Dear Chairman McClain and Commissioners Crankovich and Johnson Huber:

Enclosed please find our comments for the Kittitas County Board of Commissioners October 29, 2008 public hearing to consider the issues raised in the Eastern Washington Growth Management Hearings Board’s First Order Finding Continuing Non-Compliance and Continuing Invalidity in Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c. Thank you in advance for considering our comments. The other enclosures will be sent by separate emails.

Please contact me if you require additional information,

Tim Trohimovich
Planning Director

Our mission at Futurewise is to promote healthy communities and cities while protecting working farms and forests and shorelines for this and future generations
October 29, 2008

Honorable Mark McClain  
Honorable Alan Crankovich  
Honorable Linda K. Johnson Huber  
Kittitas County  
Board of Commissioners  
205 W 5th Avenue, Suite 108  
Ellensburg, Washington 98926

Dear Chairman McClain and Commissioners Crankovich and Johnson Huber:

Subject: Kittitas County Board of Commissioners October 29, 2008 public hearing to consider the issues raised in the Eastern Washington Growth Management Hearings Board’s First Order Finding Continuing Non-Compliance and Continuing Invalidity in Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c and Kittitas County’s response

Provisions the County should update to Comply with the Growth Management Act

Thank you for the opportunity to comment on the issues raised in Eastern Washington Growth Management Hearings Board’s (EWGMHB) First Order Finding Continuing Non-Compliance and Continuing Invalidity in Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c and the Final Decision and Order in that case. We recommend that the county amend its comprehensive plan and development regulations to bring them into compliance with the Growth Management Act, the Final Decision and Order, and the First Order Finding Continuing Non-Compliance and Continuing Invalidity in Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c for the issues that have not been successfully appealed and stayed. These include the following comprehensive plan provisions and development regulations:

- Repeal the Gold Creek resort PUD and resort designations and apply a Growth Management Act compliant rural designation.1 This is Legal Issue 2 in Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

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1 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, First Order Finding Compliance as to Legal Issues 4 and 13 (RE: Application Nos. 06-01, 06-05, 06-06, and 06-13), Legal Issue 6 (RE: Ellensburg UGA) and Rescinding Invalidity as to Legal Issues 4 and 13 (RE: Application Nos. 06-01, 06-05, 06-06, and 06-13) AND LEGAL ISSUE 6 AND 14 (RE: Ellensburg UGA); First Order Finding Continuing Non-Compliance as to Legal Issues 2, 3, and 4 (RE: Application Nos. 06-03, 06-04, and 06-17), 5, 7, 12 , and 13 (RE: Application Nos. 06-03, 06-04, and 06-17), and
Adopt Growth Management Act (GMA) complaint designation criteria for agricultural lands of long-term commercial significance. We then recommend that the county apply these criteria to the county’s rural lands to ensure that lands that meet these criteria are designated as agricultural lands of long-term commercial significance. As our May 6, 2008, comment letter, enclosed with this letter, documented the county has failed to designate as agricultural lands of long-term commercial significance properties that meet those criteria. This was included in Legal Issues 3 and 4 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Adopt Growth Management Act (GMA) complaint designation criteria for forest lands of long-term commercial significance. Below we discuss why the criteria currently posted on the county’s website with the title “Kittitas County Comprehensive Plan and Zoning Provisions” do not comply with the GMA. This was included in Legal Issue 3 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Amend GPO 2.142B, other comprehensive plan policies, and the county’s development regulations so the notice for all plats and development permits within or near mineral lands of long-term commercial significance include the warning that “an application might be made for mining-related activities, including mining, extraction, washing, crushing, stockpiling, blasting, transporting, and recycling of minerals.” We are amazed that the version of the policy in the document currently posted on the county’s website with the title “Kittitas County Comprehensive Plan and Zoning Provisions” does not include this provision. It would have been a very simple change to make and is required by the GMA. This was included in Legal Issue 3 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Recommit or otherwise bring into compliance the agricultural lands de-designated by Application No. 06-17. This was included in Legal Issues 4 and 13 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

For Application Nos. 06-03 and 06-04 and the City of Kittitas UGA expansions, the county must properly analyze these lands for designation as of agricultural lands and conduct a proper county-wide or area-wide analysis of agricultural land in

Continuing Invalidity as to Legal Issues 4 and 13 (RE: Applications Nos. 06-03, 06-04, and 06-17) and LEGAL ISSUES 6 AND 14 (RE: City of Kittitas UGA); and Order Acknowledging Stay and Abeyance of Compliance Proceedings as to Legal Issues 1, 10, and 11 (August 7, 2008), at 41.

2 Id. at 20 – 21.
3 Id. at 26.
4 Id. at 26 – 28.
5 Id. at 28 – 29.
conjunction with this review. This was included in Legal Issues 4 and 13 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Bring the urban growth areas and urban growth nodes into compliance with the Growth Management Act. This was included Legal Issues 5 and 12 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Repeal the City of Kittitas urban growth area expansions. The board has now twice held that these expansions violate the GMA. This was included Legal Issues 6 and 14 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

Bring the county’s comprehensive plan future land use map and zoning map into compliance with the GMA. This was included Legal Issue 7 from Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c.

The reasons why those provisions do not comply with the Growth Management Act are explained in our May 6, 2008, comment letter enclosed with this letter. Please include that letter and the enclosures previously provided to the county in the record of this public hearing.

The proposed Commercial Forest Land Use Narrative, Criteria, and Policies violate the Growth Management Act, and compliant provisions should be adopted

In its 1994 amendments to the definition of forest lands of long-term commercial significance, the legislature made the following findings:

The legislature finds that it is in the public interest to identify and provide long-term conservation of those productive natural resource lands that are critical to and can be managed economically and practically for long-term commercial production of food, fiber, and minerals. Successful achievement of the natural resource industries’ goal set forth in RCW 36.70A.020 requires the conservation of a land base sufficient in size and quality to maintain and enhance those industries and the development and use of land use techniques that discourage uses incompatible to the management of designated lands.

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6 Id. at 42.
7 Id. at 41.
8 Id. at 32 – 36.
9 Id. at 41.
There are three key criteria for designating forest land of long-term commercial significance:

1. The land is "not already characterized by urban growth."\textsuperscript{11}

2. "The land is primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production, including Christmas trees subject to the excise tax imposed under RCW 84.33.100 through 84.33.140 ...."\textsuperscript{12}

3. "[A]nd that has long-term commercial significance."\textsuperscript{13}

"'Long-term commercial significance' includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land."\textsuperscript{14} The three criteria listed above are used both for the designation, re-designation, and de-designation of natural resource lands.\textsuperscript{15}

We appreciate that the proposed forest land designation criteria are based on these requirements. However, they are not included in the "Redesignation criteria for Commercial Forest Lands" and this omission violates the Growth Management Act.\textsuperscript{16}

Further, Guidelines 1 through 6 are the same forest land redesignation criteria the Eastern Board has held to violate the GMA.\textsuperscript{17} Guideline 1 is entitled "long-term economic conditions," but it does not address long-term economic conditions. For example, Guideline 1 refers to "milling facilities." But while mills are needed to provide markets for logs, investments will not be made in mills unless the forest land

\textsuperscript{11} RCW 36.70A.170(1)(b).
\textsuperscript{13} Id.
\textsuperscript{16} Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, First Order Finding Compliance as to Legal Issues 4 and 13 (RE: Application Nos. 06-01, 06-05, 06-06, and 06- 13), Legal Issue 6 (RE: Ellensburg UGA) and Rescinding Invalidity as to Legal Issues 4 and 13 (RE: Application Nos. 06-01, 06-05, 06- 06, and 06-13) AND LEGAL ISSUE 6 AND 14 (RE: Ellensburg UGA); First Order Finding Continuing Non- Compliance as to Legal Issues 2, 3, and 4 (RE: Application Nos. 06-03, 06-04, and 06-17), 5, 7, 12 , and 13 (RE: Application Nos. 06-03, 06-04, and 06-17), and Continuing Invalidity as to Legal Issues 4 and 13 (RE: Applications Nos. 06-03, 06-04, and 06-17) and LEGAL ISSUES 6 AND 14 (RE: City of Kittitas UGA); and Order Acknowledging Stay and Abeyance of Compliance Proceedings as to Legal Issues 1, 10, and 11 [August 7, 2008], at 26.
\textsuperscript{17} Id. at 25 – 26.
base is stable.\textsuperscript{18} Further, this criterion includes factors that are not long-term economic conditions, such as log sizes. Log size is controlled by management practices.\textsuperscript{19} Log sizes are not related to long-term commercial significance since improved management can increase log sizes.

Guideline 2 seems to imply that rural residential uses are compatible with forest lands of long-term commercial significance. They are not.\textsuperscript{20} So this guideline violates the GMA requirement to protect natural resource lands from incompatible uses.

Guideline 3 is entitled "Ownership Goals and Objectives." While it contains a discussion of ownership goals and objectives, the actual criterion discusses the regional benefits that may result from de-designation including higher property taxes and economic stimulus. This guideline ignores the fact that while natural resource uses, including forest lands, generate more in taxes than they cost in public services, rural residential uses generate less in tax revenues then the services they require.\textsuperscript{21} It also ignores the legislature intended to set apart natural resource lands for those productive industries.\textsuperscript{22} This criterion is also exactly contrary to the natural resources industry goal in RCW 36.70A.303(8). It is also outside the definition of long-term commercial significance.\textsuperscript{23} This guideline is contrary to the GMA.

Guideline 6 is entitled "Change in Circumstances, but the provisions, other then changes in land use patterns, are changes in state law. Most of these laws predate the GMA and so they cannot be changes in circumstances. Again, this guideline is outside the definition of long-term commercial significance.

In addition, the narrative at pages 1 and 2 of the "Kittitas County Comprehensive Plan and Zoning Provisions" does not seek to conserve the natural resource industry as the


\textsuperscript{19} Index 33 (Tab 33), Letter from the State of Washington Department of Fish and Wildlife to the Kittitas County Board of Commissioners p. 3 of 4 (May 12, 2008).


\textsuperscript{22} 1994 Session Laws, Chapter 307 § 1.

GMA requires, rather it seeks to de-designate forest lands of long-term commercial significance. Again, this violates the Growth Management Act.\(^\text{24}\)

Kittitas County should not just repackage the criteria previously found to violate the GMA. The county should adopt criteria that comply with state law.

**Adequate time should be provided to review and comment on the proposed amendments**

The only material available for tonight’s public hearing are the “Kittitas County Comprehensive Plan and Zoning Provisions (which only include policies related to forest lands and do not include any regulations)” and three graphs. It is not clear when these provisions where made available to the public, they were not posted on the county’s website as of Thursday October 23rd, so the public has not even had a week to review and comment on them. No other information on the proposed update is available. No Washington State Environment Policy Act (SEPA) review of the update was apparently done. We urge the county to provide some information on what the update will be, conduct SEPA review of the update, and give the public an adequate time to review and comment on this information.

Thank you for considering our comments. If you require additional information, please telephone me at 206-343-0681 or by email at tim@futurewise.org.

Sincerely,

Tim Trohimovich, AICP
Planning Director

Enclosures

\(^{24}\) *Id.* at 26.
May 6, 2008

Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Kittitas County
Board of Commissioners
205 W 5th Avenue, Suite 108
Ellensburg, Washington 98926

Dear Chairman McClain and Commissioner Crankovich:

Subject: Kittitas County Board of Commissioners May 6, 2008 public hearing for compliance on the Eastern Washington Growth Management Hearings Board (EWGMHB) decision Case No. 07-1-0004c

Thank you for the opportunity to comment on the proposed amendments to the comprehensive plan and development regulations. Kittitas County Conservation works countywide to conserve the parts of the community we all care about, including working farms and forests. RIDGE is also active in Kittitas County supporting high quality development and working for sustainable ecosystems and sustainable economies. Futurewise is a statewide citizens’ group working to promote healthy communities and cities while protecting working farms and forests for this and future generations.

The three organizations which worked together to write this letter were one of the prevailing parties in Kittitas County Conservation et al. v. Kittitas County EWGMHB Case No. 07-1-0004c. As you know, we are vigorously defending this decision from the county’s ill considered appeal.

We appreciate the hard work that many of the committee members put in on this effort to help the County comply with the Growth Management Act. We appreciate the hard work of county staff. We also appreciate the work the Board of County Commissioners have put into this issue.

We suggested and supported the extension to the compliance deadline to allow the county more time to work on this update. Our offer was contingent on the county continuing to work on the future land use and zoning maps to get them right, designate those urban growth nodes that qualify as limited areas of more intense rural development (LAMIRDs) as LAMIRDs, and
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 2

address the portions of the remand that are not stayed. It was also contingent on the county
providing three weeks notice of a final public hearing with all material available to the public
when the notice is given. While the county substantially complied with its comment to give
three weeks notice, the materials were not available three weeks before the hearing. Nor did the
county complete some of the work we had hoped, such as the designation of LAMIRDs. We
regret that work was not done.

We continue to be very disappointed that many of the changes required by the Eastern Board’s
order that were not appealed and not stayed have not been addressed. We identify those
provisions and urge you to update them.

This letter will first summarize our comments on the update. The letter will then comment in
detail on the proposed comprehensive plan and development regulations update.

Summary of Our Recommendations

Our most significant recommended improvements are to:

- Adopt a transfer of development rights program for Kittitas County. Our May 1, 2007 letter
to the Kittitas County Planning Commission included three code provisions that would allow
Kittitas County to immediately adopt and implement a transfer of development rights
program to help protect working farms and forests. We urge the county to adopt a transfer of
development rights program as part of this update.

- While we support the deletion of the urban growth nodes, the land formerly designated as
urban growth nodes should be evaluated to determine whether they meet the criteria for
limited areas of more intense rural development (LAMIRDs), rural designations, or natural
resource lands designations as part of this update. This is necessary to comply with the
Growth Management Act (GMA). Please see page 4 of this letter.

- We appreciate the rural comprehensive plan designation and zoning for the Gold Creek part
of the Snoqualmie Pass Sub-Area Comprehensive Plan. This will protect the quality of life
for Kittitas County residents and property owners and, by protecting important wildlife
habitats, enhance the county’s tourism industry. Please see page 5 of this letter.

- The designation criteria for agricultural lands of long-term commercial significance continue
to need work and the county should use the improved criteria to update its Commercial
Agriculture comprehensive plan designation and zoning. This is necessary to protect an
important part of the county’s economy, the rights of farmers to continue to farm without
interference, and to comply with the GMA. Please see page 6 of this letter.

- The designation criteria for forest lands of long-term commercial significance continue to
need work and the county should use the improved criteria to update its Commercial Forest
comprehensive plan designation and zoning. This is necessary to protect an important part of
the county’s economy, the rights of foresters to continue to grow trees without interference,
and to comply with the GMA. Please see page 10 of this letter.
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 3

- We support proposed 8.3 Rural Land Use with improvements. These changes are needed to protect water quality, senior water rights holders, neighboring property owners, and the county’s rural character. Please see page 11 of this letter.

- We recommend the county deny the City of Kittitas urban growth area (UGA) expansion as it is unneeded and violates the GMA. We detail and document our concerns on page 23 of this letter.

- Kittitas County must revise its UGAs because they are oversized. This reform is needed to reduce the burdens on taxpayers and ratepayers to pay for governmental services and to comply with the GMA. We detail and document our concerns on page 25 and in Appendix B on page 44 of this letter.

- Kittitas County must adopt designation criteria for its comprehensive plan designations to guide its zoning. The county must also eliminate the inconsistencies between its comprehensive plan’s Future Lands Use Map and the zoning map. This is necessary to protect property owners from arbitrary decisions and to comply with the GMA. Please see page 25 of this letter.

- The proposed amendments to Chapter 16.09 Kittitas County Code (KCC), Performance Based Cluster Platting, do not comply with the Growth Management Act. This is so because they do not provide for a variety of rural densities and do not protect neighboring property owners and the county’s rural character. Please see page 29 of this letter.

- We appreciate that the natural resource lands notification will be required for all permits, but Policies GPO 2.129B, GPO 2.142C, and GPO 2.145 & KCC § 17.04.060 should also include the notice that mineral operations may apply for mining related activities. Policy GPO 8.15 also needs to apply to all development, not just to residential development. This needed to protect both mining operations and people who are considering purchases of nearby properties. Please see page 30 of this letter.

- Chapter 17.14 KCC, Performance Based Cluster Plat Uses, needs to be amended to prohibit urban growth outside urban growth areas. These changes are needed to protect water quality, senior water rights holders, neighboring property owners, and the county’s rural character. Please see page 30 of this letter.

- Do not adopt Chapter 17.28A KCC, A-10 - Agricultural Zone-10, because it is unneeded and allows urban growth outside the urban growth area. Please see page 31 of this letter.

- Eliminate the one-time splits allowed in KCC § 17.29.040, A-20 - Agricultural Zone, because it allows urban growth outside the urban growth area. This is necessary to protect nearby property owners and rural character. Please see page 32 of this letter.

- Eliminate the uses that are inconsistent with protection of agricultural lands from Chapter 17.31 KCC Commercial Agriculture Zone to protect the county’s agricultural economy. Please see page 32 of this letter.
Limit the overall density in a PUD to the density of the underlying zone and comply with the requirements to limit PUDs to protect rural character and neighboring property owners. Please see page 33 of this letter.

Kittitas County must adopt regulations to ensure that related developments are considered as one application. This will prevent circumvention of our state water code, protect senior water rights holders, protect farmers that rely on irrigation water, and protect water quality and water quantity. Please see page 34 of this letter.

Amend KCC § 17.98.020, Petitions, to require that rural rezones be processed as part of the annual comprehensive plan update and adopt a clarification to the criteria for rezones. This will help protect neighboring property owners. Please see page 35 of this letter.

Conduct a Washington State Environmental Policy Act (SEPA) review of the proposed comprehensive plan and development regulation amendments. This is necessary to give the county decision makers the information necessary to evaluate the proposal and to comply with state law. Please see page 36 of this letter.

