



Kittitas County Critical Areas Ordinance Update

Best Available Science (BAS) Code Recommendation Matrix

Summary of Considerations from Best Available Science (BAS) Report			
Topic	Potential Code Changes	CAC Member Feedback	
Frequently Flooded Areas	Incorporation of floodplain functions and values	A reference should be adopted within KCC 17A.05 (Frequently Flooded Areas), stating that all development shall conform to the provisions of KCC Title 14 (Flood Damage Prevention), Flood Damage Prevention and within Title 14, stating that flood damage protection activities shall conform to Chapter 17A.05.	<i>No feedback.</i>
	Incorporation of floodplain functions and values	Revise KCC 17A.05 to indicate “It is the purpose of this article to reduce the risk to life, property damage, and public facilities that result from floods, and to protect fish and wildlife habitats that occur within frequently flooded areas.”	<i>No feedback.</i>
	Future conditions and floodplain mapping	Require, or at a minimum encourage, consideration of future conditions during investigation of base flood elevation. Updated standards could reference the currently available guidance for future conditions (FEMA 2010), or other more useful and applicable guidance or methods that may become available in the future.	<i>No feedback.</i>
	Unique flood hazards and floodplain mapping	Require, or at a minimum encourage, consideration of unique alluvial fan flood hazards when floodplain development occurs <ul style="list-style-type: none"> • within or near the Naneum Creek and Manastash Creek alluvial fan areas, or • other areas where alluvial fan conditions occur; or • when new flood hazard and base flood elevation study of these areas is completed. 	<i>CAC recommended that alluvial fans be dealt with in geo hazard section, with reference in floods to allow for consideration where alluvial fan areas are not on FEMA maps.</i>
	Reporting requirements for floodplain development	Require applicants for floodplain development to provide adequate information on existing site conditions and impacts (in addition to the information currently required in KCC14.08.110).	<i>No feedback.</i>



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Frequently Flooded Areas	Land use regulations within frequently flooded areas	Ensure that subdivision does not result in a parcel located solely within a frequently flooded area. If an existing parcel has a buildable site outside the frequently flooded area, it should not be subdivided to create a new lot, tract, or parcel within a binding site plan that does not have a buildable site outside the frequently flooded area. This provision would not apply to lots set aside from development and preserved as open space.	<i>No feedback.</i>
	Land use regulations within frequently flooded areas	Require use of additional specific actions to avoid flood damage to structures and other development within existing parcels or lots located within frequently flooded areas. In addition to existing standards for elevating structures above base flood elevation, require one or more of the following hazard reduction measures: 1) All new structures on lots that have a buildable site out of frequently flooded areas be located in that area, when possible; 2) All new structures, pavement, and other development on lots that do not have a buildable site out of frequently flooded areas be located as far from the water body as possible and on the highest existing land (on lots where higher land is located nearer the water body, determination should be made during development review to determine development area that results in greatest avoidance of flood damage); and 3) Require a minimum setback of 15 feet from floodways for all structures.	<i>No feedback.</i>
	Land use regulations within frequently flooded areas	In order to reduce impacts to the functions provided by frequently flooded areas, require all subdivision proposals, short subdivisions, short plats, planned developments, and new and expansions to manufactured housing parks to set aside open space through deed restriction, easement, subdivision covenant, or donation to a public agency. Also consider allowances to increase the density of the development in the portion of the development outside the frequently flooded area to compensate for the amount of land in the frequently flooded area preserved as open space. Such a change could be done in accordance with the section of the Kittitas County zoning (or other development ordinance) that allows development clustering, PUDs and/or transfers of development rights.	<i>No feedback.</i>



