

Skamania County

GMA COMPLIANCE REVIEW FOR CRITICAL AREAS – Phase II

2006 Critical Areas Update Process

June 2006

PURPOSE:

The purpose of this report is to describe the process undertaken by Skamania County to consider best available science as part of the 2006 Critical Areas Update Process. Additionally, this report summarizes the primary sources of best available science taken into account during this update process and describes those measures that give special consideration to the conservation and protection of anadromous fisheries as required in RCW 36.70A.

BACKGROUND:

As defined in RCW 36.70A.030(5), critical areas include the following areas and ecosystems:

- Wetlands
- Areas with a critical recharging effect on aquifers used for potable water (Critical Aquifer Recharge Areas)
- Fish and wildlife habitat conservation areas
- Frequently flooded areas
- Geologically hazardous areas

Skamania County's Current Critical Area Ordinance (Skamania County Code Title 21A) and the Critical Areas Chapter of the Comprehensive Plan were adopted in early 1996. On May 9, 2005, there was a minor amendment to Title 21A, Chapter 21A.05-Fish and Wildlife Protection to modify the review process in Fish and Wildlife Protection Areas. At the time of original adoption, the policies and development regulations were found to meet the requirements of RCW 36.70A to designate and protect Critical Areas. However, in 1995 the Washington State Legislature added a new section to the Growth

Management Act (GMA) that raised the standard for designating and protecting critical areas and protecting anadromous fisheries. RCW 36.70A.172(1) states:

In designating and protecting critical areas under this chapter, counties and cities shall include best available science in developing policies and developing regulations to protect the function and values of critical areas. In addition, counties and cities shall give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

The GMA mandates a "review timeline schedule" for each County within the State of Washington to review and update, if necessary, its Comprehensive Plan and development regulations for consistency and continued compliance with those portions of the GMA applicable to that particular County. Skamania County is one of ten counties in the State of Washington that is required to only partially plan under GMA. The scheduled review timeline for Skamania County to review and update, if necessary, is December 1, 2005. However, in 2005, the Washington State Legislature adopted a change in the GMA that allows a one (1) year extension to all of the 2005, 2006 and 2007 counties. Then in 2006, the Washington State Legislature adopted another change in the GMA that provides a time extension to small and slow-growing jurisdictions for updates to their comprehensive plans, development regulations and critical areas ordinances. It contains qualifying criteria and clarification that jurisdictions making progress on their updates will be eligible for state grants, loans, pledges and financial guarantees. This change allows eligible counties to comply with the requirements at any time within thirty-six months following the originally established date. This means that by December 1, 2008, Skamania County is required to review and update, if necessary, its Comprehensive Plan and development regulations to be consistent and in continued compliance with GMA for Critical Areas.

As part of the 2006 Critical Areas Update Process, Skamania County adopted a Public Participation Program (Phase I) in January 2006, which indicates the County will complete the Critical Areas Update Process by November 2006. Unless the Public Participation Program is modified after a public hearing, Skamania County will complete the Critical Areas Update Process by November 2006.

BEST AVAILABLE SCIENCE GUIDANCE:

In 1998, the Washington State Department of Community, Trade and Economic Development (CTED) created an administrative rule to assist cities and counties in determining how to meet the requirements for best available science. The administrative rule took effect August 27, 2000 and is found in the Washington Administrative Code (WAC) Chapters 365-195-900 through 365-195-925.

As stated in part in WAC 365-195-910(1):

Consultation with state and federal natural resource agencies and tribes can provide a quick and cost-effective way to develop scientific information and recommendations. State natural resource agencies provide numerous guidance documents and model ordinances that incorporate the agencies' assessments of best available science.

CTED also compiled a report in March 2002 known as *Citations of Recommended Sources of Best Available Science For Designating and Protecting Critical Resource Areas*. According to this document, "in the context of critical areas protection, a valid scientific process is one that produces reliable information useful in understanding the consequences of a local government's regulatory decisions".

In November 2003, CTED published *Critical Areas Assistance Handbook* to provide suggestions and guidance to local governments to use in designating and protecting critical areas consistent with the Growth Management Act. Within this handbook, there are example code provisions that meet the requirements of best available science for designating and protecting critical areas. The handbook states, "Note that because the Example Code Provisions found in Appendix A are general in nature, they will need to be modified in consideration to local environmental conditions and community needs."

