

## Lauren Davidson

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**From:** Tim Trohimovich <Tim@futurewise.org>  
**Sent:** Friday, March 25, 2016 10:00 AM  
**To:** Planning  
**Subject:** Comments for March 28, 2016 public hearing on the "Zoning OCC Title 17A" Code Amendment 2015-1  
**Attachments:** Okanogan County PC Comment Letter Zoning Update March 25 2016 as emailed.pdf

Dear Sirs and Madams:

Enclosed please find our comment letter for the Planning Commission's March 28, 2016 public hearing on the "Zoning OCC Title 17A" Code Amendment 2015-1. We are also mailing the paper original of the letter with paper copies of the referenced enclosures. Also enclosed with the letter is a data CD with a pdf version of the letter and enclosures.

Please contact me if you require anything else.

Tim Trohimovich, AICP  
Director of Planning & Law



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March 25, 2016

Mr. Albert Roberts, Chair  
Okanogan County Regional Planning Commission  
Office of Planning and Development  
123 – 5<sup>th</sup> Ave. N. Suite 130  
Okanogan, Washington 98840

Dear Chair Roberts and Planning Commissioners:

Subject: Comments on Planning Commission Public Hearing on “Zoning OCC Title 17A” Code Amendment 2015-1 on March 28, 2016.

Sent via U.S. Mail and email to: [planning@co.okanogan.wa.us](mailto:planning@co.okanogan.wa.us)

Thank you for the opportunity to comment on “Zoning OCC Title 17A” Code Amendment 2015-1. We very much appreciate Okanogan County sending us notice of the public hearing. This letter first summarizes our recommendations and then includes detailed documentation of the needed changes to the proposed zoning code.

Futurewise is working throughout Washington State to create livable communities, protect our working farmlands, forests, and waterways, and ensure a better quality of life for present and future generations. We work with communities to implement effective land use planning and policies that prevent waste and stop sprawl, provide efficient transportation choices, create affordable housing and strong local businesses, and ensure healthy natural systems. We are creating a better quality of life in Washington State together. Futurewise has members across Washington State, including Okanogan County.

## Summary

As we document and explain in the detailed recommendations below, we recommend:

- That nonagricultural development should be directed away from the urban/rural fringe and the zoning regulations should adopt the Futurewise principles. Please see page 3 of this letter for more information.
- The zoning should take water availability into account in setting densities and include requirements to protect water quality, water quantity, and senior water rights holders. Specifically, we recommend that:
  - Densities greater than one dwelling unit per five acres should not be allowed outside areas designated for urban development. So the Rural 1 and Minimum Requirements Zones should be eliminated and densities in other zones should be capped at one dwelling unit per five acres.
  - Do not allow the limited divisions for each lot existing on January 1, 2016, in the Rural 5 and Rural 20 zones.<sup>1</sup> The county does not have the water resources to create this

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<sup>1</sup> Proposed Okanogan County Code (OCC) 17A.050.110 and proposed OCC 17A.060.110.

many lots. It also does not have the firefighting resources to protect houses on this many lots from wildfires.<sup>2</sup>

- Highly polluting uses should not be allowed in aquifer recharge areas.
- Any development proposing to use a permit-exempt well shall be limited to one permit-exempt well withdrawal system limited to withdrawing no more than 5,000 gallons per day.
- Applicants for building permits and subdivisions of land shall demonstrate that sufficient water is both legally and actually available to serve the proposed uses and activities including providing water necessary for fire protection.
- The sources of water for building permits and subdivisions of land shall not interfere with required minimum instream flows and senior water rights.
- The densities adopted in the zoning regulations shall be consistent with available water supplies.
- Increases in density shall only be approved if sufficient water is both legally and actually available and the sources will not interfere with required minimum instream flows and senior water rights.
- Sufficient water shall be reserved to maintain the agricultural industry in Okanogan County.

Please see page 5 of this letter for more information.

- Require that conditional uses comply with the Planning Enabling Act and be compatible with the uses in the vicinity. Please see page 10 of this letter for more information.
- Retain the current landscape requirements and limit impervious surfaces. Please see page 11 of this letter for more information.
- Amend proposed OCC 17A.330.010 to comply with and not violate the state platting statutes. Please see page 12 of this letter for more information.
- The Neighborhood Commercial (NC) zones should be limited to existing commercial areas and the areas of documented need. Please see page 13 of this letter for more information.
- Designate and conserve agricultural and forest land of long-term commercial significance. Please see page 13 of this letter for more information.
- Do not increase densities in the area formerly covered by the Molson Overlay. Please see page 15 of this letter for more information.
- Do not allow accessory dwelling units on lots smaller than one acre. Please see page 15 of this letter for more information.

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<sup>2</sup> *Okanogan County, Washington Community Wildfire Protection Plan* p. 88 (2013) accessed on March 24, 2016 at: [http://file.dnr.wa.gov/publications/rp\\_burn\\_okanogan\\_cwpp\\_2013update.pdf](http://file.dnr.wa.gov/publications/rp_burn_okanogan_cwpp_2013update.pdf) and enclosed with the paper original of this letter. The cover and page 88 are also enclosed with the pdf version of this letter.

- The special development provisions currently in the Methow planning area zones should not be repealed. Please see page 15 of this letter for more information.
- The setbacks for the Rural 1, Rural 5, and Rural 20 zones should not be weakened. Please see page 16 of this letter for more information.
- RV parks, campgrounds, hotels, motels, and similar uses should require a conditional use permit and require lots larger than the minimum lot size and appropriate to the intensity of the proposed use. Please see page 16 of this letter for more information.
- The changes to the District Use Chart (Chapter 17A.220 OCC) should be modified and the dangerous uses not allowed in rural areas where the public facilities and services, including fire services, cannot support them. Please see page 16 of this letter for more information.

## Detailed Recommendations

### Direct nonagricultural development away from the urban/rural fringe and require Firewise principles

The increased residential development in the rural, forest, and agricultural areas of Okanogan County is creating significant problems for fire districts and firefighters. As the *Community Wildfire Protection Plan* states:

One challenge Okanogan County faces is the large number of houses in the urban/rural fringe compared to twenty years ago. Since the 1970s, a segment of Washington's growing population has expanded further into traditional forest or resource lands and other rural areas. The "interface" between urban and suburban areas and unmanaged forest and rangelands created by this expansion has produced a significant increase in threats to life and property from fires and has pushed existing fire protection systems beyond original or current design or capability. Many property owners in the interface are not aware of the problems and threats they face and owners have done very little to manage or offset fire hazards or risks on their own property. Furthermore, human activities increase the incidence of fire ignition and potential damage.<sup>3</sup>

And Okanogan County has experienced Washington State's two largest wildfires in history back to back.<sup>4</sup> To minimize more development that is beyond the capability of the fire protection systems, we recommend that the following changes be made to the proposed zoning.

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<sup>3</sup> *Okanogan County, Washington Community Wildfire Protection Plan* p. 88 (2013).

<sup>4</sup> Gary DeVon, *Largest Fire in State History* *Gazette-Tribune* (Aug. 26, 2015) accessed on March 22, 2016 at: <http://www.gazette-tribune.com/news/largest-fire-in-state-history/70863/> and enclosed with the paper original of this letter.

First, the areas identified in *Community Wildfire Protection Plan's* Figure 4.2. *Wildland-Urban Interface Map in Okanogan County, Washington* as having the three lowest density "wildland-urban interface (WUI)" conditions and the "Intermix Condition" should be zoned R-20 or as agricultural or forest lands of long-term commercial significance.<sup>5</sup> The multi-family densities allowed by proposed Okanogan County Code (OCC) 17A.060.060A and the densities and land divisions allowed by Proposed OCC 17A.060.110, Special provisions, shall not be allowed.