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Topic		Potential Code Changes	CAC Member Feedback
Frequently Flooded Areas	Mitigation sequencing	Provide a mitigation sequencing requirement regulations – this would increase the incentive for applicants to avoid floodplain impacts and the need for mitigation, and would reduce the potential for net loss of floodplain functions. Alternatively, a mitigation sequencing requirement applicable to all critical areas could be specified in KCC Title 17A.	<i>No feedback.</i>
	Compensatory flood storage	<p>Implement the following options to improve protection of the storage provided by frequently flooded areas:</p> <ul style="list-style-type: none"> • Expand the requirement for no net loss of floodplain storage to include more waterbodies than only those designated as “shorelines of the state”; • Incorporate code language that requires compensatory flood storage mitigation activities to consider the existing and future ecological and hydrologic functions of impact and mitigation sites, and/or to ensure these functions are maintained or improved; • Incorporate code language that requires the preferred prioritization of compensatory floodplain mitigation. Example order of prioritization: 1) Onsite flood-storage; 2) Off-site flood storage in close proximity upstream or downstream of the floodplain fill location; and 3) Off-site flood storage in a location further upstream or downstream; and • Where floodplain mitigation would occur at a distance from the fill location, require evaluation of no net rise of flood elevations in areas upstream and downstream of proposed fill. 	<i>No feedback.</i>



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Critical Aquifer Recharge Areas	General code considerations	Revise CARA definition to make it consistent with the GMA, and incorporate the results of the preliminary CARA mapping.	<i>No feedback.</i>
	General code considerations	State that CARAs are present within the County, and reference the CARA map.	<i>No feedback.</i>
	General code considerations	State that new activities and developments within CARAs must not cause contaminants to enter an aquifer or significantly adversely affect the recharging of an aquifer.	<i>No feedback.</i>
	Hydrogeologic assessments	Require site-specific hydrogeologic assessments for activities that have a risk of adversely affecting CARAs, and list the minimum report contents.	<i>No feedback.</i>
	Fertilizers, Herbicides, and Pesticides	Encourage the use of best management practices to prevent impacts to groundwater quality. Recognize that the use of fertilizers, herbicides, and pesticides may be subject to existing federal and state laws.	<i>CAC recommended removing fertilizer language since regulation of those products is appropriately handled by other agencies.</i>



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Fish and Wildlife Habitat Conservation Areas	Designating FWHCAs	Use the standard GMA definitions for FWHCAs.	<i>No feedback.</i>
	Stream Typing System	Implement the water typing system specified in WAC 222-16-030.	<i>No feedback.</i>
	Documenting FWHCAs	Specify the conditions under which a special habitat study will be required...At a minimum, a special habitat study should include the following information: <ul style="list-style-type: none"> • Map showing location of OHWM and/or locations of wildlife habitat conservation area(s) • Identification of any endangered, threatened, sensitive, or candidate species that have a primary association with the habitat(s) in the project area • Vegetative, faunal, topographic, and hydrologic characteristics of the habitat • Detailed discussion of potential direct and indirect impacts resulting from the project, and the management practices to be utilized that will protect the habitat after the project site has been developed 	<i>Rely on State and Federal maps and lists where available.</i>
	Wildlife Habitat Buffers	Require protective buffers for designated wildlife habitat protection areas. The appropriate site- and species-specific buffer should be determined by a qualified professional biologist, based upon the best available science.	<i>No feedback.</i>



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Topic	Potential Code Changes	CAC Feedback	
Fish and Wildlife Habitat Conservation Areas	Stream Buffers	Define buffer standards for all stream types that are consistent with the best available science. It is recommended that the following minimum buffer widths be specified in the KCC: <ul style="list-style-type: none"> • Type S waters: 150 feet • Type F waters: 100 feet • Type Np waters: 50 feet • Type Ns waters: 30 feet 	<i>No feedback.</i>
		Specify that activities that reduce buffer functions should be subject to mitigation sequencing requirements. For unavoidable impacts, appropriate mitigation should be required for buffer impacts.	<i>No feedback.</i>
		Specify a minimum buffer width (or percentage) that is allowed for buffer width averaging.	<i>No feedback.</i>
	Timing restrictions	Specify that all in-water work timing will be consistent with approved fish work windows, as determined by WDFW and referenced in the WAC. In addition, limitations should be placed on development activities during breeding and nesting periods for important species. The regulations should state that appropriate timing restrictions for wildlife species should be based upon best available science and agency recommendations, and specified in the project Habitat Management Plan.	<i>CAC concurs with aligning and being consistent with State requirements.</i>