CTED also developed a critical areas update checklist for local governments to use to help determine if the existing development regulations and comprehensive plan guidelines meet the basic requirements of the GMA.

The Washington State Department of Ecology (DOE) published guidance documents for *Wetlands in Washington State Volume 1: Synthesis of the Science* (March 2005) and *Volume 2: Guidance for Protecting and Managing Wetlands* (April 2005). This two volume set replaces the guidance for wetlands found in the CTED Critical Areas Assistance Handbook (November 2003). Additionally, DOE published in January 2005, *Critical Aquifer Recharge Areas Guidance Document*, which replaces their previous one from July 2000.

The *Technical Guidance Document for Clearing and Grading in Western Washington* was published by CTED in May 2005. This document compiled the best available science for clearing and grading land in Western Washington primarily related to water quality, stormwater runoff, and erosion control for the protection of resource lands and critical areas.

Documents created during the watershed planning process focused on efforts to address local water quantity, water quality, fish habitat, and instream flows. Skamania County is included in several of the Water Resource Inventory Areas (WRIA) that created watershed

plans. The Lower Columbia Fish Recovery Board (LCFRB) acts as the lead agency for the Planning Unit in WRIA 25/26 and WRIA 27/28, and Skamania County acts as the lead agency for the Planning Unit in WRIA 29. A survey of existing information (Level 1 Assessment) and more detailed assessments focused on filling important data gaps (Level 2 Assessment) have been completed for all the WRIAs in Skamania County. The assessment data was used to develop draft watershed plans, which include recommendations on the updates to County Critical Area Codes.

Subbasin Planning was created to mitigate impacts to fish and wildlife due to construction of the dams on the Columbia River; the Federal government required Bonneville Power Administration (BPA) to set aside money from its operations to restore and protect fish and wildlife populations and their habitat. The BPA formed the Northwest Power and Conservation Council (NPCC) to review projects and allocate funding for such work in the Columbia River basin. In the past funding allocations were not based on a comprehensive strategy. Subbasin planning is the NPCC effort to develop such a strategy. Subbasin assessments were conducted by the NPCC and plans are being developed in cooperation with local agencies, governments, tribes, and residents. In Skamania County, this work is coordinated by the LCFRB and is being conducted in conjunction with Federal Recovery Planning described below.

Federal Recovery Planning is required under the Endangered Species Act. Several salmonid species found in Skamania County are listed under the Endangered Species Act (ESA) as either threatened, endangered, candidate, or sensitive species of concern. There are both federal level and state level ESA listings for vertebrate animals, invertebrate animals, flowering plants and non-flowering plants. These lists are continually being updated for each species and contain hundreds of species. The National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) is required to develop recovery plans for each ESA listed salmonid species. The LCFRB is acting as the lead agency for these efforts on the Washington side of the lower Columbia River. The NOAA Fisheries Technical Recovery Team defined what constitutes recovery under the ESA for each listed salmonid population and the LCFRB is working to develop a plan to meet these recovery goals with local agencies, governments, tribes, and citizens.

Two studies were conducted to address concerns regarding the quality and quantity of groundwater and surface water in Skamania County arising from increased population growth. The first study was conducted in 1997 by Pacific Groundwater Group (Skamania Westend Water Quality Study) and the second study was conducted in 2004 by Kennedy Jenks Consultants (Stabler Area Water Quantity and Quality Study Report).

COMPLIANCE REVIEW PROCESS:

Skamania County relied on existing scientific information determined by other local, state and federal natural resource agencies to meet the BAS criteria as provided for in WAC 365-195-905(2). This review included analyzing the best available science reviews conducted by other local jurisdictions in Washington State, including but not limited to Thurston County, King County, Jefferson County, Whatcom County, Kitsap County and Clark County, as well as the guidance documents created by CTED and DOE. Also included in the review was the data available from Washington State Department of Fish and Wildlife (WDFW), the Washington State Department of Natural Resources (DNR), the Washington State Department of Health (DOH), and the Lower Columbia Fish Recovery Board (LCFRB). Scientific data from the Federal Emergency Management Agency (FEMA), the United States Environmental Protection Agency (EPA), the United States Department of Fish and Wildlife (USDFW), the National Oceanic and Atmospheric Administration – Fisheries (NOAA Fisheries) and the United States Geological Survey (USGS) was also analyzed in this review.

