



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

## **Wetlands & CAO Updates: Guidance for Small Cities**

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*Western Washington Version*

January 2010  
Publication No. 10-06-002  
(1<sup>st</sup> Revision July 2011)  
(2<sup>nd</sup> Revision October 2012)

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*Western Washington Version*

*By*

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Washington State Department of Ecology  
Olympia, Washington

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## **Summary of July 2011 Revisions**

Several important changes have occurred since this guidance was originally released in January 2010. These include:

- Change in requirements for wetland delineation
- Development of an additional “credit-debit” method for calculating mitigation ratios
- Expiration of the moratorium on adoption of new critical area regulations with respect to agriculture

The July 2011 revisions also include:

- Sample CAO language on monitoring that was inadvertently omitted from the original document
- Guidance on reducing mitigation ratios for rehabilitation and enhancement when used in combination with 1:1 replacement through creation or reestablishment, consistent with the recommendations in the joint mitigation guidance
- Criteria to be considered when approving alternative mitigation plans
- Correction of several formatting errors

If you have a paper copy of the January 2010 document, you should recycle it and use the July 2011 revision, which will be available on line only.

## **Summary of October 2012 Revisions**

The second revision of this guidance document includes:

- Updated criteria for using credits from an in-lieu fee program for mitigation.
- Removing the “preservation only” column from the mitigation ratio table and revising the rehabilitation ratio for Category I bogs to case by case (from 6:1).
- Adding language for protection of the mitigation site.
- Reorganizing the sections on mitigation preference and location.
- Correction of several formatting errors.

If you have a printed copy of either the January 2010 or July 2011 document, you should recycle it and use the October 2012 revision, which will be available on line only.

## Introduction

This document is intended to provide guidance and tools useful in developing a wetland protection program for small cities and towns that are in the process of updating their critical areas ordinances (CAOs) to meet the Growth Management Act (GMA) requirements. Wetlands are one of the five types of critical areas identified in the GMA.

We recognize that many local governments lack the planning staff and resources necessary to develop and implement wetland standards that are both locally appropriate and based on best available science (BAS). Nonetheless, they must comply with the GMA requirement to designate and protect wetlands.

The first part of this document describes the important topics that should be addressed in the wetlands section of your CAO. It includes recommendations for wetland protection based on BAS. Appendix A is a sample CAO chapter for wetlands that incorporates these recommendations into a format similar to that found in many local CAOs. (Please note that the sample CAO will need to be tailored to your jurisdiction's naming and numbering system. There are several generic "XX" references throughout the text.) Appendix B contains definitions that are commonly used in wetlands regulations.

This document does not include the more general provisions typically found in regulations related to all critical areas. These can be found in Appendix A of the *Critical Areas Assistance Handbook* published by the Washington State Department of Commerce (formerly the Department of Community, Trade, and Economic Development) in November 2003 (<http://www.commerce.wa.gov/site/745/default.aspx>). This document revises the wetland-specific provisions in the *Critical Areas Assistance Handbook*.

The recommendations in this document and the sample ordinance may not be appropriate for use by rural **county** governments. Factors to consider are the county's rate of growth, the nature and intensity of land uses in the county, the wetland resources at risk, and the ability of the county to implement its CAO. We suggest that you contact us to determine whether this guidance is applicable to your county. Please use the following link to find Ecology's wetland specialist for your area:  
<http://www.ecy.wa.gov/programs/sea/wetlands/contacts.htm>.

- **Washington State Wetland Rating System for Western Washington – Revised** (Washington State Department of Ecology Publication # 04-06-25, Olympia, WA, August 2004, annotated August 2006).

Links to all of these documents can be found at:

<http://www.ecy.wa.gov/programs/sea/wetlands/gma/index.html>.

## **Relationship of GMA and SMA**

You may be planning to adopt a Shoreline Master Program (SMP) that will rely on the CAO for protection of wetlands and other critical areas in shoreline jurisdiction. Ecology does not have an approval role in the CAO adoption process; our role is advisory. The SMP, however, is a joint document of Ecology and the local government requiring Ecology approval. Before the SMP can be approved by Ecology, the CAO must meet the “no net loss of ecological functions” requirement (WAC 173-26-186(8)(b)(i)).

You should be aware that the Shoreline Management Act (SMA) may preclude or alter the administration of your CAO. For example, certain activities exempted under the CAO will not qualify for exemption under the SMP. In addition, activities allowed under the CAO may require permits under the SMP.

For assistance with CAO/SMP integration, please use the following link to find the shoreline planner for your area:

<http://www.ecy.wa.gov/programs/sea/sma/contacts/index.html>.

## **Policy Discussion for Your Wetlands Chapter**

Your wetlands chapter will exist as one of several in your critical areas ordinance. Below we describe some of the important subsections in the wetlands chapter and include our recommendations for protecting wetlands based on the best available science.

### *Purpose*

The chapter typically begins with a purpose statement, followed by designation criteria, which include a definition of wetlands and the methods by which they are identified and rated and other details listed below. The purpose statement may also state that this chapter is intended to be consistent with the requirements of 36.70A RCW and to implement the goals and policies of your Comprehensive Plan for protecting wetlands.

### *Definitions*

Your wetlands chapter may include a separate list of definitions, or the definitions may be included in the general definitions section of the CAO. Appendix B is a list of definitions relevant to your wetlands chapter. This list includes terms identified in state law and agency guidance documents. Clarity and consistency in the use of these terms will make ordinance implementation easier.

cannot be used alone to designate wetlands. Wetlands are those areas that meet the above definition of “wetland.” Wetlands are also dynamic systems that change over time. It is important to adopt the GMA definition and to have regulations in place to protect wetland functions and values, should wetlands that do not currently appear on the NWI or other maps be identified in the future.