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Topic		Potential Code Changes	CAC Feedback
Fish and Wildlife Habitat Conservation Areas	Habitat mitigation	<p>To improve the success of compensatory mitigation projects, the following mitigation regulations should be considered:</p> <ul style="list-style-type: none"> • Add a mitigation sequencing requirement to the FWHCA regulations, to reduce the potential for a new loss of habitat functions. This could be specified in an earlier section of the code that applies to all critical areas. • Specify that mitigation projects must have a mitigation plan prepared by a qualified professional that includes written goals, objectives, performance standards, a monitoring and maintenance plan, and a contingency plan. Specify that mitigation projects must be monitored and maintained for at least 5 years. 	<i>No feedback.</i>
	Channel migration zones	See Section 2.5 (Geological Hazard Areas)	<i>CAC recommended that channel migration zones be dealt with in geo hazard section.</i>



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Geological Hazard Areas (GHAs)	General code considerations	Revise geologically hazardous areas definitions to make them consistent with the GMA.	
		Include specific criteria for determining when a hazard area delineation or assessment is required.	
		Require that hazard area assessments consider activities on adjacent sites that may result in increased hazards.	
		Specify that geologic hazard assessments must be prepared by a qualified professional (i.e., licensed professional engineer, engineering geologist, or geologist).	
	Erosion hazard areas	Require an erosion risk assessment for projects within high-risk erosion areas.	
	Landslide hazard areas	Include regulations that prevent structures on landslide hazard areas.	
		Require setbacks from the top and toe of landslide-prone areas.	
		Specify that appropriate mitigation measures for development near landslide hazard areas shall be determined by a qualified professional.	
	Landslide hazard areas: channel migration hazards	Limit or restrict development within channel migration and avulsion hazard areas.	
		Include standards to retain vegetated riparian buffers to mitigate bank erosion and channel migration.	
	Landslide hazard areas: avalanche hazards	Require a risk assessment, prepared by a qualified professional, for proposed development within or adjacent to an avalanche hazard area.	



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Topic		Potential Code Changes	CAC Feedback
GHAS	Seismic hazard areas	Link regulations to the most current version of the International Building Code.	
	Mine hazard areas	Require developments in areas of suspected mining activity to investigate potential risks.	

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Wetlands	Designating regulated wetlands	Use the standard GMA definition of regulated wetlands.
	Delineating wetlands	<p>Require a delineation and critical areas report if a proposed development is located within 300 feet of a known or suspected wetland.</p> <p>Require the use of the Corps of Engineers Arid West or Western Mountains, Valleys, and Coast regional supplements (and future amendments) for wetland delineations. Delineations should be completed and critical areas reports prepared by a qualified wetland biologist.</p> <p>Clearly state that the location of wetlands for regulatory purposes will be determined based on a site-specific assessment.</p>
	Exemptions- Agricultural Activities	<p>For agricultural activities in the Naches watershed (which will not be enrolled in the VSP), require agricultural producers to use reasonable measures to protect wetland functions, such as those described in Field Office Technical Guides adopted by the Natural Resources Conservation Service.</p> <p>Revise the code definition of "agricultural activities" to be consistent with state law.</p>



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Wetlands	Exemptions- Other Activities	<p>Clarify that activities listed in this section are exempt only so far as they avoid and minimize impacts to wetland and buffer functions.</p> <p>Remove the exemption for "existing and ongoing natural resource activities."</p> <p>Emergency activities that would otherwise be subject to critical areas permit requirements under non-emergency conditions should be required to obtain an after-the-fact permit and provide appropriate mitigation for any impacts.</p> <p>Consider requiring some form of permanent marking of wetland and buffer areas to reduce the potential for impacts over the long term. This requirement could be limited to more intensive land uses such as subdivisions. While fencing and signage may be appropriate adjacent to a residential development, landowners in more rural areas may prefer less intrusive measures such as hedgerows or windbreaks.</p> <p>Wetlands, buffers, and mitigation sites should be recorded with a notice on title.</p> <p>Define what types of "utility facilities" are exempt and limit the exemption to utilities with low potential impacts, such as installation within improved rights-of-way. Utility development should be required to follow the mitigation sequence and all unavoidable impacts should be offset through compensatory mitigation.</p> <p>Specify thresholds for clearing and grading activities that will trigger critical areas review.</p>	