The CTED critical areas update checklist for local governments was used to help determine if the existing development regulations and comprehensive plan guidelines meet the basic requirements of the GMA.

CTED coordinated an agency meeting for Skamania County and the Cities of Stevenson and North Bonneville to discuss the best available science and the critical areas update requirements. The critical areas agency meeting took place on February 6, 2006, and focused on what is the current best available science for critical areas updates, how state agencies are involved in the update process, and available technical assistance. The following state agencies were represented at the meeting: CTED, WDFW, DNR, DOE, DOH, and LCFRB.

A press release was issued on February 27, 2006, providing notice and announcing the 2006 Critical Areas Update Process had begun and that the Public Participation Program had been adopted on January 9, 2006. The press release also stated that all written comments and suggestions on potential changes to the existing Critical Areas Ordinance (Skamania County Code Title 21A) should be submitted by March 31, 2006 to be included in the GMA Compliance Review Report and presentation to the Board of County Commissioners.

On March 15, 2006, planning staff gave a presentation and answered questions on the 2006 Critical Areas Update Process at the regular meeting of the Wind River Watershed Council in Carson, Washington.

On March 17, 2006, planning staff from Skamania County, the City of Stevenson and the City of North Bonneville met with agency personnel from the Washington State

Department of Ecology (DOE) to review and acquire guidance on the best available science for wetland protection. The discussion focused on the DOE's recent (March and April 2005) publications of the two volume set *Wetlands in Washington State*.

On March 29, 2006, planning staff gave a presentation and answered questions on the 2006 Critical Areas Update Process at an open house meeting held at Rock Creek Recreational Center in Stevenson, Washington.

By March 31, 2006, five comment letters from the public were submitted to be included in the presentation of this compliance report.

COMPLIANCE REVIEW RESULTS:

The CTED critical areas update checklist was used to review the existing Skamania County Code Title 21A – Critical Areas. The results of the review (yes or no) are as follows:

- Does the Critical Areas Ordinance (CAO) include a purpose statement and, if so, is it consistent with the Growth Management Act and locally adopted comprehensive plan? **(no)**
- Does the CAO apply to all development near critical areas, including on neighboring properties? **(yes)**
- Does the CAO include a review process for those proposals that are near critical areas? **(yes)**
- Does the CAO define “qualified professional”? **(no)**
- Does the CAO provide a limited set of exemptions? Are those exemptions specific enough that they wouldn't result in significant impacts to critical areas? **(no)**
- Does the CAO allow for “reasonable use”? **(no)**
- Does the CAO clearly designate all critical areas that might be found within Skamania County? **(no)**
- Does the CAO include science-based standards to protect critical areas? **(no)**
- Did the process to draft the current (1996) CAO include the “best available science”? **(no)**
- Was the best available science that was reviewed documented in the record? *NOTE: There is no documentation in the 1996 record that best available science reviewed.* **(no)**
- Did the CAO drafting process include the public? *NOTE: The 1996 original CAO and 2005 amendment to the CAO included public participation and public hearings.* **(yes)**

Out of the eleven questions asked on the checklist, this review shows that eight are answered no, which indicates the majority of the current critical areas ordinance (development regulation) needs to be updated. Counties are encouraged to not only

conserve and protect critical resources, but to also allow opportunities to enhance habitats and protections while allowing a certain degree of development within a specified footprint. The development regulations need to clearly state that it applies to all development near critical areas, including those critical areas on neighboring properties. Definitions of “qualified professional” and “reasonable use” needs to be included in the development regulations. The list of exemptions needs to be revised to remove the exemptions for small wetlands and the provision that allows further expansion into a water resource buffer by doubling a structure in size.

The 1996 Comprehensive Plan A Amendment – Critical Areas (guidelines) and Skamania County Code Title 21A – Critical Areas Ordinance (development regulations) are organized into three categories (watershed protection areas, fish and wildlife protection areas, and geologically hazardous areas). These documents (guidelines and development regulations) need to be reorganized into chapters following each of the five critical area categories (wetlands, critical aquifer recharge areas, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas).

