

Chapter 15.16
CRITICAL AREAS CODE

Sections:

15.16.177 Best available science.

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(1) Protection for Functions and Values and Anadromous Fish. Critical areas reports and decisions to alter critical areas shall include the best available science in order to protect the functions and values of critical areas and must give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fish and their habitat, such as salmon and bull trout.

(2) Best Available Science to Be Used Must Be Consistent with Criteria. The best available science is that scientific information applicable to the critical area prepared by local, state or federal natural resource agencies, or a qualified scientific expert or team of qualified scientific experts that is consistent with criteria established in WAC 365-195-900 through 365-195-925.

Whether a person is a qualified scientific expert with expertise appropriate to the relevant critical areas is determined by the person's professional credentials and/or certification, any advanced degrees earned in the pertinent scientific discipline from a recognized university, the number of years of experience in the pertinent scientific discipline, recognized leadership in the discipline of interest, formal training in the specific area of expertise, and field and/or laboratory experience with evidence of the ability to produce peer-reviewed publications or other professional literature. No one factor is determinative in deciding whether a person is a qualified scientific expert. Where pertinent scientific information implicates multiple scientific disciplines, cities are encouraged to consult a team of qualified scientific experts representing the various disciplines to ensure the identification and inclusion of the best available science.

(3) Characteristics of a Valid Scientific Process. 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, and in developing critical areas policies and development regulations that will be effective in protecting the functions and values of critical areas. To determine whether information received during the permit review process is reliable scientific information, the city planning director shall determine whether the source of the information displays the characteristics of a valid scientific process. Such characteristics are as follows:

(a) Peer Review. The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The proponents of the information have addressed the criticism of the peer reviewers. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed;

(b) Methods. The methods used to obtain the information are clearly stated and replicated. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to assure their reliability and validity;

(c) Logical Conclusions and Reasonable Inferences. The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained;

(d) Quantitative Analysis. The data have been analyzed using appropriate statistical or quantitative methods;

(e) Context. The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge; and

(f) References. The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

(4) Nonscientific Information. Nonscientific information may supplement scientific information, but it is not an adequate substitute for valid and available scientific information. Common sources of nonscientific information include the following:

(a) Anecdotal Information. One or more observations that are not part of an organized scientific effort (for example, "I saw a grizzly bear in that area while I was hiking.");

(b) Nonexpert Opinion. Opinion of a person who is not a qualified scientific expert in a pertinent scientific discipline (for example, "I do not believe there are grizzly bears in that area."); and

(c) Hearsay. Information repeated from communication with others (for example, "At a lecture last week, Dr. Smith said there were no grizzly bears in that area.").

15.16.180 References.

General References:

1. Citations of Recommended Sources of Best Available Science for Designating and Protecting Critical Areas, Washington State Department of Community Trade and Economic Development.

2. Example Code Provisions for Designating and Protecting Critical Areas, November 2003, Community Trade and Economic Development.

3. Pierce County critical areas code, Title 18E.

4. WAC 365-195-900 through 365-195-925.

5. WAC 365 (195 through 905).

Critical Aquifer Recharge Areas:

36. Guidance Document for the Establishment of Critical Aquifer Recharge Areas Ordinances, July 2000, Department of Ecology.

7. Washington State Department of Health. 2005. Washington's Source Water Assessment Program. DOH publication # 331-148

8. U.S. Environmental Protection Agency. 2003. "Potential sources of drinking water contamination index. URL: <http://www.epa.gov/safewater/swp/sources1.html> (Accessed Nov. 2005)

9. WAC 173-160 - Minimum Standards for Construction and Maintenance of Wells.

10. WAC 246-290 - Drinking Water Regulations - State Board of Health

Wetlands:

411. Washington State Department of Ecology. 1997. Washington State Wetlands Identification and Delineation Manual (Ecology Publication # 96-94). ~~Washington State Wetland Identification and Delineation Manual (1997).~~

512. Washington State Department of Ecology. 2004. Guidance on Wetland Mitigation in Washington State Part 1: Laws, Rules, Policies, and Guidance Related to Wetland & Mitigation & Part 2: Guidelines for Developing Wetland Mitigation Plans and Proposals (Ecology Publications # 04-06-013a & # 04-06-013b) ~~2004 Washington State Wetland Rating System for Western Washington (Publication No. 04-06-014).~~

613. DOE Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals, 2004.

714. Washington State Department of Ecology. 1992. Wetland Buffers: Use and Effectiveness, and Appendices (Ecology Publications # 92-10 & 92-10a) ~~Wetland Replacement Ratios: Defining Equivalency, WSDOE 1992, Publication No. 92-08.~~

815. Freshwater Wetlands in Washington State, Volume 2, Appendix 8-C.

916. Washington State Department of Ecology. 2004. Washington State Wetlands Rating System – Western Washington (Ecology Publication # 04-06-025) ~~Revised Washington State Wetlands Rating System for Western Washington.~~

17. Washington State Department of Ecology & Washington State Department of Fish and Wildlife. 2005. Wetlands in Washington State – Volume 1: A Synthesis of the Science & Volume 2: Guidance for Protecting and Managing Wetlands (Ecology Publications #05-06-006 & #05-06-008)

10. ~~Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, WSDOE Publication No. 97-30.~~

Frequently Flooded Areas:

148. Federal Emergency Management Administration Flood Maps.

Geologically Hazardous Areas:

129. Washington State Department of Natural Resources (slope stability mapping).

1320. U.S. Geological Survey maps showing slide areas.

21. Washington Department of Ecology. Controlling Erosion Using Vegetation.
<http://www.ecy.wa.gov/programs/sea/pubs/93-30/index.html>

22. International Building Code 2003. International Code Council, Inc. ISBN #1-892395- 56-8.

23. USGS Quaternary Fault and Fold Database for the United States.
<http://earthquake.usgs.gov/regional/qfaults/wa/sea.html>.

14. Pierce County critical areas code, Title 18E.

15. WAC 365-195-900 through 365-195-925.

16. WAC 365 (195 through 905)-
Fish and Wildlife Habitats:

24. Washington Environmental Council. 2004. Habitat Protection Tool Kit: A Guide to Habitat
Conservation Planning Under Washington's Growth Management and Shoreline Management Acts. URL:
www.wecprotects.org

25. Washington State Department of Ecology. 2005. Protecting Aquatic Ecosystems: A Guide for Puget
Sound Planners to Understand Watershed Processes (Publication # 05-06-013)

26. Washington State Department of Ecology. 2001. Focus: Riparian Areas. Washington Department of
Ecology (Publication # 00-10-023)

27. WAC 232-12-014 Washington State Endangered Species

28. WAC 232-12-011 Washington State Threatened and Sensitive Species

29. WAC 222-16-030 Department of Natural Resources Water Typing System

END

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