

EXHIBIT A

CHAPTER 18.06 CRITICAL AREAS REGULATIONS

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18.06.010 Purpose and Applicability

A. Purpose. The purpose of this title is to designate ecologically sensitive and hazardous areas and to protect these areas and their functions and values in a manner that also allows reasonable use of private property. This chapter is intended to:

1. Implement the Town of Winthrop Comprehensive Plan (as amended) and the requirements of the Growth Management Act;
2. Protect critical areas, in accordance with the Growth Management Act and through the application of best available science, as determined according to WAC 365-195-900 through 365-195-925, and in consultation with state and federal agencies and other qualified professionals;
3. Protect the general public, resources and facilities from injury, loss of life, property damage or financial loss due to flooding, erosion, landslides, or steep slopes failure;
4. Protect unique, fragile and valuable elements of the environment, including ground and surface waters, wetlands, and fish and wildlife and their habitats;
5. Prevent cumulative adverse environmental impacts to water quality and availability, wetlands, and fish and wildlife habitat; and

6. Provide flexibility and attention to site specific characteristics, so as to ensure reasonable use of property.

B. Applicability. These critical area regulations shall apply as an overlay to zoning and other land use regulations established by the Winthrop Municipal Code (as amended).

1. All land uses and/or development permit applications on all lots or parcels within the Town that lie within critical areas as defined herein shall comply with the provisions of this chapter. No action shall be taken by any person that results in any alteration of any critical area except as consistent with the purposes, objectives and intent of this chapter.
2. Where two or more types of critical areas overlap, requirements for development shall be consistent with the standards for each critical area. Where it is determined that a designated critical area is located within the shoreline jurisdiction, the provisions of the Shoreline Master Program will be used to provide protection to that particular critical area(s). However, any standards found in this chapter may also be applied to a proposal as optional and/or supplemental items to the provisions of the Shoreline Master Program. For designated critical areas outside of the shoreline jurisdiction the provisions of this chapter shall apply.
3. These Critical Areas regulations shall apply concurrently with review conducted under the State Environmental Policy Act (SEPA), as locally adopted. Any conditions required pursuant to this Chapter shall be included in the SEPA review and threshold determination.

18.06.020 Definitions

“**Administrator**” means the Winthrop town planner or other person designated by the Mayor and approved by the council.

“**Agency consultation**” means consultation with the Washington Department of Fish and Wildlife and/or the U. S. Fish and Wildlife Service for the purpose of making a preliminary determination regarding impacts of a development proposal on Fish and Wildlife Habitat Conservation Area functions and values. “Agency consultation” does not mean “Endangered Species Section 7 Consultation.”

“**Aquifer Recharge Areas**” means those areas designated in Section 18.06.140 herein.

“**Avulsion**” means a sudden abandonment of a part or the whole of a meander belt by a stream for some new course.

“**Avulsion Hazard Zone (AHZ)**” means the portion of the CMZ that delineates avulsion hazards not accounted for in the HMZ.

“Best Available Science” means current scientific information used in the process to designate, protect or restore critical areas, that is derived from a valid scientific process as defined by WA 365-195-900 through 925.

“Buffer” or **“buffer zone”** means an area contiguous to and protective of a critical area that is required for the continued maintenance, functioning, and/or structural stability of a critical area.

“Channel Migration Zone (CMZ)” means those areas subject to risk from lateral channel movement due to stream bank destabilization, rapid stream channel changes (i.e. avulsions), stream bank erosion, and/or shifts in location of stream channels, as shown on Okanogan County’s Channel Migration Zone Hazard maps.

“Critical areas” include the following areas and ecosystems: aquifer recharge areas (i.e., areas with a critical recharging effect on aquifers used for potable water); fish and wildlife habitat conservation areas; flood hazard areas (including frequently flooded areas and channel migration zones); geologically hazardous areas; and wetlands.

“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 storage or use of equipment or materials inconsistent with the existing use. Development approvals issued by the town that bind land to specific patterns of use, including, but not limited to, subdivisions, short subdivisions, zone changes, conditional use permits and planned developments. Development does not include interior building improvements, exterior structure maintenance activities, routine landscape maintenance, or maintenance of individual utility service connections.

“Dwelling” means a building or portion thereof that contains living facilities, including provisions for sleeping, eating, cooking and sanitation for not more than one (1) family. This definition specifically excludes recreational vehicles.

“Erosion Hazard Zone (EHZ)” means the area of the CMZ unaccounted for in the AHZ or the HMZ, which delineates channel susceptibility to lateral bank erosion.

“Fish and Wildlife Habitat Conservation Areas” means those areas designated in Section 18.06.150 herein.

“Flood event” means any rise in the surface elevation of a water body to a level that causes the inundation or submersion of areas normally above the Ordinary High Water Mark.

“Flood Hazard Areas” means those areas designated in Section 18.06.170 herein.

“Functions and Values” means beneficial roles served by critical areas; including, but not limited to water quality protection and enhancement, fish and wildlife habitat, flood storage, conveyance and attenuation, ground water recharge and discharge, erosion control, protection from hazards, historical and archaeological and aesthetic value protection, and recreation.

“Geologically Hazardous Areas” means those areas designated in Section 18.06.180 herein.

“Qualified Professional” Means a person with experience and training in the pertinent scientific discipline. A qualified professional must have obtained a B.S. or B.A. or equivalent degree in biology, engineering, environmental studies, fisheries, geomorphology or related field, and two years of related work experience. A qualified professional for habitat must have a degree in biology and professional experience related to the subject species. A qualified professional for wetlands must be a professional wetland scientist with at least two years of full-time work experience as a wetlands professional, including delineating wetlands using the state or federal manuals, preparing wetland reports, conducting function assessments, and developing and implementing mitigation plans. A qualified professional for geological hazards must be a professional engineer or geologist, licensed in the state of Washington. A qualified professional for aquifer recharge areas must be a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

“Priority habitat” means a habitat type or element designated as Priority Habitat by the Washington Department of Fish and Wildlife.

“River-Reach Scale” means the scope of engineering assessments addressing erosion and/or scour problems shall incorporate potential impacts that may extend both up- and downstream of the project site, and not only be limited to the project site boundaries. The term ‘reach’ refers to a segment of the river that exhibits similar hydrologic, hydraulic, and/or fluvial geomorphic characteristics. It is assumed that a river reach will therefore exhibit similar and/or linked fluvial geomorphic characteristics in response to changes that may be implemented within the boundaries of the defined reach.

“Wetland” or **“Wetlands”** means areas that are inundated or saturated by surface water or ground water 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 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 created to mitigate conversion of wetlands.

18.06.030 Exemptions

The activities listed below are exempt from the provisions of this chapter. Exempt activities shall be conducted using all reasonable methods to avoid impacts to critical areas. The decision to declare an activity exempt shall be an Administrative Decision, subject to Section 18.06.100 of these regulations. Exemption from the chapter shall not be considered permission to degrade a critical area or ignore risks from natural hazards. Incidental damage to, or alteration of, a critical area that is not a necessary outcome of the exempted activity shall be restored, rehabilitated at the responsible party's expense.