A review of the exiting guidance documents, sources of best available science and other local jurisdiction’s regulations found that by organizing the chapter to match the critical areas categories there is a smaller chance of having conflicting requirements. For example, the current Skamania County Code Title 21A – Critical Areas Ordinance has conflicting buffers for stream, creeks, and rivers compared to the fish and wildlife protection areas. Under the Growth Management Act, all of these resources are considered to be Fish and Wildlife Conservation Areas.

Best Available Science Review for Each Critical Area:

Wetlands:

Currently in Skamania County, wetlands are classified based on function and value as determined through a point count factor analysis derived from field data sheets. A water resource specialist is required to conduct the classification of the wetland. Once classified the following wetland buffers currently apply:

Category of Wetland	Widths of Buffers
IV	25 feet
III	50 feet
II	100 feet
I	200 feet

Under the most recent (April 2005) best available science from the Washington State Department of Ecology (DOE) there are four different alternatives to determining wetland buffer widths. Skamania County may adopt any of the alternatives and meet the best available science requirements.

Alternative 1 creates buffer widths based on wetland category only. Alternative 2 creates buffer widths based on wetland category and modified by the intensity of the impacts from proposed land use. Alternative 3 creates buffer widths based on wetland category, intensity of impacts, wetland functions, or special characteristics. The fourth alternative (Alternative 3A) is actually a version of Alternative 3 that includes a graduated scale for the buffer widths rather than the three step range (Low, Moderate and High Intensity of Use) of buffer widths. Each of the four alternatives provides a different degree of flexibility in regulating the uses around wetlands, yet each alternative provides protection meeting the best available science.

The best available science for determining wetland buffer widths is divided into Western and Eastern Washington guidance documents, providing two sub-categories to each of the four alternative buffer width systems. Skamania County is the only county in Washington State to be located in both Western and Eastern Washington. Therefore, Skamania County's wetland buffer system will also include two sub-categories (Western and Eastern Washington) unless the more restrictive is applied to the entire County.

The following tables are adapted from DOE's document *Wetlands in Washington State Volume 2 – Guidance for Protecting and Managing Wetlands*, Appendix 8-C Western Washington and Appendix 8-D Eastern Washington:

Buffer Alternative 1: Width Based Only on Wetland Category:

Category of Wetland	Western Washington Widths of Buffers	Eastern Washington Widths of Buffers
IV	50 feet	50 feet
III	150 feet	150 feet
II	300 feet	200 feet
I	300 feet	250 feet

Buffer Alternative 2: Width Based on Wetland Category and Modified by the Intensity of the Impacts from Proposed Land Use:

Category of Wetland	Western Washington Land Use with Low Impact*	Western Washington Land Use with Moderate Impact*	Western Washington Land Use with High Impact*	Eastern Washington Land Use with Low Impact*	Eastern Washington Land Use with Moderate Impact*	Eastern Washington Land Use with High Impact*
IV	25 feet	40 feet	50 feet	25 feet	40 feet	50 feet
III	75 feet	110 feet	150 feet	75 feet	110 feet	150 feet
II	150 feet	225 feet	300 feet	100 feet	150 feet	200 feet
I	150 feet	225 feet	300 feet	125 feet	190 feet	250 feet

*See table below for DOE's determination of land uses that can result in high, moderate, and low impacts to wetlands.

Types of proposed land uses that can result in high, moderate, and low levels of impacts to adjacent wetlands as determined by DOE:

Level of Impact from Proposed Change in Land Use	Types of Land Use Based on Common Zoning Designations as Determined by DOE**
High	<ul style="list-style-type: none"> • Commercial • Urban • Industrial • Institutional • Retail sales • Residential (more than 1 unit/acre) • Conversion to high-intensity agriculture (dairies, nurseries, greenhouses, growing and harvesting crops requiring annual tilling and raising and maintaining animals, etc.) • High-intensity recreation (golf courses, ball fields, etc.) • Hobby farms
Moderate	<ul style="list-style-type: none"> • Residential (1 unit/acre or less) • Moderate-intensity open space (parks with biking, jogging, etc.) • Conversion to moderate-intensity agriculture (orchards, hay fields, etc.) • Paved trails • Building of logging roads • Utility corridor or right-of-way shared by several utilities and including access/maintenance road
Low	<ul style="list-style-type: none"> • Forestry (cutting of trees only) • Low-intensity open space (hiking, bird-watching, preservation of natural resources, etc.) • Unpaved trails • Utility corridor without a maintenance road and little or no vegetation management