Detailed Comments on the Proposed Comprehensive Plan Compliance Update

*Kittitas County should adopt a transfer of development rights (TDR) program as part of this update*

We continue to be disappointed that Kittitas County is not adopting a transfer of development rights program as part of this update. Our May 1, 2007 letter to the Kittitas County Planning Commission included three code provisions that would allow Kittitas County to immediately adopt and implement a transfer of development rights program to help protect working farms and forests. A copy of the letter to the Kittitas County Planning Commission is included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename “PC Comment Letter Dev Regs Final April 30 2007.pdf.” We urge the county to adopt a transfer of development rights program as part of this update.

While we support some of the initial steps towards a TDR program in the comprehensive plan, they will not create an operational TDR program now. Nor will they adequately protect working farms, working forests, and the rural areas. We urge you to adopt a strengthened TDR program now along with improved comprehensive plan provisions and development regulations to comprehensively protect working farms, working forests, the rural area, and water quality.

**While we support the deletion of the urban growth nodes, the land formerly designated as urban growth nodes should be evaluated to determine whether they meet the criteria for limited areas of**
more intense rural development (LAMIRDs), rural designations, or natural resource lands designations

We appreciate the elimination of the urban growth nodes since they did not comply with the GMA and protect water quality and water quantity. However, we believe the land formerly in these areas should be evaluated to determine if they qualify as limited areas of more intense rural development (LAMIRDs), rural designations, or natural resource lands designations. We are particularly concerned since some residential, even high density residential zoning and commercial zoning continues to be applied to these areas. Simply removing the UGN boundaries does not comply with the GMA since the Commercial Designation with underlying Ag-20 zoning is left in now rural lands in Thorp, Ronald, and other former UGNs. We urge the county to evaluate whether these areas meet the LAMIRD criteria and properly designate and zone these areas as part of this compliance update. This is necessary to protect the county’s rural character and to comply with the GMA.

We appreciate the rural comprehensive plan designation and zoning for the Gold Creek part of the Snoqualmie Pass Sub-Area Comprehensive Plan

We appreciate and strongly support the rural designation and zoning applied to the Gold Creek area of the Snoqualmie Pass Sub-Area Comprehensive Plan. As the Draft Environmental Impact Statement and Section 4(f) Evaluation I-90 Snoqualmie Pass East documents, Gold Creek is an important wildlife habitat and connects habitats north and south of I-90. Under the proposed plan for I-90, the bridge at Gold Creek will be expanded to allow for greater animal migration.\(^1\) This will complement other ongoing activities such as purchases of private land in the Gold Creek basin to provide for habitat connectivity. For example, this September the U.S. Department of the Interior approved $3,940,000 to acquire 76 acres along Gold Creek to protect habitat and improve habitat connectivity.\(^2\) The need for improved connectivity is documented in many reports including Assessing Wildlife Habitat Connectivity in the Interstate 90 Snoqualmie Pass Corridor, Washington.\(^3\) We agree with the Forest Service that the Gold Creek basin should be given a designation that will protect these important wildlife habitats.\(^4\)

\(^1\) Draft Environmental Impact Statement and Section 4(f) Evaluation I-90 Snoqualmie Pass East p. ES-16. Available from [http://www.wsdot.wa.gov/Environment/compliance/docs/FinalExecutiveSummary.pdf](http://www.wsdot.wa.gov/Environment/compliance/docs/FinalExecutiveSummary.pdf) and included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the “Gold Creek” directory with the file name: FinalExecutiveSummary.pdf.

\(^2\) News Release: Secretary Kempthorne Announces $67 Million in Grants to Support Land Acquisition and Conservation Planning for Endangered Species, September 26, 2006. Included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the “Gold Creek” directory with the filename: “9/26/2006–Secretary Kempthorne Announces $67 Million in Grants to Support Land Acquisition and Conservation Planning for Endangered Species.pdf”

\(^3\) Included on the data CD enclosed with Futurewise’s February 1, 2008 letter in the “Gold Creek” directory with the filename: “Assessing Wildlife Habitat Connectivity I90.pdf”

\(^4\) U.S. Forest Service letter to Kittitas County Community Development Services pp. 3 – 4 (October 24, 2006). Included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community
The designation criteria for agricultural lands of long-term commercial significance continue to need work and the county should use the improved criteria to update its Commercial Agriculture comprehensive plan designation and zoning. See pages 30 – 33 of the Compliance Draft Comp Plan (4-11-08)

Farming and ranching have and continue to be mainstays of the Kittitas County economy. The most recent state economic analysis of Kittitas County summarized the contribution of the two sectors in this way:

The natural resource based industries continue to provide important employment and remain a vital part of the local economy. Agriculture in the rich Kittitas Valley is thriving. Its employment accounted for 7 percent of all covered employment in 2000. The manufacturing sector is also driven by the local natural resource base industries. The highest manufacturing employment is found in food processing, followed by lumber and wood products. Manufacturing in Kittitas County employed 700 workers in 2000.\(^5\)

While agricultural designations should be based on long-term factors, it is interesting to note that the prices of farms products, including Timothy hay, are at historic highs.\(^6\) Some agricultural economists believe these high prices will last for a decade.\(^7\)

Agriculture relies on its land base. Kittitas “County is to conserve agricultural land in order to maintain and enhance the agricultural industry and to discourage incompatible uses.”\(^8\)

There are three primary criteria for agricultural lands of long-term commercial significance. As the Supreme Court has recently held:

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Development Services in the “Gold Creek” directory with the filename: “Pages from 10-25-06%20Public%20Hearing%20Exhibits_ComUpdate.pdf”


\(^6\) Scott Kilman, Historic Surge in Grain Prices Roils Markets, The Wall Street Journal p. A1 (September 28, 2007) included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Historic Surge in Grain Prices.pdf”; Mike Johnson, Prices strong, demand high for hay, Daily Record p. 2 (September 8, 2007) included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Prices strong, demand high for hay.pdf.”


\(^8\) King County v. Central Puget Sound Growth Management Hearings Bd., 142 Wn.2d 543, 556 – 57, 14 P.3d 133, 140 (2000).
17 In sum, based on the plain language of the GMA and its interpretation in *Benaroya*, we hold that agricultural land is land: (a) not already characterized by urban growth (b) that is primarily devoted to the commercial production of agricultural products enumerated in RCW 36.70A.030(2), including land in areas used or capable of being used for production based on land characteristics, and (c) that has long-term commercial significance for agricultural production, as indicated by soil, growing capacity, productivity, and whether it is near population areas or vulnerable to more intense uses.  

The Washington State Supreme Court wrote: “We further hold that counties may consider the development-related factors enumerated in WAC 365-190-050(1) in determining which lands have long-term commercial significance.”

The agricultural designation criteria on pages 30 through 31 do not address whether the land is: “(a) not already characterized by urban growth” or “(b) that is primarily devoted to the commercial production of agricultural products enumerated in RCW 36.70A.030(2), including land in areas used or capable of being used for production based on land characteristics ...” as the Growth Management Act and the *Lewis County* decisions require. Further the criteria go well beyond whether the land has “long-term commercial significance for agricultural production, as indicated by soil, growing capacity, productivity, and whether it is near population areas or vulnerable to more intense uses” again as the Growth Management Act and the *Lewis County* decisions require. For example, none of the factors included in “A” on page 30 address long-term significance; they all focus on immediate costs. In addition, they do not take into account long-term farm prices, which is we documented are at historic highs and are likely to stay there for quite a while. It is also not even clear that these factors can be determined for the wide variety of crops that farmers and ranchers grow and raise in Kittitas County. They often cannot be determined for a season let alone for the long-term.

The apparent requirement on page 31 that non-irrigated grazing lands must predominately make up an entire section of land is contrary to the data on the county’s rangeland. In 2002 Kittitas County had 399 farms that had pastureland and rangeland other than cropland. These farms had 81,236 acres of rangeland. So the average farm with rangeland had 204 acres of rangeland. This is less than three times the acreage needed to be designated, 640 acres, and will

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10 *Id.*


12 *Id.* at p. 245.
leave many farms unprotected from incompatible uses. Right to farm laws, while important, are insufficient to protect working farms and ranches.  

The de-designation criteria have the same problems we have listed above along with other problems. For example, the last bullet on the bottom of page 31 provides that if expansion is required for any reason and the farmer cannot buy “adjacent and/or nearby land” the land is de-designated. This policy ignores the fact that 40 percent of farmland is rented or that a nearby farmer may want to buy or lease the land at issue. This criterion has no basis in the GMA requirements listed above.

GPO 2.114B on page 32 violates the Eastern Board’s ruling that water availability cannot be an exclusionary factor. The policy still does not specify how it will be applied and that it is a secondary criterion. This is especially important in Kittitas County because much less than half of the county’s land in farms is irrigated. In 2002, Kittitas County had 230,646 acres in farms. Land in irrigated farms totaled 203,411 acres in 2002, up from 144,066 acres in 1997. However, 91,944 acres are irrigated. So how is this criteria applied? Does it apply at all to dry land wheat and pasture? Does the entire farm have to be irrigated? If so, it would appear to limit the criterion to less than half of the land in irrigated farms and much less than half of all land in farms. This criterion does not reflect the fact that many of Kittitas County’s irrigated farms and ranches have a mix of irrigated and dry land farming. Nor does it reflect that 162 Kittitas County farms and ranches are dry land operations.

Further, the use of “prime farmland” as a criterion is too restrictive. Many farmers also successfully farm unique farmland and farmland of long-term commercial significance.

The criteria in WAC 365-190-050 also need to be operationalized into criteria that can be objectively applied. For example, WAC 365-190-050(1)(e) calls for consideration of predominate parcel size. But Kittitas County has not identified the parcel sizes suitable for long-term commercial significance. We urge you to clarify the criteria so they comply with the GMA.

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15 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 27.
17 Id. at p. 255.
18 Id.
19 Id. at p. 240 & p. 255.
The Eastern Board directed the county to redo its agricultural designations using the GMA compliant criteria. As near as we can tell, the reconsideration of the county’s comprehensive plan designations to ensure that all land that meets the criteria for agricultural land of long-term commercial significance are designated Commercial Agriculture has not be done. There are many parts of the county that would benefit from and qualify as agricultural lands of long-term commercial significance. For example, the area bounded by Naneum Road on the west, Brick Mill Road on the south, Fairview Road on the east, and Rader Road on the north would qualify even under the county’s current or proposed criteria. The land abuts an existing area designated and zoned Commercial Agriculture. Large parcels predominate, with the vast majority of the land in parcels larger than twenty acres. The entire 1,401 acres is in the Kittitas Reclamation District (KRD), “a Bureau of Reclamation agency [that] is the largest of several water providers for the fertile lands of the Kittitas Valley.” The land is almost entirely, 1,253.2 acres, prime farmland. The data enclosed on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services also show the criteria in WAC 365-190-050 are met. This and other qualifying areas should be designated Commercial Agriculture.

The former broad Rural Lands designation should be examined using the new Commercial Agriculture and Commercial Forest criteria prior to assigning the new rural designations to these lands. Land that qualifies as natural resource lands should be designated as natural resource lands of long term commercial significance. The county should not assume that the rural lands would not qualify.

Finally, we support the recommendation to retain the commercial agricultural designations for the land in applications 06-01 (Thomas and Lynne Mahre), 06-03 (Kevin Gibb), 06-04 (Ronald and Douglas Gibb), 06-05 (Art Sinclair), 06-06 (Basil Sinclair), 06-13 (Teanaway Ridge LLC., et al.), and 06-16 (Teanaway Ridge LLC., et al.). As our prior briefing and the materials in the data CD included with Futurewise’s February 1 letter to Kittitas County Community Development Services and the parcel data on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the directory entitled “Real Property Records Rader & Brick Mill.”

20 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 33.
21 Parcel map enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services and the parcel data on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the directory entitled “Real Property Records Rader & Brick Mill.”
23 See the Soil Map – Kittitas County Area, Washington Brick Mill and Rader East of Naneum on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Soil_Map Brick Mill and Rader East of Naneum.pdf”; USDA Natural Resources Conservation Service, Prime and Other Important Farmlands (WA): Kittitas County Area, Washington pp. 1 – 4 (09/19/2007) enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “PrimeAndImportantSoils2007.rtf.”
Services showed, these areas meet the county’s criteria for Commercial Agriculture and the and the Growth Management Act’s criteria for agricultural lands of long-term commercial significance.

The designation criteria for forest lands of long-term commercial significance continue to need work and the county should use the improved criteria to update its Commercial Forest comprehensive plan designation and zoning. See pages 36 – 40 of the Compliance Draft Comp Plan (4-11-08)

In its 1994 amendments to the definition of forest lands of long-term commercial significance, the legislature made the following findings:

The legislature finds that it is in the public interest to identify and provide long-term conservation of those productive natural resource lands that are critical to and can be managed economically and practically for long-term commercial production of food, fiber, and minerals. Successful achievement of the natural resource industries' goal set forth in RCW 36.70A.020 requires the conservation of a land base sufficient in size and quality to maintain and enhance those industries and the development and use of land use techniques that discourage uses incompatible to the management of designated lands. 24

There are three key criteria for designating forest land of long-term commercial significance:

1. The land is “not already characterized by urban growth ....” 25

2. “The land is primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production, including Christmas trees subject to the excise tax imposed under RCW 84.33.100 through 84.33.140 ....” 26

3. “[A]nd that has long-term commercial significance.” 27

Kittitas County has long been home to the forest products industry. Lumber and wood products manufacturing jobs continue to be the sixth highest paid in the county. 28

The designation criteria in Policy GPO 2.131 do not incorporate criteria 1 and 2. So this violates the Growth Management Act.

25 RCW 36.70A.170(1)(b).
27 Id.
28 Washington State Employment Security Department, Labor and Economic Analysis Branch, Kittitas County Profile p. 23 (November 2002).
"Long-term commercial significance’ includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land’s proximity to population areas, and the possibility of more intense uses of the land.” The designation criteria on pages 39 – 40 do not take into account growing capacity, productivity, and soil composition. This violates the Growth Management Act.

The “designation considerations” focus on the needs of the industry, presumably referring to the needs of mills along with other buyers. However, this ignores the fact that while mills are needed to provide markets for logs, investments will not be made in mills unless the forest land base is stable. The designation criteria do not take this into account.

The de-designation criteria on pages 36 – 39 also do not comply with the GMA. First, they are unclear. What, for example, does “Compatibility Land Use Objectives” mean? This is unclear especially given that residential and forestry uses are incompatible. Does this criterion mean that residential uses are not allowed? That should be the case, but the criterion does not explicitly say so. Further, the de-designation criteria do not address all the GMA criteria set out above. The designation and de-designation criteria should be revised to comply with the GMA. To assist the county in this work, the article The Management of Resource and Rural Lands in Compliance with Washington's Growth Management Act (November 2006) is enclosed on the data CD included with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services. The county then needs to apply the new criteria to the county to ensure the forest lands of long-term commercial significance are properly designated.

**Revise 8.2 Identification of Rural Lands to comply with state law and the county’s rural character. See page 99 of the Compliance Draft Comp Plan (4-11-08)**

The description of general uses does not protect Kittitas County property owners and does not comply with state law. We recommend the following revisions with our additions double underlined and our revisions double struck through.

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32 The filename is: “Resource Lands and Rural Areas Oct 2006 Final 2.doc.”
General Uses

The Rural Lands exhibit a vibrant and viable landscape where a diversity variety of rural land uses and rural housing densities are allowed where compatible with rural character and the protection of designated natural resource lands, critical areas, water quality and quantity, the minimization of land use conflicts, and the reduction in costs for taxpayers. Many sizes and shapes can be found in The Rural lands, its topography and access variations allow for smaller rural lots to large acreage, economic activities, rural residential subdivisions, farming, logging, and mining. This rich mix of uses allows the variety of lifestyle choice, which makes up the fabric of rural community life. Some choose a private, more independent lifestyle, or space for small farm activities and children’s 4-H projects. Others choose the more compact arrangement found in clustering, with its accompanying open space and close neighbors. Traditionally the most common uses in rural lands are agriculture, recreational and residential, which remain important in terms of employment, income and tax base. Kittitas County will strive to encourage and support these activities in whatever areas and zones they occur.

We support proposed 8.3 Rural Land Use with improvements.


We strongly support deletion of existing 8.3 and the substitution of new Section 8.3. We strongly support including the rural designations on the comprehensive plan’s Land Use Map and adopting criteria for the various rural designations. These are a significant improvement to the comprehensive plan and directly address several of the Eastern Board’s rulings in Kittitas County Conservation et al. v. Kittitas County EWGMHB Case No. 07-1-0004c. However, we have four concerns about this section.

First, the comprehensive plan proposes to direct 28.5 percent of the county’s future growth into the rural area. This is a very large amount of growth given that several recent newspaper articles document that all of the water in the Yakima basin is already allocated.33 Directing this much growth into the rural area that likely lacks available water conflicts with the GMA which requires that the rural element protect surface water and groundwater resources.34 Allowing the construction of many new residences also strains surface and groundwater resources. We recommend that the Rural Residential designation only be allowed in areas where sufficient water rights exist to serve these lots with public water systems. We also recommend that the population protections that were formerly allocated to the UGNs should be offered to the cities interesting in additional population growth rather than allocated to the rural area.

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33 Jeff Switzer, Everett Herald Abuse of Water Laws Jeopardizes Supply for People, Fish (September 4, 2007) included on the data CD enclosed with the paper original of this letter with the filename “HeraldNet_ Abuse of water laws jeopardizes supply for people, fish.pdf” and Jonathan Martin, Seattle Times Big growth, big fight over water (November 21, 2007) included on the data CD enclosed with the paper original of this letter with the filename: “Local News _ Big growth, big fight over water _ Seattle Times Newspaper.pdf.”
34 RCW § 36.70A.070(5)(c)(iv).
Second, the Growth Management Act, in RCW 36.70A.070(5)(b), requires that the “[t]he rural element shall provide for a variety of rural densities [and] uses ....” This requirement is one of the ways that the requirements in RCW 36.70A.070(5)(c) are met including protecting surface water and groundwater resources and protecting against conflicts with the use agricultural, forest, and mineral resource lands of long-term commercial significance.

