

Critical Areas Ordinance Update- Best Available Science Review

19.200 Wetlands

State Agency Guidance Documents

- In 2005, the Washington Department of Ecology (Ecology) provided a two-volume guidance on wetland buffers and mitigation (Sheldon, D., T. Hrubby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale. March 2005. **Wetlands in Washington State- Volume 1: A Synthesis of the Science. Washington State Department of Ecology.** Publication #05-06-006. Olympia, WA. ; Granger, T., T. Hrubby, A. McMillan, D. Peters, J. Rubey, D. Sheldon, S. Stanley, E. Stockdale. April 2005. **Wetlands in Washington State- Volume 2: Guidance for Protecting and Managing Wetlands.** Washington State Department of Ecology. Publication #05-06-008 and 2014 modifications. Olympia, WA.). These were published after the County's 2005 CAO update process was nearing completion. Many of the concepts and recommendations appear to have been incorporated, but it should be formally acknowledged as part of the record.
Recommendation: Formally consider the recommendations provided in Volume 2 and 2014 updates (Appendix 8C), as supported by Volume 1. Specifically, the recommended buffer reduction of no more than 25% (currently 50%), and increased enhancement mitigation ratios (Table 19.200.250). Utilize Table 8C-8, *Examples of measures to minimize impacts...*, and the Buffer Alternative 3 approach from Table 8C-4 thru 7. The recommended buffers have not changed since 2005.
- In 2009, the Army Corps of Engineers, Ecology and the Environmental Protection Agency (EPA) published guidance on selecting off-site mitigation sites (**Selecting Wetland Mitigation Sites Using a Watershed Approach.** December 2009, Ecology Publication #09-06-032).
Recommendation: *While the current CAO already allows off-site mitigation through in lieu fee programs, this guidance and the existing Hood Canal In-Lieu Fee program will be referenced for more clarity on the use of such programs.*
- In 2012, Ecology developed an optional credit-debit tool for calculating mitigation functions and values (**Calculating Credits and Debits for Compensatory Mitigation of Western Washington: Final Report.** March 2012, Ecology Publication #10-06-011).
Recommendation: *Its use will be allowed and encouraged.*
- In 2012, Ecology published, guidance on advance permittee-responsible mitigation. (**Interagency Regulatory Guide: Advance Permittee-Responsible Mitigation,** Ecology Publication #12-06-015, Olympia, WA, December 2012). It recommends that mitigation for projects with pre-identified impacts to wetlands may be constructed in advance of the impacts if the mitigation is implemented according to federal rules, state policy on advance mitigation, and state water quality regulations consistent with the guidance document.

Recommendation: *Include advance mitigation and this guidance document as a mitigation option for Wetlands. Its use should be referenced and encouraged.*

- In 2013, Ecology published a review of the science on wetland buffers. However, Ecology will not be providing any revisions to this guidance for the current round of updates. (Hruby, T. **Update on wetland buffers: The state of the science.** October 2103. Washington State Department of Ecology Publication #13-06-11.)

Recommendation: *No changes are recommended.*

- In 2014, the 2004 Wetland Rating System for Western Washington was updated by Ecology (Washington **State Wetland Rating System for Western Washington: 2014 Update.** January 2015. Ecology Publication # 14-06-029). Per 19.200.210(A), Kitsap County uses the 2004 State Rating System, or as amended, to categorize wetlands for the purposes of establishing wetland buffer widths, wetland uses and replacement ratios for wetlands. The amended 2014 changes therefore went into effect immediately at the local level. The update of the rating systems will provide a more accurate rating of the functions and values of a wetland but keeps the same four wetland categories used in the 2005 guidance. For the 2015-2019 CAO update cycle, [Ecology] is not proposing any changes to the buffer widths recommended in the 2005 guidance, however any buffer strategy that uses function scores to determine buffer widths will need to be adjusted to use the new scores in the 2014 update.