**DOE encourages local governments to create land use designations for zoning that are consistent with these examples.

Buffer Alternative 3 provides the most flexibility in applying buffers to wetlands in both Western and Eastern Washington. When using alternative 3, a wetland may fall into more than one characteristic listed in the table. In that case, the required buffer to protect the wetland would be the widest one. The following tables list the buffer widths for each category of wetland located in either Western or Eastern Washington:

Width of buffer needed to protect Category IV wetlands in both Western and Eastern Washington (Buffer Alternative 3 for wetlands scoring less than 30 points for all functions).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use	Other Measures Recommended for Protection
Score for all 3 basic functions is less than 30 points	<ul style="list-style-type: none"> • Low – 25 feet • Moderate – 40 feet • High – 50 feet 	No recommendations

Width of buffer needed to protect Category III wetlands in both Western and Eastern Washington (Buffer Alternative 3 for wetlands scoring 30 – 50 points for all functions and for isolated vernal pools in Eastern Washington only).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use	Other Measures Recommended for Protection
Moderate level of function for habitat (score for habitat 20-28 points)	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
Not meeting above characteristic	<ul style="list-style-type: none"> • Low – 40 feet • Moderate – 60 feet • High – 80 feet 	No recommendations

Width of buffer needed to protect Category II wetlands in Western Washington (Buffer Alternative 3 for wetlands scoring 51 – 69 points for all functions or having the “Special Characteristics” identified in the rating system).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use (Apply most protective if more than one criterion is met.)	Other Measures Recommended for Protection
High level of function for habitat (score for habitat 29-36 points)	<ul style="list-style-type: none"> • Low – 150 feet • Moderate – 225 feet • High – 300 feet 	Maintain connections to other habitat areas
Moderate level of function for habitat (score for habitat 20-28 points)	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
High level of function for water quality improvement and low for habitat (score for water quality 24 – 32 points; habitat less than 20 points)	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No additional surface discharge of untreated runoff
Estuarine	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
Interdunal	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
Not meeting above characteristics	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No recommendations

Width of buffer needed to protect Category II wetlands in Eastern Washington (Buffer Alternative 3 for wetlands scoring 51 – 69 points for all functions or having the “Special Characteristics” identified in the rating system).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use (Apply most protective if more than one criterion is met.)	Other Measures Recommended for Protection
High level of function for habitat (score for habitat 29-36 points)	<ul style="list-style-type: none"> • Low – 100 feet • Moderate – 150 feet • High – 200 feet 	Maintain connections to other habitat areas
Moderate level of function for habitat (score for habitat 20-28 points)	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
High level of function for water quality improvement and low for habitat (score for water quality 24 – 32 points; habitat less than 20 points)	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No additional surface discharge of untreated runoff
Vernal pool	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet <p>OR</p> <p>Develop a regional plan to protect the most important vernal pool complexes – buffers of vernal pools outside protection zones can be reduced to:</p> <ul style="list-style-type: none"> • Low – 40 feet • Moderate – 60 feet • High – 80 feet 	No intensive grazing or tilling in the wetland
Riparian forest	Buffer widths to be based on score for habitat functions or water quality functions	Riparian forest wetlands need to be protected at a watershed or sub-basin scale (protection of the water regime in the watershed) Other protection based on needs to protect habitat and/or water quality functions
Not meeting above characteristics	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No recommendations

