

Ordinance 801 Public Testimony

August 18, 2015 Board of Commissioners Public Hearing

August 5, 2015

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Mr. A. Richard Vial, Chair
Washington County Planning Commission
155 N. First Avenue, Suite 350
Hillsboro, OR 97124



**Re: Proposed Ordinance No. 801; Response to Issues Raised at July 15, 2015
Washington County Planning Commission Hearing**

Dear Chair Vial and Members of the Washington County Planning Commission:

This office represents K & R Holdings, LLC ("K & R"). This letter is written on behalf of K & R in response to issues raised at the July 15, 2015 initial evidentiary hearing on proposed Ordinance No. 801.

I. Introduction.

The Planning Commission opened the first hearing on this legislative amendment on July 15, 2015. The Planning Commission gave proper notice to the Oregon Department of Land Conservation and Development ("DLCD") and the Metropolitan Service District ("Metro") prior to the first hearing. The Planning Commission, with a quorum present, took testimony from those interested in proposed Ordinance No. 801. Commissioner Wellner declared that he would recuse himself from participation and voting on the proposed Ordinance.

At the conclusion of public testimony, the Planning Commission continued the public hearing to August 5, 2015 at 1:30 p.m.

II. The Planning Commission Should Adopt Proposed Ordinance No. 801 and Change the Buffer for Several Reasons.

Much of the testimony heard by the Planning Commission against the ordinance focused on why the existing buffer should be retained for reasons other than compatibility between urban and farm and forest uses. For the reasons explained below, the Planning Commission should recommend to the Washington County Board of Commissioners (the "Board") that proposed Ordinance No. 801 be adopted.

- **The existing buffer is unnecessarily wide to achieve its purpose of compatibility.**

Much of the testimony by those opposed to proposed Ordinance No. 801 argued that the existing buffer should be maintained. The existing buffer is shown in **Exhibit 1** (slide from the Staff Report). Several persons testified that the existing buffer should be retained because of its

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environmental benefits. In fact, environmental issues are addressed by relevant Washington County Community Plan (the “Plan”) provisions and Washington County Community Development Code (“CDC”) land use regulations. These include North Bethany General Design Element 5(a), provision of trails; General Design Element 14, compliance with North Bethany Drainage Master Plan; and General Design Element 15, compliance with CDC and Washington County Code landslide hazard requirements.

Additionally, Northwest Neighborhood Design Element 3 requires trails and pedestrian connections to meet THPRD standards.

The North Bethany Plan contains two (2) maps assuring that certain areas shall be protected: the “Density-Restricted Lands” map adjacent to the UGB and the “Landslide Study Areas” map.

CDC Chapter 410, “Grading and Drainage”, requires that development address grading and drainage requirements and hazard areas, such as landslides. CDC Chapter 421, “Floodplain and Drainage Hazard Area Development”, requires that drainage hazard area standards be addressed during development. CDC Section 501-12, “Standards for Development within the North Bethany Subarea Plan”, requires that development provide certain public improvements. These include meeting the standards of CWS’s North Bethany Drainage Master Plan (CDC Section 501-12.2.C(1)) and acquisition by THPRD of any of the subject properties shown on the “Park, Trails, and Pedestrian connections” map of the North Bethany Subarea Plan as the site of a “fixed” park, or a trail.

The purpose of the buffer is to comply with the 2002 Urban Growth Boundary (“UGB”) expansion ordinance condition of approval 6 to assure compatibility between urban uses and farm and forest practices on EFU zoned property. The purpose of the buffer is not environmental protection, nor is it to protect rural residences, nor is it to be used to reduce the amount of housing, or residential density, inside the UGB.

The urban/rural edge map from the Staff Report shows density restricted lands, which assures that low density residential development will be provided adjacent to the UGB. (**Exhibit 2**). The proposed Ordinance will not increase residential density.

- **The purpose of the buffer is not to implement non-compatibility issues.**

The purpose of the buffer is to implement condition of approval 6, which is to ensure compatibility. While the existing buffer is wide, it has no mandated landscaping requirement, as does proposed Ordinance No. 801. Issues such as school capacity, residential density, environmental constraint, and coordination with Clean Water Services (“CWS”) and Tualatin Hills Park and Recreation (“THPRD”) are addressed through either Plan provisions or CDC land use regulations.

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The Planning Commission can find that the CDC and the Plan assure that the applicant will make necessary public improvements and will take necessary and prudent development steps to see that the site is appropriately developed.

- **The existing buffer is not as effective as the proposed 50-foot wide buffer with a fence and mandated landscaping requirements in a tract in assuring compatibility and, consequently, the existing buffer takes land from property owners that could be otherwise developed at appropriate densities for residential housing inside the UGB.**

The UGB is intended to meet the Portland Metropolitan area's housing needs. While it is important that urban uses be compatible with adjacent farm and forest uses as required by Statewide Planning Goal ("Goal") 3, there is no basis to arbitrarily reduce the amount of housing available inside the UGB, especially where there is no proven benefit to assuring compatibility as is the case with the existing buffer.

Exhibit 3 is a July 30, 2015 letter from Matt Sprague of Pioneer Design Group. Mr. Sprague's letter explains why the facts support a finding that the proposed Ordinance is superior to the existing buffer.

For all of these reasons, the Planning Commission can find that proposed Ordinance No. 801 fulfills the requirement of condition of approval 6 to assure compatibility between urban uses and forest and farm uses, while increasing the amount of land available at an appropriate density for residential development inside the UGB and existing regulations assure that public infrastructure would be provided and hazard areas will be mitigated as necessary.

III. Response to Issues Raised at July 15, 2015 Public Hearing.

A. Testimony by Martha Moyer.

Ms. Moyer testified that the proposed buffer would result in more houses. That issue is irrelevant to the Planning Commission's task, which is to determine whether proposed Ordinance No. 801 assures compatibility between urban uses and farm and forest practices. Some additional dwelling units will be allowed by the change in the buffer but at the planned low-density that now exists.

Ms. Moyer also asserted the existing buffer is the result of a "compromise", without explaining the basis for that statement.

Finally, Ms. Meyer urged the Planning Commission to vote in the "best interest" of the Bethany Community and neighbors. In fact, the Planning Commission must decide its recommendation on proposed Ordinance No. 801 based on whether it fulfills condition of approval 6.

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B. Testimony by Jeanine Rustead of THPRD.

Ms. Rustead said that she had an initial conversation with K & R and that while the conversation was promising, has not concluded.

Chair Vial asked Ms. Rustead if she saw increased cost to THPRD as a result of the proposed ordinance and she said that she did not.

C. Testimony by Carol Chesarek.

Ms. Chesarek argued without any supporting substantial evidence that the 300-foot buffer would result in “more noise” and that it would affect adjacent equestrian facilities.

First, there is no evidence that noise will be mitigated based on the existing buffer, or the proposed 50-foot buffer. However, K & R submitted a letter from a landscape architect in which the landscape architect stated that the proposed landscape buffer would be an effective mitigation for a number of impacts including noise.

Ms. Chesarek asked for additional plantings within the buffer. The letter from the landscape architect submitted on behalf of K & R concludes that the recommended landscaping plantings in proposed Ordinance No. 801 are adequate to assure compatibility.

Finally, Ms. Chesarek asserted that street stubs are not to be allowed next to the rural area. Proposed Ordinance No. 801 requires that the landscape buffer be inside a tract, which means that a street stub will not be able to be located next to the UGB.

D. Testimony by Joe Rayhawk.

Mr. Rayhawk raised a number of issues, none of which is a compelling reason for the Planning Commission not to recommend the adoption of proposed Ordinance No. 801.

First, he asserted that proposed Ordinance No. 801 will result in an increase in untreated stormwater. As the Planning Commission knows, to the extent any of the area now in the buffer is developed, the applicant must meet stringent requirements for stormwater runoff. Moreover, Oregon law prohibits increased flow onto adjacent properties in a way that would damage those properties.

Mr. Rayhawk also asserted the reduced buffer would result in conditions too dangerous for equestrians to ride horses on his property and that horses are sensitive to noise. However, it is likely that Mr. Rayhawk’s horses already hear noise from traffic on NW Germantown Road and NW Kaiser Road and Mr. Rayhawk's other activities. Moreover, the Planning Commission can

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find that the increased and intensive plantings required by proposed Ordinance No. 801 will be more effective than a wider buffer width without required plantings.

Mr. Rayhawk has asserted that a number of the Statewide Planning Goals (the "Goals") are not satisfied. However, he offered no explanation for what basis the Goals are not satisfied. For the reasons explained below, the Planning Commission can find that the County can meet its burden of proof to demonstrate that applicable Goals are satisfied.

1. Goal 1, "Citizen Involvement".

Goal 1 requires that the County adopt and publicize a program for citizen involvement. Washington County has an active citizen participation organization program, provided notice of the legislative amendment to the CPO and the CPO testified and commented on the proposed ordinance.

The Planning Commission can find that Goal 1 is satisfied.

2. Goal 2, "Land Use Planning".

Goal 2 requires the County to establish a land use planning process as a basis for land use decisions. Goal 2 also requires an adequate factual base for land use decisions and that the County coordinate with affected governmental entities as required by ORS 197.015. The County's legislative planning process achieves Goal 2. The evidence before the Planning Commission demonstrates an adequate factual base for recommending that proposed Ordinance No. 801 be adopted by the Board. Finally, the County has coordinated with the affected governmental entities of CWS, THPRD and Metro.

The Planning Commission can find that Goal 2 is satisfied.

3. Goal 3, "Agricultural Lands".

Goal 3 requires the County to preserve and maintain agricultural lands. One of Goal 3's Guidelines requires that urban growth be separated from agricultural lands by a buffer or transitional areas of open space. Goal 3, Guideline A.1. The guideline, however, leaves it to the County to decide the appropriate buffer. In this case, the Planning Commission has substantial evidence before it that proposed Ordinance No. 801 is a satisfactory buffer to achieve both the purposes of Goal 3 and Condition of Approval 6.

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4. Goal 5, “Natural Resources, Scenic, and Historic Areas, and Open Spaces”.

Goal 5 is entitled “Natural Resources, Scenic, and Historic Areas, and Open Spaces”. None of the affected lands are designated as Goal 5 resources. Therefore, Goal 5 is not a basis upon which the Planning Commission can act on proposed Ordinance No. 801.

5. Goal 7, “Areas Subject to Natural Hazards”.

Goal 7 requires the County to protect people and property from natural hazards, which is defined to include, landslides. Goal 7 simply requires that the County plan for natural hazards by adopting Comprehensive Plan policies to reduce the risk to people and property from the identified natural hazards. The Plan is implemented through CDC 410-4, “Landslide Study Area Requirements”. The Planning Commission can find that the County has satisfied Goal 7.

6. Goal 11, “Public Facilities and Services”.

Goal 11 requires the County to plan and develop a timely, orderly, and efficient arrangement of public facilities and services to serve as a framework for urban and rural development. Nothing about proposed Ordinance No. 801 violates Goal 11 and Mr. Rayhawk has not specified how it would.

E. Washington County Citizen Action Network (the “Network”).

The Network said that they shared the same concerns as did Citizen Participation Organization 7. Their representative said that the Planning Commission should not act on the proposed Ordinance until the THPRD, CWS, and Metro issues are resolved. K & R believes the issues raised by THPRD and the two districts can be resolved either before today's continued Planning Commission hearing, or prior to Board of County of Commissioners action.

Failure to act would set a bad precedent that planning related to trail location, park location, sanitary sewer alignment, and storm treatment facility location be completed prior to establishing an urban/rural buffer and prior to development applications. A delay would imply that every time an urban/rural buffer is proposed to be established, the development planning would have to precede the buffer's establishment.

IV. Conclusion.

The Washington County Long Range Planning staff has recommended approval of proposed Ordinance No. 801. The proposed Ordinance provides a mechanism to assure that urban uses are compatible with farm and forest practices on EFU zoned land. Evidence unrelated to

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compatibility is not relevant to the discussion of proposed Ordinance No. 801 because relevant County Plan and CDC provisions adequately address density and development activities.

K & R respectfully requests that the Planning Commission close the public hearing on August 5 and recommend that the Board adopt proposed Ordinance No. 801.

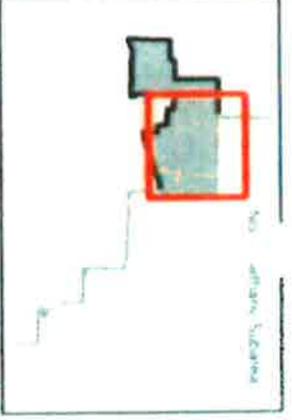
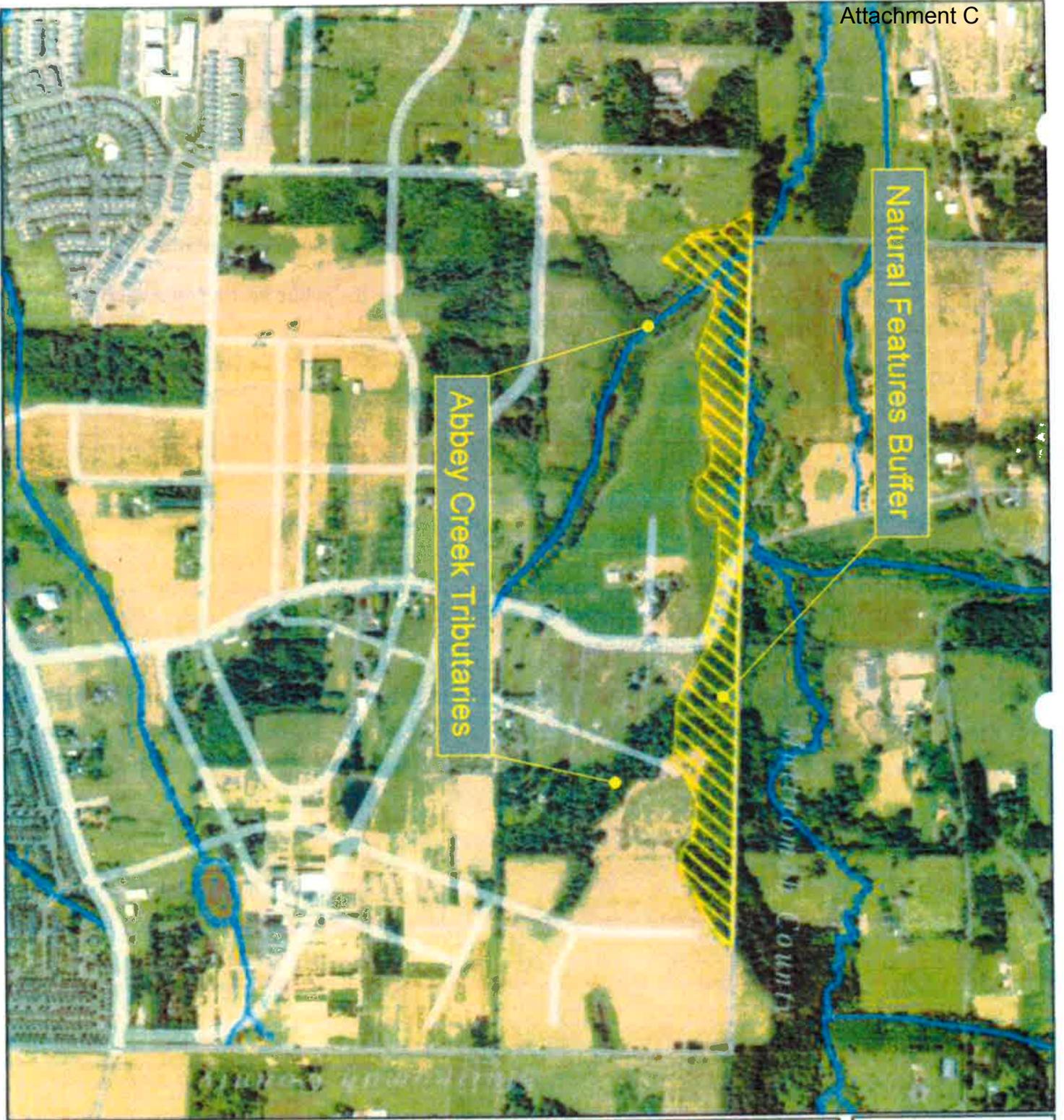
Very truly yours,



Michael C. Robinson

MCR:rsr
Enclosures

cc: Mr. Robert Fraley (via email) (w/ encls.)
Ms. Theresa Cherniak (via email) (w/ encls.)
Mr. Andy Back (via email) (w/ encls.)
Mr. John O'Neil (via email) (w/ encls.)
Mr. John Schmidt (via email) (w/ encls.)
Ms. Nacia Bonilla (via email) (w/ encls.)



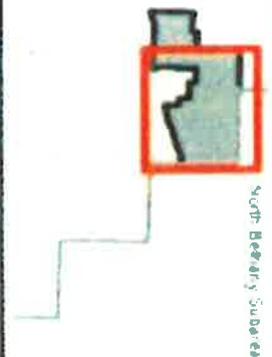
Urban/Rural Edge
MAP

Legend

-  Existing Natural Features Buffer with Fencing
-  County Boundaries
-  Streams



Portions of the trail corridor are shown to illustrate how they define the edge of sections of the Natural Features Buffer area



North Bethany Subarea

Urban/Rural Edge MAP

- 0' to 50' Fence Only Buffer
- Trail Corridor
- Vegetation Buffer with Fencing
- Natural Features Buffer with Fencing
- Density Restricted Lands



North Bethany Subarea - Department of Land Use & Transportation
and Development Services



CIVIL LAND USE PLANNING SURVEY
P 503.643.8286 F 844.715.4743 www.pd-grp.com
9020 SW Washington Square Rd Suite 170
Portland, Oregon 97223

July 30, 2015

A. Rich Vial, Chair
Washington County Planning Commission
155 N. First Avenue, Suite 350
Hillsboro, OR 97124

RE: Urban/Rural Edge Map and Standards

Dear Commission Members:

I am a Land Use Planner and Principal at Pioneer Design Group, Inc. and have been performing subdivision design in Washington County since 1993. Within the North Bethany Sub-Area, our firm has been the applicant's representative for seven projects most of which are under construction this summer totaling 880 residential units. We are also expecting to begin additional North Bethany Sub-Area projects adding approximately 330 more residential units. I have become very familiar with the North Bethany Sub-Area requirements in the Bethany Community Plan and Washington County, Community Development Code Section 390.

I am in favor of a revision to the Urban/Rural Edge Map. I have been analyzing the impacts of the current map on the properties along the north line both east and west of Kaiser Road where the Urban/Rural Edge Map currently requires substantially greater buffer width compared to the remaining planning area boundaries.

The properties most affected have very similar site conditions. They are bound by the Abbey Creek drainage along the northern boundary of the Plan area. Each also has a drainageway running downhill in a northwesterly direction creating ridges of developable land between Abbey Creek and the on-site drainageways. These ridges narrow as they extend northwest. The current Urban/Rural Edge Map further restricts the developable land on the ridges directly impacting efficient use of the land and the ability to provide proper circulation and design.

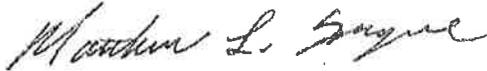
Attached is an exhibit map showing the affected properties, the drainageways, ridges and the preferred and most efficient street network. The street network is shown in blue. This street network could be accommodated with changes to the Urban/Rural Edge Map and Standards.

West of Kaiser Road, my analysis concludes that the current limitation on buffer width will result in either a long, east/west dead end street with additional dead end streets needed to fill out the developable areas or a block resulting in a long row of double frontage lots to accommodate two east/west streets avoiding the dead ends. Both of these types of design is discouraged by Washington County and are costly and inefficient.

A similar situation exists east of Kaiser Road. In this case however the ridge is wider and with changes to the plan, a block system could be created as shown on the attached exhibit without the need to create through lots or dead end streets, which would be the alternative should revisions to the Urban/Rural Edge Map not be approved.

A plan to limit the urban/rural edge to a minimum of 50 feet will allow for efficient design in the affected areas, will improve circulation and will limit dead end streets to the greatest degree possible.

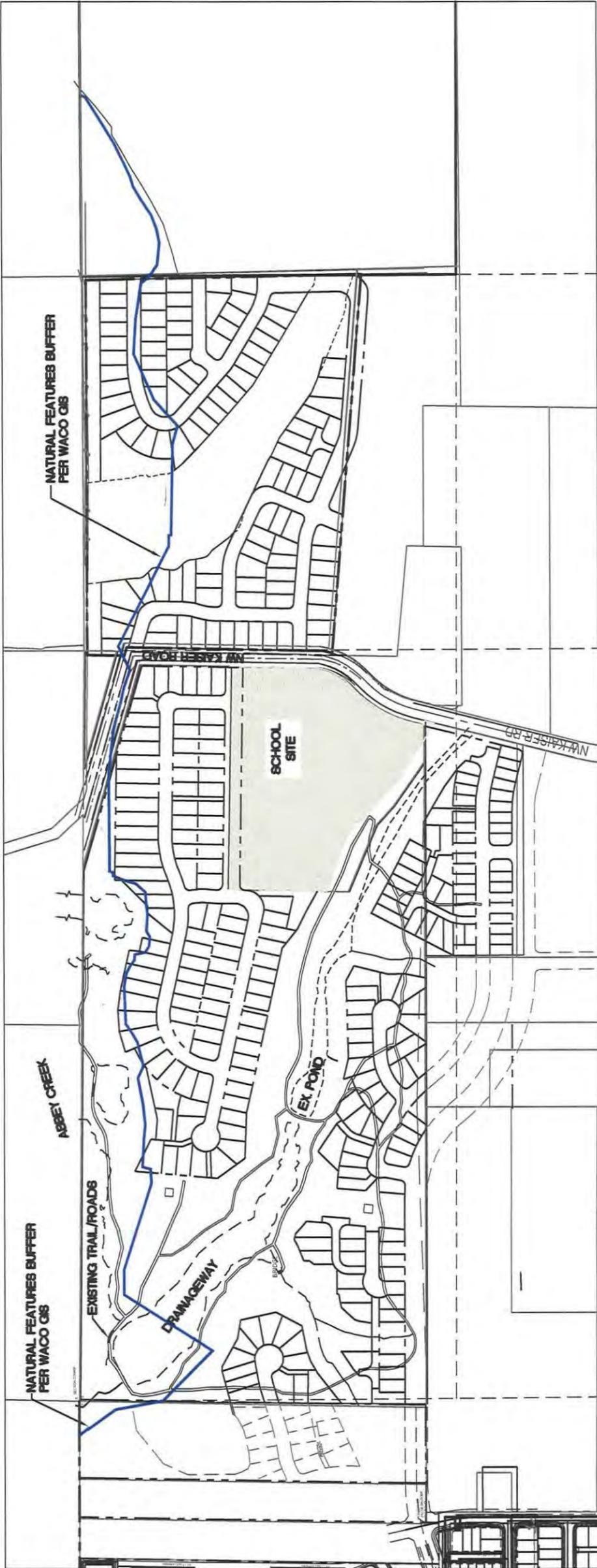
Sincerely,
Pioneer Design Group, Inc.



Matthew L. Sprague
Principal

Attached: Preferred Circulation Plan Exhibit

NORTH BETHANY BUFFER EXHIBIT

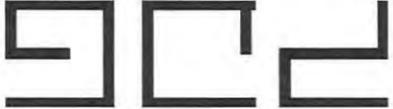


LAYOUTS ARE PRELIMINARY AND MAY CHANGE UPON FURTHER ANALYSIS



SCALE: 1"=200'

Designed by	BEF	Date	05/2015
Drawn by	TSW	Date	05/2015
Reviewed by	BEF	Date	05/2015
Project No.	REF.		
Horiz. Scale:	1"=200' (H)		
Vert. Scale:			



 PIONEER DESIGN GROUP, INC.
 P 503.643.8286
 F 844.715.4743
 www.pdg-grp.com
 SUITE 170
 PORTLAND, OREGON 97223
 9020 SW WASHINGTON SQUARE RD

Agenda Item #: 7.9.1
 Topic: Ordinance No. 801
 Submitted by: John Schmidt hpr
 Mtg / Date: 8/5/2015

Project No.
 Type EXHIBIT
 Sheet



INDIVIDUAL TESTIMONY SIGN-IN FORM

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

WHEN COMPLETED, PLEASE GIVE THIS FORM TO THE CLERK SEATED AT THE DESK TO THE LEFT OF THE PODIUM.

THANK YOU.

801

PLEASE PRINT CLEARLY.

DATE: 8/5/2015

FIRST NAME <u>JOE</u>	LAST NAME <u>RAYHAWK</u>
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ADDRESS: HOME OR BUSINESS (Please check one.)

STREET <u>15249 NW BELMANTOWN ROAD</u>	CITY <u>PORTLAND</u>	ZIP <u>97231</u>
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BRIEFLY STATE YOUR TOPIC:

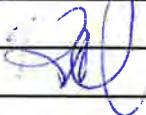
<u>OBJECT TO ORDINANCE 801</u>



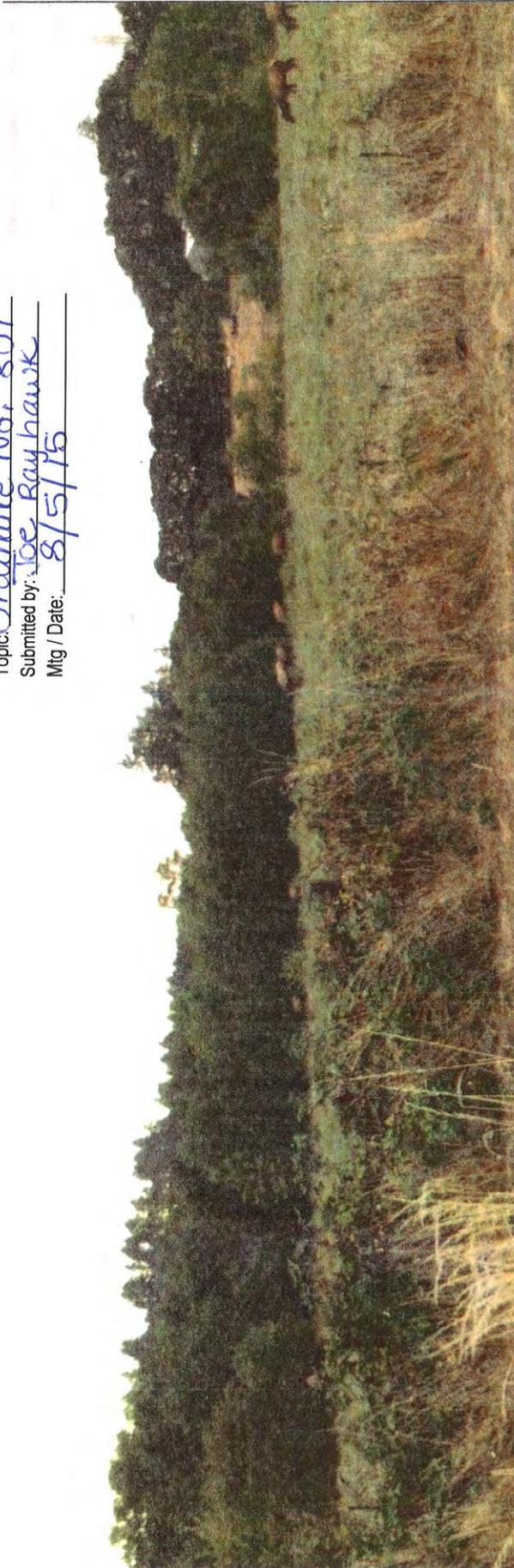
Washington County Planning Commission
 Hearing Sign - In Sheet
 August 5, 2015

ORDINANCE NO. 801

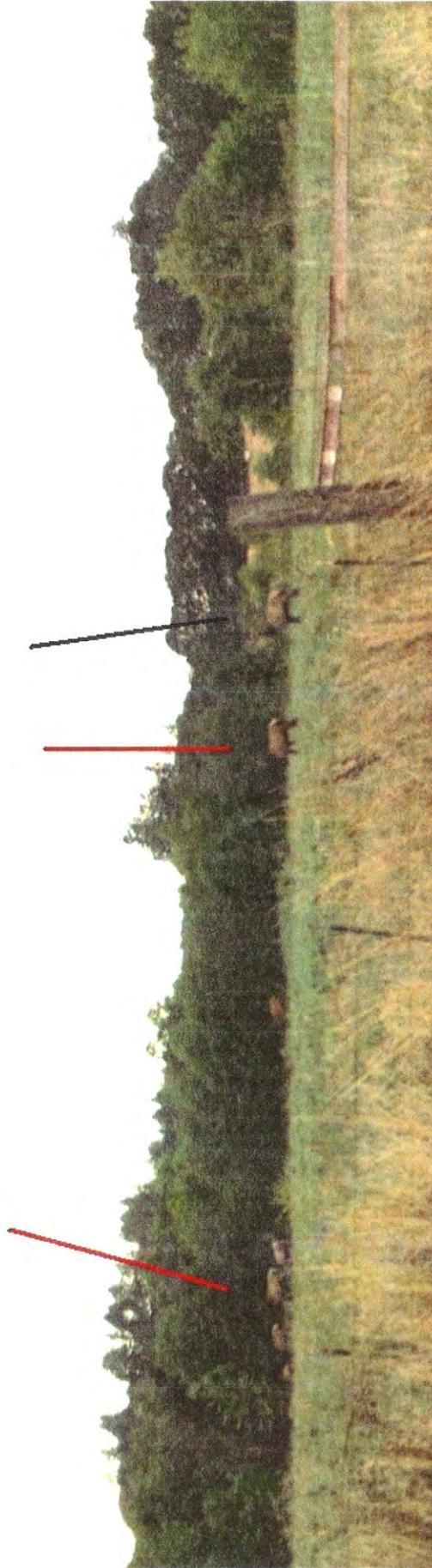
PLEASE PRINT CLEARLY IF YOU WISH TO COMMENT

Name	Address	City	State	Zip
1. MICHAEL ROBINSON	1120 NN OUCH ST, TENTH FLOOR	PORTLAND	OR	97209-4124
2. Matt Sprague	9020 SW Washington Sq. Rd #170	Portland	OR	97223
3. John Schmidt	17933 NW Evergreen Plany, 300	Beaverton	OR	97006
4. Carol Chewarek	13300 NW Germantown Rd	Portland	OR	97231
5.				
6.  Mr. Russell Dondero 				
7. 1506 Limpus Ln Forest Grove, OR 97116				
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Agenda Item #: 7.a.
Topic: Ordinance No. 801
Submitted by: Joe Rayhawk
Mtg / Date: 8/5/15



Part of the Elk Herd gazing in field next to Abbey Creek Stables - Morning, August 5, 2015 Only counted 18 (herd is usually 40)



Bull Elk and two males watching me. They do not trust Elk-stalking Paparazzi

Title: Input to Washington County Planning Commission re Ordinance 801
Reducing the size of the North Bethany Natural Features Buffer

Author: Joe Rayhawk, 15248 NW Germantown Road, Portland, OR 97231 file: 2015\PC_20150805_801_Rayhawk.rtf

- 1) Your meeting packet includes my testimony from the 7/15 hearing. I hope you have read it. I will be glad to try to clarify anything in it. I resubmit portions for your convenience.
- 2) New in today's submission are two parts of my testimony about the Natural Features Buffer from 2014. I am told that I cannot include things such as the DMP by reference.

These submissions provide extended discussion of the dangers to horse and rider of sudden surprises with analysis of the physics. Dangers include things such as injury, maiming and death.

They also includes detailed references to CWS statements about the impracticality of meeting legal requirements for stormwater retention and treatment. In essence CWS documents state they cannot meet the requirements if home construction occurs on the steep slopes.

I stand by my key statements in last month's submission:

If development, including backyards or THPRD trails, occurs 50 feet uphill from my riding trails, I will have to end use of the trails due to danger to horses and riders.

**Such development would also increase the danger for horses in my south pasture.
The increased and untreated runoff from backyards may render the field unusable for pasture.
Losing the use of the pasture would reduce the number of horses we can stable.
This would render the stable operation uneconomical leading to the end of the business.**

Providing a dense screen only fifty feet deep such that sights, sounds, people and objects can appear suddenly to startle the horses on a steep slope is almost maximally bad. In addition, the planned planting cannot provide even visual isolation for a decade or more.

- 3) I provided detailed analysis of how one or more rows of houses on the steep slopes will require massive disturbance of the slopes as well as put living areas with sight lines well above the 5-foot fence and the initial 6-foot high trees. Also, the stack-up will cause massive increases in run-off with much of it not treatable nor retainable by CWS facilities.
- 4) The picture in your packet of my Page 16 did not reproduce well. I am re-supplying it as Page 3. It lets to see with your own eyes where the Natural Features Buffer, east of Kaiser Road has slumped. The slope where the land is slumped is steeper than the land above and the area below where the slumping material formed a shelf. The steep area is in shadow because it is tilted away from the Sun in the winter. The slump appears to be a very small scale version of the Oso, Washington landslide that killed over 40 people. .

A new note: The steep slope west of Kaiser has not slumped. One would expect similar behavior from these two contiguous pieces of land. My guess is that the Western Tributary of Abbey Creek above the western slope diverts enough stormwater so the slope has not yet gotten saturated enough. It sure seems primed to go. Of course, building between the tributary and slopes will increase runoff, disturb the structure during development and add loads. So, reducing the size of the buffer west of Kaiser is not a good idea.

Note that building on these slopes cannot be made safe by connecting one house to some form of bedrock. You need to keep an entire hillside fixed while doing all sorts of things that destabilize it.

- 4) I am re-supplying the three printouts from **Oregon HazVu: Statewide GeoHazards Viewer** as Pages 4 and 5. These include the mapped landslides in the Natural Features Buffer, the Earthquake Risk Overlay and then a zoomed out view showing the location of the Oatfield Fault. This fault is a less than a mile away. Page 6 is an extract from a DOGAMI reproduction of an Oregonian article that discusses the three Portland faults. The base of the faults appears to be 19 kilometers deep. There is the additional risk from the Cascadia Fault

Now for some information about the Germantown Road Fault.

Page 7 is a large scale DOGAMI map of the Linnton Quadrangle

Page 8 is partially zoomed picture that you can start to make out the Germantown Road Fault, but still tell it is from the large scale map. Page 9 is a further zoom with annotations that show the Germantown

Road Fault literally runs under the steep slopes of the Natural Features Buffer. Finally, Page 10 is a zoom from the big

Attachment C

picture (Page 7) that shows the cross-section vertical land-slip caused by the Germantown Road Fault.

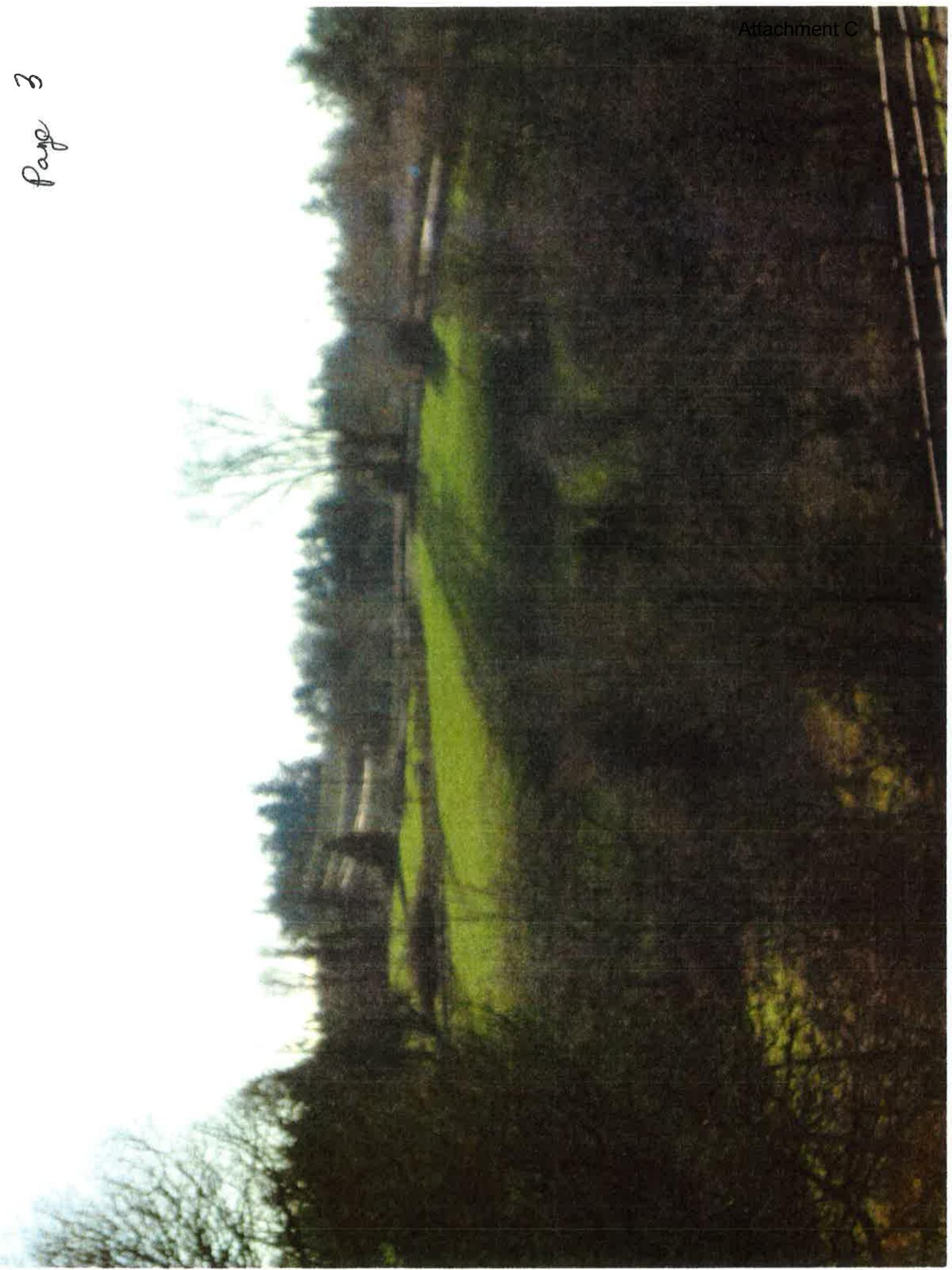
- 5) The DOGAMI Landslide Maps were commissioned by Metro to identify places where development should not be done.
- 6) Even as volunteer Planning Commissioners, you are under legal obligation personally to act prudently and responsibly. Voting to allow home construction which requires large disturbances to unstable slopes known to be at landslide risk and at earthquake risk from THREE different earthquake faults is neither reasonable nor prudent.
- 7) I wish to admit that I was wrong about the attempt to farm on the Robinson property. After your last hearing, they began harvesting hay. Unfortunately, the weather was not kind. It rained lightly after they cut the hay. It may have been that it was ruined by that. They baled the hay one night, it began to rain overnight and was raining heavily the next morning when it appeared they were going to pick up the bales. They appeared to give up, knowing that the hay inside the bales would mold. This makes the hay unsafe to feed. Also, animals will not eat it because of the bad smell.

I counted 8 bales on the steep slopes where they had removed the dense trees in 2013 by ripping them from the ground and grinding them up. The bales appeared to be about 250 pounds each. So, 8 bales would be 1 ton. We pay \$300/ton delivered for high quality Eastern Oregon hay. It is unlikely that unruined local hay would have gotten that good a price. Given the cost of operating on the steep slopes, it is doubtful that they would have made a profit from the 'farming' on the steep slope.

