Best Available Science and Information List
Thurston County Critical Areas Ordinance Update

July 24, 2012

The following documents represent a partial list of data and best available science. This list is not meant to be exhaustive, and may be added to in the future. This document is intended to provide an index of the science and data that was reviewed and utilized by the Thurston Board of County Commissioners, the Thurston County Planning Commission, and the Thurston County Planning Department in their development of the proposed critical areas ordinance update, from 2003 to present. It is important to note that some of the documents listed below are literature reviews. Literature reviews represent a collection of scientific research, and are intended to provide a summary or synthesis of a given field or topic of scientific study. Literature reviews typically incorporate information from numerous sources.

Because critical areas are often interconnected in the landscape, the scientific information that has been produced often has relevance across multiple categories of critical areas. Staff have attempted to list documents in each category in which they hold relevance, though it is possible that not all documents with relevance in more than one category have been listed as such. In instances where documents are listed in more than one category, a note has been inserted to inform the reader that the document is considered to provide valid information in more than one category of critical area.

The numbering of the documents below corresponds to the digital collection of best available science documents. Digital copies of documents have not been retained where a web URL has been provided below. Digital copies of the remaining documents on the list below are available at the Permit Assistance Center, Building 1, 2nd Floor of the Thurston County Courthouse, 2000 Lakeridge Drive SW, Olympia, WA 98502.

Critical Aquifer Recharge Areas (through December 23, 2011)


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


of flooded sand and gravel pits and its implications for the functioning of the enclosing
aquifers. Mineral Industry Sustainable Technology Programme. Hydrogeochemical
Engineering Research and Outreach, University of Newcastle Upon Tyne, UK.

47. Government of Western Australia, Department of Water. Managed aquifer recharge policy.

and gravel pits. Minnesota Department of Natural Resources, Division of Waters.
Prepared for the Legislative Commission on Minnesota Resources.

49. Green, J.A., and J.A. Pavlish. N.d. LCMR [Legislative Commission on Minnesota
Resources] study of the hydraulic impacts of limestone quarries and gravel pits.
Powerpoint presentation. Minnesota Department of Natural Resources, Division of
Waters.


51. Guo, Y.C., S.W. Krasner, S. Fitzsimmons, G. Woodside, and N. Yamachika (Principal
Investigators). 2010. Source, fate, and transport of endocrine disruptors,
pharmaceuticals, and personal care products in drinking water sources in California.


Phase 1: Initial estimate of toxic chemical loadings to Puget Sound. Ecology Publication

implementation plan – total maximum daily load (TMDL). Developed by Henderson
Inlet Watershed Technical Advisory Group. Washington State Department of Ecology,
Water Quality Program. Publication No. 08-10-040.

bacteria and temperature total maximum daily load – water quality implementation plan.
Developed by the Technical Advisory Group for the Totten, Eld, and Little Skookum
TMDL. Washington State Department of Ecology, Water Quality Program. Publication
No. 07-10-071.


Note: Document available in Frequently Flooded Areas section.


64. Kennedy/Jenks Consultants. 2010. Recycled water white paper (Draft). Opportunities and limitations for recycled water use. Santa Cruz Water Department and Soquel Creek Water District.


69. King County, Washington. 2004. Best available science – Volume I: A review of scientific literature. King County Executive Report. Critical areas, stormwater, and clearing and grading proposed ordinances. King County Department of Natural Resources and Parks, Water and Land Resources Division, Department of Development and Environmental Services, Department of Transportation.


*Note: Document available in Frequently Flooded Areas section.*


Note: Document available in Frequently Flooded Areas section.


*Note: Document available in Wetlands section.*


112. Thurston County Public Health and Social Services Department, Environmental Health Division; and Thurston County Resource Stewardship Department, Water Resources Division. 2010. Thurston County water resources monitoring report. 2007-2008 and 2008-2009 water years.

113. Thurston County Public Health and Social Services Department, Environmental Health Division. 2008. On-site sewage system management plan.

114. Thurston County Public Health and Social Services Department, Environmental Health Division, Resource Protection Section; and Thurston County Department of Waste and Water Management. 2002. 2001 Deschutes groundwater inflow survey – Deschutes River, Thurston County, Washington.


Staff Note: This website includes various monitoring information and data on environmental conditions, including precipitation data and stream flows.


Note: Document available in Frequently Flooded Areas section.


Staff Note: Mapping data and detailed information on each water quality listing can be accessed by clicking the hyperlinks under “Listing Detail” in this document.


Staff Note: This site allows users to access data for water bodies on Ecology’s impaired water quality (303(d)) list. Users can also access background information on required Total Maximum Daily Load (TMDL) studies.


**Critical Aquifer Recharge Areas (Added after December 23, 2011)**


Geologic Hazards (through December 23, 2011)


Note: Document available in the Wetlands section.


Geologic Hazards (added after December 23, 2011)


   [http://ianrpubs.unl.edu/Soil/g1307.htm](http://ianrpubs.unl.edu/Soil/g1307.htm)


**Frequently Flooded Areas**


*Note: Document available in Wetlands section.*


*Note: Document available in Wetlands section.*


of the National Flood Insurance Program in the State of Washington Phase One Document – Puget Sound Region.