Width of buffer needed to protect Category I wetlands in Western Washington (Buffer Alternative 3 for wetlands scoring 70 points or more for all functions or having the “Special Characteristics” identified in the rating system).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use (Apply most protective if more than one criterion is met.)	Other Measures Recommended for Protection
Natural Heritage Wetland	<ul style="list-style-type: none"> • Low – 125 feet • Moderate – 190 feet • High – 250 feet 	No additional surface discharges to wetland or its tributaries No septic systems within 300 feet of wetland Restore degraded parts of buffer
Bogs	<ul style="list-style-type: none"> • Low – 125 feet • Moderate – 190 feet • High – 250 feet 	No additional surface discharges to wetland or its tributaries Restore degraded parts of buffer
Forested	Buffer width to be based on score for habitat functions or water quality functions	If forest wetland scores high for habitat, need to maintain connections to other habitat areas Restore degraded parts of buffer
Estuarine	<ul style="list-style-type: none"> • Low – 100 feet • Moderate – 150 feet • High – 200 feet 	No recommendations
Wetlands in Coastal Lagoons	<ul style="list-style-type: none"> • Low – 100 feet • Moderate – 150 feet • High – 200 feet 	No recommendations
High level of function for habitat (score for habitat 29-36 points)	<ul style="list-style-type: none"> • Low – 150 feet • Moderate – 225 feet • High – 300 feet 	Maintain connections to other habitat areas Restore degraded parts of buffer
Moderate level of function for habitat (score for habitat 20-28 points)	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
High level of function for water quality improvement and low for habitat (score for water quality 24 – 32 points; habitat less than 20 points)	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No additional surface discharge of untreated runoff
Not meeting any of the above characteristics	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No recommendations

Width of buffer needed to protect Category I wetlands in Eastern Washington (Buffer Alternative 3 for wetlands scoring 70 points or more for all functions or having the “Special Characteristics” identified in the rating system).

Wetland Characteristics	Buffer Widths by Impact of Proposed Land Use (Apply most protective if more than one criterion is met.)	Other Measures Recommended for Protection
Natural Heritage Wetland	<ul style="list-style-type: none"> • Low – 125 feet • Moderate – 190 feet • High – 250 feet 	No additional surface discharges to wetland or its tributaries No septic systems within 300 feet of wetland Restore degraded parts of buffer
Bogs	<ul style="list-style-type: none"> • Low – 125 feet • Moderate – 190 feet • High – 250 feet 	No additional surface discharges to wetland or its tributaries Restore degraded parts of buffer
Forested	Buffer width to be based on score for habitat functions or water quality functions	If forest wetland scores high for habitat, need to maintain connections to other habitat areas Restore degraded parts of buffer
Alkali	<ul style="list-style-type: none"> • Low – 100 feet • Moderate – 150 feet • High – 200 feet 	No additional surface discharges to wetland or its tributaries Restore degraded parts of buffer
High level of function for habitat (score for habitat 29-36 points)	<ul style="list-style-type: none"> • Low – 100 feet • Moderate – 150 feet • High – 200 feet 	Maintain connections to other habitat areas Restore degraded parts of buffer
Moderate level of function for habitat (score for habitat 20-28 points)	<ul style="list-style-type: none"> • Low – 75 feet • Moderate – 110 feet • High – 150 feet 	No recommendations
High level of function for water quality improvement and low for habitat (score for water quality 24 – 32 points; habitat less than 20 points)	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No additional surface discharge of untreated runoff
Not meeting any of the above characteristics	<ul style="list-style-type: none"> • Low – 50 feet • Moderate – 75 feet • High – 100 feet 	No recommendations

There is also an Alternative 3A which establishes wetland buffers on a graduated scale based on the point count for the habitat functions. The graduated scale allows for an incremental transition between each point count rather than the three groupings (0-19, 20-28, and 29-36) developed in Alternative 3. An example of the Alternative 3A buffer widths for Western Washington is an increase of 20 feet for every one point increase in the habitat score (between 21 and 31). An example of the Alternative 3A buffer widths for Eastern Washington is an increase of 10 feet for every one point increase in habitat score (between 21 and 31). DOE explains that Alternatives 3 and 3A are two separate approaches for determining widths of buffers for wetlands scoring between 20 and 31 points for the habitat function. DOE recommends that local governments should select

one of the two approaches and should not hybridize the approaches or adopt both at the same time.

As stated earlier, Skamania County's review of best available science is based on a large part on existing information, scientific literature and analysis conducted by other local, state, and federal agencies. The DOE publications *Wetlands in Washington State Volume 1 and Volume 2* were the primary best available science sources considered for wetlands.