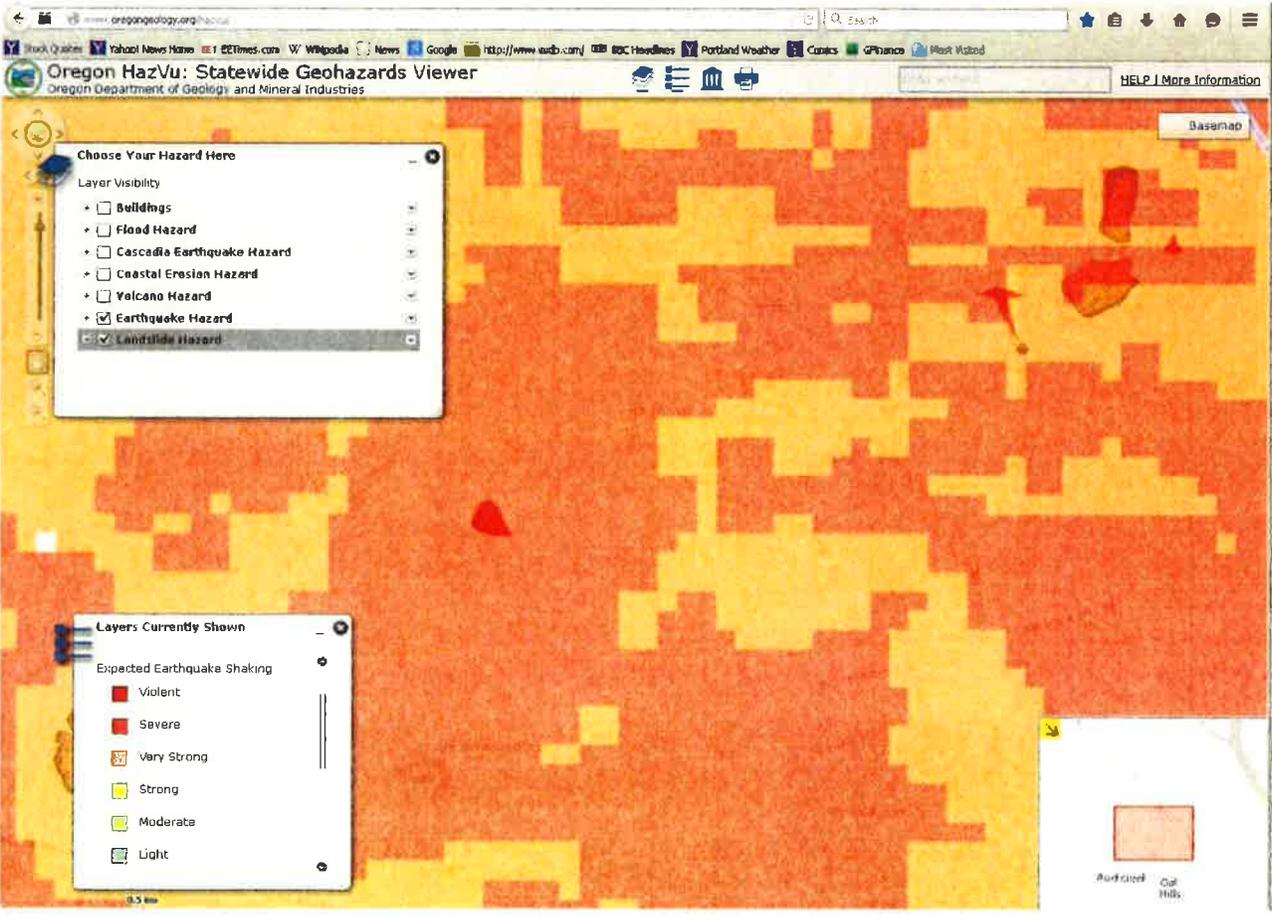
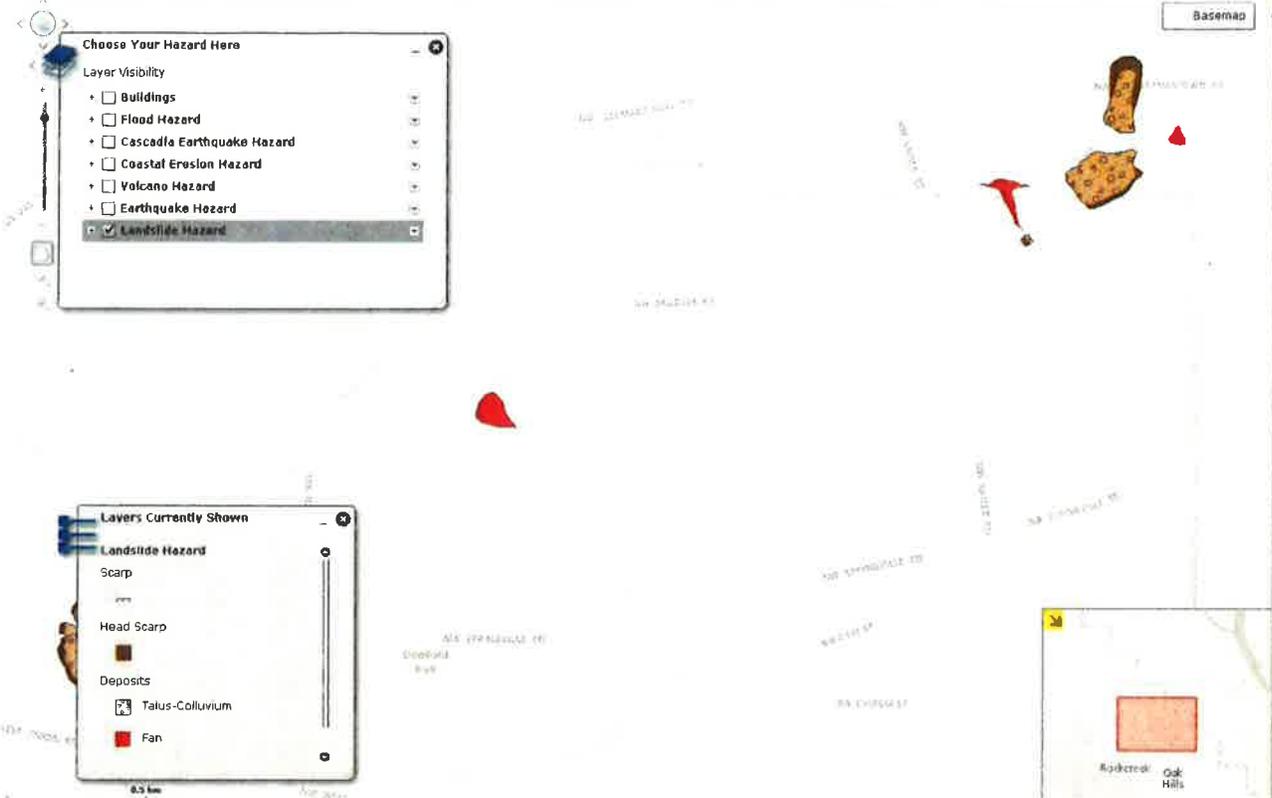
This week they stacked up the hay. I counted a total of 144 bales in the two stacks I could see. If the bales were 250 pounds each, this would be 18 tons. 18 tons at \$300 each would be \$5400. This would have been enough to 'keep' their farm deferral status if they had not lost the status in 2012 because they had not farmed the property in the previous 5 years. BTW, they paid \$195,000 in taxes in 2012 because they lost the deferral. They have been paying more than \$12,000 a year since.

The 8 bales from the steep slope represent 1/18 of the bales I counted or just over 5% of the harvest. The steep slope area represents more than 10% of the farmed area. So, the yield/acre from this area was less than half of what it was from the flat, already cleared, land. Again, farming operations on the steep slopes are more expensive than on the flat land. Lower yields, higher costs. It is unlikely, they can actually make a profit from the steep slopes much less recover the cost of ripping the trees out of the ground.

Page 3



Page 1

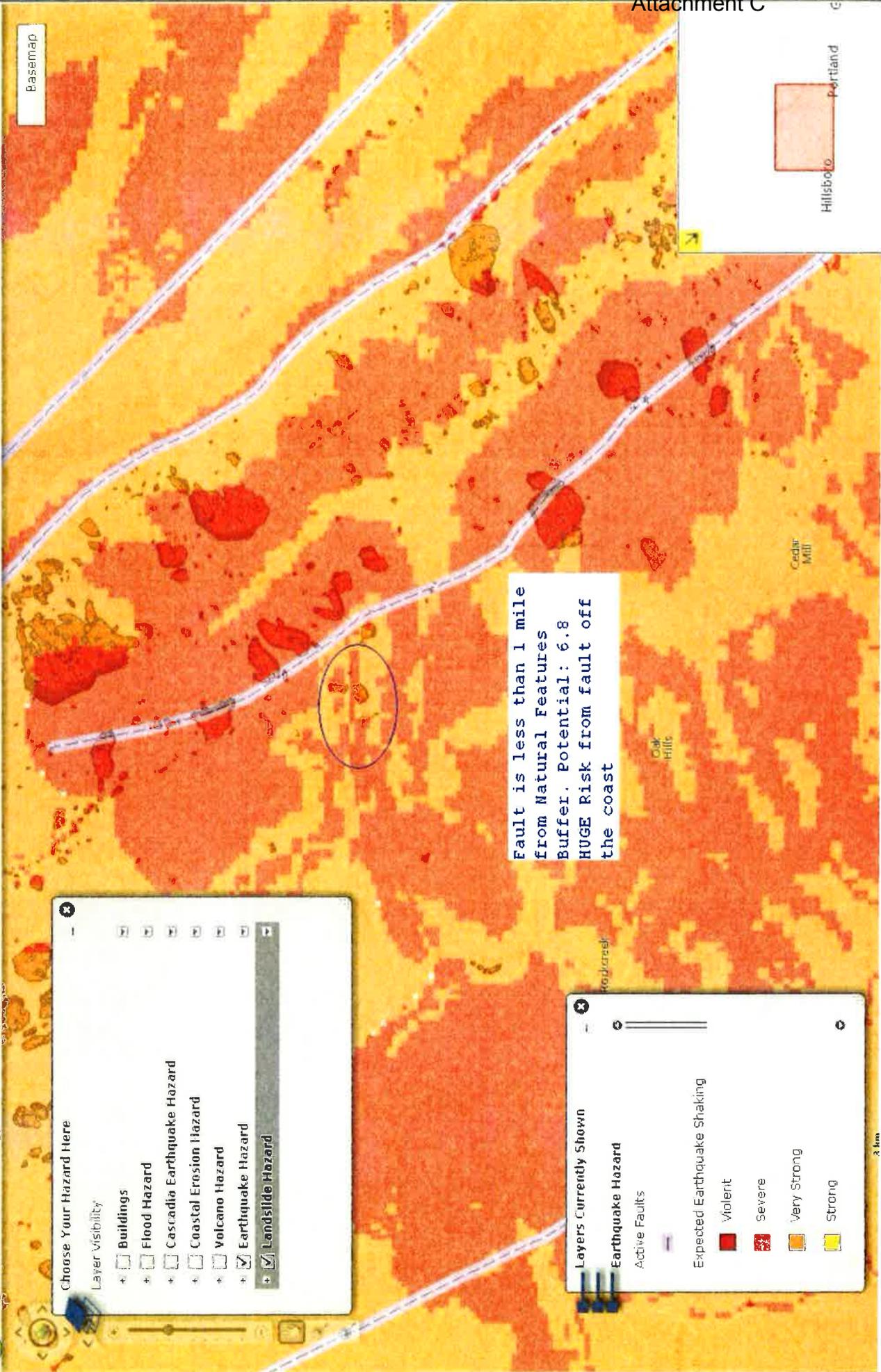


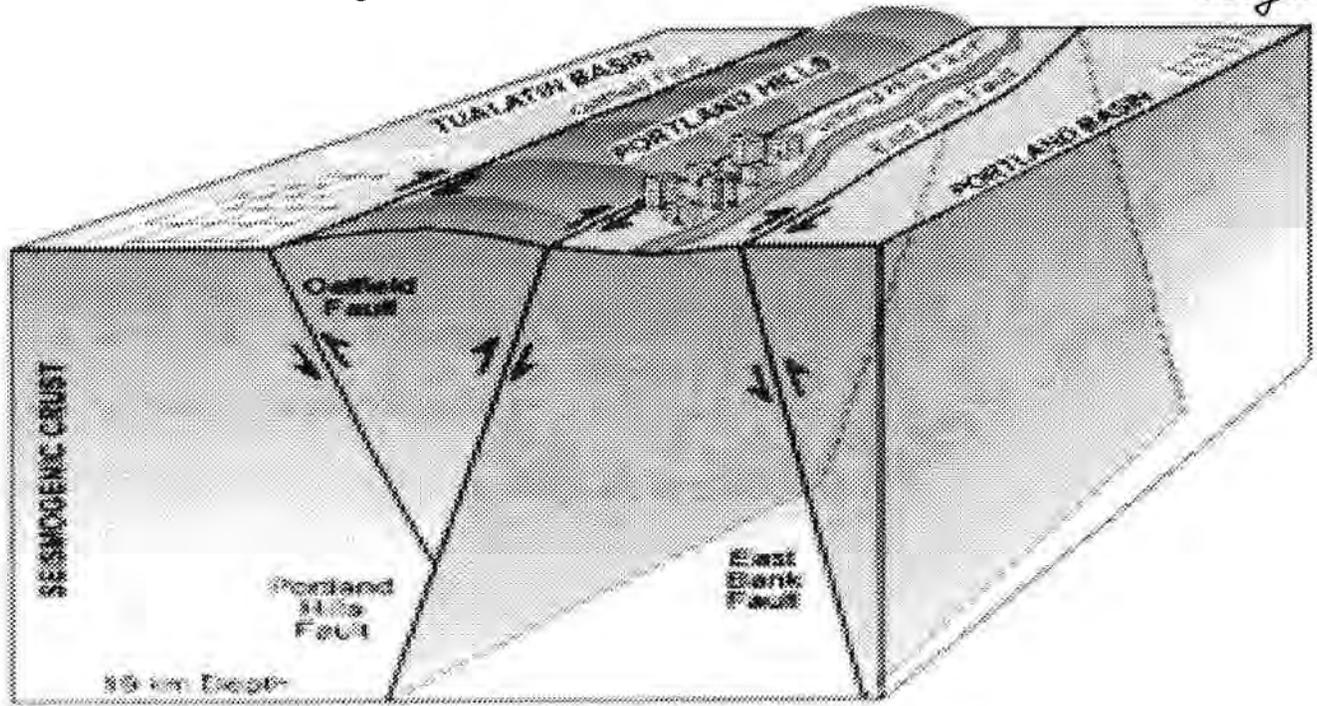
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Oregon HazVu: Statewide Geohazards Viewer
Oregon Department of Geology and Mineral Industries

HELP | More Information





URL: <http://www.oregongeology.org/sub/earthquakes/PortHillsFault.htm>

A discovery at a middle school is the first direct proof that the Portland Hills Fault could generate an earthquake.

Wednesday, May 30, 2001

By Richard L. Hill and Noelle Crombie of The Oregonian staff (reprinted with permission)

The geologist did a double take as he peeked into a shallow trench at a school construction project.

What Ian P. Madin spotted in the trench's soil sediments is what he had spent the past 14 years looking for: evidence that the Portland Hills Fault is active -- capable of generating an earthquake.

Joe Rayhawk: Background discussion deleted down to interesting quote:

The Portland Hills Fault is one of three large faults that underlie the city, running parallel to each other about one and a half to two miles apart.

The East Bank Fault on the east side of the Willamette River runs under the University of Portland, Mocks Bottom, the Oregon Convention Center, Lloyd Center and Benson and Central Catholic high schools. **A third fault, the Oatfield Fault, runs west of Northwest Skyline Road from Sylvan Hill to Germantown Road through Bonny Slope.**

Casey Marley, emergency management coordinator for Clackamas County, said the discovery should remind the public about the threat of an earthquake. **"It's going to happen," she said. "Whether it will be in five years or in 500 years, that's the hard part."**

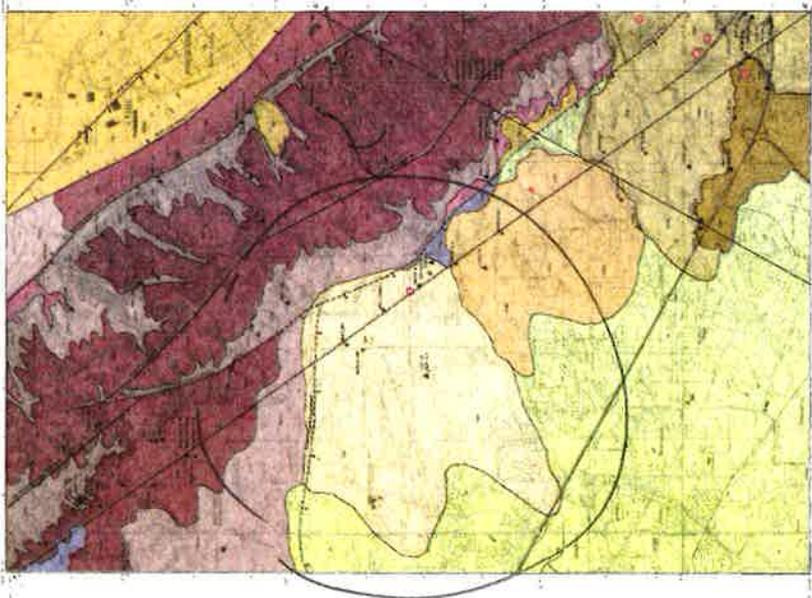
Preliminary Geologic Map of the Linnton 7.5' Quadrangle, Multnomah and Washington Counties, Oregon

2009

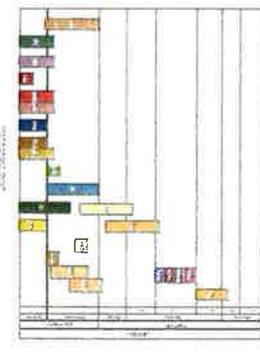
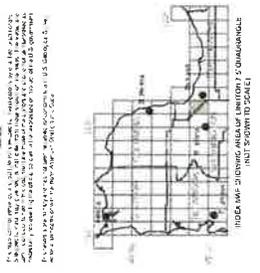
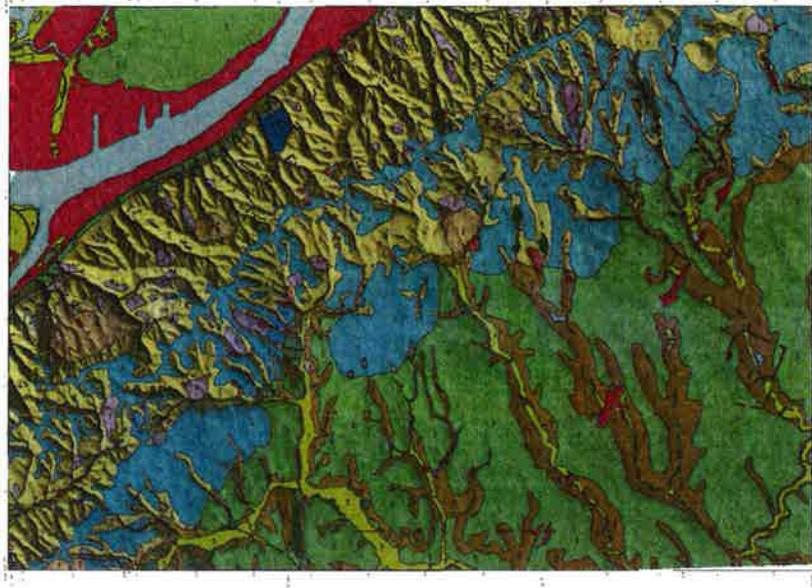
OPEN FILE REPORT OWR 08

OREGON DEPARTMENT OF GEOLOGY
1140 NE Oregon Street, Suite 100
Portland, Oregon 97232
503.747.7000
www.oregon.gov/DEPTGEO

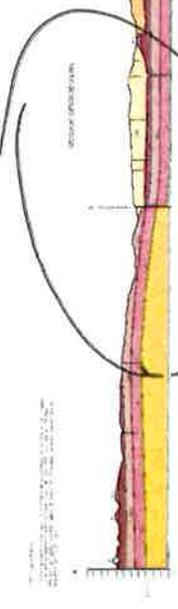
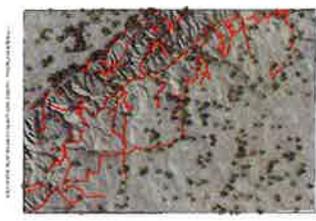
BEDROCK GEOLOGY



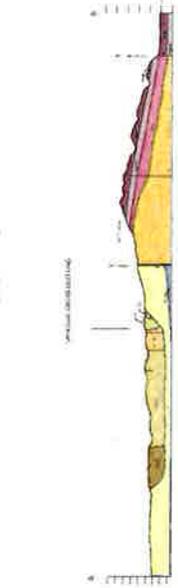
SURFICIAL GEOLOGY



See Pages 8-9

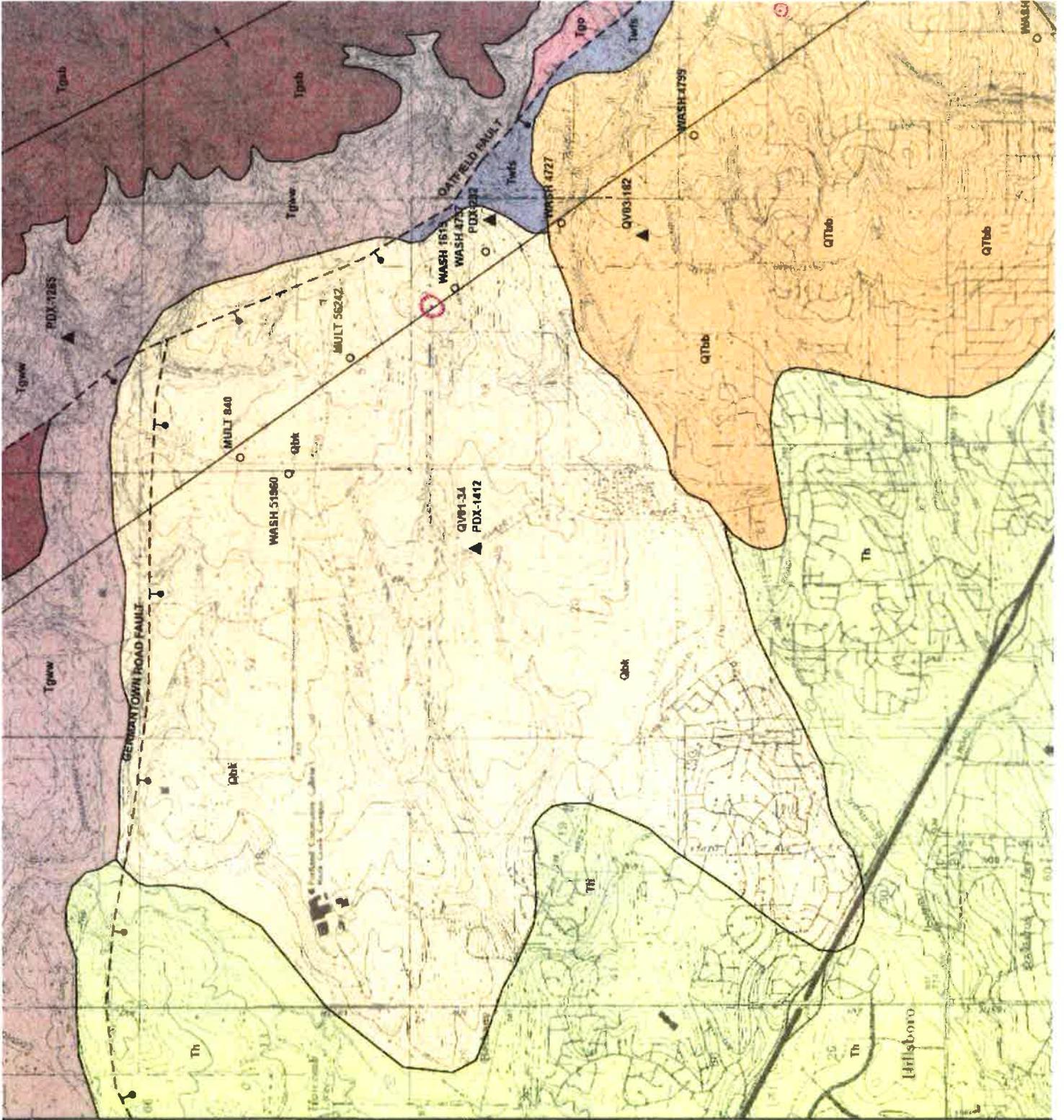


See page 10

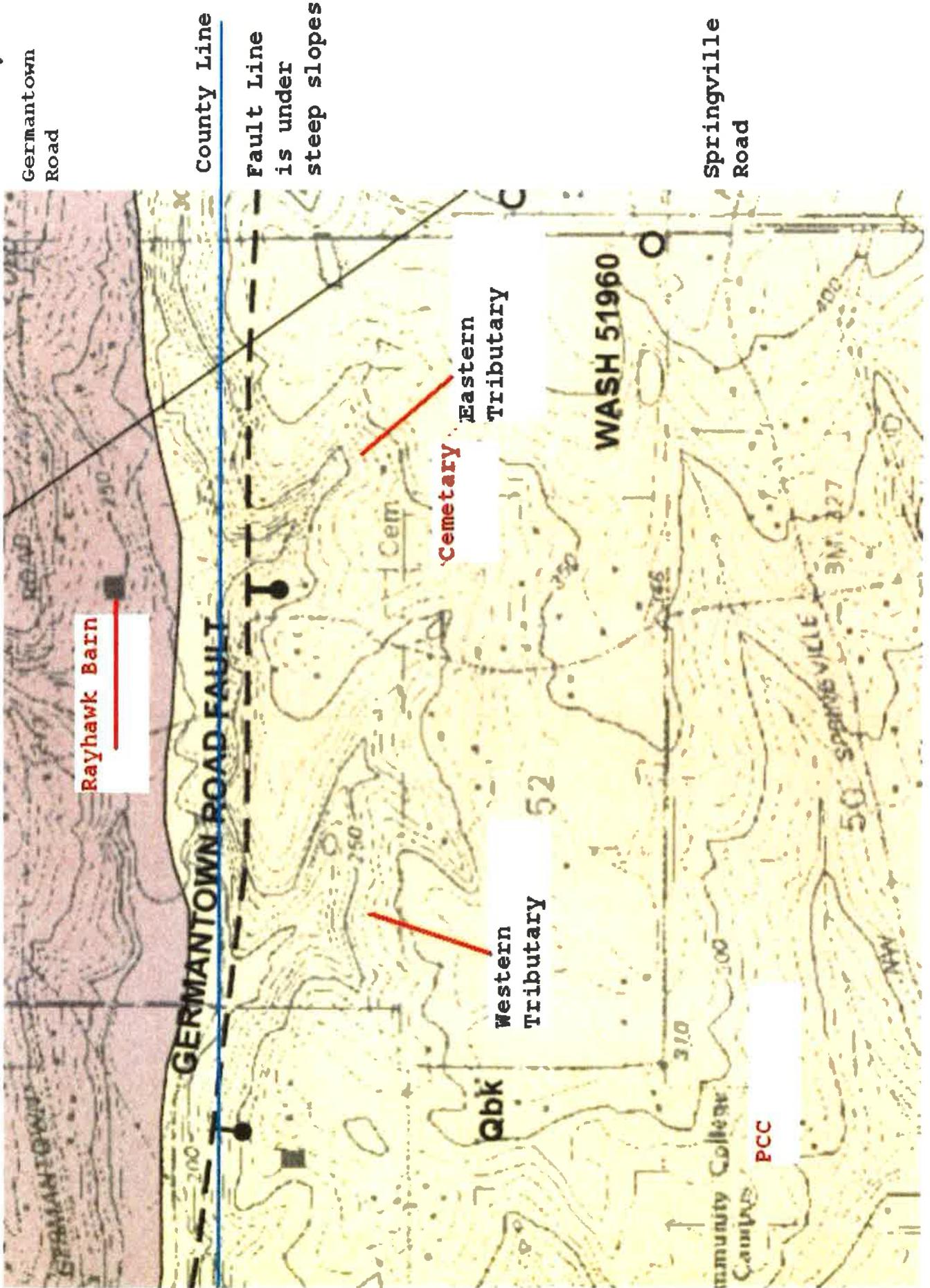


Attachment C

Germantown Road Fault
First Zoom
Just to locate area
for annotated picture



Page 9



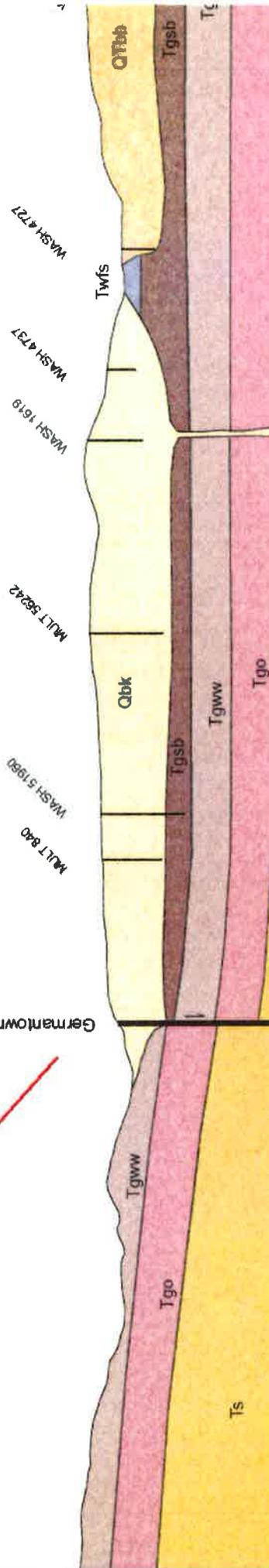
Cross Section View Extracted from
Preliminary Geologic Map of the Linnton 7.5' Quadrangle,
Multnomah and Washington Counties, Oregon

Major vertical slip at the
Gerमतown Road Fault!

GEOLOGIC CROSS SECTIONS

(Surficial units not shown in cross section)

Gerमतown Road Fault



Title: Input for Washington County Consideration of the Natural Features Buffer Tier 1 2014 Issues

Author: Joseph Rayhawk

Resubmitted 8/5/2015 for Ordinance 801

Date: 06/16/2014

file: 2014\RayhawkNaturalFeatures2014.rtf

This is just a summary of what I believe are the most important issues to be considered
They are listed in the order of importance with respect to the community.

1) The Natural Features Buffer is on a slope greater than 25% known to staff, Planning Commissioner and the Board of County Commissioners to be considered at earthquake risk according to the Metro Map website and is shown in maps provided by staff for earlier Ordinances as subject to deep landslides per DOGAMI work.

DOGAMI: Oregon Department of Geology and Mineral Industries

The DOGAMI work was done around 2010 after a number of large landslides around the Metro area had occurred in places not previously known to be at landslide risk. Using techniques involving LIDAR, they mapped a large number of areas as landslide zones. The intent of the work was to find places where development should not occur because of danger of injury and death to residents of if any kinds of buildings were built on them.

Given that the staff, the Planning Commissioners know that building on these slopes is dangerous, it is neither reasonable nor prudent for any of them to advocate for or to allow such building.

For more recent indications that we are subject to landslides, we have this year had landslides that blocked Highway 26 in the county and another that blocked the Columbia Scenic Highway. Also, there was a horrific landslide in the State of Washington with significant loss of life and property. One cannot claim to be ignorant of landslides and the risks therefrom.

As is also in the record, Oregon is subject to risk of a huge earthquake off the coast. I have heard developers, at least one Planning Commissioner and at least one County Commissioner claim that we have been building safely on steep slopes for years. Those statements are absolutely false. One can claim that we have been building on steep slopes IGNORANTLY believing it was safe. It is assumed in public planning documents that if the next quake off the coast is a Level 9, that various buildings in the state will collapse, that a significant

number of 15 bridges will collapse and that buildings in downtown Hillsboro may collapse and may sink partially

into the ground due to liquefaction. The latter was admitted by County Chair Andy Duyck last year. It is absurd to think that we can expect to be able to stabilize the land in the Natural Features Buffer against this kind of now expected event.

Just to be complete: Per the maps for earlier Ordinances, the land under the Natural Features Buffer is known to have had landslides in the past. These slides occurred without an actual earthquake. The land is unstable. Also, as I introduced into the record for earlier Ordinances, all of North Bethany is within a zone that will receive severe shaking if there is a quake on the Oatfield fault which runs along the West Hills just to the east.

2) The Natural Features Buffer is on steep slopes that run down in wetlands and tributaries that connect to the waters of the state via Abbey Creek. Abbey Creek flows into Rock Creek about 1 mile west of the Natural Features Buffer. This part of Rock Creek has been 303d listed by the Oregon DEQ since before 2010. The 303d listing is both for Endangered Species Act (salmonid spawning) and for Environmental Protection Act (water quality) issues. In the most recent update to the State 303d listing (in 2012), Rock Creek received additional constraints up to milepost 12.9 which is upstream from where Abbey Creek joins it.

Clean Water Services(CWS) is the county's technical review agency with respect to aspects of water quality. In the North Bethany Drainage Master Plan, CWS states that it is not practical to build stormwater retention and treatment facilities on the steep slopes on which the Natural Features Buffer exists. In the North Bethany Storm Water Implementation Plan, CWS assumes that the Natural Features Buffer is going to be covered with vegetation. Specifically, that plan contains no stormwater retention and treatment facilities.

As testified to for previous Washington County ordinances, there is no way to capture and treat runoff from backyards that are on the slopes unless there is a substantial expanse of plants.

Let me introduce one new fact not previously in the records of North Bethany Ordinances. K&R has filed a permit applications with DSL for a 227 unit development in the Northwest corner of North Bethany. This project is called Abbey Meadows. This DSL application is available at:

<http://www.statelandsonline.com/index.cfm?fuseaction=Comments.AppDetailLF&id=55690>

The following ialiized section is verbatim from the application.

Listed Species Review

Review of Stream Net on-line mapping indicates winter steelhead in downstream segments of Abbey Creek north and west of the project site (Stream Net, 2010). No open water connection is currently present from the site to any stream segments with mapped ESA fish populations or habitat.

*A database search for rare, threatened and endangered species was completed by Oregon Biodiversity Information Center (ORBIC) staff at the request of the applicant. The report, dated December 19, 2013, found five (5) element occurrence records within a 2-mile radius of the project site. None of these records were within the project site or immediately adjacent to the site. The nearest listed occurrence was winter run steelhead (*Oncorhynchus mykiss*, pop 33, Upper Willamette River ESU), federally listed threatened and state listed species of concern, within several tributaries in the Abbey Creek basin, approximately 1.5 miles northeast of the site.*

My property and the section of Abbey Creek that crosses it are below the Natural Features Buffer and are less than 1.5 mile east of the Abbey Meadows site. Both of the tributaries of Abbey Creek that come down from North Bethany enter Abbey Creek less than 1.5 miles east of the Abbey Meadows site.

K&R is stating in the public record that they know there are Endangered Species Act salmonids in Abbey Creek that are in the path of runoff from the Natural Features Buffer and from both tributaries. If they later take actions that put these spawning grounds at risk, they cannot claim ignorance as a defense against actions from the EPA and other FEDERAL agencies. Note: The EPA got a felony conviction with jail sentence several years ago for a man in Southern Oregon who knowingly took actions that harmed salmonids in protected streams.

What follows is some important new observations with respect to CWS' estimates of increased flows in Abbey Creek and Rock Creek.

The following table is from Clean Water Services North Bethany Drainage Master Plan. I moved it to the next page for ease of review

Table 3.3: 25-year Peak Flow Increase from North Bethany Subarea Relative to 25-year

Basin	Peak Flow in Downstream Channels		Contribution to Stream
	Calculated Increase in 25-year peak flow (cfs)	Peak Flow in Downstream Channel (cfs)	
Abbey Creek East	37	445	8
Abbey Creek West	87	485	18
Rock Creek	41	1314	3
Bethany Creek	104	149	70

There are several aspects of this table that have not been pointed out during earlier Ordinance hearings.

- 1) The column for calculated Increase in 25-year peak flow includes only the amount directly into the associated stream from the identified basin. This can be seen from the fact that the increased flow into Rock Creek (line 3) is less than flows associated with the two Abbey Creek basins although Abbey Creek flows into Rock Creek.
- 2) If one combines the two increases for the two Abbey Creek basins, the total is 124 cfs. Clearly, this represents the actual increase in flow into the Western part of Abbey Creek. The table entry for the % increase for Abbey Creek West lists only 18%. This is from $87 / 485 = 17.9\%$. But, the actual increase in flows for Abbey Creek West will include the increase from Abbey Creek East. So, the proper percentage is actually $124 / 485 = 25.56\%$.

When the Drainage Master Plan was done in 2010, it was known that Rock Creek where Abbey Creek flowed into was 303(d) listed. It was stated that the 303(d) protection extended 1/4 mile up Abbey Creek which includes where the Western Tributary of Abbey Creek joins Abbey Creek.

As mentioned elsewhere, it is now known that salmonids are spawning in Abbey Creek well east of this area.

- 3) A similar analysis suggests that the 3% number assigned to Rock Creek is too low because it ignores the increase in flow from Abbey Creek. Specifically, the increase in flow using the CWS' estimates will be:

$$41 + 87 + 37 = 165 \text{ and } 165 / 1314 = 12.56 \%$$

The key here is the increase is over 10%. Also, as of the end of 2012, Rock Creek has received additional constraints with respect to 303(d) listing.

- 3) The Natural Features Buffer gets its name in part because it is known that there is a Large Animal Migration Path across it. In the past, Washington County staff visited my property to verify that we had horse riding trails within a few feet of the county line. That is, the trail is within a few feet of the North Bethany project and within a few feet of the northern edge of the Natural Features Buffer. While they were on the trail, the elk herd

which migrates between Forest Park and coast range went by on the other side of the fence. They were literally using the Large Animal Migration Path that is part of the Natural Features Buffer.

Numerous citizens have testified about the Elk herd and the area is listed by Metro as Significant Habitat. It is nice however that Washington County staff have observed the herd for the record.

Such migration paths are to be protected from development per Oregon state law.

There has been testimony entered into the record that protection of such paths requires 300 feet of separation. Otherwise, noise, sights and smells can deter the animals from using the path.

The elk use both the uplands (the Natural Features Buffer and points east and west within North Bethany and the wetlands area on my property.

During the wet part of the year, it can be very difficult for them to traverse the wetlands because the wetlands are essentially a very deep and soft bog. They need to use the uplands during that time.

While I and others have argued that 300 feet is needed to protect the migration path, the issue is moot because

the landslide and earthquake issue which has to do with protecting human life requires even more separation.

- 4) On various maps for earlier North Bethany Ordinances, much of the area now known as the Natural Features Buffer was marked as Constrained Density Area. This meant that no housing units would be built in the area. Hence, for most of the Natural Features Buffer, there is no loss of expected density because none was ever planned for it. When North Bethany planning was first begun, the earthquake and landslide issues were not understood. When the planning was begun, the presence of salmonids in Abbey Creek was not known. All housing developers know that there are risks that land may not be developable because of the presence of wetlands, not yet delineated, and the possible presence of endangered species.

It is generally discussed, but I do not understand the details, that if an area that has an assumed density cannot be developed, that the density can be transferred to another area. K&R in their requests last year concentrated on the possible loss of density because of the Natural Features Buffer for the Robinson Property. But, North Bethany is a planned community where all of the projects/properties are interrelated. It is just not right to consider any one development project or property as through it is isolated.

- 5) Finally, we come to the legal requirements of the Metro Ordinance that requires the county to provide for compatibility at the Urban / Rural Interface. Several years ago, the Planning Commission recommended at different times a 50-foot buffer and a 10-foot buffer as being wide enough. In my expert opinion as someone who has operated a horse stables, horse riding and horse riding training facility for more than ten years, these were inadequate.

I was pleased when the County Commissioners voted for the much larger buffer, I believe the commissioners recognized the dangers of the landslide issues and the extra danger from the expected large earthquake. This year, K&R, in a letter to the county dated June 6, 2014 advocates that a 30-foot buffer would be adequate. They discuss that it will be adequate to eliminate the effects of noise disturbances. Again, as an expert, I state that 30 feet is not adequate even to eliminate the noise disturbance issues.

In a rebuttal response to the K&R letter, I list many ways in which nearby noises would put horses and riders, especially young riders, at risk of injury and even death.

Further, K&R argues that the steep slope is not part of the Metro requirement. Again as an actual expert, let me say that visual issues are every bit as important as noise. Also, horses are especially sensitive to any strange sights ABOVE them. In nature, horses are subject to attack from above. A particular example would be cougars attacking from trees. Hence, any strange actions including such seemingly innocuous things as kids playing catch with a football or a Frisbee flying over a backyard fence and downhill across a very narrow buffer could spook a horse. A variation on the playing catch with a football would be someone mis-kicking either a football or a soccer ball so that it came over the fence getting all the way to a horse or just making a very loud sound when it landed in the brush a few feet away.

I have mentioned numerous times that one of the most dangerous animals on the planet with respect to the horse riding business is a thirteen year-old boy with a rock. With respect to that and similar issues, it is worth noting that houses built on or near the steep slopes are likely to have decks well above ground. Decks tend to be on the same level as the main part of the house which will be at the level of the ground near the front of the house. Given a house depth of 40 feet on slopes of 25%, the deck would be 10 feet high. Someone on such a deck is going to be much higher than the 6-foot fence required along the southern edge of the Natural Features Buffer. Hence, they will be able to look over the fence and DOWN at where the horses are. Again, this puts them above the horses, triggering flight-for-survival instincts. It also means that it will be easy for that thirteen year-old, or younger, boy to hit the horses with thrown objects.

As I have also mentioned, any lawn chemicals used to treat backyards will run off the slopes down onto land on which my horses graze. There has been testimony introduced during several previous ordinances that suggest several hundred feet of heavily treed land, that is a riparian buffer, might be able to absorb such chemicals, protecting both the horses and the ESA species in Abbey Creek.

I am not actually going to say how wide the buffer needs to be to protect my horse business as required by the Metro Ordinance. It is certainly larger now that K&R removed the large trees on the Robinson property last year that would have also provided visual protection. The issue of how much is needed is moot because the issues of human safety, endangered species protection and protecting the large animal migration path all require at least as much or more.

To re-iterate some points I have made for previous North Bethany ordinances.

The use of the riding trails are an important feature of my business. If the buffer between where the houses and people are and where the horses can be is too narrow, I will as a MORAL obligation have to terminate use of the riding trails out of concern for human and horse safety and indeed the safety of children from North Bethany who could be also be hurt by a frightened horse.