The designation criteria should address the requirements of RCW 36.70A.070(5)(c). The Environmental Protection Agency’s *Protecting Water Resources with Higher-Density Development* recommends that:

Watershed hydrology suggests that three primary land use strategies can help to ensure adequate water resource protection:

- Preserve large, continuous areas of absorbent open space;
- Preserve critical ecological areas, such as wetlands, floodplains, and riparian corridors; and
- Minimize overall land disturbance and impervious surface associated with development.\(^5\)

In discussing the third bullet, the Environmental Protection Agency writes:

Research has revealed a strong relationship between impervious cover and water quality (Arnold, 1996; Schueler, 1994; EPA, 1997). Impervious surfaces collect and accumulate pollutants deposited from the atmosphere, leaked from vehicles, or derived from other sources. During storms, accumulated pollutants are quickly washed off and rapidly delivered to aquatic systems. Studies have demonstrated that at 10 percent imperviousness,\(^2\) a watershed is likely to become impaired (Schueler, 1996; Caraco, 1998; Montgomery County, 2000), the stream channel becomes unstable due to increased water volumes and stream bank erosion, and water quality and stream biodiversity decrease. At 25 percent imperviousness, a watershed becomes severely impaired, the stream channel can become highly unstable, and water quality and stream biodiversity are poor (Schueler, 2000).

\(^2\) The 10 percent figure is not an absolute threshold. Recent studies have indicated that in some watersheds, serious degradation may begin well below 10 percent. However, the level at which watershed degradation begins is not the focus of this study. For purposes of our analysis, EPA uses the 10 percent threshold as an indicator that water resources might be impacted.\(^36\)

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\(^5\) United States Environmental Protection Agency *Protecting Water Resources with Higher-Density Development* p. 4 (EPA 231-R-06-001: January 2006). Included on the CAO on CD enclosed with the paper original of this letter with the “Water Quality” directory with the filename: “protect_water_higher_density.pdf.”

\(^36\) *Id.* at p. 6, footnote 3 omitted.
We recommend that the future land use map, land use designation criteria, and the comprehensive plan policies incorporate all three of the Environmental Protection Agency's recommendations and that impervious surfaces within a basin be limited to ten percent. To implement the last recommendation, the Environmental Protection Agency recommends moderate and high densities in urban growth areas and very low densities outside areas of concentrated development. 37 We recommend the same approach for Kittitas County, moderate to high densities within small, compact urban growth areas and densities of one dwelling unit per five acres, per ten acres, and per 20 to 40 acres in the rural area. In sensitive basins, significant areas of densities of one dwelling unit per ten and 20 and 40 acres are needed to maintain impervious surfaces below ten percent and to protect water quality.

Third, as we document in Appendix A, lands within densities greater than one dwelling unit per five acres do qualify as rural densities. So we recommend that the maximum rural density be one dwelling unit per five acres.

Fourth, as we document in Appendix A, residential uses are incompatible with natural resource lands. So we recommend that lower densities of one dwelling unit per 20 or 40 acres adjacent to natural resource lands. Natural resource lands should not be given rural designations as this also violates the Growth Management Act. Natural resource lands are also not be included in urban growth areas. 38 Since the "Rural Transition Areas" are intended foresee the land that will eventually be included in the urban growth areas, natural resource lands should not be included in the "Rural Transition Areas" areas.

Also, low densities in rural transition areas will make them difficult to resubdivide. We recommend that the densities be limited to one dwelling unit per 10 acres to facilitate further subdivision in the Rural Transitional Areas.

This section of the comprehensive plan indicates that a stay has been issue as to the Rural-3 and Agricultural-3 designations and zones. While this is true, the stay is on the county’s need to act to comply with the Eastern Board’s order as to these designations. However, if the county chooses to act, as it is doing here, its actions must comply with the Growth Management Act. Unfortunately without the changes we proposed the county’s action is not consistent with the Growth Management Act.

We request the following revisions to the designations to implement these recommendations. Our additions are double underlined and our deletions are double struck through.

37 Id. at pp. 16 –25.
38 Confederated Tribes and Bands of the Yakima Indian Nation v. Yakima County, EWGMHB 94-1-0021, Final Decision and Order (Mar. 10, 1995) at 1995 WL 903191, *5. “It may be noted that critical area designations as well as resource land designations are an important first step in the planning process. They provide the sideboards for further comprehensive plan development by pointing out either where development should not occur or where, at the least, there are significant developmental concerns.” Also see the planning sequence required by RCW §§ 36.70A.040 (3), (4), and (5).
**Rural Land Use Designations**

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<tr>
<th>Land Use Comprehensive Plan Designation</th>
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<td>Residential (R)</td>
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<td>Development (LAMIRDs)</td>
<td>General Commercial (C-G)</td>
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</tbody>
</table>

**RURAL TRANSITION AREAS**

**DESIGNATION CRITERIA:**

**Criterion 1.** Land use designation shall be immediately adjacent to designated UGAs.

**Criterion 2.** The land will be needed to accommodate urban growth in the next 40 years. Lands at the time of adoption of the ordinance designated or zoned, Rural Residential, Ag 3, Rural 3, Ag 5, or Rural 5 and lands that otherwise are located adjacent to and logical extensions of UGA's.

**Criterion 3.** Lands located within the logical expansion of urban utility corridors.
Criterion 4. The county has a plan to provide the capital facilities and services needed to accommodate urban growth lands with the potential to receive services within the 40 year planning period.

Criterion 5. The lands are located within the service area of a water system with sufficient water rights and water capacity to serve the anticipated development at a rural level of service. Lands that are included within and identified by the Kittitas County Transportation Plans.

Criterion 6. Lands are not located within an irrigation district, or irrigation entity, or nonprorable water district.

Criterion 7. May not include lands identified as prime, prime if irrigated, and farmland of statewide or local importance.

Criterion 8. Lands that which do not meet the criteria for are not designated Commercial Agriculture, Commercial Forest, and Mineral Lands.

Criterion 9. The lands do not have extensive critical areas and are well suited to development. May include lands which have been mapped as floodway, or which have excessively steep slopes, unstable soils or other mapped critical area feature is predominant.

Criterion 10. Lands which have public values that must be protected under state law including but not limited to:
   i. Shorelines
   ii. Wetlands
   iii. Sensitive fish and wildlife habitat

Density

Standard 1. An average of 1 dwelling unit per 10.3 or 1 dwelling unit per 5 acres within the contiguous land use designation excluding nonconforming lots existing at the time of adoption of this ordinance.

Standard 2. There are portions of the county that have parcels that have been created that are less than 3 acres. In those areas the density shall be the existing density.

Standard 3. Property may not be further divided once the average of 1 unit per 10.3 or 1 dwelling unit per 5 acres density is reached until such time as the property is included in the UGA.

Standard 4. Development shall be clustered and the use of shadow platting shall be required in order to plan for future incorporation into the UGA. Shadow plats shall identify future transportation and utility corridors.

Standard 5. Require approved alternative septic and water systems for developments proposing lots sizes less than 3 acres in size.

RURAL RESIDENTIAL AREAS

Purpose and Intent

The Rural Residential category provides a broad choice of areas within rural Kittitas County where rural lifestyles can be sustained. This category is intended to maintain
rural character by creating and/or maintaining larger parcel sizes. This designation is applied to areas that are relatively unconstrained by environmentally sensitive areas or other significant landscape features, have access to water systems with adequate supplies of water, meet the level of service requirements for transportation identified in the Kittitas County Transportation Plan, and also recognizes areas that are already committed to a pattern of smaller rural lots.

POLICIES

The use of public water systems or community wells to conserve resources shall be encouraged. In the instance of Criterion 8 below, they shall be required.

Lands formerly designated as Urban Growth Nodes (UGN), (Snoqualmie Pass, Easton, Ronald, Thorp, and Vantage) and are now designated as Rural Residential at the adoption of this land use designation shall undergo review to decide whether or not these areas should be appropriately designated as Limited Areas of More Intense Development or Urban Growth Areas not associated with a City.

These reviews shall include the adoption of new sections specifically including Purpose and Intent, Policies, Designation Criteria, and Density Standards for LAMIRD’s and UGA’s not associated with cities within the Kittitas Comprehensive Plan. The adoption of this new material shall be completed as identified by the Board of Commissioners.

Group A or B water systems and innovative waste water disposal systems are encouraged. In the instance of Criterion 8 below, they shall be required.

Parcel creation in this land use designation shall minimize conflicts with nearby resource lands.

DESIGNATION CRITERIA

Criteria 1. Lands outside Urban Growth Areas.
Criteria 2. Lands which do not meet the criteria for located outside of the Commercial Agriculture or Commercial Forest land use designations and are generally at least one mile from these designations.
Criteria 3. Lands located within a fire district, adjacent to a fire district, or have the demonstrated potential to be served by a fire district.
Criteria 4. Lands served by established county and or state road networks which are in existence or can be logically extended as provided in the Kittitas County Transportation Plan.
Criteria 5. May include lands at the time of adoption of the ordinance designated or zoned Rural Residential, Ag 2, Rural 3, Ag 5, or Rural5 or ands that otherwise are located adjacent to and are logical extensions of this land
use designation determined on a case by case basis that provides for a logical boundary of the designation.

Criteria 5. Lands that do not require extension or provision of public/urban levels of services. Utility Services may be provided by Public Utility Districts or Private Utility providers.

Criteria 6. The lands are located within the service area of a water system with sufficient water rights and water capacity to serve the anticipated development at a rural level of service.

Criteria 7  Lands that have not been identified as:

a. Lands which have been mapped as floodway plains, or which have excessively steep slopes, unstable soils or other mapped critical area feature is predominant.

b. Lands which have public values that must be protected under state law including but not limited to:
   i. Shorelines
   ii. Wetlands
   iii. Sensitive fish and wildlife habitat

Criteria 8. Total impervious surfaces within the subbasin will remain below ten percent including the land within this designation. Lands that otherwise meet all criteria except, Criterion 5, that may have existing “on the ground investments,” including but not limited to, state approved utility service.

Criteria 9. The predominate parcel size is five acres or less.

Criteria 10. The lands are readily accessible to cities and towns for jobs and services.

DENSITY

Standard 1. The density within this land use designation shall not exceed 1 dwelling unit per 3 acres or 1 dwelling unit per 5 acres excluding legal non-conforming lots existing at the time of the adoption of this ordinance.

Standard 2. Parcels may be created with a maximum lot size of 1 acre, unless otherwise determined by the Kittitas County Environmental Health Department. or the Washington State Department of Health requirements, through clustering, density shifting or other innovative techniques as long as the average density of 1 dwelling unit per 3 or 1 dwelling unit per 5 acres is met.

Standard 3. Parcel development, creating lots less than 3 acres in size shall require, at a minimum, community water and septic systems. Newly created 5 acre parcels may be served by individual wells and onsite individual septic systems.

Standard 4. Clustering and other innovative techniques are encouraged and recommended for parcels in this land use designation.
Standard 5. Any parcel development within 1320 feet (1/4 section) of a natural resource land use must be developed using innovative techniques, including but not limited to, clustering, density shifting, and Planned Unit Developments.

RURAL RESOURCE LANDS

....

POLICIES
Density shifting and clustering and other innovative techniques through transfers of development rights are encouraged within this land use designation.

Group A or B water systems and innovative waste water disposal systems are encouraged.

This land use designation shall encourage development in areas least suited for agriculture and forestry.

Recognize agriculture and forestry as an important economic activities and support the working lands in the county.

DESIGNATION CRITERIA

Criteria 1. Lands outside Urban Growth Areas and the Rural Transition Areas land use designation.

Criteria 2. Lands do not meet the criteria for Commercial Agriculture, Commercial Forest, and Mineral Lands.

Criteria 43. Lands may have agriculture or forest land practices of small scale and/or commercial significance.

Criteria 44. May include lands which have been mapped as floodway plains, or which have excessively steep slopes, unstable soils or other mapped critical area feature is predominant.

Criterion 54. Lands located within areas serviced by irrigation entities.

Criteria 65. May include lands which have public values that must be protected under state law including but not limited to:
  i. Shorelines
  ii. Wetlands
  iii. Sensitive fish and wildlife habitat

Criteria 7. The predominate parcel sizes are 5 to 19 acres. Parcels larger than 20 acres may exist.
Criteria 9. Lands served by established county and or state road networks which are in existence or can be logically extended as provided in the Kittitas County Transportation Plan.

Criteria 10. Lands adjacent to urban growth areas that may be included in the urban growth area in the future.

Density

While the density standards are acceptable, the diagram following them is not. Placing 50 one acre lots on the corner of 1,000 acres would constitute illegal urban growth. As the Eastern Board has correctly held, clustering and similar measures must include limits on the number of units allowed in the clusters.39 Fifty one-acre lots would not comply with the Growth Management Act.

RURAL OUTLYING AREAS

....

POLICIES

Development in this land use designation shall be limited to encourage conservation of open space.

Any development that occurs in this land use designation shall be encouraged to use clustering, density shifting or other innovative techniques.

Development less than 420 acres shall use transfers of development rights innovative techniques, including, but not limited to, clustering, density shifting, and Planned Unit Developments. The use of provisions as allowed in Performance Based Cluster Platting shall be available in this designation with consideration for up to a 1200% density bonus through the transfer of development rights program.

The use of a Transfer of Development Rights Program (TDRs) is preferred and shall be strongly encouraged.

The County shall not extend county roads into lands designated as Rural Outlying Lands, unless identified as a transportation corridor in the Kittitas County Transportation Plan.

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39 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 52.
DESIGNATION CRITERIA

Criterion 1. Large undeveloped parcels with no direct county road or state highway access.

Criterion 2. Lands located outside of an identified Irrigation Entity.

Criterion 3. Lands that do not meet the criteria for Commercial Agriculture, Commercial Forest, and Mineral Lands.

Criterion 4. Lands in close proximity to Public Lands and private lands that have historically provided access to public recreation areas.

Criterion 54. Lands previously designated as Commercial Forest and Commercial Agriculture land use that no longer meet the criteria for Commercial Forest and Commercial Agriculture lands.

Criterion 65. May include lands previously zoned Agriculture-20 and Forest and Range-20. Lands zoned as such shall continue to retain a 1 dwelling unit per 20 acre development density, and shall be classified under the Rural -20 zone.

Criterion 76. May include lands classified under “open space” tax classification per RCW 84.34.

Criterion 87. May include lands which have public values that must be protected under state law including but not limited to:
   i. Shorelines
   ii. Wetlands
   iii. Sensitive fish and wildlife habitat

Criterion 98. May include lands which have been mapped as floodway, or which have excessively steep slopes, unstable soils or other mapped critical area feature is predominant.

Criterion 108. Shall include rural lands. May include lands that were formerly designated as Commercial Forest Lands that could provide a buffer between Rural Residential and Commercial Forest Lands and Commercial Agricultural Lands.

DENSITY

Standard 1. Density in this land use designation shall be
   a. 1 dwelling unit per 420 acres.
   b. 1 dwelling unit per 80 acres consistent with Standard 2 below excluding non-conforming lots existing at the time of adoption of this ordinance.
   c. 1 dwelling unit per 205 acres when planned and developed using the transfer of development rights program the Performance Based Cluster Pilot.

Standard 2. De-designated natural resource lands shall be at existing density unless, plans for de-designation have been reviewed and subject to approval by the following committees.
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 22

a. Commercial Forest Lands shall be reviewed by the Forest Lands Advisory Committee.
b. Commercial Agriculture lands shall be reviewed by the Agricultural Lands Advisory Committee.

Standard 3. Land use plans shall be reviewed and shall be subject to approval by the Land Use Advisory Committee for consistency with requested Rural Land Use Designation.

Standard 4. The minimum lot size shall be 420 acres for lots created not using innovative techniques that is consistent with the density of 1 dwelling unit per 420 acres.

Standard 5. Maximum lot size is 1 acre unless otherwise determined by Kittitas County Environmental Health Department or the Washington State Department of Health requirements for lots developed using the transfer of development rights program—innovative techniques.

RURAL RECREATIONAL AREAS OVERLAY

It is unclear to us why the Rural Recreational Areas Overlay is needed. Presumably new master planned resorts and clustered development can be located in most of the rural designations already, including the Rural Outlying Areas. Consequently, it appears this designation is unneeded. We also disagree that the GMA overlooks second homes, indeed master planned resorts, such as Suncadia in Kittitas County, are designed specifically to accommodate second homes.

General Comments

We also recommend that the comprehensive plan clearly identify the zones that are to implement the comprehensive plan designations. Currently, it is unclear which zones can be adopted for land in the various comprehensive plan designations. This has led to rezones where zones inconsistent with the comprehensive plan designation have been adopted, creating significant problems for the county. We recommend the county adopt the following table as part of its comprehensive plan, in addition to the rural table above, to clearly show which zones can be used to implement the various comprehensive plan designations.

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<td><strong>Comprehensive Plan Designation</strong></td>
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| Commercial Forest | Commercial Forest (CF)  
Master Planned Resort (MPR) |
| Commercial Agriculture | Commercial Agriculture (CA)  
Wind Farm Resource Overlay |
| Urban Residential | Residential (R)  
Residential (R-2)  
Historic Trailer Court (H-T-C) |
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**Do not approve the City of Kittitas UGA expansion as it is unneeded and violates the GMA**

In *Kittitas County Conservation et al. v. Kittitas County* EWGMHB Case No. 07-1-0004c, the Eastern Washington Growth Management Hearings Board held that:

Under the GMA, urban growth areas may not be expanded unless there is a need for additional capacity, based on the state Office of Financial Management (OFM) population projections, patterns of development, and other similar factors identified in RCW 36.70A.110. The purpose of a land capacity analysis is to provide the information necessary to determine whether there is a need to expand an UGA. In the absence of a land capacity analysis, there is no demonstration of need and expansion is not justified.⁴⁰

⁴⁰ Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 76.