- A. Emergency construction necessary to protect life or property from immediate damage by the elements. An emergency is an unanticipated event or occurrence which poses an imminent threat to public health, safety, or the environment, and which requires immediate action within a time too short to allow full compliance. Once the threat to the public health, safety, or the environment has dissipated, the construction undertaken as a result of the previous emergency shall then be subject to and brought into full compliance with this title;
- B. Normal maintenance or repair of existing buildings, structures, roads, utilities, levees, or drainage systems, provided the activity does not further alter, encroach upon, or increase impacts to critical areas or associated buffers;
- C. Existing agricultural activities normal or necessary to general farming conducted according to industry-recognized best management practices, including the raising of crops or the grazing of livestock;
- D. Site investigative work necessary for land use application submittals such as surveys, soil logs, percolation tests and other related activities. In every case, critical area impacts shall be minimized and disturbed areas shall be immediately restored; and
- E. Passive recreational activities, including, but not limited to: fishing, bird watching, hiking, hunting, boating, horseback riding, skiing, swimming, canoeing, and bicycling provided the activity does not alter the critical area or its buffer by changing existing topography, water conditions or water sources.

18.06.040 Public Agency and Utility Exception

- A. If application of this title would prohibit a development proposal by a public agency or public utility, the agency or utility may apply for an exception pursuant to this section. To qualify for an exception the agency or utility must demonstrate the following:
 - 1. That there is no other practical alternative to the proposed development which has less impact on critical areas;
 - 2. The application of this title would unreasonably restrict the ability to provide utility services to the public;

3. That the proposed use does not pose a threat to the public health, safety or welfare;
 4. That the proposal protects critical areas functions and values to the extent feasible and provides for mitigation in accord with the provisions of this title; and,
 5. The proposal is consistent with other applicable regulations and standards.
- B. A request for exception shall be submitted to the Town with the application materials for the particular development proposal. The application shall be supplemented with an explanation as to how the public agency and utility exception criteria are satisfied. The administrator may require additional information or studies to supplement the exception request.
- C. A Public Agency and Utility exception shall be processed according to the provisions of Title 19, Administrative Procedures, governing a Type I review process.

18.06.050 Reasonable Use Exception.

- A. If the application of this title would deny all reasonable use of the subject property, the property owner may apply for an exception pursuant to this section. To qualify for an exception the applicant must demonstrate all of the following:
1. That no other reasonable use can be made of the property that will have a lesser adverse impact on the critical area and adjoining and neighboring lands;
 2. That the proposed use does not pose a threat to the public health, safety or welfare;
 3. Any alteration is the minimum necessary to allow reasonable use of the property; and,
 4. The inability of the proponent to derive reasonable use of the property is not the result of actions by the applicant after the effective date of this chapter.
- B. A request for a reasonable use exception shall be submitted to the Town with the application materials for the particular development proposal. The application shall be supplemented with an explanation as to how the reasonable use exception criteria are satisfied. The Town may require additional information or studies to supplement the reasonable use exception request.
- C. Where a request for a reasonable use exception is granted, impacts to critical areas and buffers shall be mitigated consistent with the purpose and standards of this Chapter to the greatest extent feasible.
- D. A reasonable use exception shall be processed according to the provisions of Title 19, Administrative Procedures governing a Type I review process.

18.06.060 Reference Maps and Materials

The Town shall maintain reference maps and materials that provide information on the general locations of critical areas. Since boundaries are generalized, the application of

this chapter and the actual type, extent and boundaries of critical areas shall be determined and governed by the classification section established for each critical area. In the event of any conflict between the critical area location or designation shown on the Town's maps and the criteria and standards established in this chapter, or the site-specific conditions, the criteria, standards and/or site-specific conditions shall prevail. Reference maps and inventories shall include, but are not limited to the following (or, where applicable, any subsequent or amended version):

- A. Wetlands Map, based upon US Fish and Wildlife Service National Wetlands Inventory;
- B. Fish and Wildlife Habitat Area Maps, based upon Washington Department of Fish and Wildlife Priority Habitats and Species data;
- C. Soils Maps, based upon Okanogan County Soils Survey;
- D. Steep Slopes Map;
- E. Flood Insurance Rate Map Community 530124B, Panel #H&I-01, 1977;
- F. Town of Winthrop Comprehensive Plan;
- G. Town of Winthrop Shoreline Master Program;
- H. Town of Winthrop Comprehensive Flood Hazard Management Plan;
- I. *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication #96-94), as revised;
- J. *Washington State Wetlands Rating System for Eastern Washington* (Department of Ecology Publication #4-06-15), as revised;
- K. *Wetlands in Washington State, Volumes 1 and 2: Managing and Protecting Wetlands* (Department of Ecology Publications #05-06-006 and #05-06-008); and
- L. Approved Critical Areas Reports, Special Studies, Geotechnical Analyses, and other special reports previously completed for a subject property
- M. Monitoring data

18.06.070 Critical Areas Review Process

All land use and building permits shall require that applicants disclose activities within one hundred (100) feet of a known or suspected critical area. The provisions of this chapter shall be applied to any such proposals with the following exception: where the known or suspected critical area is a Fish and Wildlife Habitat Conservation Area and a plan or agreement for the habitat or species in question has been prepared and approved by the Washington Department of Fish and Wildlife (WDFW) and the Town of Winthrop, the provisions of said plan or agreement shall take precedence over the provisions of this Critical Areas Review Process. If, based on the provisions of such a plan or agreement, the requirements of any part of the Critical Areas Review Process have been waived, all relevant land use/development applications and, where applicable, a SEPA Checklist, shall be required. The review process shall proceed as follows:

- A. *Pre-application meeting/site visit.* Upon receiving a land use or development proposal, the administrator shall schedule a pre-application meeting and/or site visit with the proponent for purposes of a preliminary determination whether the proposal is likely to result in impacts to the functions and values of critical areas

or pose health and safety hazards. At this meeting, the administrator shall discuss the requirements of this chapter and other applicable local regulations; provide critical areas maps and other available reference materials; outline the review and permitting processes; and, work with the proponent to identify any potential concerns with regards to critical areas.