State laws require that wetlands protected under the Growth Management Act and the Shoreline Management Act be delineated using a manual that is developed by Ecology and adopted into rules ([RCW 36.70A.175](#); [RCW 90.58.380](#)). The Department of Ecology adopted a wetland delineation manual in 1997 ([WAC 173-22-080](#)) that was based on the original 1987 Corps of Engineers manual and subsequent Regulatory Guidance Letters.

During the last few years the Army Corps of Engineers has updated and expanded their delineation manual with regional supplements. To maintain consistency between the state and federal delineations of wetlands, Ecology has repealed [WAC 173-22-080](#) (the state delineation manual) and replaced it with a revision of [WAC 173-22-035](#) that states delineations should be done according to the currently approved federal manual and supplements. **The changes became effective March 14, 2011.**

The Growth Management Act states that “wetlands regulated under development regulations adopted pursuant to this chapter shall be delineated in accordance with the manual adopted by the department pursuant to [RCW 90.58.380](#).” RCW 90.58.380 allows the Department of Ecology to adopt rules that incorporate changes to the manual.

**Therefore, the currently approved federal manual and supplements should be used for delineating wetlands in GMA jurisdiction. See:**

<http://www.ecy.wa.gov/programs/sea/wetlands/delineation.html>.

Local governments are not required to rate or classify wetlands when regulating them. However, methods that classify, categorize, or rate wetlands help target the appropriate level of protection to particular types of wetlands and avoid the “one-size-fits-all” approach. If a local government uses a wetland rating system, it must consider the criteria described in WAC 365-190-090(3).

The *Washington State Wetland Rating System for Western Washington - Revised* (Ecology Publication #04-06-025, August 2004, annotated August 2006) is a useful tool for dividing wetlands into groups that have similar needs for protection. The revised rating system represents the best available science, as it is based on a better understanding of wetland functions, ways to evaluate them, and what is needed to protect them. It provides a quick “snapshot” characterization of a particular wetland. In many cases, it will provide enough information about existing wetland functions to allow adequate plan review and land use decisions to be made without the additional expense of a separate wetland functional assessment.

**While local governments are not required to use Ecology’s revised rating system, we strongly encourage you to adopt wetland regulations that require its use.** Most qualified wetland specialists are using the revised rating system. In cases where state and

The scope, coverage, and applicability of a critical areas ordinance should capture the full range of activities that are detrimental to wetland functions. Therefore, exemptions should be supported by the scientific literature and be carefully crafted to minimize the potential for adverse impacts. However, a local government should not assume that an exemption is appropriate in the absence of science to refute the exemption. The language should clearly state whether a given exemption is from applicable standards in the code or whether it is exempt from needing a permit but still must comply with the code. Exemptions should be limited and construed narrowly.

For more information on this topic please refer to Chapter 8 of *Wetlands in Washington State, Volume 2: Managing and Protecting Wetlands* (Ecology Publication # 05-06-008, Olympia, WA, April 2005, <https://fortress.wa.gov/ecy/publications/summarypages/0506008.html>).

The GMA, in RCW 36.70A.030(21), requires local governments to regulate wetlands that meet the definition of biological wetlands (see the definition of “wetland” in the following section). This includes **Prior Converted Croplands (PCCs)** and **hydrologically isolated wetlands**, two types of wetlands that have been exempt from federal regulation at times. PCCs are wetlands that have been ditched and drained for active agricultural use before December 23, 1985. Isolated wetlands are those wetlands that have no surface hydrologic connection to waters of the United States. These wetlands must be regulated by your CAO.

EPA and the Corps sent draft 2011 Guidance to the White House Office of Management and Budget (OMB) that would reportedly “clarify Clean Water Act responsibilities.” The 2011 Guidance apparently will not address CWA jurisdiction over waste treatment systems or prior converted croplands, contentious issues that the agencies intend to address in future agency guidance documents. Please see <http://www.ecy.wa.gov/programs/sea/wetlands/isolated.html> for more information on how the state of Washington currently regulates isolated wetlands.

The scientific literature does not support exempting wetlands that are below a certain size. While we recognize an administrative desire to place size thresholds on wetlands that are to be regulated, you need to be aware that it is not possible to conclude from size alone what functions a particular wetland may be providing. Ecology has developed a strategy for exempting small wetlands when additional criteria are considered. This language is present in the sample ordinance. **However, impacts to small wetlands are NOT exempt from the requirement to provide compensatory mitigation for those impacts.** If an In-Lieu Fee (ILF) program or a mitigation bank is available in your area (page 12), these mitigation alternatives can help prevent loss of wetland function from impacts to small wetlands in your jurisdiction.

Exceptions are typically addressed in a CAO in the context of reasonable use of property. For more information about this regulatory tool, see Section VII of the *Critical Areas Assistance Handbook* published by the Washington State Department of Commerce (<http://www.commerce.wa.gov/site/745/default.aspx>). You should keep in mind that the

While this approach may initially be more labor intensive and expensive, such information will allow rapid review of development proposals and can help your jurisdiction prioritize areas for preservation or acquisition.

This approach is consistent with best available science (BAS). It can help with the development of a landscape-analysis approach to protecting wetlands in your city. Landscape analysis for critical areas facilitates and informs long-range planning. The City of Aberdeen used this approach in their CAO update. (See Section XX.050.B in the sample ordinance.)

