteration or development and states the exemption listed in this section that applies. The purpose of a Determination of exemption eligibility is to provide, at the applicant's request, a written record documenting that a proposed alteration or development is, in fact, an exempt activity under the provisions of this Chapter.
The director shall review the exemption request to verify that it complies with this chapter and approve, approve with conditions, or deny the exemption. If the exemption is approved, it shall be placed on file with KCCDS. If the exemption is denied, the proponent may continue in the review process and shall be subject to the requirements of this chapter.
2. **Exempt Alterations and Development and Impacts to Critical Areas.** All exempted alterations or development shall use reasonable methods to avoid potential impacts to critical areas and their buffers. To be exempt from this Title does not give permission to degrade a critical area or its buffer or ignore risk from natural hazards. Any incidental damage to, or alteration of, a critical area or its buffer that is not a necessary outcome of the exempted alteration or development shall be restored, rehabilitated, or replaced at the responsible party's expense.
3. **Exempt Alterations and Development.** The following alterations and developments and uses shall be exempt from the provisions of this Title:
 - a. **Emergencies.** Those alterations or developments 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 preventive action in a timeframe too short to allow for compliance with the requirements of the critical areas regulations, provided that:

- i. The emergency action shall have the least possible impacts to the critical area and its buffer as is reasonably judged in real time while still adequately addressing the emergency situation;
 - ii. The person or authorized representative of the agency undertaking such action shall notify the County within one (1) working day following commencement of the emergency alteration or development. Within thirty (30) days, the Director shall determine if the action taken was within the scope of the emergency actions allowed in this Subsection. If the Director determines that the action taken, or any part of the action, was beyond the scope of an allowed emergency action, then the enforcement provisions of KCC 17A.01.150 shall apply; and
 - iii. After the emergency, the person or authorized representative of the 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 areas report and mitigation plan, as described in 17A.01.080. The person or authorized representative of the agency undertaking the action shall apply for review, and the alteration, critical areas report, and mitigation plan shall be reviewed by the County 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 alteration or development 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, dikes, levees, or drainage systems, that do not require construction permits, if the alteration or development does not further change 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. Operation and maintenance includes vegetation management performed in accordance with best management practices that is part of ongoing maintenance of structures, infrastructure, or utilities, provided that such management actions are part of ongoing maintenance, do not expand further into the critical area or buffer, are not the result of an expansion of the structure or utility, and do not directly impact an endangered or threatened species.
- c. **Passive Outdoor Activities.** Recreation, education, and scientific research activities that do not alter or degrade the critical area or buffer, including fishing, hiking, and bird watching.
- d. **Forest Practices.** Forest practices conducted in accordance with the requirements of the Forest Practice Act (Chapter 76.09 RCW) and its rules, except for the conversion of forest land to a use other than commercial forestry (Class IV conversions). **Removal or Control of Terrestrial Noxious Weeds.** Removal of terrestrial weeds that are included on the State noxious weed list (WAC 16-750) or other invasive plant species as identified by Kittitas County. Control may be conducted by clipping, pulling, over-shading with native tree and shrub species, or non-mechanized removal including herbicide or other methods applicable to weed control.
- e. **Removal or Control of Aquatic Noxious Weeds.** Removal or control of aquatic noxious weeds, as defined in RCW 17.26.020, using an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental

impact statement published by the Washington State Department of Agriculture or the Washington State Department of Ecology jointly with other state agencies under RCW Chapter 43.21C.

- f. **Enhancement Actions.** Habitat enhancement actions that do not involve clearing, grading, in-water work or construction activities, such as revegetation with native plants and installation of nest boxes.
- g. **Maintenance of Existing Structures.** Normal maintenance or repair of existing structures or developments, including damage by accident, fire, or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition including, but not limited to, its size, shape, configuration, location, and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to critical areas or their buffers. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including, but not limited to, its size, shape, configuration, location, and external appearance and the replacement does not cause substantial adverse effects to critical areas or their buffers.
- h. **Site Exploration and Investigation Activities.** Site exploration and investigation activities that are prerequisite to preparation of an application for development, when all the following conditions are met:
 - i. The activity will have no significant adverse impact on the environment including, but not limited to, fish; wildlife; fish or wildlife habitat; water quality; and aesthetic values; and
 - ii. The activity does not involve the installation of any structure, and upon completion of the activity, the vegetation and land configuration of the site are restored to conditions existing before the activity.
- i. **Tree Removal.**
 - i. Hazard Tree Removal in Fish and Wildlife Habitat Conservation Areas, Wetlands, Frequently Flooded Areas and Geologically Hazardous Areas.
 - (a) The removal of a hazard tree, including removal for compliance with KCC 20.10, Wildland Urban Interface Code, may be allowed when trimming or topping is not sufficient to address the hazard. If a tree in close proximity to a stream or river qualifies as a hazard tree in accordance to this Title it should be felled in a manner that creates instream habitat, when it is possible to do so while also addressing the original hazardous situation. Where the hazard is not immediately apparent to the Director, the Director may require the applicant to submit a Hazard Tree Determination Report (KCC 17A.02.406) prepared by a qualified arborist (KCC 17A02.102) or forester (KCC 17A.02.345). The removal of nonhazardous trees is not an exempt action in the critical areas listed under KCC 17A.01.050.3.h.i, except when regulated under the provisions of the Forest Practice Act (Chapter 76.09 RCW).
 - ii. Tree Removal in Critical Aquifer Recharge Areas.
 - (a) The removal of any tree is an exempt action when the tree is solely within a Critical Aquifer Recharge Area and not also within a different overlapping critical area, riparian management zone, or buffer. This action does not require an exemption request or review by the director, unless it is associated with a regulated activity identified in KCC 17A.03.030.

- j. **Utility Line Work.** Public and private utility line work (new construction, maintenance, and repair) within improved surfaces (e.g., driveways, parking lots, concrete or asphalt surfaces, gravel roads and road shoulders, and hard surface-earthen rights-of-way or easements).
- k. **Harvesting of Wild Crops.** 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 critical area or its buffer by changing existing topography, water conditions, or water sources.

17A.01.060 Exceptions

1. **Public Agency and Utility.** If the application of this Title would prohibit a proposed development by a public agency or public utility, the agency or utility may apply for an exception pursuant to the following:
 - a. **Exception Request and Review Process.** An application for a public agency and utility exception shall be made to the County and shall include a critical areas report, as described in KCC 17A.01.080, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW). The application shall follow the administrative project permit review process outlined in KCC 15A.03.
 - b. **Director Review.** The Director shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all the reasonable use exception criteria in Subsection 2(c).
 - c. **Public Agency and Utility Review Criteria.** The criteria for review and approval of public agency and utility exceptions are as follows:
 - i. There is no other practical alternative to the proposed development with less impact on the critical area and its buffer;
 - ii. The application of this Title would unreasonably restrict the ability to provide utility and/or agency services to the public;
 - iii. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;
 - iv. The proposal attempts to protect and mitigate impacts to the critical area functions and values consistent with the best available science; and
 - v. The proposal is consistent with other applicable regulations and standards.
 - d. **Burden of Proof.** The burden of proof shall be on the applicant to bring forth evidence in support of the application and to provide sufficient information on which any decision must be made on the application.
2. **Reasonable Use.** If the application of this Title would deny all reasonable economic use of the subject property, the County shall determine if the property owner may apply for an exception pursuant to the following:
 - a. **Exception Request and Review Process.** An application for a reasonable use exception shall be made to the County and shall include a critical areas report, as described in KCC 17A.01.080, including mitigation plan, if necessary; and any other related project documents, such as permit applications to other agencies, special studies, and environmental documents prepared pursuant to the State Environmental Policy Act (Chapter 43.21C RCW and rules thereunder in Chapter 197-11 WAC). The application shall follow the administrative project permit review process outlined in KCC 15A.03. In determining what is considered reasonable use of an undeveloped parcel, the Director may consider additional information such as zoning, and comparable structure sizes and land uses of the surrounding area.

- b. **Director Review.** The Director shall approve, approve with conditions, or deny the request based on the proposal's ability to comply with all the reasonable use exception criteria in Subsection 2(c).
- c. **Reasonable Use Review Criteria.** Criteria for review and approval of reasonable use exceptions include:
 - i. The application of this Title would deny all reasonable economic use of the property;
 - ii. No other reasonable economic use of the property has less impact on the critical area and its buffer;
 - iii. The proposed impact to the critical area is the minimum necessary to allow for reasonable economic use of the property;
 - iv. 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 Title;
 - v. The proposal does not pose an unreasonable threat to the public health, safety, or welfare on or off the development proposal site;
 - vi. The proposal will result in no net loss of critical area functions and values consistent with the best available science;
 - vii. The proposal is consistent with other application regulations and standards.
- d. **Burden of Proof.** The burden of proof shall be on the applicant to bring forth evidence in support of the application and to provide sufficient information on which any decision must be made on the application.

17A.01.070 Non-Conforming Lots, Structures, and Uses

The following provisions apply to lots, structures and uses lawfully established prior to the effective date of this Title, or amendments thereto, which do not conform to the current regulations or standards of this Title. The following provisions do not apply to lots, structures or uses that were unlawfully established.

- 1. Non-conforming lots:
 - a. An undeveloped lot, tract, parcel, site, or division of land located landward of the ordinary high water mark which was established in accordance with local and state subdivision requirements prior to the effective date of this Title but which does not conform to the present lot size standards may be developed as permitted by the land use regulations of the local government so long as such development conforms to all other requirements of this Title and the Act.
- 2. Non-conforming structures:
 - a. Nonconforming structures may be maintained, repaired, renovated, and remodeled, provided such activity does not enlarge or expand the structure beyond the allowances in this section.
 - b. Nonconforming structures may be enlarged or expanded one time, provided:
 - i. The enlargement does not extend closer to the critical area than the existing primary structure or farther into the minimum side yard setback;
 - ii. The enlargement does not expand the footprint of the existing structure by more than 200 square feet in a lateral direction;
 - iii. The enlargement does not cause new direct wetland or stream impact; and
 - iv. Mitigation of impacts to disturbed critical areas or buffers is provided in accordance with this title. The County may consult with agencies of expertise to ensure plan adequacy.
 - c. .
 - d. Nonconforming single-family residences may increase their height within the existing structural footprint up to maximum of thirty-five (35) feet.

- e. A nonconforming structure which is moved any distance must be brought into conformance with this Title and the Act.
 - f. Damaged nonconforming structures outside frequently flooded areas may be reconstructed to those configurations existing immediately prior to the time the development was damaged. Reconstruction of nonconforming development located in frequently flooded areas shall comply with reconstruction regulations contained within the Kittitas County Flood Prevention Ordinance (KCC Chapter 14.08-December 2014).
3. Nonconforming uses:
- a. Nonconforming uses may be continued consistent with their lawfully established scale and range of uses.
 - b. A structure which is being or has been used for a nonconforming use may be used for a different nonconforming use only upon written approval by the Director and may be approved only upon a finding that:
 - i. No reasonable alternative conforming use is practical because of the configuration of the structure and/or the property;
 - ii. The proposed use will be at least as consistent with the policies and provisions of the Act and this Title and as compatible with the uses in the area as the pre-existing use;
 - iii. The use or development is enlarged, intensified, increased or altered only to the minimum amount necessary to achieve the intended functional purpose;
 - iv. The structure(s) associated with the nonconforming use shall not be expanded in a manner that increases the extent of the non-conformity, including encroachment into areas such as setbacks, and any critical areas and/or associated buffers where new structures, use, or development would not be allowed;
 - v. The buffer standards of this Title are met;
 - vi. The change in use, remodel, or expansion will not create adverse impacts to critical areas or their associated buffers and riparian management zones;
 - vii. Uses which are specifically prohibited or which would thwart the intent of the Act or this Title shall not be authorized; and
 - viii. Conditions necessary to assure that the use will not become a nuisance or a hazard have been attached to the development permit and preliminary site analysis.

Redevelopment of nonconforming rights-of-way and associated transportation structures, such as railroad trestles, may be permitted for purposes of facilitating the development of public trails; provided, that such redevelopment shall be otherwise consistent with the provisions of this Title.

17A.01.080 Critical Areas Reports

1. **When Required.** An applicant shall submit a critical areas report when required by 17A.01.110.2 and the reporting section of the applicable critical area chapter of this Title. Critical areas reports are valid for five years from the date of completion, or date of the corresponding delineation documentation, if applicable.
2. **Preparation by Qualified Professional.** The critical areas report shall be prepared by a qualified professional as defined in KCC 17A.02.620.
3. **Incorporation of Best Available Science.** The critical areas report shall use scientifically valid methods and studies in the analysis of critical area data and field reconnaissance to evaluate the proposed development and all probable impacts to critical areas in accordance with the provisions of this Title. The report shall reference the source(s) of science used.
4. **Minimum Report Contents.** At a minimum, the report shall contain the following:
 - a. The name and contact information of the applicant and a description of the proposal;
 - b. The site plan for the proposed development, including a map drawn to scale depicting critical areas, buffers and/or setbacks, the proposed development, and any areas to be cleared or altered;

- c. The names and qualifications of the persons preparing the report;
- d. Documentation of any fieldwork performed on the site;
- e. Documentation that consultation, when deemed appropriate, was initiated with agencies of expertise;
- f. Field identification and characterization of all critical areas and buffers on and adjacent to the proposed development;
- g. A statement specifying the accuracy of the report, and all assumptions made and relied upon;
- h. A discussion of the performance standards applicable to the critical area and proposed development;
- i. A mitigation plan in accordance with KCC 17A.01.100 if mitigation is required; and
- j. Any additional report information required for the critical area as specified in KCC 17A.01.80 through KCC 17A.01.100.

17A.01.090 General Protective Measures

1. **Land Divisions.** All the following shall apply to the creation of new lots or parcels:
 - a. All critical areas and their buffers and/or riparian management zones and any associated setbacks shall be mapped prior to the approval of a land division.
 - b. All new lots or parcels shall contain sufficient area outside of the wetland and/or wetland buffer, fish and wildlife habitat conservation area and/or fish and wildlife habitat conservation area riparian management zones or buffers, floodway, channel migration zone, or landslide hazard area and/or landslide hazard area buffer to accommodate the use or development.
 - c. Open space or conservation area lots may be established without a site that is suitable for development provided there is a note on the face of the plat or other recorded document which indicates the purpose of the lot.
2. **Native Growth Protection Areas**
 - a. Native growth protection areas shall be used in development proposals for land division to delineate and protect those contiguous critical areas and buffers listed below:
 - i. All landslide hazard areas and buffers;
 - ii. All wetlands and buffers;
 - iii. All floodways;
 - iv. All fish and wildlife habitat conservation areas and associated riparian management zones and buffers; and
 - v. All other lands to be protected from alterations as conditioned by project approval.
 - b. Native growth protection areas shall be recorded on all documents of title of record for all affected lots.
 - c. Native growth protection areas shall be designated on the face of the plat or recorded drawing in a format approved by the County assessor. The designation shall include the following restrictions:
 - i. An assurance that native vegetation will be preserved for the purpose of preventing harm to property and the environment, including, but not limited to, controlling surface water and erosion, maintaining slope stability, buffering, and protecting plants, fish, and animal habitat; and
 - ii. The right of the County to enforce the terms of the restriction.
3. **Temporary or Permanent Field Identification.** Prior to a regulated alteration or development taking place within or adjacent to a critical area, the County may require temporary or permanent field markers delineating the critical area boundary and associated buffer. The type of field markers to be used will be agreed to by the applicant and the Director depending on site conditions and inspection requirements. Field markers shall be

spaced at a minimum of every fifty (50) feet, unless alternative placement or spacing is authorized by the Director. The location of field markers must be shown on all site plans and final plats associated with the proposed development. Field markers shall remain in place until any required final inspections are completed and approved. Field markers may be waived by the Director if an alternative to field marking achieves the same objective, or if the development and construction activity(ies) is located at a sufficient distance so that impacts to the critical area and its buffer are unlikely to occur. The Director may require permanent, wildlife-passable fencing and/or signage if necessary to protect a critical area and its buffer from adjacent land uses.

4. **Building Setbacks.** Unless otherwise provided, buildings and other structures shall be set back a distance of fifteen (15) feet from the edges of all critical area buffers, RMZs, or from the edges of all critical areas, except CARAs, if no buffers are required. The following are allowed in the building setback area:
 - a. Landscaping;
 - b. Uncovered decks;
 - c. Building overhangs, if such overhangs do not extend more than eighteen (18) inches into the setback area; and
 - d. Impervious ground surfaces, such as driveways and patios.
5. **Notice on Title.** Any property on which a development proposal requiring a critical areas report is submitted shall have filed with the Kittitas County Auditor:
 - a. A notice on title of the presence and location of the critical area and/or buffer;
 - b. A statement as to the applicability of this Title to the property; and
 - c. A statement describing possible limitations on action in or affecting critical areas or buffer as approved by the Director. The Applicant shall record such documents and will provide a copy of the recorded notice to the County. Development proposals which are defined as normal repair and maintenance of existing structures or developments, including, but not limited to, roof repair, interior remodeling, wood stove permits, and on-site sewage disposal systems repairs, are exempt from this requirement.