RCW 36.70A.110 requires not just the existence of evidence in the record that can be used to support an UGA expansion, but an affirmative assessment by the County as to whether: (1) there is a need to expand the UGA based on the OFM twenty-year population projections, and other considerations, such as the amount of developable land projected to be available within the existing UGA and (2) whether the particular land at issue is appropriate for inclusion in the UGA. See *Moitke v. Spokane County*, EWGMHB No. 05-1-0007, FDO, at 8-10 (Feb. 14, 2006). As this Board explained in *McHugh v. Spokane County*, EWGMHB, No. 05-1-0004, FDO, at 19-20 (Dec. 16, 2005), [T]he County must conduct the analysis (or, at minimum, substantively verify an analysis provided by a proponent) and must include the analysis in the record so it can be evaluated by the public.⁴¹

⁴¹ Id. at 76 – 77.
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 24

There must also be a current capital facility plan which meets the requirements of RCW 36.70A.070(3) to support the urban growth area expansion.  

While the City of Kittitas had done an analysis, the county had not and no capital facility plan had been prepared to address the expansion. Therefore the City of Kittitas urban growth area expansion violated the GMA. Like last time, we cannot find any analysis prepared by the county nor any capital facility plan for the land included in the expansion. This UGA expansion continues to violate the GMA.

Further, the City of Kittitas’ Land Use and Population Analysis shows that the existing Kittitas Urban Growth Area (UGA) has more land, 3.4 acres more, than needed to accommodate the city’s extension of the 2025 population target to 2027. The Land Use and Population Analysis concludes that “based on the above land analysis Kittitas has enough land to meet OFM population projections allocated by the County ....” This is confirmed by the new City of Kittitas Comprehensive Plan which concluded that the City of Kittitas UGA has land available to meet the city’s residential needs while preserving critical areas, providing parks, and rights of way while keeping values affordable. In addition, taken as a whole, the Kittitas County UGAs are oversized.

The City of Kittitas Comprehensive Plan argues that it needs more land for employment, but the comprehensive plan includes no analysis showing that the 290 acres of agricultural land in the city zoned Mixed Commercial/Industrial or the 75 acres of agricultural land in the city zoned Industrial are inadequate. Indeed, since the comprehensive plan estimates that only 60 percent of this land will convert from agricultural uses over the next 20 years, it is plainly in excess of the city’s 20 year demand.

Thus, there is no justification for the proposed City of Kittitas UGA expansion. The Board of County Commissioners should deny this application. The lands proposed for the UGA addition should be considered as agricultural lands of long-term commercial significance.

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42 Id. at 77.
43 Id. at 76 – 78.
44 City of Kittitas Land Use and Population Analysis pp. 1 – 6 of 6 (June 2006). On the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Kittitas UGA Analysis from 10-27%20to%2011-1%20Comments%20Recievied%20BOCC.pdf.”
45 Id. at p. 6 of 6.
46 City of Kittitas Comprehensive Plan p. 12 of 80 (July 2007) included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Compiled adopted comp plan.pdf.”
47 See page 44 of this letter for Appendix B: Urban Growth Area Calculations for Kittitas County Urban Growth Areas.
48 City of Kittitas Comprehensive Plan p. 12 of 80 (July 2007).
49 Id.
Kittitas County must revise its UGAs because they are oversized

In Kittitas County Conservation et al. v. Kittitas County EWGMHB Case No. 07-1-0004c, the Eastern Washington Growth Management Hearings Board held that:

Further the County is out of compliance with the GMA by failing to conduct a proper land quantity analysis to determine the appropriate size of the UGA, and the County did not provide an updated Capital Facilities Plan to accommodate the UGA expansions for the City of Kittitas and for the City of Ellensburg. Such expansions are out of compliance. This issue is remanded with directions for the County to conduct a proper land quantity analysis and an updated CFP in compliance with the GMA and to show the work done. 50

As we document in Appendix B of this letter, the Kittitas County urban growth areas are oversized. 51 We have been unable to find any evidence that Kittitas County has conducted a proper land quantity analysis or updated capital facilities plan. The county has certainly not shown its work. The county’s failures mean that the county continues to be out of compliance with the GMA.

Kittitas County must adopt designation criteria for its comprehensive plan designations and to guide its zoning and eliminate is inconsistencies between its comprehensive plan’s Future Lands Use Map and the zoning map

In Kittitas County Conservation et al. v. Kittitas County EWGMHB Case No. 07-1-0004c, the Eastern Washington Growth Management Hearings Board held that Kittitas County’s failure to include criteria for the various land use designations, except for agricultural and mining lands for which it included criteria, violates the GMA. 52 We have not found any of those criteria for urban residential, commercial or industrial designations and zones. The county must remedy this failure to comply with the GMA.

For the proposed zoning and comprehensive plan maps we have the following preliminary recommendations.

50 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 76.
51 See page 44 of this letter for Appendix B: Urban Growth Area Calculations for Kittitas County Urban Growth Areas.
52 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 41.
Positive Aspects

We are pleased to see the committees have included a variety of land use designations and complimentary zones within the rural area of Kittitas County.

We are also pleased to see an attempt in many areas to buffer designated resource lands with zoning that will protect these lands from potential interference of nearby dense development. This effort appears to be incomplete at this time.

General Concerns

We are very disappointed that an inappropriate policy to not downzone any land in the county appears to promote continued sprawl in Rural Lands and leads to identification of excessive amounts of zoning for 3 and 5 acre densities in Rural Lands. This appears to drive much of the use of rural designations rather than adherence to their own criteria.

GMA’s goals and requirements are not yet met because the county has not redone its designation of natural resource lands. It appears a new analysis of commercial agriculture and forest lands has not been included at this time.

The Rural Transition Zones between existing Urban Growth Areas and rural low density zones do not identify additional industrial and commercial uses and locations.

A comprehensive review of mineral lands and wind resources was not included in these draft maps or text.

Uses found to be non-compliant in rural zones in the Hearings Board order of March 21, 2008 have been retained in comparable rural zones.

Densities and uses found to be non-compliant with airport safety zones in the March 21, 2008 order have not been amended.

Specific Area Comments

In the proximity of unincorporated Easton (former UGN):

1. The amount of rural residential needs to be greatly reduced. As it is evident that population forecasts have not been used here or county wide to justify this designation and zone.
2. The use of rural outlying designation and zoning to protect commercial forest lands needs to be increased.
In the proximity of unincorporated Thorp (former UGN) and west in Manastash/Cove Road:

1. The use of rural residential next to commercial agriculture does not protect these resource lands.
2. As with other areas, the required analysis of agricultural lands for designation as agricultural lands of long-term commercial significance has not been done to date.
3. Thorp is now designated rural where former UGN existed and the commercial designation and zoning must be removed. Existing commercial uses are legally nonconforming and cannot be justified as commercial on maps.
4. The use of rural residential in Thorp as with the other former UGN’s does not conform to criteria because it is applied to large lots, justified based on prior inappropriate rezones and former UGN boundaries not logical outer boundaries.

In the proximity of Roslyn and Cle Elum:

A distinct and adequate in size distance between the cities’ UGAs is not denoted and the issue of coordination of land use and zoning in this area has been the subject of numerous comp plan amendment controversies over many years. These two communities should be separated by rural lands and their spheres of influence identified.

In proximity to what is referred to as the “South Corridor” (Easton to east of Peoh Point):

1. There is an inconsistent application of rural outlying designation and zoning to these lands that roughly follow the Interstate 90 corridor. All commercial forest lands require protection through limits on densities and incompatible uses.
2. This area too has identified lands in large lots without adequate transportation for associated densities as rural residential (densities 1 du per 3 or 5 acres).

All former UGNs.

1. The commercial designations and zoning previously applied to UGNs must be removed or LAMIRDs designated. Existing commercial uses are legally non-conforming and cannot be justified as commercial on maps. They no longer can identify a service area as they are designated rural and are not LAMIRDs or UGAs.
2. The use of rural residential in the former UGN’s does not comply with the GMA nor does it conform to criteria because it is applied to large lots, justified based on prior inappropriate rezones and former UGN boundaries.
Transition Zones.

1. These zones that abut Urban Growth Areas and are intended to establish a transition area for future “residential growth”, protect future urban expansion, encourage use of areas targeted for urban growth, etc. beyond the current mandated planning period fail to:
   a. include any identification of lands that may be appropriate for industrial uses; and
   b. include any identification of lands that may be appropriate for commercial uses.

2. Although this designation and zone identify a planning period beyond that which is required by law, the criteria fail to identify the population projections and a land inventory analysis to justify it.

Appearance of Consistency and Fairness.

1. We have found numerous incidents of individual’s land holdings being included in the highest proposed density areas which do not conform to the criteria set forth in the text and in some cases appear to be disconnected from other areas with the same designation and zone.

2. In one case there appears to be a faint outline of an island of existing inappropriate zoning in the Badger Pocket area of Lower County.

3. The language in some criteria which states that logical boundaries are a requirement for inclusion of land in some designations and zoning appears to be applied inconsistently.

4. The lack of application of protective designation and zoning to commercial forest lands and commercial agricultural lands appears to favor individual ownerships in addition to being inconsistently applied; an example is South Corridor southeast of Easton to east of Peoh Point near Cle Elum.

5. As in Thorp, inappropriate inclusion of level of investment made on specific parcels is not compliant and the criteria must be removed and maps edited appropriately.
Detailed Comments on the EWGHB Compliance Draft Kittitas County Code (January 18, 2008)

The proposed amendments to Chapter 16.09 Kittitas County Code (KCC), Performance Based Cluster Platting, do not comply with the Growth Management Act. See pages 1 through 8 of Chapter 16.09 KCC EWGMHB Compliance Draft (4-11-08)

In Kittitas County Conservation et al. v. Kittitas County, the Eastern Board held that:

KCC 16.09 allows 100% bonus density increases within the Rural-3, Agricultural-3, Rural-5 and Agricultural-5 zones, which would create high density urban development in the rural areas and is contrary to the goals of the GMA. The Ordinance also does not include a limit on the maximum number of lots allowed on the land included in the cluster; prohibit the number of connections to public and private water and sewer lines; nor include requirements to limit development on the residual parcel.53

While we appreciate that the proposed amendments no longer allow a density bonus for the Rural-3 and Agriculture-3 zones, Chapter 16.09 KCC still allows a 60 percent density bonus in the Rural-5 and Agriculture-5 zones and a 100% bonus in the Agriculture-10 and Rural-10 zones. So the maximum density in the Rural-5 and Agriculture-5 zones is one dwelling unit per three acres. As we show in Appendix A, densities outside urban growth areas and limited areas of more intense rural development with densities greater than one dwelling unit per five acres violate the Growth Management Act. The Agriculture-10 and Rural-10 zones, with their allowed densities of one dwelling unit per five acres, compounds this problem. As the Eastern Board has held:

“Generally 5-acre lots in rural areas would be more difficult to justify, especially if large number of such lots exist.” The Board will review number, location and configuration of those lots to “determine whether such lots constitute urban growth; presents an undue threat to large-scale natural resource lands; thwarts the long-term flexibility to expand the UGA; or, will otherwise be inconsistent with the goals and requirements of the Act.”54

We urge you eliminate the density bonuses for the Rural-5 and Agriculture-5 zones and reduce the density bonus for the other zones to no more than 50 percent. We also urge the county to

53 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 52.
54 City of Moses Lake v. Grant County, EWGMHB Case No. 99-1-0016, Order on Petitioner’s Motion for Reconsideration (Aug. 16, 2000), at 1 – 2 of 7.
adopt limits on the maximum number of lots allowed in the cluster, the maximum number of lots in a cluster pod (the number of cluster lots near each other), spacing requirements for clusters, limits on the number of connections required to public and private wells and septic systems, and to prohibit future development of the residual parcel. These changes are needed to protect rural character, protect neighboring property owners and senior water rights holders, and comply with the GMA.

**We appreciate that the natural resource lands notification will be required for all permits, but Policies GPO 2.129B, GPO 2.142B, GPO 2.145, and GPO 8.15 & KCC § 17.04.060 should also include the notice that mineral operations may apply for mining related activities. See pages 34, 41, 42, and 111 of the Compliance Draft Comp Plan (4-11-08) & page 3 of EWGMHB Compliance Draft 4-11-08 KCC Title 17 | Zoning**

We appreciate and support that the natural resource lands notification will be required for all permits, this will help farmers continue to remain in farming. However, we are concerned that Policies GPO 2.129B, GPO 2.142B, GPO 2.145, and GPO 8.15, and KCC § 17.04.060 do not provide, as RCW 36.70A.060(1)(b) requires, that “the notice for mineral resource lands shall also inform that an application might be made for mining-related activities, including mining, extraction, washing, crushing, stockpiling, blasting, transporting, and recycling of minerals.” We recommend the county add this or a similar provision to the policies and regulations.

Policy GPO 8.15 on page 111 continues to limit the notice to “residential development activities.” The Eastern Board has already held this violates the GMA. The policy must be revised.

**Chapter 17.14 KCC, Performance Based Cluster Plat Uses, needs to be amended to prohibit urban growth outside urban growth areas. See pages 22 –23 of EWGMHB Compliance Draft (4-11-08) KCC Title 17 | Zoning**

The Kittitas County Conservation petitioners Issue 10 included Chapter 17.14 KCC, Performance Based Cluster Plat Uses, because these provisions allow urban uses in outside urban growth areas.\(^{55}\) The Eastern Board agreed that these provisions violated the GMA. However, the county has not proposed any amendments to these provisions.\(^{56}\) We recommend that these provisions be amended to prohibit urban growth outside urban growth areas.

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\(^{55}\) *Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order* (August 20, 2007), at 47.

\(^{56}\) *Id.* at 47 – 54.
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 31

We appreciate the County’s proposed repeal of KCC § 17.16.121, Administrative Uses, since it indicates that the Residential zone may be applied outside the urban growth areas.

We appreciate the county’s proposed repeal of KCC § 17.16.121, Administrative Uses. It will help clarify the county’s development regulations.

We appreciate the County’s proposed repeal of KCC § 17.18.090 17.16.121, Administrative Uses, since it indicates that the Residential zone may be applied outside the urban growth areas.

We appreciate the county’s proposed repeal of KCC § 17.18.090, Administrative Uses. It will help clarify the county’s development regulations.

Chapter 17.20 KCC, RR – Rural Transition Zone, shall not allow urban growth outside the rural area. See pages 28 – 31 of EWGMHB Compliance Draft (4-11-08) KCC Title 17 | Zoning

The county is proposing to allow densities of one dwelling unit per three acres in the RR – Rural Transition Zone. While Kittitas County Superior Court has issued a stay, that stay only relieves the county of the obligation to repeal the R-3 and A-3 zones. Any amendments must comply with the Growth Management Act. Consequently the amendments to the RR zone can only allow one dwelling unit per five acres outside limited areas of more intense rural development.

Do not adopt Chapter 17.28A KCC, A-10 - Agricultural Zone-10, because it is unneeded and allows urban growth outside the urban growth area. See pages 45 – 50 & 60 – 63 of EWGMHB Compliance Draft January 18, 2008 KCC Title 17 | Zoning

If we understand the proposed A-10 zone correctly, it is a rural zone. We think this zone largely duplicates the A-20 zone, which is another rural zone. Many of the areas where this zone is applied should be designated as agricultural lands of long-term commercial significance.

We are also concerned that the proposed zone allows urban growth outside urban growth areas. Urban growth is prohibited outside the urban growth area, including the rural area.\(^{37}\) However, some of the uses in the A-10 zone are urban uses, such as duplexes, hospitals, governmental

uses, and convalescent centers. We urge you to delete these urban uses if the county decides to adopt this new zone.

*Eliminate the one-time splits allowed in KCC § 17.29.040, A-20 - Agricultural Zone, because it allows urban growth outside the urban growth area.* See page 49 of Chapter 16.09 KCC EWGMHB Compliance Draft (4-11-08)

As you know, the signers of this letter have won an appeal of the county’s regulations that allow one time splits smaller than five acres in the rural area and on natural resource lands. As we show in Appendix A, densities outside urban growth areas and limited areas of more intense rural development with densities greater than one dwelling unit per five acres violate the Growth Management Act. Appendix A also shows these densities interfere with normal agricultural practices, harming agriculture and leading to the conversion of working farms. As Appendix A also shows, the county does not have the unallocated water to serve this additional rural growth, the water used will come at the expense of senior water right holders. Consequently, we recommend you either eliminate the one-time splits or limit them to a rural density.

*Eliminate the uses that fail to protect working farms in Chapter 17.31 KCC, Commercial Agriculture Zone.* See pages 63 – 65 of Chapter 16.09 KCC EWGMHB Compliance Draft (4-11-08)

As you know, we have successfully appealed the county’s failure to protect working farms from incompatible uses. While we appreciate the county’s proposal to delete sand and gravel mines from the uses allowed in the Commercial Agriculture zone, we continue to object to the other illegal uses allowed in this zone.

In the *Lewis County v. Western Washington Growth Management Hearings Bd.*, the Washington State Supreme Court held that allowed uses on resource lands must not negatively impact agricultural lands of long-term commercial significance. The Supreme Court affirmed the Western Board’s conclusion that allowing non-farm uses within farmlands, including mining, residential subdivisions, telecommunications towers, public facilities, and recreational uses violated the Growth Management Act. We urge you to repeal these and similar uses now to save the county’s much put upon taxpayers the expense of the county having to remove them later.

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58 *City of Moses Lake v. Grant County,* EWGMHB Case No. 99-1-0016, Order on Petitioner’s Motion for Reconsideration (Aug. 16, 2000), at 1 – 2 of 7.
60 Id.
Honorable Mark McClain, Chairman
Honorable Alan Crankovich
Re: Compliance Update Public Hearing May 6, 2008
May 6, 2008
Page 33

Proposed KCC 17.36.025 should limit the overall density in a PUD to the density of the underlying zone and PUDs must be limited to protect rural character. See pages 63 – 67 of EWGMHB Compliance Draft (4-11-08) KCC Title 17 | Zoning

We strongly supported the prior proposal to adopt KCC 17.36.025, PUD Density, which would have limited the overall density in a Planned Unit Development (PUD) to the maximum density of the underlying zone. This change is needed to protect the county’s rural character, protect senior water rights holders, and comply with the Growth Management Act.