Second, the areas identified in *Community Wildfire Protection Plan's* Figure 4.2 as having the "Rural" condition should be zoned as agricultural and forest lands of long-term commercial significance. Third, areas served with a one lane road or with only one way in and out should also be zoned R-20 or as agricultural or forest lands of long-term commercial significance. The multi-family densities allowed by proposed OCC 17A.060.060A and the densities and land divisions allowed by Proposed OCC 17A.060.110, Special provisions, shall not be allowed in these areas. These changes will reduce increases in densities in the WUI which already has more residential development than can be protected by the existing firefighting system.<sup>6</sup>

Fourth, as also recommended by the *Community Wildfire Protection Plan*, the zoning and subdivision regulations should "[a]dopt stringent regulations to insure fire-safe development of rural subdivisions (see FIREWISE or similar programs for specific recommendations)."<sup>7</sup> See the enclosed *Firewise Toolkit A Guide to Firewise Principles* enclosed with this letter and downloaded on March 22, 2016 at: <http://www.firewise.org/wildfire-preparedness/firewise-toolkit.aspx> The Firewise Communities Program is a nationally recognized program to reduce the risk of damage from wildfires.<sup>8</sup>

The Firewise Principles recommend "'two ways out' of the neighborhood for safe evacuation during a wildfire emergency."<sup>9</sup> So does the U.S. Fire Administration.<sup>10</sup> Two ways out is important to protect the safety of property owners, residents, and firefighters. The three firefighters who died in Twisp River Fire in Okanogan County this last summer died on a relatively short dead end road serving six houses.<sup>11</sup> A fourth firefighter was severely injured in the fire and a three person bulldozer team was trapped on the same road.<sup>12</sup> If the area had two ways out, it is possible the firefighters would not have had to drive down a road in zero visibility<sup>13</sup> and would not have crashed.

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<sup>5</sup> *Okanogan County, Washington Community Wildfire Protection Plan* p. 39 (2013).

<sup>6</sup> *Id.* at p. 88.

<sup>7</sup> *Id.* at p. 97.

<sup>8</sup> About Firewise webpage accessed on March 24, 2016 at: <http://www.firewise.org/about.aspx>

<sup>9</sup> *Firewise Toolkit A Guide to Firewise Principles* p. \*2 enclosed with both the pdf and paper originals of this letter.

<sup>10</sup> FEMA U.S. Fire Administration, *Wildfires: Protect Yourself and Your Community* enclosed with the paper original of this letter and accessed on March 24, 2016 at:

[http://www.usfa.fema.gov/downloads/pdf/publications/wildfires\\_protect\\_yourself\\_and\\_your\\_community.pdf](http://www.usfa.fema.gov/downloads/pdf/publications/wildfires_protect_yourself_and_your_community.pdf)

<sup>11</sup> Washington State Department of Natural Resources, *Twisp River Fire Fatalities and Entrapments Interagency Learning Review Status Report* pp. 8 -9 & pp. 15 - 18 of 24 (18 November 2015) accessed on March 24, 2016 at: [http://wildfiretoday.com/documents/Twisp\\_River\\_Fire\\_Status\\_Report.pdf](http://wildfiretoday.com/documents/Twisp_River_Fire_Status_Report.pdf) and enclosed with the paper original of this letter.

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* at p. 15 of 24.

Some argue that the county should not require wildfire safety measures, it should be a personal choice. But the local, state, and federal firefighters have no choice. They are ordered in to save the structures whether the property owners or the county chose to undertake Firewise fire safety measures or not. And the federal government pays \$3 billion a year fighting these fires,<sup>14</sup> not the property owners or counties that fail to take common sense steps to protect property owners and firefighters. As economist Ray Rasker said “[w]hen you read in the news that the federal agencies are spending up to \$3 billion a year fighting fires, what they’re really spending money on is defending private property from fires. Another way to say that is that the federal taxpayer pays for the land use decisions of local government.”<sup>15</sup> And sometimes the firefighters pay for the land use decisions of local government too.

### Take water availability into account in setting densities and protect water quality, water quantity, and senior water rights holders

RCW 36.70.330(1) requires that “[t]he land use element shall also provide for protection of the quality and quantity of groundwater used for public water supplies . . .” In the Order Denying Cross Motions for Summary Judgment and/or Dismissal in *Methow Valley Citizens’ Council and Futurewise v. Okanogan County*, the Honorable Judge Culp observed that “the trier of fact will have to determine whether the final zoning ordinance protects [county property owners] rights by including provisions adequate to protect the quality and quantity of ground water.”<sup>16</sup> But there are no zoning regulations proposed to protect ground water quality and quantity.<sup>17</sup> As will be explained below, we recommend they be included to comply with state law.

In fact, the zoning is likely to lead to the pollution of ground water. Large areas of the county are zoned for densities of two housing units per acre.<sup>18</sup> Large areas are also zoned for one housing unit per 2.5 acres.<sup>19</sup> Most of the rural zones allow apartments and mobile home parks with densities of five dwelling units per acre outside parts of the Methow Valley.<sup>20</sup> The apartments are permitted uses in the Minimum Requirement, Rural 1, Rural 5, and Rural 20 zones.<sup>21</sup> Marylynn Yates, in a peer reviewed scientific journal, analyzed data and cases of ground water pollution from septic tanks. She concluded that septic tanks are major contributors of waste water, septic tanks are the most frequently reported cause of ground water contamination, and the most important factor influencing ground water contamination

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<sup>14</sup> Rowan Moore Gerety, *After A Bad Fire Season, Okanogan County Looks The Other Way On Land Use* Northwest Public Radio website (Dec 10, 2015) accessed on March 24, 2016 at: <http://nwpr.org/post/after-bad-fire-season-okanogan-county-looks-other-way-land-use>

<sup>15</sup> *Id.*

<sup>16</sup> *Methow Valley Citizens’ Council and Futurewise v. Okanogan County*, Okanogan County Superior Court Case No. 15-2-00005-7 Order Denying Cross Motions for Summary Judgment and/or Dismissal p. 4 (March 11, 2016) enclosed with the paper original of this letter.

<sup>17</sup> Zoning Okanogan County Code Title 17A Draft: October 16, 2015 pp. 1 – 152 accessed on March 22, 2016 at: <http://www.okanogancounty.org/planning/>.

<sup>18</sup> Okanogan County Zoning – Draft – 10/15/2015 map; proposed OCC 17A.030.060A (Minimum Requirement [RM] Zone); Proposed OCC 17A.040.060A (Rural 1 [R1] Zone).

<sup>19</sup> Okanogan County Zoning – Draft – 10/15/2015 map; proposed OCC 17A.050.060A (Rural 5 [R5] Zone).

<sup>20</sup> Proposed OCC 17A.030.060A (Minimum Requirement [RM] Zone); Proposed OCC 17A.040.060B (Rural 1 [R1] Zone); proposed OCC 17A.050.060B (Rural 5 [R5] Zone); proposed OCC 17A.060.060B (Rural 20 [R20]).

<sup>21</sup> Proposed OCC 17A.220.010.

from septic tanks is the density of the systems.<sup>22</sup> Lot sizes associated with ground water contamination cases ranged from less than a quarter acre to three acres.<sup>23</sup> More recent studies support these conclusions. For example, an “observational study identified septic system density as a risk factor for sporadic cases of viral and bacterial diarrhea in central Wisconsin children.”<sup>24</sup> The greater the density of septic tanks the greater the likelihood of diarrheal disease.<sup>25</sup> And the highest septic tank densities were one septic tank per 11 acres.<sup>26</sup> A study of the potential for nitrate pollution of ground water in Cedar Valley, Iron County, Utah lead to a recommendation that the minimum lot size for septic systems should be five acres in one part of the valley and 15 acres in three other parts.<sup>27</sup> So houses and apartments allowed by the proposed zoning will pollute the groundwater drinking water sources.