### *ABCs*

The most basic approach to protecting wetland functions and values can be summarized as the **A-B-C Approach, or Avoid, Buffer, Compensate**. This means that a CAO should contain language to ensure that:

1. Wetlands impacts are **avoided** to the extent practicable.
2. Wetlands are **buffered** to protect them from adjacent land-use impacts.
3. Unavoidable impacts are **compensated**, or replaced.

Your CAO should provide requirements on how to reduce the severity of impacts to wetlands. When an alteration to a wetland is proposed, impacts should be avoided, minimized, or compensated for in the following sequential order of preference:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

### *Buffers*

Establishing standards for wetland buffers is usually the most challenging part of developing a CAO. However, developing a predictable, reasonable approach for

You may wish to adopt an even simpler approach to wetland buffers, one based only on wetland category. In this case, buffers must be large enough to protect the most-sensitive wetlands from the most damaging land-use impacts. Please refer to Appendix 8-C of *Wetlands in Washington State, Volume 2* for these examples.

Ecology's buffer recommendations are based on a moderate-risk approach to protecting wetland functions. This means that there is a moderate risk that wetland functions will be impacted. Adopting smaller buffers represents a high-risk approach, and you need to be prepared to justify why such an approach is necessary and to offer alternative means of protecting wetland functions that help reduce the risk.

**Ecology's buffer recommendations are also based on the assumption that the buffer is well vegetated with native species appropriate to the ecoregion.** If the buffer does not consist of vegetation adequate to provide the necessary protection, then either the buffer area should be planted or the buffer width should be increased.

### *Buffer Averaging*

Local governments often wish to allow buffer widths to be varied in certain circumstances. This may be reasonable if your standard buffers are adequate. The width of buffers may be averaged if this will improve the protection of wetland functions, or if it is the only way to allow for reasonable use of a parcel.

We recommend that a request for buffer averaging include a wetland report. The report should be prepared by a qualified professional describing the current functions of the wetland and its buffer and the measures that will be taken to ensure that there is no loss of wetland function due to the buffer averaging. The width of the buffer at any given point after averaging should be no smaller than 75% of the standard buffer.

If you choose to adopt small standard buffer widths, then further reductions to the buffer width should not be allowed under any circumstances.

### *Mitigation*

Unavoidable **impacts to wetlands should be offset by compensatory mitigation.** Your CAO should include standards for the type, location, amount, and timing of the mitigation. It should also include clear guidance on the design considerations and reporting requirements for mitigation plans.

Ecology's recommendations for the amount of mitigation (ratios) are based on wetland category, function, and special characteristics. Requiring a greater area helps offset both the risk that compensatory mitigation will fail and the temporal loss of functions that may occur. We recommend using the ratio table shown in the sample ordinance. It is derived from the more detailed tables in Part 1 of the joint agency guidance on mitigation: *Wetland Mitigation in Washington State, Parts 1 and 2* (Ecology publications #06-06-011a & b, March 2006).

### Mitigation Banking

A mitigation bank is a site where wetlands, streams, or other aquatic resource areas have been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources. A mitigation bank may be created by a government agency, corporation, nonprofit organization, or other entity. The bank sells its credits to permittees who are required to compensate for wetland impacts. Mitigation banks allow a permittee to simply write a check for their mitigation obligation. It is the bank owner who is responsible for the mitigation success. Mitigation banks require a formal agreement with the Corps, Ecology, and the local jurisdiction to be used for federal or state permits.

Ecology adopted the final Wetland Mitigation Banks Rule (WAC 173-700) in 2009. The purpose of the rule is to provide a framework for the certification, operation and monitoring of wetland mitigation banks. To learn more about wetland banking and the rule, see Ecology's website at <http://www.ecy.wa.gov/programs/sea/wetlands/mitigation/banking/index.html>.

### In-Lieu Fee (ILF)

In this approach to mitigation, a permittee pays a fee to a third party in lieu of conducting project-specific mitigation or buying credits from a mitigation bank. ILF mitigation is used mainly to compensate for impacts to wetlands when better approaches to compensation are not available or practicable, or when the use of an ILF is in the best interest of the environment.

An ILF represents the expected costs to a third party of replacing the wetland functions lost or degraded as a result of the permittee's project. Fees are typically held in trust until sufficient funds have been collected to finance a mitigation project. Only a nonprofit organization such as a local land trust, private conservation group, or government agency with demonstrated competence in natural resource management may operate an ILF program. All ILF programs must be approved by the Corps to be used for Section 404 permits. To learn more about ILF programs, see Ecology's website at <http://www.ecy.wa.gov/mitigation/ilf.html>.

### Off-Site Mitigation

This refers to compensatory mitigation that is not located at or near the project that generates impacts to wetlands. Off-site mitigation is generally allowed only when on-site mitigation is not practicable or environmentally preferable.

Ecology, the Corps of Engineers, and EPA have developed guidance to help applicants select potential off-site mitigation sites. To download a copy of *Selecting Wetland Mitigation Sites Using a Watershed Approach (Western Washington)*, (Ecology Publication #09-06-032, December 2009), please see <https://fortress.wa.gov/ecy/publications/summarypages/0906032.html>.

**Appendix A - Sample Wetlands Chapter**  
**(Western Washington)**

## **Subchapter XX.XX Wetlands**

### **Sections:**

- XX.010 Purpose
- XX.020 Identification and Rating
- XX.030 Regulated Activities
- XX.040 Exemptions and Allowed Uses in Wetlands
- XX.050 Wetland Buffers
- XX.060 Critical Area Reports
- XX.070 Compensatory Mitigation
- XX.080 Unauthorized Alterations and Enforcement

### **XX.010 Purpose**

The purposes of this Chapter are to:

A. Recognize and protect the beneficial functions performed by many wetlands, which include, but are not limited to, providing food, breeding, nesting and/or rearing habitat for fish and wildlife; recharging and discharging ground water; contributing to stream flow during low flow periods; stabilizing stream banks and shorelines; storing storm and flood waters to reduce flooding and erosion; and improving water quality through biofiltration, adsorption, and retention and transformation of sediments, nutrients, and toxicants.

