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August 13, 2018

The Honorable James Beaver
The Honorable Jerome Delvin
The Honorable Shon Small
Board of Commissioners for Benton County
620 Market Street
Prosser, Washington 99350

Dear Commissioners Beaver, Delvin, and Small:

Subject: Comments on Ordinance Amendment OA 2017-004, the 2017 Periodic Update of the County's Critical Areas Ordinance (BCC 15.08).

Sent via email to: planning.department@co.benton.wa.us

Thank you for the opportunity to comment on the Ordinance Amendment OA 2017-004, the 2017 Periodic Update of the County's Critical Areas Ordinance (BCC 15.08). Futurewise works throughout Washington State to support land-use policies that encourage healthy, equitable, and opportunity-rich communities, and that protect our most valuable farmlands, forests, and water resources. Futurewise has members across Washington State including Benton County.

Futurewise supports the update to the county's critical areas regulations to protect people and property from natural hazards, to protect the fish and wildlife which contribute to the county's economy and help generate jobs, and to protect the county's drinking and irrigation waters from contamination.

We offer the following recommendations to help the County further meet planning goals to protect members of the public from injury, loss of life, and protect resources and facilities from property damage. Additionally, these recommendations can help maintain healthy, functioning ecosystems including ground and surface waters, wetlands, and fish and wildlife and their habitats by: directing activities not dependent on critical areas resources to less ecologically sensitive sites; mitigating unavoidable impacts; and preventing cumulative adverse environmental impacts to water quality, wetlands, and fish and wildlife habitat. Furthermore, they will help prevent the overall net loss of wetlands, frequently flooded areas, and habitat conservation areas.

Thank you for incorporating many of our recommendations from our March 8, 2018 letter such as providing clarification of the functions and values of critical areas, and additional measures for identifying and recording properties identified as critical areas. We congratulate the County on completing this updated draft of the ordinance that will classify ecologically sensitive and hazardous areas and protect their functions and values. Our suggested improvements are summarized below:

- Limit buffer averaging in Benton County Code (BCC) 15.08.330(c) and require a 30-foot setback between critical area buffers and any buildings in BCC 15.08.330, BCC 15.08.480, and BCC 15.08.530.





- Landslides can be deadly and destroy property. We recommend additional requirements for geologically hazardous areas and that geologically hazardous risk assessments be required for all potentially dangerous landslides including landslide deposits identified by the Department of Natural Resources and areas identified as landslide runout areas or areas likely to slide.

Our detailed comments which also address these and additional recommendations follow. Thank you for considering them.

Provisions We Particularly Support

The Critical Areas Ordinance update has many excellent provisions. We could include a long list of the provisions we support, but we want to highlight a few:

- The mitigation sequencing requirements in Benton County Code (BCC) 15.08.100 and BCC 15.08.220. By avoiding and minimizing impacts to critical areas, those areas are protected and development costs are reduced because mitigation to replace lost functions and values can be expensive.
- The standard wetland buffers in BCC 15.08.330(b)(1). These buffers will help protect the functions and values of wetlands, such as maintaining water quality.¹
- The clear and well-written explanation of the applicability of the Voluntary Stewardship Program (VSP) and its relationship to the critical areas regulations in BCC 15.08.120(a)(1).
- The designation of shrub-steppe habitat as a habitat of local importance in BCC 15.08.500(3)(i). Since shrub-steppe habitat is a priority habitat, Benton County is correctly designating and protecting the habitat type.²

Detailed Recommendations on the Draft Benton County Critical Areas Ordinance

- I. **Require a 30-foot setback between critical area buffers and any buildings in BCC 15.08.330, BCC 15.08.480, or BCC 15.08.530**

Setbacks from critical areas buffers provide an area in which buildings can be repaired and maintained without having to intrude in the buffer. It also allows for the creation of a Home Ignition Zone that can protect buildings from wildfires and allow firefighters to attempt to save the buildings during a wildfire. Since a 30-foot-wide Home Ignition Zone is important,³ we recommend that a setback at least 30 feet wide be required adjacent to all setbacks in BCC 15.08.330, BCC 15.08.480, or BCC 15.08.530.

