

## Appendix 8-B

# Recommendations for Wetland Language in a Critical Areas Ordinance

**Appendix 8-B is a complement to Chapter 8 and its other appendices. Local governments should not use suggested language contained in Appendix 8-B in their critical areas ordinances without also carefully reviewing all of Chapter 8 and its supporting appendices.**

This appendix contains specific recommendations for language that can be used in critical area regulations to protect wetlands. The recommendations are based on the relevant best available science from Volume 1. While other language may also adequately include the best available science, the language recommended in this appendix represents the State of Washington's best attempt to provide a reasonable, science-based approach to wetlands regulation.

The language below is provided in a format similar to that found in many local critical areas ordinances and therefore is different from other appendices. This appendix does not include the more general provisions typically found in critical areas regulations that relate to all critical areas. These can be found in Appendix A of the *Critical Areas Assistance Handbook* published by the Washington State Department of Community, Trade and Economic Development in November 2003 ([http://www.cted.wa.gov/uploads/CA\\_Handbook.pdf](http://www.cted.wa.gov/uploads/CA_Handbook.pdf)). This appendix revises the wetland specific provisions in Appendix A of the *Critical Areas Assistance Handbook*.

Appendix 8-B should be used in conjunction with Appendices 8-C through 8-F, which contain guidance on wetland mitigation ratios and buffer widths with supporting rationale as well as with Chapter 8, which includes additional discussion on developing the necessary elements of a wetland regulatory ordinance. This appendix includes:

### Wetland Provisions

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## Wetland Provisions

### Designating, Defining, Identifying, and Mapping Wetlands

A. **Designating, Defining, and Identifying Wetlands.** Wetlands are those areas, identified in accordance with the *Washington State Wetlands Identification and Delineation Manual* (Ecology 1997), that meet the following definition: “Wetland” or “wetlands” means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

All areas within the [city/county] meeting the criteria in the wetland definition in the *Wetlands Identification and Delineation Manual* (Ecology 1997), regardless of whether these areas have previously been identified or mapped, are hereby designated critical areas and are subject to the provisions of this Title.

B. **Mapping.** The approximate location and extent of wetlands are shown on the adopted critical area(s) maps. The following critical area(s) maps, including [*locally adopted maps or the National Wetlands Inventory*] are hereby adopted. Additionally, soil maps produced by U.S. Department of Agriculture Natural Resources Conservation Service may be useful in helping to identify potential wetland areas. These maps are to be used as a guide for the [city/county], project applicants, and/or property owners to identify potential wetland areas that may be subject to the provisions of this Title.

It is the actual presence of wetlands on a parcel, as delineated by the requirements of the *Washington State Wetlands Identification and Delineation Manual* (Ecology 1997), that triggers the requirements of this Title, whether or not the wetland is identified on the adopted maps. The exact location of a wetland’s boundary shall be determined through the performance of a field delineation by a qualified wetlands professional, applying the *Washington State Wetlands Identification and Delineation Manual* (Ecology 1997) as required by RCW 36.70A.175.

## Applicability

No sample language is provided for the applicability section of a critical areas ordinance. Please see Chapter 8.3.2 for the discussion on applicability. Code language needs to be crafted to align with the manner in which the local government chooses to trigger its regulations. The two options discussed in Chapter 8 are: 1) integrating provisions for wetland protection throughout various elements of the development code as appropriate (e.g., grading and filling ordinance, stormwater management, etc.); or 2) developing a specific critical areas (or wetland) ordinance and permit that encompasses all activities that may influence a wetland. Section 8.3.2 in Chapter 8 includes a discussion of applicability for both options.

## Regulated Activities

The following activities are regulated if they occur in a regulated wetland or its buffer:

- A. The removal, excavation, grading, or dredging of soil, sand, gravel, minerals, organic matter, or material of any kind;
- B. The dumping of, discharging of, or filling with any material;
- C. The draining, flooding, or disturbing of the water level or water table;
- D. The driving of pilings;
- E. The placing of obstructions;
- F. The construction, reconstruction, demolition, or expansion of any structure;
- G. 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, provided that these activities are not part of a forest practice governed under Chapter 76.09 RCW and its rules; or
- H. Activities that result in:
  - 1. a significant change of water temperature;
  - 2. a significant change of physical or chemical characteristics of the sources of water to the wetland;
  - 3. a significant change in the quantity, timing or duration of the water entering the wetland, or
  - 4. the introduction of pollutants.