Also, the wetlands south of Abbey Creek become dry and usable as a pasture for the horses in the summer time. They are part of a rotation we do among 4 pasture areas. We currently can handle 30 horses in the stables because we can rotate the horse among the pastures allowing the non-used pastures to re-grow for later use the same year. If we lose the use of the pasture south of Abbey Creek, we will have to reduce the number of horses because the remaining 3 pastures cannot handle the load. It is possible that the reduction in the herd size will make our operation non-practical and we will have to end the business.

I have stated in previous ordinance hearings that we can lose the use of the south field due to effective poisoning from chemicals from North Bethany. Let me add that we can lose the use of the field if the buffer is inadequate to provide safety for the horses. Much of the description I have provided above concentrated on the danger to humans. But, there is significant risk of injury to the horses in those panic situations. I have MORAL and legal reasons to avoid risking such injuries.

To: Washington County Board of Commissioners
Attn: Chair Duyck
155 North First Avenue, Suite 300
Hillsboro, OR 97124

From: Joseph Rayhawk
Abbey Creek Stables
15248 NW Germantown Road
Portland, Oregon 97231

Date: June 17, 2014

Chair Duyck and Commissioners,

I have received a copy of a June 6, 2014 letter from John O'Neil, representing K & R, with subject line:

Re: 2014 Long Range Planning Work Program - North Bethany Natural Features Buffer

This letter contains many statements which I believe are false and misleading. I will review the letter more or less sentence-by-sentence indicating the areas I found incorrect. In addition, I will point out statements that literally contradict the key points the letter is claiming to make. I have retyped the letter below keeping the sections that were in bold in bold. The text from the letter is italicized. My comments are in non-italicized font.

As you are aware, the North Bethany urban/rural interface buffer is up for consideration as a Tier 1 Issue in the 2014 Annual Work Program.

Referring to Mr O'Neil's Subject matter line above , it is clear that the Tier 1 issue has to do with the Natural Features Buffer, not just the urban/rural interface buffer.

The sole purpose of the buffer is to comply with Condition 6 of the Metro Ordinance No 02-987A, which is designed to "ensure compatibility between the urban uses in an included study area and agricultural practices on adjacent land outside the UGB zoned for farm or forest".

It is clear from the record and is known to the staff, the Planning Commission, and the Board of Commissioners that the Natural Features Buffer has more than one purpose. It was originally labeled as a Natural Features Buffer because the area was/is known to be a Large Animal Migration Path. Because of the steep slopes and the wetlands at the base of the hill that connect to Abbey Creek, it is also an area of significant environmental concern. Yes, it is also immediately above areas that are in active use for horse pasture and for horse riding.

Staff visited our property at the boundary verifying that our horse riding trails went within a few feet of the boundary.

During the visit, the elk herd that uses the land within the Natural Features Buffer as a Large Animal Migration Corridor actually went by on the North Bethany side of the fence.

As staff's June 28, 2013 Issue paper highlights, the restriction is "related to urban/rural compatibility and not related to safety and stability issues."

Yes, the specific Metro Ordinance itself has to do with urban/rural compatibility. There are two reasons this sentence is misleading. First, it implies that this restriction applies to the Natural Features Buffer as if it were only a urban/rural buffer. Second, as I have testified repeatedly, there is a major safety aspect to the compatibility issues. The presence of people and pets, and what I have described as the most dangerous

animal on the planet, a 13-year-old boy, have real potential for causing safety issues. Hence, because of the nature of horses, as large, fast, powerful, prey animals, **safety is part of the compatibility issue.**

In looking back at that the evolution of the the issue, it appears that the slope was somehow pulled into the discussion when attempting to efficiently overlap various buffers in the area, including buffers designed to protect riparian areas and forested slopes.

Here the letter itself is admitting that the Metro Urban/Rural Compatibility issue is not the 'sole purpose' of the Natural Features Buffer.

Based on the Issue Paper's findings as well as discussions with key stakeholders, there appears to be a firm consensus that the urban / rural compatibility issue simply does not have a slope-related dimension.

There are several aspects of this sentence that are false, First, assuming the only issue here is urban/rural compatibility, I am a major stakeholder. It is my business that is threatened. I state categorically I have had no discussions with K&R or the actual owners of the land covered by the Natural Features Buffer.

Let me refine my earlier safety discussion. Horses are especially sensitive to any strange shapes or actions above them. This has to do with them being attacked from above as prey animals by cougars. Whatever the reason, they will often startle and bolt when something happens at a higher altitude. Mr O'Neil's statement that the urban/rural compatibility issue does not have a slope-related dimension is false due to the nature of horses. Also, because of the steep slopes, activities on backyard patios and especially on any raised decks are going to increase the probability of something bad happening. Again, there is a slope-related dimension to the urban/rural compatibility issue.

The county has existing regulations in place to address building on slopes.

It is not clear that the existing county regulations are adequate for safety, even for slopes that are not known to have the issues I am about to re-iterate here. Oregon is planning for the next large quake off the coast. If it is a Level 9, many things may just fall down. For example, many Interstate Highway bridges on I-5 may collapse. As Chair Duyck admitted during hearings last year, there is potential for liquefaction in downtown Hillsboro. Indeed, the County Building at 155 North First, since it was built many years ago before we understood the potential and high probability of a huge quake, may literally collapse. It is absurd to assume that buildings built on steep slopes known to be landslide prone are somehow going to be fine when the earthquake happens.

A key issue here is that the greater-than-25% slopes in the North Bethany Natural Features Buffer are not typical.

An important aspect of these greater-than-25% slopes are that they are listed as Earthquake-risk on maps from Metro Map web-site that I introduced several years ago into the record. Further, most of the area is listed as land-slide prone on maps placed into the record by staff. In particular, some areas, based on DOGAMI LIDAR-based work in 2010 are shown to be deep-seated landslide zones.

A second aspect of these steep slopes is that they are above wetlands that connect directly to Abbey Creek. Abbey Creek is known to have salmonids. Hence, storm water runoff is required to be slowed and to be treated before it reaches those wetlands. Clean Water Services in the North Bethany Drainage Master Plan

states that it is not practical to build the retention and treatment facilities on the steep slopes in the area. Clean Water Services' North Bethany Storm Water Implementation Plan provides no Stormwater Retention

Facilities

for these slopes. As I have noted in earlier testimony, because of the slope, it is not possible to capture or to treat run-off from lawn chemicals used on backyards that are on the steep slopes.

The current buffer affects K&R Holdings, LLC's properties to a degree that is dramatically greater than any similarly situated property along the North Bethany urban/rural interface.

There are several issues worth commenting about here. First, there is no similarly "situated" property along the North Bethany urban/rural interface. First, no one else is operating a horse stables and rider training business.

Second, "situated" introduces the subject of location. If this land was all flat, one could argue that the Natural Features Buffer was situated similarly to other land along the edge. But, this is the real world. It is three-dimensional. Further, because the land is sloped, it has geophysical aspects that need to be considered. Land east and west of the Natural Features Buffer is not as steeply sloped.

While I am not 100% sure, statements and actions by K&R in 2013 suggest that they do not actually own the property here. They have an option to buy it. In 2013, K&R ripped out a stand of large trees in the Natural Features Buffer, ground them up and apparently threw them away. I filed a complaint against this activity which would clearly have been a violation of the the County Development Code if it was a development activity. Matt Wellner, spokesman for K&R speaking to the county and to the Oregonian, stated that they were clearing the land as a favor to the landowner so the owner could farm it. It is worth noting that the property came out of farm deferral in 2012 because the owner had stopped all farming activity for five years. It is also worth noting that there are about 10 acres of cleared flatter land which is not on 25% slopes facing away from the sun. Also, worth noting, that there has been no farming on the cleared land.

But, the key issue is as of last year, K&R was not the property owner.

K&R is a successful and apparently competent land developer. It is reasonable to assume that their options contract with the landowner is tied to 'buildable' or 'developable' acres. For example, it was obvious from the beginning that the eastern tributary of Abbey Creek runs across the property. Clearly, this means that 3-5 acres are not buildable. With the CWS Storm Retention Facilities adjacent to the tributary, as much as 5 acres is not buildable.

K&R might be the landowner now if they had exercised their option in the last 12 months. It does not seem likely that they would do so given the uncertainty about the approximately 5 acres at question here.

If the notion of slope had not unjustifiably been invoked, the buffer affecting our property would only be a very small fraction of its current size(several hundred feet in some cases).

Let me deal here only with the word "unjustifiably". Obviously, I have listed reasons why consideration of the slope is justified. Mr O'Neil's use here is an attempt to support his other arguments with rhetorical flourish rather than logic or facts.

So as far as we can tell, the next largest buffer in North Bethany is 20'. We would like to propose a 30' buffer along our northern border. In doing so, we will be able to meet two main regional planning objectives: urban/rural compatibility and maximizing density within the Urban Growth Boundary. We feel that 30' is an appropriate separation distance to mitigate any noise disturbances that may affect our northern neighbor's horse boarding facility.

As it seems K&R often does, they discuss only one part of an issue as if that part is either the only part or the

most

important part. The issue they emphasize here, the noise disturbance while important, is not even the most important issue with respect to the horse business.

First, let me say relative to almost everyone who has testified in the North Bethany hearings, I appear to be the most qualified expert on the subject of the operating a horse stables and horse-riding training business. I say that the idea that a 30-foot buffer is adequate to mitigate the effect of noise disturbances is ABSURD. The apparent ignorance in making such a claim is very surprising.

Horses are prey animals. (As with most prey animals, their eyes are on the sides of their heads so they can see in more directions. Hunting animals such as cougars and humans have their eyes in on the front of their heads so they can focus on the prey.) They survive in the wild by running at any sight or sound that startles them.

When they switch into flight mode, they do it quickly and at very high speed. The flight mode is a survival-reflex and does not allow for the horse to consider whether or not there is a human rider onboard or a human in the way.

Horses weigh on the order of 1000 pounds which is about the weight of 4 NFL linemen. They can run faster than

30 MPH which is about 3 times as fast as NFL linemen. The kinetic energy of an object is proportional to the mass times the velocity. So, a running horse has $4 * 3 = 12$ times as much kinetic energy as an NFL linemen.

There have been incidents where linemen have accidentally run over cheerleaders on the sidelines. It does not work out well for the cheerleaders. But, because of the much higher mass and velocity of the horse, the equivalent situation would be more like a linemen running into a 1 or 2 year-old 30 pound baby.

If you are the rider on such a bolting horse, and the horset turns and runs into woods (as we have here for most of the length of our property immediately north of the Natural Features Buffer, the physics of the event is the same as though you have been launched into the trees and branches at 30 MPH.

The horse will tend to dodge around trees and under low-hanging branches. Relative to the mass of a human, tree trunk and branches can be considered immovable objects.

The horse dodging the tree will not necessarily miss it by enough so that your leg does.

Similarly, it may duck under a branch just low enough to protect itself.

In both of these instances, serious harm, up to and including death, can occur to the rider.

Assuming that you do not get injured by colliding with a tree while on the horse, it is possible, indeed likely, that you will come off the horse, either by being jostled off from the bumpy and rapid left-right turns of the horse or because your self-preservation instincts cause you to decide to get off. At the moment you get off, you are five or more feet of the ground traveling at 30 MPH. The same physics as if you were riding on top of a car at 30 MPH and decided to jump off. HOWEVER, there are issues here that make it worse than the car situation. First, there are trees and branches. Once you leave the horse, you cannot control your direction until you come into contact with something.

If you strike a tree or branch directly, it is the same as though you ran into a wall.

Going back to physics, fast humans run at about 15 MPH. Most of us are not that fast.

Running into a wall at 15 MPH is going to hurt.

Running (or flying) into one at 30 MPH involves 4 times as much kinetic energy.

Even worse, perhaps, if you have a glancing impact with a tree or branch, it may start you spinning. A particularly scary version of this would be to have your head hit

a branch (possibly rendering you unconscious) and start flipping end-under-end. Again, the likelihood of serious injury such as paralysis or death is significant.

Compounding both the direct and glancing impact issue is that the land below the Natural Features Buffer continues to be sloped. In particular, the woods section (about half the east-west length of the buffer) is also greater than 25% sloped. What this means is that when you come off the horse at about 5 feet above the ground where you are at that moment, you are going to land on ground some distance further down the hill. That is, you are not looking at just a 5 foot fall, but the equivalent a jumping from something higher than a car roof.

Simplifying slightly:

Start at height of 5 feet

Horizontal Velocity = 30 MPH = $30 * 5280 \text{ fph} / 3600 \text{ sec/hour} = 44 \text{ feet/sec}$

Vertical Drop of Hill = $-0.25 * \text{Horizontal Velocity} * \text{Time to Impact} (-.25 * HV * t)$

Altitude (wrt point of departure) = $5 \text{ ft} - 1/2 g t^2$ ($g = 32 \text{ feet/sec/sec}$)

Need to solve for altitude of rider = height of ground at impact

$$5 - 1/2 g t^2 = -0.25 * HV * t$$

or standard quadratic equation form:

$$1/2 g t^2 - 0.25 HV * t - 5 = 0$$

or

$$16 t^2 - 11 t - 5 = 0$$

or

$$t = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{11 \pm \sqrt{11^2 - 4*32*(-5)}}{32} = \frac{11 \pm \sqrt{121 + 640}}{32} = \frac{11 + 27}{32}$$

Or 1.1875 seconds.

Effective height = same as falling at 1g for 1.1875 seconds $\implies D = 1/2 g t^2 = 22 \text{ feet}$

That is, the situation is more akin to jumping off the top of truck that is 20 feet tall doing 30 MPH.

And, when you hit the ground, you are not going to slide to a stop in the same way as on level ground. You are going to slide much further downhill because of the slope.

All of which is to say that the land being sloped is part of the compatibility issue.

Enough physics. Let me say that all of these effects can be caused by visual disturbances as well as by noise disturbances. As I have pointed out before a 13-year-old boy with a rock, especially one who is above the horse, can cause the same problems.

I also discuss in a direct testimony letter, sent separately, that the same issues can be triggered by something like a mis-kicked football or soccer ball crashing into the buffer area, making a sound not unlike a cougar crashing through the brush/trees to attack a horse.

Let me try to explain this by a fairly horrifying analogy. Suppose that Hannibal the Cannibal Lecter was real and loose in your neighborhood. Suppose also that he had been using a chainsaw to kill his victims and prepare parts for his meals. Assuming you believe this and somewhere in the bushes about 30 feet from you someone started a chainsaw. I submit that a REASONABLE action on your part would be to turn and run away from that as fast as possible.

Agenda Item #: 7.a.
Topic: Ordinance No. 801
Submitted by: Carol Chesarek
Mtg / Date: 8/5/15

Attachment C

Carol Chesarek
13300 NW Germantown Road
Portland, OR 97231

August 5, 2015

Washington County Planning Commission
c/o Washington County Long Range Planning Division
155 N. First Avenue, Suite 350-14
Hillsboro, OR 97124

Re: Ordinance 801

Dear Chair Vial and Washington County Planning Commissioners,

Thank you for the opportunity to testify again about North Bethany Ordinance 801.

I've actively participated in the North Bethany planning process since 2006. I'm here today to remind you of Forest Park Neighborhood's strong opposition to K&R Holdings' proposal to reduce the Natural Features Buffer along the northern edge of North Bethany, and to share some additional information that I thought you might find helpful.

First, I have included a drawing sketch submitted by K&R Holdings to Washington County in 2013 that shows where they believe they can build new homes and residential streets in the current Natural Features Buffer. This will help you visualize where these homes will be on the steep slopes and mapped landslide hazard areas, and also in relationship to Abbey Creek Stables.

Second, I have attached a few articles about landslide damage to homes in Oregon and Washington.

My home on Germantown Road is not in a landslide hazard area. But I once looked into landslide insurance after some neighbors uphill from me brought in dozens of truckloads of fill and I was concerned that the fill could come down on my home. First, you need to figure out that landslides aren't included in a standard homeowner's policy – many people don't read the fine print in their plans. Then, you need to find an independent insurance broker who can connect you with a company that does write this type of policy. Once you've found one, you need to fill out a special application with questions about the property, including known risks, and the underwriters will consider whether they want to offer you a policy or not, and what rate they will charge. I found the insurance to be expensive, especially given my location outside a landslide hazard area, and decided against purchasing a policy.

If you don't have a policy and your home is damaged or destroyed by earth movement, the bank doesn't forgive your mortgage.

Allowing homes and county roads to be built on these hazardous slopes may put lives and property at risk. You are allowed to consider all the consequences of development on these slopes in your recommendation on this Ordinance, you are not limited to considering the rule

that inspired the initial designation of the Natural Features Buffer. The question before you is whether development should be allowed in the current buffer – is that the right outcome for the county, its ratepayers and its residents, as well as for the adjacent agricultural operations.

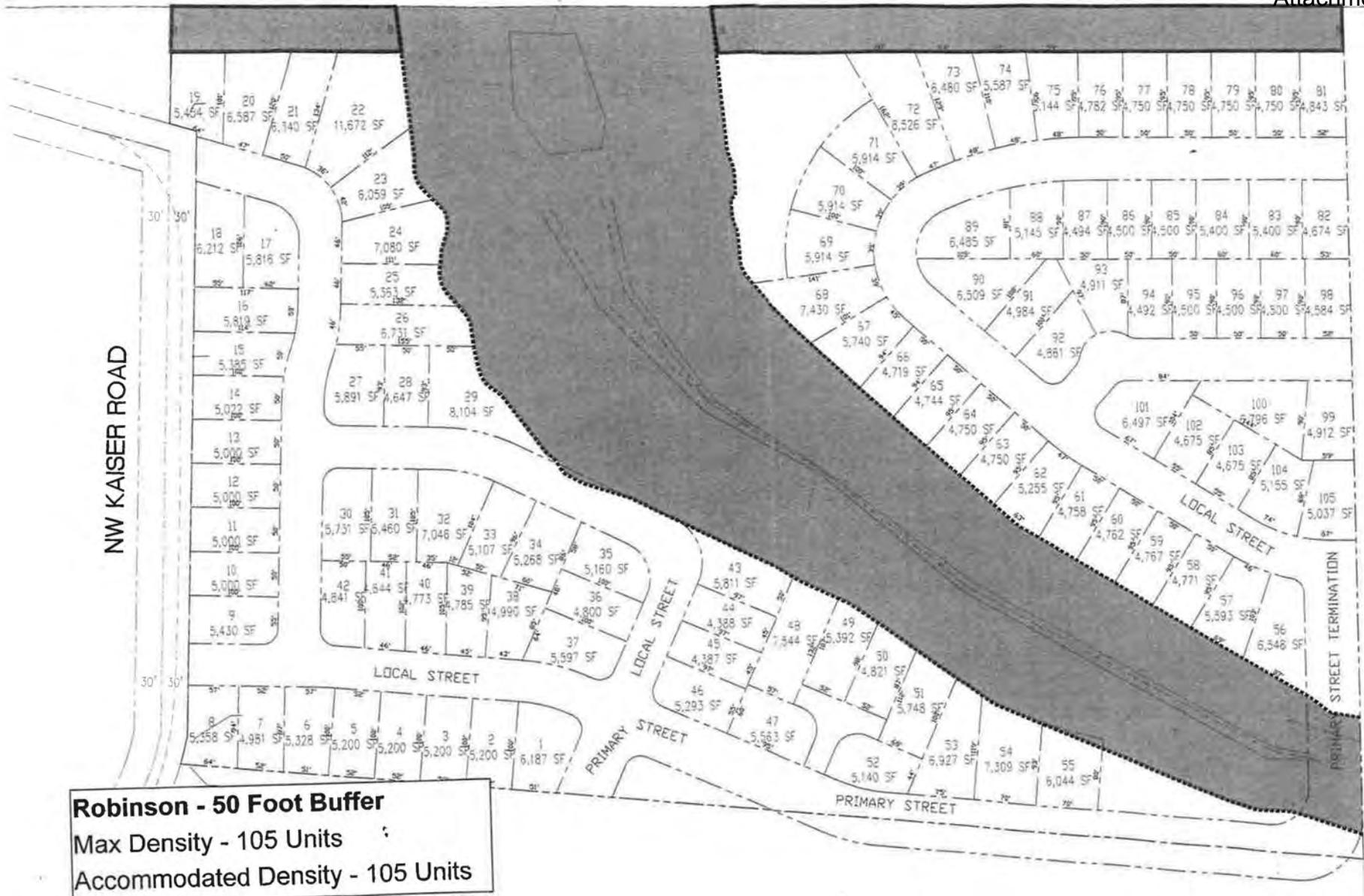
The state and Metro consider slopes greater than 25% not to be buildable, not because it is impossible to build on them, but because we've come to realize over the years that it isn't wise to. Costs to develop and maintain infrastructure are higher and risk of landslides is higher. Engineers are wonderful, but sometimes they make mistakes. Errors in construction and flaws in materials can be disastrous. A break in an irrigation line in the home above you can bring a hillside crashing down on your home, as happened a few years ago in Portland. There are simply more risks in these areas than in building on more gently sloped land.

The proposed reduction in the Natural Features Buffer would result in a buffer that is not sufficient to "ensure compatibility" between development in North Bethany and the agricultural uses in my neighborhood, including Abbey Creek Stables. Please oppose any reduction in the current Natural Features Buffer.

Thank you for your consideration.



Carol Chesarek
Forest Park Neighborhood Board Member



Robinson - 50 Foot Buffer
Max Density - 105 Units
Accommodated Density - 105 Units

West Hills home smashed in landslide

Noelle Crombie | The Oregonian/OregonLive By Noelle Crombie | The Oregonian/OregonLive

[Email the author](#) | [Follow on Twitter](#)

on October 08, 2008 at 10:52 PM, updated April 01, 2010 at 4:18 PM



Brent Wojahn/The

Oregonian From the air, it's easy to see the path of a Southwest Portland home that slid down a hill this morning near Terwilliger Boulevard. [See more photos](#)

A sound like garbage cans scraping across the street rattled Greg Sherwood from his sleep Wednesday morning.

The noise quickly became louder and more ominous, like wood snapping and concrete cracking apart.

Out the window of his home on Southwest Burlingame Place, Sherwood saw the house across the street slowly drop from the horizon. It was going down like an elevator, he thought.

Lt. Rich Tyler, a Portland Fire Bureau spokesman, said the stretch of Southwest Burlingame where the house was situated is "now in question."

Officials flagged six houses in the area as uninhabitable and indefinitely closed sections of Terwilliger Boulevard and Burlingame Place.

In a blur, Sherwood and his wife, Debbie, raced into the predawn chill to see Kathy Hendrickson sliding down the hill, her house falling apart around her. She was frantic, riding a slab of debris, looking for a patch of earth that wasn't moving.

Next door, Sam Silverberg ran from his house and grabbed an aluminum ladder. Together, Silverberg and the Sherwoods were on their bellies, trying to extend the ladder to a still-sliding Hendrickson.

"Grab the ladder, Kathy!" Greg Sherwood shouted.

The 5:40 a.m. landslide sent the Southwest Portland home, at **6438 Southwest Burlingame Place**, about 100 yards down a 45-degree embankment. Down the slope, along Southwest Terwilliger Boulevard, the sliding house -- built in 1930 at 6438 S.W. Burlingame Place -- hit two other homes, moving one off its foundation and bending it in the middle.

Hendrickson, who declined to be interviewed, was home alone. When the house started to creak and shake, she called her husband, who was in Phoenix, Ariz., and he told her to get out, according to neighbors who talked to her afterward.

Neighbors said Hendrickson initially couldn't open the front door, but eventually got it to budge as everything buckled around her.

As the sliding house collapsed into hundreds of pieces, Silverberg's wife, Anne Johnston, called 9-1-1 and told the dispatcher that her neighbor's house had just fallen down the hill.

"Your neighbor's house fell down the hill?" the emergency dispatcher replied in disbelief.

High-pitch screaming started in the background. "It's still going," Johnston said, before stopping her conversation with the dispatcher to repeatedly shout "come this way" to Hendrickson.

Johnston then told the dispatcher that she needed to put down the phone to help. She yelled, "Sam, get the ladder!" The line stayed open.

Reaching for the ladder as the silty soil continued moving under her, Hendrickson grabbed the bottom rung. On the 9-1-1 call, she can be heard sobbing after the trio hauled her up the hill to safety.

Downslope, in the 6300 block of Southwest Terwilliger Boulevard, the Chou family was in the middle of its own 9-1-1 call.

Yuan Chou, a researcher at Oregon Health & Science University, awoke to what he thought was the sound of rain. It was actually the first smattering of dirt to give way above.

"But then it started to sound like a crackling fire," Chou said.

Chou peered out the window and initially thought the Hendricksons' house was on fire because sparks were flying as the structure hit power lines. He shouted for his son Ben, 26, to call 9-1-1.

Ben Chou, though, realized what was happening. He told his parents to get out.

Next door, Rachael Hemphill and her husband were awakened by the same noises, she said.

"It gets louder and louder and it's like roaring and a cracking and I look out the front of the house to see if somebody was out in the front," Hemphill said. "And my husband goes to the back and yells, 'Get the kids out, get the kids out. The house is sliding. There's a landslide.'"

The couple called 9-1-1, fearing for whomever was in the sliding house.

Shan Hemphill said the scene was surreal as he looked out a bathroom window at the rear of the home.

"It was creepy to ... see a house creeping towards you from uphill," he said. "I never dreamed it would come down en masse, the whole foundation and everything, and take everything out like a giant bulldozer."

The Hemphills' house and yard were untouched, but the Chous' home was knocked off its foundation. From the street, Yuan Chou watched rolling gravel turn into a wall of dirt and cartwheeling trees. He noticed a neighbor backing his car out of a garage.

Chou thought about the expensive Honda that he had just bought. He told his son that there was still time to get the car. But as he started to run toward the garage, Ben Chou grabbed his father and held him back.

"No," Ben Chou said, "there is no time to be concerned about the car. It is a small thing."

Within minutes, the sliding house crashed into the Chous' two-story home, pancaking the second floor onto the first.

The Chous' house and the Silverberg-Johnston house were among four residences red-tagged, meaning that they are unsafe to enter.

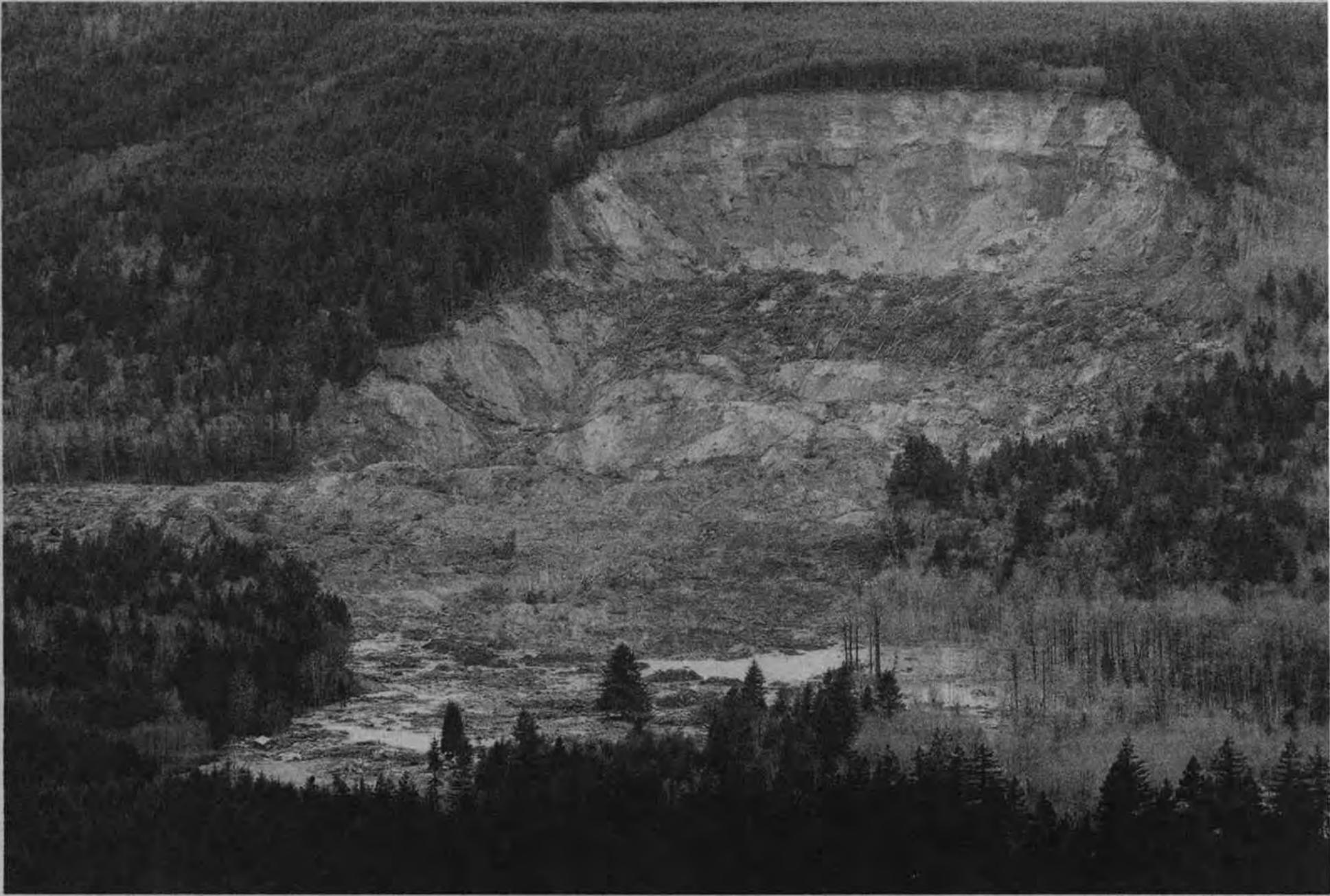
Hours after the landslide, Yuan Chou clutched two small shoulder bags as he watched American Red Cross worker pour a hot drink for his wife, Siukee.

She still wore her pajamas. He paced, trying not to tear up.

"We have been living there 20 years," he said, looking at the broken brown house with the square picture window. "That house up there was big, like a mansion. But I never worried that would fall on me. Never."

-- Noelle Crombie: noellecrombie@news.oregonian.com

Helen Jung, Desiree Afleje and Lynne Palombo contributed to this report



MARCUS YAM/THE SEATTLE TIMES, VIA ASSOCIATED PRESS

Danger Lingers After Landslide Kills 4 in Washington State

Homes and a Highway Are Buried in Seconds

By KIRK JOHNSON

ARLINGTON, Wash. — A huge landslide that roared down from a rain-saturated mountain slope near here, leaving four people dead and at least 18 others missing, remained a site of both devastation and continued extreme danger on Sunday, state and local officials said.

The slide, about a square mile in size, reduced homes to shattered fragments in seconds, buried a state highway and dammed the North Fork of the Stillaguamish River, pos-

ing flood risks up and down stream. But the rescue effort quickly also became a scene of havoc in itself, with some emergency workers sinking up to their armpits in the slurry-like mud and requiring rescue themselves as they were pulled out with ropes.

"Mother Nature holds the cards," Gov. Jay Inslee said at a news briefing here, about 20 miles from the slide. He said that rescue efforts were continuing, but that the emergency officials said that portions of

the slide area were still too treacherous to walk on. Mr. Inslee, who flew over the small community of Oso, population about 200, declared a state of emergency and called the destruction, "unrelenting and awesome."

The slide, in an area of loose glacial soils, was reported around 10:45 a.m. on Saturday along a highway between the cities of Arlington and Darrington, about 50 miles north of Seattle.

Continued on Page A12



ANNIE MULLIGAN / THE DAILY HERALD, VIA ASSOCIATED PRESS

Above, the site of a landslide near Arlington, Wash., where a woman collapsed as residents asked rescue workers for news. At least 18 people were missing.

Danger Lingers After Landslide in Washington Buries Homes and Highway

From Page A10

"There really is no stick standing in the path of the slide," Mr. Inslee said.

Eight people, including a 6-month-old, were rescued Saturday by emergency crews. The baby and an 81-year-old man were in critical condition on Sunday at Harborview Medical Center in Seattle, the hospital said. Six houses were destroyed in the mudslide, and other structures were most likely damaged as well, including some in the flooded areas above the dammed river.

There were early signs of hope. Rescuers could hear people crying for help amid the rubble on Saturday, but were unable to reach them, said Shari Ireton, a spokeswoman for the Snohomish County sheriff's office. The county's executive, John Lovick, told reporters on Sunday afternoon that no further cries had been heard since overnight.

He and Mr. Inslee urged residents in the slide zone who might have been away to check in with local emergency officials or the Red Cross. The Snohomish County Sheriff, Ty Trenary, said the number of missing people was a "fluid" number, based on how many people lived in the destroyed homes, and that the tally could change.

Residents, though, said they were certain the death toll would rise.

Reed Miller, for one, said he believed his son Joseph, 47, who is disabled, was probably among the uncounted dead.

"I figure he hasn't survived," Mr. Miller said. "I've tried his cell."

Mr. Miller, 75, a retired lumber mill worker, was in Arlington shopping for groceries on Saturday, leaving his son alone in the home in Oso that they shared, which he said is now destroyed.

He spent Saturday night in an emergency shelter at a middle school here in Arlington along with several dozen other residents, including some who had evacuated their homes downstream from the slide as flood concerns mounted.

Among the other shelter residents, he said, was a neighbor and one or two of her four small children — he was unsure about the exact number. Her husband and the other children in the family were unaccounted for, Mr. Miller said.

Emma Fitzsimmons and Ashley Southall contributed reporting from New York.

landslide that roared down from a rain-saturated mountain slope near here, leaving four people dead and at least 18 others missing, remained a site of both devastation and continued extreme danger on Sunday, state and local officials said.

The slide, about a square mile in size, reduced homes to shattered fragments in seconds, buried a state highway and dammed the North Fork of the Stillaguamish River, pos-



POOL PHOTO BY LINDSEY WASSON



THE NEW YORK TIMES

Also among the missing were a group of girls who were having a slumber party, according to a resident interviewed by The Seattle Times.

Other people talked about close calls and luck. Sierra Sansabar, who lives in Arlington, said she and her boyfriend were driving on Route 530 on Saturday

when they were halted by the covered roadway perhaps five minutes or so, by her estimate, after the slide — the second or third car to arrive at the scene.

"Mud, household items everywhere, people screaming, crying, running into the rubbish," she said. "I can't even describe how crazy it was."

came a scene of havoc in itself, with some emergency workers sinking up to their armpits in the slurry-like mud and requiring rescue themselves as they were pulled out with ropes.

"Mother Nature holds the cards," Gov. Jay Inslee said at a news briefing here, about 20 miles from the slide. He said that rescue efforts were continuing, but that the emergency officials said that portions of

over the small community of Oso, population about 200, declared a state of emergency and called the destruction, "unrelenting and awesome."

The slide, in an area of loose glacial soils, was reported around 10:45 a.m. on Saturday along a highway between the cities of Arlington and Darrington, about 50 miles north of Seattle.

Continued on Page A12



JORDAN STEAD/SEATTLEPI.COM, VIA ASSOCIATED PRESS

Route 530, top, was buried in rubble after a landslide reduced buildings to shattered fragments. Above, Barbara Walsh, whose husband was among the missing, was comforted by Gov. Jay Inslee, right, after a news conference on Sunday.

Much of western Washington has been deluged by heavier than normal precipitation over the last six weeks, with record snowfall levels in some areas of the Cascade Mountains and soaking rains in lower elevations.

Here in Arlington, about 7.14 inches of rain has fallen so far this month, well above normal

levels of about 4.57 inches, making it the sixth-wettest March recorded since 1922, said Johnny Burg, a meteorologist in the National Weather Service's Seattle office.

Those drenching rains also came after a prolonged spell of drier than normal conditions from October to January.

"That kind of heavy rain saturates the ground to the where it cannot hold any water," Mr. Burg said. "An creates instability especial steep hillsides."

More rain is forecast for day night into Tuesday, when area is expected to receive other one-quarter to one-half inch of precipitation, he said. Weather Service has issued flood warning and a flash watch for the area too, but "massive flooding" was unlikely. In Washington, landslides

Parts of a rescue are too treacherous for emergency crews to walk on.

pen regularly but they are usually smaller or take place in remote areas. A huge slide on Whidbey Island, west of Seattle, sent the equivalent of 10 dump-truck loads of earth about 200,000 cubic yards heaving toward Puget Sound March. Mr. Miller, the Oso resident, said a small slide flooded parts of the roadway about weeks ago, as well.

State officials, earlier this month, also issued flood alerts in parts of the state as soils reached saturation levels, but Mr. Inslee and other officials said on Sunday that they had no information on whether there were any indications of a threat on slopes east of Oso.

Mr. Inslee said it was also early to talk about any compensation for the disaster, though he said simply rebuilding the highway would be a major project. He said that for now, the "extreme challenges" in searching the area were the priority.

Standing outside the middle school shelter on Sunday afternoon under a brilliant sun, Mr. Miller said he found himself thinking of his home and old life now lost. His incomes were on the dining room table in an envelope, he said, ready to be sent. He and his son had been talking about moving soon to a retirement community that has programs for adults with disabilities. He was about to see his quarterly property tax bill for the county, too. But with his wife gone, he said with a sad laugh, he will not be paying it.

"Let them come after me," he said.



ANNIE MULLIGAN / THE DAILY HERALD, VIA ASSOCIATED PRESS

Not-so-solid ground beneath your feet

Clackamas landslide maps are intended to guide development, improve public safety

By Molly Harbarger
mharbarger@oregonian.com

Every year some part of Clackamas County starts slipping. Turn a corner on a windy, hilly road and there might be a slight crescent-shaped ditch revealing an active slide the county roads department must patch up or repave.

Heavy rains made 2009 an especially bad year. In Eagle Creek, Stacey Simpson woke her two sleeping daughters and raced them out of their house when her husband, Richard Smith, heard suspicious cracking in the backyard.

The hill above their house crashed through the walls, pushing the house off its foundation and down the hill. Severed electrical lines set the house on fire, and the family watched as it burned. Several pets died.

In Lake Oswego, six teenagers ran in socked-feet as a landslide roared down the hill a house sat on, pushing through the back wall, through the middle of the house and out the garage. It was only one hour into 2009 when the slide caused the evacuation of 20 nearby homes and set the stage for a year that saw dozens of slides.

With so many slides Clackamas County was declared a national disaster area. The declaration opened Federal Emergency Management Agency money that was used to create a new set of maps that use laser-mapping technology to show where the landslides have occurred in the past and might occur in the future, as well as a report that assesses what kind of damage is likely.

The study area encompasses most of Clackamas County's population, stretching south from Milwaukie to

Please see **LANDSLIDES**, Page A6



THE OREGONIAN/2009

This Lake Oswego home was severely damaged by a landslide in January 2009, when landslides caused much damage in Clackamas County and the county was declared a national disaster area. New maps created by the state Department of Geology and Mineral Industries show where the slides have occurred in the past, and where they might occur in the future.



THE OREGONIAN/2009

Richard Smith and his wife, Stacey Simpson, and their two daughters escaped with their lives after their house burned to the ground after a landslide in January 2009.

Landslide study area



DAN AGUAYO/THE OREGONIAN

On Oregonlive.com

To see the LIDAR maps created by the state Department of Geology and Mineral Industries as well as links to the agency's guide for homeowners and a fact sheet about landslides in Oregon, go to oregonlive.com/clackamascounty.

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Richard

Landslides

Continued from Page A5

Canby and from Wilsonville to Sandy. About 7 percent of that area is at high risk for landslides. That means not only are landslides common there but there is also a lot of stuff, as state engineering geologist Bill Burns put it.

That includes \$1 billion worth of buildings, infrastructure such as roads, pipes and electrical lines and nearly 8,000 people.

"The hazard can be high somewhere, but if there's not a lot of stuff you worry about, the risk isn't as high," Burns said.

The northern Clackamas area is at especially high risk because the density of the Portland area is matched with conditions that lead to lots of landslides.

Scientists mapped 2,885 landslides in the area. Some of those are more than 150 years old. Ancient and prehistoric landslides are hard to find, because many seem like normal hillsides, covered in trees and wildlife. However, the land remains unstable practically forever, and the right mix of factors can trigger the slide.

A trifecta for landslides

The Troutdale Formation is the name given to an underground trail of sedimentary rocks, such as silt and mudstones, that occasionally crop out of hillsides. The formation creates loose ground on the steep hillsides of northern Clackamas County when hit by yearly rains.

"And boy does it ever want to landslide," Burns said.

From 1964 to 2009, local agencies recorded 370 landslides in the area. The Oregon Department of Geology and Mineral Industries estimates that typical years racked up

hundreds of thousands to millions of dollars in losses from landslides. Severe storm years far exceeded that, such as \$75 million in 1996.

The agency uses LIDAR, a laser-mapping technology that uses light aircraft to make highly detailed and accurate maps. The new Clackamas County maps replace ones from 1979, before computer-assisted mapping.

An Oregon City apartment complex, Newell Creek, was built atop a 150-year-old landslide that began shifting again in 2006 after two months of heavy rains. Officials knew the area suffered occasional landslides, but LIDAR revealed the extent of the threat. Unfortunately the information came after the landslide damaged sewer and water lines and half a dozen homes.