¹ Sheldon, D., T. Hruby, P. Johnson, K. Harper, A. McMillan, T. Granger, S. Stanley, and E. Stockdale, *Wetlands in Washington State - Volume 1: A Synthesis of the Science* p. 2-34, p. 5-38 (Washington State Department of Ecology Publication #05-06-006 Olympia, WA: March 2005) on the CAO on CD Data CD 1 included with Futurewise's March 7, 2018 letter to the Benton County Planning Department in the "Wetlands" directory with the filename: "0506006.pdf" also accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/summarypages/0506006.html>

² PHS Distribution by County list in the Benton County tab on the CAO on CD Data CD 1 included with Futurewise's March 7, 2018 letter to the Benton County Planning Department in the "Fish & Wildlife Habitat\PSH Management Recs" directory with the filename "2017_distribution_by_county.xls" and accessed on Aug. 1, 2018 at: <https://wdfw.wa.gov/conservation/phs/list/>.

³ Firewise USA "The ember threat and the home ignition zone" webpage.





II. The Critical Areas Ordinance update should include provisions to manage groundwater withdrawals and recharge in Part Three Critical Aquifer Recharge Areas

The State of Washington Department of Ecology's *Critical Aquifer Recharge Areas Guidance Document* recommends that counties and cities "[m]anage groundwater withdrawals and recharge" to "[m]aintain availability for drinking water sources" and "[m]aintain stream-base flow from ground water to support instream flows, especially for salmon-bearing streams."⁴ ESSB 6091, the so-called *Hirst* fix bill, provides in relevant part that "[d]evelopment regulations must ensure that proposed water uses are consistent with RCW 90.44.050 and with applicable rules adopted pursuant to chapters 90.22 and 90.54 RCW when making decisions under RCW 19.27.097 and 58.17.110."⁵ RCW 36.70A.060(2) requires that "[e]ach county and city shall adopt development regulations that protect critical areas that are required to be designated under RCW 36.70A.170" including critical aquifer recharge areas.

Part Three does not include any regulations to manage groundwater withdrawals and recharge or to ensure that proposed water uses are consistent with RCW 90.44.050 and with applicable rules adopted pursuant to chapters 90.22 and 90.54 RCW when making decisions under RCW 19.27.097 and 58.17.110. This is important because water resources are limited in Benton County and the demand for water is forecast to exceed the supply in two of three Benton County basins by 2035.⁶ In the Yakima Basin, "[a]ny new consumptive water uses add to the existing water deficit in the basin."⁷ Flows in the Yakima River are already too low certain times of the year, harming salmon survival.⁸

⁴ Laurie Morgan, *Critical Aquifer Recharge Areas Guidance Document* p. 24 (Washington State Department of Ecology, Water Quality Program: Jan. 2005 Publication Number 05-10-028) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/SummaryPages/0510028.html> and included on the CAO on CD enclosed with the paper original of Futurewise's March 7, 2018, letter to the Benton County Planning Department on Data CD 1 in the "CARA" directory with the filename "0510028.PDF."

⁵ ESSB 6091 Section 102 accessed on Aug. 1, 2018 at: <http://lawfilesextra.leg.wa.gov/biennium/2017-18/Pdf/Bills/Session%20Laws/Senate/6091-S.SL.pdf>

⁶ State of Washington Department of Ecology Water Resources Program, *Focus on Water Availability Rock-Glade Watershed, WRLA 31* pp. 1 – 2 (Publication Number: 11-11-035: Revised Aug. 2012) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/summarypages/1111035.html>; State of Washington Department of Ecology Water Resources Program, *Focus on Water Availability Lower Yakima Watershed, WRLA 37* pp. 1 – 2 (Publication Number: 11-11-041: Revised Jan. 2014) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/summarypages/1111041.html>; State of Washington Department of Ecology Water Resources Program, *Focus on Water Availability Alkali-Squibuck Watershed, WRLA 40* pp. 1 – 2 (Publication Number: 11-11-044: Revised Feb. 2015) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/summarypages/1111044.html> and all enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department; S.A. Hall, J.C. Adam, M. Barik, J. Yoder, M.P. Brady, D. Haller, M.E. Barber, C.E. Kruger, G.G. Yorgey, M. Downes, C.O. Stockle, B. Aryal, T. Carlson, G. Damiano, S. Dhungel, C. Einberger, K. Hamel-Reiken, M. Liu, K. Malek, S. McClure, R. Nelson, M. O'Brien, J. Padowski, K. Rajagopalan, Z. Rakib, B. Rushi, W. Valdez *Columbia River Basin Long-Term Water Supply and Demand Forecast 2016 Legislative Report* pp. 66 – 96 (Washington State University State of Washington Water Research Center and Office of Columbia River State of Washington Department of Ecology, Publication No. 16-12-001: Dec. 2016) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/SummaryPages/1612001.html> and enclosed with Futurewise March 7, 2018, letter to the Benton County Planning Department.