- B. *Agency consultation.* Because species populations and habitat systems are dynamic, agency consultation shall be required where activities are proposed within one hundred (100) feet of a designated Fish and Wildlife Habitat Conservation Area. The administrator shall consult with WDFW and the U. S. Fish and Wildlife Service to determine the value of the site to federal or state identified endangered, threatened, sensitive, or candidate species; animal aggregations considered vulnerable by the WDFW; and those species of recreational, commercial, or tribal importance that are considered vulnerable by the WDFW. The administrator shall also consult with the WDFW to determine whether the proposed action may affect priority habitat.
- C. *Application and SEPA Checklist.* For all nonexempt proposals, the proponent shall submit all relevant land use/development applications, together with a SEPA Checklist.
- D. *Determination of need for critical areas report.* Based upon the pre-application meeting, application materials, SEPA Checklist, and, in the case of Fish and Wildlife Habitat Conservation Areas, the outcome of the agency consultation, the administrator shall determine if there is cause to require a critical areas report. In addition, the administrator may use critical areas maps and reference materials, information and scientific opinions from appropriate agencies, or any reasonable evidence regarding the existence of critical area(s) on or adjacent to the site of the proposed activity. The determination of need for a critical areas report shall be an Administrative Decision, subject to Section 18.06.100 of these regulations.
- E. *Documentation and notification.* The administrator shall document the pre-application meeting and/or site visit, application and SEPA threshold determination, and any other steps or findings (including, in the case of Fish and Wildlife Habitat Conservation Areas, the agency consultation) that inform the determination whether a critical areas report shall be required. The applicant shall receive notice of the determination and any findings which support it.

18.06.080 Critical Areas Report

If the administrator determines that the site of a proposed development potentially includes, or is adjacent to, critical area(s), a critical areas report may be required. When required, the expense of preparing the critical areas report shall be borne by the applicant. The content, format and extent of the critical areas report shall be approved by the administrator.

- A. The requirement for critical areas reports may be waived by the administrator if there is substantial evidence that:
 - 1. There will be no alteration of the critical area(s) and/or the required buffer(s);

2. The proposal will not impact the critical area(s) in a manner contrary to the purpose, intent and requirements of this ordinance and the comprehensive plan; and,
 3. The minimum standards of this chapter will be met.
- B. No Critical Areas Report is required for proposals that are exempt from the provisions of this chapter as set forth under Section 18.06.030, Exemptions herein.
- C. Critical Area Reports shall be completed by a qualified professional who is knowledgeable about the specific critical area(s) in question, and approved by the administrator.
- D. At a minimum, a required Critical Areas Report shall contain the following information:
1. Applicant's name and contact information; permits being sought, and description of the proposal;
 2. A copy of the site plan for the development proposal, drawn to scale and showing:
 - a. Identified critical areas, buffers, and the development proposal with dimensions;
 - b. Limits of any areas to be cleared; and
 - c. A description of the proposed stormwater management plan for the development and consideration of impacts to drainage alterations;
 3. The names and qualifications of the persons preparing the report and documentation of any fieldwork performed on the site;
 4. Identification and characterization of all critical areas, wetlands, water bodies, and buffers adjacent to the proposed project area;
 5. An assessment of the probable cumulative impacts to critical areas resulting from the proposed development of the site;
 6. An analysis of site development alternatives;
 7. A description of reasonable efforts made to apply mitigation sequencing to avoid, minimize, and mitigate impacts to critical areas;
 8. A mitigation plan, as needed, in accordance with the mitigation requirements of this chapter, including, but not limited to:
 - a. The impacts of any proposed development within or adjacent to a critical area or buffer on the critical area; and
 - b. The impacts of any proposed alteration of a critical area or buffer on the development proposal, other properties and the environment;
 9. A discussion of the performance standards applicable to the critical area and proposed activity;
 10. Financial guarantees to ensure compliance; and
 11. Any additional information required for specific critical areas as listed in subsequent sections of this chapter.
- E. The administrator may request any other information reasonably deemed necessary to understand impacts to critical areas.

18.06.090 Mitigation Requirements

The applicant shall avoid all impacts that degrade the functions and values of critical areas. If alteration is unavoidable, all adverse impacts to critical areas and buffers resulting from the proposal shall be mitigated in accordance with an approved critical areas report and SEPA documents. Mitigation shall be on-site, when possible, and sufficient to maintain the functions and values of the critical area, and to prevent risk from a hazard posed by a critical area.

- A. *Mitigation sequencing.* Applicants shall demonstrate that all reasonable efforts have been examined with the intent to avoid and minimize impacts to critical areas. When an alteration to a critical area is proposed, such alteration shall be avoided, minimized, or compensated for in the following order of preference:
1. Avoiding the impact altogether by not taking a certain action or parts of an action;
 2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
 3. Rectifying the impact to wetlands, critical aquifer recharge areas, flood hazard areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the historical conditions or the conditions existing at the time of the initiation of the project;
 4. Minimizing or eliminating the hazard by restoring or stabilizing the hazard area through engineered or other methods;
 5. Reducing or eliminating the impact or hazard over time by preservation and maintenance operations during the life of the action;
 6. Compensating for the impact to wetlands, critical aquifer recharge areas, flood hazard areas, and habitat conservation areas by replacing, enhancing, or providing substitute resources or environments; and
 7. Monitoring the hazard or other required mitigation and taking remedial action when necessary.
- B. *Development standards.* In addition to the development standards specific to each type of critical area, all development shall be subject to the following standards:
1. Impervious lot coverage shall be minimized, to the extent consistent with the objectives of the development proposal
 2. The applicant shall provide for adequate stormwater drainage, based on the findings of the critical areas report and the anticipated impacts of the proposed use
- C. *Mitigation plan.* When mitigation is required, the applicant shall submit for approval a mitigation plan as part of the critical area report. Approval of a mitigation plan shall be an Administrative Decision, subject to Section 18.06.100 of these regulations.
- D. The mitigation plan shall include:
1. A written report identifying mitigation objectives, including:
 - a. A description of the anticipated impacts to the critical areas and the mitigating actions proposed and the purposes of the compensation measures, including the site selection criteria; identification of

- compensation objectives; identification of critical area functions and values; and dates for beginning and completion of site compensation construction activities;
 - b. A review of the best available science supporting the proposed mitigation and a description of the report author's experience to date in critical areas mitigation; and
 - c. An analysis of the likelihood of success of the compensation project.
 - 2. Measurable criteria for evaluating whether or not the objectives of the mitigation plan have been successfully attained and whether or not the requirements of this chapter have been met.
 - 3. Written specifications and descriptions of the mitigation proposed, including, but not limited to:
 - a. The proposed construction sequence, timing, and duration;
 - b. Grading and excavation details;
 - c. Erosion and sediment control features;
 - d. A planting plan specifying plant species, quantities, locations, size, spacing, and density; and
 - e. Measures to protect and maintain plants until established.
 - 4. A program for monitoring construction of the compensation project, and for assessing the completed project and its effectiveness over time. The program shall include a schedule for site monitoring and methods to be used in evaluating whether performance standards are being met. A monitoring report shall be submitted as needed to document milestones, successes, problems, and contingency actions of the compensation project. The compensation project shall be monitored for a period necessary to establish that performance standards have been met, but not for a period less than five (5) years from the date of planting, or ten (10) years where establishment of woody vegetation is the intended result. Where a 10-year monitoring program is required, data collection and reporting need not be completed every year. A monitoring schedule based on the findings of the critical areas report and adequate to effectively monitor canopy development shall be established in the mitigation plan.
 - 5. Identify potential courses of action, and any corrective measures to be taken if monitoring or evaluation indicates project performance standards are not being met.