The Portland area experiences little earthquake activity now, but more is expected in the future. The report says a large crustal earthquake hitting northern Clackamas could result in up to \$1 billion in losses and 4,500 buildings "moderately to completely destroyed" from landslides alone.

For planning purposes

Burns and county officials said the new data is useful for emergency management and to help guide development in the area.

Perhaps someone is closing a deal on a beautiful hillside home with amazing views. Before buying the house, the maps might show the house is in a high-risk area for shallow or deep landslides. The scenario is likely, considering the report shows 20,000 people and \$7.5 billion worth of buildings in those areas.

The maps are not the final say in whether someone should buy or sell, though, Burns says. They are good indicators of

whether residents should investigate further. If your house is in a high-risk area, Burns said, you should hire a geologist or engineer to drill in the ground and examine the specific site thoroughly to determine what kind of cost you might incur for landslide-proofing your home, just as you'd hire a plumber to inspect the risk of old pipes.

"It really helps someone look into it a little deeper and get the answers," Burns said. "It's part of that adding education to data to help make good decisions."

Homeowners can't control the rain or an earthquake, but they can manage stormwater drainage. Emergency Management Coordinator Jay Wilson said the county's emergency management plan, a federal requirement, explains ways to deal with roof runoff and ground sprinklers to avoid encouraging landslides.

The new data will also be incorporated into the emergency management plan as it's updated. The data is supposed to end up in county and city comprehensive plans, and the state Department of Land Conservation and Development has committed to working with Clackamas County for three years to help that onerous process.

Metro also participated in the project and shares responsibility with the county and cities to use the data to guide development decisions.

All three have some authority to pick which areas of the county should be targeted for density and certain kinds of buildings.

Before the study started, local, regional and state agencies met to figure out what they needed most from the maps. Now that it's over, the meetings are continuing to share ideas about how to use them. Burns' team did most of the heavy lifting in creating the

Recent big slides

2011

Oregon City: Apartment dwellers on Beavercreek Road nervously waited in their houses as a slow-moving landslide inched slowly downward. The site experienced a massive 2006 slide, and emergency officials warned that the next big slide was not a matter of "if," but "when."

2009

Lake Oswego: Six teenagers narrowly escape a landslide that destroyed the house and caused the evacuation of 20 others.

Eagle Creek: A landslide pushes a house off its foundation and ignites an electrical fire. A family of four is displaced.

Lake Oswego: A massive mudslide destroys a family's high-end dream home. The couple who owned the house had inquired about landslide insurance a month before, but hadn't heard back.

2006

Oregon City: An apartment complex, Newell Creek, is hit with a landslide at least 150 years old after two months of heavy rains, breaking a water line and damaging the access road. Two buildings were declared unsafe and demolished. The area sustained 48 slides that year.

—Molly Harbarger

maps, but will stay involved to explain the science behind the report and help officials decide how to utilize the information.

"It helps there be more emphasis on building in a way that's more mindful, that helps to reinforce and stabilize structures," Wilson said.

than 75 members, certified guardians keys. are a lot of vulnerable who don't have the to pay for a professional," Doty said. "If develop a statewide it would be a step up the vulnerable people protection."

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ct.oregonian.com

obits@oregonian.com



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August 5, 2015

TO: Washington County Planning Commission

FROM: Russ Dondero, Chair WC CAN

RE: North Bethany/Ordinance 801

I live in Forest Grove not in the North Bethany area. I have no personal ax to grind, I'm here as a concerned citizen who believes in good land use planning. Ordinance 801 if approved today is bad land use planning.

I am concerned that the discussion is too focused on narrow questions about what is a proper "buffer" on the property in question citing Condition 6 - "compatibility between urban uses & agricultural practices" outside the UGB...

Instead my focus is on what Michael Robinson, PerkinsCole, representing his client K&R terms - "Ancillary issues - "

Impacts on non-agricultural uses

- Landslide risk
- Stormwater
- Sanitary sewer alignments
- Trail alignments
- Impacts on schools
- Unknown infrastructure costs – road upgrades, fire and police response demands and times...

Mr. Robinson wants the commission to pass such questions to development stage...

This makes planning subservient to development aka market forces when in fact good planning requires issues in play be settled before approval is given...

As I said in my previous testimony last month there are too many questions in play and the commission has a lot of homework to do before this issue should be brought to a vote.

Commission staff let the cat out of the bag in their written and oral comments suggesting that the risk of a landslide might be put in any deed on the North Bethany project.....

What is required is that all parties to this Ordinance should act with due diligence before 801 comes to a vote.

By contrast K&R has consistently said in effect "trust us" to negotiate in good with the county, Metro, Clean Water Services and THPRD.

Oregon land use law under Senate Bill 100 requires planning before development not after it... K&R's request amounts to eviscerating Oregon land use law...

If this process continues in this way, you are inviting lawsuits from those affected by such a decision.

We saw what happened in the urban/rural reserves process dealing with Helvetia. Do we want to return to that process – a court challenge and possibly legislative action?

Respectfully submitted,

Russ Dondero

1506 Limpus Lane

Forest Grove, Oregon 97116



Date: August 4, 2015

To: Robert Fraley, Washington County

From: Carrie Pak

Subject: Ordinance 801, Responses to Questions from Planning Commissioner Jeffrey S. Petrillo

Below are responses to questions from Planning Commissioner Jeffrey S. Petrillo. I plan attending tomorrow's Planning Commission meeting. Please let me know if you or the Commission have other questions that I can assist address. Thanks.

(1) I have heard that CWS hired a contractor to evaluate potential sewer line locations in the area currently included in the Natural Features Buffer. Can you confirm that? What is the cost and scope of work for this contract? Does it include evaluation of potential stormwater solutions for this area? When is the work expected to finish?

A: Two studies were previously completed which evaluated sewer service to the northern portions of the North Bethany Planning area. The first was conducted by Kennedy Jenks Consultants in 2007 with final report produced in 2008. It examined three general approaches to sewer service in North Bethany ultimately recommending an all-gravity alternative. The cost of this preliminary engineering analysis for sewer service alternatives was \$130,000.

A follow-up study was completed in 2011 in response to a developer commissioned study proposing the trunk sewer be extended in an Abbey Creek alignment outside the Urban Growth Boundary and north of the North Bethany Area boundary. Kennedy Jenks was again contracted by the District to examine the north areas of the service District in more detail to confirm serviceability. In this subsequent study, small areas along the northern boundary line were identified to be "unserviceable by gravity sewer" if the line were to be constructed along the preliminary alignment proposed in the 2008 report. These "unserviceable areas" lied within the Natural Features buffer and no alternate alignment was adopted. The cost of this follow-up study was \$5,400.

Clean Water Services has recently agreed to lead the design and construction of the trunk sewer extension from its current terminus eastward to Kaiser Road. The District is currently refining the scope of services and negotiating a contract with a consultant team to prepare a detailed gravity

alignment alternative analysis, prepare construction plans and conduct all necessary permitting. With more detailed knowledge of a potential subdivision layout, the detailed analysis will be conducted to optimize comprehensive service while minimizing construction risks and costs.

The scope of work for the consultant includes not only the sewer alignment, but also development of stormwater management plans and construction details utilizing a stream corridor enhancement approach. The stormwater and sanitary sewer design are being conducted simultaneously by the same consultant in order to integrate the two efforts, thereby minimizing disturbance and coordinating the geographical overlap of the two projects.

Timing of the study, design, and construction is intended to provide service to the new Beaverton School District elementary school planned on Kaiser Road.

(2) Based on past projects, can you provide a general estimate of CWS spending that will be required to fully evaluate sewer and stormwater solutions for this area, if the county decides to allow development?

Regardless of the decision on changing the boundaries of the Natural Features Buffer area, an alternative analysis will be conducted to weigh the pros, cons, and costs of alignment alternatives. In addition to sewer serviceability, other factors affecting the alignment decision include crossing of creeks and other natural resource impacts, depth of sewers, constructability, construction methodologies, slope stability, overlap/conflict with stormwater management approaches, coordination with trail location, and project timing among others.

The need to provide sewer service to areas previously identified as “unsewerable” may add to the number of alternatives considered, and will certainly add to the complexity of the analysis. It will also generate internal policy discussions regarding alternate sewer provisions not normally considered for sewer service, cost implications, and cost burden of providing sewer to these areas. While difficult to detail and calculate, it is conceivable that extra costs will be on the order of \$15,000 in the consultant contract and another \$15,000 - \$20,000 of staff time dealing with resulting policy and cost burden issues.

One policy question will focus on assumption of the cost burden associated with the sewer service modifications necessary to serve this expanded area. Some additional costs, such as private grinder pumps will be easily attributable to and borne by properties in the expanded area. Other premium costs, such as design and construction costs due to extra depth along long lengths of the sewer line required to minimize the number of lots requiring grinder pumps will be more difficult to assign, but may be passed on to the development community.

July 15, 2015

Michael C. Robinson
MRobinson@perkinscoie.com
D +1.503.727.2264
F +1.503.346.2264Mr. A. Richard Vial, Chair
Washington County Planning Commission
155 N. First Avenue, Suite 350
Hillsboro, OR 97124**Re: Proposed Ordinance No. 801 Response to Recent Testimony Submitted to the Washington County Planning Commission**

Dear Chair Vial and Members of the Washington County Planning Commission:

This office represents K & R Holdings, LLC ("K & R"). K & R owns properties in North Bethany adjacent to the Portland Metropolitan Urban Growth Boundary (the "UGB"). This letter is written on behalf of K & R in response to recent testimony submitted to the Washington County Planning Commission (the "Planning Commission") regarding proposed Ordinance No. 801 and also describes recent conversations between K & R and the Tualatin Hills Park and Recreation District ("THPRD") and Clean Water Services ("CWS").

I. Introduction.

The staff report dated July 8, 2015 recommends that the Planning Commission consider and then recommend approval of proposed Ordinance No. 801 to the Washington County Board of Commissioners (the "Board"). The Planning Commission must decide if proposed Ordinance No. 801 satisfies Metro Ordinance No. 02-987A, Condition of Approval 6, which provides that the County shall adopt buffer provisions in its ordinances "to ensure compatibility between urban uses and included study area and agricultural practices on adjacent land outside the UGB zone for farm or forest use".

The issue is whether proposed Ordinance No. 801 adopts a buffer scheme that ensures compatibility between urban uses and agricultural practices on adjacent land outside of the UGB zone for farm or forest use. To the extent parties argue that impacts on non-agricultural uses are relevant to this issue, those uses are not considered by Condition of Approval 6. Moreover, development-related issues, such as stormwater, sanitary sewer alignments, trail alignments, and impacts on schools, are also unrelated to whether proposed Ordinance No. 801 satisfies Condition 6. However, as explained below, the Planning Commission can find that all of those issues will be considered in development applications and, because an applicant has the legal burden of proof to demonstrate that applicable Washington County Community Plan and Community Development Code ("CDC") provisions are satisfied, those issues will always be addressed at the development stage. Moreover, K & R Holdings will, as does every other applicant in North Bethany, coordinate with affected service providers such as THPRD and CWS to see that these issues are satisfactorily resolved.

Mr. A. Richard Vial, Chair
July 15, 2015
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Additionally, the County provides notice of development applications to the Beaverton School District so that the school district may comment on the development applications in terms of impacts on the school. What this means for purposes of the Planning Commissions' review of proposed Ordinance No. 801 is that the testimony should be focused on Condition 6's requirement that there be a buffer ensuring compatibility between urban uses and agricultural practices adjacent to North Bethany, and not focused on ancillary issues that will be addressed in future development applications.

II. Response to Testimony.

A. Testimony by Metro.

K & R appreciates Metro's comment. As Metro's letter recognizes, there is no one way to achieve compatibility between urban uses and agricultural uses. However, the staff report concludes that proposed Ordinance No. 801 is the best of three (3) means of achieving compatibility.

K & R will talk further with Metro about this issue. K & R believes, as does the staff report, that proposed Ordinance No. 801 combines three (3) of methods—distance, ownership, and dense landscaping—to provide assurance of compatibility between urban uses in North Bethany and adjacent agricultural practices.

B. Clean Water Services.

K & R has met, and will meet again, with CWS to discuss utility alignments. As noted above, K & R is responsible in a future development application to provide an acceptable alignment to CWS. To the extent a development application imposes requirements in sanitary sewer service delivery unacceptable to CWS, it is highly unlikely that the development application can be approved. Thus, K & R has an incentive in addition to its legal obligation to affectively coordinate with CWS on sanitary sewer and stormwater service.

C. THPRD.

K & R has met, and will meet again, with THPRD. K & R's goal in meeting with THPRD is to identify an acceptable trail location well before a development application requires it to do so.

D. Stormwater Runoff to Abbey Creek Stables.

Abbey Creek Stables' owner and operator has said that he is concerned about stormwater runoff to his property. His concern has to do with increased stormwater runoff. Oregon law requires that downhill property owners receive the same amount of water at the same velocity after development as they did prior to development.

Mr. A. Richard Vial, Chair
July 15, 2015
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E. Density.

Several parties have argued that proposed Ordinance No. 801 will allow increased density. The staff report at page 14 explains that increased density will not be allowed.

F. Land Slide Hazard.

The owner of Abbey Creek Stables has said that he is concerned about development on landslide-prone lands. CDC 410-4, "Landslide Study Area Requirements", requires that an applicant with land so identified must address potential hazards and propose mitigations to those hazards. This is something that can be accomplished in the development process. Nevertheless, landslide hazard is unlikely to have any impact on compatibility between urban and agricultural uses.

G. Visual Impact.

The owner of Abbey Creek Stables argues that the reduced fifty (50) foot-wide buffer may allow a visual impact to equestrians on nearby equestrian trails. The Planning Commission can find that the dense landscaping and landscaping management required by proposed Ordinance No. 801 will have a far more beneficial impact on reducing visual incompatibility between urban and agricultural uses than would near distance.

Exhibit 1 of this letter is a letter from Mr. Joe Percival dated July 1, 2015. Mr. Percival is a landscape architect. K & R asked Mr. Percival to review proposed Ordinance No. 801. Mr. Percival's letter states that he believes the dense landscaping in proposed Ordinance No. 801 will achieve a noise reduction, prevent casual encroachment into agricultural lands and discourage trespassing into agricultural lands.

Proposed Ordinance No. 801 also includes a requirement that the buffer area be included within a "tract". As the staff report explains, use of a tract is not a new concept in the buffer area and assures a permanent "no touch" natural area that cannot be developed, or further divided. Combined with the fence, dense landscaping, and landscaping management the tract assures an effective and permanent visual and physical barrier that ensures compatibility between the urban and agricultural uses.

III. Conclusion.

Based on the testimony submitted to the Planning Commission thus far, the Planning Commission can find that proposed Ordinance No. 801 achieves the compatibility required by Condition of Approval 6. K & R will provide additional oral and written testimony to the Planning Commission and will update the Planning Commission on its continued discussions with Metro, CWS, and THPRD.

Mr. A. Richard Vial, Chair
July 15, 2015
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K & R respectfully requests that the Planning Commission recommend approval of proposed Ordinance No. 801 to the Board.

Very truly yours,



Michael C. Robinson

MCR:rsr
Enclosure

cc: Mr. Robert Fraley (via email) (w/ encl.)
Ms. Theresa Cherniak (via email) (w/ encl.)
Mr. Andy Back (via email) (w/ encl.)
Mr. John O'Neil (via email) (w/ encl.)
Mr. John Schmidt (via email) (w/ encl.)
Ms. Nacia Bonilla (via email) (w/ encl.)



July 1, 2015

Mr. John Schmidt
K&R Holdings, LLC
17933 NW Evergreen Parkway
Suite 300
Beaverton, OR 97006

Subject: Review and Comment on the proposed Washington County Ordinance 801
Modification of Urban/Rural Compatibility Buffer

Mr. Schmidt:

I am a senior Landscape Architect and owner of the local firm Percival – Landscape Architecture. My education includes a Bachelor of Landscape Architecture from the University of Oregon and Masters in Urban Planning from Portland State. I have been a licensed Landscape Architect since 1980 and have since actively practiced this profession in the Western United States, Japan, and the Caribbean. A significant portion of my work history has been in the Portland Metropolitan area. As a result, I have direct experience in working with local codes and ordinances and have a good understanding of the effects and effectiveness of commonly practiced design standards.

In my professional opinion, Ordinance 801 as written and revised will provide an effective buffer between urban and agricultural uses. The fifty foot (50') planting strip combined with required fencing will provide noise reduction, adequate visual transition between uses, prevent casual encroachment and discourage trespassing. Achieving these results will support the overall intent of meeting the goal of urban/rural compatibility prescribed in Metro's Ordinance No. 02-987A conditions of approval for the North Bethany planning area.

Respectfully,

Joe Percival,
Landscape Architect

EXHIBIT 1



July 15, 2015

A. Richard Vial, Chair
 Washington County Planning Commission
 155 North First Avenue, Suite 350
 Hillsboro, OR 97124

Re: PROPOSED LAND USE ORDINANCE NO. 801 - An Ordinance Amending the North Bethany Subarea Plan of the Bethany Community Plan and the Community Development Code Relating to Density Restricted Lands and Natural Features Buffer

Dear Chair Vial and Members of the Planning Commission,

Thank you for allowing Tualatin Hills Park & Recreation District (THPRD) the opportunity to provide comments on Proposed Land Use Ordinance No. 801. We appreciate the efforts the county is taking to identify and address our concerns regarding the proposed ordinance and look forward to continuing our participation in the ordinance process as the public hearings are held this summer and fall.

After reviewing the staff report dated July 8, 2015, and the proposed ordinance and exhibits, THPRD has the following concerns, which are also outlined on pages 10 and 14 of the staff report:

- Uncertainty of trail location. Currently, portions of the trail are shown along the southern edge of the buffer on the western and eastern segments of the existing buffer, which corresponded with natural features, including topography. Trails will not be allowed within the reduced buffer, as such placement would result in disturbance to vegetation and steep slopes. Reducing the buffer could result in less siting flexibility and uncertainty in location, as further described in the next points.
- Uncertainty in access points. North Bethany Subarea Plan, Northeast Design Element 4a calls for at least three access points on the north boundary to provide public access to the trail network and opportunities for the community to enjoy the views toward the north. The existing natural features buffer provided natural points for such viewing access. With the reduced buffer, the ability to provide such access points may prove more challenging.
- Challenges in siting trail in relation to terrain. As illustrated on Attachments B and C to Exhibit A of the staff report, the area of the existing natural features buffer contains

steep slopes. Terrain in the surrounding area could make relocating the trail segments challenging.

- Interaction with surrounding uses. Relocating the trail could have several negative impacts and/or challenges in relation to surrounding uses:
 - If moved closer to the rural uses to the north, interference with agricultural uses;
 - Reduced visual access to natural areas;
 - Reduced public access; and
 - If relocated or incorporated into housing development, difficulty in delineating public and private property for maintenance purposes and controlling access points to the trails. THPRD is facing similar challenges in trail corridors in other areas within North Bethany.
- Increased costs. The potential of moving trail alignments to steeper slopes would result in increased costs in the development of the trails.

We met with the developer representatives, K&R Holdings, LLC, to work out these issues and have a site visit planned for July 24, 2015 to investigate a potential solution to the west of Kaiser Road. THPRD requests that the Planning Commission ask the developer to continue to work with THPRD to refine alternative trail location and access points to be included in the final ordinance.

Please let me know if you have any questions about our comments. Thank you for your consideration.

Sincerely,



Jeannine Rustad, J.D.
Superintendent of Planning

C: Doug Menke, THPRD General Manager
Keith Hobson, THPRD Director of Business & Facilities
Aisha Panas, THPRD Director of Park & Recreation Services
Michael C. Robinson, Esq., Perkins Coie

Title: Input to Washington County Planning Commission re Ordinance 801
Reducing the size of the North Bethany Natural Features Buffer

Page 1

Author: Joe Rayhawk, 15248 NW Germantown Road, Portland, OR 97231 file: 2015\PC_20150715_Rayhawk.rtf

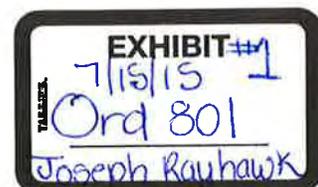
- 1) Reduction in Buffer Size to 50 feet would make it too dangerous to allow our riders to use the trails in the woods that are within 10 feet of the county line. It would lead to loss of use of our south pasture due to danger to horses and negative effects of increased and untreated stormwater and backyard runoff. These would represent loss of productive use of 1/3 of our property. Loss of the south pasture would force downsizing of operations which would force us out of the stables business.

Providing a dense screen only fifty feet deep such that sights, sounds, people and objects can appear suddenly to startle the horses on a steep slope is almost maximally bad.

- 2) A 5-foot fence at south end of 50-foot buffer will be useless for protecting horse operations. 50 feet @ 25% slope puts the fence's base 12.5 feet higher than my trail. Ignoring the next two problems, this is already not good. The head of someone standing just south of the 5-foot fence, looking over the fence, will be 17.5 higher than my trail. This will be more than 10 feet higher than the horse. Horses are especially sensitive to animals or anything suddenly appearing above them. Especially with both eyes on the front of their heads indicating they are predators.

Now assume there is a flat 20 foot wide THPRD right of way just south of the fence or a backyard that needs to have LIDA. A 20-foot right-of-way will require a retaining wall between 2.5 and 5 feet high. This puts the ground level of the trail between 1.5 below and even with the top of the fence. LIDA will require at least a 4-foot high retaining wall, making the ground at the back of the property less than a foot below the 5 foot fence.

- 3) Building a THPRD trail on steep slopes is not practical. It require either massive disturbance of the unstable slope and expensive retaining walls. It is not clear that they can be built to meet FEDERAL ADA requirements.
- 4) Page 3 lists Natural and Human Causes of Earthquakes. It discusses actions done in the Natural Features Buffer, over the last 9 years, either by K&R or by the owners of land they have optioned that actually increase the landslide risk now.
- 5) Pages 4 and 5 provide an analysis of why building one row of homes will require massive disturbance to the steep slopes. and that 2 or 3 rows of houses lead to large numbers of large disturbances. It would require serious stack-ups, large 1st and 2nd story heights, large retaining walls and huge water problems.
- 6) Roads cannot be built north -south: Hill is too steep and will freeze in the winter. It is why Kaiser Road makes a dramatic turn to go almost East-West on the steep part of the slope.
- 7) Page 6 and 7 have a discussion of the Oregon Drainage Law. Let me summarize.
**One cannot change the volume or the nature of water running onto a neighbor's land.
Nor, where the the water flows onto the neighbor's land.**
It is derived from Common Law. This is more fundamental than Land Use Goals.
It also trumps the Oregon Right to Farm laws.
The current Path of the Eastern Tributary of Abbey Creek was established in 1985 when the Robinsons built a dam. Removing that dam may cause the tributary to flow northwesterly across the wetlands. We have built fences, partially funded with Federal grants to separate the horses from an Enhanced Conservation Project. The project was to help improve water quality of Abbey Creek, Rock Creek and ultimately the Tualatin River. The federal government invested in eliminating non-native plants and planting native ones. Federal agencies continue to monitor and to invest in the protected area. The fence protects most of the tributary where it wraps around the western side of the hills on which the Woods sits. Since it has been established for more than 10 years and we and the Federal government have invested time and money, clearly the Oregon Drainage Law applies.



Title: Input to Washington County Planning Commission re Ordinance 801 - Joe Rayhawk

Page 2

8) The letter from the K&R lawyer is misleading and incomplete with respect to Land Use Goals.

They mention only Land Use Goals 1, 2 and 14.

They suggest that you can decide that these goals have been met. I submit that you cannot honestly believe that.

Pages 8 through 10 are a summary all of the goals. Quite a few are very inconvenient to K&R

Goal 3 Agricultural Lands - requires counties to inventory such lands and to "preserve and maintain" them.

It drives the Metro Ordinance. Metro cannot capriciously decide to ignore their requirement.

Goal 5 covers more than a dozen natural and cultural resources such as riparian corridors, wetlands and wildlife habitats

Page 11 is a MetroMap output showing Class A Upland Habitat (through which the county knows elk migrate) and the wetlands on my south pasture that will be put in jeopardy by reducing the buffer.

The wetlands have a direct connection to Abbey Creek. So, new EPA rules will apply.

Also, the MetroMap shows the actual path of Abbey Creek wrapping around the base of the hill on which my woods sit. The entire hill on up into the Natural Features Buffer is technically a riparian buffer. Pollutants running onto the hill will flow directly down to the creek.

Goal 7: AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS

Page 12 and 13 are a longer printout from the State. The language appears to REQUIRE the local government mitigate the risk from landslides and earthquakes once it has been informed they exist.

Clearly, Washington County has been informed.

I do not see how the county can allow construction here without clearly violating this Goal.

The current process could be viewed as Violation of Goals 2 and especially 11 since reducing the buffer is to respond to a developer's needs rather than the community's. It is interfering with CWS's planning. Approving the change will require them to take actions that they have indicated are not wise and will increase their costs.

The following CWS documents are in the record from earlier hearings, I incorporate them here by reference

North Bethany Subarea Drainage Master Plan, Otak Project No. 13035 Dated December 1, 2010

and

North Bethany Stormwater Implementation Plan Dated October 9, 2013

I also incorporate by reference here, the many comments from CWS and THPRD summarized by staff in:

Issue Paper No. 2015-03, *Consideration of Width Reductions to North Bethany's Natural Features Buffer*

Having the staff work on this Ordinance and having this Commission spend time on it appears to be a violation of Goal 11 because we are spending limited public resources for the benefit a a single developer that not only appears to be against the community interest but diverts those resources from working for the common good.

10) As I promised at the April Hearing, I am supplying on Page 16 a picture that lets you see where the Natural Features Buffer, east of Kaiser Road has slipped. This is preceded by an explanation.

I apologize if you are innumerate. There is trigonometry involved.

11) Several of you indicated in April that you did not understand the earthquake and landslide risk.

Pages 17 and 18 supply three printouts from **Oregon HazVu: Statewide GeoHazards Viewer**. These include the mapped landslides in the Natural Features Buffer, the Earthquake Risk Overlay and then a zoomed out view showing the location of the Oatfield Fault. This fault is a risk due to its being less than a mile away.

The bigger risk is the potential Level 9 off the coast.

12) Pages 19 and 20 are records from Oregon Secretary of State Corporation Division Website showing that K&R Holdings LLC and Metropolitan Land Group have the same ownership.

13) Even as volunteer Planning Commissioners, you are under legal obligation personally to act prudently and responsibly.

Voting to allow home construction which requires large disturbances to unstable slopes known to be at landslide risk and at earthquake risk from two different earthquake faults is neither reasonable nor prudent.

CAUSES OF LANDSLIDES

While doing research for this input, I found the notes below on Causes of Landslides I have marked in bold factors that apply to the North Bethany Natural Features Buffer. I will expand on the applicability below.

=====

From Wikipedia: <http://en.wikipedia.org/wiki/Landslide>

Causes

Main article: **Causes of landslides**

*Landslides occur when the stability of the slope changes from a stable to an unstable condition. A change in the stability of a slope can be caused by a **number of factors, acting together or alone.***

Natural causes of landslides include:

groundwater (pore water) pressure acting to destabilize the slope
Loss or absence of vertical vegetative structure, soil nutrients, and soil structure
(e.g. after a wildfire - a fire in forests lasting for 3–4 days)
erosion of the toe of a slope by rivers or ocean waves
weakening of a slope through saturation by snow melt, glaciers melting, or heavy rains
earthquakes adding loads to barely stable slope
earthquake-caused liquefaction destabilizing slopes
volcanic eruptions

Landslides are aggravated by human activities, such as

deforestation, cultivation and construction, which destabilize the already fragile slopes.
vibrations from machinery or traffic
blasting
earthwork which alters the shape of a slope, or which imposes new loads on an existing slope in shallow soils, the removal of deep-rooted vegetation that binds colluvium to bedrock
Construction, agricultural or forestry activities (logging) which change the amount of water which infiltrates the soil.

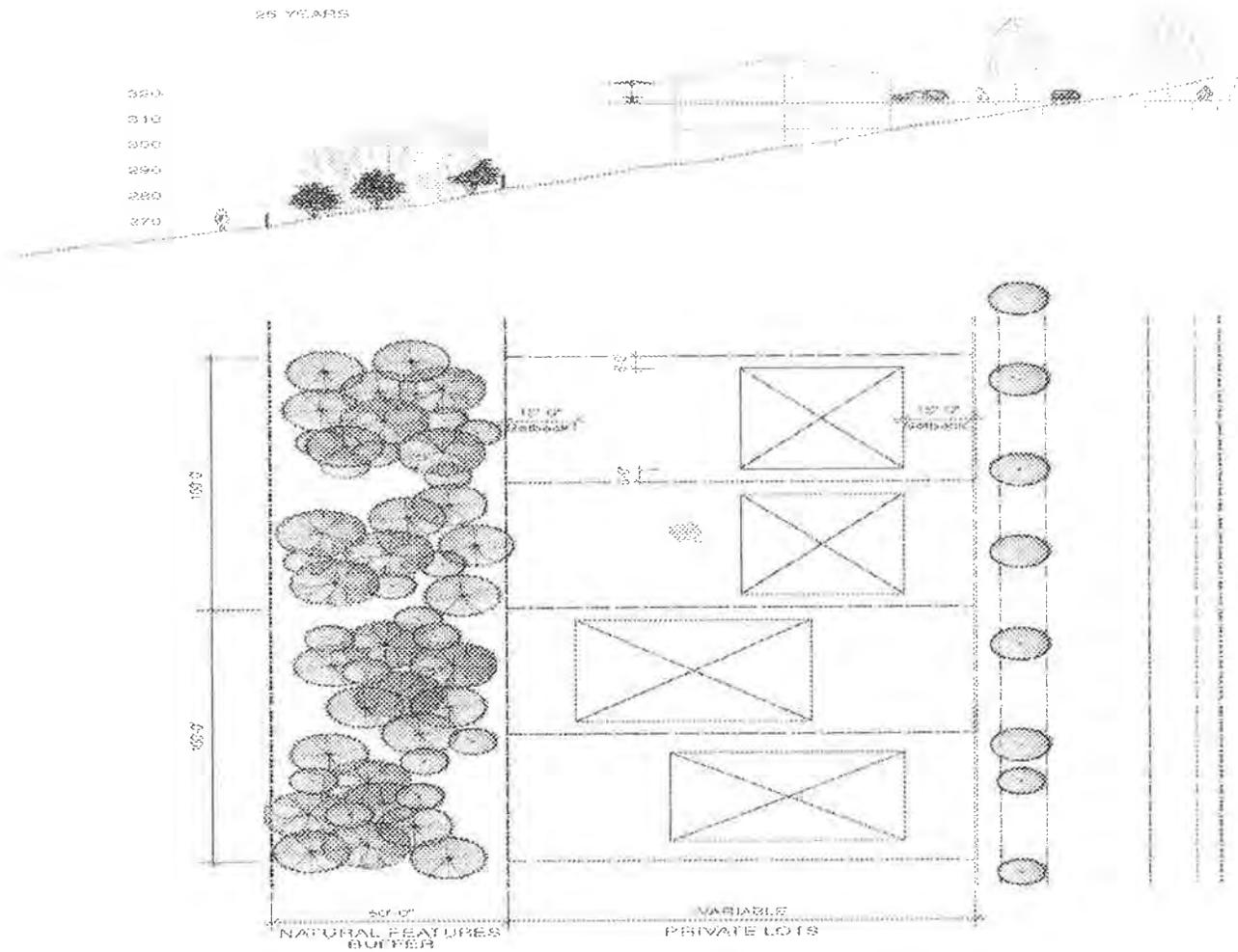
=====

Some of these apply because of the clear-cutting on the Robinson property in 2012 and 2013 and the 2014 tilling and apparent planting of grass only. The clearing was done by K&R. They claimed it was a favor to the Robinsons so they could farm. It is 2 and 3 years later and no crops have been planted. Worth noting that they do not have a water right that would let them irrigate the cleared area. And, of course, the north facing slope gets relatively little sunlight versus the already cleared and flatter land just south of Natural Features Buffer.

The area west of Kaiser was clear-cut in 2006 about the time that K&R optioned the land owned by the Hosfords. The Hosfords had planted, harvested and replanted trees on the steep slopes several times in the 20th century. In 2006, they clear-cut but did not replant. Over the last nine years, the area had become overgrown with various volunteer plants. The area was scraped clean (down to raw earth) in June and it appears that grass was planted. Given that it is not going to rain very much for several months, the grass planting may fail. So, several of the causes above apply to the Natural Features Buffer on the Hosford property.

Other Causes will apply to both sides of Kaiser Road if development, including grading, is allowed on the slopes.

Then, of course, there is an earthquake faults less than a mile to the east and the potential Level 9 earthquake fault to the west.



Above Picture is Page 47 of Ord801_All_Testimony_before_071315v2.pdf

The summary of the following is that build one row of houses will require significant disturbance to the unstable steep slopes. If the row is built with the back property line at 50 feet, it will eliminate the value of the fence for visual isolation. It will also eliminate the visual isolation of the trees in the fifty foot buffer for more than a decade because of the height of the floor in the homes. Finally if 2 or 3 rows of houses are built, the stack up requires large disturbances of the unstable slopes.

If buffer zone is 50 feet left to right, then lots shown are 100 feet left-to-right and road+sidewalks are 50 feet left-to-right. So, one row of houses + road+sidewalk would be 150 feet. Placing another row of houses up the hill, to the south would only require another 100 feet or 250 feet total. Current Buffer is approximately 350 feet from left-to-right. So, a third row of houses could be placed on the steep slopes with the road+sidewalks in front of it being on less-steep ground.

The side view of the house at the top of the diagram shows the front edge of the house touching the hillside. The house is 50 feet from left-to-right. This puts the floor that starts at the front of the house 12.5 feet above ground at the back ($0.25 * 50$ feet 12.5 feet).

Picture suggests driveway is level with road/sidewalk and middle of road is at ground level. So, $16 \text{ feet} + 50/2 = 41$ feet or driveway meets house $41 * 0.25$ or 10.25 feet above ground where next floor down hits. So, the lower floor has 10 foot high ceilings. Back wall of this home if it is 50 feet left-to-right

is $50 * 0.25$ or 12.5 above ground. As described, the back wall is 50+16 or 66 feet from front property line or $100-66 = 34$ feet from back property line. But this means base of wall is $34 * 0.25$ or 8.25 feet higher than back property line. So, someone standing on lower floor is $12.5+8.25$ or 24.75 above ground at back of yard. Someone standing on second floor is $24.75 + 10 = 34.75$ feet above property line.

In order to have any chance of meeting stormwater runoff protection requirements, this row of houses need to have backyard LIDA. To be clear, it is not obvious that the protection requirements can be met. This LIDA has to be at back property line. And the ground for the LIDA has to be flat.

Using the current 'layout' and assuming the LIDA is 16 feet wide left-to-right. The the left edge of it has to be $16 * 0.25$ or 4 feet higher than the right edge. So, we need some form of retention wall that if 4 feet above ground and some distance below. It is not clear that such a wall can be built to hold back the pressure from the water runoff from the impermeable surfaces, including the driveway. If it can be built, it will require disturbing the unstable soil a lot. And for a row of houses, it is a continuous retaining wall. Otherwise, the water will sneak out between the walls for each property and lead to erosion and failure. So, we are talking about a significant disturbance of an unstable steep slope just for the backyards of one row of houses.

However, if there is a wall four feet above ground, where does the 5 foot fence go? If below the wall, then someone standing at the back fence is looking over only 1 foot of fence. If it is built on the wall, then it is on private property which means it will be very complicated to maintain. If the wall is moved off private property, then who owns and maintains the wall?

All of the above is based on one row of houses. What about the houses on the other side of the road. First, center of the road is shown at ground level. The right edge of the sidewalk is $50/2$ or 25 feet further south or $25 * 0.25 = 6.25$ below ground level. Again, this 6.25 must be gouged out of the hillside. Again, this is a significant disturbance to the unstable slope.

But with a 16 foot setback, the ground level at the front of the house is $16 * 0.25$ or 4 feet above the sidewalk. Is the driveway that steep? Do they make the driveway flat and build the house into the side of the hill? That is $6.25 + 4 = 10.25$ feet below the slope line? Is there a garage with a flat floor? Say 24 feet right-to-left so the ground at back of garage is $24 * 0.25$ or 6 more into the slope? Assuming flat driveway and flat garage floor, we are $10.25+6 = 16.25$ feet below grade. Just for the garage.

If the house has a full floor on same level as garage, the ground at back wall will be $50 * .25$ or 12.5 above the floor. This puts it $10.25 + 12.5 = 22.75$ feet below grade. Assuming only a partial first floor, the second floor can be 50 feet left-to-right and just touch ground level at the back if it is built $12.5 + 10.25 = 22.75$ feet above the garage floor. That is, the second floor will have 22.75 feet of steps. This can be reduced by cutting into the hill above the back wall of the garage. We already have the back wall of the garage at 16.25 feet below grade. So, go up feet to first full floor and we are only 8.25 feet below grade. No go back 50 feet – 24 feet of garage and we get $26 * 0.25 = 6.25$ feet. So, we will only be 14.5 feet below grade.

I am stopping now. Note that backyard of this row is either very steep causing all sorts of water problems and risks. Or it is flat, making the retaining wall for the backyard LIDA of the next row of houses very tall indeed. Also, it is not clear how runoff from 2nd row of houses, their backyards and the road/sidewalks can be stormwater runoff protection requirements.



Beyond clean water.

Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

Michael S. Kuenzi, P.E.
Director

Oregon Drainage Law

This courtesy compilation is to generally educate the public regarding Oregon Drainage Law. This information should not be treated as a manual upon which to base legal advice or make legal or other decisions. It is also not a summary of all existing or applicable drainage laws, and most emphatically, this is not intended as a substitute for legal counsel. If you have a drainage law question please contact the State of Oregon.

Oregon drainage law, which originates from common law, has developed without legislative action. Rather, it is described in the decisions of the courts as issued over time. Therefore, there are no Oregon Revised Statutes, rules or other laws to cite pertaining to Oregon drainage law.

Oregon, through court decisions, has adopted the civil law doctrine of drainage. Generally, under this doctrine, adjoining landowners are entitled to have the normal course of natural drainage maintained. The lower landowner must accept water that naturally comes to his land from above, but he is entitled to not have the normal drainage changed or substantially increased. The lower landowner may not obstruct the runoff from the upper land if the upper landowner is properly discharging the water.

For a landowner to drain water onto lands of another in the State of Oregon, one of two conditions must be satisfied initially: (1) the lands must contain a natural drainage course; or, (2) the landowner must have acquired the right of drainage supported by valuable consideration (i.e. a purchased drainage easement for true value). In addition, because Oregon has adopted the civil law doctrine of drainage, the following three basic elements must be followed.

1. A landowner may not divert water onto adjoining land that would not otherwise have flowed there. "Divert water" includes but is not limited to:
 - A. Water diverted from one drainage area to another, and,
 - B. Water collected and discharged which normally would infiltrate into the ground, pond, and/or evaporates.
2. The upper landowner may not change the place where the water flows onto the lower owner's land. (Most of the diversions not in compliance with this element result from grading and paving work and/or improvements to water collection systems.)
3. The upper landowner may not accumulate a large quantity of water, and then release it, greatly accelerating the flow onto the lower owner's land. This does not mean that the upper landowner cannot accelerate the water at all; experience has found the drainage to be improper only when the acceleration and concentration were substantially increased.

In these circumstances, a private property owner may have a civil claim against the persons or property owners causing the damage. An attempt to resolve the matter directly with the other parties is recommended.

Landowners should utilize drainage designs that satisfy Oregon drainage law to avoid possible claims or litigation resulting from improper drainage. When it is determined that the drainage design will not satisfy the law, then drainage easements should be obtained from the affected property owners. Landowners may want to obtain legal advice for those situations that appear to be unique or could result in litigation.

Where certain drainage patterns have been established over long periods of time (i.e. in excess of at least 10 years), that are not the original natural drainage, there may be legal rights acquired which allow the continuance of the altered drainage pattern. Again, legal advice should be sought in such situations.

DRAINAGE LAW – DISCLAIMER

This information is being provided as a courtesy to citizens who inquire about Oregon Drainage Rules and Guidelines. The above information was collected from the State of Oregon website. The information on the website was assembled, written and distributed by the State of Oregon.

This information should not be taken as legal advice. If you have a legal matter that involves a drainage problem, you should seek the advice of a private attorney. Clackamas County staff is prohibited by law from giving legal advice.