B. Regulate land use to avoid adverse effects on wetlands and maintain the functions and values of wetlands throughout (name of jurisdiction).

C. Establish review procedures for development proposals in and adjacent to wetlands.

### **XX.020 Identification and Rating**

A. Identification and Delineation. 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 City meeting the wetland designation criteria in that procedure are hereby designated critical areas and are subject to the provisions of this Chapter. Wetland delineations are valid for five years; after such date the City shall determine whether a revision or additional assessment is necessary.

B. Rating. Wetlands shall be rated according to the Washington Department of Ecology wetland rating system, as set forth in the *Washington State Wetland Rating System for Western Washington* (Ecology Publication #04-06-025, or as revised and

2. The dumping of, discharging of, or filling with any material.
3. The draining, flooding, or disturbing of the water level or water table.
4. Pile driving.
5. The placing of obstructions.
6. The construction, reconstruction, demolition, or expansion of any structure.
7. The destruction or alteration of wetland vegetation through clearing, harvesting, shading, intentional burning, or planting of vegetation that would alter the character of a regulated wetland.
8. "Class IV - General Forest Practices" under the authority of the "1992 Washington State Forest Practices Act Rules and Regulations," WAC 222-12-030, or as thereafter amended.
9. Activities that result in:
  - a. A significant change of water temperature.
  - b. A significant change of physical or chemical characteristics of the sources of water to the wetland.
  - c. A significant change in the quantity, timing, or duration of the water entering the wetland.
  - d. The introduction of pollutants.

C. Subdivisions. The subdivision and/or short subdivision of land in wetlands and associated buffers are subject to the following:

1. Land that is located wholly within a wetland or its buffer may not be subdivided.
2. 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:
  - a. Located outside of the wetland and its buffer; and
  - b. Meets the minimum lot size requirements of Chapter XX.XX.

#### **XX.040 Exemptions and Allowed Uses in Wetlands**

A. The following wetlands are exempt from the buffer provisions contained in this Chapter and the normal mitigation sequencing process in Chapter XX.XX. They may be filled if impacts are fully mitigated based on provisions in Chapter XX.070. If

hand removal unless permits from the appropriate regulatory agencies have been obtained for approved biological or chemical treatments. All removed plant material shall be taken away from the site and appropriately disposed of. Plants that appear on the Washington State Noxious Weed Control Board list of noxious weeds must be handled and disposed of according to a noxious weed control plan appropriate to that species. Re-vegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

6. Educational and scientific research activities.
7. Normal and routine maintenance and repair of any existing public or private facilities within an existing right-of-way, provided that the maintenance or repair does not expand the footprint of the facility or right-of-way.

#### **XX.050 Wetland Buffers**

A. Buffer Requirements. The standard buffer widths in Table XX.1 have been established in accordance with the best available science. They are based on the category of wetland and the habitat score as determined by a qualified wetland professional using the Washington state wetland rating system for western Washington.

1. The use of the standard buffer widths **requires** the implementation of the measures in Table XX.2, where applicable, to minimize the impacts of the adjacent land uses.
2. If an applicant chooses not to apply the mitigation measures in Table XX.2, then a 33% increase in the width of all buffers is required. For example, a 75-foot buffer with the mitigation measures would be a 100-foot buffer without them.
3. The standard buffer widths assume that the buffer is vegetated with a native plant community appropriate for the ecoregion. If the existing buffer is unvegetated, sparsely vegetated, or vegetated with invasive species that do not perform needed functions, the buffer should either be planted to create the appropriate plant community or the buffer should be widened to ensure that adequate functions of the buffer are provided.
4. Additional buffer widths are added to the standard buffer widths. For example, a Category I wetland scoring 32 points for habitat function would require a buffer of 225 feet (75 + 150).

**Table XX.2 Required measures to minimize impacts to wetlands**

(Measures are required, where applicable to a specific proposal)

<b>Disturbance</b>	<b>Required Measures to Minimize Impacts</b>
Lights	<ul style="list-style-type: none"> <li>• Direct lights away from wetland</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• Locate activity that generates noise away from wetland</li> <li>• If warranted, enhance existing buffer with native vegetation plantings adjacent to noise source</li> <li>• For activities that generate relatively continuous, potentially disruptive noise, such as certain heavy industry or mining, establish an additional 10' heavily vegetated buffer strip immediately adjacent to the outer wetland buffer</li> </ul>
Toxic runoff	<ul style="list-style-type: none"> <li>• Route all new, untreated runoff away from wetland while ensuring wetland is not dewatered</li> <li>• Establish covenants limiting use of pesticides within 150 ft of wetland</li> <li>• Apply integrated pest management</li> </ul>
Stormwater runoff	<ul style="list-style-type: none"> <li>• Retrofit stormwater detention and treatment for roads and existing adjacent development</li> <li>• Prevent channelized flow from lawns that directly enters the buffer</li> <li>• Use Low Intensity Development techniques (per PSAT publication on LID techniques)</li> </ul>
Change in water regime	<ul style="list-style-type: none"> <li>• Infiltrate or treat, detain, and disperse into buffer new runoff from impervious surfaces and new lawns</li> </ul>
Pets and human disturbance	<ul style="list-style-type: none"> <li>• Use privacy fencing OR plant dense vegetation to delineate buffer edge and to discourage disturbance using vegetation appropriate for the ecoregion</li> <li>• Place wetland and its buffer in a separate tract or protect with a conservation easement</li> </ul>
Dust	<ul style="list-style-type: none"> <li>• Use best management practices to control dust</li> </ul>
Disruption of corridors or connections	<ul style="list-style-type: none"> <li>• Maintain connections to offsite areas that are undisturbed</li> <li>• Restore corridors or connections to offsite habitats by replanting</li> </ul>