However, the new proposal is to provide that “[t]he overall density of any PUD residential development shall be consistent with the County Wide Planning Policies.” This proposal has two problems. First, a potential applicant now has to go to the trouble of getting a current copy of the countywide planning policies, which is frankly a waste of time. It is better to include the standard in the development regulations. Second, RCW 36.70A.210(1) provides that “a ‘county-wide planning policy’ is a written policy statement or statements used solely for establishing a county-wide framework from which county and city comprehensive plans are developed and adopted pursuant to this chapter.” So we are concerned that the county cannot require a proposed development to comply with the countywide planning policies. Consequently, we urge the county to limit the overall density in a Planned Unit Development (PUD) to the maximum density in the underlying zone.

In addition, as the Eastern Board wrote: “The County’s Planned Unit Development Zone Ordinance (KCC 17.36) further aggravates the problem of urban-like development in the rural and agricultural zones without the appropriate controls in place.” This includes more than just density, it also includes include limits on the maximum number of lots allowed in the cluster, limits on the number of connections to public and private water and sewer lines, and requirements to limit development on the residual parcel. The provisions that allow urban uses outside urban growth areas must also be eliminated. None of these fixes are included in the proposal.

The county is also out of compliance with its own County–wide Planning Policies which require the Conference of Governments to review the cumulative effects of PUDs when it reviews population allocations. Policy A from Section 6 of the County–wide Planning Policies and Attachment # 3, Number 7 provide:

Policy A: KCCOG shall review the cumulative effects of PUD development when reviewing population allocations. (See Attachment #3.)

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61 Kittitas County Conservation et al. v. Kittitas County, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 53.

62 Id. at 52 – 53.
7. KCCOG shall review the cumulative effects of PUD development when reviewing population allocations.

The population allocations were before the Conference of Governments for review in November 2007, but the conference did not review the cumulative effects of PUD development. We urge the Conference of Governments to undertake this review as part of this update.

*Kittitas County must adopt regulations to ensure that related developments are considered as one application to protect surface and ground water resources, farmers, and senior water rights holders.*

In order to circumvent adequate review of short and long subdivision applications and to use exempt wells, some developers have applied for multiple applications for adjacent land. The Washington State Department of Ecology reviewed Kittitas County Washington State Environmental Policy Act (SEPA) documents and found that 75 percent of the 10 to 14 lot developments were from developers and land owners with multiple developments. This has resulted in significant adverse impacts on Kittitas County residents, property owners, and water rights holders.

The Eastern Board held that Kittitas County must update its development regulations to ensure that side-by-side applications are not allowed in a manner that allows illegal wells and harms ground water resources. This issue is even more serious because all of the water in the Yakima basin is already allocated. We have been unable to find any policies or regulations addressing this serious problem in any part of the update. We urge you to do so. We suggest adding the following new section to the Kittitas County planning regulations in Title 16 KCC, Subdivisions.

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64 *Id.*

65 *Kittitas County Conservation et al v. Kittitas County*, EWGMHB Case No. 07-1-0004c, Final Decision and Order (August 20, 2007), at 53.

66 Jeff Switzer, *Everett Herald* Abuse of Water Laws Jeopardizes Supply for People, Fish (September 4, 2007) included on the data CD enclosed with the paper original of this letter with the filename “HeraldNet_Abuse of water laws jeopardizes supply for people, fish.pdf” and Jonathan Martin, *Seattle Times* Big growth, big fight over water (November 21, 2007) included on the data CD enclosed with the paper original of this letter with the filename: “Local News_Big growth, big fight over water _Seattle Times Newspaper.pdf.”
16.04.060 Land to be included in an Application for a Division of Land.
Every application for a division of land or a boundary line adjustment shall include all contiguous land within a common ownership, under the control of the applicant(s), or within a common plan of development or sale.

Amend KCC § 17.98.020, Petitions, to require that rural rezones be processed as part of the annual comprehensive plan update, and adopt a clarification to the criteria for rezones

We recommend that KCC § 17.98.020(6) be amended to require that rural zones be processed as part of the annual update to the comprehensive plan. We think this will better protect rural Kittitas property owners and rural character. We recommend the exception for a specific development application be dropped since that exception could swallow the rule.

KCC § 17.98.020(7)(a) currently requires that a proposed amendment be compatible with the comprehensive plan. The Growth Management Act, in RCW 36.70A040 requires Kittitas County to adopt development regulations, including a zoning map, “that are consistent with and implement the comprehensive plan…..” We recommend that KCC § 17.98.020(7)(a) be revised to track the Growth Management Act, rather than the weaker “compatible” language currently in that subsection. Our recommended additions are double underlined and our recommended deletions are double struck through.

6. A petition requesting a change on the zoning map for areas designated Rural in Kittitas County shall be processed consistently with the Annual Comprehensive Plan Docketing Process to address compliance with the goals, policies and objectives of the adopted comprehensive plan and cumulative impacts, unless the petition is accompanied with a specific development application.

6.7. A petition requesting a change on the zoning map from one zone to another must demonstrate that the following criteria are met:
   a. The proposed amendment is consistent with and implements compatible with the comprehensive plan; and
   b. The proposed amendment bears a substantial relation to the public health, safety or welfare; and
   c. The proposed amendment has merit and value for Kittitas County or a subarea of the county; and
   d. The proposed amendment is appropriate because of changed circumstances or because of a need for additional property in the proposed zone or because the proposed zone is appropriate for reasonable development of the subject property; and
   e. The subject property is suitable for development in general conformance with zoning standards for the proposed zone; and
   f. The proposed amendment will not be materially detrimental to the use of properties in the immediate vicinity of the subject property; and
g. The proposed changes in use of the subject property shall not adversely impact irrigation water deliveries to other properties.

Conduct a Washington State Environmental Policy Act Review of the proposed comprehensive plan and development regulation amendments.

The Washington State Environmental Policy Act (SEPA) requires Kittitas County to conduct an environmental review of all non-exempt county actions including the adoption of comprehensive plan and zoning amendments. A review of the county’s website and the SEPA register does not indicate that the county has complied with this requirement. We urge the county to comply with this important requirement and take into account the impacts on the land, water, climate, and environment that these proposals will cause. If the county conducts a SEPA review, please provide us with a copy of the environmental documents.

Thank you for considering our comments. If you would like more information please contact us.

Sincerely,

James Boyle, Acting Chairman
Kittitas County Conservation Coalition

Tim Trohimovich, AICP
Planning Director, Futurewise
e-mail: tim@futurewise.org

Enclosures
Appendix A: Densities greater than one dwelling unit per five acres outside UGAs and LAMIRDSs violate the GMA

The Eastern Washington Growth Management Hearings Board, in defining what is “urban growth” and what is allowable rural development, has held that in rural areas, densities no greater than one housing unit per five acres is allowed. This decision is based on the requirements of the Growth Management Act (GMA). The GMA prohibits urban growth outside the urban growth area, including rural areas. The GMA, in RCW 36.70A.030(17), defines urban growth as “… growth that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources, rural uses, rural development, and natural resource lands designated pursuant to RCW 36.70A.170….” When allowed to spread over wide areas, urban growth typically requires urban governmental services.

Five acres is the minimum amount of land that can support even a small farm. The Census of Agriculture shows that the average Kittitas County farm in 2002 totaled 248 acres. The smallest category of farm reported by the Census of Agriculture is farms from one to nine acres in size. In Kittitas County in 2002 there were 120 farms in that category and they consisted of 682 acres, making the average size of these farms as 5.86 acres. Since almost six acres is the smallest size that supports agriculture and lots that are too small to support agriculture are defined as urban growth, this data certainly supports the Eastern Board’s holding on rural densities.

Rural and resource land densities of one dwelling unit per three acres or greater will lead to many adverse impacts on Kittitas County land owners, residents, and taxpayers. These densities lead to what is called rural sprawl.

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67 The Growth Management Act (GMA) created three state agencies to interpret the GMA and to hear appeals alleging that cities, counties, or state agencies are in violation of the GMA. Kittitas County is in the jurisdiction of the Eastern Washington Growth Management Hearings Board.
68 City of Moses Lake v. Grant County, EWGMB Case No. 99-1-0016 Final Decision and Order pp. *5 – 6 of 11 (May 23, 2000). See also Diehl v. Mason County, 94 Wn. App. 645, 655-57, 972 P.2d 543, 547-49 (1999) (Residential densities of one housing unit, or more, per 2.5 acres “would allow for urban-like development” and are prohibited outside urban growth areas including in rural areas).
71 Id.
In *Rural Sprawl: Problems and Policies in Eight Rural Counties*, Rick Reeder, Dennis Brown, and Kevin McReynolds of the United States Department of Agriculture’s Economic Research Service described the results of a telephone survey of eight fast growing rural counties. With its 1996 to 2006 population growth rate of 21.43 percent, Kittitas County is within the range of the counties studied. Among the problems the study found were school crowding, traffic congestion, water supply problems, and pollution from septic tanks. Most of the eight counties also reported problems maintaining public services including police and fire services. Interestingly, Washington and Florida counties appeared to be in the best shape to manage public services, due in part to both states’ growth management laws. The authors also concluded that Mason County’s Growth Management Act-required zoning regulations had “significantly contained rural sprawl.” Outside of limited areas of more intense rural development and historic towns, Mason County’s highest density rural zone is one dwelling unit per five acres.

Professor Tom Daniels also wrote about the adverse impacts of rural sprawl in a paper entitled *What to Do About Rural Sprawl?* Professor Daniels wrote:

Rural sprawl creates a host of planning challenges. Rural residential sprawl usually occurs away from existing central sewer and water. Homeowners rely on on-site septic systems and on wells for water. Often, these systems are not properly sited or not properly maintained. For example, a 1998 study in Indiana reported that between 25 and 70 percent of the on-site septic systems in the state were failing.

When septic systems fail in large numbers, sewer and water lines must be extended into the countryside, often a mile or more. Public sewer is priced according to average cost pricing. This means that when sewer lines are extended, there is a strong incentive to encourage additional hook-ups along the line. So when a sewer line is extended a mile or more, development pressure increases along the line. This usually results in a sprawling pattern, like a hub and spoke from a village to the countryside.

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73 *Id.* at 201 to 202.

74 *Id.* at 202.

75 *Id.*

76 *Id.* at 204.

The spread-out rural residents are completely auto-dependent and are often long-range commuters. This puts greater demands on existing roads and increases the demand for more and better roads. The greater traffic also results in the burning of more fossil fuels, producing more air pollution.

Rural residents also have added to the national trend of Americans consuming more land per person for a residence. The demand for 2- to 10-acre house lots has driven up land prices in rural fringe areas beyond what a farmer or forester can afford to pay. Moreover, as land prices rise, farmers and foresters are more likely to sell their land for house lots. This in turn causes a greater fragmenting of the land base, making it more difficult for remaining farmers and foresters to assemble land to rent. Rented land is especially important for commercial farming. Nationwide, about 40 percent of farmland is rented.

Newcomers to the countryside often have little understanding of the business of farming or forestry. The conflicts between farmers and non-farm neighbors are well-known. Neighbors typically complain about farm odors, noise, dust, crop sprays, and slow moving farm machinery on local roads. Farmers point to crop theft, vandalism, trash dumping, and dogs and children trespassing and harassing livestock. In forested areas, the increase in residents bring a greater likelihood of fire. In short, farming and forestry are industrial uses. They should be kept as separate as possible from rural residential development.78

Another adverse effect of dense rural development is adverse impacts on streams and wetlands. The Rural Element of the Comprehensive Plan is required to protect “critical areas, as provided in RCW 36.70A.060, and surface water and ground water resources....”79 Critical areas include wetlands and streams.80

In a recent review of these studies, Schueler concludes that “this research, conducted in many geographical areas, concentrating on many different variables, and employing widely different methods, has yielded a surprisingly similar conclusion – stream degradation occurs at relatively low levels of imperviousness (10-20%).” Recent studies also suggest that this threshold applies to wetland health. Hicks found a well-defined inverse relationship between freshwater wetland habitat quality and impervious surface area, with wetlands suffering

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79 RCW 36.70A.070(5)(c)(iv).
80 RCW 36.70A.030(5).
Honorable Mark McClain, Chairman  
Honorable Alan Crankovich  
Re: Compliance Update Public Hearing May 6, 2008  
May 6, 2008  
Page 40

impairment once the imperviousness of their local drainage basin exceeded
10%.  

Densities of one housing unit per acre generally have 13 percent of the lot in impervious
surfaces. Three to five acre lots generally have impervious surfaces of 8.3 percent. Five acre
lots generally have impervious surfaces of 5.4 percent.

So, impervious surfaces above ten percent adversely affect streams and wetlands. Over the long-
term, a five acre rural density is the highest density that can effectively maintain a ten percent
effective impervious surface maximum. This is especially true given that many subbasins will
include urban growth areas with much higher percentages of impervious surfaces. Some rural
uses, such as agricultural product processing plants, may also have higher impervious surfaces.
Higher densities, such as one housing unit per three acres or one dwelling unit per acre, mean
that impervious surfaces will exceed this percentage in Kittitas County, resulting in significant
adverse environmental impacts and adverse impacts on surface water quality.

The State of Washington Department of Community, Trade, and Economic Development
(CTED) also recommends against this type of sprawling, low-density development. CTED
recommends rural residential densities of one housing unit per five and 10 acres. For rural
agricultural and forest uses outside of agricultural and forest lands of long-term commercial
significance, CTED recommends densities of one dwelling unit per 20 acres.

High rural densities, densities greater than one dwelling unit per five acres, have the following
additional adverse impacts:

- These densities increase costs to taxpayers by allowing land development that will require
  services that are expensive to provide. On average, rural residential development costs

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81 Chester L. Arnold, Jr. & C. James Gibbons, Impervious Surface Coverage: The Emergence of a Key
CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with
the filename: “9373702.pdf.”

82 United States Environmental Protection Agency, National Management Measures to Control Nonpoint Source
Pollution from Urban Areas p. 1-9 (Publication Number EPA 841-B-05-004, November 2005). Downloaded on
January 3, 2006: http://www.epa.gov/owow/nps/urbanmm/ and included on the data CD enclosed with Futurewise’s
February 1, 2008 letter to Kittitas County Community Development Services in the “Water Quality” directory with
the file name “urban_guidance[1].pdf.”

83 Id.

84 Id.

18-19 (Olympia, Washington: Washington State Department of Community, Trade and Economic Development,
June 1999). Included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County
Community Development Services with the filename: “Keeping the Rural Vision.pdf.”

86 Robert W. Burchell, Naveed A. Shad, David Listokin, Hilary Phillips, Anthony Downs, Samuel Seskin, Judy S.
Davis, Terry Moore, David Helton, and Michelle Gall. The Costs of Sprawl—Revisited pp. 50 – 52 (Transit
Cooperative Research Program Report 39, Transportation Research Board, National Research Council 1998),
more than it generates in revenues. In contrast, working farms and forests cost less in services than they generate in taxes. "For every dollar of revenue from farm and open land, 51 cents was required to cover associated services." Put drinking water supplies at risk by allowing high density development in areas that contribute to drinking water for county property owners, farmers, ranchers, residents, and businesses. This is an especially serious problem in Kittitas County since several recent newspaper articles document that all of the water in the Yakima basin is already allocated.

Harm the character of Kittitas County by allowing inappropriately high density developments in rural areas.

Increase traffic because more people drive alone and must drive longer distances to work and to meet the needs of their families. Sprawling places are likely to have more traffic fatalities per capita than more compact regions due to higher rates of vehicle use.

Building homes right next to forests increases risks for the homeowners, their families, the community, and firefighters.


Roger Coupal, Donald M. McLeod, & David T. Taylor, The Fiscal Impacts of Rural Residential Development: An Economic Analysis of the Cost of Community Services, Planning & Markets, University of Southern California, Vol. 5, Number 1 (2002). Downloaded from http://www-pam.usc.edu/volume5/v5i1a3s1.html on June 9, 2006 and included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the “Costs of Growth” directory with the filename: “Planning and Markets_Coupal, McLeod, and Taylor.pdf.”

American Farmland Trust, Cost of Community Services: Skagit County, Washington p. 17 (1999). Included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services in the “Costs of Growth” directory with the filename: “Skagit_County_COSCS.pdf.”


Jeff Switzer, Everett Herald Abuse of Water Laws Jeopardizes Supply for People, Fish (September 4, 2007) included on the data CD enclosed with the paper original of this letter with the filename “HeraldNet_Abuse of water laws jeopardizes supply for people, fish.pdf” and Jonathan Martin, Seattle Times Big growth, big fight over water (November 21, 2007) included on the data CD enclosed with Futurewise’s February 1, 2008 letter to Kittitas County Community Development Services with the filename: “Local News_Big growth, big fight over water _ Seattle Times Newspaper.pdf.”


Harms critical areas and other environmentally sensitive areas. Sprawl results in fish and wildlife habitat losses and habitat fragmentation, the separation of habitats by development. It also increases interaction between people and wildlife, increasing risk for both. Sprawl’s dispersed development pattern leads to the degradation of water quality by increasing runoff volume, altering regular stream flow and watershed hydrology, reducing groundwater recharge, and increasing stream sedimentation.

It is thus important to have a maximum density of one dwelling unit per five acres in the rural areas outside of properly designated LAMIRDs to maintain the rural character of Kittitas County, to protect drinking water supplies for both urban and rural residents and farmers and ranchers, to protect water quality, and to protect rural residents.

As this analysis shows, the Rural-3 (R-3) and Agriculture-3 (A-3) zones, both of which allow urban densities outside the urban growth areas, are illegal and must be corrected as part of the 2007 development regulation update. In addition, the Performance Based Cluster Platting, Chapter 16.09 KCC should be amended so that it does not allow densities less than one dwelling unit per five acres outside urban growth areas and limited areas of more intense rural development.

Agriculture requires lower densities still. In Save Our Butte Save Our Basin Society, et al. v. Chelan County, an agricultural minimum lot size smaller than ten acres was found to violate the Growth Management Act. A peer-reviewed journal article found agricultural densities of less than one dwelling unit per 40 acres ineffective. In Tugwell v. Kittitas County, the Court of Appeals agreed that parcels of less than 20 acres were too small to farm.