Critical Aquifer Recharge Areas:

Currently in Skamania County, there is a recommendation that wellheads should be setback 100 feet from adjacent property lines, or alternatively, a wellhead easement could be obtained from the adjacent property owner if the wellhead is closer than 100 feet to the adjacent property lines.

The best available science for identifying and protecting a critical aquifer recharge area is found in the guidance document published in January 2005 by the DOE, *Critical Aquifer Recharge Area Guidance Document*. This document replaces the previous DOE guidance document, Publication number 97-30, from July 2000. The second source of best available science for identifying and protecting a critical aquifer recharge area is the information in the CTED *Critical Areas Assistance Handbook* dated November 2003.

The quality of groundwater is linked to its recharge area. The CTED guidance document indicates that where aquifers and their recharge areas have been studied, counties and cities should use this information as the basis for classifying and designating critical aquifer recharge areas. In areas where no specific hydrogeologic studies have been done, counties and cities may use existing soil; surficial geologic and well log information to determine where recharge areas are likely to be located.

Wellhead protection easements and/or setbacks are an acceptable way to protect critical aquifer recharge areas. The risk of ground water contamination depends on two main sets of conditions. The first relates to the ground itself and how easy it is for water to pass through into the groundwater (hydrogeologic susceptibility). The second set of conditions is the contamination loading potential.

Hydrogeologic susceptibility provides the basis for classifying critical aquifer recharge areas in terms of risk of contamination. Aquifer recharge areas should be rated as having a high, moderate, or low susceptibility based on soil permeability, geologic matrix, infiltration, and depth to water as determined by the criteria established by the Washington State Department of Ecology (DOE). The DOE guidance document provides insight on classifying the vulnerability of ground water to contamination events. DOE states the following:

All ground water is vulnerable; some areas where strategic public groundwater resources are located are more vulnerable than other areas. The concept of using criteria to create classifications or categories of vulnerability helps local jurisdictions apply the appropriate measures for the risks involved.

Public water supply systems with 15 or more connections are regulated under the Federal Safe Drinking Water Act and they must inventory potential contamination sources around the wells. The Washington State Department of Health is working with the Washington State Department of Ecology to provide web-based maps of potential contamination sources along with locations of wellhead protection zones for these systems.

For new development, classification based on natural conditions allows the County to make decisions about the type of land uses that should or should not be allowed, or which uses may be allowed with conditions.

Fish and Wildlife Conservation Areas:

Currently in Skamania County streams, creeks, and rivers are regulated separately from the fish and wildlife conservation areas. The width of the buffer on a stream, creek or river is determined by the stream type classification from the Washington State Department of Natural Resources (DNR). In 1996 when Skamania County Code Title 21A was adopted the DNR stream type classification was a five-category system (1 – 5). Recently, the DNR has converted the stream type system to a four category system (S, F, Np, and Ns) as defined in WAC 222-16-030 and WAC 222-16-031. The following table shows the original classification system and the buffer widths currently in SCC Title 21A:

Original Steam Type System	Buffer Width
Type 1 Water	100 feet
Type 2 Water	100 feet
Type 3 Water	100 feet
Type 4 Water	50 feet
Type 5 Water	25 feet

The following table shows the original stream type system and the conversion to the new classification system:

Original Steam Type System	New Stream Type System
Type 1 Water	Type S
Type 2 Water	Type F
Type 3 Water	Type F
Type 4 Water	Type Np
Type 5 Water	Type Ns

The new Type S (shoreline designation) is based on data provided by DOE. The new Type F (fish habitat) was created using field verified data collected by the Washington State Department of Fish and Wildlife (WDFW) and the tribal governments synthesized through a geographical information system (GIS) logistic regression model. The new Type Np (non-fish perennial) and Ns (non-fish seasonal) are basically the non-fish streams that either have water flowing year round or have dry periods.