More information can be found at the State of Oregon's website.
The web address is: <http://www.oregon.gov/ODOT/HWY/GEOENVIRONMENTAL/>

A Summary of Oregon's Statewide Planning Goals

1. **CITIZEN INVOLVEMENT** Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program containing six components specified in the goal. It also requires local governments to have a committee for citizen involvement (CCI) to monitor and encourage public participation in planning.
2. **LAND USE PLANNING** Goal 2 outlines the basic procedures of Oregon's statewide planning program. It says that land use decisions are to be made in accordance with a comprehensive plan, and that suitable "implementation ordinances" to put the plan's policies into effect must be adopted. It requires that plans be based on "factual information"; that local plans and ordinances be coordinated with those of other jurisdictions and agencies; and that plans be reviewed periodically and amended as needed. Goal 2 also contains standards for taking exceptions to statewide goals. An exception may be taken when a statewide goal cannot or should not be applied to a particular area or situation.
3. **AGRICULTURAL LANDS** Goal 3 defines "agricultural lands." It then requires counties to inventory such lands and to "preserve and maintain" them through farm zoning. Details on the uses allowed in farm zones are found in ORS Chapter 215 and in Oregon Administrative Rules, Chapter 660, Division 33.
4. **FOREST LANDS** This goal defines forest lands and requires counties to inventory them and adopt policies and ordinances that will "conserve forest lands for forest uses."
5. **OPEN SPACES, SCENIC AND HISTORIC AREAS AND NATURAL RESOURCES** Goal 5 covers more than a dozen natural and cultural resources such as wildlife habitats and wetlands. It establishes a process for each resource to be inventoried and evaluated. If a resource or site is found to be significant, a local government has three policy choices: preserve the resource, allow proposed uses that conflict with it, or strike some sort of a balance between the resource and the uses that would conflict with it.
6. **AIR, WATER AND LAND RESOURCES QUALITY** This goal requires local comprehensive plans and implementing measures to be consistent with state and federal regulations on matters such as groundwater pollution.
7. **AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS** Goal 7 deals with development in places subject to natural hazards such as floods or landslides. It requires that jurisdictions apply "appropriate safeguards" (floodplain zoning, for example) when planning for development there.
8. **RECREATION NEEDS** This goal calls for each community to evaluate its areas and facilities for recreation and develop plans to deal with the projected demand for them. It also sets forth detailed

- standards for expedited siting of destination resorts.
9. ***ECONOMY OF THE STATE*** Goal 9 calls for diversification and improvement of the economy. It asks communities to inventory commercial and industrial lands, project future needs for such lands, and plan and zone enough land to meet those needs.
 10. ***HOUSING*** This goal specifies that each city must plan for and accommodate needed housing types, such as multifamily and manufactured housing. It requires each city to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. It also prohibits local plans from discriminating against needed housing types.
 11. ***PUBLIC FACILITIES AND SERVICES*** Goal 11 calls for efficient planning of public services such as sewers, water, law enforcement, and fire protection. The goal's central concept is that public services should be planned in accordance with a community's needs and capacities rather than be forced to respond to development as it occurs.
 12. ***TRANSPORTATION*** The goal aims to provide "a safe, convenient and economic transportation system." It asks for communities to address the needs of the "transportation disadvantaged."
 13. ***ENERGY*** Goal 13 declares that "land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
 14. ***URBANIZATION*** This goal requires cities to estimate future growth and needs for land and then plan and zone enough land to meet those needs. It calls for each city to establish an "urban growth boundary" (UGB) to "identify and separate urbanizable land from rural land." It specifies seven factors that must be considered in drawing up a UGB. It also lists four criteria to be applied when undeveloped land within a UGB is to be converted to urban uses.
 15. ***WILLAMETTE GREENWAY*** Goal 15 sets forth procedures for administering the 300 miles of greenway that protects the Willamette River.
 16. ***ESTUARINE RESOURCES*** This goal requires local governments to classify Oregon's 22 major estuaries in four categories: natural, conservation, shallow-draft development, and deep-draft development. It then describes types of land uses and activities that are permissible in those "management units."
 17. ***COASTAL SHORELANDS*** The goal defines a planning area bounded by the ocean beaches on the west and the coast highway (State Route 101) on the east. It specifies how certain types of land and resources there are to be managed: major marshes, for example, are to be protected. Sites best suited for unique coastal land uses (port facilities, for example) are reserved for "water-dependent" or "water related" uses.
 18. ***BEACHES AND DUNES*** Goal 18 sets planning standards for development on various types of dunes. It prohibits residential development on beaches and active foredunes, but allows some other

types of development if they meet key criteria. The goal also deals with dune grading, groundwater drawdown in dunal aquifers, and the breaching of foredunes.

19. ***OCEAN RESOURCES*** Goal 19 aims "to conserve the long-term values, benefits, and natural resources of the

nearshore ocean and the continental shelf." It deals with matters such as dumping of dredge spoils and discharging of waste products into the open sea. Goal 19's main requirements are for state agencies rather than cities and counties.

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Oregon's Statewide Planning Goals and Guidelines

GOAL 7: AREAS SUBJECT TO NATURAL HAZARDS

To protect people and property from natural hazards.

A. NATURAL HAZARD PLANNING

1. Local governments shall adopt comprehensive plans (inventories, policies and implementing measures) to reduce risk to people and property from natural hazards

2. Natural hazards for purposes of this goal are: floods (coastal and riverine), landslides,¹ earthquakes and related hazards, tsunamis, coastal erosion, and wildfires. Local governments may identify and plan for other natural hazards.

B. RESPONSE TO NEW HAZARD INFORMATION

1. New hazard inventory information provided by federal and state agencies shall be reviewed by the Department in consultation with affected state and local government representatives.

2. After such consultation, the Department shall notify local governments if the new hazard information requires a local response.

3. Local governments shall respond to new inventory information on natural hazards within 36 months after being notified by the Department of Land Conservation and Development, unless extended by the Department.

C. IMPLEMENTATION

Upon receiving notice from the Department, a local government shall:

1. Evaluate the risk to people and

property based on the new inventory information and an assessment of:

a. the frequency, severity and location of the hazard;

b. the effects of the hazard on existing and future development;

c. the potential for development in the hazard area to increase the frequency and severity of the hazard; and

d. the types and intensities of land uses to be allowed in the hazard area.

2. Allow an opportunity for citizen review and comment on the new inventory information and the results of the evaluation and incorporate such information into the comprehensive plan, as necessary.

3. Adopt or amend, as necessary, based on the evaluation of risk, plan policies and implementing measures consistent with the following principles:

a. avoiding development in hazard areas where the risk to people and property cannot be mitigated; and

b. prohibiting the siting of essential facilities, major structures, hazardous facilities and special occupancy structures, as defined in the state building code (ORS 455.447(1)

(a)(b)(c) and (e)), in identified hazard areas, where the risk to public safety cannot be mitigated, unless an essential facility is needed within a hazard area in order to provide essential emergency response services in a timely manner.²

4. Local governments will be deemed to comply with Goal 7 for coastal and riverine flood hazards by adopting and

¹ For "rapidly moving landslides," the requirements of ORS 195.250-195.275 (1999 edition) apply.

² For purposes of constructing essential facilities, and special occupancy structures in tsunami inundation zones, the requirements of the state building code - ORS 455.446 and 455.447 (1999 edition) and OAR chapter 632, division 5 apply.

implementing local floodplain regulations that meet the minimum National Flood Insurance Program (NFIP) requirements.

D. COORDINATION

1. In accordance with ORS 197.180 and Goal 2, state agencies shall coordinate their natural hazard plans and programs with local governments and provide local governments with hazard inventory information and technical assistance including development of model ordinances and risk evaluation methodologies.

2. Local governments and state agencies shall follow such procedures, standards and definitions as may be contained in statewide planning goals and commission rules in developing programs to achieve this goal.

GUIDELINES

A. PLANNING

1. In adopting plan policies and implementing measures to protect people and property from natural hazards, local governments should consider:

- a. the benefits of maintaining natural hazard areas as open space, recreation and other low density uses;
- b. the beneficial effects that natural hazards can have on natural resources and the environment; and
- c. the effects of development and mitigation measures in identified hazard areas on the management of natural resources.

2. Local governments should coordinate their land use plans and decisions with emergency preparedness, response, recovery and mitigation programs.

B. IMPLEMENTATION

1. Local governments should give special attention to emergency access when considering development in identified hazard areas.

2. Local governments should consider programs to manage stormwater runoff as a means to help address flood and landslide hazards.

3. Local governments should consider nonregulatory approaches to help implement this goal, including but not limited to:

- a. providing financial incentives and disincentives;
- b. providing public information and education materials;
- c. establishing or making use of existing programs to retrofit, relocate, or acquire existing dwellings and structures at risk from natural disasters.

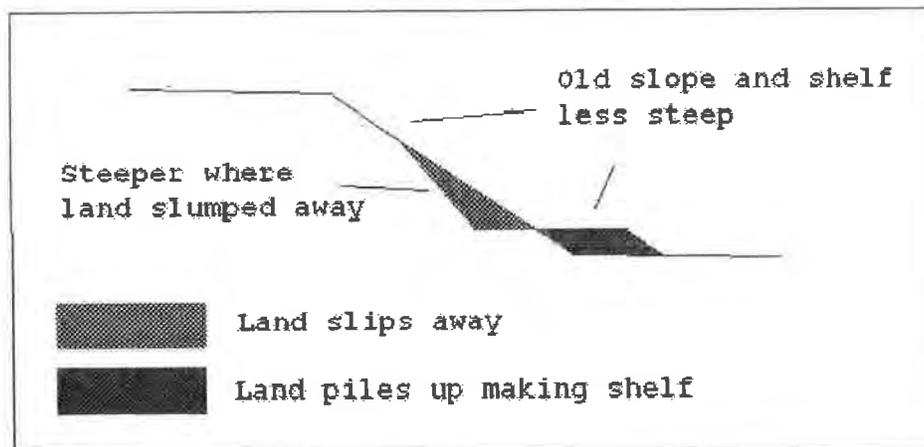
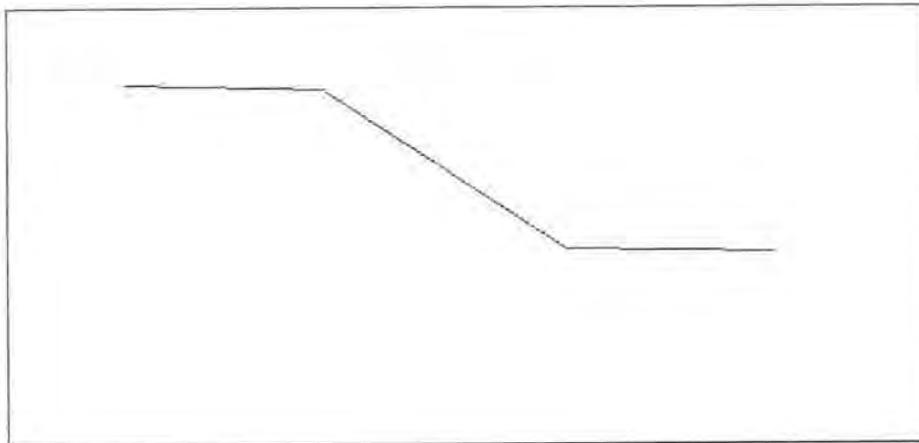
4. When reviewing development requests in high hazard areas, local governments should require site-specific reports, appropriate for the level and type of hazard (e.g., hydrologic reports, geotechnical reports or other scientific or engineering reports) prepared by a licensed professional. Such reports should evaluate the risk to the site as well as the risk the proposed development may pose to other properties.

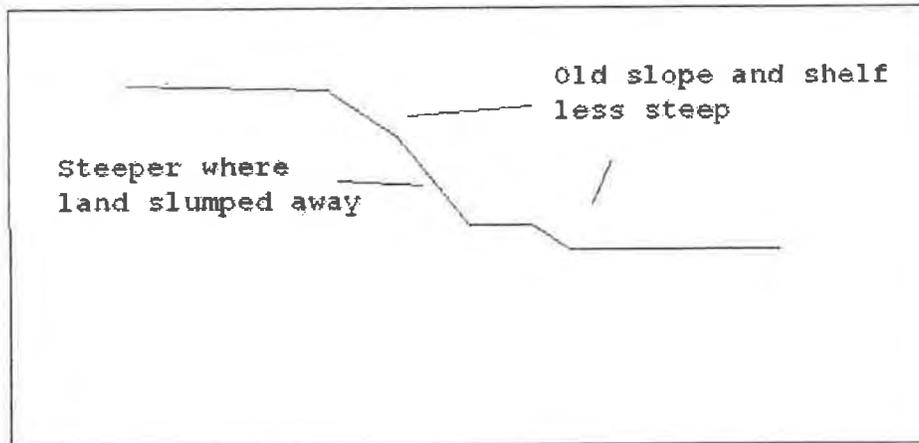
5. Local governments should consider measures that exceed the National Flood Insurance Program (NFIP) such as:
- a. limiting placement of fill in floodplains;
 - b. prohibiting the storage of hazardous materials in floodplains or providing for safe storage of such materials; and
 - c. elevating structures to a level higher than that required by the NFIP and the state building code.

Flood insurance policy holders may be eligible for reduced insurance rates through the NFIP's Community Rating System Program when local governments adopt these and other flood protection measures.

SAMPLE STEEP SLOPE BEFORE AND AFTER LIQUEFACTION

This is how the OSO landslide and the landslide in the West Hills that was 4 football fields wide happened.





Portland is at latitude 45.5 degrees north.

The Earth tilts on its axis 23 degrees.

In the winter, the North Hemisphere tilts 23 degrees away from the Sun with maximum tilt on December 21st.

On December 21st, flat land here is tilted $45.5 + 23 = 68.5$ degrees away from the Sun.

The Natural Features Buffer is sloped $>25\%$. It is effectively rotated further from the Sun.

$\text{ArcTan}(0.25) = 14$ degrees.

So, the steep part of the Natural Features Buffer is rotated $68.5 + 14 = 82.5$ degrees away from the Sun in Late December.

As the Sun sets, its angle with respect to an east-west line goes down. In our case, when that angle goes down by 7.5 degrees, the steep part of the Natural Features Buffer is tilted 90 degrees or more.

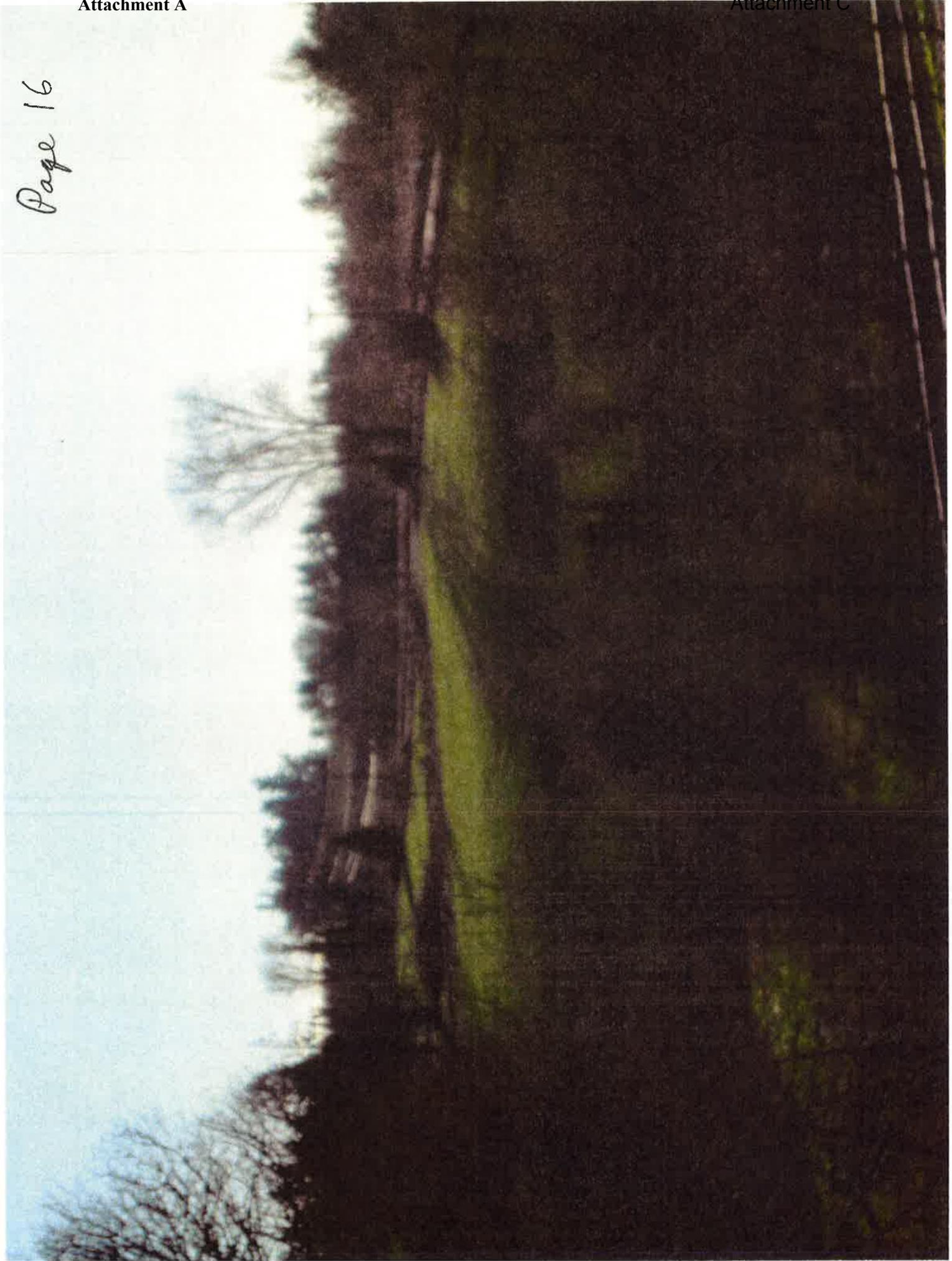
At that point, the steep part goes into shadow while the less steep area above and below are still in sunlight.

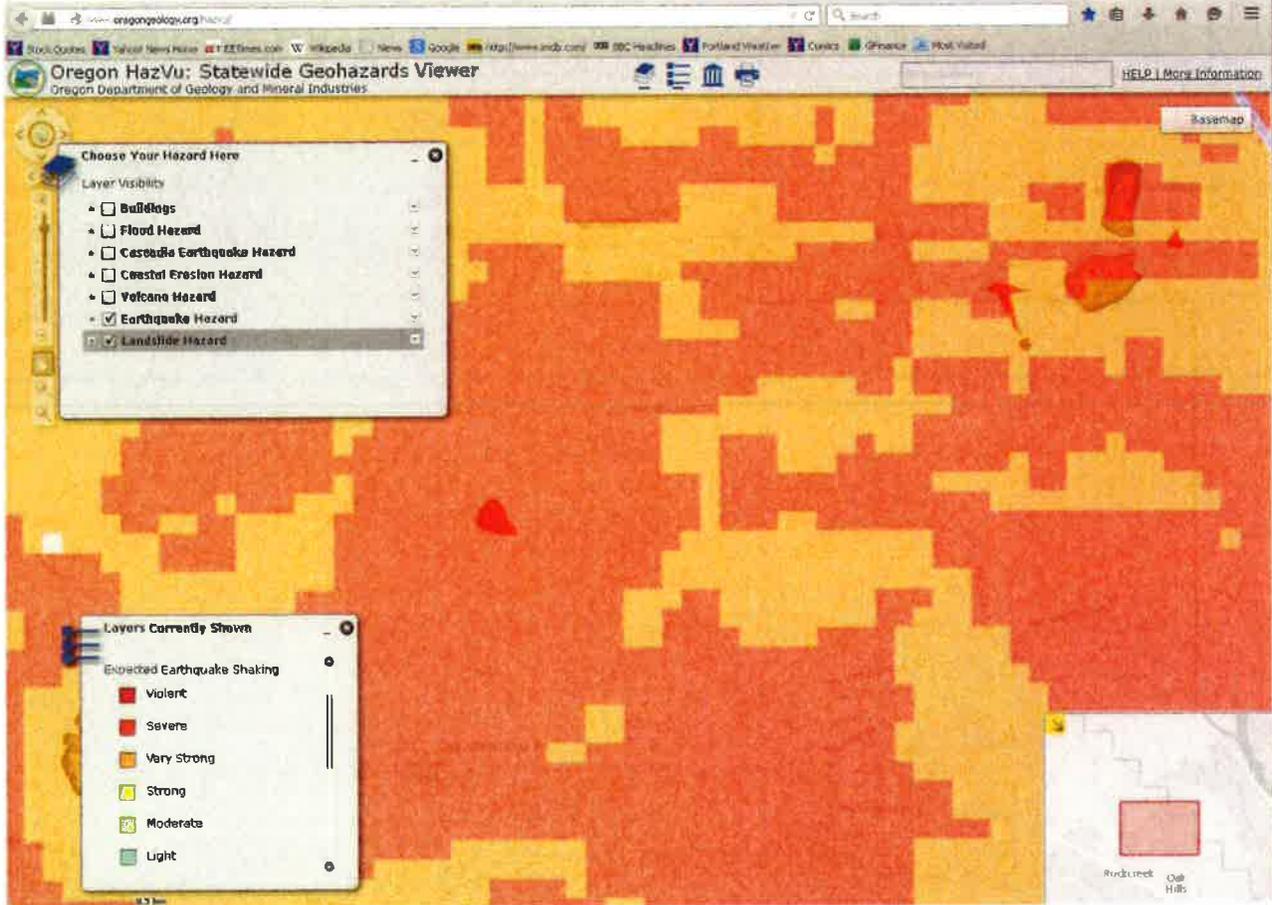
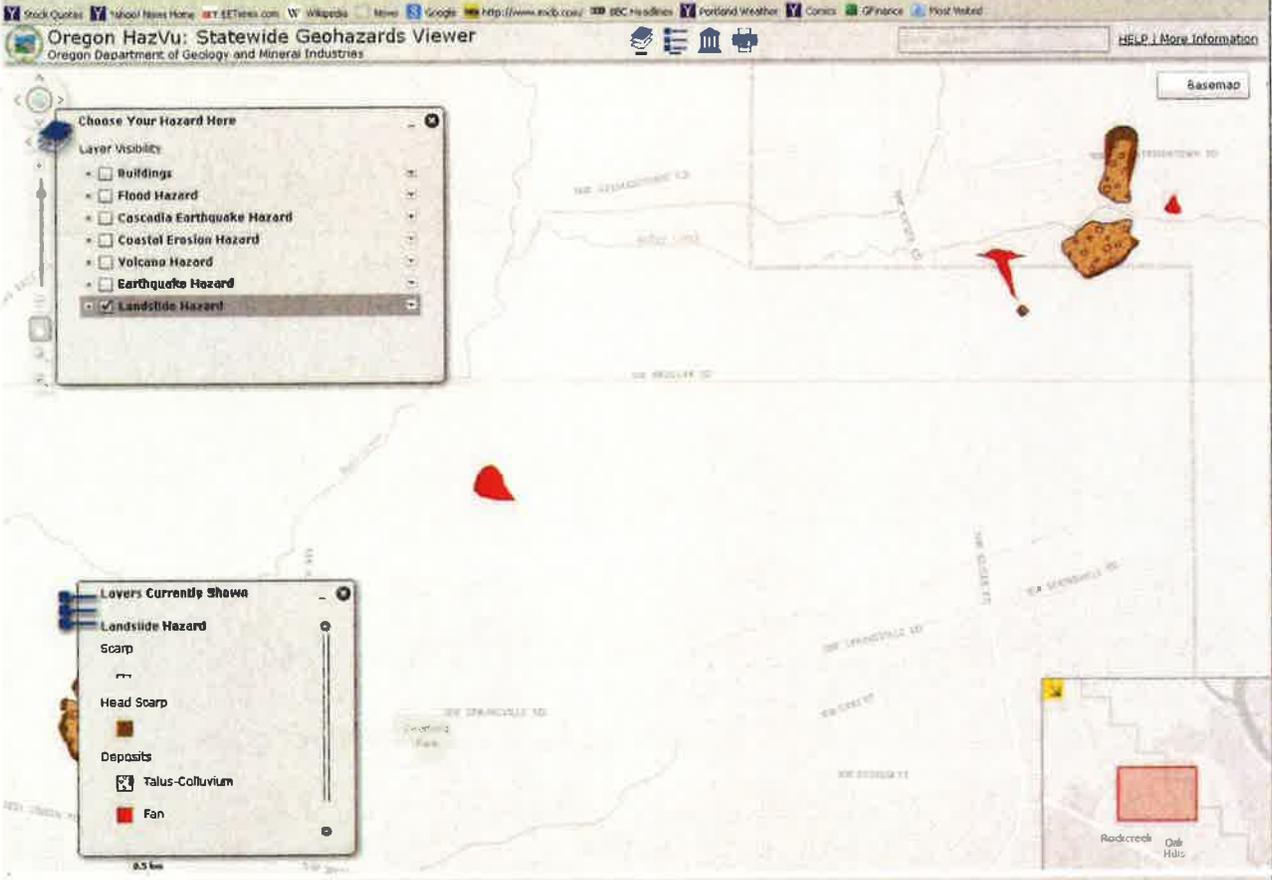
The result here is that you can see on the photograph that follows where part of the Natural Features Buffer has slumped and slid down the hill.

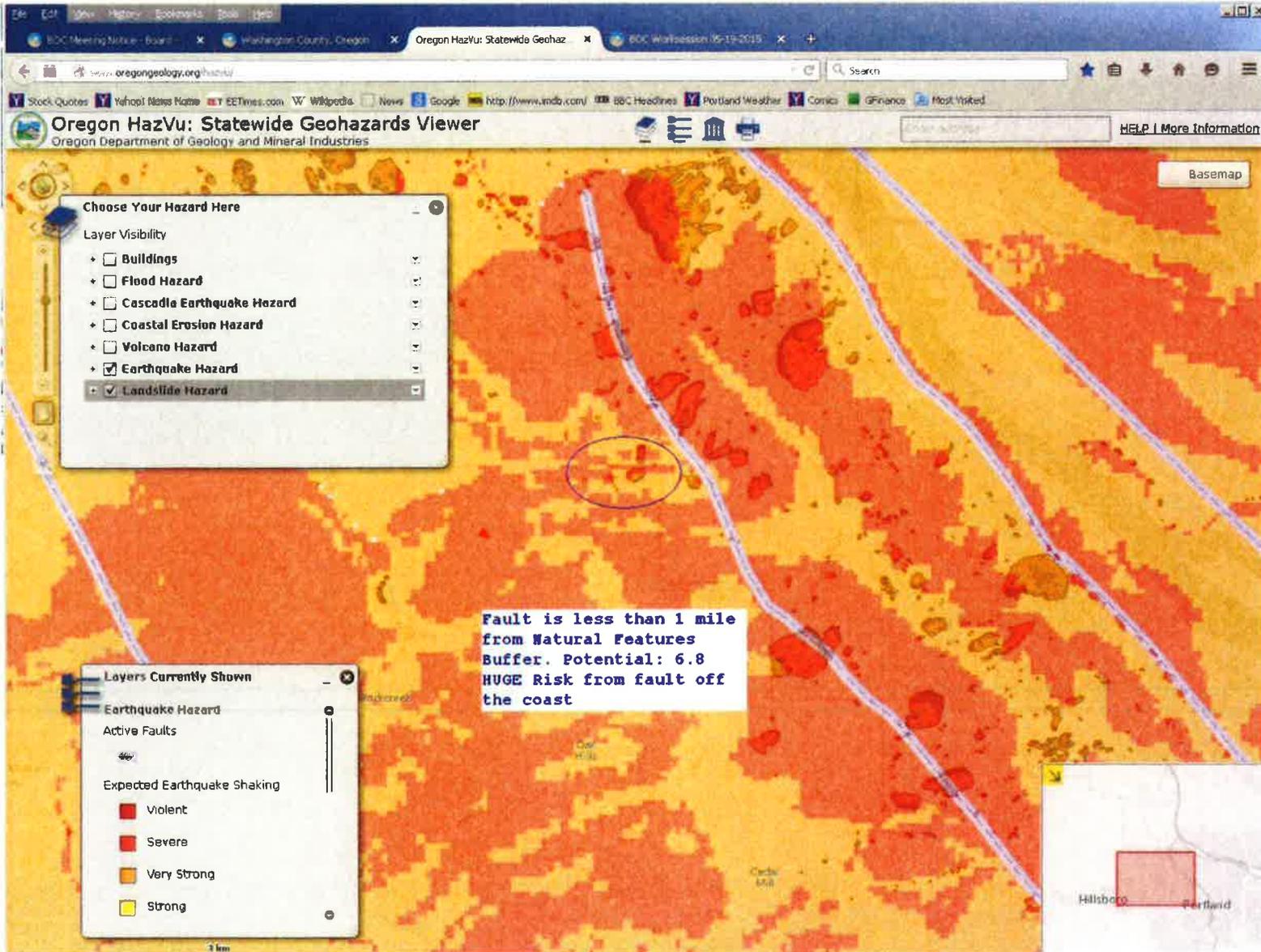
Reminder: The ground just above the shadowed part is unstable, even if less than 25% slope, because its support has slipped away.

Regardless of previous decisions building on this area is not wise.

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Business Name Search

New Search		Print Friendly		Business Entity Data			07-06-2015 05:20
Company ID#	Entity Type	Entity Status	Jurisdiction	Registration Date	Next Renewal Date	Renewal Term	
280094-96	DLIC	ACT	OREGON	04-06-2005	04-06-2016		
Entity Name	K & R HOLDINGS, LLC						
Business Address							

New Search		Print Friendly		Associated Names			
Type	PPB	PRINCIPAL PLACE OF BUSINESS					
Address	17933 NW EVERGREEN PARK WAY STE 300						
City							
State	BEAVERTON	OR	97006	7438	Country	UNITED STATES OF AMERICA	

Please click [here](#) for general information about registered agents and service of process.

Type	AGT REGISTERED AGENT	Start Date	03-29-2011	Renewal Date		
Company ID#	740227-90 SYR SERVICE CO, LLC					
Address	ATTN ALAN M SPINRAD					
Address	111 SW 5TH AVE STE 3800					
City	PORTLAND	OR	97204	3642	Country	UNITED STATES OF AMERICA

Type	MGR MANAGER	Start Date		Renewal Date		
Name	SEAN	T	KEYS			
Address	17933 NW EVERGREEN PARK WAY STE 300					
Address						
City	BEAVERTON	OR	97006	7438	Country	UNITED STATES OF AMERICA



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Business Name Search

New Search	Printer Friendly	Business Entity Data				07-06-2015 05:31
Registry No.	Entity Type	Entity Status	Jurisdiction	Registry Date	Last Renewal Date	Revised Date
472544-95	DLLC	ACT	OREGON	10-23-2007	10-23-2015	
Entity Name	METROPOLITAN LAND GROUP, LLC					
Entity Name						

New Search	Printer Friendly	Associated Names			
Type	PPB	PRINCIPAL PLACE OF BUSINESS			
Addr 1	17933 NW EVERGREEN PARK WAY STE 300				
Addr 2					
City	BEAVERTON	OR	97006	Country	UNITED STATES OF AMERICA

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Type	AGT REGISTERED AGENT	Issue Date	03-29-2011	Revised Date	
Reg. No.	740227-90	SYR SERVICE CO., LLC			
Addr 1	ATTN ALAN M SPINRAD				
Addr 2	111 SW 5TH AVE STE 3800				
City	PORTLAND	OR	97204	3642	Country: UNITED STATES OF AMERICA

Type	MGR MANAGER	Revised Date	
Name	SEAN T KEYS		
Addr 1	17933 NW EVERGREEN PARK WAY STE 300		
Addr 2			
City	BEAVERTON	OR	97006
Country	UNITED STATES OF AMERICA		



Carol Chesarek
13300 NW Germantown Road
Portland, OR 97231

July 15, 2015

Washington County Planning Commission
c/o Washington County Long Range Planning Division
155 N. First Avenue, Suite 350-14
Hillsboro, OR 97124

Re: Ordinance ~~739~~ 801

Dear Chair Vial and Washington County Planning Commissioners,

Thank you for the opportunity to testify about North Bethany Ordinance 801.

I've actively participated in the North Bethany planning process since 2006. I'm here today to reiterate Forest Park Neighborhood's strong opposition to K&R Holdings' proposal to reduce the Natural Features Buffer along the northern edge of North Bethany, and to share some personal comments on this proposal.

When Metro added North Bethany to the UGB in 2002, they included a new condition. Condition 6 of Metro Ordinance 02-987A reads:

“...the...county...shall adopt provisions in its comprehensive plan and zoning regulations – such as *setbacks, buffers* and designated lanes for movement of slow-moving farm machinery – to ensure compatibility between urban uses in an included study area and agricultural practices on adjacent land outside the UGB zoned for farm or forest use.” (emphasis added)

To “ensure” means to make sure or certain; guarantee. The language of the Metro Ordinance sets a high standard, and we believe that the proposed change to the Natural Features Buffer would replace an adequate buffer with one that falls far short of meeting that standard.

There are two key differences between this urban edge and the other edges that explains why a substantial agricultural buffer is required here and not on the other edges.

First, property owners on other edges hope to develop their land in the future, and they opposed any agricultural buffer because it might discourage urbanization of their land.

Second, the agriculture practiced along this edge is different – there is an equestrian business that would be substantially harmed if urban development is allowed on this slope. The current Natural Features Buffer will preserve the safety of the horses and riders who would otherwise be at risk if the horses are startled by unexpected urban noises or sights. The K&R proposal would put these horses and riders at risk of serious injury or even death.

Abbey Creek Stables facilities are used for Equestrian Eventing, which includes riding at high speeds (20 mph) on a trail that comes within 10' of the county line, and jumping obstacles on the trail, and in a jumping ring. Horses are also trained for these events at their facility, which requires concentration by the horse and rider.

I have attached examples of agricultural buffers from other jurisdictions, to show that the width of this buffer is consistent with practices in other areas, it is not unusually large.

To summarize, San Luis Obispo County (CA) has agricultural buffers up to 600' wide. Placer County (CA) has residential exclusion zones up to 400' wide and agricultural buffers up to 800' wide. Sutter County's agricultural buffers range from 100-800 feet depending on crop type, Sacramento County buffers ranges from 300-500 feet.

The deepest section of the North Bethany buffer is located in a Clean Water Services vegetated corridor, on land that won't be buildable even if the buffer is reduced – staff made an arbitrary choice to include that area in the buffer. The deepest effective width of the Natural Features Buffer is only about 365'. The narrowest point in the buffer is only 158' wide.

I have attached one view of the steep slope of the current Natural Features Buffer from the lower field at Abbey Creek Stables. This field is used for training horses, directly below and close to the buffer.

The vegetation screen defined in the draft Ordinance has several shortcomings:

- The new 6' tall trees will be planted in the 50' buffer, at the bottom of the steep slopes. Those trees will not grow tall enough to effectively screen the upper part of the steep slopes for at least 10 to 20 years. The elevation change from the top of the proposed 50' buffer to the top of the slope (upper edge of the current buffer) appears to range from about 25' to 60'. Assuming that the slope averages 25%, and that the trees are set back about 4 feet from the upper edge of the buffer, they would be planted a foot lower than the upper edge of the proposed buffer and the tree's first foot in height will be lost to the slope, and it will, at best, only extend 5 feet in height above the lower edge of the buffer.
- Deciduous trees are allowed, but they will provide little screening when their leaves are off. Many native conifers (for example Douglas Fir) lose their lower branches, and would not provide effective screening where they are missing branches. Western Red Cedar are probably the most effective trees for a screen here – they are evergreen, usually have relatively dense foliage, and they usually keep their lower branches.
- Native conifers tend to be roughly triangular when viewed from the side. Some varieties (e.g. Douglas Fir) have an open growth habit that isn't an effective visual screen. Depending on tree spacing (important for tree health), tree tops will not grow together to provide effective visual screening for many years (see graphic below for an example). That means that conifers would need to grow tall enough for the width of the tree to fill in the gaps between trees near the top of the slope to provide an effective visual screen.
- Even if it might someday be adequate to provide a visual screen, we can't wait more than 10 to 20 years to "ensure compatibility" for Abbey Creek Stables.

A more effective vegetation screen would include a double row of Western Red Cedars along the upper edge of the buffer, with native shrubs such as Oregon Grape that will discourage trespassing. That still wouldn't be adequate, but it would be more effective than the proposal in the draft Ordinance.

This is an sketch of an agricultural buffer from another jurisdiction that requires three rows of conifers in some vegetative screens. Note that it is easy to see between the first line of trees.



Buffer viewed from the agricultural side. screening shrubbery included.

I hope that you will honor, and that you will recognize that the proposal in the draft Ordinance is not sufficient to "ensure compatibility" between development in North Bethany and the agricultural uses in my neighborhood, including Abbey Creek Stables. Please opposed any reduction in the current Natural Features Buffer.

Thank you.



Carol Chesarek
Forest Park Neighborhood Board Member



A view of the Natural Features Buffer from Abbey Creek Stables

Agricultural Buffers In Other Jurisdictions

Examples (Excerpts) of Agricultural Buffer Policies and Requirements

Note that none of these standards address riding stables, which are a particularly sensitive type of use because of the way horses may respond to unexpected sights and sounds. The use of vegetation screening and berms appears to assume relatively level ground, so a set of steep urban slopes overlooking an agricultural area does not seem to be directly addressed.

San Luis Obispo County (CA) Department of Agriculture

Agricultural Buffer Policies and Procedures

"Mitigation Measures

Objective

Building setbacks (buffers) and/or screening techniques (walls, landscaping, etc.), are useful to increase the likelihood of compatibility between development (homes, schools, etc.) and agricultural property. Buffer distances are the most effective mitigation measure.

Scope

The buffer is placed on the developer's property and will be recorded as a distance from the property line to the proposed occupied structure. However, the total buffer distance calculation and recommendation is measured from proposed occupied structure to the edge of the agricultural operation. The buffer will allow for such land uses as landscaping, barns, storage buildings, orchards, pastures, etc., while protecting the agricultural use and the public's health and safety." Page 5

"2. Buffer Distance Ranges by Crop

Agricultural practices associated with the production of crops are the most important contributing factor to land use conflict when development occurs in close proximity to agricultural areas. Since production practices vary considerably by type of crop, buffer distances may vary accordingly. Ranges in distance are necessary due to the influence that site or project specific factors may have.

Buffer Distance Range by Crop

Table 1

Type of Agricultural Use Buffer Distance Range

1. Intensive Agricultural Uses

Vineyards	200 - 600 feet
Irrigated orchards	200 - 600 feet
Irrigated vegetables and berries	200 - 600 feet
Irrigated Forage and Field Crops	100 - 400 feet
Wholesale nurseries - Outdoors	100 - 500 feet
Greenhouses	100 - 300 feet

2. Non-Intensive Agricultural Uses

Dry farm field crops, orchards and vineyards	100 - 200 feet
Rangeland/pasture	50 - 200 feet" p. 5, 6

Sacramento (CA) Rural Urban Connection Strategy**D R A F T****Rural-Urban Connections Strategy: Land Use Policies and Plans Current Conditions Inventory**

September 23, 2008

http://www.sacog.org/rucs/wiki/index.php/Land_Use_Current_Conditions

“Additionally, non-agricultural lands in the region are subject to buffer requirements to help minimize the conflict between agricultural and non-agricultural uses. Sutter and Placer Counties’ agricultural buffers range from 100-800 feet depending on crop type, Yuba and Yolo Counties require a minimum 100-300 foot buffer, Sacramento County ranges from 300-500 feet, and El Dorado County requires 200 foot buffer that may be administratively reduced if certain Board adopted criteria are met.”

San Luis Obispo County (CA) Department of Agriculture**Agricultural Buffer Policies and Procedures**http://www.slocounty.ca.gov/Assets/AG/assets/Buffer+Policy_2005.pdf**Placer County.**

Policy Document Land Use/Circulation Diagrams and Standards

www.placer.ca.gov/Departments/CommunityDevelopment/Planning/CommPlans/~//media/cdr/Planning/CommPlans/PCGP/PCGPPart3.ashx**Sacramento Region Rural Urban Connection Strategy****D R A F T****Rural-Urban Connections Strategy: Land Use Policies and Plans Current Conditions Inventory**http://www.sacog.org/rucs/wiki/index.php/Land_Use_Current_Conditions



INDIVIDUAL TESTIMONY SIGN-IN FORM

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

WHEN COMPLETED, PLEASE GIVE THIS FORM TO THE CLERK SEATED AT THE DESK TO THE LEFT OF THE PODIUM.

THANK YOU.

PLEASE PRINT CLEARLY.

DATE: 7-15-15

FIRST NAME Carol	LAST NAME Chesarek
----------------------------	------------------------------

ADDRESS: **HOME** OR **BUSINESS** (Please check one.)

STREET 13300 NW Germantown Rd.	CITY Portland	ZIP 97231
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BRIEFLY STATE YOUR TOPIC:

Ordinance 801



INDIVIDUAL TESTIMONY SIGN-IN FORM

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

WHEN COMPLETED, PLEASE GIVE THIS FORM TO THE CLERK SEATED AT THE DESK TO THE LEFT OF THE PODIUM.

THANK YOU.

PLEASE PRINT CLEARLY.

DATE: 7.15.15

FIRST NAME MICHAEL	LAST NAME KOBINSON
-----------------------	-----------------------

ADDRESS: HOME OR BUSINESS (Please check one.)

STREET 1120 NW 25th Couch St, TENTH Floor	CITY HOLLAND, OR	ZIP 97209-4128
---	---------------------	-------------------

BRIEFLY STATE YOUR TOPIC:

ORDINANCE NO. 201



INDIVIDUAL TESTIMONY SIGN-IN FORM

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

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THANK YOU.