In addition to urban density apartments, other uses with a high potential to pollute ground water are allowed in unincorporated Okanogan County. Aircraft sales, repair, service and aircraft salvage, just to name a few, are permitted uses in the Minimum Requirement, Rural 1, Rural 5, and Rural 20 zones just to name a few.<sup>28</sup> Acid manufacturing, explosive manufacturing or storage, asphalt batch plants, petroleum bulk plants, auto wrecking yards, junk yards, cement and lime manufacturing, just to name a few, are conditional uses in the Minimum Requirement, Rural 1, Rural 5, and Rural 20 zones.<sup>29</sup> These are all potential sources of ground water contamination.<sup>30</sup>

Adverse impacts will also occur because the proposed densities are not matched to the available ground water resources. This is particularly important because a significant number

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<sup>22</sup> Marylynn V. Yates, *Septic Tank Density and Ground-Water Contamination* 23 GROUND WATER 586, p. 590 (1985). Accessed most recently on March 23, 2016 at: <http://info.ngwa.org/gwol/pdf/852537546.PDF> and enclosed in with the paper original of this letter. Ground Water is a peer-reviewed scientific journal. See the Ground Water Peer Review webpage enclosed with the paper original of this letter and accessed on March 23, 2016 at: <http://www.ngwa.org/pubs/GW/Pages/Ground-Water-Peer-Review.aspx>

<sup>23</sup> Marylynn V. Yates, *Septic Tank Density and Ground-Water Contamination* 23 GROUND WATER 586, p. 590 (1985).

<sup>24</sup> Mark A. Borchartd, Po-Huang Chyou, Edna O. DeVries, and Edward A. Belongia, *Septic System Density and Infectious Diarrhea in a Defined Population of Children* 111 ENVIRONMENTAL HEALTH PERSPECTIVES 742, p. 745 (2003). Accessed most recently on March 23, 2016 at:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241485/pdf/ehp0111-000742.pdf> and enclosed with the paper original of this letter. Environmental Health Perspectives is a peer reviewed scientific journal. See the Environmental Health Perspectives Journal Information accessed on March 23, 2015 at:

<http://ehp.niehs.nih.gov/journal-information/> and enclosed with the paper original of this letter.

<sup>25</sup> Mark A. Borchartd, Po-Huang Chyou, Edna O. DeVries, and Edward A. Belongia, *Septic System Density and Infectious Diarrhea in a Defined Population of Children* 111 ENVIRONMENTAL HEALTH PERSPECTIVES 742, pp. 745 – 47 (2003).

<sup>26</sup> *Id.* at 747.

<sup>27</sup> Mike Lowe, Janae Wallace, and Walid Sabbah, and Jason L. Kneedy, *Science-Based Land-Use Planning Tools to Help Protect Ground-Water Quality, Cedar Valley, Iron County, Utah Special Study* 134 pp. 27 – 28 (Utah Geological Survey, a Division of Utah Department of Natural Resources: 2010). Most recently accessed on March 23, 2016 at: <http://geology.utah.gov/online/ss/ss-134/ss-134text.pdf> and enclosed with the paper original of this letter.

<sup>28</sup> Proposed OCC 17A.220.010.

<sup>29</sup> Proposed OCC 17A.220.010.

<sup>30</sup> Laurie Morgan, *Critical Aquifer Recharge Areas Guidance Document* pp. 37 – 41 (Washington State Department of Ecology, Water Quality Program: Jan. 2005, Publication Number 05-10-028) enclosed with the paper original of this letter and accessed on March 23, 2016 at:

<https://fortress.wa.gov/ecy/publications/publications/0510028.pdf>

of Okanogan County's subbasins and streams are already overappropriated.<sup>31</sup> The Washington State Department of Ecology has also concluded that "most if not all of the available water has already been allocated" in Water Resource Inventory Areas (WRIAs) 48 and 49, the Methow and Okanogan River Watersheds.<sup>32</sup> Water is in such short supply that:

Ecology regularly sends out Administrative Orders under RCW 90.03 alerting water right holders they will be curtailed in favor of instream flows for the Methow and Okanogan Rivers. This has been a common occurrence in Okanogan County where users were curtailed or shut off four out of the last five years on the Methow and three out of the last five years on the Okanogan during times of low flow.<sup>33</sup>

Ecology also explained that:

Demands of new water use reduce water legally available for existing, senior water rights including instream flows. Where hydraulic continuity is shown with surface water, new domestic uses established under RCW 90.44.050 are subject to curtailment to meet the needs of more senior water rights in water short years. If water supply becomes limited, water use could be curtailed by those with senior water rights, which includes instream flows established in Chapters 173-548, 173-549 and 173-563 WAC.

[The] Department of Health does not consider interruptible water rights an adequate and reliable water source consistent with WAC 246-290-420. For these reasons, future water source plans will likely not be a reliable supply for year round residential use and may be subject to interruption due to conflict with instream flows. As such, it will be questionable whether a plan would provide an appropriate provision for potable water supply under RCW 58.17.<sup>34</sup>

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<sup>31</sup> ENTRIX, Inc., *Level 1 Watershed Technical Assessment Final Report: Okanogan River Watershed Resource Inventory Area 49* p. ES-3 (Okanogan Watershed Planning Unit: Sept. 2006) accessed on March 23, 2016 at: [http://www.okanogancd.org/sites/default/files/programs/owp/24\\_Technical%20Assessment.pdf](http://www.okanogancd.org/sites/default/files/programs/owp/24_Technical%20Assessment.pdf) and enclosed with the paper original of this letter.

<sup>32</sup> State of Washington Department of Ecology Water Resources Program, *Focus on Water Availability for the Methow Watershed, WRLA 48* p. 2 (Publication Number: 11-11-052, Revised August 2012) accessed on March 23, 2015 at: <https://fortress.wa.gov/ecy/publications/summarypages/1111052.html> and enclosed with the paper original of this letter; State of Washington Department of Ecology Water Resources Program, *Focus on Water Availability for the Okanogan Watershed, WRLA 49* p. 2 (Publication Number: 11-11-053, Revised August 2012) accessed on March 23, 2015 at: <https://fortress.wa.gov/ecy/publications/summarypages/1111053.html> and enclosed with the paper original of this letter.

<sup>33</sup> Letter from Washington State Department of Ecology to Perry Huston Okanogan County Planning p. 3 of 5 (April 7, 2011) enclosed with the paper original of this letter.

<sup>34</sup> *Id.* While Ecology's quote states that a determination that surface and ground water are in continuity must be made for ground water to be subject to the instream flow rules, in the Methow Basin the Washington State Department of Ecology must determine that the ground water is not hydraulically connected. WAC 173-548-050(4), part of the Methow Basin instream flow rule, provides that: "(4) If the groundwater being sought for withdrawal has been determined by the department not to be hydraulically connected with surface waters listed as closed, the department may approve a withdrawal. When insufficient evidence is available to the department to make a determination that ground and surface waters are not hydraulically connected, the department shall not approve the withdrawal of groundwater unless the person proposing to withdraw the groundwater provides

The very limited water availability is confirmed by the Methow Watershed Council. When Ecology adopted the instream flow rule for the Methow River, water was reserved for permit exempt wells. The council states that to their knowledge, this is the only non-interruptible water available in the Methow Sub basin.<sup>35</sup> The Council has projected that:

Assuming future build-out with no new parcels and existing parcel size regulations, 6 reaches would have water remaining in their reserves. The Lower Methow would exceed its reserve, leaving 1,092 presently existing parcels out of a total of 2,913 presently existing parcels unable to be supplied by a well.