17A.01.100 Critical Areas Mitigation

1. **Mitigation Sequence.** Adverse impacts caused by new alterations and developments shall be mitigated using the following actions in order of priority:
 - 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 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; and
 - f. Monitoring the impact and the compensation project and taking appropriate corrective measures.
2. **Mitigation Plans.** When mitigation is required, the applicant shall submit a mitigation plan. The mitigation plan shall include all the following:
 - a. Mitigation Sequencing. A description of reasonable efforts made to apply mitigation sequencing pursuant to KCC 17A.01.100.1 to avoid, minimize, and mitigate impacts to critical areas and buffers;
 - b. Mitigation Details.

- i. Documentation of consultation/coordination with appropriate agencies of expertise, as applicable;
 - ii. A description of the anticipated impacts to the critical area and buffer, including impacts to critical area functions and values;
 - iii. The mitigating actions proposed, including: type of mitigation proposed (e.g., on-site or off-site); site selection criteria; identification of compensation goals; and identification of critical area functions.
 - iv. The environmental goals and objectives of the mitigation, together with specific measurable criteria and performance standards for evaluating whether or not the goals and objectives of the mitigation project have been successfully attained;
 - v. An analysis of the likelihood of success of the mitigation project based on best available science.
 - c. Construction Details. The mitigation plan shall include written specifications, descriptions, and drawings of the mitigation proposed, including:
 - i. Construction sequence, timing, and duration;
 - ii. Grading and excavation details;
 - iii. Erosion and sediment control features; and
 - iv. Planting plan specifying plant species, quantities, locations, size, spacing, density, and measures to protect and maintain plants until established. All plant species must be native to the region.
 - d. Monitoring Details.
 - i. A program for monitoring construction and assessing the outcome of the mitigation project, including the schedule for site monitoring (for example, describe how monitoring may occur in years 1, 2, 3, 5, 7 and 10 after site construction), and how the monitoring data will be evaluated to determine if the performance standards are being met. Monitoring reports shall be submitted to the County to document milestones, successes, problems, and contingency actions of the compensation project. The mitigation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than ten (10) years. Mitigation monitoring shall be the responsibility of the applicant, and monitoring reports will be reviewed by County staff to ensure that performance standards are being met.
 - ii. A contingency plan with courses of action and corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met, including a possible extension of the monitoring period until it can be shown that performance standards are being met.
 - iii. The mitigation plan shall include financial guarantees ensuring fulfillment of the compensation project, monitoring program, and any contingency measures in accordance with KCC 17A.01.100.3.
 - iv. The mitigation plan shall address any additional mitigation requirements relevant to the specific critical area as specified in the following chapters.
- 3. Financial Guarantees.**
- a. When mitigation is required for a proposed development but is not completed prior to the County's final permit approval, such as final plat approval or final building inspection, the applicant shall post a financial guarantee to ensure work will be completed and meet the stated environmental objectives. Where financial guarantees are required by other state or federal agencies for specific mitigation features, additional financial guarantees for those features are not required under this provision.
 - b. The financial guarantee shall be in the amount of one hundred and twenty-five percent (125%) of the estimated cost of the uncompleted actions and/or the

estimated cost of restoring the functions and values of the critical area(s) that is at risk. The guarantee amount shall be based on an itemized cost estimate of the mitigation activity including clearing and grading, plant materials, plant installation, irrigation, weed management, monitoring, and other costs.

- c. The financial guarantee may be in the form of a surety bond, performance bond, assignment of savings account, an irrevocable letter of credit guaranteed by an acceptable financial institution, or other form acceptable to the Director, with terms and conditions acceptable to the Kittitas County attorney.
 - d. The financial guarantee shall remain in effect until the Director determines, in writing, that the standards bonded for have been met. Financial guarantees for wetland or stream compensatory mitigation shall be held for a minimum of five (5) years after completion of the work to ensure that the required mitigation has been fully implemented and demonstrated to function and may be held for longer periods when necessary.
 - e. 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.
 - f. 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 Director may demand payment of any financial guarantees or require other action authorized by Kittitas County code or any other law.
 - g. Any funds recovered pursuant to this Section shall be used to complete the required mitigation. Such funds shall not be deposited in the County General Fund, but rather provided with a separate account. The County will use such funds to arrange for completion of the project or mitigation, and follow-up corrective actions.
 - h. Depletion, failure, or collection of financial guarantees shall not discharge the obligation of an applicant or violator to complete required mitigation, maintenance, monitoring, or restoration.
4. **Mitigation Banking and In-Lieu Fee Mitigation.** The County may approve mitigation banking and/or in-lieu fee mitigation as a form of compensatory mitigation for wetland and fish and wildlife habitat conservation area impacts when the provisions of this Title require mitigation and when the use of a mitigation bank/in-lieu fee program will provide equivalent or greater replacement of critical area functions and values when compared to conventional permittee-responsible mitigation. Mitigation banks and in-lieu fee program shall only be used when it can be demonstrated that they provide significant ecological benefits including long-term conservation of critical areas, important species, habitats and/or habitat linkages, and when they are documented to provide a viable alternative to the piecemeal mitigation for individual project impacts to achieve ecosystem-based conservation goals. Mitigation banks and in-lieu fee programs shall not be used unless they are certified in accordance with applicable federal and state mitigation rules and expressly authorized through County legislative action.

17A.01.110 Review Process

1. **Administrative Procedures and Rules.** The administrative procedures followed during the critical area review process shall conform to the standards and requirements of all development and alterations. This shall include, but not be limited to, timing, appeals, and fees associated with applications covered by this Title.
2. **General Requirements**
 - a. Submittal. Prior to the county's consideration of any proposed alteration or development not found to be exempt under KCC 17A.01.050, the applicant shall

- submit to the County complete information regarding the critical area on the application for the underlying development, on forms provided by the county.
- b. As part of critical areas review, the County shall:
 - i. Verify the information submitted by the applicant;
 - ii. Evaluate the project area and vicinity for critical areas and buffers;
 - iii. Determine whether the applicant is required to seek additional critical area consultation with qualified professionals and/or agencies, which may include a joint site visit with county staff, agency staff, and/or qualified professionals;
 - (1) This additional consultation may be required for, but is not limited to, areas which contain unmapped critical areas and/or difficult mitigation circumstances.
 - iv. Determine whether the proposed development is likely to impact the functions or values of critical areas; and
 - v. Determine if the proposed development avoids impacts or adequately addresses the impacts to the critical area and buffer associated with the alteration or development.
 - c. Make a review determination:
 - i. No Critical Areas Present. If after a site visit the director's analysis indicates that the project area is not within or adjacent to a critical area or buffer and that the proposed alteration or development is unlikely to degrade the functions or values of a critical area, then the director shall rule that the critical area review is complete and note on the underlying application the reasons that no further review is required. A summary of this information shall be included in any staff report or decision on the underlying permit.
 - ii. Critical Areas Present, but No Impact – Waiver. If the director determines there are critical areas within or adjacent to the project area, but that the best available science shows that the proposed alteration or development is unlikely to degrade the functions or values of the critical area(s) or buffer(s), the director may waive the requirement for a critical areas report. A waiver may be granted if there is substantial evidence that all of the following requirements will be met:
 - (1) There will be no alteration of the critical area or associated riparian management zone or buffer;
 - (2) The development proposal will not negatively impact a critical area or buffer.
 - iii. Critical areas may be affected by proposal. If the director determines that a critical area or areas or buffer(s) may be affected by the proposal, then the director shall notify the applicant that a critical areas report must be submitted prior to further review of the project, as described in KCC 17A.01.080. The director may use the following indicators to assist in determining the need for a critical areas report:
 - (1) Indication of a critical area on the county critical areas maps that may be impacted by the proposed alteration or development;
 - (2) Information and scientific opinions from appropriate agencies, including but not limited to the Washington State Departments of Fish and Wildlife and Ecology;
 - (3) Documentation, from a scientific or other reasonable source, of the possible presence of a critical area; or
 - (4) A finding by a qualified professional, or a reasonable belief by the director, that a critical area may exist on or adjacent to the site of the proposed alteration or development.
 - iv.

- d. **Effect of Director's Determination.** A determination regarding the apparent absence of one or more critical areas by the director is not an expert certification regarding the presence of critical areas and the determination is subject to possible reconsideration and reopening if new information is received. If the applicant wants greater assurance of the accuracy of the critical area review determination, the applicant may choose to hire a qualified professional to provide such assurances.
3. **Request for Technical Assistance.** The Director may engage technical consultants or agencies with expertise to provide third party review and interpret critical area data and findings submitted by or on behalf of the applicant in instances where County staff lack the resources or expertise to review these materials. An applicant may be required to pay for or reimburse the County for the review costs incurred.
4. **Pre-Qualification of Consultants.** The Director may prepare and maintain a list of qualified technical consultants and firms that meet the qualified professional standards detailed in KCC 17A.01.610. Any proposed consultant whose name is not on the list may submit a statement of qualifications including information on experience in the preparation of critical area studies, years of experience, and sample work. Upon approval of the submitted qualifications, the Director shall add the name to the list of qualified consultants. The Director may reject data and findings from non-pre-qualified consultants or require a third-party review per KCC 17A.01.110.3.

17A.01.120 Relationships to Other Regulations

1. This Title shall apply as an overlay and in addition to zoning and other regulations adopted by the County.
2. Any individual critical area adjoined by another type of critical area shall have the buffer and meet the requirements that provide the most protection to the critical areas involved. When any existing regulations, easement, covenant, or deed restriction conflicts with this Title that which provides more protection to the critical area shall apply.
3. These critical areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as locally adopted.
4. Compliance with the provisions of this Title does not constitute compliance with other federal, state, and local regulations and permit requirements that may be required (for example, Hydraulic Project Approval [HPA] permits, Section 106 of the National Historic Preservation Act, U.S. Army Corps of Engineers Section 404 permits, National Pollution Discharge Elimination System permits). The applicant is responsible for complying with these requirements, apart from the process established in this Title.

17A.01.130 Best Available Science

Critical areas reports and decisions to alter critical areas shall be based on the most current best available science to protect the functions and values of critical areas in Kittitas County.

17A.01.150 Critical Areas Report Review and Determination

1. The director shall make a determination as to whether the proposed alteration or development and associated mitigation, if any, is consistent with the provisions of this Title. The director's determination shall be based on the following criteria:
 - a. The proposal minimizes the impact on critical areas in accordance with KCC 17A.01.100, Critical Areas Mitigation;
 - b. The proposal is consistent with the general purposes of this Title;
 - c. Any alterations permitted to the critical area(s) are mitigated in accordance with this Title's mitigation requirement sections depending on the type of critical area(s) impacted;

- d. 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
 - e. The proposal is consistent with other applicable regulations and standards.
- 2. The county may condition the proposed alteration or development as necessary to mitigate impacts to critical areas and to conform to the standards required by this Title.
- 3. **Determination.** The Director will determine if the proposed alteration or development meets the criteria in KCC 17A.01.150(1) and complies with the applicable provisions of this Title. The Director shall prepare a written notice of determination and identify any required conditions of approval.
 - a. If a proposed alteration or development is approved under this Title a notice of determination and conditions of approval shall be included in the project file, be considered in the next phase of the County's review of the proposed alteration or development in accordance with any other applicable codes and regulations, and shall be attached to the underlying permit or approval.
 - i. Any subsequent changes to the conditions of approval shall void the previous determination pending re-review of the proposal and conditions of approval by the director.
 - ii. A favorable determination should not be construed as endorsement or approval of any underlying permit or approval.
 - b. If a proposed alteration or development is rejected due to not adequately mitigating its impacts on the critical area(s) and/or does not comply with the criteria in KCC 17A.01.150(1), and the provisions of this Title, the Director shall prepare a written notice of the determination that includes findings of noncompliance.
 - i. No proposed alteration, development, or permit shall be approved or issued if it is determined that the proposed activity does not adequately mitigate its impacts on the critical area(s) and/or does not comply with the provisions of this Title.
 - ii. Upon receiving a notice of determination that includes findings of noncompliance, the applicant may request consideration of a revised critical areas report.
 - iii. If the revision is found to be substantial and relevant to the critical area review, the Director may reopen the critical area review and make a new determination based on the revised report.
- 4. The County's determination regarding critical areas pursuant to this Title shall be concurrent with the final decision to approve, condition, or deny the development proposal or other alteration involved.

17A.01.170 Enforcement

- 1. **Generally.** When a critical area or its buffer has been altered in violation of this Title, all ongoing development work shall stop, and the critical area and buffer shall be restored. The County 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 Title.
- 2. **Requirement for Restoration Plan.** All development work shall remain stopped until a restoration plan is prepared and approved by the County. Such a plan shall be prepared by a qualified professional using best available science and shall describe how the actions proposed meet the minimum requirements described below. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal. The County may consult with agencies of expertise to ensure plan adequacy.
- 3. **Minimum Performance Standards for Restoration**
 - a. For alterations to critical aquifer recharge areas, frequently flooded areas, wetlands, and fish and wildlife 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:

- i. The pre-violation structural and functional values shall be restored, including water quality, hydrology and habitat functions;
 - ii. The historic soil types and configuration of the altered area shall be replicated;
 - iii. The critical area and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species type and densities. The historic functions and values should be replicated at the location of the alteration; and
 - iv. Information demonstrating compliance with the requirements in KCC 17A.01.100 shall be submitted to the Director.
- b. For alterations to frequently flooded areas and geologically hazardous 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 safety can be obtained, these standards may be modified:
- i. The hazard shall be reduced to a level equal to, or less than, the pre-development hazard;
 - ii. Any risk of personal injury resulting from the alteration shall be eliminated or minimized; and
 - iii. The hazard area and buffers shall be replanted with native vegetation sufficient to minimize the hazard.
4. **Site Investigations.** The Director is authorized to make site inspections and take such actions as are necessary to enforce this Title, pursuant to KCC 18.01.060.
5. **Penalties.** Penalties for violating the provisions of this Title are specified in KCC 18.05.

17A.01.190 Severability

If any clause, sentence, paragraph, section, or part of this Title or the application thereof to any person or circumstances shall be judged by any court of competent jurisdiction to be invalid, such order or judgment shall be confined in its operation to the controversy in which it was rendered. The decision shall not affect or invalidate the remainder of any part thereof and to this end the provisions of each clause, sentence, paragraph, section, or part of this law are hereby declared to be severable.

Chapter 17A.02 DEFINITIONS

17A.02.010 Generally.

Certain terms and words used in this title are defined in the following sections. Words used in the present tense include the future; words in the singular number include the plural number; and words in the plural number include the singular number. The word "shall" is mandatory.

17A.02.020 Adjacent.

"Adjacent" to a critical area means the project area is located:

1. anywhere within the standard critical area buffer and/or standard building setback;
2. anywhere within three hundred (300) feet from a fish and wildlife habitat conservation area or wetland; or
3. anywhere within two hundred (200) feet from a critical aquifer recharge area.

17A.02.030 Agricultural Activities.

"Agricultural activities" means agricultural uses and practices including, but not limited to: Producing, breeding, or increasing agricultural products; rotating and changing agricultural crops; allowing land used for agricultural activities to lie dormant; allowing land used for agricultural activities to lie dormant as a result of adverse agricultural market conditions; allowing land used for agricultural activities to lie dormant because the land is enrolled in a local, state, or federal conservation program, or the land is subject to a conservation easement; maintaining, repairing, and replacing agricultural equipment; maintaining, repairing, and replacing agricultural facilities, provided that the replacement facility is no closer to the shoreline and/or critical area than the original facility; and maintaining agricultural lands under production or cultivation.

17A.02.040 Agricultural Activities, High Intensity.

"High intensity agricultural activities" are defined as: dairies, animal feed lots, nurseries, greenhouses, and like uses which are commercially operated.

17A.02.050 Agricultural Land.

"Agricultural land" means land primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by *RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production.

17A.02.060 Alluvial Fan.

"Alluvial fan" or "Alluvial fan hazard area" means a low, outspread, relatively flat-to- gentle sloping landscape surface composed of eroded alluvial materials deposited by a stream at the transitional area between valley floodplains and steep mountain slopes. Channel pattern in the alluvial fan is highly variable, often dependent on substrate size and age of the landform. Channels may change course frequently, resulting in a multi-branched stream network. Channels can also be deeply incised within highly erodible alluvial material.

17A.02.070 Alteration.

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

17A.02.080 Anadromous Fish.

“Anadromous Fish” means fish that spawn and rear in fresh water and migrate to the ocean to mature in the marine environment until returning to freshwater to spawn. In Kittitas County, these include Pacific salmon, steelhead, bull trout, and Pacific lamprey.

17A.02.090 Applicant.