## Activities Allowed in Wetlands

The activities listed below are allowed in wetlands in addition to those activities listed in the provisions established in *Allowed Activities* (Section [#]) in this Title. These activities do not require submission of a critical area report, except where such activities result in a loss to the functions and values of a wetland or wetland buffer. These activities include:

- A. Conservation or preservation of soil, water, vegetation, fish, shellfish, and other wildlife that does not entail changing the structure or functions of the existing wetland;
- B. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling of soil, planting of crops, chemical applications, or alteration of the wetland by changing existing topography, water conditions, or water sources;
- C. Drilling for utilities/utility corridors under a wetland, with entrance/exit portals located completely outside of the wetland boundary, provided that the drilling does not interrupt the ground water connection to the wetland or percolation of surface water down through the soil column. Specific studies by a hydrologist are necessary to determine whether the ground water connection to the wetland or percolation of surface water down through the soil column is disturbed; or
- D. Enhancement of a wetland through the removal of non-native invasive plant species. Removal of invasive plant species shall be restricted to hand removal. All removed plant material shall be taken away from the site and appropriately disposed of. Revegetation with appropriate native species at natural densities is allowed in conjunction with removal of invasive plant species.

## Wetland Ratings

A. Wetlands shall be rated according to the Washington State wetland rating system for [eastern or western Washington] (*Washington State Wetland Rating System for Eastern Washington - Revised*, Ecology Publication #04-06-015; *Washington State Wetland Rating System for Western Washington - Revised*, Ecology Publication #04-06-025) or as revised by Ecology. Wetland rating categories shall be applied as the wetland exists at the time of the adoption of this Title or as it exists at the time of an associated permit application. Wetland rating categories shall not change due to illegal modifications.

Note: Choose either the rating system for eastern or western Washington as appropriate.

## Wetland Rating Categories – Eastern Washington

1. **Category I.** Category I wetlands are: 1) those identified by the Washington Natural Heritage Program/DNR as high quality, relatively undisturbed wetlands, or wetlands that support state Threatened or Endangered plant species; 2) alkali wetlands; 3) bogs; 4) mature and old-growth forested wetlands over ¼ acre in size dominated by slow-growing native trees; 5) forested wetlands with stands of Aspen; or 6) wetlands that perform many functions very well.

Category I wetlands represent a unique or rare wetland type, are more sensitive to disturbance than most wetlands, are relatively undisturbed and contain some ecological attributes that are impossible to replace within a human lifetime, or provide a very high level of functions.

2. **Category II.** Category II wetlands are: 1) forested wetlands in the channel migration zone of rivers; 2) mature forested wetlands containing fast growing trees; 3) vernal pools present within a mosaic of other wetlands; or 4) wetlands with a moderately high level of functions. These wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a high level of protection.
3. **Category III.** Category III wetlands are: 1) vernal pools that are isolated; or 2) wetlands with a moderate level of functions. Generally, wetlands in this category have been disturbed in some way, and are often smaller, less diverse and/or more isolated in the landscape than Category II wetlands. They may not need as much protection as Category I and II wetlands.
4. **Category IV.** Category IV wetlands have the lowest levels of functions and are often heavily disturbed. These are wetlands that should be replaceable, and in some cases may be improved. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands do provide some important functions and should be protected to some degree.

## Wetland Rating Categories – Western Washington

1. **Category I.** Category I wetlands are: 1) relatively undisturbed estuarine wetlands larger than 1 acre; 2) wetlands that are identified by scientists of the Washington Natural Heritage Program/DNR as high quality wetlands; 3) bogs larger than ½ acre; 4) mature and old-growth forested wetlands larger than 1 acre; 5) wetlands in coastal lagoons; or 6) wetlands that perform many functions well.

Category I wetlands represent a unique or rare wetland type, are more sensitive to disturbance than most wetlands, are relatively undisturbed and

contain some ecological attributes that are impossible to replace within a human lifetime, or provide a very high level of functions.

2. **Category II.** Category II wetlands are: 1) estuarine wetlands smaller than 1 acre, or disturbed estuarine wetlands larger than 1 acre; 2) a wetland identified by the Washington State Department of Natural Resources as containing “sensitive” plant species; 3) a bog between ¼ and ½ acre in size; 4) an interdunal wetland larger than 1 acre; or 5) wetlands with a moderately high level of functions.

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

3. **Category III.** Category III wetlands are: 1) wetlands with a moderate level of functions; or 2) interdunal wetlands between 0.1 and 1 acre in size. Generally, wetlands in this category may have been disturbed in some way and are often less diverse or more isolated from other natural resources in the landscape than Category II wetlands.
4. **Category IV.** Category IV wetlands have the lowest levels of functions and are often heavily disturbed. These are wetlands that should be replaceable, and in some cases may be improved. However, experience has shown that replacement cannot be guaranteed in any specific case. These wetlands may provide some important functions, and should be protected to some degree.