PLEASE PRINT CLEARLY.

DATE: 7/15/2015

FIRST NAME JOSEPH	LAST NAME RAYHAWK
-----------------------------	-----------------------------

ADDRESS: HOME OR BUSINESS (Please check one.)

STREET 15248 NW GERMANTOWN ROAD	CITY PORTLAND	ZIP 97231
--	-------------------------	---------------------

BRIEFLY STATE YOUR TOPIC:

I WISH TO LIST MANY REASONS WHY ORDINANCE 801 IS A BAD IDEA

**INDIVIDUAL TESTIMONY SIGN-IN FORM**

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

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THANK YOU.

PLEASE PRINT CLEARLY.

DATE: 7-15-15

FIRST NAME RUSSELL	LAST NAME DONDIKO
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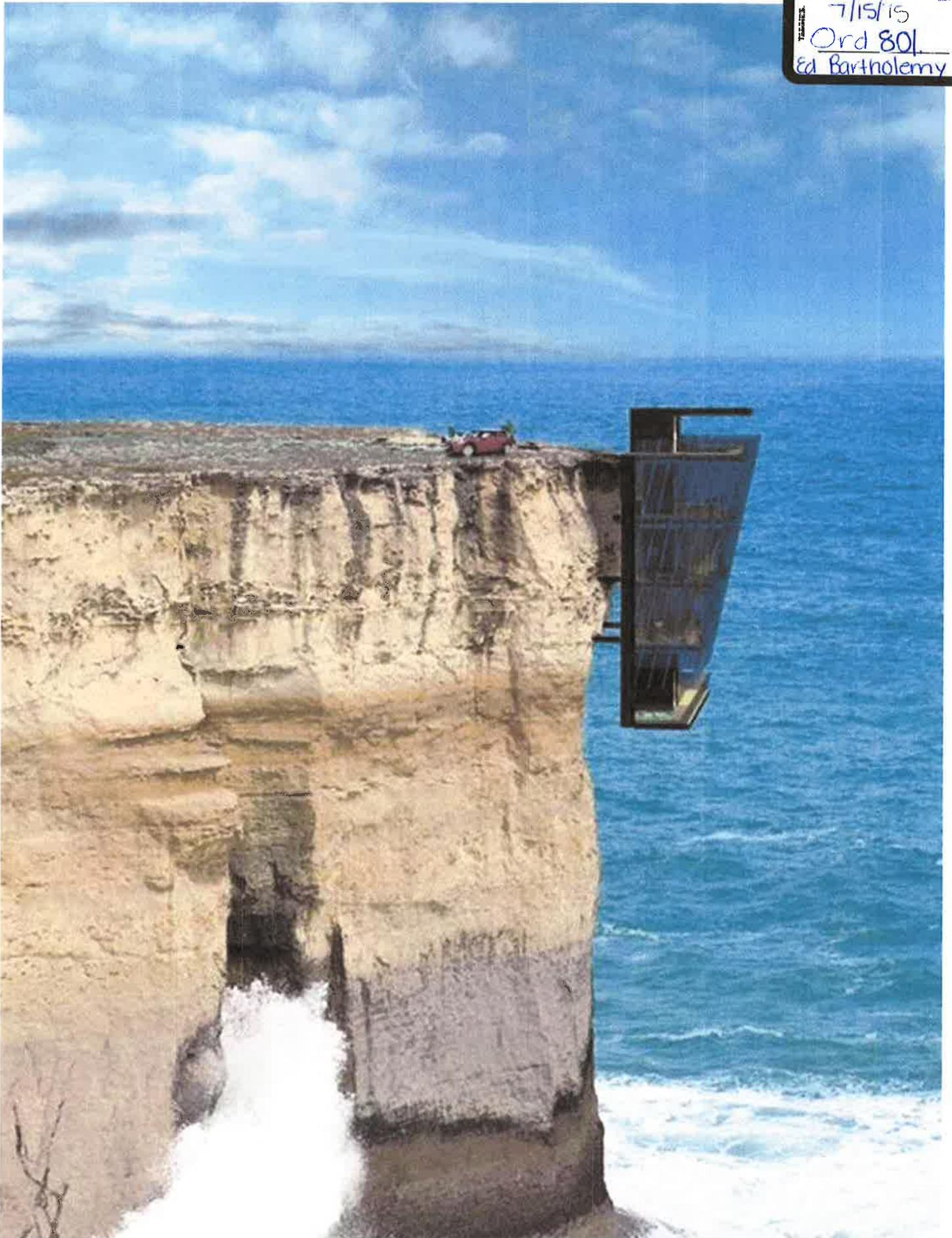
ADDRESS: HOME OR BUSINESS (Please check one.)

STREET 1506 Linpus Lane	CITY FOREST GROVE	ZIP 97116
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BRIEFLY STATE YOUR TOPIC:

ORDINANCE 801 - approved
CAAS - WCCAM

Attachment 6
EXHIBIT # 4
7/15/15
Ord 801
Ed Bartholemy





July 10, 2015

Andy Back, Manager
Planning & Development Services
Washington County Dept. of Land Use & Transportation
155 N First Avenue, Suite 350, MS 14
Hillsboro, OR 97124-3072

Dear Andy:

Thank you for providing the opportunity to review and comment on Washington County proposed Ordinance No. 801 that amends the North Bethany Subarea Plan and the Community Development Code to reduce the Natural Features Buffer with Fencing to a uniform width of 50 feet. Please enter this letter into the record for the Planning Commission hearing on July 15, 2015.

As you know, a condition on addition of the North Bethany area into the UGB is related to the urban compatibility issue and reads as follows:

In Title 11 planning, the city or county with land use planning responsibility for Study Areas 84, 85, 86 and 87 (partial) shall adopt provisions in its comprehensive plan and zoning regulations – such as setbacks, buffers and designated lanes for movement of slow-moving farm machinery – to ensure compatibility between urban uses in an included study area and agricultural practices on adjacent land outside the UGB zoned for farm or forest use.

The condition directs the County to ensure compatibility between urban and agricultural uses, but does not specify how that goal must be achieved in any particular location. This allows the County to meet the condition by adopting methods that are specifically tailored to the particular characteristics of the land and the existing rural uses as well as the proposed urban development pattern. Accordingly, the three existing buffers vary widely, from a fence to prevent trespass, to a 20-foot minimum vegetative buffer for ground spraying and harvest activities that generate dust, to the subject buffer that ranges from 158-465 feet in width for pasture, wheat/row crops, livestock uses and an equestrian center and also includes steeply sloped lands and natural features. Recognizing the extensive and detailed work completed by the County when it developed the three existing buffers based on the unique circumstances in each area, Metro's preference would be for the County to retain the adopted Natural Features Buffer with Fencing along the northern boundary. Any proposal to change the previously adopted buffers should be based on a similarly detailed analysis regarding the features and uses specific to these areas, and evidence regarding impacts, rather than a "one size fits all" numerical approach.

As outlined in the County's Long Range Planning Issue Paper No. 2015-03 (May 1, 2015), Clean Water Services (CWS) has a number of sanitary sewer and stormwater service concerns regarding the land that would potentially become developable if the Natural Features Buffer is reduced. The concerns

stated by CWS regarding the serviceability of these areas are not insignificant. According to the Issue Paper, K & R Holdings has done some preliminary engineering work but has not provided an engineering study to CWS that demonstrates how sanitary sewer and stormwater requirements can be met. It seems unwise to amend the buffer standards to an arbitrary numerical standard at this time without fully understanding the impacts to the efficiency of providing sanitary sewer and stormwater services, long-term maintenance and operational costs for both the service provider and future homeowners and potential disturbances to the slopes.

A better understanding of the costs, impacts to the slopes and the required streamside and wetland vegetated corridor will provide more certainty regarding which areas along the northern boundary can potentially be developed. This in turn would provide more certainty to Clean Water Services and the opportunity to amend the buffer, if desired, in a way that reflects a refined local situation while still meeting the requirements of the Metro condition.

Metro is very interested in the effectiveness of the proposed buffers in achieving a compatible relationship between urban and agricultural uses and looks forward to continued communication and coordination with County staff on this important issue.

Sincerely,



Tim O'Brien, AICP
Principal Regional Planner

c: Councilor Kathryn Harrington, District No. 4
Theresa Cherniak, Principal Planner, Washington County LU&T
Roger Alfred, Metro Senior Assistant Attorney
John Williams, Deputy Director, Metro Planning & Development

From: Carol Chesarek [<mailto:chesarek4nature@earthlink.net>]
Sent: Thursday, July 02, 2015 3:22 PM
To: Robert Fraley
Subject: questions about Ord 801

Hi Bob,

A few questions relating to the North Bethany Ordinance 801. Hopefully these are easy to answer. If any of it is complicated, let me know and I'll give you a call so we can talk about it instead of using email.

Do we know what dates the follow-up PC and BoCC hearings would be, if they want more than one? My notes say 8/5 for the PC, 9/22 and 10/6 for the BoCC, but I have a question mark next to 9/1. I understand that those dates are all tentative, just trying to schedule some other meetings so they won't conflict.

Are the photos of the current buffer and Abbey Creek stables that county staff used in their presentations to the Planning Commission and Board of Commissioners available?

Are there areas where the full width of the proposed 50' buffer is not currently occupied by trees and native shrubs? I'm trying to figure out if the new trees called for as a vegetative screen would be planted in areas that are relatively open now, or if there are substantial stretches where they'd need to be planted among existing trees. I know that K&R cleared a lot of trees of that slope, but I don't know how close to the county line they were cleared, if they stopped at 50' or went to 30'. If they cleared to 30', then there would be a 20' empty space where new trees and shrubs could be planted. Conversely, are there substantial areas where the current vegetation fills the full 50' of the proposed buffer (outside of the CWS vegetated corridors)?

And yes, I understand that any trees within the current buffer (outside CWS corridors) could be removed before any development application is filed, because state agricultural and forestry rules apply.

The deepest part of the current natural features buffer is located in a vegetative corridor that won't be allowed to develop regardless of what happens with the agricultural buffer. What is the deepest part of the "natural features buffer with fencing" that is outside of a vegetative corridor?

The Ordinance language left me confused about whether tree removal would be allowed within the 50' buffer:

- Exhibit 1, p. 3 of 3, V.A.2.a says "For land in the Natural Features buffer with Fencing on the Urban/Rural Edge Map, no development is permitted, including alteration of existing vegetation, except as permitted by Community Development Code Section 390-19.2 and 19.4"

- Exhibit 2, p. 5 of 8, G.1.(b) says “Identification, location and description of existing trees six (6) inches or greater in diameter at four (4) feet above grade to be preserved or removed (including common name, species and size) and extent of existing understory vegetation to remain.”

The second bullet seems to imply that existing trees within the buffer could be removed. Or is the intent to document removal of other trees on the slope, outside of the proposed smaller buffer? I found this section from Exhibit 2 confusing because I couldn't tell if it applied to the buffer, or to areas to be developed outside the buffer. Elsewhere the intent to maintain vegetation within the proposed 50' buffer is clear.

I hope you are managing to keep cool. Have a great weekend!

Carol

From: Carol Chesarek [<mailto:chesarek4nature@earthlink.net>]
Sent: Sunday, July 05, 2015 8:35 PM
To: Robert Fraley
Subject: another question re: Ord 801

Hi Bob,

I remembered another question about the filed Ord 801.

The language in Exhibit 2, p. 3 of 8, 390-19.2.A prohibits street stubs or driveways are prohibited at “North Bethany boundaries that abut rural lands with Rural Reserve designations.” This is the existing language, not a change.

Is the southern (urban side) edge of the Natural Features buffer (current version or the proposed 50’ version) considered a North Bethany boundary? I’d like to make sure that we can’t have any streets that stub out at the edge of the buffer. I’ve always thought this language would prevent that, but after re-reading the language I realized I couldn’t tell if the inner (urban) edges of the buffers are considered a boundary in this context.

Many thanks,

Carol

From: Robert Fraley [mailto:Robert_Fraley@co.washington.or.us]
Sent: Wednesday, July 08, 2015 10:16 AM
To: Carol Chesarek
Cc: Theresa Cherniak; Angela Brown
Subject: Ordinance No. 801

Good Morning, Carol –

I'll try to answer your remaining questions in this email. For visuals of the buffer area, I have attached our May 28 presentation to CPO 7, which has a number of slides showing photos of the existing buffer. It also includes two slides showing aerial views of the North Bethany and the existing Natural Features Buffer. I have also included a marked up aerial showing the main areas along the urban/rural edge that will require the most landscaping to meet the proposed landscape screening standards. Please let me know if you have any difficulty opening these attachments.

Question: Are there areas where the full width of the proposed 50' buffer is not currently occupied by trees and native shrubs? I'm trying to figure out if the new trees called for as a vegetative screen would be planted in areas that are relatively open now, or if there are substantial stretches where they'd need to be planted among existing trees. I know that K&R cleared a lot of trees of that slope, but I don't know how close to the county line they were cleared, if they stopped at 50' or went to 30'. If they cleared to 30', then there would be a 20' empty space where new trees and shrubs could be planted. Conversely, are there substantial areas where the current vegetation fills the full 50' of the proposed buffer (outside of the CWS vegetated corridors)?

Staff Response: *In general, portions of the proposed 50' buffer will require infill planting, but at this time it is difficult to gauge the extent of the plantings required without a screening and buffering plan detailing the existing vegetation. The proposed ordinance requires "supplemental landscape screening" for areas with existing vegetation in order to achieve a level consistent with the minimum landscape requirements for the buffer. There are three identifiable areas that are relatively open and will definitely require additional landscaping to meet the proposed standards. The first is an area where a stand of Christmas trees was removed on the Robinson property across from Mr. Rayhawk's property (a small portion of this, possibly 15-20' in width, is still vegetated). The other two areas are located on the Hosford property west of NW Kaiser (see attached map with referenced areas circled in red).*

Question: The deepest part of the current natural features buffer is located in a vegetative corridor that won't be allowed to develop regardless of what happens with the agricultural buffer. What is the deepest part of the "natural features buffer with fencing" that is outside of a vegetative corridor?

Staff Response: *The deepest part of the buffer that is outside of a vegetated corridor is approximately 365 feet wide. This area is located east of Kaiser Road on the Robinson property, just east of the Abbey Creek tributary (see attached map).*

Question: The Ordinance language left me confused about whether tree removal would be allowed within the 50' buffer:

- Exhibit 1, p. 3 of 3, V.A.2.a says “For land in the Natural Features buffer with Fencing on the Urban/Rural Edge Map, no development is permitted, including alteration of existing vegetation, except as permitted by Community Development Code Section 390-19.2 and 19.4”
- Exhibit 2, p. 5 of 8, G.1.(b) says “Identification, location and description of existing trees six (6) inches or greater in diameter at four (4) feet above grade to be preserved or removed (including common name, species and size) and extent of existing understory vegetation to remain.”

The second bullet seems to imply that existing trees within the buffer could be removed. Or is the intent to document removal of other trees on the slope, outside of the proposed smaller buffer? I found this section from Exhibit 2 confusing because I couldn't tell if it applied to the buffer, or to areas to be developed outside the buffer. Elsewhere the intent to maintain vegetation within the proposed 50' buffer is clear.

Staff Response: *Vegetation removal (excepting non-native and invasive plantings) is not permitted within the buffer per CDC Section 390-19.4.A. The intent of the second bullet (Section 390-19.4.G(1)(b)) is to allow for removal of “invasive” vegetation as well as dangerous or diseased trees within the buffer if necessary to protect the overall health of buffer vegetation. We will look at whether any changes to the ordinance language might be needed to address this.*

Question: Is the southern (urban side) edge of the Natural Features buffer (current version or the proposed 50' version) considered a North Bethany boundary? I'd like to make sure that we can't have any streets that stub out at the edge of the buffer.

Staff Response: *The urban/rural edge is the northern boundary of North Bethany. It is possible that local streets platted as part of a subdivision could stub up to the southern edge of the proposed 50' Natural Features Buffer, but roads would not be allowed within the buffer tract.*

I hope this information answers your questions. Please let me know if you have any additional questions.

Best regards,
Bob

Robert Fraley | Associate Planner

Washington County Department of Land Use & Transportation
Planning and Development Services | Long Range Planning
155 N First Avenue, Suite 350 MS14 | Hillsboro, OR 97124
503-846-8817 direct | 503-846-4412 fax
robert_fraley@co.washington.or.us | www.co.washington.or.us/lut

North Bethany Natural Features Buffer

Buffer Width Reduction Ordinance Update



CPO 7 Presentation

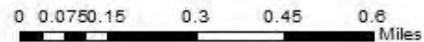
May 28, 2015



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ph (503) 846-8611

Geonet

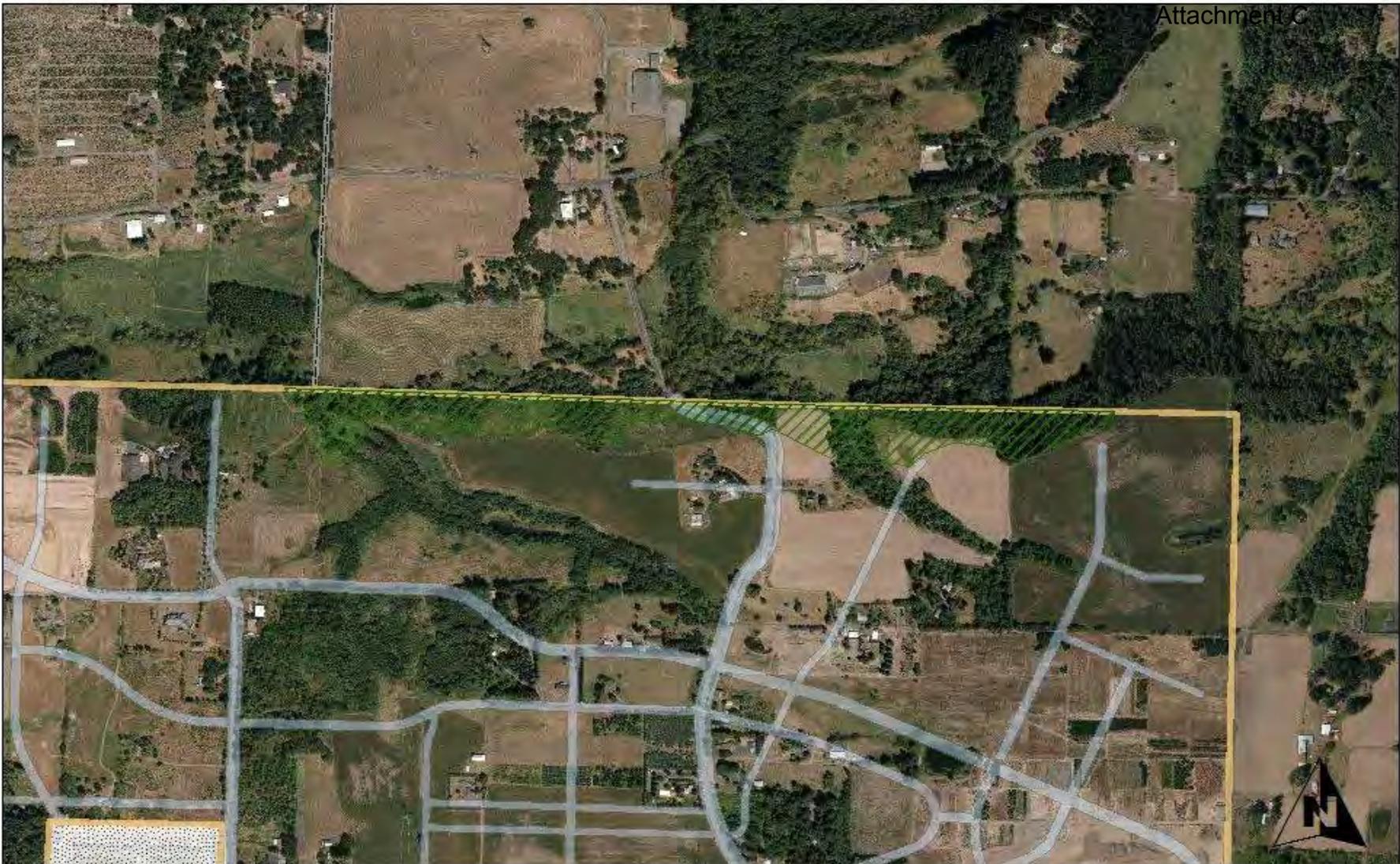
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May 27, 2015

Disclaimer:

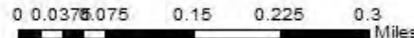
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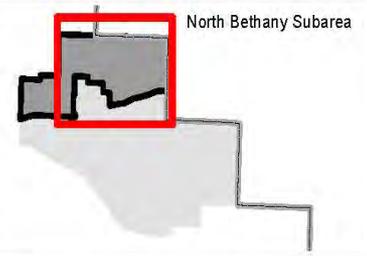
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May 28, 2015

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Bethany Community Plan Chapter 2 NORTH BETHANY SUBAREA



Portions of the trail corridor are shown to illustrate how they define the edge of sections of the Natural Features Buffer area.

Urban/Rural Edge MAP

- Fence Only Buffer
- Trail Corridor
- Vegetation Buffer with Fencing
- Natural Features Buffer with Fencing
- Density Restricted Lands



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Natural Features Buffer



Natural Features Buffer



Natural Features Buffer



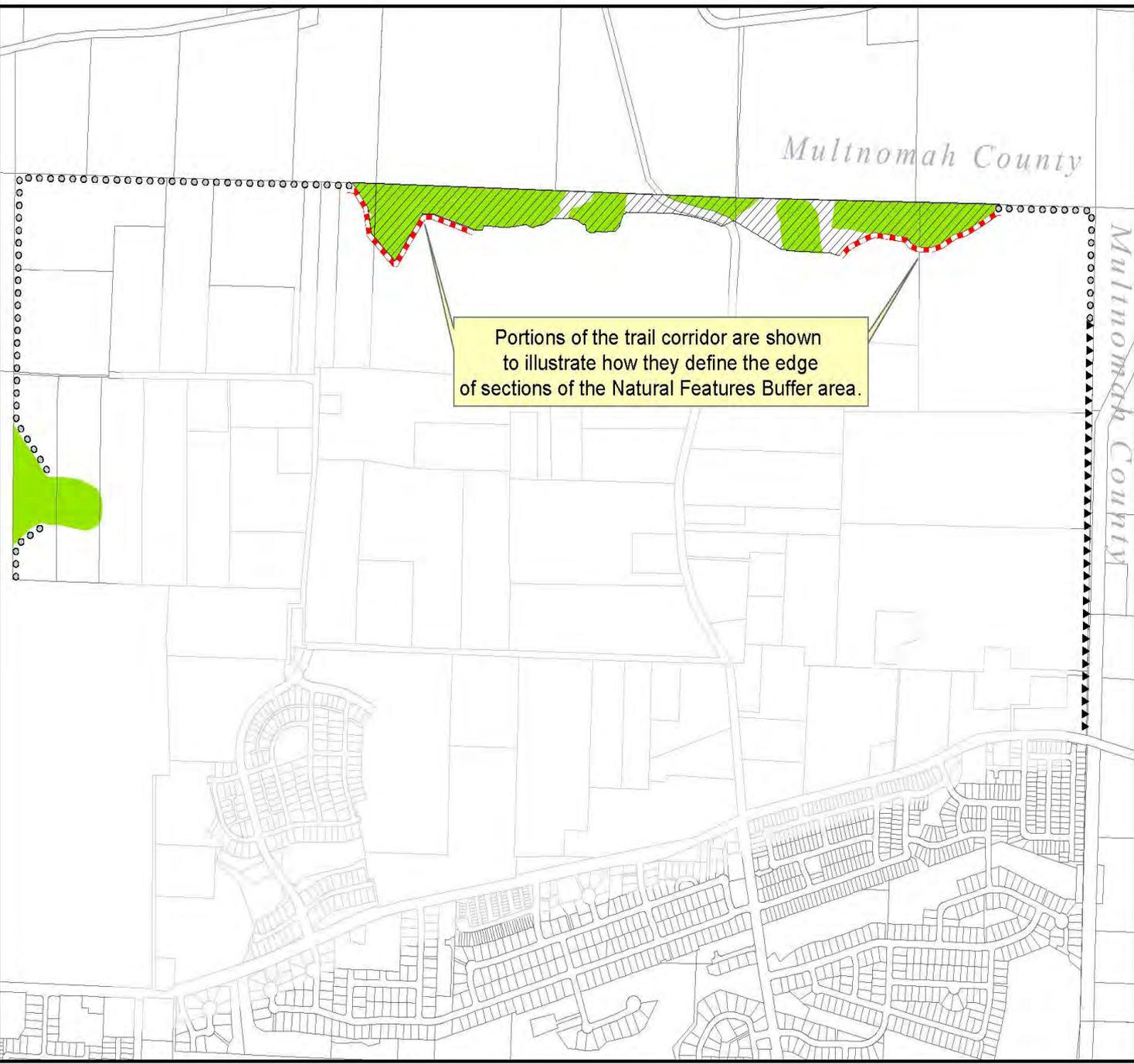
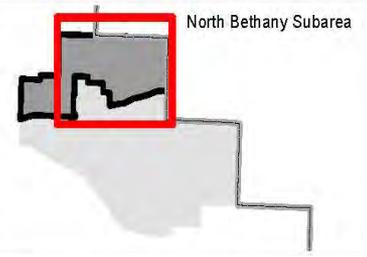
Natural Features Buffer



Natural Features Buffer



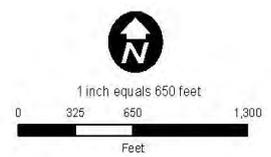
Bethany Community Plan Chapter 2 NORTH BETHANY SUBAREA



Portions of the trail corridor are shown to illustrate how they define the edge of sections of the Natural Features Buffer area.

Urban/Rural Edge MAP

- Fence Only Buffer
- Trail Corridor
- Vegetation Buffer with Fencing
- Natural Features Buffer with Fencing
- Density Restricted Lands



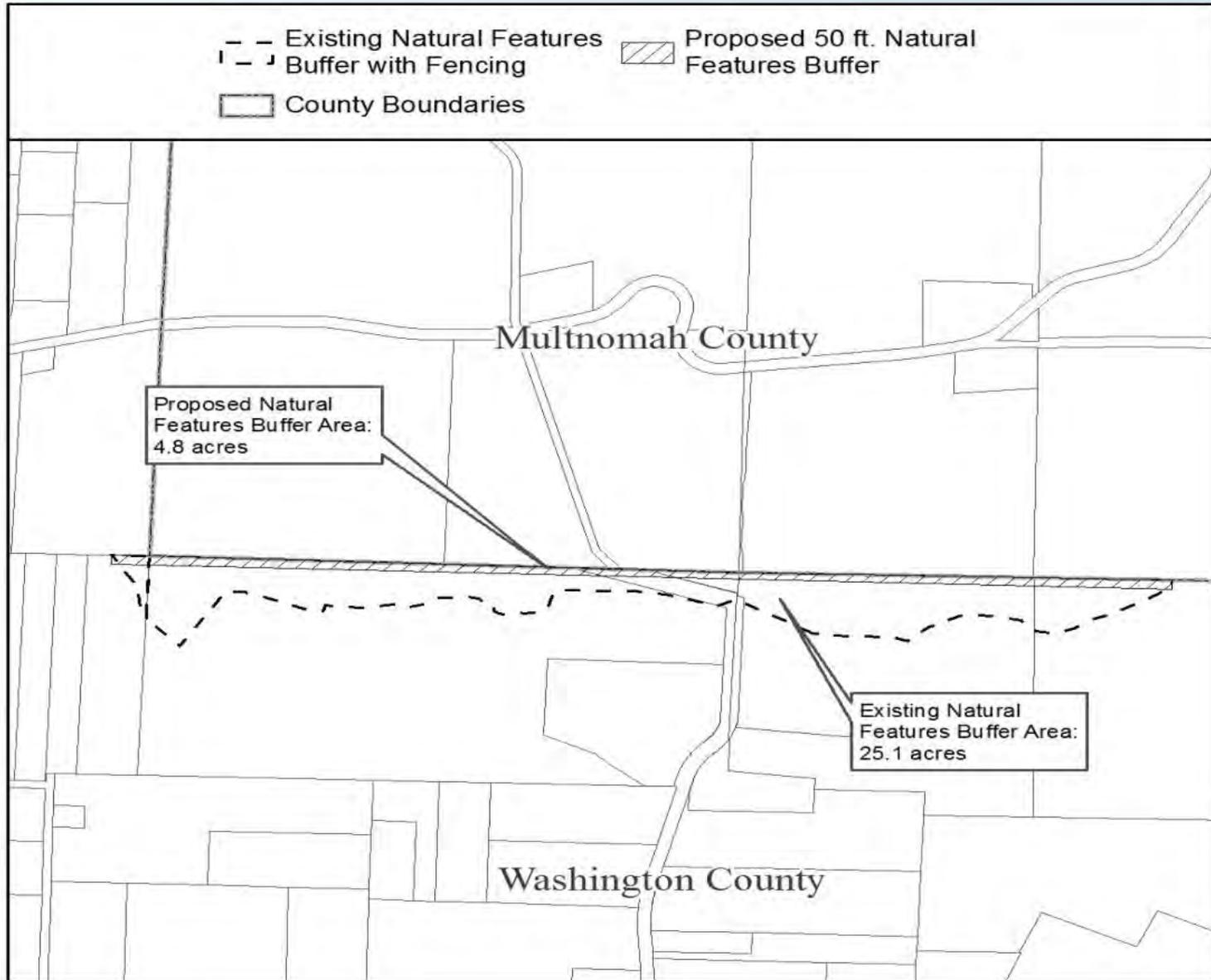
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Analysis

Issues for consideration include:

- Serviceability for sanitary sewer and stormwater.
- Impacts to THPRD planned trail alignments.
- Maintaining compliance with Urban/Rural compatibility requirements (Condition 6 of Metro's Ordinance No. 02-987A.)





Key Ordinance Provisions

- 50' minimum buffer
 - ✓ “No touch” buffer tract
 - ✓ No THPRD trails within buffer
 - ✓ Fencing along southern edge
 - ✓ Vegetated screening
- Landscape screening at specified planting levels.
- Maintenance and management of permanent buffer screening.



Next Steps

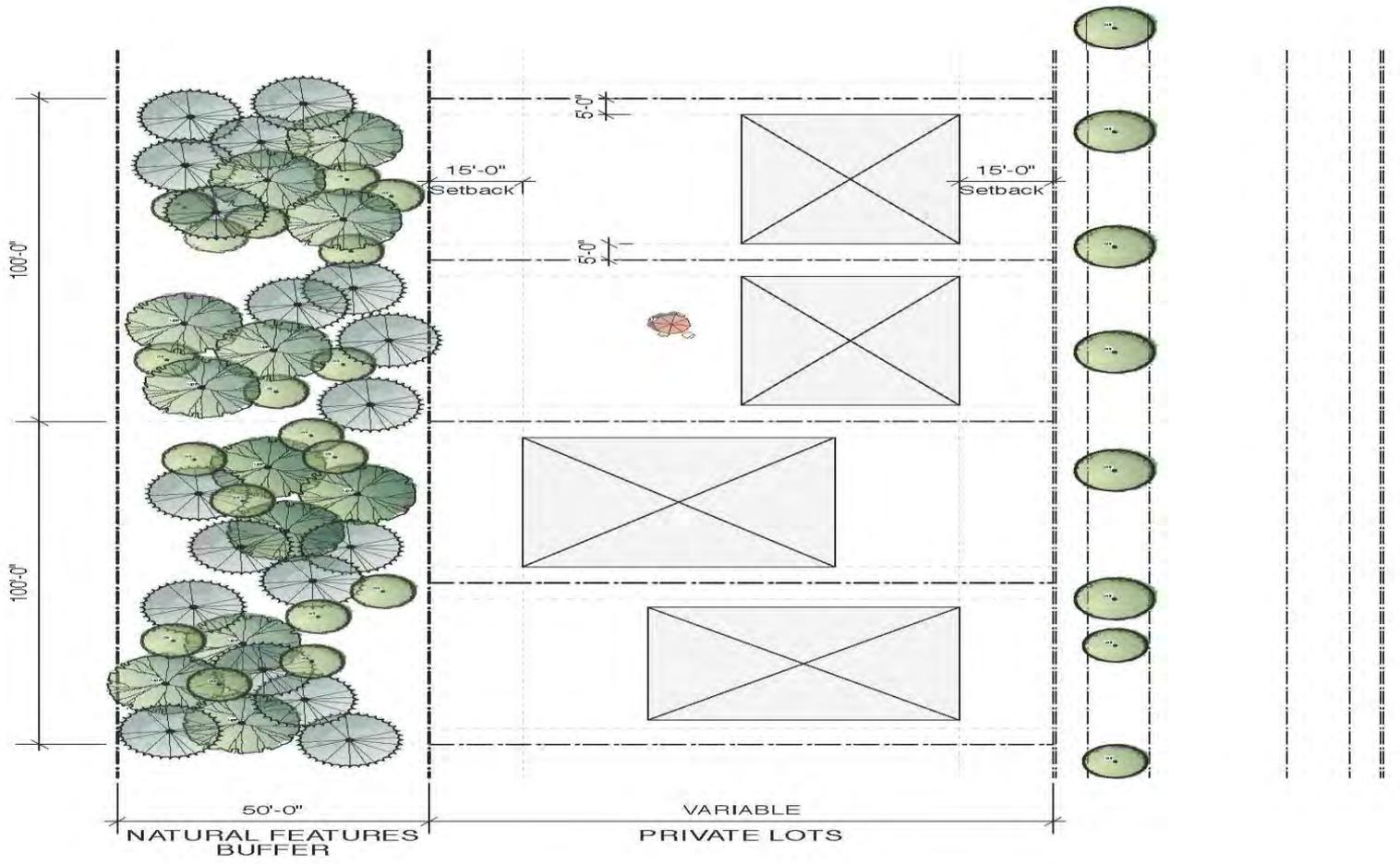
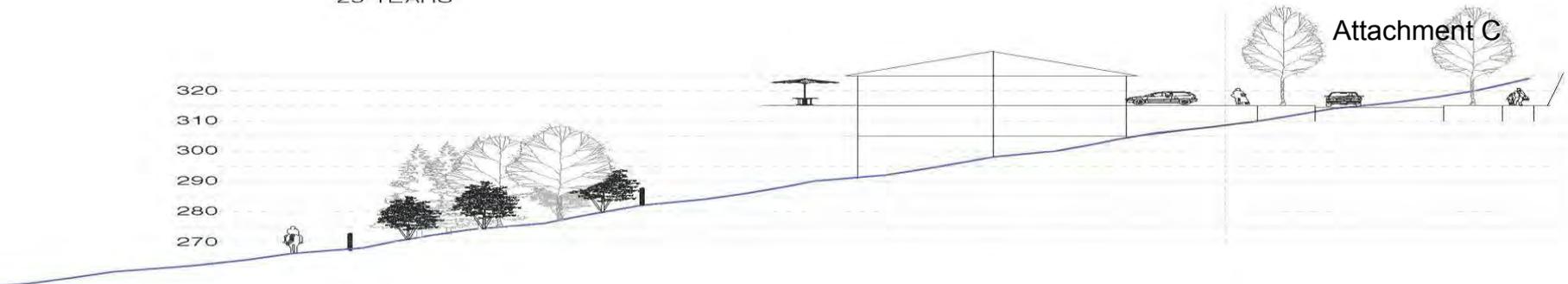
- File Ordinance June 5.
- Initial Planning Commission hearing July 15.
- Initial Board hearing August 18.

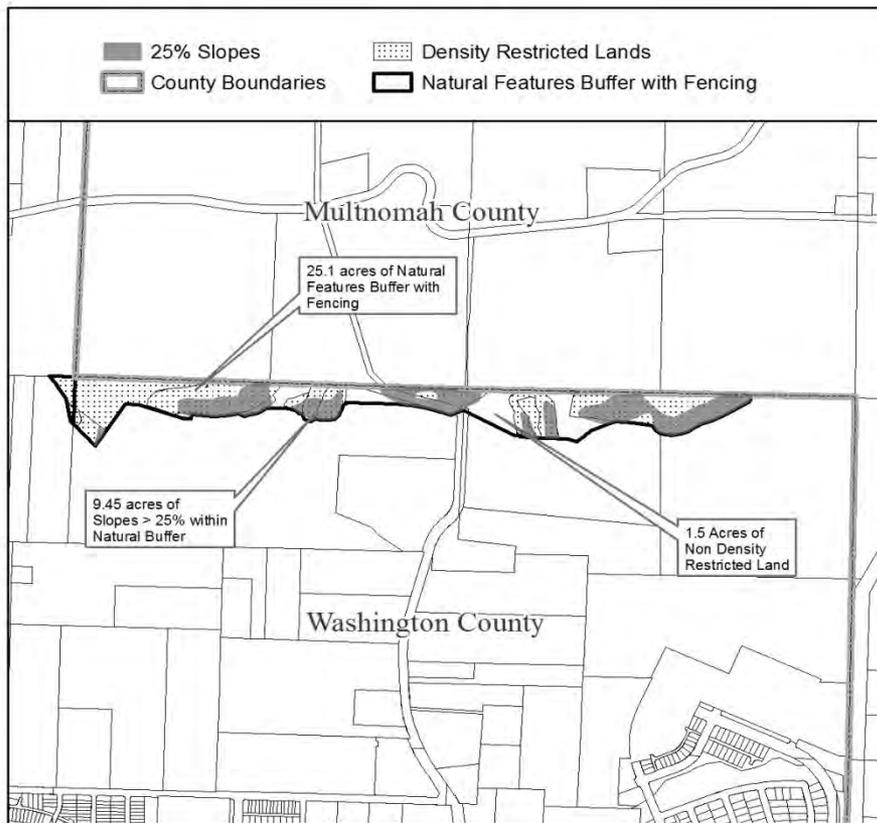


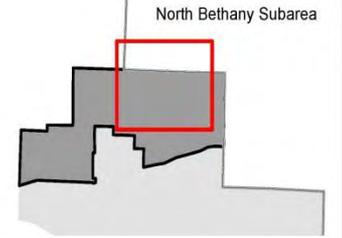
Questions



320
310
300
290
280
270







Urban/Rural Edge MAP

- Fence Only Buffer
- Trail Corridor
- Vegetation Buffer with Fencing
- 2 ft. Contours
- Natural Features Buffer with Fencing
- Sewer Service Challenges (CWS, 2010)
- Wetland & Estimated CWS Vegetated Corridor



1 inch = 200 feet

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Analysis – Sewer Impacts

- Service to the area would require additional sanitary sewer engineering analysis.
- The sanitary system for North Bethany was planned as an all-gravity system.
- The Natural Features Buffer area is located downhill of planned sewer facilities.
- Serving these areas would require the use of pumps or a secondary gravity system.
- Individual homes could use grinder pumps but such systems are maintenance and electricity intensive.
- Wide use of grinder pumps is not advisable.



Analysis – Stormwater Impacts

- Stormwater management solutions are not easily identifiable.
- Lands within the Buffer are designated landslide hazard areas – stormwater and infiltration facilities could cause greater slope instability.
- Piping stormwater from properties directly to Abbey Creek poses two concerns:
 - Residential downspout connections draining directly to Abbey Creek without downstream water-quality treatment and flow management would not be allowed.
 - Construction of drainage pipes down steep slopes to the creek could exacerbate overall slope instability.



Analysis – Trails Impacts

- A buffer width reduction would possibly force trails to be located down steeper slopes.
- A narrower buffer provides less trail siting flexibility.
- Trail siting in steeply sloped areas would be more difficult and costly than in the planned locations.

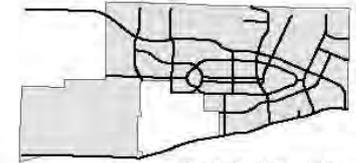
THPRD requests conditions on development to ensure an acceptable alternative trail location is identified.



Analysis – Metro Compliance

- Buffer reduction would undo a significant portion of the urban/agricultural compatibility measures in place.
- It would re-introduce the issue of North Bethany urban/rural compatibility and compliance with Metro's condition.
- A legislative change to the buffer would require staff to provide findings for compliance with Condition 6 of the Metro Ordinance.





North Bethany Subarea

Landslide Study Areas Shallow Seated MAP

- North Bethany Planning Area
- High Susceptibility*
- Moderate Susceptibility*
- Arbor Oaks Subarea
- Primary Streets ROW

*Boundaries are subject to site-specific refinement.