Assuming full build-out of all possible parcels under present zoning, 5 reaches would have water remaining in their reserve. The Upper Methow and Lower Methow would exceed their reserves. The Upper Methow would have 127 parcels unable to be supplied by permit-exempt wells out of a total of 1,948 possible parcels. The Lower Methow would have 24,313 parcels out of a total of 26,133 possible parcels unable to be supplied by wells.<sup>36</sup>

The proposed zoning applies a "Rural 1" zone, which allows one-acre lots and apartments at densities of five dwellings per acre, along many Okanogan County streams that are already over appropriated.<sup>37</sup> The one acre lots and apartments are permitted uses in the Rural 1 zone.<sup>38</sup> These streams include Bonaparte Creek in the Osoyoos basin, 41,188 percent over appropriated in the summer; Johnson Creek in the Salmon basin, 2,913 percent over appropriated in the summer; the lower part of Sinlahekin Creek in the Sinlahekin basin, 3,015 percent over appropriated in the summer; Tonasket Creek in the Osoyoos basin, 54,143 percent over appropriated in the summer; and Tunk Creek in the Omak basin, 1,300 percent over appropriated in the summer.<sup>39</sup> In the Osoyoos and Salmon basins the 2006 ground water appropriations exceeded ground water recharge as it did for WRIA 49 as a whole.<sup>40</sup> "Groundwater and surface water interact throughout the [Okanogan River] watershed."<sup>41</sup> Allowing high densities along the over allocated creeks with a hydrologic connection to ground water will result in loss of water available to senior water rights holders that rely on these streams for irrigation and other uses.

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additional information sufficient for the department to determine that hydraulic continuity does not exist and that water is available."

<sup>35</sup> Methow Watershed Council Letter to the Okanogan County Commission Re: Okanogan Comprehensive Plan and watershed planning p. 1 (June 14, 2011) and enclosed with the paper original of this letter.

<sup>36</sup> *Id.* at p. 2.

<sup>37</sup> Okanogan County Zoning – Draft – 10/15/2015 map; proposed OCC 17A.040.060A & B; ENTRIX, Inc., *Level 1 Watershed Technical Assessment Final Report Okanogan River Watershed Resource Inventory Area 49* p. ES-9 & WRIA 49 Stream Monitoring Locations map (Sept. 2006).

<sup>38</sup> Proposed OCC 17A.220.010.

<sup>39</sup> ENTRIX, Inc., *Level 1 Watershed Technical Assessment Final Report Okanogan River Watershed Resource Inventory Area 49* p. ES-9 & WRIA 49 Stream Monitoring Locations map (Sept. 2006).

<sup>40</sup> *Id.* at ES-4.

<sup>41</sup> *Id.* at 2-24.

The Washington State Department of Ecology had to appeal a county subdivision approval because the County's SEPA determination failed to require the subdivision to comply with the requirements for permit exempt wells.<sup>42</sup> The Silver Spur North Ranch originally proposed to create 220 individual lots, a 15-site recreational vehicle park, an equestrian center, and recreational center with swimming pools that would withdraw 18,800 gallons of water per day from permit-exempt wells.<sup>43</sup> "That is well in excess of 5,000 gallons of water per day, the limit allowed by common subdivisions without water rights, as confirmed by the state Supreme Court's opinion in the 'Campbell and Gwinn' case."<sup>44</sup> In response to Ecology's appeal, the Silver Spur North Ranch was limited to 5,000 gallons a day from one permit-exempt well serving eleven housing units.<sup>45</sup> Any addition development will require "an off-site source of water ..."<sup>46</sup> There have been other cases where Okanogon County's planning decisions disregarded these requirements.<sup>47</sup>

Okanogon County has a choice to make. It can allow many small rural lots and apartments outside cities and towns that greatly exceed the available water in the county. This will allow those that subdivide first to create new lots and new apartments, but condemn everyone else to existing lots that are unbuildable because all of the water is already used up under Washington's first in time, first in right water allocation system.<sup>48</sup> Or the county could attempt to equitably limit lots and development to those that can be served by the available water resources. The proposed zoning hews to the first approach, an approach that will create some winners, but many, many losers. We recommend another approach, one that seeks to attempt to match new development with available water resources. That is the fairer approach.

Protecting groundwater is important as Okanogon County residents and property owners are highly depended on ground water for drinking water supplies.<sup>49</sup> So we recommend the following modifications to the proposed zoning:

- Densities greater than one dwelling unit per five acres should not be allowed outside areas designated for urban development and served by municipal water systems. So the Rural 1

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<sup>42</sup> Department of Ecology News Release - March 26, 2010 10-054 *Water concerns prompt appeal of subdivision approval* accessed on Jan. 28, 2015 enclosed with the paper original of this letter.

<sup>43</sup> *Id.*

<sup>44</sup> *Id.*

<sup>45</sup> Okanogon County Resolution 10 – 201 Approving the Development Agreement for Silver Spur North Ranch and Adopting Findings of Fact and Conclusions of Law p. \*2 – 3; Development Agreement by and Between Okanogon County and Caribou LLC, for the Silver Spur North Ranch Development pp. 8 – 9 accessed on March 23, 2016 at

<http://www.okanogancounty.org/planning/Docs%20and%20PDFs/Development%20Agreement-Silver%20Spur%20NR.pdf> and cited pages enclosed with the paper original of this letter.

<sup>46</sup> Development Agreement by and Between Okanogon County and Caribou LLC, for the Silver Spur North Ranch Development pp. 8 – 9.

<sup>47</sup> Washington State Department of Ecology Letter to Okanogon County Planning Re: Eagle Canyon Estates (March 23, 2009) enclosed with this letter and the paper original of this letter.

<sup>48</sup> *Postema v. Pollution Control Hearings Bd.*, 142 Wn.2d 68, 79 – 80, 11 P.3d 726, 734 (2000).

<sup>49</sup> Tom Culhane and Dave Nazy, *Permit-Exempt Domestic Well Use in Washington State* p. 7 & p. 22 (Water Resources Program Washington State Department of Ecology, Olympia, Washington: Feb. 2015: Publication No. 15-11-006) accessed on March 23, 2016 at: <https://fortress.wa.gov/ecy/publications/documents/1511006.pdf> and enclosed with the paper original of this letter.

- and Minimum Requirements Zones should be eliminated and densities in other zones be capped at one dwelling unit per five acres.
- Do not allow the limited divisions for each lot that existed on January 1, 2016, in the Rural 5 and Rural 20 zones.<sup>50</sup> As was documented above, the county does not have the water resources to serve this many lots. It also does not have the firefighting resources protect houses on this many lots from wildfires.<sup>51</sup>
  - Highly polluting uses should not be allowed in aquifer recharge areas.
  - Any development proposing to use a permit-exempt well shall be limited to one permit-exempt well withdrawal system limited to withdrawing no more than 5,000 gallons per day.
  - Applicants for building permits and subdivisions of land shall demonstrate that sufficient water is both legally and actually available to serve the proposed uses and activities including providing water necessary for fire protection.
  - The sources of water for building permits and subdivisions of land shall not interfere with required minimum instream flows and senior water rights.
  - The densities adopted in the zoning regulations shall be consistent with available water supplies.
  - Increases in density shall only be approved if sufficient water is both legally and actually available and the sources will not interfere with required minimum instream flows and senior water rights.
  - Sufficient water shall be reserved to maintain the agricultural industry in Okanogan County.