## Standards

### General Requirements

A. Activities and uses shall be prohibited in wetlands and wetland buffers, except as provided for in this Title.

B. **Category I Wetlands.** Activities and uses shall be prohibited from Category I wetlands, except as provided for in the *Public Agency and Utility Exception* (Section [#]), *Reasonable Use Exception* (Section [#]), and *Variance* (Section [#]) elements of this Title.

C. **Category II and III Wetlands.** For Category II and III wetlands, the following standard shall apply:

1. Where wetland fill is proposed, it is presumed that an alternative development location exists; activities and uses shall be prohibited unless the applicant can demonstrate that:

- a. The basic project purpose cannot reasonably be accomplished on another site or sites in the general region while still successfully avoiding or resulting in less adverse impact on a wetland; and
- b. All on-site alternative designs that would avoid or result in less adverse impact on a wetland or its buffer, such as a reduction in the size, scope, configuration or density of the project, are not feasible.

Full compensation for the loss of acreage and functions of wetland and buffers shall be provided under the terms established under *Mitigation* (Section [#]) in this Title.

**D. Category IV Wetlands.** Activities and uses that result in unavoidable impacts may be permitted in Category IV wetlands and associated buffers in accordance with an approved critical area(s) report and compensatory mitigation plan, and only if the proposed activity is the only reasonable alternative that will accomplish the applicant's objectives. Full compensation for the loss of acreage and functions of wetland and buffers shall be provided under the terms established under *Mitigation* (Section [#]) in this Title.

## Criteria for a Critical Area Report for Wetlands

**A. Preparation by a Qualified Professional.** A critical area report for wetlands shall be prepared by a qualified professional who is a certified Professional Wetland Scientist or a non-certified professional wetland scientist with a minimum of five (5) years of experience in the field of wetland science, including experience preparing wetland reports.

See Appendix 8-H for further information on what constitutes a qualified wetland professional.

**B. Minimum Standards for Wetland Reports.** The written report and the accompanying plan sheets shall contain the following information, at a minimum:

1. The written report shall include at a minimum:
  - a. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the wetland critical area report; a description of the proposal; identification of all the local, state, and/or federal wetland-related permit(s) required for the project; and a vicinity map for the project;
  - b. A statement specifying the accuracy of the report and all assumptions made and relied upon;
  - c. Documentation of any fieldwork performed on the site, including field data sheets for delineations, function assessments, baseline hydrologic data, etc.;

- d. A description of the methodologies used to conduct the wetland delineations, function assessments, or impact analyses including references;
- e. Identification and characterization of all critical areas, wetlands, water bodies, shorelines, floodplains, and buffers on or adjacent to the proposed project area. For areas off-site of the project site, estimate conditions within 300 feet of the project boundaries using the best available information;
- f. For each wetland identified on-site and within 300 feet of the project site provide: the wetland rating per *Wetland Ratings* (Section [#]) of this Title; required buffers; hydrogeomorphic classification; wetland acreage based on a professional survey from the field delineation (acreages 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* (Section [#]) 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, and;
- l. Evaluation of functions of the wetland and adjacent buffer using a functions assessment method recognized by local or state agency

staff and including the reference for the method used and all 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 areas; grading and clearing limits; areas of proposed impacts to wetlands and/or buffers (include square footage estimates);
  - b. A depiction of the proposed stormwater management facilities and outlets (to scale) for the development, including estimated areas of intrusion into the buffers of any critical areas. The written report shall contain a discussion of the potential impacts to the wetland(s) associated with anticipated hydroperiod alterations from the project.

**C. Compensatory Mitigation Reports.** When a project involves wetland and/or buffer impacts, a compensatory mitigation report shall be required, meeting the following minimum standards:

1. **Preparation by a Qualified Professional.** A compensatory mitigation report for wetland or buffer impacts shall be prepared by one or more qualified professional(s) including someone who is a certified Professional Wetland Scientist or a non-certified professional wetland scientist with a minimum of five (5) years experience designing compensatory mitigation projects. The compensatory mitigation projects must have been installed and monitored for a minimum of two (2) years, in order to verify success. In addition, the design team may include civil engineers, landscape architects, or landscape designers depending upon the complexity of the project.
2. **Wetland Critical Area Report.** A critical area report for wetlands must accompany or be included in the compensatory mitigation report and include the minimum parameters described in *Minimum Standards for Wetland Reports* (Section [#]) of this Title.
3. **Compensatory Mitigation Report.** The report must include a written report and plan sheets that must contain, at a minimum, the following elements. Full guidance can be found in the *Guidance on Wetland Mitigation in Washington State - Part 2: Guidelines for Developing Wetland Mitigation Plans and Proposals*, April 2004 (Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10; Ecology Publication #04-06-013b) or as revised.
  - a. The written report must contain, at a minimum:

- i. The name and contact information of the applicant; the name, qualifications, and contact information for the primary author(s) of the Compensatory Mitigation Report; a description of the proposal; a summary of the impacts and proposed compensation concept; identification of all the local, state, and/or federal wetland related permit(s) required for the project; and a vicinity map for the project;
- ii. Description of the existing wetland and buffer areas proposed to be impacted including: acreages (or square footage) based on professional surveys of the delineations; Cowardin classifications including dominant vegetation community types (for upland and wetland habitats); hydrogeomorphic classification of wetland(s) on and adjacent to the site; the results of a functional assessment for the entire wetland and the portions proposed to be impacted; wetland rating based on *Wetland Ratings* (Section [#]) of this Title;
- iii. An assessment of the potential changes in wetland hydroperiod from the proposed project and how the design has been modified to avoid, minimize, or reduce adverse impacts to the wetland hydroperiod;
- iv. An assessment of existing conditions in the zone of the proposed compensation, including: vegetation community structure and composition, existing hydroperiod, existing soil conditions, existing habitat functions. Estimate future conditions in this location if the compensation actions are NOT undertaken (i.e., how would this site progress through natural succession?);
- v. A description of the proposed conceptual actions for compensation of wetland and upland areas affected by the project. Describe future vegetation community types for years 1, 3, 5, 10, and 25 post-installation including the succession of vegetation community types and dominants expected. Describe the successional sequence of expected changes in hydroperiod for the compensation site(s) for the same time periods as vegetation success. Describe the change in habitat characteristics expected over the same 25-year time period;
- vi. The field data collected to document existing conditions and on which future condition assumptions are based for hydroperiod (e.g., existing hydroperiod based on piezometer data, staff/crest gage data, hydrologic modeling, visual observations, etc.) and soils (e.g., soil pit data - hand dug or mechanically trenched,

and soil boring data. Do not rely upon soil survey data for establishing existing conditions.);

- 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 including the following elements: site preparation, plant materials, construction materials, installation oversight, maintenance twice/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 impacted, 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. Proposed conditions expected from the proposed actions on site including future hydrogeomorphic types, vegetation community types by dominant species (wetland and upland), and future hydrologic regimes;

- v. Required wetland buffers for existing wetlands and proposed compensation areas. Also, identify any zones where buffers are proposed to be reduced or enlarged outside of the standards identified in this Title;
- vi. A plant schedule for the compensatory area including all species by proposed community type and hydrologic regime, size and type of plant material to be installed, spacing of plants, “typical” clustering patterns, total number of each species by community type, timing of installation;
- vii. Performance standards (measurable standards reflective of years post-installation) for upland and wetland communities, monitoring schedule, and maintenance schedule and actions by each biennium.

**D. Additional Information.** When appropriate, the [director] may also require the wetland report to include an evaluation by the State Department of Ecology or an independent qualified expert regarding the applicant's analysis and the effectiveness of any proposed mitigating measures or programs and to include any recommendations as appropriate.

- 1. If the development proposal site contains or is within a wetland area, the applicant shall submit an affidavit, which declares whether the applicant has knowledge of any illegal alteration to any or all wetlands on the proposed site and whether the applicant previously had been found in violation of this ordinance. If the applicant has been found previously in violation, the applicant shall declare whether such violation has been corrected to the satisfaction of the jurisdiction.
- 2. The [director] shall determine if the mitigation and monitoring plans and bonding measures proposed by the applicant are sufficient to protect the public health, safety, and welfare, consistent with the goals, purposes, objectives, and requirements of this Title.

## **Requirements for Compensatory Mitigation**

A. Compensatory mitigation for alterations to wetlands shall achieve equivalent or greater biologic functions. Compensatory mitigation plans shall be consistent with the *Guidance on Wetland Mitigation in Washington State - Part 2: Guidelines for Developing Wetland Mitigation Plans and Proposals*, April 2004 (Washington State Department of Ecology, U.S. Army Corps of Engineers Seattle District, and U.S. Environmental Protection Agency Region 10; Ecology Publication #04-06-013b), or as revised.