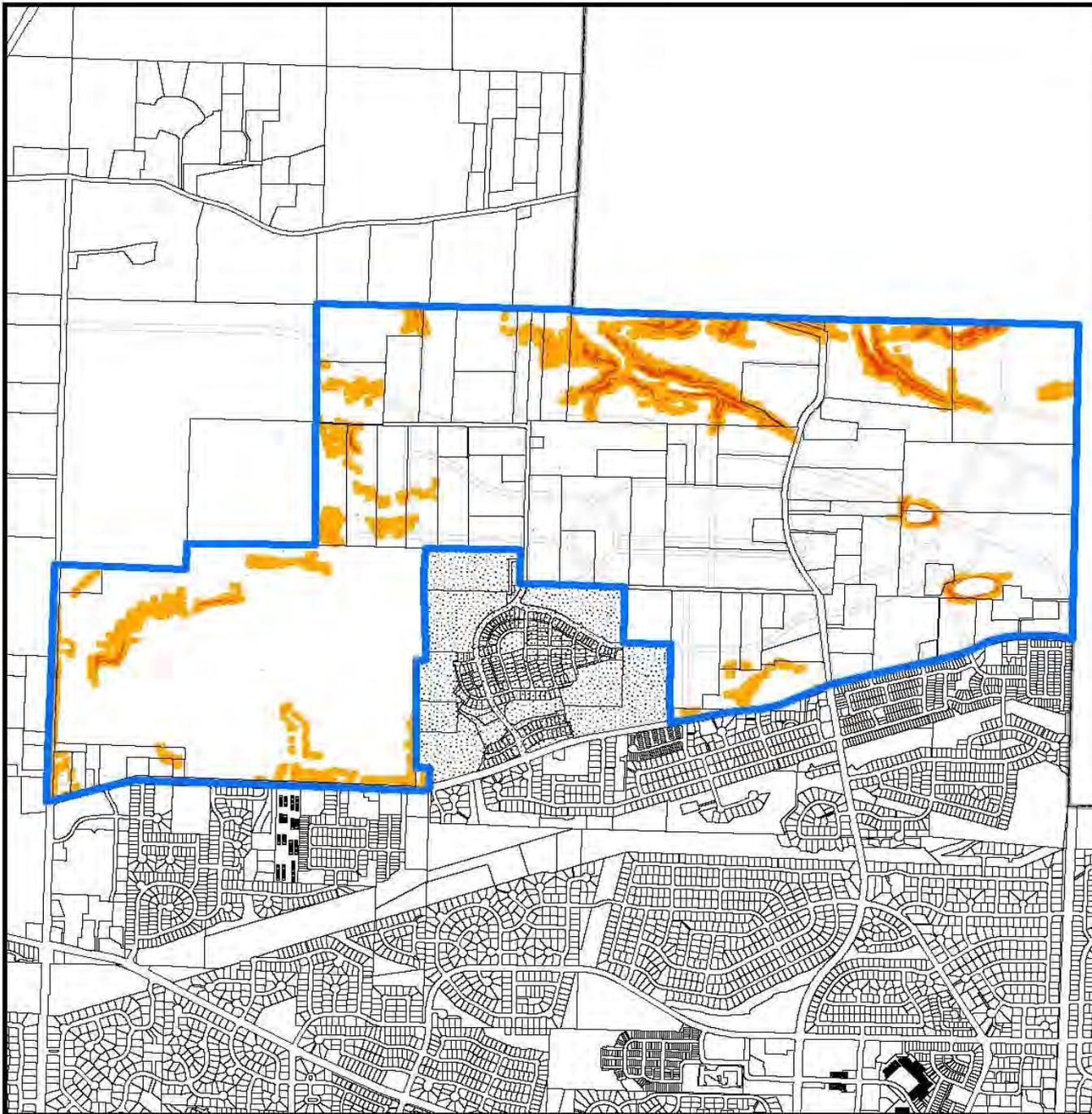
NOTE: The County determined these study areas based on maps and data from the Department of Geology and Mineral Industries (DOGAMI).



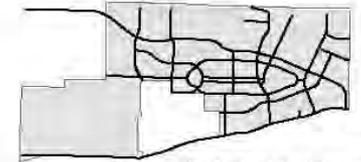
1 inch equals 1,500 feet



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North Bethany Subarea

Landslide Study Areas Deep Seated MAP

-  North Bethany Planning Area
-  High Susceptibility*
-  Moderate Susceptibility*
-  Arbor Oaks Subarea
-  Primary Streets ROW

*Boundaries are subject to site-specific refinement.

NOTE: The County determined these study areas based on maps and data from the Department of Geology and Mineral Industries (DOGAMI).



1 inch equals 1,500 feet



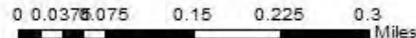
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Washington County
155 North First Avenue
Hillsboro, OR 97124
ph (503) 846-8611

1:9,600



May 28, 2015

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From: Robert Fraley [mailto:Robert_Fraley@co.washington.or.us]
Sent: Thursday, July 09, 2015 1:29 PM
To: Carol Chesarek
Cc: Theresa Cherniak
Subject: RE: Ordinance No. 801

Hi Carol,

Thank you for these additional comments and we will further consider them as we move forward.

Thanks,
Bob

Robert Fraley | Associate Planner
503-846-8817 robert_fraley@co.washington.or.us

From: Carol Chesarek [<mailto:chesarek4nature@earthlink.net>]
Sent: Wednesday, July 08, 2015 11:31 AM
To: Robert Fraley
Cc: Theresa Cherniak; Angela Brown
Subject: RE: Ordinance No. 801

Hi Bob,

Thank you for putting this together for me. Your answers, the presentation, and the marked up aerial photo are all very helpful, and I appreciate your taking the time to put them together.

My neighborhood had requested that streets not be allowed to stub out against the rural area because such stubs encourage trespassing by leading people up to a barrier. It was our understanding that street stubs were not be allowed against the edge of the buffers. Since there is some type of "buffer" along all the rural edges, this provision (which was added at our request to avoid encouraging trespassing, and without any protest from the development community aside from their commitment to provide the single rural access point mentioned in the code) would have no meaning if street stubs are allowed to end against the buffer. In this case, there would be sidewalks leading directly up to the buffer fence. The cyclone and wire mesh fence types identified in the Ordinance won't discourage trespassing (in fact, 5' cyclone fencing is very inviting for children and teenagers, at a previous hearing a Planning Commissioner described attending an outdoor event where adults simply put one arm over a 5' cyclone fence and vaulted over it). The "no climb" fencing mentioned is a wire mesh designed to prevent livestock, not humans, from climbing over it. Street stubs ending at a trail are less of a concern, because the trail provides a route for a pedestrian to continue walking.

I hope you and Theresa will further consider how this provision about street stubs is applied, and whether the current language should be modified to better achieve the original goal. Looking back through the legislative history might also help establish the original intent and staff expectation about the meaning.

Best regards,

Carol

From: Carol Chesarek [<mailto:chesarek4nature@earthlink.net>]
Sent: Monday, July 13, 2015 1:10 AM
To: Robert Fraley
Cc: Theresa Cherniak
Subject: RE: Ordinance No. 801

Hi Bob,

Thanks for your help. I'll just also quickly point out that in most cases street stubs are intended to provide for future through street connections into adjacent new urban areas. In this case, the restriction is limited to places where the street stubs would be located adjacent to Rural Reserves, which are protected from development for 50 years. Adjacent to this northern edge, even if that adjacent area were to eventually develop, it is doubtful that there would be new residential street connections down the steep slope and across the Abbey Creek corridor – it is more likely that it would be developed with very limited connectivity, such as is planned across the western edge of North Bethany, onto the Peterkort property. In that case, the cost of a single bridge was so high that there's only one street connection planned from North Bethany. So I suspect NW Kaiser would remain the only road connection.

Best wishes,

Carol

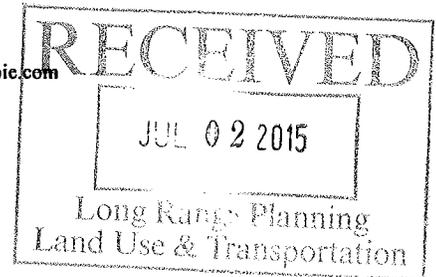
PERKINScoie

1120 NW Couch Street
10th Floor
Portland, OR 97209-4128

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+1.503.727.2222
perkinscoie.com

July 2, 2015

Michael C. Robinson
MRobinson@perkinscoie.com
D. +1.503.727.2264
F. +1.503.346.2264



Mr. A. Richard Vial, Chair
Washington County Planning Commission
155 N. First Avenue, Suite 350
Hillsboro, OR 97124

Re: Proposed Ordinance No. 801; Letter on Behalf of K & R Holdings, LLC

Dear Mr. Vial and Members of the Washington County Planning Commission:

This office represents K & R Holdings, LLC ("K & R"). K & R owns properties in Bethany adjacent to the Portland Metropolitan Urban Growth Boundary (the "UGB"). This letter is written on behalf of K & R and supports proposed Ordinance No. 801.

Proposed Ordinance No. 801 amends Chapter 2, "North Bethany Sub Area Plan of the Bethany Community Plan" (the "Plan") and Washington County Community Development Code ("CDC") Section 390 to change the "Natural Features Buffer with Fencing" to a uniform width of 50-feet along the UGB. This letter explains why the Planning Commission should recommend approval of proposed Ordinance No. 801 to the Washington County Board of Commissioners (the "Board") and why the proposed ordinance meets relevant approval standards, including Metropolitan Service District ("Metro") Ordinance No. 02-987A, Condition of Approval 6 (**Exhibit 1**).

I. Introduction.

1. Metro Condition Requiring Provisions to Ensure Compatibility.

Metro amended the UGB in 2002 to add land in the Bethany area. Metro did so through Ordinance No. 02-987A (the "Ordinance"). The Ordinance includes Exhibit B, which lists eight (8) conditions of approval for the addition of Study Areas 84, 85, 86 and 87 (partial) to the UGB. Condition of approval 6 requires measures to ensure compatibility between urban and rural uses:

"6. In Title 11 Planning, the city or county with land use planning responsibility for Study Areas 85, 85, 86 and 87 (partial) shall adopt provisions in its comprehensive plan and zoning regulations—such as setbacks, buffers and designated lanes for movement of slow-moving farm machinery—to ensure compatibility between urban uses in an included study area and agricultural practices on land adjacent outside the UGB zone for farm or forest use."

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Washington County (the "County") implemented condition of approval 6 by adopting Plan Chapter 2 and CDC section 390. The Board has initiated proposed Ordinance No. 801 to modify the current Plan and CDC provisions to ensure continued compatibility between urban uses in Bethany and agricultural practices on adjacent lands outside of the UGB.

The current compatibility requirements provide for a varying buffer width with fencing where indicated along the urban/rural edge map (**Exhibit 2**). The current regulations allow residential development to occur to the top of slope on lands with greater than 25% slope.

Proposed Ordinance No. 801 provides for a uniform 50-foot wide buffer with the maintenance of existing native vegetation, and planting of additional landscaping for screening and buffering purposes (**Exhibit 3**).

2. Adjacent Farm Use.

The area in Multnomah County outside of and adjacent to the UGB is zoned Exclusive Farm Use ("EFU"). One of the properties in that area is Abbey Creek Stables, located at 15248 NW Germantown Road. ORS 215.203(2)(a) provides that farm uses include the stabling or training of equines. According to past testimony by one of the owners of Abbey Creek Stables, Abbey Creek Stables provides stables for horses (located on the north end of the Abbey Creek Stables property adjacent to NW Germantown Road) and also provides equine training and riding on the property. The current County Plan and CDC provisions provide a buffer adjacent to this use. Proposed Ordinance No. 801 will provide a different and equally effective buffer between urban development in Bethany and EFU properties to the north, including Abbey Creek Stables.

II. Compliance with Metro Ordinance No. 02-987A, Condition of Approval 6.

1. What Metro Condition of Approval 6 Requires.

Condition of Approval 6 requires the County, through its Plan and land use regulations, to ensure compatibility between urban uses in Bethany and agricultural practices on adjacent land outside the UGB that is zoned for farm or forest use. CDC Section 106-37 defines "compatible" as "capable of existing together in harmony; capable of orderly, efficient integration and operation with other elements in a system considering building orientation, privacy, lot size, buffering, access and circulation."

The type of issues that may impact compatibility between urban and agricultural uses include noise, loss of privacy through views onto the agricultural property, and trespass by persons. As explained below, the Planning Commission can find that trespass can be prevented by the 50-foot wide buffer, the minimum 5 foot high fence, and the use of existing and proposed intensive

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landscaping. View intrusion will be limited by the 50-foot wide setback and intense vertical landscaping. Finally, noise will be minimized by the 50-foot wide setback.

The Planning Commission can find that Condition of Approval 6's requirement for compatibility means that the County must have regulations capable of providing that urban uses are able to exist in harmony with agricultural uses outside of the UGB. The proposed buffer requirements are capable of providing for compatibility between urban and agricultural uses.

2. Metro Findings on Compatibility in this Area.

Metro adopted findings for Ordinance No. 02-987A under the heading "Compatibility" that examined the conflicts between urban uses in Bethany and adjacent agricultural uses. Metro found that "the Agricultural Compatibility Analysis shows that urbanization of the Bethany area will have relatively fewer impacts on agricultural activities in the same area ... The alternative analysis also shows that existing forested areas and creeks have the potential to buffer farm operation from development."

Metro also found, "[m]oreover, the proposed expansion area is well-buffered from agricultural activities in the area." (Metro Ordinance No. 02-987A, Exhibit C, page 6.) An aerial photograph showing the relationship between Bethany and the adjacent EFU zoned property, including the property on which Abbey Creek Stables is located, shows existing forested areas and Abbey Creek (**Exhibit 4**) Just as Metro found, the Planning Commission can find that the existing natural features in the area function as an appropriate buffer to separate urban from agricultural uses. Augmented by the enhanced landscaping requirements, the Planning Commission can find that the proposed requirements will provide for compatibility between urban and agricultural uses.

3. Proposed Ordinance No. 801's Buffer Provisions.

The Planning Commission can find that proposed Ordinance No. 801 will provide an effective buffer to ensure compatibility between urban and agricultural uses. Proposed CDC 390-19.2.E provides that required buffer landscaping and existing vegetation be maintained by hand implements, so that machinery will not be allowed to maintain the buffer. This requirement minimizes noise to the adjacent agricultural practices.

Proposed CDC Section 390-19.4.A requires a minimum 50-foot wide tract, measured from the urban/rural edge to provide screening and buffering between urban and rural agricultural uses. A "tract" is a non-developable unit of land, in this case, controlled by a future homeowners association.

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Proposed CDC Section 390-19.4.B requires installation of a minimum 5 foot high fence composed of either cyclone, wire mesh, "no climb", or wood located along the southern (urban) edge of the tract. The fence will provide a physical barrier, in addition to the 50-foot wide setback and intensive landscaping, to discourage trespassing into the agricultural area.

Proposed CDC Section 390-19.4.F. requires the installation of permanent landscaping within the buffer to provide a physical separation between urban and agricultural uses. The agricultural screening includes, as provided for in proposed CDC Section 390-19.4.H., a layered canopy of native deciduous and evergreen trees and shrubs planted every 100 lineal feet by the width of the 50-foot buffer, to include 6 canopy trees, 18 evergreen/conifer trees, 9 understory trees and 36 shrubs, for a total of 69 trees and shrubs per 5,000 square feet of buffer area.

Proposed CDC Section 390-19.4.G(1) requires the landscaping and buffering plan to be prepared by a registered landscaping architect demonstrating that certain standards are met.

Proposed CDC Section 390-19.4.G(2) requires the creation of a management plan for the establishment and ongoing maintenance of the buffer landscaping.

CDC Section 390-19.4.H (2)-(9) establishes the standards for landscaping screening, including evergreen trees with a minimum height of 6 feet fully branched at the time of planting, with a mature height of 30 feet and deciduous trees fully branched with a minimum caliper size of one and one-half (1-1/2) inches, and a minimum height of 8 feet at the time of planting with a minimum mature height of 30 feet, as well as requirements for other landscaping standards.

Finally, proposed CDC Section 390-19.4.K and .L provide for the maintenance and preservation of the landscaping buffer. Subsection (K) requires that every two years, the owner of the tract in which the landscaping buffer is located shall provide a monitoring and maintenance report for the buffer landscaping that is to be prepared by a certified forester or other qualified professional. Subsection (L) requires that five years after the installation of the required planting, the tract owner shall submit to Washington County Current Planning Services a document confirming that at least 75% of the new buffer plantings remain in healthy condition and, if this is not the case, must include a plan to restore the landscaping screening to meet this standard.

For all of these reasons, the Planning Commission can find that the proposed regulations ensure compatibility because they result in an intense landscaped buffer using existing and new landscaping, combined with a fence, for a consistent 50-foot width that will minimize compatibility disruption noise, view intrusion and trespass from urban to agricultural activities.

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4. Equestrian Facilities Co-Exist with Urban Uses.

The Planning Commission can find that equestrian facilities can coexist with urban uses. **Exhibit 5** is entitled "Equestrian Facilities – Residential Neighborhood Compatibility Exhibit". This exhibit shows three (3) urban equestrian facilities in the Portland metropolitan area, in addition to Abbey Creek Stables.

The Wilsonville Equestrian Center is located just north of the Wilsonville City limits and is within the UGB. The facility is adjacent to a busy road, Boeckman Road, with the nearest neighborhood approximately 556 feet away. Cindy's House of Horses is located in the Tualatin Valley adjacent to the Tualatin River and is about 150-feet away from residential uses. Finally, the Lake Oswego Hunt Club is within the City of Lake Oswego and is very close to adjacent homes. The operators of all of these equestrian facilities have said that they are able to operate both stable and equine activities in close proximity to urban uses.

These three (3) equestrian uses compare favorably with the location of Abbey Creek Stables. While the stable is located at the north end of the Abbey Creek Stables property adjacent to NW Germantown Road, some of its equestrian trails may be located close to the UGB. The 50-foot buffer, combined with the extensive requirements for retention of native vegetation and planting of new vegetation, provide an appropriate means of assuring compatibility between equine uses and urban uses.

For these reasons, the Planning Commission can find that proposed Ordinance No. 801 will implement Metro Ordinance No. 02-987A, Condition of Approval 6 to provide for compatibility.

III. Applicable Statewide Planning Goals ("Goals").

The Planning Commission can find that the applicable Goals to this proposed amendment to the Plan and the CDC are Goal 1, "Citizen Involvement"; Goal 2, "Land Use Planning"; and Goal 14, "Urbanization".

1. Goal 1, "Citizen Participation".

Goal 1 requires the County to develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process. The Planning Commission can find that Goal 1 is satisfied through the County's citizen participation program, including the review of proposed Ordinance No. 801 by Citizen Participation Organization 7 ("CPO 7").

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2. Goal 2, "Land Use Planning."

The Planning Commission can find that Goal 2 is satisfied. Goal 2 requires the County to establish a land use planning process and policy framework as a basis for all decisions and actions related to the use of land and to ensure an adequate factual base for such decisions and actions. The record before the Planning Commission demonstrates an adequate factual basis for the Planning Commission to recommend the adoption of proposed Ordinance No. 801 by the Board.

The Planning Commission can also find that the County has coordinated with affected governmental entities as that term is defined in ORS 197.015(5). Coordination requires the County to provide notice of proposed Ordinance No. 801 to Metro and the Oregon Department of Land Conservation and Development ("DLCD"). The County has provided timely notice of the proposed Ordinance to both entities and has provided them an opportunity to comment on proposed Ordinance No. 801. The Planning Commission has an obligation to consider Metro and DLCD's comments and to incorporate their comments as much as is reasonably possible into a recommendation on Ordinance No. 801.

3. Goal 14, "Urbanization".

The County can find that Goal 14 is satisfied. Goal 14 requires the County to provide for an orderly and efficient transition from urban to rural land uses. Goal 14 provides that the UGB location should be considered based on a number of factors, including compatibility of proposed urban uses with nearby agriculture and forest activities occurring on farm and forest lands outside of the UGB. In this case, for the reasons explained above, the Planning Commission can find that proposed Ordinance No. 801 will ensure that urban uses can be compatible with nearby agriculture and forest activities on Multnomah County EFU-zoned land.

For these reasons, the Planning Commission can find that the applicable Goals are satisfied.

IV. Applicable Oregon Administrative Rules.

The Planning Commission can find that no Oregon Administrative Rules are implicated by this amendment.

V. Applicable Washington County Community Plan Provisions.

A. Washington County Comprehensive Framework Plan for the Urban Area.

The Planning Commission can find that a portion of the findings and conclusions for Plan Policy 43, "Community Design for New Urban Areas", are implemented by proposed Ordinance No. 801. Policy 43, "Summary of Findings and Conclusions", includes the following:

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"[d]evelopment at the edge of the Subarea will be required to provide appropriate improvements to ensure compatibility with adjacent rural agricultural uses as specified in the Bethany Community Plan and the Community Development Code." As explained above, the Planning Commission can find that this will continue to be the case if proposed Ordinance No. 801 is adopted by the Board.

Bethany Community Plan, North Bethany Subarea, "V. North Bethany Subarea Design Elements", "A. General Design Elements", 2.A, provides:

"To provide compatibility between agricultural activities on adjacent rural land and new urban development in the North Bethany Subarea, new development shall comply with the following requirements:

a. For land in the Natural Features Buffer with Fencing on the Urban/Rural Edge Map no development is permitted, including alteration of existing vegetation, except as permitted by Community Development Code Section 390-18; and

b. The standards of CDC Section 390-19, including recording a waiver of the right to remonstrate against customarily accepted farm or forestry practices on nearby rural land."

The Planning Commission can find that General Design Element (a) is satisfied by proposed Ordinance No. 801 through its amendments to CDC Section 390-19.

VI. Conclusion.

For the reasons contained in this letter, the Planning Commission can find that proposed Ordinance No. 801 meets applicable approval standards. K & R asks that the Planning Commission recommend approval of Ordinance No. 801 to the Washington County Board of Commissioners.

Very truly yours,



Michael C. Robinson *for*

MCR:rsr
Enclosures

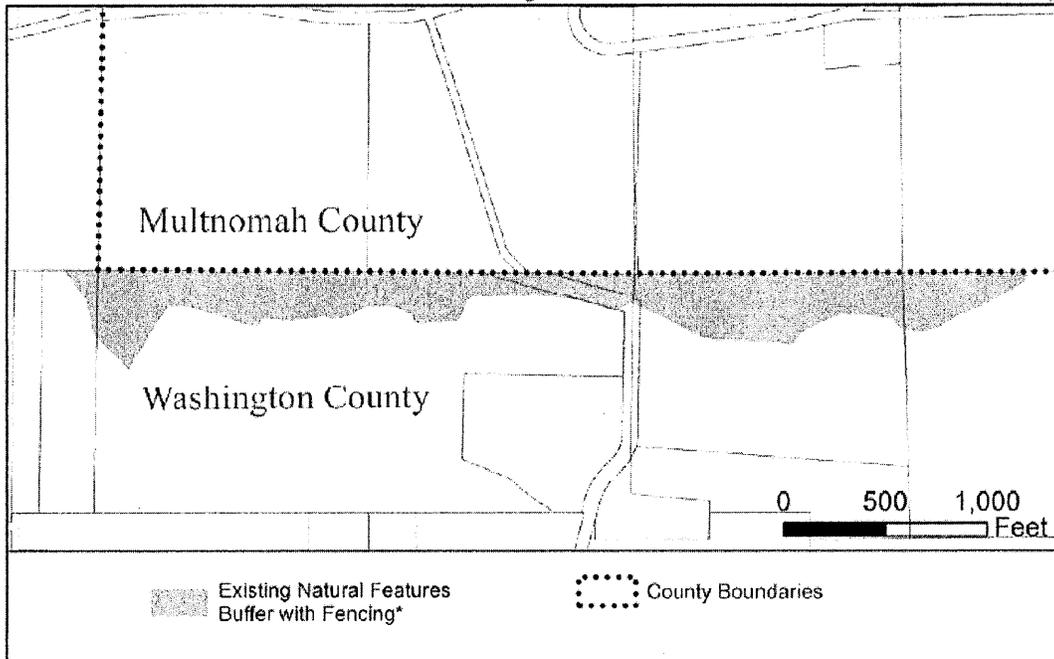
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cc: Mr. John O'Neil (via email) (w/encls.)
Mr. John Schmidt (via email) (w/encls.)
Ms. Nacia Bonilla (via email) (w/encls.)
Mr. Robert Fraley (via email) (w/encls.)
Ms. Theresa Cherniak (via email) (w/encls.)

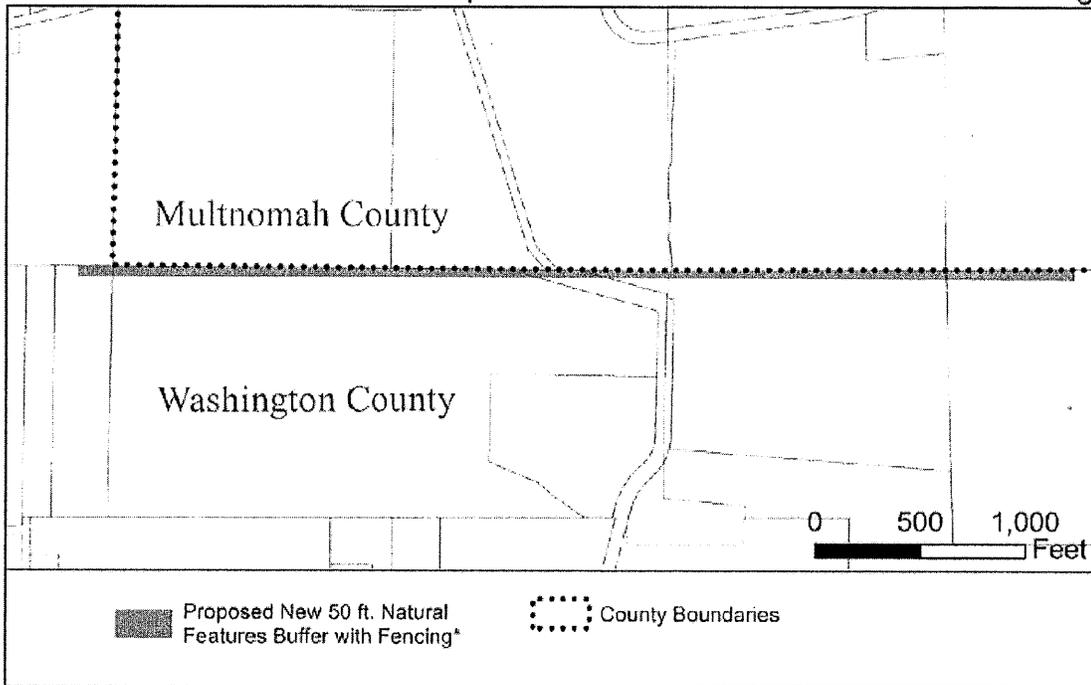
Exhibit B to Ordinance No. 02-987A
Conditions on Addition of Study Areas 84, 85, 86 and 87 (partial) to UGB

1. Washington County or, upon annexation of the area to the City of Beaverton, the city shall complete the planning required by Metro Code Title 11, Urban Growth Management Functional Plan, section 3.07.1120 ("Title 11 planning") for Study Areas 84, 85, 86 and 87 (partial) within two years following the effective date of this ordinance.
2. The city or county with land use planning responsibility for the site shall apply the 2040 Growth Concept design types shown on Attachment 1 to this ordinance to the planning required by Title 11.
3. The city or county with land use planning responsibility for a study area included in the UGB shall apply interim protection standards in Metro Code Title 11, UGMFP, section 3.07110, to the study area.
4. The city or county with land use planning responsibility for the Beaverton School District elementary school site shall adopt provisions in its comprehensive plan and zoning regulations to limit development on the school site to public school facilities and other development necessary and accessory to the public school use, and public park facilities and uses identified in the conceptual school plan required by Title 11, subsection 3.07.11201.
5. In Title 11 planning, the city or county with land use planning responsibility for Study Areas 84, 85, 86 and 87 (partial) shall recommend appropriate long-range boundaries for consideration by the Council in future expansion of the UGB or designation of urban reserves pursuant to 660 Oregon Administrative Rules Division 21.
6. In Title 11 planning, the city or county with land use planning responsibility for Study Areas 84, 85, 86 and 87 (partial) shall adopt provisions in its comprehensive plan and zoning regulations - such as setbacks, buffers and designated lanes for movement of slow-moving farm machinery - to ensure compatibility between urban uses in an included study area and agricultural practices on adjacent land outside the UGB zoned for farm or forest use.
7. The conceptual transportation plan required by Title 11, subsection 3.07.1120F for the area shall provide for bicycle and pedestrian access to and within the school site from the surrounding area designated for residential use.
8. In the application of statewide planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) to Title 11 planning, Washington County or the City of Beaverton shall comply with those provisions of Title 3 of the UGMFP acknowledged by the Land Conservation and Development Commission ("LCDC") to comply with Goal 5. If LCDC has not acknowledged those provisions of Title 3 intended to comply with Goal 5 within four years following the effective date of this ordinance Washington County or the City of Beaverton shall consider any inventory of regionally significant Goal 5 resources adopted by resolution of the Metro Council in the county's Goal 5 process.

Existing Natural Features Buffer with Fencing



Proposed Natural Features Buffer with Fencing



*For Illustrative Purposes Only.



Equestrian Facility - Residential Neighborhood Compatibility Exhibit



PROPERTY LINE
PROPOSED 50' BUFFER
SAMPLE LOT LAYOUT



ABBEY STABLES
[15248 nw germantown rd
portland, or, 97231]

The property line of the proposed North Bethany development site lies seven-hundred-and-ten [710] feet South of the main structures at Abbey Stables. An additional fifty-foot undeveloped tract of land is planned with the intent of providing a harmonious buffer along the rear-yard facing portion of the subdivision to give trail riders to the North a tranquil experience along the Urban/Rural edge.



LAKE OSWEGO HUNT CLUB
[112 NW Mountain Blvd
Lake Oswego, OR 97034]

The Lake Oswego Hunt Club lies one-hundred and twelve feet [112'] from the nearest neighbors to the West, and directly North of Iron Mountain Blvd., a busy thoroughfare in heart of the Lake Oswego. The facility focuses on a high-end equestrian experience for its members and provides opportunities for jumping, showing, and dressage.



WILSONVILLE EQUESTRIAN CENTER
[15500 SW 10th St
Wilsonville, OR 97156]

Wilsonville Equestrian Center is located just north of the Wilsonville City limits and was brought into the Urban Growth Boundary in 2002. The facility lays two-hundred and sixty feet [260'] North of Boeckman Rd with the nearest neighborhood approximately five-hundred and fifty-six feet [556'] away. The owner noted that it was good for the horses to acclimate to new noises from the surrounding area.



CINDY'S HOUSE OF HORSES
[11100 SW Hazelbrook St
Cottage Grove, OR 97111]

Cindy's House of Horses is a laid-back venue in the the Tualatin Valley adjacent to the River. The facility lies one-hundred and fifty feet [150'] away from residential density similar to that planned for the North Bethany sub-area. The owner reports support from its surrounding community in the form of a volunteer base made up of students from Hazelbrook Middle School and a boost in business from the neighboring residences.



Angela Brown

From: Robert Fraley
Sent: Friday, June 26, 2015 3:09 PM
To: Angela Brown
Subject: FW: Ordinance 801
Attachments: CCF06222015_0000.pdf; Comments on Ordinance 801.docx



Robert Fraley | Associate Planner
503-846-8817 robert_fraley@co.washington.or.us

From: Mary Manseau [<mailto:marymanseau@gmail.com>]
Sent: Friday, June 26, 2015 9:23 AM
To: Theresa Cherniak; Robert Fraley
Subject: Ordinance 801

Bob and Theresa,

Attached are my comments on Ordinance 801. Please let me know if you have any questions. My major concerns center on the dismantling of the intent of the BCP.

- Trails Along Natural Areas: Chapter 2, III D, Community Design Goal 4., Integration of park sites and trails with natural areas, where practicable. Allowing construction on steep slopes eliminates the possibility of planned trails along the "top of slope" and likely will move these trail connections to sidewalks on interior streets. Simply to say that trails will be taken care of via the statement found in Chapter 2, IV E, Parks, Trails and Pedestrian Connections Map that "*The final location and configuration of all parks and trails will be determined by THPRD...*" removes the certainty provided by the BCP to the community of that goal of integration of trails with the natural areas.
- Landslide Study Areas: These areas were originally mapped and because they overlapped the 25% slope areas they were considered to be in no-build zones. As changes have been made to the BCP, these areas have become available for homes with appropriate geotechnical engineering. However, nothing appears to be required to ensure this information will be readily available to the home buying public. Notes on the deeds need to be required as is planned in BS West.

Mary

K. Density Restricted Lands Map

The Density Restricted Lands Map identifies lands that have natural constraints in the form of wetlands, fish and wildlife habitat, estimated CWS vegetated corridors, open space, slopes greater than 25 percent, floodplains, and drainage hazard areas. These are important natural areas where development is precluded. These lands are given underlying land use designations. However, residential density was not assumed for these lands and not accounted for as buildable lands in the Title 11 concept planning process. Therefore, density transfers from density restricted lands are not allowed in North Bethany and development in density restricted lands is prohibited, except when permitted by provisions of this Community Plan and the Community Development Code (CDC). The Density Restricted Lands Map is intended to identify areas where ~~residential development and density transfers~~ are prohibited, ~~with the exception of slopes greater than 25 percent that are located outside of the Natural Features Buffer on the Urban/Rural Edge Map. Development on slopes greater than 25 percent that are located outside of the Natural Features Buffer may be permitted if all CDC requirements are met, including the requirements of CDC Section 410 (Grading and Drainage).~~ If Density Restricted Lands are built on, the maximum and minimum density of the site is computed using the net developable acreage (total parcel acreage less mapped Density Restrict Land acreage).

COMMENT/QUESTION: Won't provisions in the code allow for impacts on mapped wetlands (and as a consequence impacted on CWS vegetated corridors as well as the 25% slopes)? Or is the intent of the density restricted lands map to allow building only on the 25% slopes?

V. NORTH BETHANY SUBAREA DESIGN ELEMENTS

All new development shall be consistent with the following design elements and Area of Special Concern requirements.

A. General Design Elements

1. Floodplains, drainage hazard areas, streams and their tributaries, and riparian wooded areas, **steep slopes**, scenic features, power line easements, and rights-of-way are **preserved and protected** by being designated as a Significant Natural Resource Area and/or Density Restricted Lands.

QUESTION/COMMENT: Is this still a true statement? Should the above reference to steep slopes be removed? Although development is limited, these areas are not necessarily preserved. As I asked earlier, is the intent of the density restricted lands to allow limited development of only the 25% slopes or can any of the other density restricted lands or SNRA areas be developed?

In the design of new development, these areas shall be **interconnected** with the park and open space system and the stormwater and water quality management system consistent with the requirements and standards for CWS and THPRD.

QUESTION/COMMENT: How has the removal of the large natural features buffer impacted the planned interconnected park and open space system? How and when will the requirement for interconnectedness be addressed?

390-18.4 Permitted Development

A. Permitted uses are subject to applicable land use designation(s) and applicable regulations in the Community Plan, Community Development Code, and/or Clean Water Services "Design and Construction Standards for Sanitary Sewer and Surface Water Management" or its successor. In cases of over-lapping regulation, the most restrictive shall dictate.

B. For slopes greater than twenty-five (25) percent that are located outside of the Natural Features Buffer shown on the Urban / Rural Edge Map of the North Bethany Subarea Plan, development may be permitted if all CDC requirements are met, including the applicable requirements of CDC Section 410.

~~C. For slopes greater than twenty-five (25) percent that are located within the Natural Features Buffer shown on the Urban / Rural Edge Map of the North Bethany Subarea Plan, residential development may be permitted at the top of pre-existing slopes greater than twenty-five (25) percent slope when the following standards are met:~~

~~(1) The proposed development location does not conflict with trail locations designated by the Park, Trails and Pedestrian Connections Map of the North Bethany Subarea Plan.~~

Question/Comment: With removal of 390-18.4C(1), how will conflict between the planned trail connections at top-of-slope of the natural features buffer and development be addressed? This trail is an important design feature of the Bethany Community Plan. Provisions need to be made to address the impact at the time that the Bethany Community Plan is be altered to allow development on these steep slopes. The NE neighborhood design elements currently require a minim of three access points to the north boundary for public access and viewing. We need to evaluated whether this is adequate to ensure the vision of the plan. Can this be addressed through alterations to proposed changes to CDC 390-19.4? CDC 390-19.4. I requires 5-foot wide access tracts for maintenance every 530 feet. Shouldn't consideration be given to having these accessways serve dual purposes--maintenance and public access to views--and requiring these accessways to meet the CDC 408 required 15-feet in width?

390-18.5 Prohibited Uses

Notwithstanding Section 390-18.4, the following uses are prohibited on Density Restricted Lands:

A. Density transfers – Section 300-3.

B. Development, grading, vegetation removal or other alterations located within the Natural Features Buffer shown on the Urban / Rural Edge Map

390-19.2 General Requirements:

A. Street stubs and/or driveways are prohibited at all North Bethany boundaries that abut rural lands with Rural Reserves designations. In the circumstance where a pre-existing access easement or agreement to provide access was recorded prior to January 1, 2009, one private street stub or driveway access will be allowed.

B. The installation of fencing to discourage trespass onto rural lands by residents and pets in the urban area is required between proposed development and the North Bethany boundaries that are adjacent to rural lands. Where the required fencing is located along public use areas (such as trails), it shall be posted with signage that provides information about adjacent farm/forest uses, as approved by the Director.

C. Prior to final land use approval, the applicant/owner of any pre-existing parcel within twelve hundred (1200) feet of rural property outside the Urban Growth Boundary shall sign and record in the Deed and Mortgage Records of the county a waiver of right to remonstrate against customarily accepted farm and forest practices.

D. Installation and ongoing maintenance of required buffer elements (fencing, existing vegetation, and buffer landscaping) is the responsibility of the

development and shall comply with the standards of Sections 405-4 and 405-5 (ownership and maintenance of open space areas). For subdivisions, a Homeowner's Association (HOA) shall be required to maintain the fencing and landscaping.

Comment/Question: What if THPRD accepts the buffer?

390-19.4 Natural Features Buffer with Fencing

The following standards requirements apply to the proposed development of land identified with that includes any portion of the "Natural Features Buffer with Fencing" shown on the Urban/Rural Edge Map of the North Bethany Subarea Plan:

A. Placement of the land located within the "Natural Features Buffer with Fencing" into a minimum fifty (50) foot wide tract measured from the urban/rural edge boundary, as illustrated on the North Bethany Subarea Urban/Rural Edge Map.

No development, grading, vegetation removal, or other alteration shall be allowed within the tract, except for the removal of non-native and invasive vegetation by means of hand implements, and the planting of native trees and shrubs for habitat restoration, and to provide screening and buffering between urban and rural agricultural uses. and development of trail segments that are identified on the Parks, Trails, and Pedestrian Connections Map.

B. Installation of a minimum five (5) foot high fence (cyclone, wire mesh "no climb", or wood), located along the southern edge of the tract

What if a trail is located in this area? Or will trails be prohibited in this area?

G. Prior to preliminary approval, development applications that include any portion of the "Natural Features Buffer with Fencing" shall be required to include:

(1) An agricultural screening and buffering plan prepared by a registered landscape architect demonstrating that all requirements of this section will be met. The plan shall include the following:

(a) Plan and cross-sectional views, to scale, clearly delineating the "Natural Features Buffer with Fencing" in relation to all adjacent property line(s), streets, and features such as creeks and proposed building envelopes. The plan shall show the proposed fencing and plantings in accordance with the standards in Sections 390-19.4.B and H. If available at the time of plan submission, the plan shall also show buildings and structures, and other on-site improvements such as driveways, decks and retaining walls.

(b) Identification, location and description of existing trees six (6) inches or greater in diameter at four (4) feet above grade to be preserved or removed (including common name, species and size) and extent of existing understory vegetation to remain. In the case of existing heavily vegetated areas, current aerial and ground level photos demonstrating dense tree and understory coverage may substitute for this requirement.

Question/Comment: Removal? I thought all native vegetation within this buffer is required to be preserved, see 390-19.4A.

(h) Provisions for an assessment prepared by a certified forester or other qualified professional and submitted to Current Planning

Services five (5) years after completion of landscape screening installation documenting that at least seventy-five (75) percent of new buffer plantings remain in healthy condition.

Question/Comment: What if a development fails this assessment? Shouldn't there be identified actions, including possible penalties imposed for failure?

FROM: CH-CM Community Plan, Description of BS West Subarea Maps
Co. Landslide Inventory & Landslide Study Area Maps

The county contracted with the Oregon Department of Geology and Mineral Industries (DOGAMI) to apply new technology in the identification of potential landslide hazard areas in the vicinity of the Bonny Slope West subarea. DOGAMI determined that portions of the subarea have moderate to high susceptibility to shallow-seated and deep-seated landslides. The Landslide Study Areas Maps for Bonny Slope West, produced by DOGAMI, identify these areas.

Areas identified as having a moderate to high susceptibility to landslides within the Bonny Slope West subarea will (PLACEHOLDER FOR REQUIREMENT TO IDENTIFY MODERATE TO HIGH LANDSLIDE SUSCEPTIBILITY AREAS ON DEED RECORDS - AS CONDITION OF DEVELOPMENT? -- PER BOARD DIRECTION AT JUNE 2 WORKSESSION BRIEFING). In addition, these areas will require an engineering geology report as part of a development application. The report will need to determine if site conditions require special design or construction standards to address conditions and if an additional report is required at the building permit stage. The county will maintain map notations and a record of site-specific reports. Applicable review criteria are found under CDC Section 410 (Grading and Drainage).

