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DEPARTMENT OF ECOLOGY

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June 30, 2008

Brian Shea
Grays Harbor County Department of Public Services
Planning and Building Division
100 West Broadway, Suite 31
Montesano, WA 98663-3614

RE: Proposed Grays Harbor April 2008 Initial Draft Critical Areas Ordinance

Dear Mr. Shea:

Thank you for providing the opportunity to review and comment on the draft Grays Harbor County Critical Areas Ordinance dated April 2008. This is the first Critical Areas Ordinance for the County, and I would like to congratulate you on this important step.

I would like to commend Grays Harbor County and recognize the effort and complexities involved with developing a Critical Aquifer Recharge Area ordinance, along with the other critical areas ordinances.

I have reviewed the first draft of the Grays Harbor County Code 18.06 and the related policy document, and have the following comments. I would be happy to provide further assistance as the draft progresses.

Best Available Science

The references that are cited in Section 18.06.145 are very good resources. However, listing them by itself does not constitute Best Available Science. Information from the documents that were used as Best Available Science to support County decisions for designating and protecting Critical Aquifer Recharge Areas should be included in the record.

The supporting document for Best Available Science cites King County, Mason County, and Thurston County Critical Areas ordinances, as well as the Washington Department of Community Trade and Economic Development. However, the cites appear to be outdated. All of the documents that have Critical Aquifer Recharge Area provisions or guidance have been updated since the dates cited, especially to account for Best Available Science. I encourage the County to review the current codes, especially the

King County Best Available Science document for Critical Aquifer Recharge Areas. This document has good examples for designation and protection.

In addition to the references cited, it would be useful to include in the list geological information, especially maps and descriptions of the geology, from the Department of Natural Resources. I would also look at whether there were USGS reports or information available. The geology is a primary control on the susceptibility of aquifers to contamination. It is also a primary recharge factor.

Designating Critical Aquifer Recharge Areas

The following section of the ordinance addresses when a review for a development project is triggered:

- (1) Critical aquifer recharge areas are those areas with a critical recharging effect on aquifers used for potable water or are areas where an aquifer serving as the source for drinking water is vulnerable to contamination that would affect the potability of the water. A project shall be reviewed for its potential adverse impact to a critical aquifer recharge area and the associated wellhead protection area when any one of the following exists:
 - (a) The project site is located within a municipal watershed or within the 100-foot protective radius for either a Group A Water System or a Group B Water System;
 - (b) The project site is located within an area that has been designated by Grays Harbor County as an Area of Special Concern pursuant to Grays Harbor County Code 8.16.230 and the project site contains a soil or soils that have a natural drainage class of *excessively drained* or *somewhat excessively drained* as identified in the 1986 United States Department of Agriculture's Soil Survey of Grays Harbor Area, Pacific County, in Wahkaikum County, Washington.

I do not believe that one-hundred feet is an adequate protection zone to prevent contamination from higher risk potentially polluting activities, such as chemical handling.

Grays Harbor County uses the categories of excessively drained soils and somewhat excessively drained soils within an Area of Special Concern that has been formally designated by the County under the on-site rules to trigger review of a development proposal.

Soil properties are useful for determining general recharge patterns and determining areas that allow recharge to occur most readily.

Although the County's method seeks to identify high-risk areas, it leaves out very susceptible conditions. For example, if a wellhead protection zone is designated by the

Washington Department of Health as “highly susceptible.” but has moderately well drained soils according to the 1986 soil survey, it is not clear whether that area is protected by this ordinance.

This approach seems to be limited and doesn't account for protection of important water resources that may be in susceptible conditions that fall outside of the threshold as stated in the ordinance.

One way to address this limitation is to use more than one category to designate Critical Aquifer Recharge Areas. For example, you could set a category with the most stringent measures to protect the highest risk areas, and another category or more to protect other areas.

I believe the Areas of Special Concern could be used to guide designation and protection if there was more information and coverage than just within the excessively drained and somewhat excessively drained soils areas. The criteria and the procedure for formal designation would have to be clearly stated. It wasn't clear to me which of these has been formally designated by the County, so it was not possible to figure out which areas are protected under this method. There should be good definitions for all the Areas of Special Concern along with a description of how the County formally designates them.

It is also not clear whether the County has formally designated and mapped the Critical Aquifer Recharge Areas.

I also could not determine if an area that would meet the definition of a Sole Source Aquifer, but hadn't been formally designated, would be protected at all under the ordinance. It doesn't appear that it would. Would only that part of the Sole Source Aquifer that had excessively or somewhat excessively-drained soils be designated and protected?

Examples of questions that could be addressed include:

- Are wellhead protection zones required by the Washington Department of Health automatically considered as an Area of Special Concern, or does that require a formal designation by the County?
- Which time of travel zone (there are six-month, one-year, five-year, and ten-year time-of-travel zones, along with a “default” wellhead protection zone for one of the well categories).
- Is the Washington Department of Health susceptibility rating taken into account?
- What triggers the designation of an Area of Special Concern?

Seawater Intrusion

There is no mechanism in the ordinance to designate and protect aquifers from induced seawater intrusion. The County should consider a requirement to test for chlorides for coastline development. Jefferson County and Island County have provisions for seawater

intrusion. The Island County Seawater Intrusion Ordinance is at <http://www.islandcounty.net/code/documents/ICC08.pdf#Chapter 8.09 Potable Water Source and Supply>. The Jefferson County Critical Aquifer Recharge Area ordinance can be seen at the Jefferson County website.

Protecting Critical Aquifer Recharge Areas

The following part of the draft ordinance relates to protection:

- (2) Critical Aquifer Recharge Area Protection Standards. A project located within a Critical Aquifer Recharge Area shall be required to prepare a critical protection area special study as noted in Section 18.06.020. The Study shall be prepared by a professional hydrologist and contain information on the location of the aquifer and/or wellhead protection area in relation to the proposal, direct measures to avoid impacts to the aquifer and/or wellhead protection area or through the application of mitigation measures, and an analysis of the completed project's probable impact to the aquifer and/or wellhead protection area and its function.

The protection requirements above are non-specific, and the requirements for the study are very general. Without enough detail to have an objective standard to compare against, it is not possible to tell whether the Critical Aquifer Recharge Areas are sufficiently protected by the ordinance. It would be better to consider specific types of measures for development proposals that are at a high risk of causing contamination. For example, many jurisdictions require secondary containment and spill plans for above-ground tanks that contain hazardous materials; chemical storage and transfer facilities are typically prohibited from being located within a susceptible wellhead protection zone.

There are many good examples of pollution prevention ordinances on the web, including Mason and Thurston County. The City of Vancouver also has an excellent ordinance that integrates surface water/stormwater/ground water pollution prevention.

Thank you for this opportunity to comment on this draft. I would be happy to provide more assistance in the form of maps, examples and references should you find that helpful. Please contact me and I will do what I can to help.

Sincerely,



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