**B. Mitigation Shall Be Required in the Following Order of Preference:**

1. Avoiding the impact altogether by not taking a certain action or parts of an action.
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps 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.
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments.
6. Monitoring the required compensation and taking remedial or corrective measures when necessary.

**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 as determined by a site-specific function assessment, 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/county], such as replacement of historically diminished wetland types.

**D. Preference of Mitigation Actions.** Methods to achieve compensation for wetland functions shall be approached in the following order of preference:

1. Restoration (re-establishment and rehabilitation) of wetlands.
2. Creation (establishment) of wetlands on disturbed upland sites such as those with vegetative cover consisting primarily of non-native introduced species. This should only be attempted when there is an adequate source of water and it can be shown that the surface and subsurface hydrologic regime is conducive for the wetland community that is anticipated in the design.

3. Enhancement of significantly degraded wetlands in combination with restoration or creation. Such enhancement should be part of a mitigation package that includes replacing the impacted area and meeting appropriate ratio requirements.

See Appendices 8-C and 8-D for definitions of the types of compensatory mitigation actions (restoration, creation, enhancement).

**E. Type and Location of Compensatory Mitigation.** Unless it is demonstrated that a higher level of ecological functioning would result from an alternate approach, compensatory mitigation for ecological functions shall be either in-kind and on-site, or in-kind and within the same stream reach, sub-basin, or drift cell (if estuarine wetlands are impacted). Compensatory mitigation actions shall be conducted within the same sub-drainage basin and on the site of the alteration except when all of the following apply:

1. There are no reasonable on-site or in sub-drainage basin opportunities (e.g., on-site options would require elimination of high-functioning upland habitat), or on-site and in sub-drainage basin opportunities 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. Off-site mitigation has a greater likelihood of providing equal or improved wetland functions than the impacted wetland; and
3. Off-site locations shall be in the same sub-drainage basin unless:
  - a. Established watershed goals for water quality, flood storage or conveyance, habitat, or other wetland functions have been established by the [city/county] and strongly justify location of mitigation at another site; or
  - b. Credits from a state-certified wetland mitigation bank are used as compensation and the use of credits is consistent with the terms of the bank's certification.
4. The design for the compensatory mitigation project needs to be appropriate for its location (i.e., position in the landscape). Therefore, compensatory mitigation should not result in the creation, restoration, or enhancement of an atypical wetland. An atypical wetland refers to a compensation wetland (e.g., created or enhanced)

that does not match the type of existing wetland that would be found in the geomorphic setting of the site (i.e., the water source(s) and hydroperiod proposed for the mitigation site are not typical for the geomorphic setting). Likewise, it should not provide exaggerated morphology or require a berm or other engineered structures to hold back water. For example, excavating a permanently inundated pond in an existing seasonally saturated or inundated wetland is one example of an enhancement project that could result in an atypical wetland. Another example would be excavating depressions in an existing wetland on a slope, which required the construction of berms to hold the water.

**F. Timing of Compensatory Mitigation.** It is preferred that compensatory mitigation projects be completed prior to activities that will disturb the on-site wetlands. At the least, compensatory mitigation shall be completed immediately following disturbance and prior to use or occupancy of the action or development. Construction of mitigation projects shall be timed to reduce impacts to existing fisheries, wildlife, and flora.

The [director] may authorize a one-time temporary delay in completing construction or installation of the compensatory mitigation when the applicant provides a written explanation from a qualified wetland professional as to the rationale for the delay. An appropriate rationale would include identification of the environmental conditions that could produce a high probability of failure or significant construction difficulties (e.g., project delay lapses past a fisheries window; or installing plants should be delayed until the dormant season to ensure greater survival of installed materials). The delay shall not create or perpetuate hazardous conditions or environmental damage or degradation, and the delay shall not be injurious to the health, safety, and general welfare of the public. The request for the temporary delay must include a written justification that documents the environmental constraints that preclude implementation of the compensatory mitigation plan. The justification must be verified and approved by the [city/county].

**G. Mitigation Ratios.** [insert appropriate acreage ratios]

See Appendices 8-C and 8-D for recommended mitigation ratios and criteria for increasing or reducing ratios to be used with the Washington State wetland rating systems. Appendix 8-F provides the rationale for the recommended ratios.

1. The mitigation ratio is the acreage required for compensatory mitigation divided by the acreage of impact.
2. The ratios are for a concurrent compensatory mitigation project. If the impacts to a wetland are to be mitigated by using an approved and established mitigation bank, the rules and ratios applicable to the bank should be used.