- b. The averaged buffer will not result in degradation of the wetland's functions and values as demonstrated by a critical areas report from a qualified wetland professional.
- c. The total buffer area after averaging is equal to the area required without averaging.
- d. The buffer at its narrowest point is never less than either  $\frac{3}{4}$  of the required width or 75 feet for Category I and II, 50 feet for Category III and 25 feet for Category IV, whichever is greater.

B. To facilitate long-range planning using a landscape approach, the Administrator may identify and pre-assess wetlands using the rating system and establish appropriate wetland buffer widths for such wetlands. The Administrator will prepare maps of wetlands that have been pre-assessed in this manner.

C. Measurement of Wetland Buffers. All buffers shall be measured perpendicular from the wetland boundary as surveyed in the field. The buffer for a wetland created, restored, or enhanced as compensation for approved wetland alterations shall be the same as the buffer required for the category of the created, restored, or enhanced wetland. Only fully vegetated buffers will be considered. Lawns, walkways, driveways, and other mowed or paved areas will not be considered buffers or included in buffer area calculations.

D. Buffers on Mitigation Sites. All mitigation sites shall have buffers consistent with the buffer requirements of this Chapter. Buffers shall be based on the expected or target category of the proposed wetland mitigation site.

E. Buffer Maintenance. Except as otherwise specified or allowed in accordance with this Chapter, wetland buffers shall be retained in an undisturbed or enhanced condition. In the case of compensatory mitigation sites, removal of invasive non-native weeds is required for the duration of the mitigation bond (Section XX.070.H.2.a.viii).

F. Impacts to Buffers. Requirements for the compensation for impacts to buffers are outlined in Section XX.070 of this Chapter.

G. Overlapping Critical Area Buffers. If buffers for two contiguous critical areas overlap (such as buffers for a stream and a wetland), the wider buffer applies.

H. Allowed Buffer Uses. The following uses may be allowed within a wetland buffer in accordance with the review procedures of this Chapter, provided they are not prohibited by any other applicable law and they are conducted in a manner so as to minimize impacts to the buffer and adjacent wetland:

8. Stormwater management facilities. Stormwater management facilities are limited to stormwater dispersion outfalls and bioswales. They may be allowed within the outer twenty-five percent (25%) of the buffer of Category III or IV wetlands only, provided that:
  - a. No other location is feasible; and
  - b. The location of such facilities will not degrade the functions or values of the wetland; and
  - c. Stormwater management facilities are not allowed in buffers of Category I or II wetlands.
9. Non-Conforming Uses. Repair and maintenance of non-conforming uses or structures, where legally established within the buffer, provided they do not increase the degree of nonconformity.

I. Signs and Fencing of Wetlands and Buffers:

1. Temporary markers. The outer perimeter of the wetland buffer and the clearing limits identified by an approved permit or authorization shall be marked in the field with temporary "clearing limits" fencing in such a way as to ensure that no unauthorized intrusion will occur. The marking is subject to inspection by the Administrator prior to the commencement of permitted activities. This temporary marking shall be maintained throughout construction and shall not be removed until permanent signs, if required, are in place.
2. Permanent signs. As a condition of any permit or authorization issued pursuant to this Chapter, the Administrator may require the applicant to install permanent signs along the boundary of a wetland or buffer.
  - a. Permanent signs shall be made of an enamel-coated metal face and attached to a metal post or another non-treated material of equal durability. Signs must be posted at an interval of one (1) per lot or every fifty (50) feet, whichever is less, and must be maintained by the property owner in perpetuity. The signs shall be worded as follows or with alternative language approved by the Administrator:

**Protected Wetland Area  
Do Not Disturb  
Contact [Local Jurisdiction]  
Regarding Uses, Restrictions, and Opportunities for Stewardship**

- b. The provisions of Subsection (a) may be modified as necessary to assure protection of sensitive features or wildlife.

- f. For each wetland identified on site and within 300 feet of the project site provide: the wetland rating, including a description of and score for each function, per *Wetland Ratings* (Section XX.020.B) of this Chapter; required buffers; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acres for on-site portion and entire wetland area including off-site portions); Cowardin classification of vegetation communities; habitat elements; soil conditions based on site assessment and/or soil survey information; and to the extent possible, hydrologic information such as location and condition of inlet/outlets (if they can be legally accessed), estimated water depths within the wetland, and estimated hydroperiod patterns based on visual cues (e.g., algal mats, drift lines, flood debris, etc.). Provide acreage estimates, classifications, and ratings based on entire wetland complexes, not only the portion present on the proposed project site.
  - g. A description of the proposed actions, including an estimation of acreages of impacts to wetlands and buffers based on the field delineation and survey and an analysis of site development alternatives, including a no-development alternative.
  - h. An assessment of the probable cumulative impacts to the wetlands and buffers resulting from the proposed development.
  - i. A description of reasonable efforts made to apply mitigation sequencing pursuant to *Mitigation Sequencing* (Chapter XX.XX) to avoid, minimize, and mitigate impacts to critical areas.
  - j. A discussion of measures, including avoidance, minimization, and compensation, proposed to preserve existing wetlands and restore any wetlands that were degraded prior to the current proposed land-use activity.
  - k. A conservation strategy for habitat and native vegetation that addresses methods to protect and enhance on-site habitat and wetland functions.
  - l. An evaluation of the functions of the wetland and adjacent buffer. Include reference for the method used and data sheets.
2. A copy of the site plan sheet(s) for the project must be included with the written report and must include, at a minimum:
- a. Maps (to scale) depicting delineated and surveyed wetland and required buffers on site, including buffers for off-site critical areas that extend onto the project site; the development proposal; other critical

3. Mitigation requirements may also be determined using the credit/debit tool described in “*Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report* (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised) consistent with subsection H of this Chapter.