### Require that conditional uses comply with the Planning Enabling Act and be compatible with the uses in the vicinity

The Planning Enabling Act, in RCW 36.70.020(7), defines a conditional use to mean

a use listed among those classified in any given zone but permitted to locate only after review by the board of adjustment, or zoning adjustor if there be such, and the granting of a conditional use permit imposing such performance standards as will make the use compatible with other permitted uses in the same vicinity and zone and assure against imposing excessive demands upon public utilities, provided the county ordinances specify the standards and criteria that shall be applied.

Okanogan County plans under the Planning Enabling Act and must comply with RCW 36.70.020(7). The Planning Enabling Act requires that conditional uses must be compatible with the other permitted uses in the vicinity and zone and assure against imposing excessive demands upon public utilities. But the conditional use standards in proposed OCC 17A.310.080, 17A.310.090, and 17A.310.100 do not include these requirements. For example both proposed OCC 17A.310.080 and OCC 17A.310.090 require compatibility with the uses on the same property as the conditional use, but not with other permitted uses in the vicinity

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<sup>50</sup> Proposed OCC 17A.050.110 and 17A.060.110

<sup>51</sup> *Okanogan County, Washington Community Wildfire Protection Plan* p. 88 (2013).

and the same zone as RCW 36.70.020(7) requires. This is both illegal and one-sided. Why should compatibility be required with uses on the same property, but not with uses on the neighboring properties? This is especially important when you remember the Minimum Requirement, Rural 1, Rural 5, and Rural 20 zones allow such potentially damaging uses as acid manufacturing, explosive manufacturing or storage, asphalt batch plants, petroleum bulk plants, auto wrecking yards, and junk yards as conditional uses.<sup>52</sup> And the decision maker only has to consider the standards in OCC 17A.310.080, they are not requirements for issuing a conditional use permit. The potential conditions listed in proposed OCC 17A.310.100 are only examples and are not required. These failures also violate RCW 36.70.020(7). Further, the conditions should not be onerous at all. So we recommend the following modifications to proposed OCC 17A.310.080 with our additions underlined and our deletions struck through.

#### **17A.310.080 Standards and criteria**

The hearing examiner or board of adjustment ~~shall~~ may allow a conditional use if all of ~~consider~~ the following standards and criteria ~~are met in evaluating the conditional use permit:~~

- A. That the conditions imposed are reasonably calculated to insure the proposed conditional use is and will remain compatible with the comprehensive plan, zoning for the subject area, other land use actions including but not limited to plats, planned developments, and other conditions use permits; and
- B. That the proposed activity is and will remain compatible with current and future uses on the subject property; and
- C. The required performance standards and conditions will make the conditional use compatible with other existing and permitted uses in the same vicinity and zone ~~That such conditions are not unnecessarily onerous;~~ and
- D. That the proposed conditions will protect the public health, morals and general welfare, and environment; and
- E. The required performance standards and conditions will assure the conditional uses will not imposing excessive demands upon public facilities, utilities, and services including the adopted transportation level of service standards.

The required performance standards and conditions shall be recorded in the real property records of Okanogan County as requirements applicable to the imposed through a CUP be recorded with the title of the property for which the permit is issued.

#### **Retain the current landscape requirements and limit impervious surfaces**

Tourism and outdoor recreation are important parts of the Okanogan County economy. A recent study estimates the expenditures from outdoor recreation in Okanogan County total \$222,002,000.<sup>53</sup> These expenditures contributed \$151,343,000 and 1,819 jobs to the Okanogan

<sup>52</sup> Proposed OCC 17A.220.010.

<sup>53</sup> Tania Briceno and Greg Schundler, *Economic Analysis of Outdoor Recreation in Washington State* p. 83 (Earth Economics, Tacoma, WA: 2015) accessed on March 24, 2016 at: <http://www.rco.wa.gov/documents/ORTF/EconomicAnalysisOutdoorRec.pdf> and enclosed with the paper original of this letter.

County economy.<sup>54</sup> They also generate \$18.6 million in state and local taxes.<sup>55</sup> Maintaining the county's attractiveness is necessary to maintain this industry and community's quality of life.

There are no limits on lot coverage or impervious surfaces for the Minimum Requirement, Rural 1, Rural 5, or Rural 20 zones.<sup>56</sup> These zones cover most of unincorporated Okanogan County. So uses can cover the entire lot with buildings and pavement. This is out of character with the county and can reduce the quantity of ground water recharge on which many Okanogan County residents and businesses depend for their water supplies.<sup>57</sup>

To address these problems, we recommend that current landscaping requirements Chapter 17.27 OCC be retained. We also recommend that impervious surfaces in the Minimum Requirement, Rural 1, Rural 5, or Rural 20 zones be limited to ten percent with an exception for existing lots smaller than two acres.

### Amend proposed OCC 17A.330.010 to comply with and not violate the state platting statutes

Boundary line adjustments are regulated by the state subdivision statutes. RCW 58.17.040(6) exempts the following from the requirement to be reviewed and approved as a long or short subdivision:

A division made for the purpose of alteration by adjusting boundary lines, between platted or unplatted lots or both, which does not create any additional lot, tract, parcel, site, or division nor create any lot, tract, parcel, site, or division which contains insufficient area and dimension to meet minimum requirements for width and area for a building site[.]

As you can see from RCW 58.17.040(6), to be a legal boundary line adjustment the resulting lots must contain sufficient area and dimension to meet the minimum lot sizes and widths in the county zoning regulations.<sup>58</sup> However, proposed OCC 17A.330.010 specifically authorizes violations of RCW 58.17.040(6) which, of course, is illegal. So the provisions of RCW 58.17.040(6) which purport to allow boundary line adjustments to reduce the size of lots below the zoning minimum lots sizes and lot widths must be modified and deleted.

In addition, we support the Methow Valley Citizens Council recommendation to only allow single family dwellings, customary accessory buildings (including dwelling units), pre-existing uses, and agriculture and forestry on legally created lots that are nonconforming as to size. The Methow Valley Citizens Council detailed comments explain why this recommendation should be followed.<sup>59</sup>

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<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> Proposed OCC 17A.030.090; proposed OCC 17A.040.090; proposed OCC 17A.050.090, and proposed OCC 17A.060.090.

<sup>57</sup> Laurie Morgan, *Critical Aquifer Recharge Areas Guidance Document* p. 6 (Washington State Department of Ecology, Water Quality Program: Jan. 2005, Publication Number 05-10-028).

<sup>58</sup> *Island Cty. v. Dillingham Dev. Co.*, 99 Wn. 2d 215, 222 – 23, 662 P.2d 32, 37 (1983).

<sup>59</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps "10."

Our recommended additions are underlined and our recommended deletions are struck through:

**17A.330.010 Legal pre-existing lots**

~~These uses and structures which are permitted or conditional on a conforming lot within a zone district shall also be permitted or conditional on a~~ legal pre-existing lot may be used for single family dwellings, customary accessory buildings (including dwelling units), pre-existing uses, and agriculture and forestry where those uses are allowed by the zone in which the lot is located within the same zone. Legal pre-existing lots which do not meet lot area and width requirements may not be reduced in size by use of the boundary line adjustment process (OCC 16.04.080). ~~These provisions shall apply even though such lot fails to meet the density requirements of the zone district, providing the lot meets current health district requirements for water and sewer.~~

**The Neighborhood Commercial (NC) zones should be limited to existing commercial areas and the areas of documented need**

The proposed Okanogan County Zoning – Draft – 10/15/2015 map dramatically expands the Neighborhood Commercial (NC) zones, which allow high-density apartments and commercial use beyond the existing commercial areas. The *Methow Valley Citizens' Council* estimates these expansions as follows:

- Loomis—4 square miles
- Chesaw—more than 2 square miles
- Molson—1 square mile
- Monse and Malott— ½ mile by 1 mile
- Methow—almost 80 acres on each side of highway

As was documented above,<sup>60</sup> Okanogan County lacks the water to serve these areas. It also lacks the sewer services these densities require. There is also no need for such dramatic expansions and so we recommend they be limited to the existing commercial areas and the areas of documented need.