⁷ State of Washington Department of Ecology Water Resources Program, *Focus on Mitigation in the Yakima Basin* p. 1 (Publication Number: 12-11-024: May 2012) accessed on Aug. 1, 2018 at: <https://fortress.wa.gov/ecy/publications/documents/1211024.pdf> and enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department.

⁸ U.S. Department of the Interior Bureau of Reclamation and State of Washington Department of Ecology, *Yakima River Basin Integrated Water Resource Management Plan Final Programmatic Environmental Impact Statement Benton, Kittitas, Klickitat and Yakima*





For these reasons, we recommend that Part Three include provisions to manage groundwater withdrawals and recharge consistent with protecting critical aquifer recharge areas and fish and wildlife habitat conservation areas. We appreciate Benton County's response to our earlier comments and look forward to working with the County to further define the measures to manage groundwater withdrawals and recharge.

III. Include landslide runout areas landslide hazards identified by the State of Washington Department of Natural Resources in the designation of geological hazards in BCC 15.08.450(b)

The March 22, 2014, Oso landslide “claimed the lives of 43 people, making it the deadliest landslide event in United States history. Of the approximately 10 individuals who were struck by the landslide and survived, several sustained serious injuries.”⁹ So properly designating geologically hazardous areas is important. While not as important as property damages, injuries, or death, local governments and state agencies are being held liable for landslide damages.¹⁰

“The GMA directs counties and cities to designate critical areas. RCW 36.70A.170. RCW 36.70A.030(5) lists types of critical areas: (1) fish and wildlife habitat conservation areas, (2) wetlands, (3) frequently flooded areas, (4) critical aquifer recharge areas, and (5) geologically hazardous areas.”¹¹ “Geologically hazardous areas’ means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.”¹² “[T]he GMA requires the county to designate and protect all critical areas within its boundaries.”¹³

Counties p. 3-43 (March 2012) accessed on Aug. 1, 2018 at:

<https://www.fws.gov/leavenworthfisheriescomplex/MidColumbiaFWCO/YakimaRiverBasinIntegWaterResMgtPlan.pdf> and cited excerpts enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department.

⁹ Jeffrey R. Keaton, Joseph Wartman, Scott Anderson, Jean Benoît, John deLaChapelle, Robert Gilbert, David R. Montgomery, *The 22 March 2014 Oso Landslide, Snohomish County, Washington* p. 1 (Geotechnical Extreme Events Reconnaissance (GEER): July 22, 2014) accessed on Aug. 1, 2018 at:

http://www.geerassociation.org/index.php/component/geer_reports/?view=geerreports&layout=build&id=30 and included on the CAO on CD enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department on Data CD 2 in the “Geo Hazards\Landslide Hazards” directory with the filename “GEER_Oso_Landslide_Report.pdf.” If the American territories are included, then the Oso landslide is the second deadliest landslide in American history. R.M. Iverson, D.L. George, K. Allstadt, *Landslide mobility and hazards: implications of the Oso disaster* 412 EARTH AND PLANETARY SCIENCE LETTERS 197, 198 (2015).

¹⁰ Jessie Stensland, *Island County settles landslide suit for \$1.5 million* *South Whidbey Record* p. 3 of 9 (Sept. 21, 2016) accessed on Aug. 1, 2018 at: <http://www.heraldnet.com/news/island-county-settles-landslide-suit-for-1-5-million/> and Gene Johnson, *\$60M in Settlements for Victims of Deadly Washington Landslide* *Insurance Journal* p. 1 of 2 (Oct. 12, 2016) accessed on Aug. 1, 2018 at: <https://www.insurancejournal.com/news/west/2016/10/12/429115.htm> both articles enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department.

¹¹ *Ferry Cty. v. Concerned Friends of Ferry Cty.*, 155 Wn.2d 824, 832, 123 P.3d 102, 106 (2005).

¹² RCW 36.70A.030(9).

¹³ *Stevens Cty. v. Futurewise*, 146 Wn. App. 493, 511, 192 P.3d 1, 10 (2008) *review denied Stevens County v. Futurewise*, 165 Wn.2d 1038, 205 P.3d 132 (2009).





Landslides are capable of damaging commercial, residential, or industrial development at both the tops and toes of slopes due to the earth sliding and other geological events.¹⁴ So the areas at the top, toe, and sides of the slope are geological hazards. BCC 15.08.450(b) must designate them as geologically hazardous areas.