C. **Compensating for Lost or Affected Functions.** Compensatory mitigation shall address the functions affected by the proposed project, with an intention to achieve functional equivalency or improvement of functions. The goal shall be for the compensatory mitigation to provide similar wetland functions as those lost, except when either:

1. The lost wetland provides minimal functions, and the proposed compensatory mitigation action(s) will provide equal or greater functions or will provide functions shown to be limiting within a watershed through a formal Washington state watershed assessment plan or protocol; or
2. Out-of-kind replacement of wetland type or functions will best meet watershed goals formally identified by the City, such as replacement of historically diminished wetland types.

D. **Preference of Mitigation Actions.** Mitigation for lost or diminished wetland and buffer functions shall rely on the types below in the following order of preference:

1. Restoration (re-establishment and rehabilitation) of wetlands:
  - a. The goal of re-establishment is returning natural or historic functions to a former wetland. Re-establishment results in a gain in wetland acres (and functions). Activities could include removing fill material, plugging ditches, or breaking drain tiles.
  - b. The goal of rehabilitation is repairing natural or historic functions of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland.
2. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native species. Establishment results in a gain in wetland acres. This should be attempted only when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive to the wetland community that is anticipated in the design.
  - a. If a site is not available for wetland restoration to compensate for expected wetland and/or buffer impacts, the approval authority may authorize creation of a wetland and buffer upon demonstration by the applicant’s qualified wetland scientist that:

- i. Category I or II wetland rating (using the wetland rating system for western Washington)
  - ii. Rare wetland type (for example, bogs, mature forested wetlands, estuarine wetlands)
  - iii. The presence of habitat for priority or locally important wildlife species.
  - iv. Priority sites in an adopted watershed plan.
- b. Wetland impacts will not have a significant adverse impact on habitat for listed fish, or other ESA listed species.
  - c. There is no net loss of habitat functions within the watershed or basin.
  - d. Mitigation ratios for preservation as the sole means of mitigation shall generally start at 20:1. Specific ratios should depend upon the significance of the preservation project and the quality of the wetland resources lost.
  - e. Permanent preservation of the wetland and buffer will be provided through a conservation easement or tract held by a land trust.
  - f. The impact area is small (generally <math><1/2</math> acre) and/or impacts are occurring to a low-functioning system (Category III or IV wetland).

All preservation sites shall include buffer areas adequate to protect the habitat and its functions from encroachment and degradation.

E. Location of Compensatory Mitigation. Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of paragraphs 1-4 below apply. In that case, mitigation may be allowed off-site within the subwatershed of the impact site. When considering off-site mitigation, preference should be given to using alternative mitigation, such as a mitigation bank, an in-lieu fee program, or advanced mitigation.

1. There are no reasonable opportunities on site or within the sub-drainage basin (e.g., on-site options would require elimination of high-functioning upland habitat), or opportunities on site or within the sub-drainage basin do not have a high likelihood of success based on a determination of the capacity of the site to compensate for the impacts. Considerations should include: anticipated replacement ratios for wetland mitigation, buffer conditions and proposed widths, available water to maintain anticipated hydrogeomorphic classes of wetlands when restored, proposed flood storage capacity, and potential to mitigate riparian fish and wildlife impacts (such as connectivity);
2. On-site mitigation would require elimination of high-quality upland habitat.

delay shall not be injurious to the health, safety, or general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the City.

G. Wetland Mitigation Ratios<sup>1</sup>:

Category and Type of Wetland	Creation or Re-establishment	Rehabilitation	Enhancement
Category I: Bog, Natural Heritage site	Not considered possible	Case by case	Case by case
Category I: Mature Forested	6:1	12:1	24:1
Category I: Based on functions	4:1	8:1	16:1
Category II	3:1	6:1	12:1
Category III	2:1	4:1	8:1
Category IV	1.5:1	3:1	6:1

H. Credit/Debit Method. To more fully protect functions and values, and as an alternative to the mitigation ratios found in the joint guidance *“Wetland Mitigation in Washington State Parts I and II”* (Ecology Publication #06-06-011a-b, Olympia, WA, March, 2006), the administrator may allow mitigation based on the “credit/debit” method developed by the Department of Ecology in *“Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington: Final Report,”* (Ecology Publication #10-06-011, Olympia, WA, March 2012, or as revised).

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<sup>1</sup> Ratios for rehabilitation and enhancement may be reduced when combined with 1:1 replacement through creation or re-establishment. See Table 1a, *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance--Version 1*, (Ecology Publication #06-06-011a, Olympia, WA, March 2006 or as revised). See also Paragraph D.4 for more information on using preservation as compensation.

targeted functions, hydrogeomorphic classification, and categories of wetlands.