In addition to conserving agricultural land, the Growth Management Act, in RCW 36.70A.020(8), requires counties to adopt regulations that “shall assure that the use of lands adjacent to agricultural, forest, or mineral resource lands shall not interfere with the continued
use, in the accustomed manner and in accordance with best management practices, of these designated lands for the production of food, agricultural products ...." In *Tugwell v. Kittitas County*, the Court of Appeals agreed that parcels of less than 20 acres, especially lots three acres and smaller, interfered with normal agricultural uses on adjacent farmland by increasing liability insurance costs and traffic. Like in the *Tugwell* case, Kittitas County’s current development regulations designates and zones land immediately adjacent to agricultural lands of long-term commercial significance for residential development at a density of one dwelling unit per 3 acres and one dwelling unit per five acres. Like the *Tugwell* case, these small lots and residences will interfere with farming activities on the adjacent land.

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Appendix B: Urban Growth Area Calculations for Kittitas County Urban Growth Areas

<table>
<thead>
<tr>
<th>Jurisdiction/Area</th>
<th>2025 Population Target</th>
<th>2025 Population Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity from Land Capacity Analysis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kittitas/UGA</td>
<td>1,584</td>
<td>1,922</td>
</tr>
<tr>
<td>Ellensburg/UGA</td>
<td>23,764</td>
<td>40,374</td>
</tr>
<tr>
<td>Subtotal Land Capacity Analysis</td>
<td>25,348</td>
<td>42,296</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity from 2007 City Populations</td>
<td>2025 Population Target</td>
<td>2007 Population</td>
</tr>
<tr>
<td>Roslyn/UGA</td>
<td>1,320</td>
<td>1,020</td>
</tr>
<tr>
<td>South Cle Elum/UGA</td>
<td>1,056</td>
<td>580</td>
</tr>
<tr>
<td>Cle Elum/UGA</td>
<td>10,034</td>
<td>1,835</td>
</tr>
<tr>
<td>Subtotal 2007 City Populations</td>
<td>12,410</td>
<td>3,435</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2025 Population Target</td>
<td>2025 Population Capacity</td>
</tr>
<tr>
<td>Total UGAs</td>
<td>37,758</td>
<td>45,731</td>
</tr>
<tr>
<td>25 percent market factor</td>
<td>3,992</td>
<td></td>
</tr>
<tr>
<td>UGA Total Plus Market Factor</td>
<td>41,750</td>
<td></td>
</tr>
</tbody>
</table>


This analysis significantly undercounts capacity since the numbers used for the Roslyn/UGA, South Cle Elum/UGA, and Cle Elum/UGA are the 2007 population estimates for the cities only. They do not include the total capacities for these cities and to not include any populations or capacities for the UGAs outside the city limits.
What to Do About Rural Sprawl?

By Tom Daniels, Professor
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Paper Presented at The American Planning Association Conference
Seattle, WA
April 28, 1999

What is Rural Sprawl?

While "urban sprawl" and "suburban sprawl" steal the headlines, rural sprawl presents a thornier problem. Urban sprawl can be thought of as an inflating tire of growth. Suburban sprawl mimics some of urban sprawl, especially in commercial expansion along arterial highways, but also includes leapfrogging development that isolates parcels of farmland, forest land, and open space. Suburban sprawl also tends to separate residential districts from the commercial strip and office park districts, creating greater dependence on the automobile.

Rural sprawl takes two forms. The first is low-density residential development that is scattered outside of villages, suburbs, and smaller cities. The second type of rural sprawl is commercial strip development along arterial highways leading into and out of villages, suburbs, and smaller cities.

What Problems Does Rural Sprawl Create?

Rural sprawl creates a host of planning challenges. Rural residential sprawl usually occurs away from existing central sewer and water. Homeowners rely on on-site septic systems and on wells for water. Often, these systems are not properly sited or not properly maintained. For example, a 1998 study in the Indiana reported that between 25 and 70 percent of the on-site septic systems in the state were failing.\(^1\)

When septic systems fail in large numbers, sewer and water lines must be extended into the countryside, often a mile or more. Public sewer is priced according to average cost pricing. This means that when sewer lines are extended, there is a strong incentive to encourage additional hook-ups along the line. So when a sewer line is extended a mile or more, development pressure increases along the line. This usually results in a sprawling pattern, like a hub and spoke from a village to the countryside.

The spread-out rural residents are completely auto-dependent and are often long-range commuters. This puts greater demands on existing roads and increases the demand for more and better roads. The greater traffic also results in the burning of more fossil fuels, producing more air pollution.

Rural residents also have added to the national trend of Americans consuming more land per person for a residence. The demand for 2- to 10-acre house lots has driven up land prices in rural fringe areas beyond what a farmer or forester can afford to pay. Moreover, as land prices rise, farmers and foresters are more likely to sell their land for house lots. This in turn causes a greater fragmenting of the land base, making it more difficult for remaining farmers and foresters to assemble land to rent. Rented land is especially important for commercial farming. Nationwide, about 40 percent of farmland is rented.\(^2\)

Newcomers to the countryside often have little understanding of the business of farming or forestry. The conflicts between farmers and non-farm neighbors are well-known. Neighbors typically complain about farm odors, noise, dust, crop sprays, and slow moving farm machinery on local roads. Farmers point to crop theft, vandalism, trash dumping, and dogs and children trespassing and harassing livestock. In forested areas, the increase in residents bring a greater likelihood of fire. In short, farming and forestry are industrial uses. They should be kept as separate as possible from rural residential development.

In September, 1998 the Iowa Supreme Court declared the Iowa Right-to-Farm law unconstitutional.\(^3\) In February, 1999, the U.S. Supreme Court refused to hear the case on appeal, thus letting the ruling stand. The Iowa Supreme Court found that the law took away the right of non-farm neighbors to sue under the nuisance doctrine, and offered those neighbors no compensation under the 5th Amendment. Forty-nine states have a right-to-farm law, and those laws are certain to be challenged in the coming years. Farmers will be put on the defensive; and the legal costs of defending the farm could be high.
The irony here is that many farmers have resisted land use controls claiming that the controls were a “taking” of their private property rights. Now, courts may rule that farm operations are taking the rights of neighbors to enjoy their own property. Again, the bottom line is that farms and non-farm neighbors should be separated as much as possible.

**What Are the Causes of Rural Sprawl?**

There are several factors that combine to create rural sprawl. Sprawl doesn't just happen. It is the result of thousands of individual decisions that are made within a framework of local government land controls and local, state, and federal tax policies and spending programs.

- Individual Tastes and Preferences
- Federal Mortgage Interest Deduction
- Weak Local Planning and Zoning
- State Subdivision Control Acts
- State and Federal Highway Programs
- Population Growth

Many people perceive the countryside as a safer, cleaner, cheaper, and more rewarding place to live, compared to the congestion, crime, and high property taxes of cities and the monotony and rising taxes of the suburbs. At the same time, a house has become the major investment vehicle for many families. The strategy is to:

  a) buy as much house as possible;
  b) maximize the federal mortgage interest deduction;
  c) build up equity in the house while paying off the mortgage; and
  d) buy or build a house in the countryside where the appreciation potential is high.

The result is a strong demand for “McMansions” on 2- to 10-acre lots. This pattern is made possible by weak local planning and zoning and some state subdivision control acts. The standard for zoning in many rural areas is one- and two-acre minimum lot sizes. This allows for considerable residential development, assuming that the ground will percolate septic systems and that well water is readily available. Many newcomers to the countryside want their own septic and well systems and do not want to pay monthly utility bills. Also, local zoning typically does not limit the number of curb cuts along country roads. It is not uncommon to have a plethora of curb cuts along a country road, despite the traffic danger of limited sight-distance.

There are a number of states with subdivision control acts that effectively encourage the creation of large residential lots in the countryside. For example:

1) Ohio and Tennessee exempt new lots of more than 5 acres from subdivision review;

2) Vermont’s Act 250 exempts new lots of greater than 10 acres from on-site septic system tests for location and type of septic system;

3) Colorado exempts lots of greater than 35 acres. That is one reason why Colorado has been losing farm and ranch land at a rate of 90,000 acres a year;[iv]

4) Michigan’s Subdivision Control Act allows divisions on parcels less than 20 acres, 5 divisions on parcels between 20 and 30 acres, 7 divisions on parcels between 40 and 50 acres, 11 divisions on parcels between 80 and 90 acres, and 16 divisions on parcels between 160 and 200 acres. For parcels over 20 acres, two additional lots may be created if a road is put in. (See Figures 1-4).

ISTEA and TEA-21 have been hailed by planners because of the regional participation by MPOs, a welcome departure from the old “one size fits all” federal approach to transportation planning. Also, more transportation money has become available for mass transit and bike and pedestrian-oriented projects. But most of the federal transportation money will continue to be spent on roads. The more roads, the more dispersed the settlement patterns are likely to become.

The more roads, ironically, will make telecommuting easier. People will be able to live farther from work and commute to the office a few days a week. Already, there are an estimated 10 million telecommuters in the United States.v

Population growth will be a major factor in rural sprawl over the next several decades. The U.S. Census Bureau predicts there will be 393 million Americans in 2050, up from about 270 million today. vi Perhaps equally important is the possibility of population shifts away from cities and suburbs to the countryside.

**Potential Solutions to Rural Sprawl**
Prior to a discussion about solving rural sprawl, I must point out that there are “compensation laws” in 25 states. Though the laws vary somewhat, they generally require a government to pay a private landowner if government regulations reduce the value of the property beyond a certain percentage (e.g. 5%, 10%). States with these laws will be hampered in their attempts to curb rural sprawl.

Solutions to rural sprawl must come in an integrated set of techniques. No one technique will suffice. These techniques must combine financial incentives with regulation, including:

- A Comprehensive Plan
- Agricultural, Forest, and Rural Residential Zones
- Subdivision Regulations
- Capital Improvements Plans
- UGB/VGBs
- Property Tax Incentives
- Purchase and Transfer of Development Rights

Solutions to rural sprawl must be mesh with a county or regional comprehensive planning process. The comprehensive plan provides an inventory of land resources, projected population growth, and a vision of how to accommodate that population. The comprehensive plan is the legal foundation for the zoning ordinance, especially through the future land use map.

Zoning is a key ingredient in regulating rural sprawl. Places that have experienced some success in limiting rural sprawl use agricultural zoning of 20 acre or greater minimum lot sizes or fixed area ratio of one building lot of a maximum of two acres for every 25 or 50 acres. Timber zoning in Oregon at 80 and 160 minimum lot sizes has largely been effective, too. A more contentious problem arises in those places where commercial farming and forestry are fading and the land has low natural resource production capacity. In these places, rural residential zones may be appropriate. Oregon has set up 250,000 acres in rural residential zones in the Willamette Valley alone. These zones carry 3- to 5-acre minimum lot sizes. The balance to be struck is to allow some rural residential development without sacrificing good quality land and without accommodating so many rural residents that sprawl develops.

It is important to recognize that “rural cluster” or “open space zoning” is not a solution to rural sprawl. In fact, many cluster developments in the countryside can simply create “clustered sprawl.” Cluster developments may leave some land open, but the clusters are often based on fairly high densities, such as one dwelling per two acres. Fifty houses on 100 acres with 30 acres open still puts 150 or more new dwellers in the countryside. These developments are auto-dependent and the residents can bring on conflicts with farming or forestry neighbors as discussed above. In short, cluster development is a suburban style that will hasten the conversion of rural areas to suburbs.

State subdivision control acts should follow the California model in which any subdivision must go through a planning staff review to make sure that each lot will have adequate services.

Capital improvements programs have not been widely used in rural areas. The programs spell out what infrastructure will be supplied where and when, and how the infrastructure will be financed. In recent years, many sewer and water extensions have been privately financed.

This private infrastructure should comply with the public CIP. This is one way to limit arterial commercial sprawl.

A combination of the CIP and zoning is the Urban Growth Boundary and its smaller relative, the Village Growth Boundary. Both types of boundaries require cooperation among jurisdictions to identify land use needs over the next 20 years and to draw a limit to the extension of public services, especially sewer and water lines. The boundaries promote a more compact style of development that is cheaper to service and minimizes “expending tire” type of sprawl.

An urban or village growth boundary strategy will work only if there is restrictive zoning in the countryside. If the countryside is zoned in 2-acre lots, a large amount of residential development will simply leapfrog over the boundary and spread through the hinterlands. Financial incentives can be combined with zoning to encourage farm and forestry operators to remain in business. Financial incentives are strictly voluntary.

Preferential farm property tax programs exist in every state. The shortcoming of these programs is that most have minimal eligibility requirements, and the size of the tax break often is small compared to what a developer can offer. Three states—Oregon, Nebraska, and Wisconsin—link preferential farm property taxation to agricultural zoning. This helps to protect the public interest in the preferential taxation, and not simply reduce a landowner’s holding costs while waiting for the land to ripen in value for development. The preferential taxation should be extended to commercial farm and forestry operations, not to subsidize the lifestyle of hobby farmers and rural homeowners.

The purchase and transfer of development rights hold some promise for protecting farming and forestry areas, and for directing growth away from these areas. To date, 15 states and dozens of counties have active PDR programs and have preserved over 520,000 acres at
a cost of about $1 billion.Ⅶ In 1996, the federal government authorized $35 million in grants to states and localities for PDR acquisitions. In November of 1998, voters in 31 states passed $7.5 billion in spending measures to preserve farmland and open space and to invest in "smart growth". Leading the way, voters in New Jersey approved $1 billion for land preservation projects over the next ten years.

The purchase of development rights can help create parts of growth boundaries (see Figure 5) and can strengthen zoning by stabilizing the land base. Although there will not be enough money to preserve the entire countryside, and although many landowners will choose not to participate, PDR programs are here to stay and their popularity is growing.

TDRs have enjoyed far less success than PDRs, but the opportunity to transfer development potential from the countryside to developing areas is intuitively attractive. The popularity of TDRs will likely increase as well. TDRs have the advantage of requiring some fairly sound planning in order for them to work, as in he case of Montgomery County, Maryland.

Conclusion

Rural sprawl is a planning challenge that will not go away any time soon. In many parts of the United States, rural sprawl will become more pronounced and will eventually lead to sprawling suburban-type settlements.

The impacts of rural sprawl must be examined in terms of the cumulative impact over time. Initially, a house here and a house there does not seem to place a large burden on the environment or local services; nor does it appear to cause major conflicts with farming or forestry neighbors. But over time, the scatter of houses can add up to sewage disposal and water quality problems, along with conflicts between farm and forestry operators and rural newcomers.

A common question I am asked when I make presentations is, "How do you keep people from moving out to the countryside onto one, two, five, and ten acres lots?"

This a valid question. The answer is that there needs to be a public policy vision backed by tax, spending, and regulatory programs that discourages people from living in the countryside.

This is not far-fetched. At a recent conference on Smart Growth, a fellow-presenter smiled at me and said me, "You know government created the incentives for sprawl which means that government can create the incentives to curb sprawl."Ⅷ

The answer to the question about keeping people from moving to the countryside is: "How far do you want to go with public policy to make that happen?"

Footnotes

Ⅲ Iowa Supreme Court, No. 192/96-2276, September 23, 1998. Bormann and Bormann and McGuire and McGuire vs. Board of Supervisors in and for Kossuth County, Iowa.
Ⅳ Daniels and Bowers, p. 1.
Ⅵ Daniels, p. 265.
The Fiscal Impacts Of Rural Residential Development:
An Econometric Analysis Of The Cost Of Community Services

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The authors would like to express their gratitude for the support.

ABSTRACT

Rural residential development has become an increasingly important issue in many counties around the
United States. Empirical tests are provided to determine if rural residential development is a net fiscal loss
for county governments, following work by the American Farmland Trust. This study focuses on
measuring the net fiscal impacts of rural residential development on Wyoming county governments. An
econometric model is developed and used to estimate county revenues, county expenditures, school
district revenues, and school district expenditures. The estimated model does not verify that rural
residential development is always a net loss to county governments on the margin. However, using a
representative scenario, it is shown that such development can be a net fiscal loss on average, the extent to
which is a function of assumptions tied to the analysis.

CONTENTS

I. Introduction
I. Introduction

Rural residential development is a widespread phenomenon in many counties around the United States. Counties located in isolated, but amenity-rich areas are confronted with issues similar to those experienced by counties near growing urban areas (Heimlich and Anderson, 2001). Rural lands are impacted as farm and ranch land is sold and developed into rural residences. A recent study by the American Farmland Trust (2002) estimates that 11 percent of all prime ranchlands (those with rural development densities, located near to public lands, year-round water availability, mixed grass and tree cover, and high variety of vegetation classes) are threatened by conversion to residential development. The development maybe clustered or dispersed, with the latter tending to have a more pronounced effect on the flow of public goods associated with open space.

The debate over farmland has centered on food security, the loss of high quality soils, the cultural character of small communities, wildlife habitat, and county fiscal stability (American Farmland Trust, 1995). However, critiques of the basic premise of farmland preservation question the notion of loss of value (Gordon and Richardson, 1998). The authors argue that proponents of farmland preservation over state their case when it comes to perceived benefits of preservation. Preserving farmland has the potential for restricting the supply of developable land thereby increasing prices and potentially depressing economic development. Daniels (1999 p. 3) in a reply article argues that while fears surrounding threats to U.S. food supply are unwarranted, there are areas where dispersed development can cause fiscal and environmental problems. He argues that planners and policy makers need to be “strategic” and “aim for balanced growth”.

An important player in assisting county planning efforts across the country has been the American Farmland Trust cost of community services methods (COCS), (AFT, 1999). The general results from studies across the country indicate that conversion of agricultural to residential use is a net fiscal loss to county taxpayers. When one accounts for both county revenues and county expenditures, it costs counties more than they receive in revenues, regardless of the higher assessed value for residential property relative to agricultural land. Most states differentiate the assessed valuation of agricultural land and residential land. This study provides an evaluation of the AFT methodology using a set of county fiscal impact models. The AFT housing versus farm use hypothesis is tested both at the margin and on average.
for Wyoming counties.

II. Background

Dispersed large lot development provides a host of environmental benefits and amenities to the owner. These include quality of life considerations, privacy, and scenery. Growth in dispersed rural residences benefits the landowners that sell property as well as some in the real estate, construction and service industries. Purchasers of rural homes then demand public services and infrastructure investments. Neighboring farms and ranches as well as county taxpayers may experience diminished environmental amenities and an increasingly overburdened local government as dispersed rural residential development occurs. Consequently, local taxes either must be increased or public services decreased, but certainly the mix of services provided is reallocated across users.