18.06.100 Administrative Review

- A. *Administrative decisions.* Where these regulations call for an Administrative Decision, the administrator shall submit his or her findings and preliminary decision to Town department heads and relevant state and federal agencies, for review at least 15 (fifteen) days prior to making a final decision, and shall consider timely comments in making a final decision.
- B. *Agency review.* In any case in which the administrator does not have adequate knowledge or training to determine the sufficiency and accuracy of information

contained within a critical area report or mitigation plan (whether or not an administrative decision is involved), said reports or plans shall be submitted to qualified agencies for review and recommendations prior to acceptance by the Town.

18.06.110 Surety/Bonding

If a development proposal is subject to mitigation, maintenance or monitoring plans, the Town of Winthrop, in a form acceptable to the Town Attorney may require an assurance device or surety.

18.06.120 Permit Conditions

Through the review process, the Town of Winthrop shall have the authority to attach such conditions to the granting of any approval under this chapter as deemed necessary to alleviate adverse impacts to critical area(s) and to carry out the provisions of this chapter. Such conditions of approval may include, but are not limited to the following:

- A. Specification of allowable lot sizes;
- B. Provisions for additional buffers relative to the intensity of a use or activity;
- C. Requirements and/or restrictions on the construction, size, location, bulk and/or height, etc. of structure(s);
- D. Dedication of necessary easements for utilities, conservation, open space, etc.;
- E. Imposition of easement agreements, sureties, deed restrictions, covenants, etc. on the future use and/or division of land;
- F. Limitations on the removal of existing vegetation;
- G. Limitations on impervious lot coverage;
- H. Additional measures to address issues such as erosion control, storm water management, filling, grading, etc.;
- I. Development of a mitigation plan to create, enhance, or restore damaged or degraded critical area(s) on and/or off site; and
- J. Any monitoring and/or maintenance plans necessary to implement the provisions of this chapter.

18.06.130 Enforcement

Violation of the provisions of this ordinance, or failure to comply with any of its requirements, shall be subject to enforcement actions by the Town of Winthrop that are authorized in the Zoning Ordinance, Subdivision Ordinance, Shoreline Master Program or any other land use regulation of the Town of Winthrop. The Town Attorney, when authorized by the Mayor and Council, shall seek penalties, remedies, injunctions and other legal sanctions necessary for the enforcement of this title. In addition to costs allowed by these regulations, the prevailing party in an enforcement action may, at the court's discretion, be allowed interest and reasonable attorney's fees. The Town

Attorney shall seek such costs, interest, and the reasonable attorney's fees on behalf of the Town of Winthrop when the Town is the party.

18.06.140 Aquifer Recharge Areas

- A.** *Designation.* The following areas are designated as aquifer recharge areas :
1. *Critical Potential* – Wellhead protection areas, rivers, creeks, wetlands, lakes, ponds and lands that have been specifically identified as critical recharge areas based on reliable scientific data.
 2. *High Potential* - Lands adjacent to rivers, creeks, wetlands, lakes and ponds that include soils that show permeability ratings in the county soil survey of more than 20 inches per hour within 60 inches of the soil surface.
- B.** *Mapping.* The Town has developed maps which indicate wellhead protection areas, the shoreline areas of the Methow and Chewuch Rivers, and soils with permeability ratings that indicate potential for aquifer recharge. These maps are not the result of scientific study, and are for reference purposes only.
- C.** *Standards.* In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to aquifer recharge areas:
1. Development activities within an aquifer recharge area shall be designed, planned and undertaken in a manner that will not potentially degrade groundwater resources nor adversely effect the recharging of the aquifer.
 2. A hydrogeologic study and/or ongoing monitoring may be required to assess impacts of development activities on groundwater resources.
 3. All proposed activities within aquifer recharge areas must comply with the water source protection requirements of the federal Environmental Protection Agency, the state Department of Health and the Okanogan County Health District.
 4. On-site stormwater facilities shall be designed and installed in all aquifer recharge areas, so as to provide both detention and treatment of all runoff associated with the development;
 5. All development occurring within aquifer recharge areas shall be required to connect to Town sewer and water, and on-site sewage disposal shall be prohibited.
 6. Landfills, junkyards/salvage yards, mining, wood treatment facilities, or any other activity which could impair the recharge of critical aquifer recharge areas shall be prohibited in areas with critical recharge potential; such activities may be permitted in areas with high or moderate recharge potential in accord with applicable zoning regulations, providing the applicant can satisfactorily demonstrate that potential negative impacts to groundwater can be prevented.

7. All storage tanks, whether above or underground, must be constructed so as to be protected against corrosion for the operational life of the tank; to prevent any release of hazardous substances to the ground, ground waters, or surface waters; and to utilize appropriate containment methods.
8. Any agricultural activities conducted within aquifer recharge areas shall incorporate best management practices concerning waste disposal, fertilizer/pesticide/herbicide use, and stream corridor management. If necessary, applicants shall seek technical assistance from Natural Resource Conservation Service, the Okanogan County Conservation District or the WSU Cooperative Extension Office.
9. Application of pesticides, herbicides and fertilizers within aquifer recharge areas shall comply with timing and rates specified on product packaging.
10. Vehicle repair and servicing activities must be conducted over impermeable pads and within a covered structure capable of withstanding normally expected weather conditions. Chemicals used in the process of vehicle repair and servicing must be stored in a manner that protects them from weather and provides containment should leaks occur.

18.06.150 Fish & Wildlife Habitat Conservation Areas

- A. *Designation.* The Town of Winthrop designates Fish and Wildlife Habitat Conservation Areas within the town and its urban growth area in accord with Washington Department of Fish and Wildlife (WDFW) *Priority Habitat and Species Program*, as amended.
- B. *Classification.* The Town shall use two general classifications of Fish and Wildlife Habitat Conservation Areas. These classifications are not intended to prioritize protection of one class of habitat over the other, but to recognize that the two types of habitat areas have differing functions and values within the urban environment. In reviewing development proposals the Town shall consider the Fish and Wildlife Habitat Conservation Areas classification in establishing buffer widths, mitigation requirements, and permit conditions. Any decision regarding establishment of buffers, buffer widths, access restrictions, vegetation conservation and restoration requirements, mitigation requirements, or permit conditions shall be an Administrative Decision, subject to Section 18.06.100 of these regulations.
 1. *Aquatic and Riparian Habitat Conservation Areas.* With this classification, the Town recognizes that riparian habitat within the Town limits and urban growth area frequently coincides with shoreline areas, flood hazard areas, wetlands and aquifer recharge areas. Riparian areas typically offer relatively contiguous habitat that is essential to a diverse array of fish and wildlife species. Best Available Science indicates that these areas are especially sensitive to pressures from urban development, and that they

provide important habitat functions and values for many species, including anadromous fish species.