“Applicant” means person who files an application for permit under this Title and who is either the owner of the land on which that proposed development would be located, a contract purchaser, or the authorized agent of such a person.

17A.02.100 Aquifer.

“Aquifer” means 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.

17A.02.102 Arborist.

“Arborist” is defined as a person with a minimum 2-year degree in arboriculture or equivalent discipline such as forestry, horticulture, or biology. Membership and certifications from International Society of Arboriculture as well as documented work experience may be substituted for formal degrees at the discretion of the Director.

17A.02.104 Area of Special Flood Hazard.

“Area of Special Flood Hazard” is defined as the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. Designation on maps always includes the letter A. Also referred to as "100-year floodplain" and "special flood hazard area."

17A.02.110 Avalanche Hazard.

“Avalanche Hazard” means an area susceptible to a large mass of snow or ice, sometimes accompanied by other material, moving rapidly down a mountain slope.

17A.02.120 Avulsion.

"Avulsion" means a sudden cutting off or separation of land by a flood breaking through a meander or by a sudden change in current whereby the stream deserts its old channel for a new one, such as occurs in Channel Migration Zones.

17A.02.125 Bank (of a water body)

“Bank” means any land surface landward of the ordinary high water line next to a body of water and constrains the water except during floods. The term "bank" also includes all land surfaces of islands within a body of water that are below the flood elevation of the surrounding body of water.

17A.02.130 Best Available Science.

“Best Available Science” means 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.

17A.02.140 Buffer.

“Buffer” means an area that is contiguous to and protects a critical area, and which is required for the continued maintenance, function, and/or structural stability of a critical area. 17A.02.150

Channel Migration Zone.

Channel migration zone (CMZ) means the area along a watercourse, but not always within the flood zone, within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings.

17A.02.155 Clearing.

"Clearing" means significant vegetation removal including the removal or alteration of trees, shrubs, and/or ground cover by grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

17A.02.160 Critical Aquifer Recharge Areas.

"Critical aquifer recharge areas" are areas with a critical recharging effect on aquifers used for potable water, including areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water, or is susceptible to reduced recharge.

17A.02.170 Critical Areas.

"Critical areas" include the following areas and ecosystems: (a) wetlands; (b) critical aquifer recharge areas; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas.

17A.02.200 Cumulative Impacts

"Cumulative Impacts" or "cumulative effects" means the combined, incremental effects of human activity on ecological or critical areas functions and values. Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of cumulative impact analysis and changes to policies and permitting decisions.

17A.02.210 Dam.

"Dam" means a barrier or controlling and appurtenant works across a stream or river that does or can confine, impound or regulate flow, or raise water levels for purposes such as flood or irrigation water storage, erosion control, power generation, or collection of sediment or debris.

17A.02.220 Development.

"Development" means 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 County 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:

1. Interior building improvements.
2. Exterior structure maintenance activities, including painting and roofing.
3. Routine landscape maintenance of established, ornamental landscaping, such as lawn mowing, pruning, and weeding.
4. Maintenance of the following legally 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.

17A.02.230 Director.

"Director" means the director of the Kittitas County Community Development Services or designee.

17A.02.240 Dry Well.

"Dry well" means a hole in the ground filled with gravel or rubble intended to receive treated or otherwise unpolluted drainage water and allow it to percolate into the ground. A dry well is typically engineered and designed to infiltrate individual home roof runoff in a subdivision.]

17A.02.250 Ecological Functions.

"Ecological functions" means the work performed or role played by the physical, chemical, and biological processes that contribute to the maintenance of aquatic and terrestrial environments that constitute the natural ecosystem.

17A.02.260 Emergency Activities.

"Emergency activities" means activities necessary to prevent an immediate threat to public health, safety, or welfare – or an immediate risk of damage to private property – that require remedial or preventative action in a timeframe too short to allow for compliance with the requirements of this Title.

17A.02.270 Enhancement.

"Enhancement" means actions performed within an existing degraded critical area and/or buffer to intentionally increase or augment one or more ecological functions or values of the existing area. Enhancement actions include, but are not limited to, increasing plant diversity and cover; increasing wildlife habitat and structural complexity (snags, woody debris); installing environmentally compatible erosion controls; removing non-indigenous plant or animal species; or removing human-made structures or fill that are degrading ecological functions or values.

17A.02.280 Erosion.

"Erosion" means the process whereby wind, rain, water, and other natural agents mobilize and transport particles of soil or rock.

17A.02.290 Erosion Hazard Areas.

"Erosion hazard areas" are areas containing soils that may experience significant erosion, including any or all of the following:

1. Soil areas identified by the Natural Resources Conservation Service as having "severe" or "very severe" erosion hazard; or
2. Slopes forty percent (40%) or steeper with a vertical relief of ten (10) or more feet, except areas composed of consolidated rock; or
3. Concave slope forms equal to or greater than fifteen percent (15%) with a vertical relief of ten (10) or more feet, except areas composed of consolidated rock; or
4. Channel migration zones.]

17A.02.300 Feasible.

"Feasible" means, for the purpose of this Title, that an action, such as a development activity, mitigation, or preservation requirement, meets all of the following conditions:

1. The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;
2. The action provides a reasonable likelihood of achieving its intended purpose;
3. The action does not physically preclude achieving the activity's primary intended legal use; and
4. In cases where these guidelines require certain actions unless they are infeasible, the burden of proving infeasibility is on the applicant. In determining an action's infeasibility, the

reviewing agency may weigh the action's relative public costs and public benefits, considered in the short- and long-term time frames.

17A.02.310 Feedlot.

"Feedlot" means the use of structures or pens for the concentrated feeding or holding of animals or poultry including, but not limited to, horses, cattle, sheep or swine. This definition includes dairy confinement areas, slaughterhouses, shipping terminal holding pens, poultry and/or egg production facilities and fur farms, but does not include animal husbandry and normal farming practices.

17A.02.320 Fill.

"Fill" means any solid or semi-solid material that when placed, changes the grade or elevation of the receiving site, including the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the ordinary high water mark (OHWM), in wetlands, or on shorelands in a manner that raises the ground surface elevation or creates dry land.

17A.02.330 Fish and Wildlife Habitat Conservation Areas. "Fish and wildlife habitat conservation areas" are areas that serve a critical role in sustaining needed habitats and species for the functional integrity of the ecosystem, and which, if altered, may reduce the likelihood that the species will persist over the long term. These areas may include, but are not limited to, rare or vulnerable ecological systems, communities, and habitat or habitat elements including seasonal ranges, breeding habitat, winter range, and movement corridors; areas with high relative population density or species richness; and also, locally important habitats and species designated by the County, and state priority habitats and species as identified by the WA Department of Fish and Wildlife. "Fish and wildlife habitat conservation areas" do not include artificial features or constructs created in what were originally upland areas, such as irrigation delivery systems, irrigation infrastructure, irrigation canals, or drainage ditches that lie within the boundaries of and are maintained by a port district or an irrigation district or company.

17A.02.340 Floodplain.

"Floodplain" is synonymous with one hundred-(100)-year floodplain and means that land area susceptible to inundation with a one percent (1%) chance of being equaled or exceeded in any given year. The limit of this area shall be based upon flood ordinance regulation maps or a reasonable method which meets the objectives of the act.

17A.02.340 Floodway.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

17A.02.345 Forester.

"Forester" is defined as a person with a minimum 2-year degree in forestry or equivalent discipline such as arboriculture, horticulture, or biology. Membership and certifications from International Society of American Foresters as well as documented work experience may be substituted for formal degrees at the discretion of the Director.

17A.02.347 Forest Land

"Forest land" means all land which is capable of supporting a merchantable stand of timber and is not being actively used for a use which is incompatible with timber growing. Forest land does not include agricultural land that is or was enrolled in the conservation reserve enhancement program by contract if such agricultural land was historically used for agricultural purposes and the landowner intends to continue to use the land for agricultural purposes in the future.

17A.02.350 Frequently Flooded Areas.

"Frequently flooded areas" means lands in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year, or within areas subject to flooding due to high groundwater and those lands that provide important flood storage, conveyance, and attenuation functions. These areas include, but are not limited to, streams, rivers, lakes, wetlands, and areas where high groundwater forms ponds on the ground surface. As designated and classified determined by a local government in accordance with WAC 365-190-110. Classifications of frequently flooded areas include, at a minimum, the one hundred-(100)-year floodplain designations of the Federal Emergency Management Agency and the National Flood Insurance Program.

17A.02.360 Geologically Hazardous Areas.

"Geologically hazardous areas" means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

17A.02.370 Geotechnical Analysis or Geotechnical Report.

"Geotechnical analysis" or "geotechnical report" means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties. Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers or geologists who have professional expertise about the regional and local shoreline geology and processes.

17A.02.380 Grading.

"Grading" means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the existing contour of the land.

17A.02.390 Groundwater.

"Groundwater" means all the water that exists beneath the land surface or beneath the bed of any stream, lake or reservoir, or other body of surface water, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves.

17A.02.400 Habitats of Local Importance.

"Habitats of local importance" designated as fish and wildlife habitat conservation areas include those areas found and/or designated to be locally important by the County.

17A.02.405 Hazard Tree.

"Hazard Tree" means a tree with a structural defect, combination of defects or disease resulting in a structural defect that, under the normal range of environmental conditions at the site, will result in the loss of a major structural component of the tree in a manner that will:

- (1) Damage a residential structure or accessory structure, or a place of employment or public assembly;

- (2) Damage an approved road, utility, or public facility;
- (3) Prevent emergency access in the case of medical hardship; or
- (4) Endanger pedestrians or users of a recreational area

17A.02.406 Hazard Tree Determination Report.

"Hazard Tree Determination Report" means a written document prepared by an arborist or forester containing the following elements:

1. Parcel, address, and name of landowner of site where tree(s) are located,
2. Description of size, health, and species of tree(s) evaluated,
3. Description of factors related to potential impacts to human health or structures posed by evaluated tree(s),
4. Alternative methods (pruning, cabling, etc.) considered,
5. Location of nearby critical areas (wetlands, streams, steep slopes, landslides, floodplains, shorelines, etc.),
6. Proposed methods for removal,
7. Size and species of replacement trees, if any,
8. Site map showing parcel lines, structures, evaluated trees, critical areas, utilities, and other pertinent information described in the report,
9. Date of field evaluation and signature of arborist or forester,
10. Qualifications of arborist or forester authoring the report.

17A.02.410 Hazardous Substances.

"Hazardous Substances" means 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.

17A.02.430 Hydric Soil.

"Hydric soil" means a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part.

17A.02.440 Hyporheic Zone.

"Hyporheic zone" means 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.

17A.02.450 Impervious Surface.

"Impervious Surface" means a hard surface area which either prevents or retards the entry of water into the soil surface and subsoils, such as would occur under natural conditions prior to development, or which causes water to run off the surface in greater quantities or at an increased rate of flow relative to natural conditions prior to development. Common impervious surfaces include, but are not limited to: rooftops, walkways, patios, driveways, parking lots, 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.

17A.02.460 In-Stream Structure.

"In-stream structure" is a human-made structure placed within a stream or river waterward of the ordinary high water mark that either causes or has the potential to cause water impoundment, or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

17A.02.470 Landslide Hazard Areas.

"Landslide hazard areas" are areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten (10) feet of vertical relief. Potential landslide hazard areas include but are not limited to the following areas:

1. Areas designated as quaternary slumps, earth-flows, mudflows, or landslides on maps published by the U.S. Geological Survey or Washington State Department of Natural Resources.
2. Areas with all three (3) of the following characteristics:
 - a. Slopes steeper than fifteen percent (15%);
 - b. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 - c. Springs or groundwater seepage.
3. Areas that have shown movement and/or are underlain or covered by mass wastage debris;
4. Slopes that are parallel or sub-parallel to planes of weakness (which may include but not be limited to bedding planes, soft clay layers, joint systems, and fault planes) in subsurface materials;
5. Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;
6. Areas that show evidence of, or are at risk from snow avalanches; and
7. 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 competent bedrock.
8. Potentially unstable slopes resulting from river erosion or undercutting.
9. Areas that show past sloughing or calving of sediment or rocks resulting in a steep slope that is poorly vegetated.
10. Deep-seated landslide areas characterized by one or more of the following features, which may be evident in aerial images, topographic maps, LiDAR imagery or on the ground:
 - a. scalloped ridge crests at the top of the slope,
 - b. crescent shaped depressions,
 - c. head scarps,
 - d. side scarps,
 - e. ponds or sag areas on mid slopes,
 - f. benches and scarps on mid slope areas,
 - g. hummocky ground,
 - h. linear fractures in the ground.
11. Areas below unstable slopes or that have been identified as landslide hazard areas that could be impacted by landslide run out.
12. Areas above or adjacent to unstable slopes that could be impacted if the landslide area expands.

17A.02.480 Mine Hazard Areas.

“Mine hazard areas” are areas underlain by abandoned mine shafts, secondary passages between shaft tunnels, or air vents. Mine hazards include subsidence, which is the uneven downward movement of the ground surface caused by underground workings caving in; contamination to ground and surface water from tailings and underground workings; concentrations of lethal or noxious gases; and underground fires.

17A.02.490 Mining.

"Mining" means the removal of sand, gravel, soil, minerals, and other earth materials for commercial and other uses. Mining does not include mineral prospecting conducted according to the most current WAC for mineral prospecting under the hydraulic code.

17A.02.500 Mitigation Sequencing.

"Mitigation Sequencing" means a process used to guide mitigation decisions and determine the type and level of mitigation required. It follows a three (3) step process, described in 17A.01.100:

- 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 during the life of the action;
- e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
- f. Monitoring the impact and taking appropriate corrective measures.

17A.02.510 Monitoring.

“Monitoring” means evaluating the impacts of proposed developments 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.

17A.02.520 Native Growth Protection Area.

“Native growth protection area” means 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 plant and animal habitat.

17A.02.530 Native Vegetation.

“Native Vegetation” means plant species that are indigenous to the area in question.

17A.02.540 Naturally Occurring Ponds.

“Naturally occurring ponds” means those ponds and their submerged aquatic beds that provide fish or wildlife habitat, including those artificial ponds intentionally created in upland areas for mitigation purposes. Naturally occurring ponds do not include ponds deliberately designed and created in

upland sites for purposes other than mitigation, such as irrigation canals, detention facilities, wastewater treatment facilities, farm ponds, temporary construction ponds, and landscape amenities.

17A.02.550 Nonconformity.

“Nonconformity” means a legally established existing use or legally constructed structure that is not in compliance with the current regulations.

17A.02.560 Ordinary High Water Mark (OHWM).

"Ordinary high water mark (OHWM)" on all lakes, streams, and tidal water means that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the Washington State Department of Ecology; provided that in any area where the OHWM cannot be found, the OHWM adjoining salt water shall be the line of mean higher high tide and the OHWM adjoining freshwater shall be the line of mean high water.

17A.02.570 Permeability.

“Permeability” means 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.

17A.02.590 Priority Habitat.

“Priority habitat” means a 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 be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (e.g., oak woodlands, juniper savanna). A priority habitat may also be described by a successional stage (e.g., old growth and mature forests). Alternatively, a priority habitat may consist of a specific habitat feature (e.g., talus slopes, caves, snags) of key value to fish and wildlife.

17A.02.600 Priority Species.

"Priority species" means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species include State Endangered, Threatened, Sensitive, and Candidate species; animal aggregations (e.g., heron colonies, bat colonies) considered vulnerable; and species of recreational, commercial, or tribal importance that are vulnerable. A species identified and mapped as priority species fit one or more of the following criteria:

1. Criterion 1. State-Listed and Candidate Species:

State-listed species are native fish and wildlife species legally designated as Endangered (WAC 232-12-014), Threatened (WAC 232-12-011), or Sensitive (WAC 232-12-011). State Candidate species are fish and wildlife species that will be reviewed by the department (POL-M-6001) for possible listing as Endangered, Threatened, or Sensitive according to the process and criteria defined in WAC-232-12-297.

2. Criterion 2. Vulnerable Aggregations:

Vulnerable aggregations include species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to aggregate. Examples include heron rookeries, seabird concentrations, marine mammal haulouts, shellfish beds, and fish spanning and rearing areas.

3. Criterion 3. Species of Recreational, Commercial, and/or Tribal Importance:

Native and non-native fish and wildlife species of recreational or commercial importance, and recognized species used for tribal ceremonial and subsistence purposes, whose biological or ecological characteristics make them vulnerable to decline in Washington or that are dependent on habitats that are highly vulnerable or are in limited availability.

17A.02.610 Public Facilities.

"Public facilities" include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

17A.02.620 Qualified Professional.

"Qualified professional" means a person with experience and training in the applicable field or critical area. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, soil science, botany, engineering, environmental studies, fisheries, geology or related field, and a minimum of 2 years of related work experience. Other equivalently qualified professionals may be approved by the Director on a case by case basis.