The pressure for rural residential development comes from three sources: in-migration, second home development, or intra-county urban to rural relocation. Regionally, the Western US is expected to grow by 54 percent between 1990 and 2020 (Center for the American West, 2001). Wyoming’s population already has increased by 8.9 percent between 1990 and 2000. Over 55 percent of the population growth in the state between 1990 and 2000 occurred in rural areas, (Taylor, 2001a). Added to this resident population growth in the state is the number of second homes, which increased by over 30 percent between 1990 and 2000, (Taylor 2001b). American Farmland Trust estimates that over 2.6 million acres are threatened with conversion from ranching and farming to residences in Wyoming (AFT 2002).

Population has grown rapidly in the intermountain west from 1990 to 2000, compared to other regions. Idaho, Utah and Colorado, which border Wyoming, grew at rates at least double the national average during that period (Taylor, 2001a). Twenty-six percent of Wyoming's counties grew at, or faster than, the national average from 1990 to 2000. Rural areas in the western and northern portion of Wyoming near Yellowstone and Grand Teton National Parks, grew in excess of 60 percent in the same period.

Residential land use increased dramatically in Wyoming from 1960 to 1990, Figure 1. Total acres of residential development increased by 2.4 times (Theobald, 2001). Nearly 70 percent of the converted acreage was for "exurban" development of one acre per 10 to 40 acres. Only 3 percent was "urban / suburban" development of more than 2 units per acre.

County commissioners and planners are left attempting to determine the consequences of rural residential growth. They require analyses indicating the impact of rural growth on county operations and budgets. American Farmland Trust cost of community services studies are a tool widely used by planners and local policy makers.
FIGURE 1: Increase in Residential Development Acres for Wyoming 1960-90 (Increase = 417,000 acres)

III. Previous Work

The literature review covers the modeling of fiscal impacts due to rural residential development. Burchell and Listokin (1978) identify two broad types of fiscal impact methodologies: average cost and marginal cost analyses. Average cost approaches involve the use of ratios or multipliers per unit of service extended. These approaches assume future costs are approximately the same as current costs. They do not account for deficient or excess service capacity, AFT (1999). Marginal cost approaches typically involve calculating specific impacts through a case study or the use of statistical models, (Smith, Propst, and Abberger 1991).

Average cost approaches

The American Farmland Trust COCS is an average cost approach to address the fiscal impact of residential development, AFT (1999). The procedure for implementing a COCS study is straightforward. First, the analyst decides on the land use categories that are relevant for the policy issue at hand. This means residential and agricultural among others in the case of farmland conversion. Typical AFT type studies include three to as many as five types of land uses: residential, agricultural, forestland, commercial, and industrial. Then using what information is available at the local level, expenditures and revenues are allocated to each land use category. This may be done either through records where land use categories can be identified or on a simple proportional basis. A ratio of expenditures to revenues is then calculated for each category. A ratio of expenditures to revenues of less than one suggests the land use is a net fiscal benefit to county government. A ratio of expenditures to revenues of greater than one suggests that the particular land use is a net fiscal loss to county government.

A summary by Heimlich and Anderson (2001) identified 88 cost of community service studies. The
studies indicated expenditure to revenue ratios for residential development that exceeded one while those for farm and timberland fell below one across all studies. The average ratio of expenditures to revenues for rural residential development equaled 1.24 compared to 0.38 for farmland and open space. It is important to point out that AFT cost of community services studies generally do not distinguish between urban and rural residential development.

The AFT methodology clearly implicates residential development as a net fiscal loss to local governments. Yet, caution have been voiced concerning the use of the ratios developed by this approach. The ratio of fiscal expenditures to fiscal revenues generated for each land use is a snapshot of the financial relationships between users and providers at a point in time. The net fiscal impacts of a specific change in land use may not necessarily change in the proportion as indicated by the ratio calculated. Both numerator and denominator are endogenously determined in this case.

The problem with average cost approaches is that they are poor indicators of general results. Taylor (1999) used the AFT approach for Sublette County, Wyoming. A ratio of expenditures-to-revenues was estimated at $2.35 for residential development in the case where there is a resident who is consuming services but is not employed locally. The ratio falls to 1.27 if the resident is employed. This revised ratio takes into account taxes paid by the local employer (commercial property taxes and use taxes). The estimated ratio from an average cost approach then is driven by the assumptions concerning the resident.

Kelsey (1996) critiqued the AFT methodology as used for six Pennsylvania counties. He concluded that cost of community services studies do provide useful information to communities. The author identified a series of limitations in interpretation that local policy makers must be aware of to use the ratios correctly. The first is that the ratio is primarily a reflection of the proportion of local spending for schools. The second is that the ratio is averaged across land types and therefore differences among uses within the same category are lost. The third is that the starting point or unit basis used to measure the ratio can affect the fiscal ordering of land uses. Deller (1999) added another assumption being that different land uses are independent, e.g. a rural resident may be employed by a local business paying the commercial tax rate. That employee then can be viewed as contributing to the commercial tax revenue of the business. An AFT ratio does not capture this relationship.

Marginal cost approaches

Other work in fiscal impact modeling has stronger ties to concepts derived from economic theory. Grosskopf, Hayes, and Hirshberg (1995) use an economic distance function approach to estimate efficiencies in the provision of public law enforcement services. The distance function approach has the advantage that it allows for multiple outputs and completely describes the technology. Coefficients then become a direct measure of efficiency changes for a particular policy scenario.

Heikkila and Craig (1991) and Heikkila (2000) present an approach to fiscal impact modeling that draws upon the economic theory of the firm. Levels of government service are a function of inputs (mostly labor and capital) and neighborhood or community characteristics. Once public service impacts are estimated, a welfare analysis is used to measure the change in benefits associated with population changes.

Marcoullier, Deller, and Green (2000) estimate a fiscal impact model using a generalized econometric approach to evaluate the fiscal effects of second home development. The fiscal impact of recreational housing development, on a variety of public services, is analyzed. Public service expenditures are regressed against tax, demographic variables, and recreational houses per capita. The authors report
results suggesting that recreational housing just pays for itself.

The study summarized here focuses on measuring the net impacts of rural residential development on the fiscal structure of Wyoming county governments and school districts. The model departs from the approach used by American Farmland Trust (AFT), which is primarily a categorization of rural and urban residents (AFT, 1999). The analysis provided below presents estimates of the fiscal impacts of rural residential development using an econometric model of county revenues, county expenditures, school district revenues, and school district expenditures. This modeling approach reveals marginal as well as average costs, and can make possible projections about cost and revenues of future development. The modeling framework allows for analyzing specific scenarios and can be used to test specific assumptions that are implicit in the AFT approach. This analysis is useful for evaluating the fiscal impacts of rural residential development in the aggregate. The model is used to derive AFT type ratios for specific Wyoming counties.

IV. Method

Model development

The conceptual framework for this research is motivated in part from Heikkila (2000). Government is modeled as a firm providing a vector of services to the public. These services can be likened to outputs paid for by county revenues. The analysis consists of changes in the distribution of revenues and expenses arising from a change in land use. The model given here cannot replicate Heikkila's approach exactly because he uses a proxy for a specific government services (e.g. inverse of the number of crimes in a community). The proposed model focuses on the entire array of services. This analysis begins with a total operating revenue function and a total variable cost function for a particular county.

\[ TR^c = \sum_i \sum_u mr_i * S_u \]  

(1)

Total operating revenues for a county \((TRc)\) are defined in (1) where "\(mr_i\)" is the marginal revenue for tax instrument "\(i\)" and "\(u\)" is the taxpayer type. "\(S\)" is the number of users in class "\(u\)". There is no actual market for the public services. The services are nonexclusive, congestible, and lack private sector substitutes. Government service providers then are by law public monopolies, thus marginal revenue is used in place of price. This analysis does not distinguish between types of tax instruments, i.e. property taxes, sales taxes, or use taxes. The overall tax burden charged by the local government is the value of interest.

The total operating revenue function then is a marginal revenue burden "\(mb_u\)" multiplied by the number of users in the county "\(S\)" where \(mb_u = S_i * mr_i\). This relation is represented in (2). The difference here is that each user group is charged for the entire array of government services.

\[ TR^c = \sum_u mb_u * S_u \]  

(2)
Total variable cost is represented in (3). Total variable cost for county “c” is the marginal service unit service cost multiplied by the number of service units, where “muc_{ju}” is the marginal service cost for user “u” using service “j”.

\[
TVC^c = \sum_u \sum_j muc_{ju} \times S_u
\]  

(3)

Generally all services in government are provided without a unique service price. It is assumed that changes in the number of service units, expand the demand for the entire array of government services, and thus total variable cost. Equation (3) collapses into cost as a function of service units (4). Total variable cost then is the sum of each marginal unit cost of service multiplied by the number of service users. “TVC^c” then is a function of the service users where the coefficient “usercst” represents the unit demand for government expenditures by user type S_u.

\[
TVC^c = \sum_u usercst_u \times S_u
\]  

(4)

The goal of the policy maker is to allocate expenditures across different groups and interests in a county subject to a revenue constraint. If the service burden of each user group is growing proportionally, then the job of the policy maker is simplified. The problem occurs when various groups' burdens change differentially. The array of services required by user types may differ. One user group may view another as taking a disproportionate level of public resources. It is assumed in this analysis that access and availability to public services across different geographic groups remains the same. There may be public choice aspects to rural versus urban residents, but the data cannot be used to adequately address it.

If county expenditure requirements increase as dispersed rural residential development increases, then this would impose a higher tax burden on the rest of the user groups. Government must either increase tax revenues and shift resources away from traditional users to the newcomers (rural homeowners) or reduce services to at least some users.

Population changes in rural areas contribute both to revenues and expenditures. More households located further away from urban public service centers increases the cost of providing public services and spreads out available maintenance operating resources to a larger area. Land used in agricultural or forestland is hypothesized to require a lower level of public services than land used for residential purposes. The expectation then is that rural residential development exacts a higher cost to the taxpayer as land is moved from agriculture or forest to residential uses.

The conversion of private ranch and farmland to rural residential use however is expected to increase revenue generation, which generates some of the skepticism for rural land use controls. Residential land is generally taxed at a higher rate than agricultural land, so conversion is viewed as a revenue enhancement to taxpayers. What matters to public services providers and taxpayers alike is ultimately the net, not the gross, revenue generated. Empirical studies using AFT methodology indicate that, on average, residential development is a net loss to a county's tax base. However, the issue is framed as a general result and not a case-by-case basis. The hypothesized relationship can be stated as in (5).
This statement implies that rural residential development is a breakeven or net loss prospect to county governments. Many AFT type studies suggest that the ratio of expenditures to revenues for rural residential development is greater than unity. However, there are other factors that can account for changes in the fiscal impacts of residential development that AFT methodology cannot effectively incorporate. Income, wealth, and unique aspects of the land base itself can all affect the kind of ratios the AFT methodology generates. Higher assessed valuation or higher income generally means higher taxes paid out.

The approach utilized here first tests the general hypothesis formulated in (5) with a complete model for both county and school revenues and expenditures. The AFT-type ratios are calculated using the estimated model for a representative scenario of ranch land conversion common in Wyoming (and throughout the inter-mountain west): replacement of 35 acres of ranchland with a one unit residential parcel. This latter procedure first calculates the net fiscal impacts on county governments and schools from the representative scenario. Predicted changes in revenues and expenditures are then converted to percent changes from the baseline. The percent changes from the baseline are then used to calculate actual average revenue and expenditure changes for each county. The aforementioned procedure permits AFT-type expenditure-to-revenue ratios to be calculated.

The fiscal impact model developed for this analysis predicts total county government operating revenues and expenditures as well as school district revenues and expenditures. Municipal government is not considered in this modeling framework since the issue relates to policies in unincorporated areas of counties. School districts and county governments have jurisdictional control in rural areas.

Four equations are estimated for each county: total county government operating revenues, total county government operating expenditures, total school operating revenues, and total school operating expenditures. Revenues come from the following categories of sources: property taxes, sales tax recapture, and intergovernmental transfers (Wyoming Statutes §39-1-21). Intergovernmental transfers and sales tax recapture are for the most part a function of population (e.g. Wyoming Statutes §39-15-111, §39-15-112, §39-14-211). Changes in the level of all types of user groups affect the revenues that are received by a county. Fluctuations in mineral activities (coal, oil, gas, trona, and other minerals) and the resulting taxes (severance and federal mineral royalties) are collected but are not repatriated to the county of origin. They are distributed based upon changes in population. The larger urban population areas then receive most of these sources of funds.

Property taxes are the largest source of revenue for counties. Land uses are assessed at four tiers: mineral, commercial and industrial, residential, and agricultural. Minerals are taxed at 100 percent of the value of production. Commercial and industrial lands are taxed at 11 percent of assessed valuation. Residential land is taxed at 9 percent of assessed valuation. Finally agricultural land is taxed at 9 percent of the value of production as determined by the State. The local mill levy is then applied to the assessed value.
The State of Wyoming preempts all local jurisdictions in levying income or earnings taxes (Wyoming Statutes §39-12-101). State personal or business income taxes do not currently exist in Wyoming.

**Statistical procedure**

Total revenue and expenditure equations were estimated for each county governmental unit in Wyoming using time series cross-sectional models. The four dependent variables are county government operating revenue (CREV), county government operating expenses (CXPE), school operating revenues (SCHREV), and school operating expenses (SCHXPE). All variables, in dollar terms, both dependent and explanatory variables were represented as real 1998 dollars.

County revenues and expenditure equations are estimated as a function where "CREV" and "CXPE" for county "i" and time "t" is a function of rural personal income, urban personal income, acres of agricultural land, residential and commercial assessed valuation, and mineral assessed valuation, (6) and (7).

Similarly, "SCHREV" and "SCHXPE" county "i" and time "t" are a function of rural personal income, urban personal income, and total assessed valuation. The arguments in each function are proxies that represent the user groups who contribute to revenues and exact a demand for services.

\[
\ln(\text{crev}) = a + b_{i}^r \cdot \ln(\text{rupi})_i + b_{i}^u \cdot \ln(\text{urpi})_i + b_{i}^{agl} \cdot \ln(\text{agland})_i + b_{i}^{asv} \cdot \ln(\text{asval})_i + \ln(\text{mval})_i + \varepsilon_i \quad (6)
\]

\[
\ln(\text{cxpe}) = a + b_{i}^r \cdot \ln(\text{rupi})_i + b_{i}^u \cdot \ln(\text{urpi})_i + b_{i}^{agl} \cdot \ln(\text{agland})_i + b_{i}^{asv} \cdot \ln(\text{asval})_i + \ln(\text{mval})_i + \varepsilon_i \quad (7)
\]

\[
\ln(\text{schrev}) = a + b_{i}^r \cdot \ln(\text{rupi})_i + b_{i}^{urpi} \cdot \ln(\text{urpi})_i + b_{i}^{agl} \cdot \ln(\text{agland})_i + b_{i}^{asv} \cdot \ln(\text{asval})_i + \ln(\text{totval})_i + \varepsilon_i \quad (8)
\]

\[
\ln(\text{schnpe}) = a + b_{i}^r \cdot \ln(\text{rupi})_i + b_{i}^{urpi} \cdot \ln(\text{urpi})_i + b_{i}^{agl} \cdot \ln(\text{agland})_i + b_{i}^{asv} \cdot \ln(\text{asval})_i + \ln(\text{totval})_i + \varepsilon_i \quad (9)
\]

The explanatory variables are defined in Table 1. Two population base variables are "rupi" or rural personal income and "urpi", the incorporated area personal income. The other three variables represent the important land uses: agriculture, commercial, and mineral. The number of acres of agricultural land is "agland"; "asval" is total assessed valuation excluding mineral valuation; and "mval" is the assessed valuation of minerals. Rural and urban personal income is used instead of rural and urban population in order to capture both income and population effects without incurring statistical problems. Urban population and personal income exhibit multi-collinearity when they are used as separate arguments in the equations.

**Table 1: Explanatory variables for the estimated equations**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Expected Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>CREV</td>
<td>County operating revenue</td>
<td>Endog.</td>
</tr>
<tr>
<td>CXPE</td>
<td>County operating expenditure</td>
<td>Endog.</td>
</tr>
<tr>
<td>SCHREV</td>
<td>School district revenues</td>
<td>Endog.</td>
</tr>
<tr>
<td>SCHXPE</td>
<td>School district expenditures</td>
<td>Endog.</td>
</tr>
<tr>
<td>RUPI</td>
<td>Rural personal income</td>
<td>+</td>
</tr>
<tr>
<td>URPI</td>
<td>Urban personal income</td>
<td>+</td>
</tr>
</tbody>
</table>

Mineral assessed valuation was separated out from the other components of assessed valuation because of the large contribution of minerals to most county budgets in the State. County government revenue and expenditure equations separated the effects of mineral assessed valuation while for school districts a total assessed valuation was used. Ad-valorem taxes are levied against both structures and on the value of the mineral. The mill levy charged to structures and improvements are set and collected by the county. The mill levy on the value of production are set by the State and collected by the county.

The log-log structure is used to account for governmental economies of scale between large communities and small communities. Natrona County and Laramie County, with the largest populations, have 66,000 and 81,000 respectively. Niobrara County conversely has approximately 2,400 in population. This structure was compared with linear and semi-log forms. The log-log format performed best based on a comparison of F-statistics for each specification.

Data Sources

Data sources come from information collected and summarized by the State Department of Audit (Wyoming Dept. of Audit; 2000) from 1993 to 1998. Total expenditures are solely operating expenditures. Urban and rural personal income variables are estimated based upon the 1990 Census estimates of per capita income in rural versus urban census tracts. The difference between per capita income in rural census tracts and urban census tracts was less than one percent. School district variables are collected from the State Department of Education (Wyoming Department of Education; 1993-1998).