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Wetlands	Allowed uses	<p>Mining should be regulated to the same level as other uses. Code revisions should specify that mining must be conducted according to state and federal laws and that appropriate steps are taken to avoid/ minimize impacts and replace wetlands during reclamation of the mine site.</p> <p>Remove the allowance for impacts to up to two acres of Category IV wetlands without mitigation. Small wetlands should be regulated but could be exempted from mitigation sequencing requirements. Compensatory mitigation would still be required for impacts to small wetlands, potentially using a mitigation bank or in-lieu fee program if one becomes available in Kittitas County rather than requiring onsite mitigation.</p> <p>Where projects propose the use of Category IV wetlands for stormwater treatment, they should meet the requirements of the current Stormwater Management Manual for Eastern Washington, as amended.</p> <p>In addition, stormwater discharge facilities in wetland buffers should be designed to maximize the flow of runoff through buffer vegetation before stormwater enters the wetland.</p>	
	Wetland rating system	Implement the Washington State Wetland Rating System for Eastern Washington (Hruby 2007 or as amended).	



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Topic		Potential Code Changes	CAC Feedback
Wetlands	Wetland buffers	<p>Define buffer standards for all regulated wetlands regardless of wetland size. Consider adopting the buffer widths in the County's Final Draft SMP update (January 2014). These widths are similar to Ecology's Alternative 2 in allowing a range of buffer widths depending on the wetland category and the proposed intensity of development.</p> <p>Define what land uses are considered low vs. moderate/high impact (see Final Draft SMP).</p> <p>Activities that reduce buffer functions (e.g., vegetation clearing, impervious surfaces, soil compaction) should be subject to mitigation sequencing requirements. Appropriate mitigation should be required for buffer impacts. Clarify requirements that wetland buffers should be well-vegetated with native vegetation.</p> <p>To ensure protection of wetland functions, specify a minimum buffer width (either in feet or percent of standard width) that is allowed for buffer width averaging.</p>	



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Wetlands Wetland mitigation	<p>Add a mitigation sequencing requirement to the County's wetland regulations to increase the incentive for applicants to avoid wetland and buffer impacts and the need for mitigation. This would reduce the potential for net loss of wetland functions. The mitigation sequencing requirement could be specified in a code section that applies to all critical areas.</p> <p>Define specific ratios according to the types of mitigation actions proposed (creation, restoration, enhancement). Higher ratios for enhancement would be consistent with best available science and the approach taken by other agencies and jurisdictions. The section on regulations for wetland compensatory mitigation in the County's Final Draft SMP (January 2014) provides mitigation ratios that are consistent with current interagency guidance.</p> <p>Add a section to the code allowing the use of approved alternative mitigation approaches, such as an in-lieu fee program, should such approaches become available in Kittitas County in the future.</p> <p>Add a section to the wetland regulations that requires mitigation projects to have a mitigation plan prepared by a qualified professional, including written goals, objectives, performance standards, a monitoring and maintenance plan, and a contingency plan. The project applicant is responsible for site monitoring and maintenance throughout a specified number of years.</p> <p>Encourage applicants to use the interagency guidance for developing wetland mitigation plans (Ecology et al. 2006a, 2006b). By requiring mitigation based on the guidance documents, the County will be providing consistency for applicants who must also apply for state and federal permits. Requiring less compensatory mitigation at the county level would create unrealistic expectations for your constituents, which could create delays and cost overruns for development.</p> <p>Written mitigation plans should be required for both wetland and buffer mitigation projects.</p> <p>Include a requirement for a weed control schedule in wetland and buffer mitigation plans.</p>	