1. A qualified professional for wetlands and fish and wildlife habitat conservation areas must have a degree in biology, soil science, botany or related fields and relevant professional experience or professional certification (Professional Wetland Scientist Certification) that documents capability in functional assessment and mitigation techniques. For wetlands, Professional Wetland Scientist Certification, or other documentation of expertise, is required.
2. A qualified professional for preparing Geologically Hazardous Area Assessments must be a professional geologist or engineering geologist licensed in the State of Washington.
3. Engineered structures for mitigation of geologic hazards must be designed by a qualified professional engineer or engineering geologist, licensed in the State of Washington.
4. A qualified professional for critical aquifer recharge areas must be a professional hydrogeologist licensed in the State of Washington, who is trained and qualified to analyze geologic, hydrologic, and groundwater flow systems.

17A.02.630 Rehabilitation.

"Rehabilitation" means a type of restoration action intended to repair natural or historic functions and processes. Rehabilitation activities could involve breaching a dike to reconnect wetlands to a floodplain or other activities that restore the natural water regime.

17A.02.640 Repair or Maintenance.

"Repair or maintenance" means 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/or which drain, dredge, fill, flood, or otherwise alter critical areas are not included in this definition.

17A.02.650 Restore or Restoration.

"Restore," "restoration" or "ecological restoration" means repairing environmental damage to a condition equivalent to the pre-impact condition, or upgrading of impaired critical area processes or functions. This may be accomplished through measures including, but not limited to, re-vegetation, removal of intrusive stream bank structures, or removal or treatment of toxic materials. Restoration does not imply a requirement for returning the critical area to aboriginal or pre-European settlement conditions.

17A.02.660 Riparian.

"Riparian" areas are transitional between terrestrial and aquatic ecosystems and are distinguished by gradients in biophysical conditions, ecological processes, and biota. They are areas through which surface and subsurface hydrology connect waterbodies with their adjacent uplands. They include those portions of terrestrial ecosystems that significantly influence exchanges of energy and matter with aquatic ecosystems (i.e., a zone of influence).

17A.02.665 Riparian Management Zone(s)

"Riparian management zone(s)" or "RMZ(s)" is a scientifically based description of the area adjacent to rivers and streams (see "riparian") based on the site potential tree height conceptual framework. It is the area that has the potential to provide full ecological function for bank stability, shade, pollution removal, contributions of detrital nutrients, and recruitment of large woody debris.

17A.02.670 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.

17A.02.680 Setback.

"Setback" means the distance a building or structure is placed from a specified limit such as a lot line or a critical area buffer.

17A.02.690 Shorelines of the State.

"Shorelines" means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the lands underlying them; except (i) shorelines of statewide significance; (ii) shorelines on segments of streams upstream of a point where the mean annual flow is twenty cubic feet per second (20 cfs) or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty (20) acres in size and wetlands associated with such small lakes.

17A.02.700 Shorelines of Statewide Significance.

"Shorelines of statewide significance" means the shorelines identified in RCW 90.58.030 which because of their elevated status require the optimum implementation of the Shoreline Management Act's policies. This includes all rivers with a mean annual flow of greater than two hundred cubic feet per second (200 cfs) and lakes with surface areas of one thousand (1,000) acres or more.

17A.02.710 Shrub-Steppe. "Shrub-Steppe" is a nonforested vegetation type consisting of one or more layers of perennial bunchgrasses and a conspicuous but discontinuous layer of shrubs (see Eastside Steppe for sites with little or no shrub cover). Although Big Sagebrush (*Artemisia tridentata*) is the most widespread shrub-steppe shrub, other dominant (or co-dominant) shrubs include Antelope Bitterbrush (*Purshia tridentata*), Threetip Sagebrush (*A. tripartita*), Scabland Sagebrush (*A. rigida*), and Dwarf Sagebrush (*A. arbuscula*). Dominant bunchgrasses include (but

are not limited to) Idaho fescue (*Festuca idahoensis*), Bluebunch Wheatgrass (*Pseudoroegneria spicata*), Sandberg Bluegrass (*Poa secunda*), Thurber's Needlegrass (*Achnatherum thurberianum*), and Needle-and-Thread (*Hesperostipa comata*). In areas with greater precipitation or on soils with higher moisture-holding capacity, shrub-steppe can also support a dense layer of forbs (i.e., broadleaf herbaceous flora). Shrub-steppe contains various habitat features, including diverse topography, riparian areas, and canyons. Another important component is habitat quality (i.e., degree to which a tract resembles a site potential natural community), which may be influenced by soil condition and erosion; and the distribution, coverage, and vigor of native shrubs, forbs, and grasses. Sites with less disturbed soils often have a layer of algae, mosses, or lichens. At some more disturbed sites, non-natives such as Cheatgrass (*Bromus tectorum*) or Crested Wheatgrass (*Agropyron cristatum*) may be co-dominant species. Fire disturbance is an ecological component of shrub-steppe. Shrub-steppe disturbed by fire may lack the aforementioned habitat components during periods of post-fire recovery

17A.02.715 Site Potential Tree Height (SPTH)

"Site Potential Tree Height" or "SPTH" is the average maximum height of the tallest dominant trees (200 years or more in age) for a given area.

17A.02.720 Soft Armoring.

"Soft armoring" means stream bank erosion control practices using predominantly natural materials in a design that minimizes impacts to natural processes. This term is frequently used in reference to bioengineering.

17A.02.730 Species of Local Importance.

"Species of local importance" are those species that are of local concern due to their population status or their sensitivity to habitat alteration or that are game species.

17A.02.740 Streams

"Streams" see definition for "Watercourse"

17A.02.750 Stream or Water Type

"Stream or Water Types" are fully defined in WAC 222-16-030. An abbreviated definition is provided below, but the full WAC definition is adopted and applies:

1. "Type S Water" means all designated "shorelines of the state".
2. "Type F Water" means streams other than Type S Waters that contain fish habitat or are diverted for certain kinds of domestic use or for use by fish hatcheries.
3. "Type Np Water" means streams that are perennial nonfish habitat streams.
4. "Type Ns Water" means streams that are seasonal, nonfish habitat streams, which are physically connected by an above-ground channel system to Type S, F, or Np Waters.

17A.02.760 Structure.

"Structure" means a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels.

17A.02.770 Unavoidable.

"Unavoidable" means adverse impacts that remain after all appropriate and practicable avoidance and minimization have been achieved.

17A.02.780 Volcanic Hazard Areas.

Volcanic hazard areas are subject to pyroclastic flows, lava flows, debris avalanche, inundation by debris flows, mudflows, or related flooding resulting from volcanic activity. There are no active or dormant volcanoes located within Kittitas County; however, Mount Rainier and Mount St. Helens are relatively near. Hazards to Kittitas County residents from these volcanoes are limited to ash deposition.

17A.02.790 Watercourse.

"Watercourse," "river" or "stream" means any portion of a stream or river channel, bed, bank, or bottom waterward of the ordinary high water line of waters of the state. Watercourse also means areas in which fish may spawn, reside, or pass, and tributary waters with defined bed or banks that influence the quality of habitat downstream. Watercourse also means waters that flow intermittently or that fluctuate in level during the year, and the term applies to the entire bed of such waters whether or not the water is at peak level. A watercourse includes all surface-water-connected wetlands that provide or maintain habitat that supports fish life. This definition does not include irrigation ditches, canals, stormwater treatment and conveyance systems, or other entirely artificial watercourses, except where they exist in a natural watercourse that has been altered by humans..

17A.02.800 Water Quality.

"Water quality" means the physical characteristics of water, including water quantity, hydrological, physical, chemical, aesthetic, recreation-related, and biological characteristics.

17A.02.810 Water System.

"Water system" means any system providing water intended for, or used for, human consumption, domestic uses, or commercial businesses. It includes, but is not limited to, the source, purification, storage, transmission, pumping, irrigation, and distribution facilities.

17A.02.820 Waters of the State.

"Waters of the state" means lakes, rivers, ponds, streams, inland waters, underground waters, and all other surface watercourses within the jurisdiction of the state of Washington, as classified in WAC 222-16-030.

17A.02.830 Wellhead Protection Area.

"Wellhead protection area" means the portion of a well's, wellfield's, or spring's zone of contribution within the ten-year time of travel boundary, or boundaries established using alternate criteria approved by the state Department of Health in those settings where groundwater time of travel is not a reasonable delineation criteria.

17A.02.840 Wetland.

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

Chapter 17A.03
CRITICAL AQUIFER RECHARGE AREAS (CARAs)

Sections:

- 17A.03.010 Purpose and Intent.
- 17A.03.020 Classification, Designation, and Mapping.
- 17A.03.030 Applicability.
- 17A.03.040 Protection Standards.
- 17A.03.050 Reporting.

17A.03.010 Purpose and Intent.

The purpose of this chapter is to protect critical aquifer recharge areas from degradation resulting from alterations and development. It is the intent of this chapter to safeguard groundwater resources against contaminants from alterations and development.

17A.03.020 Designation, and Mapping.

1. **Classification and Designation.** Critical aquifer recharge areas are areas of unconsolidated deposits within the Roslyn and Kittitas Basins, and all Group A well head protection areas, as shown on the County's critical areas maps. All projects proposing uses listed in 17A.03.030 that are within the unconsolidated deposits within the Kittitas and Roslyn basins, or within a Group A wellhead protection area shall be reviewed for potential hazards to groundwater.
2. **Mapping.** The designated Critical Aquifer Recharge Areas are mapped in the Kittitas County Critical Areas Ordinance Critical Aquifer Recharge Area Map. Permit reviews will be based on the mapped critical area designation shown on the critical areas maps..

17A.03.030 Applicability.

This chapter regulates the following uses when located in a critical aquifer recharge area:

1. Storage tanks;
2. Commercial vehicle repair, servicing, and salvaging facilities;
3. Reclaimed wastewater;
4. New landfills, including hazardous or dangerous waste, municipal solid waste, special waste, wood waste of more than two thousand (2,000) cubic yards, and inert and demolition waste landfills;
5. Injection wells used for disposal of waste products including, but not limited to, stormwater discharge, hazardous or radioactive waste, or industrial waste;
6. Wood treatment facilities that allow any portion of the treatment process to occur over permeable surfaces (both natural and manmade);
7. Commercial coal,ore mining operations, and natural gas exploration and extraction;
8. Facilities that store, process, or dispose of chemicals containing perchloroethylene (PCE) or methyl tertiary butyl ether (MTBE) or other chemicals with the potential to contaminate groundwater;
9. Dairy farms and feedlots;
10. Man-made stormwater detention or infiltration ponds, manure lagoons, and irrigation ponds; and
11. Any other alteration or development that the Director determines – based on best available science– is likely to have a significant adverse impact on ground water.

1. 17A.03.040 Protection Standards.**Storage tanks.** Aboveground and underground storage tanks or vaults used for the storage of hazardous substances, animal wastes, sewage sludge, fertilizers, other chemical or biological hazards, dangerous wastes as defined in WAC Chapter 173-303, or any other substances, solids, or liquids in quantities identified by

Kittitas County Public Health as a risk to groundwater quality, shall be designed and constructed to:

- a. Prevent the release of such substances to the ground, ground waters, or surface waters;
 - b. Include an impervious containment area with a volume greater than the volume of the storage tank or vault to avoid an overflow of the containment area;
 - c. Provide for release detection;
 - d. Provide written spill response and spill notification procedures to the local fire district;
 - e. Use material in the construction or lining of the storage containment area which is compatible with the substance to be stored to protect against corrosion or leakage, or otherwise designed in a manner to prevent the release or threatened release of any stored substance; and
 - f. Comply with WAC 173-303 and 173-360 as well as International Building Code requirements.
2. **Commercial vehicle repair, servicing, and salvaging facilities.** Vehicle repair and servicing activities shall 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, servicing, and salvaging must be stored in a manner that protects them from weather and provides containment should leaks occur. Dry wells shall not be allowed on sites used for vehicle repair, servicing, and salvaging. Dry wells existing on the site prior to facility establishment must be abandoned using techniques approved by the Washington State Department of Ecology prior to commencement of the proposed development.
3. **Reclaimed wastewater.** Use of reclaimed wastewater must be in accordance with adopted water or sewer comprehensive plans that have been approved by Ecology.
4. **Other regulated uses.** Protection standards for other uses regulated under KCC 17A.03.030 shall be based on analysis and recommendations contained in the hydrogeologic reports required for specific projects.

17A.03.050 Reporting.

1. **When required.** Except for storage tanks, all uses listed in KCC 17A.03.030 require County review and approval of a special hydrogeological assessment prepared by a qualified professional.
2. **Contents.** The hydrogeological assessment shall include the general critical areas report requirements of KCC 17A.01.080 in addition to the following:
 - a. Geologic setting and soils information for the site and surrounding area;
 - b. Water quality data, including pH, temperature, dissolved oxygen, conductivity, nitrates, and bacteria;
 - c. Location and depth of perched water tables;
 - d. Recharge potential of site (permeability/transmissivity);
 - e. Hydrologic budget;
 - f. Local groundwater flow, direction, and gradient;
 - g. Location, depth, and other water quality data on the three (3) shallowest wells or springs located within one thousand (1,000) feet of the site;
 - h. Potential impacts to wellhead protection areas located within the site;
 - i. Surface water locations within one thousand (1,000) feet of the site;
 - j. Discussion of the effects of the proposed development on groundwater quality and quantity;
 - k. Recommendations on appropriate mitigation, if any, to assure that there shall be no measurable exceedance of minimum state groundwater quality standards or measurable reduction in available quantity of groundwater;
 - l. Emergency management plan; and

m. Containment release detection.

Chapter 17A.04
FISH AND WILDLIFE HABITAT CONSERVATION AREAS

Sections:

- 17A.04.010 Purpose and Intent.
- 17A.04.020 Designation, Mapping.
- 17A.04.030 Buffers.
- 17A.04.040 General Protection Standards.
- 17A.04.050 Permitted Alterations and Development.
- 17A.04.060 Reporting.
- 17A.04.070 Mitigation Requirements.

17A.04.010 Purpose and Intent.

The purpose of this chapter is to identify, designate, and protect regulated critical fish and wildlife species and habitats, including anadromous species and their habitats, consistent with best available science.

17A.04.020 Designation, and Mapping, and Classification.

1. **Designation.** Fish and wildlife habitat conservation areas include:
 - a. Waters of the state.
 - b. Areas with which federally-designated endangered, threatened, and sensitive fish and wildlife species have a primary association. The U.S. Fish and Wildlife Service and the National Marine Fisheries Service should be consulted for current federal listing status.
 - c. Areas with which state-designated endangered, threatened, and sensitive fish and wildlife species have a primary association. The Washington State Department of Fish and Wildlife should be consulted for current state listing status.
 - d. **State priority habitats and areas associated with state priority species.** The state Department of Fish and Wildlife should be consulted for current listing of priority habitats and species.
 - e. **Habitats and species of local importance.** Kittitas County recognizes that the priority habitats and species designated by the Washington Department of Fish and Wildlife that occur within the County are locally important and are hereby designated as habitats and species of local importance.
 - f. Naturally occurring ponds smaller than twenty (20) acres.
 - g. Lakes, ponds, streams, and rivers planted with game fish by a government or tribal entity.
 - h. **State natural area preserves, natural resource conservation areas.** Natural area preserves and natural resource conservation areas are defined, established, and managed by the Washington State Department of Natural Resources.
 - i. **State wildlife areas.** State wildlife areas are defined, established, and managed by the Washington State Department of Fish and Wildlife.
2. **Mapping.** The approximate location and extent of fish and wildlife habitat conservation areas are shown on the County's critical area maps or other BAS sources, such as the WDFW Priority Habitats and Species maps, the United States Fish and Wildlife Service, and the NOAA Fisheries critical habitat maps. These maps are to be used as a guide and do not provide definitive information about fish and wildlife habitat conservation area size or presence. Fish and wildlife habitat conservation areas may exist that do not appear on the maps. The County shall update the maps periodically as new fish and wildlife habitat conservation areas are identified and as new information becomes available.