Note: Document available in Wetlands section.


Fish and Wildlife Habitat Conservation Areas (through December 23, 2011)


Note: Document available in Wetlands section.


Note: Document available in Frequently Flooded Areas section.


Note: Document available in Frequently Flooded Areas section.


Note: Document available in Wetlands section.

*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document also included in Frequently Flooded Areas section.*


*Note: Document available in Wetlands section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


Note: Document available in Frequently Flooded Areas section.


Note: Document available in Wetlands section.


Note: Document available in Critical Aquifer Recharge Areas section.


Note: Document available in Critical Aquifer Recharge Areas section.


Note: Document available in Wetlands section.

*Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Critical Aquifer Recharge Areas section.*


*Note: Document available in Critical Aquifer Recharge Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


*Note: Document available in Frequently Flooded Areas section.*


Note: Document available in Wetlands section.


*Note: Document available in Wetlands section.*


82. Thurston Conservation District, lead entity. Salmon habitat protection and restoration plan for Water Resource Inventory Area 13, Deschutes.


*Note: Document available in Frequently Flooded Areas section.*


Note: Document available in Frequently Flooded Areas section.


Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section. Occurrence of priority species by county is available at: http://wdfw.wa.gov/conservation/phs/list/, by clicking on “Appendix 2: 2010 Species Distribution by County.”


Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section.


*Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section.*


*Note: To be used in conjunction with WDFW’s Priority Habitats and Species List, and the federal Endangered Species Act listings. This list is statewide – it does not break down animal occurrences by county.*


*Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section.*


*Note: Document available in Fish and Wildlife Habitat Conservation Areas: Prairies section.*


*Note: Document available in Geologic Hazards section.*


**Fish and Wildlife Habitat Conservation Areas (added after December 23, 2011)**


Fish and Wildlife Habitat Conservation Areas: Prairies (through December 23, 2011)


*Note: This book is a collection of the following (#32-55, all included in digital collection):*


34. Crawford, R.C., and H. Hall. Changes in the south Puget prairie landscape. 5 pp.

35. Davenport, R. Rocky Prairie restoration and native plant propagation project. 7 pp.


39. Gamon, J. Rare vascular plants of the south Puget Sound prairie landscape. 8 pp.

40. Giblin, D. *Aster curtus*: current knowledge of its biology and threats to its survival. 9 pp.


44. Lombardi, A. Food and medicine from the prairie: an ethnobotanical look at the historical use of south Puget Sound prairies. 5 pp.


47. Philpott, S. Exotic ladybird beetles in Washington prairies and their interactions with native ants. 7 pp.


51. Schmidt, I. Fort Lewis Integrated Training Area Management Program. 10 pp.


55. Wentworth, J.B. Castilleja levisecta, a threatened south Puget Sound prairie species. 5 pp.


72. Freed, S., C. Fimbel, and T. Zuchowski. 2005. The role of science in western gray squirrel enhancement in oak woodlands of south Puget Sound. The Nature Conservancy and Fort Lewis Public Works Environmental and Natural Resources Division, Fort Lewis, WA.


*Note: Staff are unable to provide a digital copy of this book.*


Fish and Wildlife Habitat Conservation Areas: Prairies (added after December 23, 2011)


Fish and Wildlife Habitat Conservation Areas: Prairies – Expert Opinion and Review

Bush, Jodi L.
Manager, Division of Listing and Recovery
Western Washington Fish and Wildlife Office
U.S. Fish and Wildlife Service
510 Desmond Dr. SE, Suite 102
Lacey, WA 98503
2009 - 2012

Chappell, Chris
Vegetation Ecologist
Washington Department of Natural Resources
Washington National Heritage Program
Olympia, WA
2004-2005

Hays, Dave
Ecological Restoration Specialist
Washington Department of Fish and Wildlife
600 Capitol Way N.
Olympia, WA 98501-1091
2009 - 2012

Knight, Katie
Environmental Planner
Washington Department of Fish and Wildlife
Puget Sound and Olympic Peninsula
Olympia, WA
2009 - 2011
McAllister, Kelly  
Biologist  
Washington Department of Fish and Wildlife  
Olympia, WA  
2004-2005

Pearson, Scott  
Biologist  
Washington Department of Natural Resources  
Washington National Heritage Program  
Olympia, WA  
2004-2005

Thomas, Ted  
Senior Ecologist  
Division of Listing and Recovery  
Washington Fish and Wildlife Office  
U.S. Fish and Wildlife Service  
510 Desmond Drive SE, Suite 102  
Lacey, WA 98503  
2009 - 2011

Tirhi, Michelle  
District Biologist  
Pierce and Thurston County  
Washington Department of Fish and Wildlife  
25644 44th Ave. S.  
Kent, WA 98032  
2009 - 2012
**Wetlands (through December 23, 2011)**


**Wetlands (added after December 23, 2011)**