2. *Upland Habitat Conservation Areas.* With this classification, the Town recognizes that those upland areas within the defined Town limits and urban growth boundary that are not otherwise designated as critical areas are frequently the most suited for human development. Upland habitats that support federal or state identified endangered, threatened or sensitive species, or any habitats which are identified as providing a high level of functions and values, must be protected in accord with federal and state regulations. However, in considering Best Available Science, this classification also is intended to ensure that development is not subject to burdensome regulation in those areas most suited to support it. Upland habitat areas shall not include those portions of the Town and Urban Growth Area where a development pattern is already established such that connectivity of habitat has already been broken and protection of identified habitat areas is unlikely to provide measurable benefit to any of the priority species identified by WDFW.
- C. *Mapping.* Priority Habitat and Species maps used by the WDFW depict general locations of Fish and Wildlife Habitat Conservation Areas. However, because species populations and habitat systems are dynamic, agency consultation shall be required to verify designation as a habitat conservation area, except in cases in which a plan or agreement for the habitat or species in question has been prepared and approved by the WDFW and the Town of Winthrop.
- D. *Standards.* In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to fish and wildlife habitat conservation areas:
1. *Habitat Assessment.* Critical Area Reports for Fish and Wildlife Habitat Conservation Areas shall include a habitat assessment to evaluate the presence or absence of a priority species or habitat.
 2. All projects shall comply with the applicable federal, state and local regulations regarding the species and habitats identified upon a site.
 3. The Washington State Department of Fish and Wildlife priority habitat and species management recommendations shall be consulted in developing specific measures to protect a specific project site.
 4. When needed to protect the functions and values of Fish and Wildlife Habitat Conservation Areas, the administrator shall require the establishment of buffer areas for activities in or adjacent to such areas. Buffers shall consist of an undisturbed area of native vegetation, or areas identified for restoration. Buffer widths shall reflect the classification and sensitivity of the habitat and the intensity of activity proposed, and shall be consistent with the management recommendations issued by the state Department of Fish and Wildlife or other Best Available Science.

5. Any approved alteration or development shall be required to minimize impacts to native vegetation. Where disturbance is unavoidable, the applicant shall restore the area to the extent possible using native plants appropriate to the site. New plantings shall be monitored and maintained in good growing condition and kept free of invasive weeds until well established upon the site.
6. Within Riparian Habitat Conservation Areas, vegetation shall not be removed unless no other alternative exists. In such cases clearing shall be limited to those areas necessary and disturbed areas shall be re-planted with site-appropriate native riparian vegetation.
7. Access to Fish and Wildlife Habitat Conservation Areas or buffers may be restricted in accord with the findings of a Critical Areas Report, Mitigation Report, PHS Management recommendations or other Best Available Science. Access restrictions may include fencing and signs, as needed to ensure protection of habitat functions and values. Restrictions may be seasonal in nature.
8. Subdivision of lands within habitat conservation areas shall be subject to the following:
 - a. All division of land shall be accomplished by planned development when a threatened or endangered species is verified to be present
 - b. All division of land shall be accomplished by planned development when 25 percent or more of the site falls within one or more designated Fish and Wildlife Conservation Areas
9. All activities, uses and alterations proposed to be located in or adjacent to water bodies used by anadromous fish shall give special consideration to the preservation and enhancement of associated habitats.

18.06.160 Wetlands

- A. *Designation.* Wetlands in Winthrop shall be designated according to the definition of wetlands in RCW 36.7A.030 (21). Wetlands meeting the criteria of that definition shall be subject to these Critical Areas regulations.
- B. *Identification, rating, and mapping.* To date there has been no wetlands mapping done specifically for the Winthrop area.
 1. The Town shall pursue accurate identification and rating of all wetlands in its planning area based on the *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication #96-94, or as amended) and the *Washington State Wetlands Rating System for Eastern Washington* (or as amended).
 2. Until funding is obtained to conduct a comprehensive inventory of wetlands, the National Wetlands Inventory (NWI) maps shall be used as a base designation. The NWI maps, along with other supportive documentation, shall be used to review development proposals, but because the National Wetlands Inventory was done at such a broad scale,

local verification according to the criteria in this section shall be part of the standard process for identifying and designating wetlands.

3. If the administrator determines that the site of a proposed development potentially includes, or is adjacent to, a wetland, and a Critical Areas Report is required, wetland identification and, where applicable, rating shall be undertaken using the *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication #96-94, or as amended) and the *Washington State Wetlands Rating System for Eastern Washington* (Department of Ecology Publication #4-06-15, or as amended). Where federal regulations require use of the U. S. Army Corps of Engineers *Arid West Interim Regional Supplement* (or as amended) to the *1987 Wetland Delineation Manual*, delineation using the *Washington State Wetlands Identification and Delineation Manual* (Washington Department of Ecology Publication #96-94, or as amended) shall also be required.

C. *Classification.* Wetlands shall be classified as follows:

Category I Category I wetlands are those that:

1. represent a unique or rare wetland type;
2. are sensitive to disturbance;
3. are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or
4. provide a very high level of functions.

Generally, these wetlands are not common and make up a small percentage of the wetlands in Eastern Washington. Category I wetlands include alkali wetlands, bogs, Natural Heritage wetlands, mature and old-growth forested wetlands with slow growing trees, forested wetlands with stands of aspen, and wetlands that perform many functions well, as measured by the rating system.

Category II Category II wetlands are:

1. forested wetlands in the channel migration zone of rivers;
2. mature forested wetlands containing fast growing trees;
3. vernal pools present within a mosaic of other wetlands; or
4. those wetlands with a moderately high level of functions.

These wetlands are difficult, though not impossible, to replace. They provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a high level of protection.

Category III Category III wetlands are:

1. vernal pools that are isolated; or
2. wetlands with a moderate level of functions, as measured by the rating system.

These wetlands have generally been disturbed in some manner, and are often smaller, less diverse and/or more isolated in the landscape than Category II wetlands. They may not require as much protection as Category I and II wetlands.

Category IV Category IV wetlands have the lowest levels of functions, as measured by the rating system, and are often heavily disturbed. These are wetlands that we should be able to replace, and in some cases improve. These wetlands do provide some important functions, and should be afforded some degree of protection.