The Kitsap CAO will be updated to reflect the changes made to the wetland scoring system as follows:

Table for converting category scores

2004	Western WA Categories	2014
≥70	Category I	23-27
51-69	Category II	20-22
30-50	Category III	16-19
<30	Category IV	9-15

Tables for converting function scores

2004	Final Habitat Score	2014
29-36	High	8-9

20-28	Medium	5-7
≤19	Low	3-4

2004	Final Water Quality Score	2014
24-32	High	8-9

Recommendation: *The Wetland Rating System changes will include modifications to the mosaic wetlands definition, Category definitions, and scoring (see above). As noted above, these changes went into effect immediately in 2014 with the update to the State Rating System. The changes to the CAO are for clarity and consistency.*

- In 2015, Ecology and the Washington State Department of Fish and Wildlife published assessments, intended to assist local governments with land-use planning. (Stanley, S., S. Grigsby, D.B. Booth, D. Hartley, R. Horner, T. Hruby, J. Thomas, P. Bissonnette, R. Fuerstenberg, J. Lee, P. Olson , George Wilhere. 2011. **Puget Sound Characterization. Volume 1: The Water Resources Assessments (Water Flow and Water Quality)**. Washington State Department of Ecology. Publication #11-06-016. Olympia WA.).

Recommendation: *No changes are recommended. This information is useful for planning purposes, but not recommendations are provided regarding actual development standards.*
- A new Ecology guidance document was published in June of 2016 (Bunton, D., Mraz, R., Driscoll, L., Yahnke, A. 2016. **Wetland Guidance for CAO Updates: Western Washington Version**. Washington State Department of Ecology. Publication No. 10-06-001. Olympia WA). This publication replaces *Wetlands and CAO Updates: Guidance for Small Cities (Western Washington Version, Publication No. 10-06-002, as well as the 2011 and 2012 revisions*. While it indicates that the “small cities guidance” has been found potentially applicable to all cities and counties, the guidance assumes an adjacent land use that is high intensity and to consult with Ecology for each jurisdiction.

Recommendation: *The assumption made in this guidance about adjacent land use intensity does not apply to much of Kitsap County. Ecology was therefore consulted, and the 2014 updated Appendix 8C, Buffer Alternative 3 from **Wetlands in Washington State- Volume 2: Guidance for Protecting and Managing Wetlands**. Washington State Department of Ecology. Publication #05-06-008.*

Legislative Changes

- In 2011, Ecology repealed WAC 173-22-080 regarding the wetland delineation manual and replaced it by amending WAC 173-22-035 to line up with the Army Corp wetland delineation manual.

Recommendation: *Include the following language is recommended by Ecology (Formal email, June 2, 2015):*

“Identification of wetlands and delineation of their boundaries pursuant to this Chapter shall be done in accordance with the approved federal wetland delineation manual and applicable regional supplements. All areas within the County meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Chapter.”

- As part of the reorganization and clarification effort in 2010, WAC 365-190-080 was split into six sections, one to address critical areas generally and then one for each type of critical area. WAC 365-190-090 was added to address and amend prior regulations on wetlands. This section clarified the wetland rating system and identified additional sources of wetland protection guidance from Ecology for consideration, *“including the management recommendations based on the best available science, mitigation guidance, and provisions addressing the option of using wetland mitigation banks.”*

Recommendation: *Updates will include references to Ecology’s guidance document “Wetland Mitigation in Washington State”, 2006 or as amended. Additions will also be made to clarify the option of using mitigation banks and in-lieu fee programs, as available.*

19.300 Fish and Wildlife Habitat Conservation Areas

- In 2008, WDFW updated its **Priority Habitats and Species List**.
Recommendation: *The new list will be referenced where appropriate.*
- In 2009, WDFW published a new guidance document for landscaped planning (**Landscape Planning for Washington’s Wildlife: Managing for Biodiversity in Developing Areas**, December 2009). This document gives examples of major stressors linked to residential land uses that influence wildlife, as well as considerations for developing Habitat Management Plans at the site-scale and planning at the watershed-scale.
Recommendation: *This document may be referenced in the CAO as a guidance document for development of Habitat Management Plans*
- **Aquatic Habitat Guidelines**
Aquatic Habitat Guidelines are a series of technical guidance documents and White Papers from the Washington Department of Fish And Wildlife. Originally focused on the protection and restoration of salmonid habitat, they have recently broadened to include fully functioning systems through comprehensive and effective management of activities affecting aquatic and riparian ecosystems. Recent updates include:
 - **Land Use Planning for Salmon, Steelhead and Trout: A land use planner’s guide to salmonid habitat protection and recovery (2009)**
Provides policy and regulatory guidance/examples for protecting anadromous fish habitat. The recommendations are basic and do not go beyond the current CAO policies or development

standards. However, they do provide further support for the existing CAO.