3. **Habitat boundary survey.** If the Director determines that a fish and wildlife habitat conservation area may be present within the project vicinity, he/she may require the habitat area to be delineated and/or mapped by a qualified professional who is knowledgeable about fish and wildlife habitat conservation areas within Kittitas County, or confirmed by the Washington Department of Fish and Wildlife. The existing maps showing the locations of fish and wildlife habitat conservation areas are coarse-scaled, and for planning purposes only. A survey performed by a qualified biologist may be necessary to determine the precise boundary of a habitat area. Unless otherwise defined in this Chapter, the boundary of aquatic habitats shall be the ordinary high water mark of the waterbody. The management recommendations for Washington's priority habitats and species or federal equivalent should be used as a tool for identifying and delineating fish and wildlife habitat boundaries. The County may waive this requirement if there is adequate information available on the area proposed for development to determine the impacts of the proposed development and appropriate mitigating measures.
4. **Waters of the state classification.** For purposes of this Chapter, Kittitas County hereby adopts the water typing system specified in WAC 222-16-030, as described below:
 - a. **Type S:** all waters, within their ordinary high water mark, meeting the criteria as "shorelines of the state" and "shorelines of statewide significance" under RCW Chapter 90.58. The current list of Shoreline waters, along with their specific shorelines environments, is provided in the Kittitas County Shoreline Master Program (KCC Title 17B). Type S streams and lakes are protected by the Shoreline Master Program, rather than through this Title.
 - b. **Type F:** segments of natural waters other than Type S Waters, which are within the bankfull widths of defined channels and periodically inundated area of their associated wetlands, or within lakes, ponds, or impoundments having a surface area of 0.5 acre or greater at seasonal low water and which in any case contain fish habitat.
 - c. **Type Np:** all segments of natural waters within the bankfull width of defined channels that are perennial non-fish habitat stream. Perennial stream waters do not go dry any time of a year of normal rainfall. However, for the purpose of water typing, Type Np Waters include the intermittent dry portions of the perennial channel below the uppermost point of perennial flow.
 - d. **Type Ns:** All segments of natural waters within the bankfull width of the defined channels that are not Type S, F, or Np waters. These are seasonal, non-fish habitat streams in which surface flow is not present for at least some portion of a year of normal rainfall and are not located downstream from any stream reach that is a Type Np, F or S Water. Ns Waters must be upstream from and physically connected by an above-ground channel system to Type S, F, or Np Waters. *[WAC 222-16-030]*

17A.04.030 Riparian Management Zones and Buffers.

1. **Purpose.** Riparian Management Zones (RMZs) and Buffers shall be established and maintained to protect fish and wildlife habitat conservation areas. RMZs refer to areas established and maintained to protect streams. Buffers refer to areas established and maintained to protect nonaquatic fish and wildlife habitat conservation areas.
2. **Measurement.** RMZs for streams shall be measured in all directions from the ordinary high water mark (OHWM) as identified in the field. Building setbacks (17A.01090.5) are in addition to RMZs and buffers and are measured outward from the edge of the RMZ or buffer boundary. (See 17A.04.030(8) for information regarding nonaquatic fish and wildlife habitat conservation area buffers.)
3. **RMZ and Buffer Condition.** RMZs and buffers shall be maintained in a predominantly well-vegetated and undisturbed condition to ensure that they perform their intended function of

protecting the FWHCA. Tree removal is prohibited in RMZs and FWHCA buffers other than in accordance with 17A.01.050.3.j.

4. **Standard Riparian Management Zones for Waters of the State.**

Table 17A.04.030-4 Standard RMZ Widths
Kittitas County Nonshoreline Rivers, Streams, Lakes and Ponds
(does not include building setback [KCC 17A.01.090.5])

Stream Type	Riparian Management Zone Widths ^{1,2}	
	Cascade Ecoregion (feet)	Columbia Plateau Ecoregion (feet)
Type S (Shoreline)	See the SMP	See the SMP
Type F	150	100
Type Np	100	65
Type Ns	50	40

¹ Interrupted RMZs: When a fish and wildlife habitat conservation area RMZ contains an existing legally established public or private road, the Director may allow an alteration or development on the landward side of the road provided that the alteration or development will not have a detrimental impact to the habitat area. The Director may require a habitat management plan if – after considering the hydrologic, geologic, and/or biological habitat connection potential and the extent and permanence of the buffer interruption – such a plan is deemed necessary to confirm the lack of detrimental impact on the habitat area.

² Multiple RMZs: In the event that RMZs for any fish and wildlife habitat conservation area are contiguous or overlapping, the most protective of the collective RMZs shall apply.

³ The Cascade and Columbia Plateau Ecoregions are derived from the Water Resource Inventory Areas (WRIA) 38, 39, and 40 ecoregion boundaries. The Cascade Ecoregion includes North Cascades, Cascades, and Eastern Cascade Slopes and Foothills ecoregions. The Columbia Plateau Ecoregion includes the shrub-steppe ecoregion known as the Columbia Plateau.

5. **Increased RMZs.** The Director shall increase the fish and wildlife habitat conservation area RMZ width where the standard RMZ is inadequate to prevent significant adverse environmental impacts or to address hazards associated with the site or the proposed alteration or development. The Director may increase the buffer up to a maximum of two times the standard width. The Director shall consider increasing the RMZ when any of the following conditions are present:
- a. The composition, quality and density of the buffer vegetation is insufficient to protect the habitat area;
 - b. There is evidence of historical or current susceptibility to severe erosion, channel instability, or aggrading;
 - c. There are multiple channels or islands present; or
 - d. The land adjacent to the ordinary high water mark and extending throughout the standard habitat buffer is steeply sloped (greater than forty percent (40%) slope) and there are no designated landslide hazards such that an increased buffer may be required to protect ecological functions.

6. **Riparian Management Zone or Buffer averaging.** The Director may allow averaging of the standard RMZ or buffer widths of fish and wildlife habitat sites in accordance with an approved habitat management plan on a case-by-case basis. With RMZ or buffer averaging, the RMZ or buffer width is reduced in one location and increased in another location to maintain the same overall standard area. Proposals for RMZ or buffer averaging shall meet all the following:
 - a. The Fish and wildlife habitat conservation area RMZ or buffer has not been averaged or reduced by any prior actions administered by Kittitas County;
 - b. No feasible site design could be accomplished without buffer averaging;
 - c. The RMZ or buffer averaging will not reduce habitat functions or adversely affect anadromous fish habitat;
 - d. The minimum width of the RMZ or buffer at any given point is at least seventy-five percent (75%) of the standard width, or thirty (30) feet, whichever is greater; and
 - e. The area that is added to the RMZ or buffer to offset the reduction is well-vegetated or will be densely planted with native vegetation along with monitoring and management to ensure that it becomes so. The Director may require such native vegetation enhancement if needed to ensure this criterion is met.

8. **Buffers for non-aquatic habitats.** Appropriate site- and species-specific buffers for nonaquatic fish and wildlife habitat conservation areas shall be based upon best available science, and recommendations by the Washington Department of Fish and Wildlife or a qualified professional biologist. Buffers will be measured in all directions from the habitat boundary, as mapped by the Washington State Department of Fish and Wildlife or qualified professional pursuant to 17A.04.020 and verified by the Director.
 - a. Interrupted Buffers: When a fish and wildlife habitat conservation area buffer contains an existing legally established public or private road and/or a legally established development which creates a significant interruption of buffer function, the Director may allow an alteration or development on the opposite side of the road from the habitat area provided that the actions will not have a detrimental impact to the habitat area. The Director may require a habitat management plan if – after considering the hydrologic, geologic, and/or biological habitat connection potential and the extent and permanence of the buffer interruption – such a plan is deemed necessary to confirm the lack of detrimental impact on the habitat area.
 - b. Multiple buffers: In the event that buffers for any fish and wildlife habitat conservation area or other critical area (including RMZs) are contiguous or overlapping, the most protective of the collective buffers shall apply.

17A.04.040 General Protection Standards.

1. **Alterations.** All alterations and development shall be prohibited from fish and wildlife habitat conservation areas and their buffers, except in accordance with this Title. A fish and wildlife habitat conservation area, RMZ, or buffer may be altered only if the proposed alteration of the habitat and/or any required compensatory mitigation does not degrade the functions and values of the habitat.
2. **Mitigation requirement.** Mitigation of alterations to fish and wildlife habitat conservation areas and their buffers shall meet the requirements of KCC 17A.04.030.
3. **Anadromous fish.** All alterations and development proposed to be located in aquatic fish and wildlife habitat conservation areas used by anadromous fish or in areas that affect such aquatic habitat areas shall give special consideration to the preservation and enhancement of anadromous fish habitat, including, but not limited to, adhering to the following standards:
 - a. An alternative alignment or location for the alteration or development is not feasible;

- b. The alteration or development is designed so that it will not degrade the functions or values of the fish habitat or other critical areas;
 - c. Stream bank erosion control measures shall be designed to use bioengineering methods or soft armoring techniques, according to the WDFW Integrated Stream Bank Protection Guidelines (WDFW, 2003) (an approved habitat management plan, and
 - d. Any impacts to the functions or values of the aquatic fish and wildlife habitat conservation area are mitigated in accordance with a habitat management plan.
4. Timing restrictions.
- a. **Fish.** In-water work alteration or development shall be timed to occur only during the allowable work window as designated by the Washington State Department Fish and Wildlife (WDFW) for the applicable species and aquatic fish and wildlife habitat conservation area type.
 - b. **Wildlife.** The County shall impose limitations on construction activities during breeding and/or nesting periods for priority species when necessary to protect the species and avoid adverse impacts. Appropriate timing restrictions for wildlife species shall be based upon best available science and WDFW recommendations.

17A.04.050 Permitted Alterations and Development.

The following alterations and development may be permitted in fish and wildlife habitat conservation areas and/or their riparian management zones or buffers when all feasible measures have been taken to avoid and mitigate adverse effects on species and habitats and a net loss of habitat functions will not occur.

1. **Clearing and grading.** When clearing and grading is permitted in a fish and wildlife habitat conservation area or its associated RMZ or buffer as part of an authorized alteration or development or as other allowed in these standards, the following shall apply:
 - a. Grading is allowed only during the dry season, as determined by the Director;
 - b. Clearing and grading shall be limited to the minimum necessary to accomplish the alteration or development; and
 - c. Erosion and sediment control will meet or exceed the standards set forth in the current version of the Stormwater Manual for Eastern Washington.
2. **Stream bank stabilization.** Stream bank stabilization and protection shall be permitted subject to all the following standards, and those standards described in WDFW's Integrated Streambank Protection Guidelines (WDFW, 2003), WDFW's 2012 Stream Habitat Restoration Guidelines (SHRG), and KCC 17A.01.120.4:
 - a. Natural riverine processes, including channel migration, will be maintained to the maximum extent practicable;
 - b. The alteration or development will not result in increased erosion and will not alter the size or distribution of stream substrate;
 - c. Nonstructural measures, such as placing or relocating the development further from the aquatic habitat area, planting vegetation, or installing on-site drainage improvements, are not feasible or not sufficient to protect the stream bank;
 - d. Stabilization is achieved through bioengineering or soft armoring techniques; and
 - e. Hard bank armoring may occur only when the property contains a primary, already existing, legally-established, permanent structure, which is unable to be relocated, that is in danger from erosion caused by riverine processes, as documented in a geotechnical analysis prepared by a qualified professional. The armoring shall not expand beyond the original structural footprint, unless necessary to protect existing permanent buildings, roads or utility infrastructure adjacent to the bank, and shall not increase erosion or flooding on adjacent properties.
3. **Docks and launching ramps.** Construction, reconstruction, repair, and maintenance of docks and public or private launching ramps are subject to all the following, and those standards described in KCC 17A.01.120.4:

- a. The dock or ramp is located and oriented and constructed in a manner that minimizes adverse effects on water quality, movement of aquatic and terrestrial life, ecological processes, spawning habitat, and wetlands;
 - b. Docks and ramps shall meet or exceed all relevant state and federal permit requirements; and
 - c. No adverse impact to fish or wildlife habitat areas or associated wetlands will occur.
4. **Roads, trails, bridges, and rights-of-way.** Construction of trails, roadways, and bridges through or across streams, other fish and wildlife habitat conservation areas and/or their RMZs or buffers are subject to all the following, and those standards described in WDFW's Water Crossing Guidelines and KCC 17A.01.120.4:
- a. There is no other feasible alternative route with less impact on the fish and wildlife habitat conservation area;
 - b. The crossing minimizes interruption of downstream movement of wood, ice, sediment, and the movement of all fish and wildlife. Bridges are preferred for all stream crossings and should be designed to maintain the existing stream substrate and gradient, provide adequate horizontal clearance on each side of the ordinary high water mark, and provide adequate vertical clearance above the ordinary high water mark;
 - c. Roads within a stream buffer shall not run parallel to the water body when there is an alternative alignment that has less adverse effect on stream functions;
 - d. Trails shall be located on the outer edge of the fish and wildlife habitat conservation area buffer, except for limited viewing platforms and at the crossing, and shall use pervious materials where feasible;
 - e. Stream crossings, where necessary, shall be perpendicular with the stream, or as close to perpendicular as possible, and shall be the minimum width necessary. Common or shared crossings are the preferred approach where multiple properties can be accessed by one crossing; and
 - f. Culverts and bridges shall be designed according to applicable state and federal guidance criteria for fish passage as identified in Fish Passage Design at Road Culverts, WDFW, 2003, and/or the National Marine Fisheries Services Guidelines for Anadromous Salmonid Passage Facility Design, 2011, (and subsequent revisions) or WDFW's Water Crossing Design Guidelines (WDFW, 2013). The applicant or property owner shall maintain fish passage through the culvert.
5. **Utility facilities.** New utility lines and facilities may cross streams or Fish and wildlife habitat conservation areas if they comply with the following standards, and those standards described in KCC 17A.01.120.4:
- a. There is no other feasible alternative route with less impact on the Fish and wildlife habitat conservation area;
 - b. Installation at a stream crossing shall be accomplished by boring beneath the scour depth and hyporheic zone of the stream and the entire channel migration zone width, where feasible;
 - c. Where boring under the channel is not feasible. the utilities shall cross at an angle of no less than sixty (60) degrees, but as close to ninety (90) degrees as possible, relative to the centerline of the channel;
 - d. Crossings shall be contained within the footprint of an existing road, bridge or utility crossing where possible;
 - e. The utility route shall avoid paralleling the stream or following a down-valley course near the channel; and
 - f. The utility installation shall not increase or decrease the natural rate of channel migration.

6. **Instream structures.** Instream structures shall only be allowed as part of a County-approved restoration project. The structure shall be designed to avoid modifying flows and water quality in ways that may adversely affect habitat conservation areas.
7. **Stormwater conveyance and discharge facilities.** Stormwater conveyance or discharge facilities such as dispersion trenches, level spreaders, and outfalls may be placed within the outer 25% of a standard fish and wildlife habitat conservation area buffer on a case-by-case basis when the Director determines that all the following are met:
 - a. Due to topographic or other physical constraints, there are no feasible locations for these facilities outside the standard fish and wildlife habitat conservation buffer;
 - b. The discharge is located as far from the ordinary high water mark (OHWM) as possible and in a manner that minimizes disturbance of soils and vegetation;
 - c. The discharge outlet is located in the outer 25% of the standard buffer and is designed to prevent erosion and promote infiltration; and
 - d. The discharge meets state water quality standards, including total maximum daily load (TMDL) standards as appropriate at the point of discharge.
8. **Onsite sewage systems and wells.**
 - a. New on-site sewage systems and/or individual wells may be placed within standard aquatic fish and wildlife habitat conservation area buffers only if:
 - i. There are no alternative locations outside of the buffer;
 - ii. It complies with all state and local regulations; and
 - iii. The onsite sewage system and/or well is accessory to an approved residential structure, for which it is not feasible to connect to a public sanitary sewer system, and is subject to approval by the Director on a case by case basis.
 - b. 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:
 - i. Connection to an available public sanitary sewer system;
 - ii. 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 from the habitat area as far as possible, provided the proposed sewage system is in compliance with the Kittitas County Health Department; or
 - iii. Repair to the existing on-site septic system.

17A.04.060 Reporting.

1. **When required.** If a proposed development is located within or adjacent to a known or suspected fish and wildlife habitat conservation area, the Director shall require the applicant to submit a habitat management plan prepared by a qualified professional, defined in KCC 17A.02.620, which includes the information listed in this section. The requirement to provide a habitat management plan for fish and wildlife habitat conservation areas may be waived on a case by case basis if the Director determines that there are no potential direct and/or indirect impacts on designated species or habitats that would result from the proposed development.
2. **Contents.** When required by this chapter, habitat management plans for habitat conservation shall include the general critical areas report requirements, as described in KCC 17A.01.080, in addition the following:
 - a. Identification of any state or federal endangered, threatened, sensitive, or candidate species that have a primary association with habitat on the project area;
 - b. Map showing the location of the ordinary high water mark and/or locations of fish and wildlife habitat conservation area(s) and their buffers in accordance with KCC 17A.04.020;

- c. The vegetative, faunal, topographic, and hydrologic characteristics of the fish and wildlife habitat conservation area;
- d. A discussion of any federal, state, or local special management recommendations, including Washington Department of Fish and Wildlife habitat management recommendations, that have been developed for species or habitat located on or adjacent to the project area;
- e. A detailed discussion of the direct and/or indirect potential impacts on the fish and wildlife habitat conservation area by the project. Such discussion shall include a discussion of the ongoing management practices that will protect habitat after the project site has been developed;
- f. The general mitigation plan requirements of KCC 17A.01.080 as well as the fish and wildlife habitat conservation area mitigation requirements of KCC 17A.04.070, if the alteration or development will result in unavoidable impacts to fish and wildlife habitat conservation areas; and
- g. Methods and measures to avoid, minimize and/or compensate for adverse impacts associated with the proposed development, including, but not limited to:
 - i. Prohibition or limitation of use, alteration, and development within the fish and wildlife habitat conservation area;
 - ii. Retention of vegetation and/or re-vegetation of areas/habitats critically important to species;
 - iii. Special construction techniques;
 - iv. Implementation of erosion and sediment control measures;
 - v. Habitat restoration or enhancement (e.g., fish passage barrier removal);
 - vi. Seasonal restrictions on construction activities on the subject property;
 - vii. Clustering of alterations or development on the subject property; and
 - viii. Any other requirements and/or recommendations from federal, state, or local special management recommendations, including the Washington State Department of Fish and Wildlife's habitat management guidelines.