- D. *Standards.* In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to wetland areas. Any decision regarding changes in buffer width, plant community rehabilitation, buffer width averaging, buffer configuration, activities allowed in buffers, signage, fencing, wetland alteration, off-site mitigation, mitigation ratios, density increases, or any other substantive decision related to the minimum standards shall be an Administrative Decision, subject to Section 18.06.100 of these regulations.
1. New or changed activities and uses shall be prohibited from wetlands or wetland buffers unless the applicant can show that the proposed activity will not degrade the functions and values of the wetland or other critical areas, or as otherwise provided in this title.
 2. Buffer widths. The following standard buffer widths have been established in accord with best available science to provide predictability in the regulation of wetlands:

Category of Wetland	Width of Buffers
I	250 ft
II	200 ft
III	150 ft
IV	50 ft

The standard buffer widths shall be applied unless a critical areas report establishes, based on intensity of impacts, wetlands functions, or special characteristics as described in Appendix 8-D of *Wetlands in Washington State, Volume 2: Managing and Protecting Wetlands* (Department of Ecology Publication #05-06-008, or as amended), that a greater or lesser buffer width would serve to protect the functions and values of a particular wetland. The standard buffer widths may be reduced by up to, but not

more than 50% for low intensity uses such as open space recreation, unpaved trails, or utility corridors that do not require roads or vegetation management. Greater buffer widths or rehabilitation of an inadequate plant community may be required where necessary to ensure development does not result in adverse impacts to wetlands.

3. Measurement of wetland buffers. All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category and the proposed land use. The same buffer widths and measurement criteria shall apply to any wetland created, restored, or enhanced as compensation for approved wetland alterations. Buffers shall be clearly marked on the ground.
4. Wetland buffer width averaging. The administrator may allow averaging of wetland buffer widths in accordance with an approved critical areas report, provided the following conditions are met:
 - a. There will be no reduction in wetland functions and values;
 - b. The wetland contains variations in sensitivity due to physical characteristics or the character of the buffer varies in slope, soils, or vegetation such that the wetland would benefit from a wider buffer in some areas and would not be harmed by a narrower buffer in other places;
 - c. The buffer at its narrowest point is never less than three-quarters (3/4) of the required width; and
 - d. The total area contained in the buffer is no less than would otherwise have been applied under a constant buffer width.

Wetland buffer width averaging shall not be combined with any other option for reducing buffer widths.

5. Where other critical areas coincide with wetlands, buffers shall be configured so as to protect aggregate functions and values. Particular consideration shall be given to habitat connectivity.
6. Wetland buffer zones shall be retained in their natural condition. Where buffer disturbances are unavoidable during adjacent construction, a detailed mitigation plan consistent with the standards under Section 18.06.090, Mitigation Requirements shall be required to ensure successful re-vegetation with native plant materials.
7. The following activities shall be allowed within wetland buffers:
 - a. Conservation or restoration activities aimed at protecting soil, water, vegetation or wildlife;
 - b. Passive recreation, including walkways or trails located in the outer 25% of the buffer area, wildlife viewing structures, and fishing access areas, provided these are designed and approved as part of an overall site development plan;
 - c. Educational and scientific research activities; and

- d. Normal and routine maintenance and repair of any existing public or private facilities provided appropriate measures are undertaken to minimize impacts to the wetland and its buffer and that disturbed areas are restored to a natural condition.
- 8. Storm water management facilities shall be allowed within the outer 25% of a wetland buffer around Category III or IV wetlands, provided that no other location is feasible and that the location of such facilities will not degrade the functions of the wetland or its buffer.
- 9. As a condition of any permit or authorization pursuant to this chapter, the administrator may require temporary or permanent signs and/or fencing along the perimeter of a wetland or buffer in order to protect the functions and values of the wetland, or to minimize future impacts or encroachment upon the wetland or buffer.
- 10. Wetland alteration proposals shall be approved only if no alternative is available. If alteration is unavoidable, all adverse impacts shall be mitigated as set forth in an approved Critical Areas Report and mitigation plan.
- 11. Mitigation shall achieve biological functions equivalent to or greater than existed in the wetland prior to mitigation.
- 12. When possible, mitigation shall be on-site and sufficient to maintain the functions and values of the wetland and buffer areas. If on-site mitigation is not feasible, then the applicant shall demonstrate that the site is the nearest that can reasonably achieve the goals of mitigation with a high likelihood of success.
- 13. Mitigation actions that require compensation by replacing, enhancing or substitution shall occur in the following order of preference:
 - a. Restoring, replacing or enhancing the wetland on the site of the project;
 - b. Restoring, replacing or enhancing degraded wetlands in the same sub-basin;
 - c. Creating wetlands on upland sites that were former wetlands or that are disturbed upland sites;
 - d. Preserving high quality wetlands that are under imminent threat.
- 14. The following ratios apply to the creation, restoration or preservation of wetlands that is in-kind, on-site, the same category, timed prior to or concurrent with alteration, and has a high probability of success:

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

These ratios do not do not apply to remedial actions resulting from unauthorized alterations.

15. The mitigation ratio may be increased if the administrator identifies that:
 - a. Uncertainty exists as to the probable success of the proposed restoration or creation;
 - b. A significant time period will elapse between impact and replication of wetland functions;
 - c. Proposed mitigation will result in a lower category of wetland or reduced functions relative to the wetland being impacted; or
 - d. The impact was due to an unauthorized action.
16. The administrator may decrease the mitigation ratio where:
 - a. Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions have a very high likelihood of success;
 - b. Documentation by a qualified wetlands specialist demonstrates that the proposed mitigation actions will provide functions and values greater than the wetland being impacted; or
 - c. The proposed mitigation actions are conducted in advance of the impact and have been shown to be successful.
17. The long or short subdivision of lands that include wetlands is subject to the following:
 - a. Land that is located wholly within a wetland or its buffer may not be subdivided;
 - b. Land that is located partially within a wetland or its buffer may be subdivided provided that an accessible and contiguous portion of each new lot is located outside of the wetland and its buffer and meets minimum lot size requirements.
 - c. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only if the Town determines that no other feasible alternative exists.
18. The administrator may allow greater density of development outside of wetland areas and associated buffers as an incentive, provided the ability to ensure a high level of protection for on-site resources is demonstrated in an approved Critical Areas Report and mitigation plan.

18.06.170 Flood Hazard Areas

A. Designation.

1) Frequently Flooded Areas

- i. The Town of Winthrop designates those areas of special flood hazard indicated in the *Flood Hazard Boundary Map/Flood Insurance Rate Map* (or as amended) and *Flood Boundary/Floodway Map* (or as amended), together with the accompanying *Flood Insurance Study* for Community Number 530125A, issued November 2, 1977 (or as amended), as Frequently Flooded Areas.
- ii. Since the above-referenced maps and Flood Insurance Study are nearly 30 years old, the town shall pursue re-mapping by FEMA to

ensure accuracy of the floodway and floodplain boundaries when funding is available.

- iii. Flood hazards are not necessarily constrained to those areas detailed in the flood insurance study and maps, therefore, mapping for the areas of local concern shall be undertaken as information becomes available, subject to availability of funds.

2) Channel Migration Zones

- i. The Town of Winthrop designates the severe and moderate channel migration zones identified in the *Comprehensive Flood Hazard Management Plan, Appendix I*, adopted July 16, 2003 (or subsequent updates), as Channel Migration Zones.
- ii. Channel Migration Zones may be modified based on the findings of completed Special Studies related to channel migration zones. See “*Requests for Reassessment of Channel Migration Zone boundaries*” below.