**Designate and conserve agricultural and forest land of long-term commercial significance**

The Washington State Employment Security Department has documented that the “[a]griculture is a very important sector for Okanogan County, which mainly consists of various tree fruits and wheat.”<sup>61</sup> Agriculture is Okanogan County’s largest employer, providing jobs to 16 percent of county residents.<sup>62</sup> “In 2007, agriculture, forestry, fishing and hunting

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<sup>60</sup> See page 2 of this letter.

<sup>61</sup> Mark A. Berreth, *Okanogan County Profile* p. 1 of 5 (Washington State Employment Security Department: Updated May 2012) and enclosed with the paper version of this letter.

<sup>62</sup> Marcy Stamper, *County to use public land base to satisfy state call for agriculture, resource lands* Methow Valley News Online (09-28-2010 | Volume: 108 | Issue: 19) enclosed with the paper version of this letter.

paid an annual average of \$35,305 ...”<sup>63</sup> This was a higher annual wage than those in the construction industry, although not as high as manufacturing workers who earned an average of \$37,302.<sup>64</sup> Many of these manufacturing workers process agricultural and forest products.

Okanogan County has 129,232 acres in cropland and 78,819 acres in harvested crop land.<sup>65</sup> The county has 1,205,285 acres of land in farms.<sup>66</sup> In 2012, the county had 35,471 head of cattle and calves.<sup>67</sup> The county also had 1,527 head of sheep and lambs,<sup>68</sup> and 3,929 laying hens.<sup>69</sup>

Unlike residential uses which cost a county more than then they produce in taxes, farms and forestry generate more in taxes than they require in public services. As the *Washington Agriculture Strategic Plan 2020 and Beyond* documents,

For each \$1 paid in taxes by farm and forest lands in that [Skagit] county, those lands received back about 51 cents in services, contributing a 49 cent subsidy for the rest of the taxpayers in the county. For every \$1 paid in taxes by residential properties, those properties received \$1.25 in public services.<sup>70</sup>

Despite these impressive economic contributions, Okanogan County has not designated a single acre of agriculture lands of long-term commercial significance despite the Growth Management Act’s requirement that the county do so by September 1, 1991.<sup>71</sup> The county should designate these lands. Futurewise’s January 29, 2015, letter to the Okanogan County Board of Commissioners on the Okanogan County Comprehensive Plan for the February 2, 2015 Public Hearing explains how to designate agricultural lands and is enclosed with the paper original of this letter.

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<sup>63</sup> T. Baba Moussa, *Okanogan County Profile* p. 5 of 6 (Washington State Employment Security Department: January 2009) enclosed with the paper original of this letter.

<sup>64</sup> *Id.*

<sup>65</sup> United States Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series • Part 47 AC-12-A-47* Chapter 2: County Level Data, Table 8. Farms, Land in Farms, Value of Land and Buildings, and Land Use: 2012 and 2007 p. 274 (May 2014) accessed on March 24, 2016 at:

[http://www.agcensus.usda.gov/Publications/2012/Full\\_Report/Volume\\_1\\_Chapter\\_2\\_County\\_Level/Washington/wav1.pdf](http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1_Chapter_2_County_Level/Washington/wav1.pdf) A copy of Chapter 2 and the appendices are enclosed with the paper version of this letter.

<sup>66</sup> *Id.*

<sup>67</sup> United States Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series • Part 47 AC-12-A-47* Chapter 2: County Level Data, Table 11. Cattle and Calves – Inventory and Sales: 2012 and 2007 p. 294 (May 2014).

<sup>68</sup> United States Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series • Part 47 AC-12-A-47* Chapter 2: County Level Data, Table 13. Sheep and Lambs – Inventory, Wool Production, and Sales: 2012 and 2007 p. 309 (May 2014).

<sup>69</sup> United States Department of Agriculture, National Agricultural Statistics Service, *2012 Census of Agriculture Washington State and County Data Volume 1 • Geographic Area Series • Part 47 AC-12-A-47* Chapter 2: County Level Data, Table 19. Poultry – Inventory and Sales: 2012 and 2007 p. 319 (May 2014).

<sup>70</sup> Washington State Department of Agriculture, *Washington Agriculture Strategic Plan 2020 and Beyond* p. 53 (2009) accessed on March 24, 2016 at: <http://agr.wa.gov/fof/> and cited pages enclosed with the paper original of this letter.

<sup>71</sup> RCW 36.70A.170(1).

September 1, 1991, was also the deadline for the county to designate forest land of long-term commercial significance, a second deadline the county has missed.<sup>72</sup> The county should also designate these economically valuable lands. Futurewise's January 29, 2015, letter to the Okanogon County Board of Commissioners on the Okanogon County Comprehensive Plan for the February 2, 2015 Public Hearing also explains how to designate forest lands of long-term commercial significance.

### Do not increase densities in the area formerly covered by the Molson Overlay

We support the Methow Valley Citizens Council recommendation not to increase density in the former Molson Overlay for the reasons they explain.<sup>73</sup>

### Do not allow accessory dwelling units on lots smaller than one acre

We support the Methow Valley Citizens Council recommendation not to allow accessory dwelling units on lots smaller than one acre outside of areas planned for urban development. The Methow Valley Citizens Council detailed comments explain why existing regulations prohibit accessory dwelling units on one acre or smaller lots outside areas planned for urban growth.<sup>74</sup>

### The special development provisions currently in the Methow planning area zones should not be repealed

We strongly support the Methow Valley Citizens Council recommendation that the special development provisions currently in the Methow planning area zones should not be repealed. These provisions have been in place for years and have made the Methow a popular outdoor recreation area and protected its agricultural industry. The existing provisions have contributed to the county economy and tax base. As was documented above, outdoor recreation brings \$222 million and 1,819 jobs to the Okanogon County economy.<sup>75</sup> Keeping the Methow attractive and functioning for agriculture and outdoor recreation is import to maintain this income and these jobs. The Methow Valley Citizens Council's detailed comments provide more explanation as to why these successful and time-tested provisions should not be repealed as is currently being proposed.<sup>76</sup>

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<sup>72</sup> *Id.*

<sup>73</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps "7. A variety of changes under the draft Zone Code would substantially increase density in the former Molson Overlay and should be revised."

<sup>74</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps "9. Accessory housing units should not be allowed on legal pre-existing lots less than one acre in area."

<sup>75</sup> Tania Briceno and Greg Schundler, *Economic Analysis of Outdoor Recreation in Washington State* p. 83 (Earth Economics, Tacoma, WA: 2015).

<sup>76</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps "13. Special development provisions listed under the Methow planning area zones should be restored."