17A.04.070 Mitigation Requirements.

1. **General Mitigation Requirements.** Mitigation for alteration or impacts to fish and wildlife habitat conservation areas shall achieve equivalent or greater biological functions and shall include mitigation for adverse impacts upstream and downstream of the development project site. Mitigation shall address each functional attribute affected by the alteration to achieve functional equivalency or improvement on a per function basis. Mitigation elements may include, but are not limited to: restoration of previously degraded areas and key habitat features; restoration of riparian vegetation communities to provide shade and large woody debris; addition of large woody debris; and installation of upland habitat features.
2. **Buffer for aquatic habitat conservation mitigation sites.** Any aquatic fish and wildlife habitat conservation area that is created, restored, or enhanced as compensation for approved alterations shall be assigned the same buffer as would be required for the category of the original aquatic fish and wildlife habitat conservation area.
3. **Type of mitigation required.** In determining the extent and type of mitigation required, the Director may consider all the following:
 - a. The ecological processes that affect and influence habitat structure and function within the watershed or sub-basin;
 - b. The individual and cumulative effects of the action upon the functions of the critical area and associated watershed;
 - c. Observed or predicted trends regarding the gains or losses of specific habitats or species in the watershed, in light of aggregated natural and human processes;
 - d. The likely success of the proposed mitigation measures;
 - e. Effects of the mitigation actions on neighboring properties; and

- f. Opportunities to implement restoration actions formally identified by any of the following plans (or equivalent plans): an adopted shoreline restoration plan; a watershed planning document prepared and adopted pursuant to Chapter 90.82 RCW; and/or a salmonid recovery plan or project that has been identified on the Salmon Recovery Board Habitat Project List or by the Washington State Department of Fish and Wildlife as essential for fish and wildlife habitat enhancement.
4. **Timing.** Where feasible, mitigation projects shall be completed prior to or concurrently with permitted and approved alterations and development that will disturb fish and wildlife habitat conservation areas. In all other cases, as approved by the Director, mitigation shall be completed as quickly as possible following disturbance and, aside from monitoring requirements, shall be completed prior to use or occupancy of the alteration or development. Construction of mitigation projects shall be timed to reduce impacts to existing fish, wildlife and flora; provided, that the Director may adjust the timing requirements to allow grading, planting, and other alterations to occur during the appropriate season(s).
5. **Location.** Compensatory mitigation shall be provided on-site or off-site in the location that will provide the greatest ecological benefit to the species and/or habitats affected and have the greatest likelihood of success. Mitigation shall occur as close to the impact site as possible, within the same sub-basin, and in a similar habitat type as the permitted alteration unless the applicant demonstrates to the satisfaction of the Director through a watershed- or landscape-based analysis that mitigation within an alternative sub-basin of the same watershed would have greater ecological benefit.
6. **Design.** Mitigation projects involving in-water work including, but not limited to, stream relocation and installation of engineered large woody debris structures shall be professionally engineered and designed to ensure there are no adverse hydraulic effects on upstream or downstream properties, and shall comply with all applicable permits such as a hydraulic project approval (HPA) from the WA Department of Fish and Wildlife.

Chapter 17A.05 FREQUENTLY FLOODED AREAS

Sections:

- 17A.05.010 Purpose and Intent.
- 17A.05.020 Classification, designation and mapping.
- 17A.05.030 Protection Standards.
- 17A.05.040 Reporting.
- 17A.05.050 Compensatory Mitigation Requirements.

17A.05.010 Purpose and Intent.

It is the purpose of this chapter to reduce the risk to life, property damage, and public facilities that result from floods; mitigate flood hazards that may be exasperated by climate change; and to protect fish and wildlife habitat conservation areas that occur wholly or partially within frequently flooded areas.

17A.05.020 Classification, designation, and Mapping.

1. **Mapped areas.** All lands classified as floodway or special flood hazard areas in the Federal Emergency Management Agency report titled "The Flood Insurance Study for the County of Kittitas County" dated November 5, 1980, as now or hereafter amended, with accompanying Flood Insurance Rates and Boundary Maps, are designated as frequently flooded areas. The study and maps are on file at Kittitas County.
2. **Other areas.** The Flood Insurance Study maps may not show all potential flood hazard areas. Kittitas County may designate unmapped frequently flooded areas. Such designations may be appealed pursuant to KCC 14.08.160. The Director's designation of an unmapped frequently flooded area shall be based upon the following criteria:
 - a. Documented history of flooding;
 - b. Presence of alluvial fan hazards and/or channel migration zones;
 - c. Evidence of stream channel instability and susceptibility to erosion, and/or
 - d. High groundwater flood hazards

17A.05.030 Protection Standards.

1. **Avoidance.** All new development shall be located outside of frequently flooded areas, if at all possible and will follow the standard mitigation sequencing process, as defined in KCC 17A.01.100.
2. **Floodplain storage.** New uses or developments shall not reduce the effective flood storage volume, alter the direction of flood flows, or concentrate flood flows within a frequently flooded area. If proposed grading, fill, or other alteration or development would reduce effective flood storage volume, then flood storage mitigation per KCC 17A.05.050 is required.

17A.05.040 Reporting.

The Director's approval of a new use or development within a frequently flooded area shall be contingent upon reporting that meets the requirements of KCC 14.08.110 through KCC 14.08.130, the general critical areas report requirements of KCC 17A.05.040, and the following:

1. The nature, location, dimensions, and elevations of the project property;
2. Names and location of all lakes, water bodies, streams, and drainage facilities within three hundred (300) feet of the site;
3. The proposed drainage system including, but not limited to, storm sewers, overland flow paths, detention facilities, and roads;

4. Existing and proposed structures, fill, pavement, and other impervious surfaces, and locations for storage of hazardous materials;
5. Existing native vegetation and proposed clearing limits; and
6. If the proposed development involves grading, excavation, or filling, include proposed post-development terrain at one (1) foot contour intervals.

17A.05.050 Compensatory Mitigation Requirements.

1. **Floodplain storage.** If development occurs within a frequently flooded area, the volume of space occupied by the authorized fill or structure below the base flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood elevation. Compensatory storage shall comply with KCC 14.08.315 and the following:
 - a. Provide equivalent volume at equivalent elevations to that being displaced. For this purpose, "equivalent elevation" means having similar relationship to ordinary high water and to the best available ten (10)-year, fifty (50)-year, and one hundred (100)-year water surface profiles;
 - b. Provide flood storage that is hydrologically connected to the source of flooding;
 - c. Provide flood storage in an area that is vegetated;
 - d. Consider the existing and future ecological hydrologic functions of the impact and mitigation sites;
 - e. Result in no net rise of flood elevations (when the mitigation will occur at a distance from the fill location);
 - f. Areas below the waterline of a pond or other body of water cannot be credited as compensatory storage;
 - g. Provide flood storage in the same construction season as when the displacement of flood storage volume occurs and before the flood season begins; and
 - h. If the newly created storage area is accessible to fish during flood events, the area shall be designed, graded, and maintained to prevent fish stranding.
2. **Floodplain storage site selection.** The order of preference for selecting floodplain storage sites shall be:
 - a. Onsite flood storage;
 - b. Off-site flood storage in close proximity upstream or downstream of the floodplain fill location; and
 - c. Off-site flood storage in a location further upstream or downstream of the floodplain fill location.
3. **Floodplain storage mitigation plans.** When required by KCC 17A.05.050.2, floodplain storage mitigation plans shall be prepared by an engineer or geologist licensed in the state of Washington and address the general mitigation plan requirements of KCC 17A.01.080 as well as the following:
 - a. Potential that materials may be swept during flooding onto other lands to the detriment of others;
 - b. Actual danger to life and property if flooding or erosion occurs;
 - c. Susceptibility of the proposed development and its contents to flood damage;
 - d. Availability of alternative locations for the proposed development which are not subject to flood or erosion damage;
 - e. Relationship of the proposed development to any comprehensive flood hazard managements plans adopted pursuant to RCW Chapter 86.12;
 - f. Safety of access to the property in times of flooding for ordinary and emergency vehicles;
 - g. Expected heights, velocity, duration, rate or rise, and sediment transport of the flood waters and the effects of wave action at the site;
 - h. Costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities;

- i. Location and extent of storage area for floodwater which will be displaced by the proposed development; and
- j. The risk to public and private property and public health, safety, and welfare due to rising of water levels; potential for ice jams and resulting changes to stream flow patterns; shifting of stream channels (including related erosion); and costs to individuals and the general public for items which are not insured, such as: loss of productivity due to closed roads; risk to emergency response workers; loss of uninsured property (cars, landscaping, etc.); and habitat damage as a result of loss of riparian zones and floodplain function.

Chapter 17A.06 GEOLOGICALLY HAZARDOUS AREAS

Sections:

17A.06.010	Purpose and Intent
17A.06.020	Designation, Classification, and Mapping
17A.06.030	General Protection Standards
17A.06.040	Landslide Hazard Area Standards
17A.06.050	Erosion Hazard Area Standards
17A.06.060	Alluvial Fan Hazard Standards
17A.06.070	Seismic Hazard Standards
17A.06.080	Volcanic Hazard Areas
17A.06.090	Mine Hazard Areas
17A.06.100	Reporting

17A.06.010 Purpose and Intent

The purpose of this Chapter is to protect human life and safety, prevent damage to structures and property, and minimize impacts to water quality and fish and wildlife caused by geologic hazards.

17A.06.020 Designation, Classification, and Mapping

1. **Designation.** Lands classified as landslide, erosion (including channel migration zones), alluvial fan, seismic, and mine hazard areas, are hereby designated as geologically hazardous areas.
2. **Classification.**
 - a. **Potential Landslide Hazard Areas.** Landslide hazard areas shall include areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope (gradient), slope aspect, structure, hydrology, or other factors. Potential landslide hazard areas include but are not limited to the following areas:
 - i. Areas of historic failures;
 - ii. Areas designated as quaternary slumps, earth-flows, mudflows, or landslides on maps published by the U.S. Geological Survey or Washington State Department of Natural Resources;
 - iii. Areas with all three (3) of the following characteristics:
 1. Slopes steeper than fifteen percent (15%);
 2. Hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and
 3. Springs or groundwater seepage;
 - iv. Areas that have shown movement and/or are underlain or covered by mass wastage debris;
 - v. Slopes that are parallel or sub-parallel to planes of weakness (which may include but not be limited to bedding planes, soft clay layers, joint systems, and fault planes) in subsurface materials;
 - vi. Slopes having gradients steeper than eighty percent (80%) subject to rock fall during seismic shaking;
 - vii. Areas that show evidence of, or are at risk from snow avalanches; and
 - viii. 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 competent bedrock.

- A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten (10) feet of vertical relief;
- ix. Potentially unstable slopes resulting from river erosion or undercutting;
 - x. Areas that show past sloughing or calving of sediment or rocks resulting in a steep slope that is poorly vegetated;
 - xi. Deep-seated landslide areas characterized by one or more of the following features: scalloped ridge crests at the top of the slope, crescent shaped depressions, head scarps, side scarps, ponds or sag areas on mid slopes, benches and scarps on mid slope areas, hummocky ground, linear fractures in the ground. These features may be evident in aerial images, topographic maps, LiDAR imagery or on the ground;
 - xii. Areas below unstable slopes or that have been identified as landslide hazard areas that could be impacted by landslide run out; and
 - xiii. Areas above or adjacent to unstable slopes that could be impacted if the landslide area expands.
- b. **Potential Erosion Hazard Areas.** Erosion hazard areas shall include areas containing soils that may experience significant erosion, including:
- i. Soil areas identified by the Natural Resources Conservation Service as having “severe” or “very severe” erosion hazard.
 - ii. Slopes forty percent (40%) or steeper with a vertical relief of ten (10) or more feet, except areas composed of consolidated rock.
 - iii. Concave slope forms equal to or greater than fifteen percent (15%) with a vertical relief of ten (10) or more feet, except areas composed of consolidated rock.
 - iv. Channel migration zones, which are defined as the areas along a river or stream within which the channel(s) can be reasonably predicted to migrate over time as a result of natural and normally occurring hydrological and related processes when considered with the characteristics of the river and its surroundings.
- c. **Alluvial Fan Hazard Areas.** Alluvial fan hazard areas shall include those areas on alluvial fans where debris flows, debris floods, or clear water floods have the potential to significantly damage or harm the health or welfare of the community. They include the area generally corresponding to the path of potential flooding, channel changes, sediment and debris deposition, or debris flow paths as determined by analysis of watershed hydrology and slope conditions, topography, valley bottom and channel conditions, potential for channel changes, and surface and subsurface geology.
- i. If the approval authority determines that a proposed use along a Type S or F stream is within a historic channel migration zone, based on field conditions, historic information, LIDAR imagery or aerial photography, and the one-hundred-year channel migration hazard area has not been mapped, the approval authority shall require the applicant to determine if a one-hundred-year channel migration hazard area is present on the site and, if so, delineate its location and extent.
 - ii. The determination as to whether the one-hundred-year channel migration hazard area affects the subject property shall be based on the findings of a qualified professional proficient in fluvial geomorphology using a reliable methodology to determine channel migration accepted by the department (e.g., as described in the Washington Department of Natural Resources' Forest Practices Board Manual, Standard Methods for identifying Channel Migration Zones and Bankfull Channel Features, dated 8/2001, as amended; or in "A Framework for Delineating Channel Migration Zones," Washington Department of Ecology, 2003, as amended). Maps delineating the one-

hundred-year channel migration hazard area shall be of a scale and format specified by the department.

- d. **Seismic Hazard Areas.** Seismic hazard areas shall include 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.
 - e. **Volcanic Hazard Areas.** Volcanic hazard areas shall include areas subject to pyroclastic flows, lava flows, debris avalanche, inundation by debris flows, mudflows, or related flooding resulting from volcanic activity. There are no active or dormant volcanoes located within Kittitas County; however, Mount Rainer and Mount St. Helens are relatively near. Hazards to Kittitas County residents from these volcanoes are likely limited to ash deposition.
 - f. **Mine Hazard Areas.** Mine hazard areas shall include areas underlain by abandoned mine shafts, secondary passages between shaft tunnels, or air vents. Mine hazards include subsidence, which is the uneven downward movement of the ground surface caused by underground workings caving in; contamination to ground and surface water from tailings and underground workings; concentrations of lethal or noxious gases; and underground fires.
3. **Mapping.** The approximate location and extent of geologically hazardous areas are shown on maps maintained by the County. These maps are useful as a guide for project applicants and/or property owners but do not provide a conclusive or definitive indication of geologically hazardous area presence or extent. Other geologically hazardous areas may exist that do not appear on the maps, and some geologically hazardous areas that appear on the maps may not meet the geologically hazardous areas designation criteria. The County shall update the maps periodically as new information becomes available and may require additional studies during the development review process to supplement and/or confirm the mapping. Historic maps showing the locations of known coal mines within the County are available from the Washington Department of Natural Resources.

17A.06.030 General Protection Standards

1. **Generally.** New developments shall be located and/or engineered and constructed to minimize risk to health and safety, protect the building and occupants from the hazard, and not increase the risk of landslides or erosion that could impact either other properties, public resources, or other critical areas such as wetlands and fish and wildlife habitat conservation areas. If impacts to other properties, public resources or other critical areas cannot be avoided these impacts should be mitigated for. The Director may impose conditions on alterations and development in a geologically hazardous area as needed to:
 - a. Protect slope stability and minimize erosion, seismic, and/or landslide hazard risks;
 - b. Maintain natural sediment and erosion processes that are integral to the health and sustainability of freshwater ecosystems as well as minimizing impacts to stream and river processes such as channel infill, channel migration or flooding;
 - c. Minimize the potential for property damage related to seismic events, erosion and/or landslides;
 - d. Minimize the need for stream or river bank stabilization in the future;
 - e. Protect human health and safety; and
 - f. Reduce public liabilities for damages associated with seismic events, erosion and/or landslides
2. **Impact Avoidance.** Impact avoidance measures shall include, but not be limited to, locating the use/development outside of the hazard area, reducing the number, size or scale of buildings, driveways and other features; altering the configuration or layout of the proposed development; using environmentally favorable construction materials; implementing special engineering methods for construction, drainage, runoff management etc.; foregoing construction of accessory structures; preserving native vegetation; and other reasonable measures.