3. The ratios are based on the assumption that the category, based on *Wetland Ratings* (Section [#]) of this Title, and hydrogeomorphic (HGM) class/subclass of the wetland proposed as compensation are the same as the category and HGM class/subclass of the wetland impacts.
4. Ratios for projects in which the category and HGM class/subclass of wetlands proposed as compensation is not the same as that of the wetland impacts will be determined on a case-by-case basis using the recommended ratios as a starting point. The ratios could be higher in such cases.
5. The ratio for using rehabilitation as compensation is 2 times that for using re-establishment or creation (R/C) (1 acre of R/C = 2 acres of rehabilitation). The ratio for using enhancement as compensation is 4 times that for using R/C (1 acre of R/C = 4 acres of enhancement).
6. Re-establishment or creation (R/C) can be used in combination with rehabilitation or enhancement. For example, 1 acre of impact to a Category III wetland would require two acres of R/C. If an applicant provides 1 acre of R/C (i.e. replacing the lost acreage at a 1:1 ratio), the remaining 1 acre of R/C necessary to compensate for the impact could be substituted with 2 acres of rehabilitation or 4 acres of enhancement.
7. Generally the use of enhancement alone as compensation is discouraged. Using enhancement in combination with the replacement of wetland area at a minimum of 1:1 through re-establishment or creation is preferred.

**H. Preservation.** Impacts to wetlands may be mitigated by preservation of wetland areas when used in combination with other forms of mitigation such as creation, restoration, or enhancement. Preservation may also be used by itself, but more restrictions apply as outlined below.

1. **Acceptable Uses of Preservation.** The preservation of at-risk, high-quality wetlands and habitat may be considered as part of an acceptable mitigation plan when the following criteria are met:
  - a. Preservation is used as a form of compensation only after the standard sequencing of mitigation (avoid, minimize, and then compensate). Refer to *Mitigation Sequencing* (Section [#]) of this Title;
  - b. Restoration (re-establishment and rehabilitation), creation, and enhancement opportunities have also been considered, and preservation is proposed by the applicant and approved by the permitting agencies as the best compensation option;

- c. The preservation site is determined to be under imminent threat; that is, the site has the potential to experience a high rate of undesirable ecological change due to on-site or off-site activities that are not regulated (e.g., logging of forested wetlands). This potential includes permitted, planned, or likely actions;
  - d. The area proposed for preservation is of high quality or critical for the health of the watershed or basin due to its location. Some of the following features may be indicative of high-quality sites:
    - i. Category I or II wetland rating (using the Washington State wetland rating system for eastern or western WA);
    - ii. Rare or irreplaceable wetland type (e.g., bogs, mature forested wetlands, estuaries) or aquatic habitat that is rare or a limited resource in the area;
    - iii. Habitat for threatened or endangered species;
    - iv. Provides biological and/or hydrological connectivity;
    - vi. High regional or watershed importance (e.g., listed as priority site in a watershed or basin plan);
    - vii. Large size with high species diversity (plants and/or animals) and/or high abundance of native species;
    - viii. A site that is continuous with the head of a watershed, or with a lake or pond in an upper watershed that significantly improves outflow hydrology and water quality.
2. **Preservation in combination with other forms of compensation.** Using preservation as compensation is acceptable when done in combination with restoration, creation, or enhancement, provided that a minimum of 1:1 acreage replacement is provided by re-establishment or creation and the criteria below are met:
- a. All criteria listed in [H.1] are met.
  - b. The impact area is small and/or impacts are occurring to a low-functioning system (Category III or IV wetland);
  - c. Preservation of a high-quality system occurs in the same watershed or basin as the wetland impact;

- d. Preservation sites include buffer areas adequate to protect the habitat and its functions from encroachment and degradation; and
  - e. Mitigation ratios for preservation in combination with other forms of mitigation shall range from 10:1 to 20:1, as determined on a case-by-case basis, depending on the quality of the wetlands being impacted and the quality of the wetlands being preserved.
3. **Preservation as the sole means of compensation for wetland impacts.** Preservation alone shall only be used as compensatory mitigation in exceptional circumstances. Preservation alone shall not apply if impacts are occurring to functions that must be replaced on site, such as flood storage or water quality treatment that need to be replicated by water quality measures implemented within the project limits. Preservation of at-risk, high-quality wetlands and habitat (as defined above) may be considered as the sole means of compensation for wetland impacts when the following criteria are met:
- a. All criteria listed in [H.1] and [H.2] are met;
  - b. There are no adverse impacts to habitat for fish and species listed as endangered and threatened;
  - c. There is no net loss of habitat functions within the watershed or basin;
  - d. Higher mitigation ratios are applied. 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.