- **Stream Habitat Restoration Guidelines** (revised 2012)**Water Crossing Design Guidelines** (2013)

Recommendation: *These documents are not expected to change any of the development regulations of the CAO, but will be referenced as guiding documents for use in the development of Habitat Management Plans or similar functions.*

- In 2012, WDFW published updated management recommendations for the Great Blue Heron (**Management recommendations for Washington's priority species: Great Blue Heron**. March 2012).

Recommendation: *Habitat Management Plans (HMPs) will be encouraged to use these management recommendations as a guide.*

- From 2010-2016, Wild Fish Conservancy conducted water type surveys using the protocols and definitions provided in WAC 222-16-031 and Section 13 of the Forest Practices Board Manual. The stream channel locations and characteristics were documented and typed, with map changes submitted to the WA Dept. of Natural Resources for inclusion in updated maps. WFC maps and associated reports are available online at:

<http://wildfishconservancy.org/resources/maps>, under **West Sound Watersheds, Kitsap Peninsula (WRIA 15)**.

Recommendation: *Per the update to WAC 365-190-130 noted below, this stream data should be added to Kitsap County GIS for use and support of planning and permitting activities.*

Legislative Changes

- In 2007, the US Fish and Wildlife Service officially removed the Bald Eagle from the federal Endangered Species list. Accordingly, a state Bald Eagle management plan is no longer required; however, landowners must still comply with the federal Bald and Golden Eagle Protection Act (16 USC 668) to avoid impacting eagles.

Recommendation: *The species also remains classified as a State Sensitive species by WDFW and are still protected under the CAO. Clarifications regarding these changes will be added where necessary.*

- In the 2010 update, WAC 365-190-130 was added to address and amend prior regulations on fish and wildlife habitat conservation areas. Many minor clarifying changes were made, but the more substantial ones include:
 - Allowing evaluation of land uses that may contribute positively to FHWCA functions in addition to those that may negatively impact functions
 - Considering state wildlife areas (managed by WDFW) as potential FWHCAs.
 - Expressly identifying the Priority Habitats and Species (PHS) database (also managed by WDFW) as a resource for designating and protecting FWHCAs, providing further guidance on identifying “habitats and species of local importance.”

- A recommendation to consider salmon recovery plans and other information prepared by the National Marine Fisheries Service, WDFW, the state Recreation and Conservation Office, and the Puget Sound Partnership when designating, protecting and restoring salmonid habitat.
- A statement that jurisdictions “should not rely solely on Washington state department of natural resources maps of [the] stream types for purposes of regulating land uses or establishing stream buffers.” In addition, jurisdictions using the DNR stream typing system “should develop a process to verify actual stream conditions, identify flow alterations, and locate fish passage barriers by conducting a field visit.” This verification should occur “during the wet season months of October to March.”

Recommendations: *Modifications will be made to the appropriate definitions and/or sections to incorporate these changes.*

- In 2012, the legislature amended RCW 36.70A.030(5) to exclude certain artificial features, such as irrigation and drainage ditches, from the definition of “fish and wildlife areas” if they “lie within the boundaries of and are maintained by a port district or an irrigation district.” WAC 365-190-030 was amended in 2015 to incorporate this new definition.

Recommendation: *This new language will be updated in the CAO where necessary.*

19.400 Geologically Hazardous Areas

- Map of Washington State fault lines and types was updated in 2014. (**Faults and Earthquakes in Washington State, DNR**)
Recommendation: *This data was incorporated into the following update.*

- **Kitsap County Geologically Hazardous Areas Map Update** was drafted in 2014 to incorporate the latest information and mapping techniques for geohazards, and to more explicitly identify the types of hazards as specified in WAC 365-190-120 (landslide, erosion, and seismic).

