

December 27, 2017

Clark County Board of County Councilors
c/o Rebecca Tilton
P. O. Box 5000
Vancouver, WA 98666

RE: COTTON PARCELS

Dear County Councilors:

We own five contiguous land parcels in the N. E. ¼ section 28 T3N R2E Wm. Our land is positioned north of 134th Street, and is located within the area that the county proposes a zoning overlay of freight-rail dependent uses.

Two of our parcels (198378000, 198383000) are included in the planning commission proposed freight-rail dependent overlay status. Three of our parcels (198305000, 198334000, 198382000) are not.

A. Background information

1. All five parcels are zoned AG-20 although they are all non-compliant for this zone. The largest parcel is 14.99 acres. The total of all five parcels is 28.43 acres.
2. All five parcels currently have a railroad industrial urban reserve overlay.
3. All five parcels are contiguous bare land lots with no improvements.
4. The planning commission is proposing that two of the lots (198383000 and 198378000) be included in the new freight-rail dependent overlay status. These two lots comprise 16.80 acres. The three remaining parcels comprise 11.63 acres.

B. Our Request:

We are requesting our other three parcels (198305000, 198334000, 198382000) be included with the two lots already proposed by the planning commission, and their overlay status be changed from railroad industrial urban reserve to freight-rail dependent.

C. Our Reasoning:

Following are the reasons why we feel these other three parcels should be included.

1. Without including the additional three parcels, these three would be land-locked. They would have no vehicular access to a public road, or a private road, or even to a shared driveway.
2. To not include the three additional parcels would make the two parcels proposed by the planning commission unmarketable since we understand that it is illegal to land-lock lots.
3. The amount of total acreage of the additional lots is small at 11.63 acres.
4. To add these three parcels does not extend the western boundary for freight-rail dependent overlay status any further to the west and in fact would help square up the map.

Thank you very much for your consideration in this matter.

Respectfully yours,



Leslie A. Cotton



Linda M. Cotton

Erikson & Associates, PLLC
Attorneys at Law

Erikson

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January 2, 2018

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Jose Alvarez
Community Planning
1200 Franklin Street
Vancouver, Washington

Board of County Councilors
P.O. Box 5000
Vancouver, WA 98666-5000

E-mail: jose.alvarez@clark.wa.gov

Re: Freight-Rail-Dependent-Uses

Dear County Councilors and Mr. Alvarez:

I represent Howard and Katherine Graman, the owners of approximately 10 acres located at 12816 NE Laurin Road, Vancouver,¹ which is proposed for inclusion in Comprehensive Plan amendments to implement freight-rail-dependent-uses authorized under ESB 5517, codified in the *Growth Management Act* as follows:

Any county located to the west of the crest of the Cascade mountains that has both a population of at least four hundred thousand and a border that touches another state, and any city in such county, may adopt development regulations to assure that agriculture, forest, and mineral resource lands adjacent to short line railroads may be developed for freight rail dependent uses. [²]

Such counties and cities may also modify development regulations to include development of freight rail dependent uses that do not require urban governmental services in rural lands. [³]

¹Tax Lot 34 (APN 198331-000), located in the South half of Section 28, Township 3 North, Range 2 East of the Willamette Meridian.

²RCW 36.70A.060(1)(a).

³RCW 36.70A.108(2).

Under **Clark County Code Section 40.560.010(G)**, “[m]ap changes may only be approved if all of the following are met:”

- 1. The proponent shall demonstrate that the proposed amendment is consistent with the Growth Management Act and requirements, the countywide planning policies, the community framework plan, comprehensive plan, city comprehensive plans, applicable capital facilities plans and official population growth forecasts;**

The Staff Report dated October 27, 2017 finds consistency with economic development and transportation goals, concluding as follows:

The proposed text amendments and map are consistent with GMA Goals. The subject parcels are part of a phase I overlay of freight-rail-dependent-uses. The legislature amended the Growth Management Act (GMA) to allow for these uses. [4]

However, there is no discussion of maintaining and enhancing natural resource industries, nor ensuring public facilities and services at the time the development is available for occupancy:

(8) Natural resource industries. Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forestlands and productive agricultural lands, and discourage incompatible uses. . . .

(12) Public facilities and services. Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards. [5]

Any conclusion that maintenance and enhancement of agriculture is consistent with the industrialization contemplated by freight-rail-dependent-uses must be based upon an analysis of impacts which is entirely lacking in the Staff Report. Moreover, there is no evidence that public facilities will be available at the time that proposed industrialization is ready for occupancy. County records indicate that all of the properties within the proposed Plan amendment are served by septic systems, not public facilities.

⁴Staff Report, Jose Alvarez, October 27, 2017, at 2.

⁵RCW 36.70A.020.