In addition, the State of Washington Department of Natural Resources is conducting a landslide inventory which began in 2017 in Pierce County. The plan is to conduct the inventory statewide. The Department of Natural Resources has also compiled landslides information from other sources. This data is available at the Washington Geologic Information Portal.¹⁵ We appreciate the County's addition of areas mapped by the State of Washington Department of Natural Resources as landslides or landslide deposits as designated landslide hazard areas. We continue to recommend that areas identified as landslide runout areas or areas at the top and sides of landslide hazards likely to slide also be identified as landslide hazard areas. We recommend the following amendments with our additions double underlined and our deletions double struck through:

(b) Landslide Hazard Areas.

- (1) Slopes 15 percent or greater that have a relatively permeable geologic unit overlying a relatively impermeable unit and have springs or ground water seeps;
- (2) Slopes 40 percent or greater with a vertical relief of 10 or more feet except areas composed of competent rock and properly engineered slopes designed and approved by a geotechnical engineer licensed in the state of Washington and experienced with the site;
- (3) Potentially unstable slopes resulting from rapid river or stream incision, river or stream bank erosion, or undercutting by wave action. These include slopes exceeding 10 feet in height adjacent to rivers, streams and, lakes ~~and coastal~~ shorelines and with more than a 35 percent gradient;
- (4) Areas that have shown evidence of historic failure or instability, including, but not limited to, back-rotated benches on slopes; areas with structures that exhibit structural damage such as settling and racking of building foundations; and areas that have toppling, leaning, or bowed trees caused by ground surface movement;
- (5) Slopes having gradients steeper than 80 percent subject to rock fall during seismic shaking;
- (6) Areas that are at risk of mass wasting due to seismic forces;~~or~~

¹⁴ Jeffrey R. Keaton, Joseph Wartman, Scott Anderson, Jean Benoit, John deLaChapelle, Robert Gilbert, David R. Montgomery, *The 22 March 2014 Oso Landslide, Snohomish County, Washington* p. 1 & p. 68 (Geotechnical Extreme Events Reconnaissance (GEER): July 22, 2014).

¹⁵ State of Washington Department of Natural Resources *Washington Geologic Information Portal* click on the single-topic "Natural Hazards" map for the currently identified landslide hazards, accessed on Aug. 1, 2018 at: <https://www.dnr.wa.gov/geologyportal>





(7) Areas of historical landslide movement;

(8) Areas mapped by the State of Washington Department of Natural Resources as landslides or landslide deposits; or

(9) Areas identified as landslide runout areas or areas at the top and sides of landslide hazards likely to slide.

IV. The Geotechnical Engineering Report required by BCC 15.08.470 should also be prepared for proposed developments that have the potential to be adversely impacted by geological hazards including a landslide

We recommend that the regulations require Geotechnical Engineering Reports to review any landslide or other geological hazard capable of damaging the proposed development. BCC 15.08.470(b) limits Geotechnical Engineering Reports to “project within a geologically hazardous area ...” Geological hazards, such as landslides, however, are capable of damaging property outside the hazard itself. The 2014 Oso slide ran out for over a mile (5,500 feet) even though the slope height was 600 feet.¹⁶ A 2006 landslide at Oso traveled over 300 feet.¹⁷ Recent research shows that long runout landslides are more common than had been realized.¹⁸ This research documents that over the past 2000 years, the average landslide frequency of long runout landslides in the area near the Oso landslide is one landslide every 140 years.¹⁹ The landslides ran out from 787 feet to the 2,000 feet of the 2014 landslide.²⁰ The Nile Valley Landslide, in Yakima County, extended more than 5,500 feet from the toe of the slope onto the valley floor.²¹

In addition to protecting people from natural hazards, updated geologically hazardous regulations also protect a family’s largest asset: Their home. Homeowners insurance does not cover the damage from

¹⁶ Jeffrey R. Keaton, Joseph Wartman, Scott Anderson, Jean Benoît, John deLaChapelle, Robert Gilbert, David R. Montgomery, *The 22 March 2014 Oso Landslide, Snohomish County, Washington* p. 56 & p. 144 (Geotechnical Extreme Events Reconnaissance (GEER): July 22, 2014).

¹⁷ *Id.* at p. 1.