- vi. A description of the proposed mitigation construction activities and timing of activities.
  - vii. A discussion of ongoing management practices that will protect wetlands after the project site has been developed, including proposed monitoring and maintenance programs (for remaining wetlands and compensatory mitigation wetlands).
  - viii. A bond estimate for the entire compensatory mitigation project, including the following elements: site preparation, plant materials, construction materials, installation oversight, maintenance twice per year for up to five (5) years, annual monitoring field work and reporting, and contingency actions for a maximum of the total required number of years for monitoring.
  - ix. Proof of establishment of Notice on Title for the wetlands and buffers on the project site, including the compensatory mitigation areas.
- b. The scaled plan sheets for the compensatory mitigation must contain, at a minimum:
- i. Surveyed edges of the existing wetland and buffers, proposed areas of wetland and/or buffer impacts, location of proposed wetland and/or buffer compensation actions.
  - ii. Existing topography, ground-proofed, at two-foot contour intervals in the zone of the proposed compensation actions if any grading activity is proposed to create the compensation area(s). Also existing cross-sections of on-site wetland areas that are proposed to be altered, and cross-section(s) (estimated one-foot intervals) for the proposed areas of wetland or buffer compensation.
  - iii. Surface and subsurface hydrologic conditions, including an analysis of existing and proposed hydrologic regimes for enhanced, created, or restored compensatory mitigation areas. Also, illustrations of how data for existing hydrologic conditions were used to determine the estimates of future hydrologic conditions.
  - iv. Conditions expected from the proposed actions on site, including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future water regimes.

3. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the certified bank instrument. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

N. In-Lieu Fee. To aid in the implementation of off-site mitigation, the City may develop an in-lieu fee program. This program shall be developed and approved through a public process and be consistent with federal rules, state policy on in-lieu fee mitigation, and state water quality regulations. An approved in-lieu-fee program sells compensatory mitigation credits to permittees whose obligation to provide compensatory mitigation is then transferred to the in-lieu program sponsor, a governmental or non-profit natural resource management entity. Credits from an approved in-lieu-fee program may be used when paragraphs 1-6 below apply:

1. The approval authority determines that it would provide environmentally appropriate compensation for the proposed impacts.
2. The mitigation will occur on a site identified using the site selection and prioritization process in the approved in-lieu-fee program instrument.
3. The proposed use of credits is consistent with the terms and conditions of the approved in-lieu-fee program instrument.
4. Land acquisition and initial physical and biological improvements of the mitigation site must be completed within three years of the credit sale.
5. Projects using in-lieu-fee credits shall have debits associated with the proposed impacts calculated by the applicant's qualified wetland scientist using the method consistent with the credit assessment method specified in the approved instrument for the in-lieu-fee program.
6. Credits from an approved in-lieu-fee program may be used to compensate for impacts located within the service area specified in the approved in-lieu-fee instrument.

O. Advance Mitigation. 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.

P. Alternative Mitigation Plans. The Administrator may approve alternative critical areas mitigation plans that are based on best available science, such as priority restoration plans that achieve restoration goals identified in the SMP. Alternative

shall have the authority to issue a “stop-work” order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner’s or other responsible party’s expense to compensate for violation of provisions of this Chapter.

B. Requirement for Restoration Plan. All development work shall remain stopped until a restoration plan is prepared and approved by the City. Such a plan shall be prepared by a qualified professional using the currently accepted scientific principles and shall describe how the actions proposed meet the minimum requirements described in Subsection (C). The Administrator shall, at the violator’s expense, seek expert advice in determining the adequacy of the plan. Inadequate plans shall be returned to the applicant or violator for revision and resubmittal.

C. Minimum Performance Standards for Restoration. The following minimum performance standards shall be met for the restoration of a wetland, provided that if the violator can demonstrate that greater functions and habitat values can be obtained, these standards may be modified:

1. The historic structure, functions, and values of the affected wetland shall be restored, including water quality and habitat functions.
2. The historic soil types and configuration shall be restored to the extent practicable.
3. The wetland and buffers shall be replanted with native vegetation that replicates the vegetation historically found on the site in species types, sizes, and densities. The historic functions and values should be replicated at the location of the alteration.
4. Information demonstrating compliance with other applicable provisions of this Chapter shall be submitted to the Administrator.

D. Site Investigations. The Administrator is authorized to make site inspections and take such actions as are necessary to enforce this Chapter. The Administrator shall present proper credentials and make a reasonable effort to contact any property owner before entering onto private property.

E. Penalties. Any person, party, firm, corporation, or other legal entity convicted of violating any of the provisions of this Chapter shall be guilty of a misdemeanor.

1. Each day or portion of a day during which a violation of this Chapter is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Chapter shall constitute a public nuisance and may be enjoined as provided by the statutes of the state of Washington. The City may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Chapter. The civil penalty shall be assessed at a maximum rate of \$XX dollars per day per violation.

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## **Appendix B - Wetland Definitions**

**(Western Washington)**

## Appendix B – Wetland Definitions

**Alteration** – Any human-induced change in an existing condition of a critical area or its buffer. Alterations include, but are not limited to, grading, filling, channelizing, dredging, clearing of vegetation, construction, compaction, excavation, or any other activity that changes the character of the critical area.

**Best Available Science** – 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 WAC 365-195-900 through 925. Examples of best available science are included in *Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas* published by the Washington State Department of Commerce.

**Best Management Practices (BMPs)** – Conservation practices or systems of practices and management measures that:

- (a) Control soil loss and reduce water quality degradation caused by high concentrations of nutrients, animal waste, toxics, or sediment;
- (b) Minimize adverse impacts to surface water and ground water flow and circulation patterns and to the chemical, physical, and biological characteristics of wetlands;
- (c) Protect trees, vegetation and soils designated to be retained during and following site construction and use native plant species appropriate to the site for re-vegetation of disturbed areas; and
- (d) Provide standards for proper use of chemical herbicides within critical areas.