V. Results

Results of the estimation procedure are presented in Table 2 and 3. Time series cross sectional model structure was evaluated using a fixed effects model, a constrained OLS estimator, and a random effects estimator using generalized least squares. The fixed effects model was inferior to either the constrained OLS estimator or the random effects model based on F-tests calculated for all equations. The constrained OLS model was tested against the random effects model using a Hausman (1978) test where the null hypothesis was that the random effects model was the best model. The preferred specification is presented in Table 3. The random effects specification was chosen because it performed better than the others.

Table 2: Statistical results of the choice of model

<table>
<thead>
<tr>
<th>Lagrange multiplier test</th>
<th>County Revenue</th>
<th>County Expenditures</th>
<th>School Revenue</th>
<th>School Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Hypothesis: Ho</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error components do not exist</td>
<td>127.0399</td>
<td>75.2547</td>
<td>155.8269</td>
<td>95.2267</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Error components model is the correct specification</td>
<td>36.6892</td>
<td>95.182</td>
<td>28.172</td>
<td>14.567</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>-0.0022</td>
</tr>
</tbody>
</table>

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Table 3: Fiscal impact model results

<table>
<thead>
<tr>
<th></th>
<th>Coef.</th>
<th>Std. Error</th>
<th>t-Stat</th>
<th>P-Value</th>
<th>R2</th>
<th>F</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>County Revenues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
<td>0.941</td>
<td>398.83</td>
</tr>
<tr>
<td>Constant</td>
<td>0.9062</td>
<td>0.6929</td>
<td>1.3077</td>
<td>0.193</td>
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<tr>
<td>Rural Personal Inc ($000)</td>
<td>0.2333</td>
<td>0.0502</td>
<td>4.645</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Personal Inc ($000)</td>
<td>0.2948</td>
<td>0.0482</td>
<td>6.1182</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agric. Land (acres)</td>
<td>0.1006</td>
<td>0.0332</td>
<td>3.0283</td>
<td>0.003</td>
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<tr>
<td>Non-min assessed val.</td>
<td>0.1084</td>
<td>0.071</td>
<td>1.5273</td>
<td>0.129</td>
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<td>Mineral assessed val.</td>
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<td>0.0149</td>
<td>19.017</td>
<td>0.000</td>
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<tr>
<td><strong>County Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.000</td>
<td>0.928</td>
<td>324.31</td>
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<tr>
<td>Constant</td>
<td>1.1294</td>
<td>0.7674</td>
<td>1.4717</td>
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<tr>
<td>Rural Personal Inc ($000)</td>
<td>0.257</td>
<td>0.0556</td>
<td>4.6195</td>
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<tr>
<td>City Personal Inc ($000)</td>
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<td>5.6185</td>
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<tr>
<td>Agric. Land (acres)</td>
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<td>2.7502</td>
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<tr>
<td>Non-min assessed valuation</td>
<td>0.0835</td>
<td>0.0786</td>
<td>1.0628</td>
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<tr>
<td>Mineral assessed valuation</td>
<td>0.2774</td>
<td>0.0165</td>
<td>16.792</td>
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<tr>
<td><strong>School Revenues</strong></td>
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<td></td>
<td></td>
<td>0.000</td>
<td>0.94</td>
<td>661.02</td>
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<td>Rural Personal Inc ($000)</td>
<td>0.3891</td>
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<td>City Personal Inc ($000)</td>
<td>0.3449</td>
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<td>9.2653</td>
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</tr>
<tr>
<td>Total assessed valuation</td>
<td>0.2082</td>
<td>0.0256</td>
<td>8.1432</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>School Expenses</strong></td>
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<td></td>
<td>0.000</td>
<td>0.933</td>
<td>588.02</td>
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<tr>
<td>Constant</td>
<td>4.0645</td>
<td>0.3908</td>
<td>10.401</td>
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<tr>
<td>Rural Personal Inc ($000)</td>
<td>0.4203</td>
<td>0.0334</td>
<td>12.589</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Personal Inc ($000)</td>
<td>0.3048</td>
<td>0.04</td>
<td>7.6258</td>
<td>0.000</td>
<td></td>
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<tr>
<td>Total assessed valuation</td>
<td>0.2211</td>
<td>0.0274</td>
<td>8.0568</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Evaluating the other sets of coefficients across equations indicates some expected and some interesting relationships. The coefficient on county revenues for urban residents is not significantly different than the coefficient on the expenditure equations. This suggests that city dwellers payment to county tax rolls is not an unencumbered source of revenues. Urbanites pay taxes to counties but receive services from both the county and cities (and pay taxes to cities also). The implication is that city population increases should benefit county government. Counties do indeed view city population growth as a draw on their resources. The county sometimes can end up providing law enforcement, health, and other public services that very small communities cannot.

The results suggest that at face value the marginal contribution of rural residential population to county revenue (revenue equation for both county government and schools) is less than the marginal contribution to county expenditures. The results also show that for agricultural and rangelands, the marginal contributions to expenditures are practically equal than those to revenues. It remains to be determined if the relationship between the two sets of parameters is statistically significant. This would validate the
supposition that rural residential development is always a net fiscal loss to the county government and schools while agricultural land is a net fiscal gain.

The following statistic was used to test the hypothesis that rural residential development costs county taxpayers more than it contributes to county revenues at the margin, (10), as suggested by Mittelhammer (2001). The estimated parameter for rural personal income from the revenue equation is subtracted from the estimated parameter for rural personal income from the expenditure equation. The difference then is divided by a weighted average of the standard errors of the coefficients and the covariance between the two coefficients (calculated by estimating the equations as a seemingly unrelated regression). A test statistic greater than the student t distribution for the number of degrees of freedom would suggest that expenditure coefficients are significantly higher than revenue the coefficients. A similar test statistic was developed to test the hypothesis that agricultural land contributes more in revenues than in expenditures (11).

\[ t_{rural,0.025} = \frac{r_{upi_{spend}} - r_{upi_{revenue}}}{\sqrt{\text{var}(r_{upi_{spend}}) + \text{var}(r_{upi_{revenue}}) + 2 \times \text{cov}(r_{upi_{spend}}, r_{upi_{revenue}})}} \] (10)

\[ t_{agland,0.025} = \frac{a_{agland_{revenue}} - a_{agland_{spend}}}{\sqrt{\text{var}(a_{agland_{spend}}) + \text{var}(a_{agland_{revenue}}) + 2 \times \text{cov}(a_{agland_{spend}}, a_{agland_{revenue}})}} \] (11)

The results indicate that the differences between both pairs of coefficients are not significant, Table 4. The null hypothesis and alternative hypothesis for each test is presented in Table 4. The null hypothesis stating that the revenue generation of rural populations is equal to or greater than the expenditure generation of rural populations could not be rejected at a 95 percent confidence level. Likewise, the null hypothesis for agricultural land coefficients could not be rejected either at a 95 percent confidence level. The notion that rural residential development does not pay while agricultural land does pay is not corroborated with any degree of confidence by the statistical relationship from the model estimated. An AFT-type ratio cannot be validated as a general planning concept at the margin. One cannot claim, as a general rule, that rural residential development is a net fiscal loss to counties.

Table 4: Fiscal impact model results

<table>
<thead>
<tr>
<th>Hypothesis test</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>( H_o : r_{upinc_{rev}} \geq r_{upinc_{exp}} )</td>
<td>0.864899</td>
</tr>
<tr>
<td>( H_a : r_{upinc_{rev}} &lt; r_{upinc_{exp}} )</td>
<td></td>
</tr>
<tr>
<td>( H_o : a_{agland_{exp}} \geq a_{agland_{rev}} )</td>
<td>0.049849</td>
</tr>
<tr>
<td>( H_d : a_{agland_{exp}} &lt; a_{agland_{rev}} )</td>
<td></td>
</tr>
</tbody>
</table>

The inability to show a general result as presented above does not imply the opposite, i.e., rural residential development always pays for itself. It simply suggests that there may be scenarios where it might pay for itself. The outcomes then are a function of the specified scenario. A particular scenario is identified and used with the estimated equations to calculate AFT-type ratios. Thirty-five acres of agricultural land are
replaced by one new rural household in the county to evaluate the relative role that rural residential development plays in a county fiscal structure.

The addition of one rural household is assumed to earn the county-wide average income and possess a house with a county-wide average assessed valuation. Thirty-five acres are used for two reasons. First, a smaller acreage expansion (e.g. one or even five acre expansions) is usually connected with subdivision development which, while fragmentation nonetheless, can begin to approximate cluster development. This can allow for population growth without the more egregious consequences of fragmentation. The second reason for using a 35-acre size is that anything under 35 acres in Wyoming has to be designated as a subdivision. This level of fragmentation then is a less regulated development (Wyoming State Statutes, 1999). Baseline analysis uses family sizes for rural populations equal to the average family size specific to the county. Likewise, county-wide average incomes are used. The scenario assumes a new rural resident that is approximately the same size and generating the same income as the average household in the specific county.

The models are used to calculate changes in revenues and expenditures for both county government and schools. County population, personal income, and assessed valuation rise as a result of the new household. Agriculture's contribution through total assessed valuation declines by a small amount. The predicted net changes in both revenues and expenditures are used to calculate average ratios of total county expenditure changes to total county revenue changes. The results are displayed in Table 5. Residential development at the expense of agricultural land costs county government and schools on average across counties 1.14 of expenditures for every dollar of new revenue received when incorporating both general government and schools into the equation. The average ratio is $1.08 when looking at only general government and excluding schools. This is generally consistent with the AFT (1999) findings. The results for the overall ratio vary considerably from county to county: Hot Springs County has the highest ratio at 1.45 and Weston County the lowest with 1.03.

The results suggest the AFT claims are provisionally valid, being highly dependent upon the characteristics of the scenario chosen. Changing those assumptions (county average household income, county average residential assessed valuation, county average family size, and inclusion of schools) can change the ratios. Policy makers are right to be concerned about rural residential development. The abundance of AFT-type studies and this research also, suggest that rural residential development in the aggregate is a net fiscal loss to county governments. What these results suggest though is that the character and type of development should be studied before one can say that a particular development is itself a net fiscal loss.

Table 5: Population mix, revenue change, and ratios of public expenditures to revenues for Wyoming Counties with a replacement of 35 acres of agricultural land with one average size family.

<table>
<thead>
<tr>
<th>Wyoming Counties</th>
<th>Urban population</th>
<th>Rural Population</th>
<th>Household size</th>
<th>Ave. Assessed Valuation per person</th>
<th>Revenue Change</th>
<th>Net Expense Change</th>
<th>County Government Ratio (excluding schools)</th>
<th>Total Government Ratio (including schools)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany Co.</td>
<td>26,526</td>
<td>3,849</td>
<td>2.23</td>
<td>1,889</td>
<td>809</td>
<td>992</td>
<td>1.10</td>
<td>1.21</td>
</tr>
<tr>
<td>Big Horn Co.</td>
<td>7,049</td>
<td>4,007</td>
<td>2.60</td>
<td>2,086</td>
<td>2,429</td>
<td>2,779</td>
<td>1.04</td>
<td>1.13</td>
</tr>
<tr>
<td>Campbell Co.</td>
<td>20,249</td>
<td>11,293</td>
<td>2.73</td>
<td>2,219</td>
<td>2,344</td>
<td>2,779</td>
<td>1.07</td>
<td>1.17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>13,755</th>
<th>2,174</th>
<th>2.39</th>
<th>2,559</th>
<th>1,620</th>
<th>1,717</th>
<th>1.06</th>
<th>1.04</th>
</tr>
</thead>
<tbody>
<tr>
<td>Converse Co.</td>
<td>8,151</td>
<td>3,844</td>
<td>2.55</td>
<td>2,801</td>
<td>1,989</td>
<td>2,257</td>
<td>1.06</td>
<td>1.12</td>
</tr>
<tr>
<td>Crook Co.</td>
<td>2,653</td>
<td>3,030</td>
<td>2.51</td>
<td>3,067</td>
<td>3,426</td>
<td>3,730</td>
<td>1.09</td>
<td>1.08</td>
</tr>
<tr>
<td>Fremont Co.</td>
<td>19,273</td>
<td>16,269</td>
<td>2.58</td>
<td>1,179</td>
<td>2,774</td>
<td>3,116</td>
<td>1.11</td>
<td>1.11</td>
</tr>
<tr>
<td>Goshen Co.</td>
<td>7,014</td>
<td>5,685</td>
<td>2.38</td>
<td>1,250</td>
<td>2,039</td>
<td>2,301</td>
<td>1.07</td>
<td>1.12</td>
</tr>
<tr>
<td>Hot Springs Co.</td>
<td>3,406</td>
<td>1,253</td>
<td>2.25</td>
<td>1,264</td>
<td>1,807</td>
<td>2,644</td>
<td>1.05</td>
<td>1.45</td>
</tr>
<tr>
<td>Johnson Co.</td>
<td>3,828</td>
<td>2,797</td>
<td>2.36</td>
<td>1,623</td>
<td>2,153</td>
<td>2,409</td>
<td>1.05</td>
<td>1.11</td>
</tr>
<tr>
<td>Laramie Co.</td>
<td>54,922</td>
<td>23,271</td>
<td>2.45</td>
<td>1,839</td>
<td>1,439</td>
<td>1,626</td>
<td>1.08</td>
<td>1.12</td>
</tr>
<tr>
<td>Lincoln Co.</td>
<td>7,233</td>
<td>6,500</td>
<td>2.75</td>
<td>1,905</td>
<td>3,359</td>
<td>3,919</td>
<td>1.05</td>
<td>1.15</td>
</tr>
<tr>
<td>Natrona Co.</td>
<td>53,432</td>
<td>10,082</td>
<td>2.42</td>
<td>1,509</td>
<td>1,245</td>
<td>1,429</td>
<td>1.09</td>
<td>1.13</td>
</tr>
<tr>
<td>Niobrara Co.</td>
<td>1,684</td>
<td>923</td>
<td>2.28</td>
<td>1,594</td>
<td>2,217</td>
<td>2,440</td>
<td>1.10</td>
<td>1.09</td>
</tr>
<tr>
<td>Park Co.</td>
<td>14,751</td>
<td>10,459</td>
<td>2.42</td>
<td>1,724</td>
<td>1,667</td>
<td>1,908</td>
<td>1.09</td>
<td>1.13</td>
</tr>
<tr>
<td>Platte Co.</td>
<td>5,074</td>
<td>3,320</td>
<td>2.40</td>
<td>2,007</td>
<td>2,255</td>
<td>2,551</td>
<td>1.08</td>
<td>1.12</td>
</tr>
<tr>
<td>Sheridan Co.</td>
<td>16,098</td>
<td>8,838</td>
<td>2.31</td>
<td>2,197</td>
<td>1,670</td>
<td>1,872</td>
<td>1.10</td>
<td>1.11</td>
</tr>
<tr>
<td>Sublette Co.</td>
<td>2,461</td>
<td>3,041</td>
<td>2.47</td>
<td>2,222</td>
<td>3,965</td>
<td>4,252</td>
<td>1.10</td>
<td>1.06</td>
</tr>
<tr>
<td>Sweetwater Co.</td>
<td>33,929</td>
<td>6,313</td>
<td>2.62</td>
<td>1,341</td>
<td>1,534</td>
<td>1,874</td>
<td>1.04</td>
<td>1.20</td>
</tr>
<tr>
<td>Uinta Co.</td>
<td>15,020</td>
<td>5,148</td>
<td>2.84</td>
<td>1,393</td>
<td>2,062</td>
<td>2,313</td>
<td>1.07</td>
<td>1.11</td>
</tr>
<tr>
<td>Washakie Co.</td>
<td>6,222</td>
<td>2,349</td>
<td>2.47</td>
<td>1,454</td>
<td>1,647</td>
<td>1,831</td>
<td>1.10</td>
<td>1.10</td>
</tr>
<tr>
<td>Weston Co.</td>
<td>4,139</td>
<td>2,395</td>
<td>2.42</td>
<td>1,690</td>
<td>2,188</td>
<td>2,268</td>
<td>1.10</td>
<td>1.03</td>
</tr>
</tbody>
</table>

The implications of this change can be seen using the AFT estimates of ranchland at risk for one county. Fremont County had an annual budget of $10 million. AFT estimates that there are 296,960 acres of ranch and farmland threatened by development. Following the results of Table 5, conversion of this acreage to 35-acre ranchettes with households earning average incomes in the county and average sizes would generate almost 8,500 dispersed family households. This would mean a $2.9 million net increase in cost to county residents with the same level of service.

### VI. Conclusions

Rural residential development poses several policy questions for state and local policymakers. Rural residential development affects wildlife, public land access, open spaces, and ultimately fiscal structure of the county. The fiscal impact model developed in this research partially validates the AFT results that rural residential development costs taxpayers more than it contributes in revenues; and conversely, that agricultural land contributes more to county coffers than it asks for in services. However, relying on simply averages to make the case is risky. County land use and planning policy should encourage agricultural land protection in order to capture the fiscal savings as well as the attending flows of public goods associated with non-fragmented lands.

The two sets of results suggest that the type of rural residential development may affect the fiscal impact to the county. Development distance from public service nodes, the composition of the in-migrating households, the density of development and the natural resource land base all may be important factors to
integrate into a fiscal impacts model. Such data should be obtained and analyzed in order to assist county officials with planning strategies.

The AFT cost of community service methodology provides a simple way of calculating ratios that can be used in public policy formation that protects open spaces. It is important that the community leaders and policy makers use the ratios with caution. The results of the general test suggest that there is not a significant difference between rural residential revenues and public expenditures attributed to rural residents. However the results of the simulation indicate that rural residential development costs taxpayers more than it contributes on average but not necessarily at the margin. The mix of services and service recipients in this case are simply re-allocated in order for county budgets to balance.

It is important here to point out that this estimate does not include the broad array of other public good values associated with agricultural land which includes wildlife habitat, water quality, and viewshed. Thus this fiscal value estimate is a conservative measure of the cost and benefit disparity resulting from dispersed rural residential development.

Endnotes

1. Here the distance function is defined by Shephard (1953).

2. The coefficients on the expenditure function are similar to a conditional factor demand if TVC is considered as the indirect cost function.

3. Urban school districts are included because it was impossible to separate out urban versus rural attendance.

References


Deller, Stephen. 1999. “Cautions concerning the use of Cost of Community Development Analyses,”
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Wyoming Statutes. 1999. §39-14-211.