¹⁸ Sean R. LaHusen, Alison R. Duvall, Adam M. Booth, and David R. Montgomery, *Surface roughness dating of long-runout landslides near Oso, Washington (USA), reveals persistent postglacial hillslope instability* GEOLOGY pp. *2 – 3, published online on 22 Dec. 2015 as doi:10.1130/G37267.1; Geological Society of America (GSA) Data Repository 2016029, *Data repository for: Surface roughness dating of long-runout landslides near Oso, WA reveals persistent postglacial hillslope instability* p. 4 both enclosed with Futurewise’s March 7, 2018, letter to the Benton County Planning Department. Geology is a peer-reviewed scientific journal. Geology Author Guidelines webpage accessed on Aug. 1, 2018 at:

<http://www.geosociety.org/GSA/Publications/Journals/Geology/GSA/Pubs/geology/home.aspx?hkey=36ea531e-e9f2-4cd1-9406-c0279890add4#overview>.

¹⁹ Sean R. LaHusen, Alison R. Duvall, Adam M. Booth, and David R. Montgomery, *Surface roughness dating of long-runout landslides near Oso, Washington (USA), reveals persistent postglacial hillslope instability* GEOLOGY p. *2, published online on 22 Dec. 2015 as doi:10.1130/G37267.1.

²⁰ Geological Society of America (GSA) Data Repository 2016029, *Data repository for: Surface roughness dating of long-runout landslides near Oso, WA reveals persistent postglacial hillslope instability* p. 4.

²¹ Washington State Department of Transportation, *Nile Valley Landslide: Geotechnical Report* p. 17 (May 2010) accessed on <http://www.wsdot.wa.gov/NR/rdonlyres/F78951A8-765B-4170-824E-46686B4E6A66/0/NileValleyLandslidegeotechnicalreport.pdf> and excerpts enclosed with Futurewise’s March 7, 2018, letter to the Benton County Planning Department. This report was peer-reviewed, see the cover page.



landslides. “Insurance coverage for landslides is uncommon. It is almost never a standard coverage, and is difficult to purchase inexpensively as a policy endorsement.”²²

None of the Oso victims’ homes were covered by insurance for landslide hazards.²³ And that is common when homes are damaged by landslides.²⁴ For example, on March 14, 2011, a landslide damaged the home of Rich and Pat Lord.²⁵ This damage required the homeowners to abandon their home on Norma Beach Road near Edmonds, Washington. Because their homeowners insurance did not cover landslides, they lost their home.²⁶ This loss of what may be a family’s largest financial asset is common when homes are damaged or destroyed by landslides or other geological hazards.

Landslide buyouts are rare and when they occur the property owner often only recovers pennies on the dollar. The property owners bought out after the Aldercrest-Banyon landslide in Kelso, Washington destroyed their homes received 30 cents on the dollar.²⁷ This underlines why preventing development in geologically hazardous areas is just plain ordinary consumer protection.

So, we recommend that Benton County require review of all geological hazards capable of harming a proposed lot or building site. We recommend that BCC 15.08.470(b) be modified to read as follows with our additions double underlined and our deletion double struck through.

(b) Geotechnical Engineering Report. The technical information for a project which has the potential to be damaged by ~~within~~ a geologically hazardous area shall include a geotechnical engineering report, prepared by a qualified professional as described in subsection (a). The qualified professional shall present and include the following information:

V. **The BCC 15.08.480’s additional requirements for geologically hazardous areas and the geologically hazardous risk assessment should also be required for all potentially dangerous landslide hazards**

²² Robert L. Schuster & Lynn M. Highland, *The Third Hans Cloos Lecture: Urban landslides: socioeconomic impacts and overview of mitigative strategies* 66 BULLETIN OF ENGINEERING GEOLOGY AND THE ENVIRONMENT 1, p. 22 (2007) accessed on Aug. 1, 2018 at:

ftp://193.134.202.10/pub/TRAMM/Workshop_EWS/Literature/Schuster_and_Highland_2007_Bulletin_of_Engineering_Geology_and_the_Environment.pdf. The Bulletin of Engineering Geology and the Environment is peer-reviewed. See the Bulletin of Engineering Geology and the Environment “em Editorial Manager” login page accessed on Aug. 1, 2018 at: <http://www.editorialmanager.com/boeg/default.aspx>

²³ Sanjay Bhatt, *Slide erased their homes, but maybe not their loans* The Seattle Times (April 2, 2014) accessed on Aug. 1, 2018 at: http://old.seattletimes.com/html/latestnews/2023278858_mudslidefinancialxml.html

²⁴ *Id.*

²⁵ Ian Terry, *Abandoned and trashed after mudslide, Edmonds house now for sale* The Herald (Feb. 11, 2015). The house is for sale after the bank who held the Lord’s mortgage took ownership of the home. *Id.* Accessed on Aug. 1, 2018 at: <http://www.heraldnet.com/article/20150211/NEWS01/150219829> and enclosed with Futurewise’s March 7, 2018, letter to the Benton County Planning Department.