#### I. **Wetland Mitigation Banks.**

- 1. Credits from a wetland mitigation bank may be approved for use as compensation for unavoidable impacts to wetlands when:
  - a. The bank is certified under Chapter 173-700 WAC;
  - b. The [director] determines that the wetland mitigation bank provides appropriate compensation for the authorized impacts; and
  - c. The proposed use of credits is consistent with the terms and conditions of the bank's certification.

2. Replacement ratios for projects using bank credits shall be consistent with replacement ratios specified in the bank's certification.
3. Credits from a certified wetland mitigation bank may be used to compensate for impacts located within the service area specified in the bank's certification. In some cases, the service area of the bank may include portions of more than one adjacent drainage basin for specific wetland functions.

## Subdivisions

The subdivision and short subdivision of land in wetlands and associated buffers is subject to the following:

- A. Land that is located wholly within a wetland or its buffer may not be subdivided.
- B. Land that is located partially within a wetland or its buffer may be subdivided provided that an accessible and contiguous portion of each new lot is:
  1. Located outside of the wetland and its buffer; and
  2. Meets the minimum lot size requirements of [locally adopted zoning dimensions].
- C. Access roads and utilities serving the proposed subdivision may be permitted within the wetland and associated buffers only if the [city/county] determines that no other feasible alternative exists, consistent with this Title.

## Signs and Fencing of Wetlands

A. **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 [director] 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.

B. **Permanent Signs.** As a condition of any permit or authorization issued pursuant to this Title, the [director] may require the applicant to install permanent signs along the boundary of a wetland or buffer.

1. 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 sign shall be worded as follows or with alternative language approved by the director:

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

2. The provisions of Subsection (1) may be modified as necessary to assure protection of sensitive features or wildlife.

### C. Fencing

1. The [director] shall determine if fencing is necessary to protect the functions and values of the critical area. If found to be necessary, the [director] shall condition any permit or authorization issued pursuant to this Title to require the applicant to install a permanent fence at the edge of the wetland buffer, when fencing will prevent future impacts to the wetland.
2. The applicant shall be required to install a permanent fence around the wetland or buffer when domestic grazing animals are present or may be introduced on site.
3. Fencing installed as part of a proposed activity or as required in this Subsection shall be designed so as to not interfere with species migration, including fish runs, and shall be constructed in a manner that minimizes impacts to the wetland and associated habitat.

## Wetland Buffers

### A. Buffer Requirements. [insert buffer requirements]

See Appendices 8-C and 8-D for recommended buffer widths and criteria for increasing, reducing and averaging buffers to be used with the Washington State wetland rating systems. Appendix 8-E provides the rationale for the recommended buffers.

**B. Measurement of Wetland Buffers.** All buffers shall be measured from the wetland boundary as surveyed in the field. The width of the wetland buffer shall be determined according to the wetland category and the proposed land use as identified in this Title. 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.

C. **Buffers on Mitigation Sites.** All mitigation sites shall have buffers consistent with the buffer requirements of this Title and based on the expected category of the wetland once the mitigation actions are completed.

D. **Buffer Maintenance.** Except as otherwise specified or allowed in accordance with this Title, 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.

E. **Impacts to Buffers.** Requirements for the compensation for impacts to buffers are outlined in *Compensatory Mitigation Requirements* (Section [#]) of this title.

F. **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.

G. **Buffer Uses.** The following uses may be permitted within a wetland buffer in accordance with the review procedures of this Title, 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:

1. **Conservation and Restoration Activities.** Conservation or restoration activities aimed at protecting the soil, water, vegetation, or wildlife.
2. **Passive Recreation.** Passive recreation facilities designed and in accordance with an approved critical area report, including:
  - a. Walkways and trails, provided that those pathways are limited to minor crossings having no adverse impact on water quality. They should be generally parallel to the perimeter of the wetland, located only in the outer twenty-five percent (25%) of the wetland buffer area, and located to avoid removal of significant trees. They should be limited to pervious surfaces no more than five (5) feet in width for pedestrian use only. Raised boardwalks utilizing non-treated pilings may be acceptable; and
  - b. Wildlife viewing structures.
3. **Stormwater Management Facilities.** Stormwater management facilities, limited to stormwater dispersion outfalls and bioswales, 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.

## Stormwater Management Impacts to Wetlands

A. **Protection of Wetland Hydrology.** Wetland hydrology shall be protected through the development process. Post-development wetland hydrology shall match pre-development wetland hydrology to the maximum extent feasible.