3. **Location of Alterations.** New development shall be directed toward portions of a parcel or parcels under contiguous ownership that are not subject to, or at risk from, geological hazards and/or are outside any setback or buffer established by this Chapter.
4. **Critical Facilities Prohibited.** Critical facilities shall not be sited within landslide, erosion, alluvial fan, or mine hazard areas unless there is no other practical alternative.
5. **Review by Qualified Professional.** A qualified geologist or engineering geologist, or professional engineer licensed in the state of Washington, shall review development projects that occur in potentially geologically hazardous areas to determine the risk. If development takes place within an identified geologically hazardous area requiring design or structural elements to mitigate the hazard, a report describing the geologically hazardous area and conditions shall be prepared as described in KCC **17A.06.100**, and the design shall be approved by an qualified engineering geologist, or professional engineer licensed in State of Washington with expertise in geologically hazard mitigation.
6. **Life of Structure.** Proposed developments shall be sited far enough from erosion and landslide hazard areas to ensure at least one hundred (100) years of useful life for the proposed structure(s) or infrastructure. The location should be determined by a qualified geologist or engineering geologist, licensed in the state of Washington and be should be based on site specific evaluation of the landslide and/or erosion hazard.

17A.06.040 Landslide Hazard Area Standards

1. **Generally.** Alterations and development may be allowed adjacent to landslide hazard areas, provided that all responsible measures have been taken to minimize risks and other adverse effects, and the amount and degree of the alteration are limited to minimum needed to accomplish the project purpose. Prior to approving a new alteration or development in or adjacent to a landslide hazard area the Director shall determine that all the following standards are met:
 - a. A minimum setback equal to the height of the slope or 40 feet, whichever is greater or as recommended in an approved geotechnical report;
 - b. The alteration or development includes all appropriate measures to eliminate, reduce, or otherwise mitigate risks to health and safety;
 - c. The alteration or development is located outside of a landslide hazard area and any required setback, as determined by a qualified engineer, engineering geologist, or geologist, licensed in the state of Washington;
 - d. The alteration or development will not decrease slope stability on adjacent properties;
 - e. The alteration or development shall not increase the risk or frequency of landslide occurrences;
 - f. The removal and disturbance of vegetation, clearing, or grading shall be limited to the area of the approved alteration or development;
 - g. The alteration or development will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions;
 - h. The proposed alterations will not adversely impact other critical areas; and
 - i. Structures and improvements including drainage and vegetation management are designed to have no impact on the slope stability; and
 - j. If development takes place within an identified geologically hazardous area, the development must be designed to fully mitigate the risk to the structure(s) and not increase the risk to the public, other properties or public infrastructure or resources.
2. **Permitted Alterations and Development.** The following alterations and development may be allowed in landslide hazard areas when all reasonable measures have been taken to minimize risks and other adverse effects associated with landslide hazards, and when the amount and degree of alteration is limited to the minimum needed to accomplish the alteration or development:

- a. **Above-Ground Utility Lines and Pipes.** Utility lines and pipes that are above-ground, properly anchored and/or designed so that they will not increase the risk or consequences of static or seismic slope instability or result in an increased risk of mass wasting. Such utility lines may be permitted only when the applicant demonstrates that no other feasible alternative is available to serve the affected population. For pipelines, automatic shut off valves should be located as close as practical to the landslide area so that the release from the pipe upon breakage is minimized.
 - b. **Access Roads and Trails.** Access roads and trails that are engineered and built to standards that avoid the need for major repair or reconstruction beyond that which would be required in non-hazard areas. Access roads and trails may be permitted only if the applicant demonstrates that no other feasible alternative route exists. Standards to minimize impacts may be specified by the Director.
 - c. **Stormwater Conveyance.** Stormwater conveyance through a properly designed stormwater pipe when no other stormwater conveyance alternative is available. The pipe shall be located above-ground and be properly anchored and/or designed so that it will continue to function in the event of a slope failure or movement of the underlying materials and will not increase the risk or consequences of static or seismic slope instability or result in increased risk of mass wasting activity.
3. **Setbacks.** The Director shall require setbacks from the edges of any landslide hazard area in accordance with the following:
 - a. The size of the setbacks shall be based on the findings of a qualified engineering geologist or geologist, licensed in the state of Washington, and shall protect critical areas and minimize the risk of property damage, death, or injury resulting from landslides caused in whole or part by the alteration or development and shall be sized to provide protection for a period of at least 100 years based on the assessment of the geologic processes within the landslide hazard area;
 - b. The setback above the landslide hazard area shall include consideration of hydrologic contribution to the landslide area and/or the area subject to the potential for mass movement, and the setback down slope from the landslide hazard area shall include consideration of landslide run out; and
 - c. The Director shall have the authority to require appropriate management of vegetation or land use within the setback area to minimize the risk of increasing the risk of landslides.

17A.06.050 Erosion Hazard Area Standards

1. **Generally.** Alterations or development may be allowed within erosion hazard areas, provided that all responsible measures have been taken to minimize risks and other adverse effects with erosion hazards, and the amount and degree of the alteration are limited to minimum needed to accomplish the project purpose. Prior to approving a development or alteration in or adjacent to an erosion hazard area, a report will be prepared as defined in KCC 17A.06.100. Based on this information, the Director shall determine whether all the following standards are met.
 - a. The alteration or development includes all appropriate measures to eliminate or otherwise mitigate risks to health and safety;
 - b. The alteration or development includes best management practices to prevent, control and minimize erosion;
 - c. The alteration or development will not increase erosion potential;
 - d. The removal and disturbance of vegetation, clearing, or grading shall be limited to the area of the approved alteration or development;
 - e. The alteration or development will not increase surface water discharge or sedimentation to adjacent properties beyond predevelopment conditions, as

- documented in a geologically hazardous area risk assessment and/or geotechnical report;
- f. The proposed alterations will not adversely impact other critical areas; and
 - g. Structures and improvements are designed to minimize alterations to the erosive soils and slopes.
2. **Channel Migration Zones.** If County maps or consultation by the Director with qualified professionals or agencies with expertise indicate that a potential channel migration zone hazard exists on or adjacent to a proposed development site, the applicant shall either:
 - a. Locate the proposed development outside of an already defined channel migration hazard area as indicated on the map; or
 - b. Submit a Channel Migration Zone Report, as described in KCC 17A.06.100 prepared by a qualified geologist, or engineering geologist, or professional engineer, licensed in the state of Washington with experience in analyzing channel response in the fluvial systems of the Pacific Northwest.
 3. **Permitted Alterations and Development in Channel Migration Zones.** The following alterations and development shall be allowed as specified below and previous sections:
 - a. **Surface Water Discharge.** Discharge of surface water, provided there are no other alternatives for discharge. The pipe shall be located on the surface of the ground and be properly anchored so that it will continue to function under erosion conditions and not create or contribute to adverse effects on downstream critical areas.
 - b. **Utility Lines.** Utility lines, when no feasible location is available. Above-ground lines shall be anchored and/or designed so that it will not preclude or interfere with channel migration. Below ground lines shall be of sufficient depth as to not be affected by future channel migration.
 - c. **Public Roads, Bridges, and Trails.** Public roads, bridges, and trails when no feasible alternative alignment is available. Facilities shall be designed such that the roadway prism and/or bridge structure will not be susceptible to damage from active erosion.
 - d. **Stream Bank Stabilization.** Stream bank stabilization may be permitted subject to all of the standards listed in KCC 17A.04.050.
 4. **CMZ Buffers or Setbacks.** Based upon the results of the channel migration zone assessment, the Director shall prohibit or limit use or development within a channel migration zone and may require a setback or a buffer of undisturbed natural vegetation from the edge of the channel migration zone in accordance with the following:
 - a. The size of the setback or buffer shall be based on the findings of a qualified engineer, engineering geologist, or geologist, licensed in the state of Washington, and shall protect critical areas and processes and minimize the risk of property damage, death, or injury resulting from channel migration;
 - b. The buffer shall include the area subject to bank failure as a result of erosion; and
 - c. If the designated buffer lacks adequate woody vegetation, the Director shall have the authority to require vegetation enhancement or other measures to improve natural channel processes and large wood recruitment.

17A.06.060 Alluvial Fan Hazard Standards

1. **Permitted Alteration and Development.** Alluvial fan hazards will be determined by County maps, LIDAR, and aerial photography. The following alterations and development may be allowed in alluvial fan hazard areas, after accounting for restrictions defined by other critical area regulations, when all reasonable measures have been taken to minimize risks and other adverse effects associated with alluvial fan hazards, and when the amount and degree of alteration are limited to the minimum needed to accomplish the alteration or development:
 - a. **Roads, Utilities, Bridges, and Other Infrastructure.** Roads, utilities, bridges, and other infrastructure when located and designed to prevent adverse impacts on critical

areas and avoid the need for channel dredging or diking or other maintenance activities that have the potential to substantially degrade river and stream functions.

- b. **Residential and Commercial Developments.** Permanent residential structures and commercial developments shall be allowed in alluvial fan hazard areas only if the alluvial fan has undergone a County-approved study to assess potential hazards, determine risks, and identify mitigation measures and is deemed suitable for development. The Director shall make this determination based on a detailed assessment by a qualified engineer, engineering geologist, or geologist, licensed in the state of Washington, that identifies the risks associated with a 500-year return period debris flow or the maximum credible event that could impact the alluvial fan.
- c. **Accessory Structures.** Accessory structures not involving human occupancy shall be allowed.

17A.06.070 Seismic Hazard Standards

1. **Permitted Alterations and Development.** Alterations and development within seismic hazard areas shall follow the provisions of the Kittitas County-adopted version of the Uniform Building Code. Alterations and development within seismic hazard areas shall not require the submission of a geologically hazardous area risk assessment or geotechnical report.

17A.06.080 Volcanic Hazard Areas

1. **Permitted Alterations and Development.** Because volcanic hazards in Kittitas County are limited to ash deposition, alterations and development located only within volcanic hazard areas, and not other geologically hazardous areas, shall not require the submission of a geologically hazardous area risk assessment or geotechnical report.

17A.06.090 Mine Hazard Areas

1. **Alteration.** There are no additional protection standards for mine hazard areas; the standards of KCC 17A.06.030 shall apply.

17A.06.100 Reporting

1. **Geologically Hazardous Area Risk Assessment .** If a proposed development is located within or adjacent to a known or suspected landslide, mine, alluvial fan, or erosion hazard area, the applicant shall submit a Geologically Hazardous Area Risk Assessment prepared by a qualified professional geologist or engineering geologist. No further analysis shall be required if the Geologically Hazardous Area Risk Assessment concludes that the alteration or development is not at risk from potential geologic hazards, and that there is no geologic hazard present on or adjacent to the site.

If the Geologically Hazardous Area Risk Assessment and/or the Director concludes that a geologically hazardous area is located on or adjacent to the alteration or development and/or the alteration or development is at risk from potential geologic hazards, the applicant shall submit a Geotechnical Report consistent with the provisions of KCC 17A.02.370, and prepared by a qualified engineer or engineering geologist.

2. **Geologically Hazardous Area Risk Assessment Contents.** When required by this Chapter, Geologically Hazardous Area Risk Assessments shall include the general critical areas report requirements of KCC 17A.01.080 in addition to the following:
 - a. A description of the geology of the site and the proposed development;
 - b. An assessment of the potential impact the project may have on the geologic hazard;
 - c. An assessment of what potential impact the geologic hazard may have on the project;
 - d. Appropriate mitigation measures, if any;
 - e. A conclusion as to whether further analysis is necessary; and
 - f. The signature and stamp of the engineering geologist, or geologist that prepared the assessment.

3. **Geotechnical Report Contents.** When required by this Title, the Geotechnical Report shall include the general critical areas report requirements of KCC 17A.01.080 in addition to the following:
- a. A detailed description of the geology and soil conditions of the site;
 - b. Evaluation of the geologic conditions giving rise to the geologic hazard;
 - c. An evaluation of the safety of the proposed project;
 - d. Conclusion and recommendations regarding the effect of geologic conditions on the proposed development;
 - e. Conclusions and recommendations on the suitability of the site to be developed;
 - f. A statement regarding the risk of damage from the project, both on- and off-site; and whether or not the project will materially increase the risk of occurrence of the hazard;
 - g. Recommendations concerning drainage practices, vegetation retention and other mitigation and monitoring measures which may be needed to ensure slope stability;
 - h. Recommended erosion and sediment control measures;
 - i. A bibliography of scientific citations;
 - j. Any other specific measures which must be incorporated into the design and operational plan of the project to eliminate or reduce the risk of damage due to the hazard. This shall include a recommendation on the required buffer or setback distance that must be maintained between the proposed development and the hazard to ensure the safety of the development; and
The signature and stamp of the engineer or engineering geologist who prepared the Geotechnical Report.

4. **Channel Migration Zones Studies Contents**

When required by this Chapter, Channel Migration Zone Studies shall include the general critical areas report requirements of KCC 17A.01.080, and shall demonstrate the following:

- a. The parcel on which the development is proposed is effectively protected (disconnected) from channel movement due to the existence of permanent levees that are actively maintained by public agencies or infrastructure such as roads and bridges constructed and maintained by public agencies (not all roads and levees will be considered disconnection points): or
- b. The proposed development site has minimal risk of channel migration during the next one hundred (100) years as indicated by the existing channel type, land cover (and low likelihood of future alterations in land cover), presence of adjacent toe slope landslide hazard areas, surficial geology, low soil erosion potential, lack of evidence of likely avulsion pathways (including areas upstream of, but proximate to, the site), and/or low inundation frequency(ies). The assessment shall include a review of available data regarding historical channel locations at the site; identification of the site within a broader geomorphic reach of the river system and the general characteristics of that reach; description of existing channel type, existing channel alteration and likelihood of future alterations with changes in land cover; surficial geology, soils and erosion potential; and geotechnical setbacks relating to erosion at the toe of adjacent slope(s). The approach to assessing location shall be generally equivalent to the methods detailed in "A framework for Delineating Channel Migration Zones" (Ecology Publication # 03-06-027), or similar method approved or sanctioned by Ecology.

Chapter 17A.07 WETLANDS

Sections:

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17A.07.010 Purpose and Intent

The purpose of this Chapter is to maintain the biological and physical functions and values of wetlands with respect to groundwater recharge and discharge, water quality, stormwater and floodwater retention, storage and conveyance, fish and wildlife habitat conservation areas, recreation, and education.

17A.07.020 Designation, Mapping, Delineation, and Categorization

1. **Designation.** Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include, but are not limited to, swamps, marshes, bogs, ponds, 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.
2. **Mapping.** The approximate location and extent of wetlands are shown on maps maintained by the County, most current National Wetland Inventory (NWI), and other best available science sources. These maps are useful as a guide for project applicants and/or property owners but do not provide a conclusive or definitive indication of wetland presence or extent. Other wetlands may exist that do not appear on the maps, and some wetland areas that appear on the maps may not meet all of the wetland designation criteria. The County shall update the maps periodically as new wetland areas are identified and as new wetland information becomes available.
3. **Delineation.** The County may require the applicant to identify the location or presence of any wetlands within two hundred fifty (250) feet of a proposed development. Wetlands shall be identified and delineated by a qualified wetland professional in accordance with the approved federal wetland delineation manual and applicable regional supplements. This professional shall field stake, flag or otherwise mark the wetland boundary to aid the County in reviewing the development proposal. The County may require the on-site wetland boundary to be surveyed by a professional land surveyor. Wetlands that occur outside of or extend beyond the boundaries of the development site, onto adjoining properties, do not need to be flagged or formally delineated but their general location must be determined and disclosed in order to assess wetland buffer impacts.
4. **Categorization.** Wetlands shall be categorized by a qualified wetland professional in accordance with the current version of the Washington State Wetland Rating System for Eastern Washington and the appropriate rating forms approved by the Washington State Department of Ecology. These categories are generally defined as follows:

- a. Category I wetlands are those that represent a unique or rare wetland type, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime or provide a high level of functions. Category I wetlands include:
 - i. Alkali wetlands;
 - ii. Wetlands with high conservation value that are identified by scientists of the Washington Department of Natural Resources Natural Heritage Program;
 - iii. Bogs and calcareous fens;
 - iv. Mature and old-growth forested wetlands over ¼ acre with slow-growing trees;
 - v. Forests with stands of aspen; and
 - vi. Wetlands scoring between twenty-two and twenty-seven (22-27) points in the Eastern Washington Rating System.

- b. Category II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category II wetlands include:
 - i. Forested wetlands in the floodplains of rivers;
 - ii. Mature and old-growth forested wetlands over ¼ acre with fast-growing trees;
 - iii. Vernal pools; and
 - iv. Wetlands scoring between nineteen and twenty-one (19-21) points in the Eastern Washington Rating System.

- c. Category III wetlands have a moderate level of functions and score between sixteen and eighteen (16-18) points in the Eastern Washington Rating System. These wetlands can be often adequately replaced with a well-planned mitigation project. Category III wetlands 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 wetlands have the lowest level of functions and are often heavily disturbed. They score fewer than sixteen (16) points in the Eastern Washington Rating System. These are wetlands that can usually be replaced, and in some cases improved. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions and also need to be protected.