²⁶ *Id.* at p. *6.

²⁷ Isabelle Sarikhan, *Sliding Thought Blog, Washington’s Landslide Blog* Landslide of the Week – Aldercrest Banyon Landslide July 29, 2009 accessed on Aug. 1, 2018 at: <https://slidingthought.wordpress.com/2009/07/29/landslide-of-the-week-aldercrest-banyon-landslide/>



As was documented in the previous sections, landslides can be deadly and destroy homes. We recommend that BCC 15.08.480's additional requirements for geologically hazardous areas and the geologically hazardous risk assessment should also be required for all potentially dangerous landslides including landslides and landslide deposits identified by the Department of Natural Resources and areas identified as landslide runout areas or areas at the top and sides of landslide hazards likely to slide. We recommend that BCC 15.08.480(b) be modified to read as follows with our deletion double struck through.

In addition to the general critical area report requirements of Section 15.08.190, critical area reports for those hazards in Section 15.08.450(a)(1) (~~fifteen (15) percent to thirty-nine (39) percent slope~~), must meet the requirements of this section.

- VI. **Standard riparian buffer widths should conform to Washington Department of Fish and Wildlife Priority Habitat and Species Program recommendations. BCC 15.08.530 Performance standards—General requirements.**

The Washington State Court of Appeals has concluded that critical areas regulations must protect all critical areas functions and values.²⁸ This includes protecting water quality and fish and wildlife habitats in rivers, streams, and lakes. Sediment and nutrient removal requires buffers from 100 feet wide to 300 feet wide and wider.²⁹ Wildlife habitat generally requires buffers of 100 to 200 feet wide, with wider buffers needed for some wildlife.³⁰

This is why the Washington Department of Fish and Wildlife recommends 150- to 200-foot buffers for Type F streams and 150-foot buffer for Type Np and Ns streams and washes with a low mass wasting potential and 225-foot buffers for Type Np and Ns streams and washes with a high mass wasting potential.³¹ The proposed 50- to 100-foot wide buffers for Type F streams and 35 to 50-foot buffers for Type Np and Ns streams will not protect the functions and values of those streams. We suggest following the Washington Department of Fish and Wildlife recommendations identified above.

Thank you for considering our comments. If you require additional information, please contact Alison Cable at telephone 206 343 0681 Ext. 114 and email: alison@futurewise.org or Tim Trohimovich at telephone (206) 343-0681 Ext. 118 and email: tim@futurewise.org.

Very Truly Yours,

²⁸ *Whidbey Environmental Action Network [WEAN] v. Island County*, 122 Wn. App. 156, 174 – 175, 93 P.3d 885, 894 (2004) reconsideration denied July 12, 2004, review denied *Whidbey Environmental Action Network v. Island County*, 153 Wn.2d 1025, 110 P.3d 756 (2005).

²⁹ K. L. Knutson and V. L. Naef, *Management Recommendations for Washington's Priority Habitats: Riparian* pp. 164 – 65 (Wash. Dept. Fish and Wildl., Olympia: 1997) accessed on Aug. 1, 2018 at: <http://wdfw.wa.gov/publications/00029/> and on the CAO on CD Data CD 1 enclosed with Futurewise's March 7, 2018, letter to the Benton County Planning Department in the "Fish & Wildlife Habitat\PSH Management Recs" directory with the filename: "wdfw00029.pdf;" Timothy Quinn, George Wilhere and Kirk Krueger, (Managing Editors), *Riparian Ecosystems, Volume 1: Science Synthesis and Management Implications*, A Priority Habitats and Species Document of the Washington Department of Fish And Wildlife p. 138 (Final Version May 2018 <unformatted>) accessed on Aug. 1, 2018 at: <https://wdfw.wa.gov/publications/01987/> and enclosed with this letter.

³⁰ K. L. Knutson and V. L. Naef, *Management Recommendations for Washington's Priority Habitats: Riparian* pp. 165 – 67 (Wash. Dept. Fish and Wildl., Olympia: 1997).

³¹ *Id.* at p. xii.



Board of Commissioners for Benton County

August 13, 2018

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Tri-Cities Program Manager

Tim Trohimovich, AICP

Director of Planning & Law

Enclosure

Cc: Greg Wendt, Principal Planner
Jerrod McPherson, Planning Director