The setbacks for the Rural 1, Rural 5, and Rural 20 zones should not be weakened

We support the Methow Valley Citizens Council recommendation that the setbacks for the Rural 1, Rural 5, and Rural 20 zones should not be weakened. The Methow Valley Citizens Council detailed comments explain why this recommendation should be followed.<sup>77</sup>

RV parks, campgrounds, hotels, motels, and similar uses should have standards that require a conditional use permit and lots larger than the minimum lot size and appropriate to the intensity of the proposed use

We support the Methow Valley Citizens Council recommendation that RV parks, campgrounds, hotels, motels, and similar uses have standards like the standards in MRD zones countywide including requiring a conditional use permit and lots larger than the minimum lot size and appropriate to the intensity of the proposed use. The Methow Valley Citizens Council detailed comments explain why this recommendation should be followed.<sup>78</sup>

The changes to the District Use Chart (Chapter 17A.220 OCC) should be modified and the dangerous uses not allowed in rural areas where the public facilities and services, including fire services, cannot support them

We support the Methow Valley Citizens Council recommendation that the changes to the District Use Chart (Chapter 17A.220 OCC) should be modified and the dangerous uses not allowed in rural areas. As we documented above, acid manufacturing, explosive manufacturing and storage, petroleum bulk plants, and junk yards, just to name a few, are conditional uses in the Minimum Requirement, Rural 1, Rural 5, and Rural 20 zones.<sup>79</sup> In a wildfire, how would the overburdened fire districts, state agencies, and federal agencies even protect these facilities? They cannot protect the existing residences in the “‘interface’ between urban and suburban areas and unmanaged forest and rangelands” now.<sup>80</sup> Imagine the damage to neighboring properties from a wildfire burning an explosive manufacturing or petroleum bulk plant on a one acre or five acre lot. These uses need to be dropped from these zones. The Methow Valley Citizens Council detailed comments provide more explanation as to why these recommendations should be followed.<sup>81</sup>

Thank you for considering our comments. If you require additional information please contact me at 206-343-0681 Ext. 118 or [tim@futurewise.org](mailto:tim@futurewise.org).

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<sup>77</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps “16. Setback requirements in the rural zones (R1, R5, R20) should not be reduced, as outlined under the proposed code. Zoning Code setback requirements and lot coverage limits should be reviewed for all zones to better conform to rural conditions and mitigate impacts to groundwater recharge.”

<sup>78</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps “17. Outside Methow planning area, density of RV parks, campgrounds, hotels, motels, etc. is determined by Okanogan County Health District standards for on-site treatment.”

<sup>79</sup> Proposed OCC 17A.220.010.

<sup>80</sup> *Okanogan County, Washington Community Wildfire Protection Plan* p. 88 (2013).

<sup>81</sup> See MVCC Comments and Recommendations on the Draft Zone Code and Maps “19. New uses added and other changes made to the District Use Chart (Chapter 17A.220) raise concerns. Agricultural related industry should be made a conditional use.”

Okanogan County Regional Planning Commission  
March 25, 2016  
Page 17

Very Truly Yours,

A handwritten signature in blue ink, consisting of two stylized, overlapping 'S' shapes.

Tim Trohimovich, AICP  
**Director of Planning & Law**

Enclosures

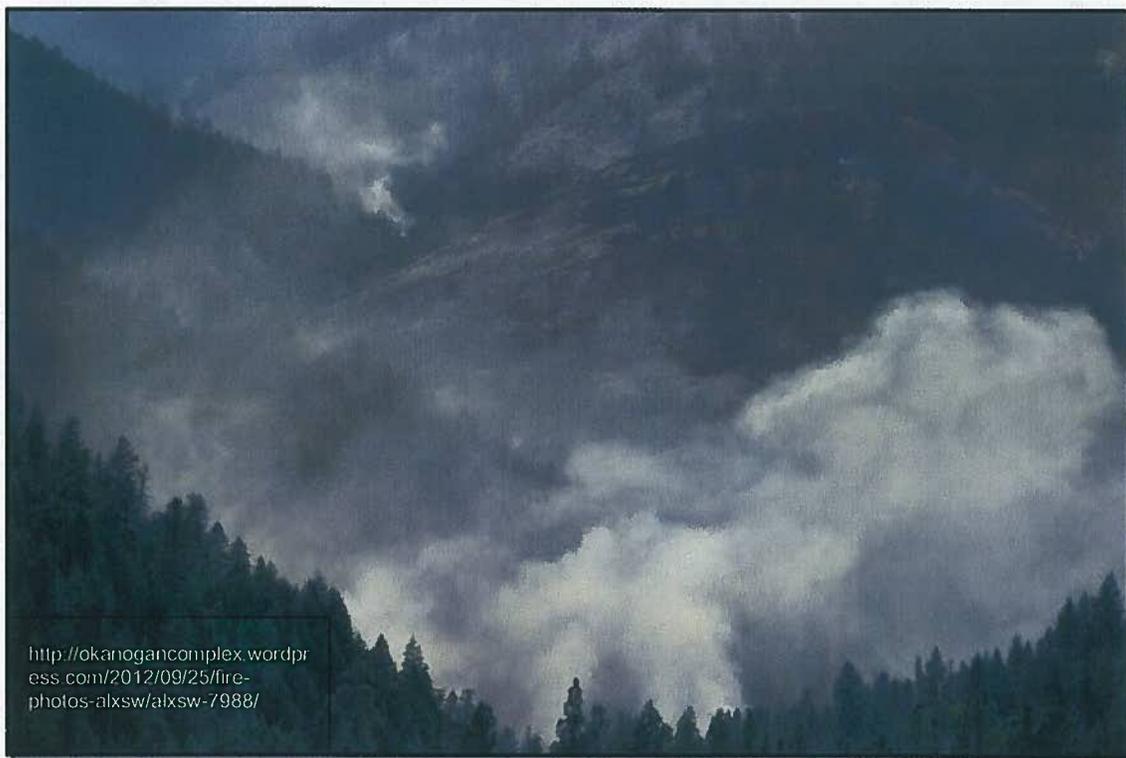


# Okanogan County, Washington

## Community Wildfire Protection Plan

**2013**

UPDATE



<http://okanogancomplex.wordpress.com/2012/09/25/fire-photos-alexsw/alexsw-7988/>

***Buckhorn Fire, Okanogan County, Washington – September 2012***

This plan was developed by the Okanogan County Community Wildfire Protection Plan committee in cooperation with the Okanogan County Department of Emergency Management, Washington Department of Natural Resources, and Northwest Management, Inc.

## Fire Protection Issues

The following sections provide a brief overview of the many difficult issues currently challenging Okanogan County in providing wildland fire protection to citizens. These issues were discussed at length both during the committee process and at several of the public meetings. In most cases, the committee has developed action items (see Chapter 6) that are intended to begin the process of effectively mitigating these issues.

### Residential Growth

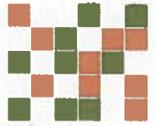
One challenge Okanogan County faces is the large number of houses in the urban/rural fringe compared to twenty years ago. Since the 1970s, a segment of Washington's growing population has expanded further into traditional forest or resource lands and other rural areas. The "interface" between urban and suburban areas and unmanaged forest and rangelands created by this expansion has produced a significant increase in threats to life and property from fires and has pushed existing fire protection systems beyond original or current design or capability. Many property owners in the interface are not aware of the problems and threats they face and owners have done very little to manage or offset fire hazards or risks on their own property. Furthermore, human activities increase the incidence of fire ignition and potential damage.

*It is one of the goals of this document to help educate the public on the ramifications of living in the wildland-urban interface, including their responsibilities as landowners to reduce the fire risk on their property and to provide safe access to their property for all emergency personnel and equipment. Homeowners building in a high fire risk area must understand how to make their properties more fire resistant using proven firesafe construction and landscaping techniques and they must have a realistic understanding of the capability of local fire service organizations to defend their property.*

### Rural Fire Protection

People moving from urban to more rural areas frequently have high expectations for structural fire protection services. Often, new residents do not realize they that the services provided are not the same as in an urban area. The diversity and amount of equipment and the number of personnel can be substantially limited in rural areas. Fire protection may rely more on the landowner's personal initiative to take measures to protect his or her property. Furthermore, subdivisions on steep slopes and the greater number of homes exceeding 3,000 square feet are also factors challenging fire service organizations. In the future, public education and awareness may play a greater role in rural or interface areas. Great improvements in fire protection techniques are being made to adapt to large, rapidly spreading fires that threaten large numbers of homes in interface, rural, and remote developments.