17A.07.030 Buffers

1. **Purpose.** Buffers shall be established and maintained to protect the functions and values of regulated wetlands.
2. **Measurement.** Wetland buffers shall be measured horizontally in all directions from the outer edge of wetland boundary as established in the field. Building setbacks (KCC 17A.01.090.4) are in addition to wetland buffers and are measured outward from the edge of the wetland buffer boundary.
3. **Buffer Condition.** Wetland buffers shall be maintained in a predominantly well-vegetated and undisturbed condition to ensure that they perform their intended function of protecting the wetland. Tree removal is prohibited in wetlands and wetland buffers other than in accordance with KCC 17A.01.050.3.h.
4. **Standard Buffer Widths.** The width of the standard buffer does not include the building setback (KCC 17A.01.090.4) and shall be based on the wetland category and the intensity of the proposed land use adjacent to the buffer as indicated in Table KCC 17A.07.030.

Table 17A.07.030: Standard Buffer Widths

Category of Wetland	Land Use with Low Impact ¹	Land Use with Moderate Impact ²	Land Use with High Impact ³
I	125 ft	190 ft	250 ft
II	100 ft	150 ft	200 ft
III	75 ft	110 ft	150 ft
IV	25 ft	40 ft	50 ft

¹ Low impact use and developments include: forestry (cutting of trees only), low intensity open space (hiking, bird-watching, and like uses), unpaved trails, and utility corridor without a maintenance road and little or no vegetation management.

² Moderate impact use and developments include: residential (1 unit/acre or less), moderate intensity open space (parks with biking, jogging, and like uses), conversion from non-agricultural lands to moderate intensity agriculture (orchard, hay fields, and like uses), paved trails, building of logging roads, and utility corridor or right-of-way shared by several utilities and including access/maintenance roads.

³ High impact use and developments include: commercial, urban, industrial, institutional, retail sales, residential (more than 1 unit/acre), conversion from non-agricultural lands to high intensity agriculture (dairies, animal feed lots, nurseries and green houses, and like uses), high intensity recreation (golf courses, ball fields, and like uses).

5. **Wetland buffer condition.** Wetland buffer areas shall be retained in a natural condition or may be improved to enhance buffer functions and values. Where buffer disturbance is allowed pursuant to this Title, re-vegetation with native vegetation shall be required. The Kittitas County noxious weed ordinance shall be adhered to. Alterations of the buffer that are inconsistent with this Title shall be prohibited.
6. **Multiple buffers.** In the event that buffers for any shorelines and/or critical areas are contiguous or overlapping, the landward-most edge of all such buffers shall apply.
7. **Interrupted buffer.** When a wetland buffer contains an existing legally established public or private road and/or a legally established development which creates a significant interruption of buffer function, the Administrator may allow development on the landward side of the road or development provided that the actions will not have a detrimental impact to the wetland. The applicant may be required to provide a wetland critical areas report to describe the potential impacts. In determining whether a critical areas report is necessary, the County shall consider the hydrologic, geologic, and/or biological habitat connection potential and the extent and permanence of the buffer interruption.
8. **Buffers of restored wetlands.** 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.
9. **Increased Buffers.** The Director shall increase the wetland buffers widths where the standard buffer is inadequate to prevent significant adverse environmental impacts or address hazards associated with the site or the proposed development. The Director may increase the buffer up to a maximum of two times the standard width. When determining how much to increase the standard buffer, the Director shall consider the following conditions:
 - a. Whether the wetland provides habitat for state priority or federally listed endangered, threatened, or sensitive species for which a habitat management plan indicates a larger buffer is necessary to protect habitat values for such species; or

- b. Whether the land adjacent to the wetland is susceptible to severe erosion, and erosion control best management practices will not effectively prevent adverse wetland impacts.
- 11. **Buffer Averaging.** The Director may allow averaging of the standard buffer widths in accordance with an approved critical areas report on a case-by-case basis. With buffer averaging, the buffer width is reduced in one location and increased in another location to maintain the same overall buffer area. In such cases, the minimum width of the buffer at any given point shall be at least seventy-five percent (75%) of the standard width, or twenty-five (25) feet, whichever is greater. Proposals for buffer averaging shall meet all the following:
 - a. The wetland buffer has not been averaged or reduced by any prior actions;
 - b. No feasible site design could be accomplished without buffer averaging;
 - c. The wetland contains variations in sensitivity due to existing physical characteristics or the character of the buffer varies in slope, soils, or vegetation, and the wetland would benefit from a wider buffer in places and would not be adversely impacted by a narrower buffer in other places;
 - d. The averaging will not have a significant adverse impact on wetland functions and values; and
 - e. The area that is added to the buffer to offset the reduction will be well-vegetated. The Director may require vegetation enhancement if needed to ensure this criterion is met.
- 12. **Mitigation for Buffer Averaging.** Prior to approving a request for wetland buffer averaging, the Director shall ensure the development is designed to separate and screen the wetland from impacts such as noise, glare, vegetation trampling, intrusion, etc to the degree feasible. The site design shall consider the varying degrees of impacts of different land uses. For example, parking lots, store entrances, and roads generally have higher noise and glare impacts than the rear of a store. Site screening should take advantage of natural topography or existing vegetation, wherever possible. Where natural screening is not available, berms, landscaping, and structural screens should be implemented as may be required by the Director (e.g., orient buildings to screen parking lots and store entrances from critical areas).
- 13. **Allowed Buffer Uses.** The Director may allow the following alterations and development within a wetland buffer provided that they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland, including wetland functions and values:
 - a. Conservation or restoration activities aimed at protecting or enhancing the soil, water, vegetation, or wildlife.
 - b. The following passive recreation facilities designed in accordance with an approved critical areas report:
 - i. Walkways and trails; provided that those pathways which are generally parallel to the perimeter of the wetland shall be located in the outer twenty-five percent (25%) of the buffer area and constructed with a surface that is not impervious to water. Raised boardwalks utilizing non-treated pilings may be acceptable; and
 - ii. Wildlife viewing structures less than five hundred (500) square feet in size, including hunting blinds.
 - c. Stormwater management facilities, limited to stormwater conveyance and dispersion facilities, outfalls and bioswales, may be allowed within the outer twenty-five percent (25%) of the buffer of wetlands in accordance with an approved critical areas report provided that:
 - i. No other location is feasible;
 - ii. The facility is designed to meet or exceed the standards set forth in the current version of the Stormwater Manual for Eastern Washington; and
 - iii. The location of such facility will not degrade the functions or values of the wetland.

17A.07.040 General Protection Standards

1. **Alterations.** New development shall be located outside of wetlands and their buffers, unless this Title specifically allows the development to occur in the wetland or buffer. A wetland or buffer may not be altered if the proposed alteration will result in a net loss of wetland functions and values. Developments shall be designed to avoid and minimize wetland and buffer impacts to the maximum extent practicable and to offset unavoidable impacts through compensatory mitigation as required in KCC 17A.07.070

17A.07.050 Alterations and Development Permitted without a Critical Areas Report

The following alterations and development are permitted in wetlands and/or buffers and do not require submission of a critical areas report, provided they have met requirements listed in KCC 17A.01.120.4 and are designed to avoid and minimize wetland and buffer impacts to the maximum extent practicable, but are subject to review by the Director:

1. **Conservation and Preservation Activities.** Conservation or preservation of soil, water, vegetation, fish, and other wildlife that does not entail permanently changing or altering the structure or functions of the existing wetland.
2. **Wetland Enhancement.** Enhancement of a wetland through the removal of non-native invasive species, provided that the weed removal does not require soil excavation or grading and provided that weed material is removed from the site and disposed of at an approved location. Bare areas that remain after weed removal shall be re-vegetated with native shrubs, trees and herbs/forbs native to Kittitas County.

17A.07.060 Reporting

1. **When Required.** If a proposed development is located within or adjacent to a known or suspected wetland, the Director shall require the applicant to submit a wetland critical areas report prepared by a qualified professional that includes the information listed in this Section.
 - a. The requirement to provide a wetland critical areas report may be waived for a single-family residence where no encroachment into a regulated wetland or its standard buffer will occur. Prior to issuance of a building permit, site development permit, or on-site sewage system permit, the applicant shall submit a single-family wetland certification form completed by a wetland specialist that certifies either:
 - i. No regulated wetlands are present within 250 feet of the project area; or
 - ii. Wetlands are present within 250 feet of the project area, but all regulated alterations and development associated with the dwelling (i.e., landscaped areas, septic facilities, outbuildings, etc.) will occur outside of the standard buffer of the identified wetland.
 1. If regulated wetland buffers extend onto the site and are within 250 feet of the project area, the wetland specialist shall place permanent, clearly visible, wetland buffer signs at the edge of the buffer. A wetland buffer sign affidavit, signed by the wetland specialist, shall be submitted to the Department as verification that the wetland buffer signs have been placed on the site.
 2. The single-family certification form may be used only to authorize single-family dwellings and associated homesite features such as garages, driveways, gardens, fences, wells, lawns, and on-site septic systems. It may not be used for new agricultural activities, expansion of existing agricultural activities, forest practice activities, commercial projects, land divisions, buffer width modifications, or violations. The single-family form may not be used to make a claim for exemption.
 - a. The single-family certification process will be monitored by the Department for accuracy, and enforcement actions will be initiated should encroachment into a regulated wetland or buffer occur.

- b. The applicant/property owner assumes responsibility for any and all errors of the single-family certification form and all associated mitigation imposed by the Department.
 - c. Single-family certification forms shall be filed with the Kittitas County Auditor's Office in accordance with the department standards.
- 2. **Contents.** When required by this Title, wetland critical areas reports shall include the general critical areas report requirements of KCC 17A.01.080 in addition to the following:
 - a. Map showing the location of all wetlands and required buffers within two hundred fifty (250) feet of the proposed development; and
 - b. An analysis of the onsite wetland(s) including the following site- and proposal-related information:
 - i. Historical and Existing On site and Surrounding Land use /Conditions
 - ii. Wetland acreage;
 - iii. Wetland category;
 - iv. Soils and Soil Attributes
 - v. Hydrogeomorphic position (HGM);
 - vi. Cowardin Classification and Upland/Wetland Vegetation Characterization
 - vii. Hydroperiods;
 - viii. A description of the Federal methodologies used to conduct the wetland delineations;
 - ix. Priority Habitats and Species;
 - x. Wetland delineation data sheets for the appropriate region;
 - xi. Wetland rating and forms;
 - xii. Wetland Functional Analysis;
 - xiii. Federal, State, and County Regulatory Discussion with buffer recommendations;
 - xiv. A detailed discussion of the project, direct and/or indirect potential impacts on the wetland by the project; and if impacts are expected;
 - xv. A discussion of measures, including the general mitigation sequence requirements of KCC 17A.01.100 proposed to preserve and protect existing wetlands;
 - xvi. A wetland mitigation plan meeting the requirements of KCC 17A.07.010, if the alteration or development will result in unavoidable impacts to wetlands or their buffers.

17A.07.070 Mitigation Requirements

- 1. **Generally.** Compensatory mitigation is required for all unavoidable alterations to wetland or their buffers, except for buffer averaging when done in accordance with KCC 17A.07.030.7. Compensatory mitigation actions shall replace functions affected by the alteration and shall provide equal or greater functions compared to the impacted wetland.
- 2. **Buffer for Wetland Mitigation Sites.** Any wetland area that is created, restored, or enhanced as compensation for approved alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland.
- 3. **Mitigation Timing.** Mitigation projects shall be completed prior to or concurrently with permitted alterations and development that will disturb wetlands. In all other cases, mitigation shall be completed immediately following disturbance and prior to use or occupancy of the alteration or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

4. **Delay in Mitigation.** The Director may authorize a one-time temporary delay, up to one hundred eighty (180) 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 which preclude implementation of the mitigation plan. The justification must be verified and approved by the County and include a financial guarantee.
5. **Preference of Mitigation Actions.** Compensatory wetland mitigation shall occur in the following order of preference:
 - a. Purchasing credits from an approved Mitigation Bank if available and feasible, Purchasing credits from an approved In-Lieu Fee program if available and feasible, and Permittee Responsible Mitigation (PRM).
 - b. In order of preference, the following PRM methods are available: (1) Restoration [re-establishment or rehabilitation], (2) Establishment [creation], (3) Preservation of existing high quality habitats, and (4) Enhancement of degraded wetlands..
6. **Replacement Ratios for Wetland Impacts.** Ratios for compensatory mitigation shall be as specified in Table KCC 17.07.070.6. The first number specifies the acreage of replacement wetlands, and the second specifies the acreage of wetlands altered. Compensatory mitigation shall restore, rehabilitate, create, or enhance equivalent or greater wetland functions. The ratios shall apply to mitigation 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. The Director may increase these ratios for remedial mitigation actions resulting from unauthorized wetland alterations, depending on the nature and extent of the alteration. These ratios do not apply to the use of credits from a certified wetland mitigation bank or in-lieu fee program. When credits from a certified bank or in-lieu fee program are used, replacement ratios should be consistent with the requirements of the bank's/program's certification.

Table 17A.07.070.6: Wetland Mitigation Ratios

Category and Type of Impacted Wetland	Restoration or Creation ^{1,2}	Rehabilitation ^{1,2}	Enhancement Only ^{1,3}
Category I, forested	6:1	12:1	24:1
Category I, non-forested	4:1	8:1	16:1
Category II, forested	4:1	8:1	16:1
Category II, vernal pool ⁴	2:1	4:1	Case-by-case
All other Category II	3:1	6:1	12:1
All Category III	2:1	4:1	8:1
All	1.5:1	3:1	6:1

Category and Type of Impacted Wetland	Restoration or Creation ^{1,2}	Rehabilitation ^{1,2}	Enhancement Only ^{1,3}
Category IV			

¹ Natural heritage sites, alkali wetlands, and bogs are considered irreplaceable wetlands because they perform special functions that cannot be replaced through compensatory mitigation. Impact to such wetlands would therefore result in a net loss of some functions no matter what kind of mitigation is provided.

² Provides gains in a whole suite of functions both at the site and sub-basin scale. Rehabilitation actions often focus on restoring environmental processes that have been disturbed or altered by previous and/or ongoing human activity.

³ Actions which provide gains in only a few functions. Enhancement action often focuses on structural or superficial improvements to a site and generally does not address larger scale environmental processes.

⁴ Compensatory mitigation for vernal pool impacts must be seasonally ponded wetland area(s).

7. **Increased Replacement Ratios.** The Director may increase the wetland mitigation ratios stated in Table KCC 17A.07.070.6 under the following circumstances:
 - a. Uncertainty exists as to the probable success of the proposed restoration or creation;
 - b. 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 impacts; or
 - d. The impact was an unauthorized impact.
8. **Alternative Mitigation Ratios.** The Director may approve different mitigation ratios when the applicant proposes a combination of wetland creation, restoration, rehabilitation, and/or enhancement, provided that federal and state resource agencies approve the mitigation plan and the plan achieves no net loss of wetland functions and values.
9. **Mitigation Ratios for Wetland Buffer Impacts.** To mitigate impacts to functions and values of wetland buffers, a minimum buffer ratio of 1:1 (alteration area:mitigation area) is required. This ratio assumes that creation/restoration of a wetland buffer with appropriate native vegetation is sufficient to compensate for the wetland buffer functions and values affected by alteration of an existing wetland buffer. If enhancement of an existing wetland buffer is proposed as mitigation, a higher mitigation ratio may be required. For any proposed wetland buffer alterations or development, the applicant must show that the functions and values of the altered wetland buffer will be fully replaced by the proposed mitigation. The Director may increase the buffer mitigation ratios under the following circumstances:
 - a. The replacement ratio needed to recover the lost functions and values of buffer area is greater than 1:1 based upon the existing type of vegetative cover of either the impact site or the proposed mitigation site.
 - b. Uncertainty exists as to the probable success of the proposed restoration or creation;
 - c. A significant period of time will elapse between impact and replication of wetland functions;
 - d. The impact was an unauthorized impact.
10. **Mitigation Plans.** Compensatory wetland mitigation plan shall be consistent with “Guidance on Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans” (Ecology Publication # 06-06-011b), or as revised. Mitigation plans shall include the general mitigation plan requirements in KCC 17A.01.100, as well as the following information:
 - a. Existing and proposed wetland acreage;
 - b. Vegetative and faunal conditions;

- c. 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;
- d. Relationship within watershed and to existing waterbodies;
- e. Soils and substrate conditions, topographic elevations;
- f. Existing and proposed adjacent site conditions;
- g. Required wetland buffers (including any buffer reduction or averaging and mitigation proposed to enhance buffers);
- h. Property ownership;
- i. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs and an addition to the property's title identifying the wetland as a mitigation area;

A bond estimate for the installation (including site preparation, plant materials and installation, fertilizers, mulch) and the proposed monitoring and maintenance work for the required number of years, pursuant to KCC 17A.01.100.