**Bog** – A low-nutrient, acidic wetland with organic soils and characteristic bog plants, which is sensitive to disturbance and impossible to re-create through compensatory mitigation.

**Buffer or Buffer Zone** – The area contiguous with a critical area that maintains the functions and/or structural stability of the critical area.

**Critical Areas** – Critical areas include any of the following areas or ecosystems: critical aquifer recharge areas, fish and wildlife habitat conservation areas, geologically hazardous areas, frequently flooded areas, and wetlands, as defined in RCW 36.70A and this Chapter.

**Creation** – The manipulation of the physical, chemical, or biological characteristics to develop a wetland on an upland or deepwater site, where a wetland did not previously exist. Creation results in a gain in wetland acreage and function. A typical action is the excavation of upland soils to elevations that will produce a wetland *hydroperiod* and hydric soils, and support the growth of hydrophytic plant species.

lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled macadam or other surfaces which similarly impede the natural infiltration of stormwater.

**In-Kind Compensation** – To replace critical areas with substitute areas whose characteristics and functions closely approximate those destroyed or degraded by a regulated activity.

**In-Lieu-Fee Program** – An agreement between a regulatory agency (state, federal, or local) and a single sponsor, generally a public agency or non-profit organization. Under an in-lieu-fee agreement, the mitigation sponsor collects funds from an individual or a number of individuals who are required to conduct compensatory mitigation required under a wetland regulatory program. The sponsor may use the funds pooled from multiple permittees to create one or a number of sites under the authority of the agreement to satisfy the permittees' required mitigation.

**Infiltration** – The downward entry of water into the immediate surface of soil.

**Isolated Wetlands** – Those wetlands that are outside of and not contiguous to any 100-year floodplain of a lake, river, or stream and have no contiguous hydric soil or hydrophytic vegetation between the wetland and any surface water, including other wetlands.

**Mature Forested Wetland** – A wetland where at least one acre of the wetland surface is covered by woody vegetation greater than 20 feet in height with a crown cover of at least 30 percent and where at least 8 trees/acre are 80 to 200 years old OR have average diameters (dbh) exceeding 21 inches (53 centimeters) measured from the uphill side of the tree trunk at 4.5 feet up from the ground.

**Mitigation** – Avoiding, minimizing, or compensating for adverse critical areas impacts. Mitigation, in the following sequential order of preference, is:

- (a) Avoiding the impact altogether by not taking a certain action or parts of an action;
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps, such as project redesign, relocation, or timing, to avoid or reduce impacts;
- (c) Rectifying the impact to wetlands, critical aquifer recharge areas, and habitat conservation areas by repairing, rehabilitating, or restoring the affected environment to the conditions existing at the time of the initiation of the project;
- (d) Minimizing or eliminating a hazard by restoring or stabilizing the hazard area through engineered or other methods;

**Prior Converted Croplands** – Prior converted croplands (PCCs) are defined in federal law as wetlands that were drained, dredged, filled, leveled, or otherwise manipulated, including the removal of woody vegetation, before December 23, 1985, to enable production of an agricultural commodity, and that: 1) have had an agricultural commodity planted or produced at least once prior to December 23, 1985; 2) do not have standing water for more than 14 consecutive days during the growing season, and 3) have not since been abandoned.

**Qualified Professional** – A person with experience and training in the pertinent scientific discipline, and who is a qualified scientific expert with expertise appropriate for the relevant critical area subject in accordance with WAC 365-195-905. 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 have at least five years of related work experience.

- (a) 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 federal manuals and supplements, preparing wetlands reports, conducting function assessments, and developing and implementing mitigation plans.
- (b) A qualified professional for habitat must have a degree in biology or a related degree and professional experience related to the subject species.
- (c) A qualified professional for a geological hazard must be a professional engineer or geologist, licensed in the state of Washington.
- (d) A qualified professional for critical aquifer recharge areas means a hydrogeologist, geologist, engineer, or other scientist with experience in preparing hydrogeologic assessments.

**Re-establishment** – The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural or historic functions to a former wetland. Re-establishment results in rebuilding a former wetland and results in a gain in wetland acres and functions. Activities could include removing fill, plugging ditches, or breaking drain tiles.

**Rehabilitation** – The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural or historic functions and processes of a degraded wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland acres. Activities could involve breaching a dike to reconnect wetlands to a floodplain or returning tidal influence to a wetland.

**Repair or Maintenance** – An activity that restores the character, scope, size, and design of a serviceable area, structure, or land use to its previously authorized and undamaged condition. Activities that change the character, size, or scope of a project beyond the

water year-round, provided there is evidence of at least intermittent flow during years of normal rainfall.

**Unavoidable Impacts** – Adverse impacts that remain after all appropriate and practicable avoidance and minimization has been achieved.

**Washington Administration Code (WAC)** – Administrative guidelines implementing the Growth Management Act, WAC 365-190 and WAC 365-195, as amended.

**Wetlands** – Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation adapted for life in saturated soil conditions. 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 to mitigate the conversion of wetlands.

**Wetland Mitigation Bank** – A site where wetlands are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing advance mitigation to compensate for future, permitted impacts to similar resources.

**Wetland Mosaic** – An area with a concentration of multiple small wetlands, in which each patch of wetland is less than one acre; on average, patches are less than 100 feet from each other; and areas delineated as vegetated wetland are more than 50% of the total area of the entire mosaic, including uplands and open water.