- 3) Incorporation of monitoring data: the Town’s Comprehensive Flood Hazard Management Plan (CFHMP) calls for monitoring to develop additional data about the floodplain and flood hazard areas. The Town shall use the data from any flood hazard monitoring programs (as well as other data as they become available) to update local flood hazard maps, including Channel Migration Zone boundaries.

B. *Mapping.* The *Flood Hazard Boundary Map/Flood Insurance Rate Map* and *Flood Boundary/Floodway Map* referred to above (or subsequent revisions to those maps), shall serve as the official maps of frequently flooded areas. The maps in the *Comprehensive Flood Hazard Management Plan, Appendix I* referred to above (or subsequent revisions to those maps), shall serve as the official maps of channel migration zones. Those official maps, along with supporting documentation, shall be used to review development proposals.

C. *Standards.* In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to flood hazard areas:

1. All development within Flood Hazard Areas shall be reviewed under and subject to the requirements of Chapter 15.12 of the Winthrop Municipal Code, Flood Damage Prevention Regulations.
2. All development within Flood Hazard Areas shall be consistent with the goals, objectives, findings, and recommendations of the Town’s CFHMP. The CFHMP, along with the Town’s Comprehensive Plan, provides a policy basis for management of flood hazard areas.
3. Where practical, development activities shall be coordinated with structural activities recommended in the CFHMP.
4. Where Flood Hazard Areas coincide with other designated critical areas, critical areas reports and mitigation plans shall address any combined functions and values.

5. In all cases where mitigation measures are proposed, said measures shall be consistent with the Town's CFHMP.
6. Structures shall be located outside of Flood Hazard Areas except where no alternative location exists.
7. Following construction of a structure within the floodplain where base flood elevation is provided, the applicant shall obtain an elevation certificate that records the elevation of the lowest floor. The elevation certificate shall be completed by a surveyor licensed in the state of Washington and shall be submitted to the Town for recording.
8. Fill and grading in flood hazard areas shall occur only upon a determination by a qualified professional that the fill or grading will not block side channels, inhibit channel migration, increase flood hazards to others, or be placed within a defined channel migration zone.
9. Subdivision in Flood Hazard Areas is subject to the following :
 - a. All lots created shall have adequate building space outside flood hazard areas, including the floodway, 100-year floodplain, and channel migration zones;
 - b. Plat maps shall indicate the floodway, 100-year floodplain and channel migration zone;
 - c. Subdivisions shall be designed to minimize or eliminate the potential for flood damage; and
 - d. Subdivisions shall provide for storm water drainage, in accordance with town standards, so as to reduce exposure to flood hazards.
10. Development within the Severe Hazard Channel Migration Zone shall be allowed only upon a determination by a qualified professional that the development will not limit channel migration or avulsion; require current or future bank stabilization; affect upstream or downstream properties; or result in a net loss of ecological functions associated with rivers and streams.
11. Upon development of properties within Channel Migration Zones under this Chapter, a notice shall be placed on the title of the property and recorded by the Okanogan County Auditor. The notice shall serve to notify future owners of the property that the property and any structures on the property are subject to potential risks related to channel migration.
 - a. The notice on the title to properties located in Moderate Hazard Channel Migration Zones shall read as follows:

"NOTICE"

This property has been identified as being within a Moderate Hazard Channel Migration Zone, and may be subject to risks from overbank flooding, bank erosion, and/or channel migration. Based on historic data, the channel or stream may erode or migrate and change locations over time, possible undercutting or eroding portions of this property. Structures and/or property may be at risk from flood inundation and/or the migrating channel and could be damaged or destroyed. Activities in the channel migration zone are

subject to the provisions of the Town of Winthrop's Comprehensive Flood Hazard Management Plan, Floodplain Development Ordinance, and Critical Areas Ordinance.

- b. The notice on the title to properties located in Severe Hazard Channel Migration Zones shall read as follows:

"NOTICE"

This property has been identified as being within a Severe Hazard Channel Migration Zone, and may be subject to risks from overbank flooding, bank erosion, and/or channel migration. Based on historic data, the channel or stream may erode or migrate and change locations over time, possible undercutting or eroding portions of this property. Structures and/or property may be at risk from flood inundation and/or the migrating channel and could be damaged or destroyed. Activities in the channel migration zone are subject to the provisions of the Town of Winthrop's Comprehensive Flood Hazard Management Plan, Floodplain Development Ordinance, and Critical Areas Ordinance.

- 12. Bank Stabilization Projects: Bank stabilization (and other actions to prevent bank erosion and/or scour) within channel migration zones shall be subject to the following standards:
 - a. Protection of structures, public roadways or sole access routes in existence before the effective date of this Critical Areas Ordinance shall be allowed;
 - b. Within the Severe Channel Migration Hazard Zone, no new bank stabilization structures or maintenance of existing bank stabilization structures will be allowed after the effective date of this Critical Areas Ordinance unless the planning and design of the proposed bank stabilization project incorporates an engineering assessment that includes evaluation of potential impacts at a river-reach scale (i.e. evaluates impacts that may occur as a result of the proposed project in up- and downstream reaches from the project site). All bank stabilization projects shall be consistent with the recommendations in the Town of Winthrop's Comprehensive Flood Hazard Management Plan (CFHMP). Means and methods for stabilizing eroding stream banks shall look at erosion and/or scour issues at the river-reach scale rather than relative to individual property boundaries. Bank stabilization projects shall use soft approaches that assure no net loss of ecological functions unless it can be demonstrated that a different technique is needed because a structure is in imminent danger. Proof of imminent danger must be demonstrated by a qualified professional's report showing that damage to the structure can be expected within three years as a result of erosion.

- c. Bank stabilization projects shall be allowed in the Moderate Channel Migration Hazard Zone where such activity will not result in interference with the process of channel migration that may cause significant adverse impacts to property or public improvement and/or result in a net loss of ecological functions associated with rivers and streams, and subject to all other applicable regulations.

D. *Requests for Reassessment of Channel Migration Zone boundaries.* A landowner or other project proponent may request reassessment of channel Migration Zone boundaries, including the locations of Avulsion Hazard Zones, Channel Migration Zones, and Erosion Hazard Zones, by submitting a Special Study to the Town for review and consideration.