DOGAMI has noted that mitigation of landslide risk for deep-seated landslide susceptibility areas involves cooperation from several entities, including the county and property owners, because the landslide susceptible areas can span entire neighborhoods. DOGAMI recommends the following risk reduction measures for mapped landslide areas:

- Minimizing irrigation on slopes;
 - Avoiding the removal of material from the base of slopes;
 - Avoiding the addition of material or excess water to the top of slopes;
 - Draining water from surfaces, downspouts, and driveways well away from slopes and into storm drains or natural drainages;
 - Consulting an expert to conduct a site-specific evaluation of considering major construction.
- DOGAMI IS CURRENTLY FINALIZING THEIR REPORT - THESE RECOMMENDATIONS MAY BE MODIFIED, AND THIS SECTION MAY NEED TO BE REVISED.

*** IV. L. Landslide Inventory and Landslide Study Area Maps.

Much of the 25% slope & the wider natural features buffer overlap with the NB Landslide Study Area.

With removal of restrictions

on development within these 25% slope areas and the narrowing of the natural features buffer

shouldn't we require additional requirements for development within these areas?

Additional requirements as planned for BS West (see above) should be required for NB to communicate to potential homebuyers the history behind the homesites located in these historic landslide areas.

abcdef Proposed additions
abedef Proposed deletions



Washington County

Citizen Participation Organization #7 (CPO 7)
 Sunset West/Rock Creek/Bethany
 Box 173, 4804 Bethany Blvd, Suite I-2
 Portland, OR 97229

June 15, 2015

Washington County Board of Commissioners, and
 Washington County Planning Commissioners
 155 N. First Avenue
 Hillsboro, OR 97124



RE: Proposed Ordinance 801 -
An Ordinance Amending the North Bethany Subarea Plan of the Bethany Community Plan & the
Community Development Code Relating to Density Restricted Lands & the Natural Features Buffer

Dear Commissioners,

At a regularly-scheduled meeting of CPO-7, held on May 28, 2015, County Planning Staff made a presentation to our members explaining the history and issues relating to Proposed Ordinance 801. Following their presentation and a question-and-answer period, the CPO members present at the meeting voted unanimously (5-0) to oppose Ordinance 801—which proposes to reduce the Natural Features Buffer within the North Bethany Subarea Plan to a uniform 50 (fifty) feet buffer and remove the prohibition of development on steep slopes within the Natural Features Buffer.

The CPO's reasons for opposing proposed Ordinance 801 include the following:

- The current urban/rural buffer was the result of a compromise during the North Bethany planning process. Allowing changes to the urban/rural buffer undermines that compromise, as well as the public process by which that compromise was reached.
- When North Bethany was brought inside the UGB in 2002, the steep banks of Abbey Creek were identified as a natural boundary between urban development to south and rural land uses to the north. Urban encroachment into the Abbey Creek corridor compromises the ability of this corridor to function as envisioned in the 2002 plan.
- The establishment of the North Bethany natural features buffer was one of Metro's conditions for approving the UGB expansion in this area. It is our opinion that the proposed buffer reduction to 50 feet would be in conflict with Metro's original UGB approval and create potential legal challenges and expense for the County and its taxpayers.
- The farmers and rural residents who border the northern boundary of the North Bethany Subarea have consistently expressed their concern and opposition to disturbing the original Natural Features Buffer. These residents believe that a reduction of the current buffer to 50 feet will have a negative impact on their properties and undermine the original intent of providing a UGB buffer large enough to maintain urban/rural compatibility (This is also a state planning requisite).
- The adoption of Ordinance 801 will increase the total number of new homes in North Bethany. Public schools in the area are already at- or over-capacity and increasing the number of homes will only exacerbate this problem.



Washington County

Citizen Participation Organization #7 (CPO 7)

Sunset West/Rock Creek/Bethany
Box 173, 4804 Bethany Blvd, Suite I-2
Portland, OR 97229

- According to Clean Water Services (CWS), providing sewer and stormwater services to the North Bethany natural features area poses significant technical and engineering challenges (CWS's concerns are identified in the County Staff's Issue Paper #2015-3, dated May 1, 2015). We are very concerned that attempting to connect sewer and stormwater to homes built on the downside of steep slopes will result in significant cost and liability being borne by the County and CWS ratepayers.
- The proposed changes would affect THPRD trail alignments resulting in increased costs and reduced public access. This is because the original trail alignments would need to be re-located onto steeper slopes and/or re-routed on internal residential streets.
- Considering the litany of issues and problems that would result from this proposed change, CPO-7 has concluded that Ordinance 801 is **not** in the interest of either the public or the County—particularly when one considers that these changes benefit a single owner/developer and the burdens and risks of such a change (both financial and legal) will be disproportionately borne by the County and its taxpayers.

We, therefore, strongly urge the Board of County Commissioners and the Planning Commissioners of Washington County to vote against the adoption of proposed Ordinance 801, and we respectfully request that these comments be entered into the public record on this matter.

Sincerely,

Kevin O'Donnell for CPO 7,
On Behalf of the CPO-7 Steering Committee

Cc: Andrew Singelakis, Director, Washington County DLUT
Andy Back, Planning & Development Services Manager, Washington County DLUT
Theresa Cherniak, Principal Planner, Washington County DLUT
Robert Fraley, Associate Planner, Washington County DLUT
Jacquilyn Saito-Moore, Assistant County Counsel, Washington County
Carrie Pak, Clean Water Services
Katherine Harrington, Metro Councilor
Tim O'Brien, Metro Planner



Washington County Planning Commission
 Hearing Sign - In Sheet
 May 6, 2015

For Items **NOT** Listed on Today's Agenda

PLEASE PRINT CLEARLY

Name	Address	City	State	Zip
1. JOE RAYHAWK	15248 NW GERMAN TOWN	PONTIAC	OR	97231
2. John Schmidt	2375 SW Beechwood Ave	Beaverton	OR	97005
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INDIVIDUAL COMMENT SIGN-IN FORM

IF YOU WISH TO ADDRESS THE PLANNING COMMISSION AND WERE UNABLE TO SIGN IN BEFORE THE MEETING STARTED, PLEASE CLEARLY PRINT YOUR NAME, ADDRESS AND THE TOPIC YOU WISH TO DISCUSS ON THIS FORM.

WHEN COMPLETED, PLEASE GIVE THIS FORM TO THE CLERK SEATED AT THE DESK TO THE LEFT OF THE PODIUM.

THANK YOU.

PLEASE PRINT CLEARLY.

DATE: May 6

FIRST NAME <i>Tom</i>	LAST NAME <i>Crothers</i>
---------------------------------	-------------------------------------

ADDRESS: **HOME** OR **BUSINESS** **(Please check one.)**

STREET	CITY	ZIP
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BRIEFLY STATE YOUR TOPIC:

<i>Bonny Slope West, Finance Plan</i>
<i>Equitable burden for Parks and Roads</i>

Title: Input for Washington County Planning Commission

Author: Joseph Rayhawk

Date: May 6, 2015

file: 2015\PC_Public Comments20150506.rtf

PUBLIC COMMENT
Attachment C

PC mtg
Hand out
5/6/15

North Bethany Natural Features Buffer

It is neither reasonable nor prudent to vote to allow construction in an area that a state agency, DOGAMI, has identified as landslide prone. This tells each of you that it would be irresponsible to allow construction there.

It is worth noting that members of the Board have stated in the past that they rely on the wisdom of the Planning Commission about land use issues.

Short and Long Term Views on the Economics of the County

I realized that I had not shared with the Planning Commission some important input I have given to the Board. I apologize. I will correct that now.

I am attaching 3 sets of input previously given to the Board.

SIP Hearing 8/26/2014

This includes these key points

- 1) Current Road and School Deficits are \$3 Billion
- 2) With current construction plans and the new water pipeline, total deficits will go to \$5 Billion
- 3) Intel cannot leave. (updated in third set) So, we do not need to do the SIP.
- 4) Neither Intel nor Nike can be taxed by the state to address the \$5 Billion because of 30-year contracts.
- 5) We need \$60 Million that Intel is going to avoid as well as 100% of TDT and school costs from new development.
- 6) It is highly unlikely that any well-run company, especially manufacturing, is going to come to this county due to the needed \$5 Billion,

April 28, 2015 - Public Comments to the Board

Horrible Impact of North Bethany on the four best schools in the Beaverton School District and

A way to calculate the increase wait time on the Sunset on-ramps due to the traffic from North Bethany and the much much worse impact from South Hillsboro.

May 5, 2015 - Public Comments to the Board

I updated my statement about Intel from the SIP Hearing. The update is that Intel can and will leave in the 5-8 year timeframe.

I explained the impact of destruction of the quality of education for the 4 best schools in BSD. The important one here is that even Intel will not be able to recruit new engineers.

Intel signed an agreement with Israel a few weeks after the SIP hearing that includes Israel contributing \$300 Million towards building the next generation fab.

Israel has water, great kindergarden through graduate schools and well-educated citizens. Washington County does not.

Reminder: Bad schools and bad roads are a major detriment to getting companies to move to a community.

Reminder: Per Oregonian Silicon Forest columns: High-tech employment in the county remains at pre-2000 levels.

Yes, not a single net new job for more than 15 years.

Washington County is not a High-tech Growth Engine. It is a bedroom community of Portland.

Summary

We have been underinvesting in roads and schools for more than 30 years.

Sooner or later, this is going to run into a wall. Will it take 50 years? 100?

I submit we are hitting the wall now.

Beaverton has said they cannot figure out how to pay for the new roads for South Cooper Mountain.

Hillsboro cannot figure out how to pay roads for South Hillsboro.

BSD has no credible plan to handle growth in North Bethany. It has no credible plan to handle elementary and middle school students from South Cooper Mountain.

For those of you who serve in the public interest, I suggest it is time to get angry.

For those of you who depend on the home construction business which is ultimately tied to jobs, it is time to get frightened.

Title: Input for Washington County BCC / Hillsboro City Council About Intel SIP Agreement

Author: Joseph Rayhawk

Date: August 26, 2014

file: 2014\WaCo_BCC_20140826_SIP.rtf

We have bad roads and schools.

They are major impediments to recruiting new employers to come to Washington County.

They are major reasons why there has not been a single NET new high-tech job in the county in 17 years.

Intel, and Nike, are not the principal cause of these two very bad things.

These can be traced to undercharging new home development by over \$20,000 on the TDT and undercharging over \$20,000 for needed new school capacity.

We are about to run out of water in the county. Local governments, including Hillsboro, are considering building a 26 mile pipeline to bring water from the Willamette. We also are hoping to raise Scoggins Dam by 12 feet.

Together these will cost about \$1 Billion.

Intel's D1X Fab will use the equivalent of 50,000 homes of water.

It will bring the time when we need more water in by over 10 years.

We have historically averaged 4,000 new homes per year. This projects to 40,000 homes in ten years.
40,000 homes times \$20,000/home = \$800 Million

Let's look at current needs and do some projections.

Issue	Current Need	40,000 Homes
Road	\$2.4 Billion	\$800 Million
Total		\$3.2 Billion
Schools	\$420 Million	\$800 Million
Total		\$1.22 Billion
Water Supply		
Pipeline	\$870 Million	
Raise Dam	\$130 Million	\$1 Billion
Totals	\$3.82 Billion	\$5.42 Billion

Important: Not doing the SIP cannot fix these by itself. Assume 4000 new homes per year.

Then increased needs will be $4000 * (\$20K \text{ for roads plus } \$20K \text{ for schools}) = \160 Million.

So, if we get \$66 Million a year more from Intel, we will be $160 - 66 = \$96 \text{ Million worse each year.}$

If we do not start charging homes what they cost the county, **roads and schools will get worse.**

Intel Cannot Afford To Leave

Intel's main competitive advantage is that they have a one- or two-year lead in chip process technology.

This is the source of their profits which were \$10 Billion last year.

The lead is tied ultimately to the team that they have built here.

The team cannot be moved and cannot be replicated without significant risk of losing the lead.

Intel Profit/Year	SIP Cost Per Year	Profit if lead lost	Taxes Saved by Income Tax Deal (9%)
\$10 Billion	\$66 Million	\$5 Billion or less	\$900 Million

Note: SIP cost is less than 1% of current profits. Single year's drop in Profit could exceed 30 years of SIP

If moving team from county presents more than 1% chance of losing lead, it is a stupid bet
Intel does not make a lot of stupid bets.

Aside: Why is Intel putting bringing up the 2nd half of D1X here? It is putting all of its eggs in one basket.

Two Possible Answers:

- 1) They have discovered that having the fab in different states causes inefficiencies.
- 2) They cannot put another large fab in states where their other fabs are.
In particular, all of those states have water shortages.

Can We Work Our Way Out of This?

Let's assume we actually charge new homes the rational amount: Then the needs stop growing at \$3.82 Billion.

The Thirty year Intel SIP savings are estimated at \$2 Billion.

We also have MSTIP funding at \$32 Million a year. Over thirty years, that adds up to \$960 Million.

These two together would knock about \$3 Billion off of that \$3.82 Billion. This would substantially reduce our problem.

If we do not do both, the county will just continue to get less and less competitive.

Potentially, the schools will become so bad that even Intel will not be able to recruit new engineers and scientists who understand that bad schools end up crippling children for life.

If we do the SIP and do not start charging homes, the numbers get worse as shown column 2 above.

If we want to fix the problems, new revenues will have to be gotten from someone.

Because of the income tax deals, that money will not be coming from Intel or Nike for 30 years.

Any well-run company is going to understand this and WILL not move here.

This is a huge disincentive on top of the bad roads and schools.

Summary

Washington County cannot afford to give away the SIP money.

The SIP deal is not needed because Intel will not leave over an issue involving less than 1% of their profit.

We in the West are familiar with boom towns and ghost towns tied to gold and silver mining.

The lumber industry boom in Oregon ended in 1982. Now we have ghost counties all over the state.

The auto and other manufacturing industries had a 100 year run. There are ghost states and even ghost regions.

There are many signs that high-tech as an employment boom in the USA has run its course.

We want the SIP to fund really good schools in Hillsboro so that they are the best in the state because we want Intel engineers and fab workers and secretaries, etc to move to or to live in Hillsboro.

That way they can commute to work without using the Sunset Highway, TV Highway, etc.

The same goes for the employees of any new high-tech employers that move to Hillsboro.

Title: Input for Washington County BCC -
 Author: Joseph Rayhawk, 15248 NW Germantown Road, Portland, OR 97231
 Date: April 28, 2015 file: 2014\WaCo_BCC_201504028.rtf

Attended Beaverton Scholl District Business Last Night.
 I was there to share some of the number I will share tonight.
 Many others were there because BSD will be reducing school bus service due to budget constraints.
 This is going to make traffic worse and put more students at risk.

I talked there about the impacts ofg North Bethany on the studnet in and around North Bethany.
 I will do that and share some numbers abouty the impacts on the commutes.

Development project are in process that will add 2250 housing units to North Bethany.
 I have attached a sheet from PSU that shows the number of students for Springville
 K-8 and Jacob Wismer are at 0.6 and 0.77 per housing unit

I show you some projections for the 2250 housing units.

	Springville K-8 0.6	Jacob Wismer 0.77
2250	1350	1732
Existing students:	4000	
Percent increase	33%	43%

North Bethany Final Builldout:

4200	2520	3234
% Increase	63%	81%

We can expect most of the 2250 online by Fall, 2016

I supplied you a map showing Road A and the location of the school sites.

BSD has land for two elementary schools in North Bethany and funding to build one of them.
 Both sites are North of Road A.
 It is doubtful the Northern site can be developed unless the sewer comes in from the west.
 This will not happen until the properties to the west are developed.
 It is doubtful they can be developed until Road A is built.

It is doubtful that the Eastern Site can be developed until infrastructure is built out for
 Projects between it and Road A. Again, those projects are doubtful until Road A is built.

Of course, the NB Road Funding plan has no identified source of funds to build it.

It is very doubtful that BSD can build either schools before Fall 2016.
 So, the four apparently best schools in BSD: Westview, Stoller, Springville K-8 and Jacob Wismer
 are going to be swamped.

Adding the increase to the 4000 students already there, and somewhere between
 5300 and 5700 students are going to be damaged academically for the rest of their lives.

 The Road engineering studies for the NB project assume that there will be 96 rush hour commuters for each 100 homes.
 48 going west and 48 going south.
 West: $2250 / 100 * 48 = 1080$
 South/East: ... 1080

Those going west will have to pass through the Springville-Joss Avenue Intersection.
 The majority will use Joss Avenue. This will double or triple the traffic going past the school.

So, even though BSD is cutting school bus service making many places in the district more dangerous,
 the danger at Springville K-8 will get much worse much faster.

Most of the 1080 going south will be using Bethany Boulevard to get to the Sunset and into Portland.
 At full rush hour, the on-ramp from Cornell only allows one car every 7.5 seconds.
 If all 1080 cars were to use that on-ramp, that would increase the time to handle the traffic by 1080×7.5 or 8100 seconds or 135 minutes.

Again, the number of lanes is irrelevant. It is 1 car every 7.5 seconds per ramp.

So, the traffic will distribute itself to the Murray, Cedar Hills and Barnes/217 on-ramps.
 If done perfectly, then the 135 minutes will be divided by 4 and the average wait
 Per on-ramp will increase by only 34 minutes.

Again, if all the traffic came back in the Evening on Bethany, it would put the
 Intersection at Bethany and West Union very close to Service Level F.

But, it will be distributed on the various alternatives: Saltzman, 143rd-Kaiser, the
 Trick way up Cedar Hills and around onto Laidlaw just inside Multnomah County.
 And even 185th. Each stop sign and stop light North of where the \$50 Million in
 MSTIP Funds was spent between 2009 and 2013 will go to Service Level F.

And, that is based on just these first 2250 housing units.

If we look out to 4200 housing units, we get to 2106 cars going west
 And 2016 cars going south. The latter gets us to 15120 seconds
 Or 63 minutes of added wait at all 4 on-ramps.

These numbers are daunting.
 I had previously testified about the increase in the commute of everyone getting
 On the Sunset At 185th or west. It was on the order of 500 hours a year

I had not given you an estimate for the impact for the folks needing to use the on-ramps
 east of 185th. I had suggested that the \$50 Million in MSTIP funds was not going
 to buy them much. For the morning commute alone, the increase waste will be $\frac{1}{2}$ hour a day by Fall 2016
 and 1 hour a day with full build-out. So, 120 to 240 hours a year just to get onto the freeway.

Hillsboro is discussing at 8000 homes in South Hillsboro. Currently, 85% of their workers go to jobs outside the city.
 If those from South Hillsboro come up Cornelius Pass Road to get on the Sunset, this will be $8000 \times 85\% = 6800$
 commuters.

$6800 \times 7.5 = 51,000$ seconds or 850 minutes or 14 hours.
 I do not see anyway to distribute that traffic onto enough on-ramps to avoid DISASTER.

If half go to Brookwood, we get down to 7 hours on each on-ramp.
 If any significant number go to 185th or east, we compound the disaster from North Bethany
 I should mention that the new lane on Cornelius Pass Road will not be long enough for the cars inline.

I am skipping analysis of the 600 homes for Area 93. It is left as an exercise for the reader.

Some final numbers
 Capital Cost to add capacity for 1 student per the BSD Bond measure is \$50,000.
 At 0.6 to 0.7 students per housing unit, this add \$30,000 to \$35,000 to the capital needs.
 So, the 4200 homes of NB will add: \$126 Million to \$147 Million in needed classrooms.
 The TDT shortfall is only a little more than \$20,000. So only \$84 Million.
 Using the same factors for the 600 homes of Area 93, we get maximum
 added burden for the citizens in tge BSD of $600 \times .77 \times 50,000 = \23.1 Million
 and TDT burden of $600 \times \$20,000 = \12 Million.

from PSU 2012 population study:

Table A1
Beaverton School District
Population and Households by Elementary Area, 2010 Census

Elementary Area	Population			Households				
	Total	Age 5-17	< Age 5	Total Households	With Children < Age 18	Share of HHs with persons < Age 18	Population in Households	Persons per Household
Aloha Huber K-8	8,742	1,715	783	3,061	1,286	42%	8,512	2.78
Barnes	11,009	1,795	888	4,432	1,389	31%	10,888	2.46
Beaver Acres	9,181	1,662	848	3,282	1,326	40%	9,136	2.78
Bethany	6,471	1,343	535	2,221	1,035	47%	6,458	2.91
Bonny Slope	6,263	1,405	448	2,272	976	43%	6,257	2.75
Cedar Mill	4,641	716	323	1,940	604	31%	4,614	2.38
Chehalem	8,897	1,353	593	3,789	1,049	28%	8,768	2.31
Cooper Mountain	7,091	1,556	476	2,316	1,112	48%	7,036	3.04
Elmonica	9,692	1,572	726	3,825	1,308	34%	9,631	2.52
Errol Hassell	6,630	1,283	498	2,288	945	41%	6,585	2.88
Findley	5,526	1,568	544	1,614	1,151	71%	5,526	3.42
Fir Grove	6,833	1,193	474	2,648	891	34%	6,806	2.57
Greenway	6,980	1,140	469	3,051	914	30%	6,980	2.29
Hazeldale	6,561	1,326	485	2,291	954	42%	6,546	2.86
Hiteon	9,769	1,651	518	4,109	1,255	31%	9,727	2.37
Jacob Wismer	6,238	1,620	513	2,113	1,164	55%	6,234	2.95
Kinnaman	9,003	1,759	751	3,167	1,305	41%	8,964	2.83
McKay	6,916	1,003	439	2,909	825	28%	6,890	2.30
McKinley	13,193	1,605	949	6,019	1,544	26%	13,007	2.16
Montclair	6,415	782	390	2,917	714	24%	6,301	2.16
Nancy Ryles	9,838	1,527	542	4,416	1,256	28%	9,831	2.23
Oak Hills	7,696	1,457	548	3,032	1,110	37%	7,682	2.53
Raleigh Hills	8,728	1,241	479	4,064	967	24%	8,693	2.12
Raleigh Park	7,359	1,158	454	3,155	919	29%	7,317	2.32
Ridgewood	6,420	983	346	2,787	740	27%	6,384	2.29
Rock Creek	5,263	1,017	384	2,078	761	37%	5,263	2.53
Scholls Heights	6,669	1,734	471	2,220	1,174	53%	6,669	3.00
Sexton Mountain	7,822	1,561	489	2,946	1,131	38%	7,805	2.65
Springville K-8	6,958	1,552	576	2,570	1,161	45%	6,958	2.71
Terra Linda	4,941	938	294	1,959	666	34%	4,926	2.51
Vose	9,029	1,411	819	3,494	1,156	33%	8,931	2.56
West Tuafatin View	8,455	985	363	4,025	806	20%	8,334	2.07
Wm. Walker	7,969	1,299	675	3,128	1,077	34%	7,963	2.55
BSD Total	253,198	44,910	18,090	100,138	34,671	35%	251,362	2.51

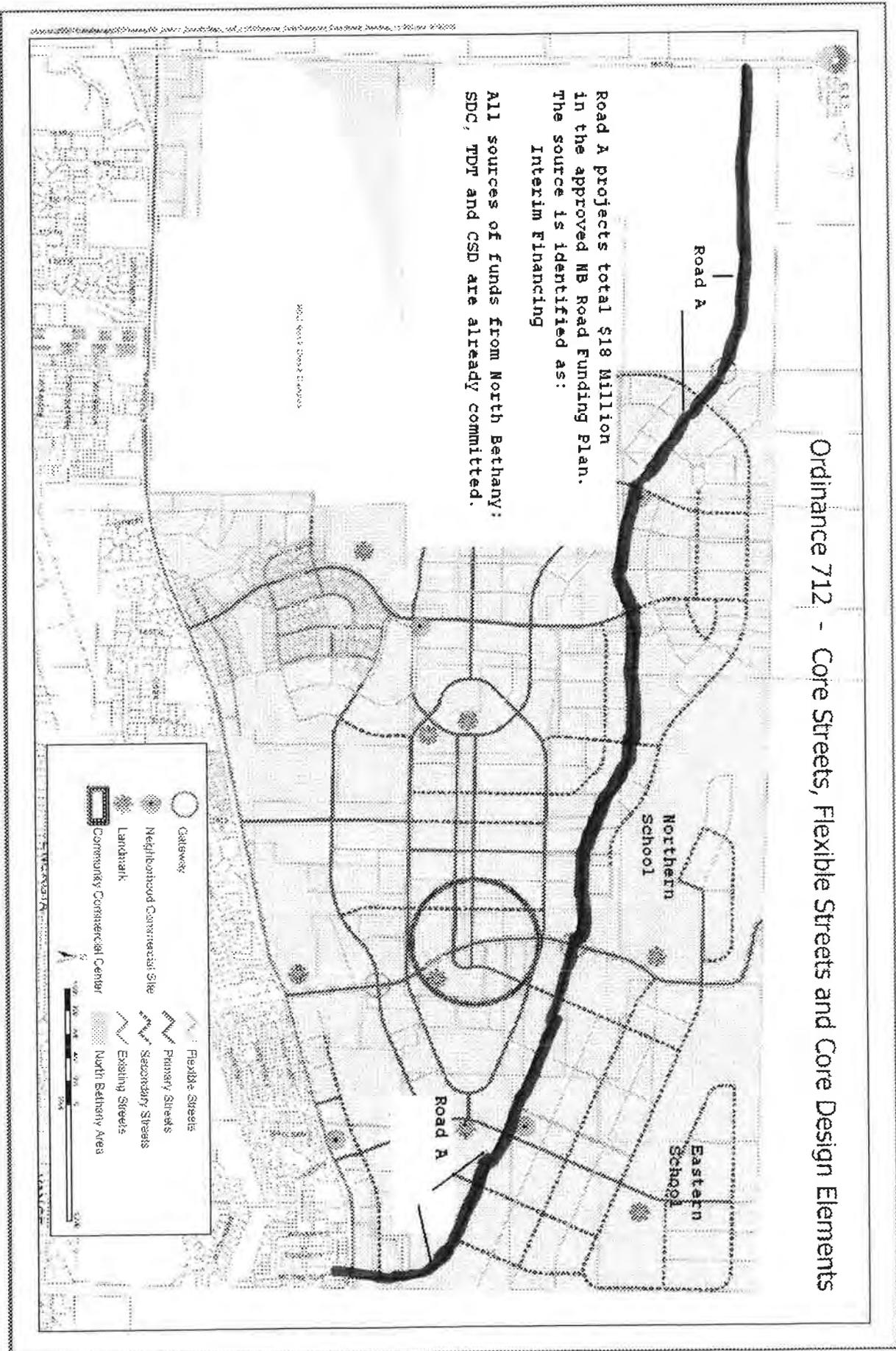
Children 5-17
Total # of HH

56
41
31
60
62
37
36
67
41
56
97
45
37
58
40
77
56
44
26
26
35
46
31
37
35
49
78
33
60
48
40
24
42
45

1680 = 2766
2113

1552 = 609
2570

Source: 2010 Census, Summary File 1, census block data aggregated to approximate BSD attendance areas by PSU, Population Research Center.



Title: Input for Washington County Board of County Commissioners

Author: Joseph Rayhawk

Date: May 5, 2015

file: 2015\BCC_1stInput_20150505.rtf

North Bethany Natural Features Buffer

It is neither reasonable nor prudent to vote to allow construction in this area that a state agency, DOGAMI, has identified as landslide prone. This identification is that it would be irresponsible to allow construction there. You reviewed a position paper about the North Bethany Natural Features Buffer in your worksession. That paper listed new reasons, not previously in the record, why construction should not be allowed.

When will Intel leave?

At the SIP Hearing, I testified that Intel could not leave. My statement was true but incomplete: Intel cannot leave in the short-term. Intel can and will leave in the 5-8 year timeframe if we do not change current practices.

A few weeks after the SIP hearing, Intel and Israel announced that Israel would provide up to \$300 Million to help build the next generation fab. Israel has some of the best desalination plants in the world. They also have an education system that makes the ones in the 50th worst state in a country that is about 25th in the world for K-12 education look essentially worthless. Their universities are outstanding especially compared to the underfunded and collapsing Oregon public institutions. So, Israel has water, great K through graduate schools and well-trained citizens.

At your last board meeting, I shared some information about school overcrowding in BSD and in the Northern Sections. I have provided an extra copy of my last testimony for Mr Rogers.

Basically, the huge increase in student population in the North is destroy the quality of education for the four schools closest to North Bethany. Note: these are apparently the best K-12 set in the state.

Because of that, many, if not most, new Intel engineers have moved to Bethany because of these schools.

First, as their destruction becomes evident, those Intel engineers are going to very, very, angry.

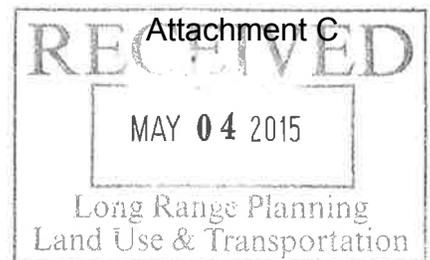
Second, even Intel will not be able to recruit new engineers because Engineers know the value of education for their children. The lifetime expected earnings increase from graduating from a top school is $N * \$100,000$ where N is lot larger than 1.

BTW: The degradation is underway: 150 kids at Westview signed up for Computer Science next year. Only 40 will be allowed in the single class they can offer next year. (Think about the number 40). It appears that getting into the class will be by lottery. This means that over 2/3 of the best potential engineers will not get into the class. This will have a significant impact on their getting into the best engineering schools.

BTW: BSD is not planning on opening the school in NB until 2018.
So, at least 3 years of disaster for the 5000 students that will be in these schools.
BTW: BSD has just cut bus service for a 1000 students due to budget problems.
BTW: The PERS decision last rejecting the unconstitutional legislature action means that BSD (and large number of public institutions) budget will be blown to smithereens

Cornelius Pass Road Widening

In today's Consent Agenda, you will fund the widening of Cornelius Pass Road. This is discussed in terms of Intel. Most Intel traffic is outside of rush hour or is in the opposite direction of the main commute. These improvements will actually be of far more benefit to South Hillboro. It is part of the \$100 Million in road improvements to Cornelius Pass Road and Brookwood. As I pointed out in my testimony last week, the traffic from South Hillsboro is going overwhelm these improvements.



From: Sara Bruemmer [mailto:bruemmer4865@comcast.net]
Sent: Monday, May 04, 2015 2:00 PM
To: Robert Fraley
Subject: issue paper 2015-03

I gave much time in the planning process for Bethany. My concern is the closeness of residential and agriculture and compatibility of same.

I do not think reducing the buffer will be beneficial to the farmers. And will buyers want a beautiful home that sits next to a pig farm without some additional space?

Sara Bruemmer
503-645-1480
17240 NW Germantown Road
Portland, OR 97231

PC mtg
5/14/15
Handout

RECEIVED
MAR 25 2015
Long Range Planning
Land Use & Transportation

Please Direct The Two Pages that follow to

Theresa Cherniak (Principal Planner)
or
Robert Fraley, Planner

for Inclusion in the Research Material for the Issue Paper on:

Task 1.1.1 a of the 2015 Work Program

FAX: 503-846-4412

Title: Input to Washington County Staff Considering Rule Changes for the North Bethany Natural Features Buffer
 Author: Joe Rayhawk
 Abbey Creek Stables
 15248 NW Gemantown Road
 Portland, OR 97231
 Date: March 25, 2015
 file: ../2015/NB_NaturalFeaturesBufferFollowup_Rayhawk.rtf

This a followup to staff's recent visit to our farm to see our land near the Natural Features Buffer (NFB) and downhill from it.

Thank you for the visit.

I provided staff with reference materials to my earlier testimony as well as updates.
 Please consider that material and this followup for the 2015 Work Program.
 The apparent work item is Task 1.1.1. a.

Let me list the two most important points first.

1) It is apparently under consideration to reduce the size of the buffer to 30 feet along the common board.

My conclusions are

- 1) This will eliminate our use of the wooded section in the eastern part as riding trails.
 This is a significant loss to us and to our boarders and will include loss of use of the ford across the creek.
- 2) It will eliminate the use of the apple orchard area in the western part as grazing and shade for the horses.
 This is a significant loss for making the south pasture good for the horses and as picnic area for boarders.
- 3) It will eliminate use of some or all of what we refer to as our summer pasture.
 As I discussed with staff, we have 3 grazing areas that we rotate use of during the Spring through Fall.
 The horses graze on each area and when each is grazed down, we close it off and move the horses to the next area. The summer pasture is the third pasture we use this way. While the horses are on the summer pasture, the other two pastures are recovering. Late in the Summer and on into Fall, we close the summer pasture and resume use of the other two pastures.
 If we lose the use of the summer pasture, we will have to reduce the number of horses we stable in order to avoid over-grazing and damage to the other two pastures.
 We believe such a reduction will lead to loss of economies of scale and will put us out of business.

Allowing development within 30 feet of the boundary is not consistent with requirements of the Metro Ordinance.

- 2) Much of the Natural Features Buffer on both sides of Kaiser Road has greater than 25% slope and is documented in the record as known landslide zone. From the record, it is clear that Metro commissioned DOGAMI to identify landslide zones because it is simply not safe to build in them.
Again, it is neither reasonable nor prudent of staff, individual members of the Planning Commission nor individual County Commissioners to vote to allow construction here.

Now some detail notes.

- 1) My wife and I and staff crossed the ford on Abbey Creek and proceeded up the east side of the property. Staff should have observed that it is a steep and continuous hill. As we traversed the main riding path and began to reach the Eastern Tributary, we came down a steep hill to get to the tributary. I have mentioned in past testimony that the entire woods section is a continuous hill down to Abbey Creek on the north and to the Eastern Tributary of Abbey Creek on the west. The entire woods is a riparian bank of Abbey Creek.
- 2) I provided input to the staff, using a picture, that they could see at least part of where landslides had occurred in the past. As we worked westward from the woods to the Apple orchard, I pointed out that the 'flat' area just south of the boundary was typical of slides where the liquefied material flows away from the slide for some distance. I did not point out that the Apple Orchard was the last part of the runoff. It is a little flat in a few areas but then is steep where the landslide flow stopped.
 I pointed out on the maps where the Robinsons (owner of the land to the south of us) had built a dam of the Abbey Creek Tributary located about halfway between the woods and the Orchard in the mid 1980s. Before that, the tributary had flowed westward of its current path. The land on our side, where the tributary flowed for many years, is washed away and close to the level of the main pasture. I conclude that the land under the orchard has the potential to be washed away by increased flows if development above it is allowed. It is stabilized by the orchard trees for now, but they in fact could be killed by chemical runoffs from backyards or even just increased runoff as has happened in nearby developments.

- 3) The current code for the NFB says that no trees could be removed. This apparently only applies if and when development occurs. Many trees have already been removed and not replanted both east and west of Kaiser Road and east and west of the Eastern Tributary to Abbey Creek.
- 4) The current code for the NFB says that native plants will be planted. No where does it specify that such plants must include trees planted in sufficient density and of types that grow high enough to provide visual screening of the area. If such trees were planted, it would prevent houses lower down the hills, near the 30 foot line from having views to the north. As such, it is not in the developers interest to plant such trees since such planting will cost money and houses with a view have higher sale prices.
- 5) 30 feet will do little to isolate visually or sonically these horse areas from the numerous potential sources of things that could frighten the horses into panic/flight reactions. As I documented in my 2014 Input, such behavior could lead to injury to horses and to riders, including maiming and death. My 2014 analysis presumed the behavior and dealt with the physics of what would happen. The behavior is well-known to people that handle horses. I view it as common-sense or horse-sense. The behavior is described and documented in a letter given to staff during the visit from Doctor Jacqueline C Neilson. Doctor Neilson is a Veterinary Behavior Specialist. In addition to degrees from outstanding schools, she teaches behavioral classes at the OSU College of Veterinary Medicine which is the best such institution in the state.
- 6) As I have testified before, CWS, the responsible agency for the county, states in the NB Drainage Master Plan that it is not practical build legally required storm water retention and treatment facilities on steep slopes.

It has been brought to my attention that CWS will require individual retention and treatment facilities on the downhill part of any lots built on slopes for which they cannot build regional facilities. Several things to note. First, these facilities are effectively dry during the summer time. This means people can walk on them. Second, in order to work, the downhill side must be built up with something like a concrete wall such that the top of the wall is level with ground well up the hill. For example, if the facility needs to be 16 feet wide, then the wall will have to be 4 feet high (assuming 25% slope). I mention in passing that such a wall may not be stable on landslide-prone ground especially during the expected large earthquake.

The head of a person standing on ground next to the wall would then be approximately 9 feet above the ground at the base of the wall. The current code for the NFB says that a five-foot fence is required at the southern edge of the NFB. Clearly, the person standing at the wall will be able to look over the required fence.

It is worth noting that horses have special fear of 80 to 200 pound animals above eye level since various animals, such as cougars, have attacked them from trees for centuries. So, a child or teenager popping up over the fence even just to say hi could easily startle a horse.

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MAY 06 2015

Long Range Planning
Land Use & Transportation

May 6, 2015

Washington County Planning Commission
Attn: Chair Vial
155 N First Avenue, Suite 350
Hillsboro, OR 97124**Re: 2015 Long Range Planning Work Program - North Bethany Natural Features Buffer**

Chair Vial and Commissioners,

As you are aware, a revision of the "natural features" buffer has been a topic of discussion in Washington County for several years now. The buffer originally came to be as a result of a Metro requirement to ensure compatibility between urban and rural land uses. In some cases a fence line or hedge row was deemed adequate, but in the case some of K&R Holdings LLC's properties, the buffer was set at several hundred feet. This resulted from an attempt to make the urban/rural compatibility buffer overlap with various existing resource buffers. The result was a buffer that had an egregiously detrimental impact on the development potential of K&R Holdings' properties, and grossly overshot the goals that Metro had set out for ensuring urban/rural compatibility.

In the attached letter from June 6, 2014 we laid out our key arguments and asked for a reduction of the buffer to 30'. The May 1, 2015 Long Range Planning Issue Paper, which will be presented to you at today's work session, lists as one of three options the possibility of reducing the buffer to a uniform width. At yesterday's Board of Commissioners work session, the conclusion was reached for planning staff to draft an ordinance that would replace the existing buffer with a 50' buffer. We feel that this is a far better solution than the other main alternative laid out in the issue paper, which would involve applying urban/rural compatibility compliance standards at the time of future land use applications. Delaying the decision in this manner would create continued uncertainty for CWS, THPRD, ourselves, and others that need to be able to plan around specific parameters when contemplating future facilities and improvements. We support the Board's suggestion that this matter be addressed through a reduction of the buffer to 50', and would greatly appreciate your support as well.

Best regards,



John O'Neil
K&R Holdings, LLC
An affiliate of MLG

cc: Theresa Cherniak, Long Range Planning
Andrew Singelakis, Director DLUT

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METROPOLITAN
LAND GROUP **MLG**

June 6, 2014

Washington County Board of Commissioners
 Attn: Chair Duyck
 155 North First Avenue, Suite 300
 Hillsboro, OR 97124

Re: **2014 Long Range Planning Work Program - North Bethany Natural Features Buffer**

Chair Duyck and Commissioners,

As you are aware, the North Bethany urban/rural interface buffer is up for consideration as a Tier 1 issue in the 2014 Annual Work Program. The sole purpose of the buffer is to comply with Condition 6 of the Metro Ordinance No. 02-987A, which is designed to "ensure compatibility between urban uses in an included study area and agricultural practices on adjacent land outside the UGB zoned for farm or forest use". As staff's June 28, 2013 Issue Paper highlights, the restriction is "related to urban / rural compatibility and not related to safety and stability issues." In looking back at that the evolution of the issue, it appears that slope was somehow pulled into the discussion when attempting to efficiently overlap various buffers in the area, including buffers designed to protect riparian areas and forested slopes. Based on the Issue Paper's findings as well as discussions with key stakeholders, there appears to be a firm consensus that the urban / rural compatibility issue simply does not have a slope-related dimension. The county has existing regulations in place to address building on slopes.

The current buffer affects K&R Holdings, LLC's properties to a degree that is dramatically greater than any similarly situated properties along the North Bethany urban / rural interface. If the notion of slope had not unjustifiably been invoked, the buffer affecting our property would only be a very small fraction of its current size (several hundred feet in some cases). So far as we can tell, the next largest buffer in North Bethany is 20'. We would like to propose a 30' buffer along our northern border. In doing so, we will be able to meet two main regional planning objectives: urban / rural compatibility and maximizing density within the Urban Growth Boundary. We feel that 30' is an appropriate separation distance to mitigate any noise disturbances that may affect our northern neighbor's horse boarding facility. The county's Fact Sheet from March 21, 2011 noted that Oceanside, CA has a 30' buffer requirement for new development adjacent to equestrian uses. The Fact Sheet also pointed out that no jurisdictions in Oregon have attempted to apply buffers of this type, so the Oceanside example appears to be the most relevant attempt to address this specific compatibility issue.

Best regards,



John O'Neil
 K&R Holdings, LLC
 An affiliate of MLG

cc: Suzanne Savin, Long Range Planning
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