Recommendation: *Revise this chapter to be organized by hazard type and provide updated maps.*

- In 2015, the Department of Natural Resources also developed a web tool, the **Washington State Seismic Hazards Catalog**. The interactive tool allows the user to assess the possible effects to critical infrastructure, and other vulnerabilities and projected losses for 20 different earthquake scenarios, 11 of which could impact Kitsap County.

(<https://fortress.wa.gov/dnr/seismicscenarios/index.html?config=seattle.xml>)

Recommendation: *The resource was reviewed and considered. The tool may be useful for other planning efforts, but does not warrant any changes to the CAO at this time.*

- **Washington State Natural Hazards Catalog**, also a new web-based tool in 2015 from the Washington Department of Natural Resources, combines multiple sources to allow the user to map a variety of known hazards, including landslides and seismic features.

(https://fortress.wa.gov/dnr/geology/?Theme=natural_hazards)

Recommendation: *The resource was reviewed and considered. The tool may be useful for other*

planning efforts, but does not warrant any changes to the CAO at this time.

Legislative Changes

- In the 2010 update, WAC 365-190-120 was added to address and amend prior regulations on geologically hazardous areas.

Recommendation: *The only change that necessitates a change in the CAO is to add channel migration zones for consideration as a landslide hazard.*

19.500 Frequently Flooded Areas

- Kitsap County's CAO (Title 19) adopts by reference **KCC Title 15** (Flood Hazard Areas) to meet the requirements of this Frequently Flooded Areas section. Title 15 was recently updated in 2015 to meet the latest requirements regarding designation and mapping (FEMA Flood Insurance Rate Maps) and channel migration zones, as well as standards for habitat protection.
Recommendation: *No substantial changes are proposed at this time. A minor update to Title 15 will be needed prior to adoption of the CAO (Title 19), but will be a minor update to change definitions per FEMA requirements.*

Legislative Changes

- In the 2010 update, WAC 365-190-110 was added to address and amend prior regulations on frequently flooded areas. A few considerations were added when designating and classifying frequently flooded areas, the most applicable being that jurisdictions should now consider areas that have the potential for "greater surface runoff caused by increasing impervious surfaces."
- In 2010, WAC 365-190-030 amended the definition of frequently flooded areas to include "areas subject to flooding due to high ground water" such as "areas where high ground water forms ponds on the ground surface."
Recommendation: *Change to definition.*

19.600 Critical Aquifer Recharge Areas

- There has been no new guidance from the Department of Ecology on critical aquifer recharge areas since 2005.
- In 2014, the U.S. Geological Survey published the Scientific Investigations Report (2014-5106), **Hydrogeologic framework, groundwater movement, and water budget of the Kitsap Peninsula, west-central Washington**. This report presents information used to characterize the groundwater-flow system on the Kitsap Peninsula, and includes descriptions of the geology and hydrogeologic framework, groundwater recharge and discharge, groundwater levels and flow directions, seasonal groundwater level fluctuations, interactions between aquifers and the

surface-water system, and a water budget. This study represents the latest in water quantity assessments for Kitsap County. Water quantity is now a factor to consider when classifying Critical Aquifer Recharge Areas (see below). While not providing any recommendations, it will be the basis for the analysis and recommendations that will be used by the water purveyors in the near future.

Recommendation: *Reviewed and considered, but did not provide guidance necessary to warrant any changes at this time.*

Legislative Changes

- In 2010, WAC 365-190-100 was added to address and amend prior regulations on critical aquifer recharge areas. This section adds water quantity as a factor to consider when classifying and protecting this critical area and acknowledges the link between aquifer recharge and fish and wildlife habitat conservation areas.

Recommendation: *These changes will be addressed through reference to Title 12 (Stormwater) and the Fish and Wildlife Habitat Conservation Areas section of the CAO, as well as clarifying when a hydrogeological report would be needed to address water quality and quantity.*