Skamania County also has a four category system (I, II, III, and IV) for buffers on ponds and lakes. The conversion of this system into the new water typing systems along with the existing buffer regulations is shown on the following table:

Original Pond and Lake Type System	New Pond and Lake Type System	Pond and Lake Buffer Width
Type I Pond or Lake	Type S	150 feet
Type II Pond or Lake	Type F	100 feet
Type III Pond or Lake	Type Np	50 feet
Type IV Pond or Lake	Type Ns	25 feet

A review of the CTED guidance documents, priority habitat and species publications from WDFW and a review of other local jurisdictions critical areas ordinances that incorporated best available science shows there is a large discrepancy between Skamania County's adopted regulations from 1996 and the recommended riparian buffers of today. The following table shows the recommended buffers for the new fish habitat water typing maps:

Water Type	Buffer Width	Other Development Standards
S	250 Feet	Where applicable, refer to the development standards for Wetlands and Geologically Hazardous Areas. When such features occur on site, the more restrictive buffer shall apply.
F	200 Feet	
Np	100 Feet	
Ns	75 Feet	

Buffer widths may be increased if the proposed development has known locations of endangered or threatened species for which a habitat management plan indicates a larger buffer is necessary to protect habitat functions for such species, or when the buffer is located within a landslide or erosion hazard area. For example, streams in ravines that have ravine sides of ten feet or greater in height, the buffer width could be the minimum buffer required for the stream type, or a buffer width that extends twenty-five feet beyond the top of the slope, whichever is greater.

Best available science also indicates that a buffer may be reduced in site-specific cases in consultation with WDFW, and only after a qualified professional completes a wildlife management plan.

Currently, SCC Title 21A provides a process for WDFW to review development proposals within 250 feet of a watercourse with regulated fish species, within 1,000 feet of any non-watercourse regulated wildlife site, or within any regulated priority habitat area. A Wildlife Management Plan is required if the proposed use is likely to adversely affect a sensitive wildlife site or priority habitat.

Skamania County will need to provide protection for areas of rare plant species and high quality ecosystems that are identified by the Washington State Department of Natural Resources through the Washington Natural Heritage Program (WNHP). Currently this is not included in the comprehensive plan or SCC Title 21A.

Frequently Flooded Areas:

Flood hazard areas are those areas that are at risk of being inundated by a 100-year flood or, more specifically, subject to a one percent or greater chance of flooding in any given year.

Skamania County currently reviews all proposed development to determine whether it would occur within the 100-year floodplain of any river or stream. The review is based on the Flood Insurance Rate Maps (FIRM) created by the Federal Emergency Management Agency (FEMA). Title 15 of the Skamania County Code establishes the requirements for any structures located within the 100-year floodplain that are consistent with the International Building Code and meets the requirements of best available science. A licensed land surveyor completes a Flood Elevation Certificate; these forms serve as a site-specific inventory to determine whether a proposed structure is elevated to an appropriate level above the floodplain.

The best available science for identifying frequently flood areas is found in the CTED guidance documents and informational data and maps from FEMA.

Geologically Hazardous Areas:

Skamania County's current code provisions include the following categories of geologically hazardous areas: erosion, landslide, seismic, and volcanic.

The primary source for the best available science on a geologically hazardous area is the CTED guidance documents. The review of these documents indicates that Skamania County is generally consistent in regulating these areas. However, Skamania County should incorporate requirements for areas within riverine channel migration zones (CMZ) or areas with mass wasting potential. Additionally, the requirement for a qualified professional to provide the geological hazards assessment report should be clarified in the development regulations.

Other Regulations Needed To Be Consistent With Best Available Science:

Over the past ten years (1996-2006) Skamania County has implemented the critical areas code for development reviews. Repeatedly over that time frame, other state and federal agencies have recommended that the county adopt stormwater regulations and clearing/grading regulations to provide better protection of critical areas. Some of these regulations could be included, in part, in the 2006 critical areas code update. However for these regulations to apply to the entire county and not just within those areas designated as critical areas, the regulations would also need to be created outside of the critical areas codes.

In May 2005, CTED published a document titled *Technical Guidance Document – For Clearing and Grading in Western Washington* that provides the best management practices (BMPs) for land clearing and grading in Western Washington as well as techniques to integrate requirements for stormwater management and low impact development into local ordinances. However, nothing in that document is intended to supercede or amend the Washington State Department of Ecology's 2001 Stormwater Management Manual for Western Washington (SWMM), or the latest edition of the manual.

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