B. **Construction of New Surface Water Conveyance Systems.** Construction of new surface water conveyance systems in wetland buffers is allowed only if discharging at the wetland edge has less adverse impact upon the wetland or wetland buffer than if the surface water is discharged at the buffer edge and allowed to naturally drain through the buffer.

C. **Stormwater Facilities on Roads Adjacent to Wetlands and their Buffers.** Construction of new surface water flow control or surface water quality treatment facilities are only allowed in wetlands and buffers when such facilities are located in the right-of-way of an existing road and conducted consistent with established guidelines for road maintenance and best management practices. This does NOT include an outlet structure for a detention facility that is designed to impound water in a wetland up-gradient of a road, unless the provisions in *Limits on Use of Wetlands for Stormwater Detention* (Subsection [#]) are satisfied.

D. **Limits on Use of Wetlands for Stormwater Detention.** Wetlands cannot be used for stormwater detention and treatment unless the project satisfies the guidance and criteria developed by the Puget Sound Wetlands and Stormwater Management Research Program (Azous and Horner, eds, 2001, *Wetlands and Urbanization: Implications for the Future*) and contained in Appendix I-D of the *Stormwater Management Manual for Western Washington*, titled “Wetlands and Stormwater Management Guidelines.” Compensatory mitigation should be provided for unavoidable loss of functions through hydrologic or structural modification of wetlands.

At this point we are not aware of wetland management guidelines that have been developed to address stormwater issues specific to eastern Washington. However, many of the wetland management principles embodied in Appendix I-D of the stormwater manual are applicable to wetlands regardless of the region in which they are located.

## Agricultural Impacts to Wetlands

Chapter 8 of this volume recommends that a local government regulate on-going agricultural activities in wetlands through best management practices and farm plans. The scope and details of such practices and plans are too site-specific and detailed for the purposes of this appendix.

The following language addresses the conversion of wetlands to new agricultural uses, and conversion of wetlands currently in agricultural use to non-agricultural uses. Both of these activities are legitimately regulated by a local government through its critical areas ordinance.

A. The conversion of wetlands not currently in agricultural use to a new agricultural use is subject to the compensatory mitigation provisions of this Title, including avoidance, minimization, and compensatory mitigation. Conversion includes the clearing of wetland vegetation for pasture or preparation for planting of crops.

B. The conversion of wetlands currently in agricultural uses to non-agricultural uses is subject to the compensatory mitigation provisions of this Title, including avoidance, minimization, and mitigation.

## Removal of Hazard Trees

Refer to Section 8.3.3.12 in Chapter 8 of this volume for the discussion on the removal hazard trees in wetlands and their buffers. A local critical areas ordinance may defer to its clearing, landscaping, or other applicable code to address the removal of hazard trees. Local governments should require that hazard trees be replaced either in kind or with species that are underrepresented in the community and under the direction of an arborist. A recommended goal for the replacement of hazard trees is 2:1 for younger trees and 4:1 for mature and old-growth trees.

## Unauthorized Alterations and Enforcement

A. When a wetland or its buffer has been altered in violation of this Title, all ongoing development work shall stop and the critical area shall be restored. The [city/county] shall have the authority to issue a “stop-work” order to cease all ongoing development work and order restoration, rehabilitation, or replacement measures at the owner’s or other responsible party’s expense to compensate for violation of provisions of this Title.

B. **Requirement for Restoration Plan.** All development work shall remain stopped until a restoration plan is prepared and approved by [city/county]. 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 [director] 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 replicated;
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; and
4. Information demonstrating compliance with other applicable provisions of this Title shall be submitted to the [director].

**D. Site Investigations.** The [director] is authorized to make site inspections and take such actions as are necessary to enforce this Title. The [director] 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 Title shall be guilty of a misdemeanor. Each day or portion of a day during which a violation of this Title is committed or continued shall constitute a separate offense. Any development carried out contrary to the provisions of this Title shall constitute a public nuisance and may be enjoined as provided by the statutes of the State of Washington. The [city/county] may levy civil penalties against any person, party, firm, corporation, or other legal entity for violation of any of the provisions of this Title. The civil penalty shall be assessed at a maximum rate of [amount] dollars per day per violation.

If the wetland affected cannot be restored, monies collected as penalties shall be deposited in a dedicated account for the preservation or restoration of landscape processes and functions in the watershed in which the affected wetland is located. The [city/county] may coordinate its preservation or restoration activities with other [city/county] in the watershed to optimize the effectiveness of the restoration action.