In most western states, state and federal agencies that have wildland fire protection responsibilities have launched a campaign to reiterate to the public that they do not provide structural fire protection. Much of the increasing costs of wildland fires can be directly related to the increasing number of structures in the wildland urban interface. State and federal agencies are trying to make it clear to the public that land and homeowners are responsible for reducing the fire risk on their property and that the agencies are not responsible for or required to provide structural protection.



## A guide to Firewise principles

THE FIREWISE COMMUNITIES PROGRAM provides homeowners with simple and easy steps to help reduce a home's wildfire risk by preparing ahead of a wildfire. These steps are rooted in principles based on solid fire science research into how homes ignite. The research comes from the world's leading fire experts whose experiments, models and data collection are based on some of the country's worst wildland fire disasters.

Below are Firewise principles and tips that serve as a guide for residents:

**When it comes to wildfire risk, it is not a geographical location, but a set of conditions that determine the home's ignition potential in any community.**

Wildfire behavior is influenced by three main factors: topography (lie of the land), weather (wind speed, relative humidity and ambient temperature) and fuel (vegetation and man-made structures). In the event of extreme wildfire behavior, extreme weather conditions are normally

present, like extended drought, high winds, low humidity and high temperatures, coupled with excess fuel build up including the accumulation of live and dead vegetation material. Additionally, the inherent lie of the land influences the intensity and spread a fire takes. Fires tend to move upslope, and the steeper the slope the faster it moves.

Of these three factors, **fuel** is the one we can influence.

Debris like dead leaves and pine needles left on decks, in gutters and strewn across lawns can ignite from flying embers. Fire moving along the ground's surface can "ladder" into shrubs and low hanging tree limbs to create longer flames and more heat. If your home has flammable features or vulnerable openings, it can also serve as fuel for the fire, and become part of a disastrous chain of ignitions to other surrounding homes and structures.

**A home's ignition risk is determined by its immediate surroundings or its "home ignition zone" and the home's construction materials.**

According to fire science research and case studies, it's not where a home is located that necessarily determines ignition risk, but the landscape around it, often referred to as the "home ignition zone." The home ignition zone is defined as the home and its immediate surroundings up to 200 feet (60 m).

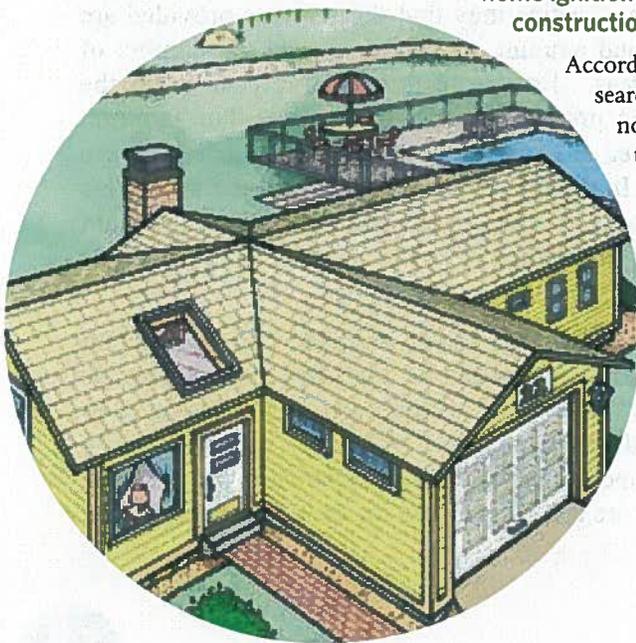
The Firewise Communities Program provides tips for reducing wildfire risk based on the home ignition zone concept:

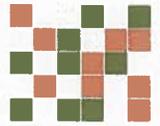
**Home Zone:** Harden your home against wildfire. This includes fences, decks, porches and other attachments. From the point of view of a fire, if it's attached to the house it is a part of the house. Non-flammable or low flammability construction materials—especially for roofs, siding and windows—are recommended for new homes or retrofits. Keep any flammables, including plantings and mulch out of the area within 5 feet of your home's perimeter.

**Zone 1:** This well-irrigated area encircles the structure for at least 30 feet on all sides including decks and fences, and provides space for fire suppression equipment in the event of an emergency. Lawns should be well maintained and mowed. Plantings should be limited to carefully-spaced low flammability species. In particularly fire prone areas, non-flammable mulch should be considered.

**Zone 2:** This area encircles 30 - 100 feet from the home. Low flammability plant materials should be used here. Plants should be low-growing and the irrigation system should extend into this section. Shrubs and trees should be limbed up and spaced to prevent crowns of trees from touching.

**Zone 3:** This area encompasses 100 - 200 feet from the home. Place low-growing plants and well-spaced trees in this area, remembering to keep the volume of vegetation (fuel) low.





**Zone 4:** This furthest zone from the structure is a natural area. Selectively prune and thin all plants and remove highly flammable vegetation.

**Homeowners can and must take primary responsibility for wildfire safety action around the home.**

There are not enough fire fighting resources to protect every house during severe wildfires, and with shrinking budgets it means we need to do more with less. Fire fighters are trained to safely and efficiently suppress wildland fires, but their effectiveness is reduced when they must sweep decks, move wood piles and patio furniture while trying to fight a fire. According to fire science research, individual efforts do make a difference even in the face of a catastrophic wildfire.

The following steps are outlined by the Firewise program to reduce home ignition risk, based on this principle:

- Prune low hanging limbs to reduce ladder fuels
- Clean roofs and gutters of pine needles and dead leaves
- Keep flammable plants and mulches at least 5 feet away from your home's perimeter
- Use low-growing, well pruned and fire-resistant plants around home
- Screen or box-in areas below patios and decks with wire screening no larger than 1/8-inch mesh
- Sweep decks and porches clear of fallen leaves
- Move woodpiles away from the home during non-winter months
- Bring doormats and furniture cushions inside when an area is threatened by a wildfire

- Close garage doors when leaving your home in the event of an evacuation

**We all have a role to play in protecting ourselves and others.**

Your home ignition zone extends up to 200 feet—and it's quite common to have neighbors whose home ignition zone overlaps yours. Buildings closer than 100 feet apart can ignite one another if they are in flames. In addition, many communities have commonly owned property, including natural or wooded areas that can pose fire risks to all. This means that to be most effective, neighbors need to work together and with their local fire service to achieve greater wildfire safety.

Together, community residents can work with agencies and elected officials to accomplish the following:

- Ensure that homes and neighborhoods have legible/clearly marked street names and numbers
- Create "two ways out" of the neighborhood for safe evacuation during a wildfire emergency
- Create phone trees to alert residents about an impending fire
- Review any existing community rules or regulations on vegetation management and construction materials to see if they are "Firewise-friendly"
- Use the "Ready, Set, Go!" program with the fire department to educate neighbors
- Use the Firewise Communities/USA® Recognition Program to create and implement an ongoing action plan that will also earn the neighborhood national recognition for their efforts

**LEARN MORE** about how to keep families safe and reduce homeowners' risk for wildfire damage at [www.firewise.org](http://www.firewise.org).

**ADDITIONALLY,** complimentary brochures, booklets, pamphlets, videos and much more can be found on the information and resources page of the website and ordered online through the Firewise catalog.