- 1) A site-specific Special Study of a channel migration hazard shall be prepared by a qualified and licensed engineer, geologist, engineering geologist, or hydrogeologist who is experienced in the fields of fluvial geomorphology and river dynamics.
- 2) A Special Study of a channel migration hazard shall use be consistent with *A Framework for Delineating Channel Migration Zones* (Washington Department of Ecology Publication 03-06-027, or as revised), including using terminology and methods consistent with the guidance in that publication.
- 3) A Special Study must include the following:
 - i. Vicinity map and site map with scale, north arrow, and parcel number(s) of the specific site being studied;
 - ii. A clear statement of the requested revision or exception to the provision(s) of the channel migration hazard maps in the *Comprehensive Flood Hazard Management Plan, Appendix I*;
 - iii. A clear presentation of all required study steps (as outlined above);
 - iv. A clearly stated conclusion of the Special Study results that supports the requested revision. The conclusion must document the basis for the revision, show how the data presented refute the data used in the *Comprehensive Flood Hazard Management Plan, Appendix I*, and calculate the new results using the new information; and,
 - v. A clearly marked map showing the requested revision to the maps in the *Comprehensive Flood Hazard Management Plan, Appendix I*.
- 4) On receipt of a Special Study, the Town will review the study for completeness and request any additional materials, data, or information needed to support the review. The review will include a site visit by a representative of the Town. Prior to the decision on a permit, staff will inform the applicant of the decision on the boundary reassessment. If the premise of the Special Study is accepted, the Town will provide the applicant with a revised map of the channel migration zone boundary.

- 5) The Administrator's decision on a reassessment request and corresponding Special Study may be appealed to Town Council.

18.06.180 Geologically Hazardous Areas

A. *Designations.* Geologically hazardous areas are designated as follows:

Erosion Hazard Areas - Erosion hazard areas are those areas that contain all three of the following characteristics:

1. A slope of 30% or greater,
2. Areas identified by the Natural Resource Conservation Service (NRCS) as having a "moderate to severe," "severe," or "very severe" rill and inter-rill erosion hazard, and
3. Areas that are exposed to the erosion effects of wind or water.

Landslide Hazard Areas - Landslide hazard areas include areas potentially subject to landslides based on a combination of geologic, topographic and hydrologic factors. They include areas susceptible because of any combination of bedrock, soil, slope, aspect, structure, or hydrology. Examples include, but are not limited to:

1. Areas that have historically been prone to land sliding.
2. Areas containing soil types identified by the Natural Resource Conservation Service (NRCS) as unstable and prone to landslide hazard.
3. Areas with slopes greater than 15%, hillsides with intersecting geologic contacts with relatively permeable sediment overlying a relatively impermeable sediment or bedrock, and springs or groundwater seepage.
4. Areas that are potentially unstable as a result of rapid stream incision or stream bank erosion.
5. Areas with slopes of 40% or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock.

Mine Hazard Areas - Mine Hazard Areas include areas that are directly underlain by, adjacent to, or affected by mine workings such as adits, tunnels, drifts, or air shafts with the potential for creating large underground voids susceptible to collapse, tailings piles, and waste rock. In addition, steep and unstable slopes created by open mines, tailings and waste rock piles have the potential for being mine hazard areas. Mine hazard areas are based upon the identification of active or historic mining activity and site-specific information regarding topography and geology. There are no known mine sites in Winthrop.

Seismic Hazard Areas - Seismic Hazard Areas are subject to severe risk of damage as a result of earthquake induced ground shaking, slope failure, settlement or soil liquefaction. There are no known active faults in Winthrop. The majority of the Town is located within Seismic Zone 2B in accordance with

the Uniform Building Code (1991 Edition, as amended). Susceptibility of land within the Town to liquefaction is “very low to low”, according to the Washington Department of Natural Resources (DNR) liquefaction susceptibility map for Okanogan County.

Volcanic Hazard Areas - Volcanic Hazard Areas are subject to pyroclastic flows, lava flows, and inundation by debris flows, mudflows, or related flooding resulting from volcanic activity. There are no such areas in Winthrop.

- B. *Mapping.* NRCS maps shall be used to identify areas of erosion potential. Soils information should be combined with site-specific information (rills, inter-rills, and wind erosion) to determine if erosion hazard is present on the site.
- C. *Standards.* In addition to the general provisions of this chapter and the requirements of the underlying zone, the following minimum standards shall apply to development activities within and adjacent to geologic hazard areas:
1. Any Critical Areas Report for a geologically hazardous area shall include a geotechnical analysis completed by a qualified professional with expertise in the particular hazard(s) present in a given critical area.
 2. Alterations of geologically hazardous areas or associated buffers may only occur for activities that:
 - a. Will not increase the threat of the geological hazard to adjacent properties beyond pre-development conditions;
 - b. Will not adversely impact other critical areas;
 - c. Are designed so that the hazard to the project is eliminated or mitigated to a level equal to or less than pre-development conditions; and
 - d. Are certified as safe as designed and under anticipated conditions by a qualified engineer or geologist, licensed in the state of Washington.
 3. Mitigation plans for geologically hazardous areas shall establish setbacks and buffer widths as needed to eliminate or minimize risks of property damage, death, or injury resulting from development of the hazard area. Where established, buffers shall be maintained between all permitted uses and activities and the designated geologically hazardous area(s).
 4. Unless otherwise provided or as part of an approved alteration, removal of vegetation from an erosion or landslide hazard area or related buffer shall be prohibited. Where removal of vegetation is unavoidable, reseedling and replanting with native vegetation shall be required, to assist in stabilization of the areas and to discourage establishment of invasive plants.
 5. Structures and improvements shall be clustered to avoid geologically hazardous areas and other critical areas.
 6. Every Erosion Hazard Area mitigation plan shall include a run-off management plan or an erosion control plan to reduce sedimentation problems.

7. Development and activities located within landslide or erosion hazard areas shall provide for long-term slope stability, and design shall incorporate the following standards:
 - a. Structures and improvements shall minimize alterations to the natural contour of the slope and foundations shall be tiered where possible to conform to existing topography;
 - b. Structures and improvements shall be located to preserve the most critical portion of the site and its natural landforms and vegetation;
 - c. The proposed development shall not result in greater risk or a need for increased buffers on neighboring properties;
 - d. The use of retaining walls that allow the maintenance of existing natural slope area is preferred over graded artificial slopes; and
 - e. Development shall be designed to minimize impervious lot coverage.
8. Utility lines and pipes shall be permitted in erosion and landslide hazard areas only when the applicant demonstrates that no other practical alternative is available.
9. Subdivision of lands in erosion, landslide, and mine hazard areas is subject to the following:
 - a. Land that is located wholly within an erosion, landslide or mine hazard area or its buffer may not be subdivided. Land that is located partially within an erosion, landslide or mine hazard area or its buffer may be divided provided that each resulting lot has sufficient buildable area outside of, and will not affect, the geologic hazard area.
 - b. Access roads and utilities may be permitted within the erosion, landslide or mine hazard area and associated buffers only if no other feasible alternative exists.
10. Should a mine hazard area be identified in Winthrop, the site shall be noted on site plans for any development activity, and a geotechnical analysis shall be required to determine safety distances.
11. Prior to development of a site that is contaminated from previous mining activities, and where a significant hazard to health or the environment may be identified, the landowner or other project proponent shall be required to prepare and implement a reclamation plan.
12. All development activities in Seismic Hazard Areas shall be required to conform to the applicable provisions of the Uniform Building Code that contains structural safeguards to reduce the risks from seismic activity.