2. **The proponent shall demonstrate that the designation is in conformance with the appropriate locational criteria identified in the plan;**

The Staff Report finds that “[t]he only locational criterion in the legislation is to be ‘adjacent to the short line railroad,’” and concludes that the “[c]riterion is not applicable.”⁶ Staff’s finding and conclusion are nonresponsive to the Code requirement, which demands satisfaction of “locational criteria identified in the *plan*,” not locational criteria identified in the *legislation*. There can be no doubt that the word “plan” refers to the Clark County Comprehensive Plan because the ordinance describes its purpose as follows: “This section states the specific procedures and review criteria necessary to process comprehensive plan amendments.”⁷

By substituting the word “legislation” for “plan,” staff have prejudged the issue to assume that the proposed amendment area satisfies locational criteria. The fact that ESB 5517 authorizes development regulations to assure freight-rail-dependent-uses does not exempt the present proposal from satisfying locational criteria including Additional Criteria for Rural Map Changes:

1. Amendments to the plan map for (a) **changing a natural resource land designation** to either a smaller lot size natural resource land designation or to a **rural designation**, or (b) creating or expanding a rural center, shall demonstrate that the following criteria have been met:
 - a. The requested change shall not impact the character of the area to the extent that further plan map amendments will be warranted in future annual reviews; and
 - b. The site does not meet the criteria for the existing resource plan designation; and
 - c. The amendment shall meet the locational criteria for the requested designation. [⁸]

Staff’s analysis does not consider impacts to “the character of the area such that further amendments will be warranted in future annual reviews.” Property within the proposed amendment area meets the criteria for the existing agricultural designation, and locational criteria are not even discussed.

⁶Staff Report at 3.

⁷CCC 40.560.010(A).

⁸CCC 40.560.010(I), emphasis added.

At very least, re-designation of my clients' property as a freight-rail-dependent-use is premature until the proposal is analyzed under applicable locational criteria. In construing Watcom County's designations under limited-area-more-intense-rural-development provisions,⁹ the Washington Supreme Court affirmed the requirement that statutory criteria must be incorporated into the Comprehensive Plan and applied before GMA compliance is determined:

[I]t is possible that some of the County's existing areas of more intense development will be found to conform to the statutory criteria. But these criteria must be incorporated into the comprehensive plan and then applied before any such determinations can be made. [¹⁰]

Likewise, in the present case, without applying locational criteria for freight-rail-dependent-uses, it is impossible to determine whether individual parcels satisfy the criteria.

* * *

3. The map amendment or site is suitable for the proposed designation and there is a lack of appropriately designated alternative sites within the vicinity;

The Staff Report: (i) finds that "[t]he proposed overlay is the first proposed to implement the new legislation," (ii) misstates that 156 acres are "part of the rural industrial land bank," (iii) notes that "the rest of the area is zoned AG-20," and (iv) concludes that the "[c]riterion has been met."¹¹ What first-in-time has to do with suitability is unfathomable, and says nothing about the availability of alternative locations. It is trivially true that no other properties are designated "freight-rail-dependent-uses" because the designation has not yet been applied; however, the criterion seeks to *guide* the choice of alternatives, not follow upon prejudgment.

While 156 acres within the proposal had been designated as an industrial bank, that designation was overturned by the Growth Management Hearings Board for untimeliness:

RCW 36.70A.367(6) unambiguously states a county must act by the deadlines established in RCW 36.70A.130(4), and the deadline in RCW 36.70A.130(4) is the year 2004. [¹²]

⁹RCW 36.70A.070(5)(d).

¹⁰*Gold Star Resorts v. Futurewise*, 167 Wash.2d 723, 740, 222 P.3d 791 (2009).

¹¹*Staff Report* at 3.

¹²*Friends of Clark County v. Clark County*, WWGMHB No. 16-2-0002 (2016).

There is no analysis in the Staff Report as to why AG-20 is somehow preferable to other designations for freight-rail-dependent uses. Nor is there any discussion of current uses on the subject property. My clients' reside upon their property, and residential uses are apparent on 18 of 26 parcels within proposed rezone.¹³ How a residential neighborhood could be "suitable" for freight-rail-dependent-uses is not analyzed in the Staff Report. Staffs' interpretation impliedly substitutes "home occupancy" for "agriculture, forest, and mineral resource lands," in violation of the *Act*.¹⁴ In particular, but without limitation of the foregoing, a local history of the Chelatchie Prairie Railroad reports that "[o]ver time, with severe winter weather, lack of maintenance and changes in ownership, the track-bed, rails, bridges, and buildings north of Battle Ground have deteriorated."¹⁵ The same article also reports maintenance of the foregoing; however, in light of the recent history of rail-line failures, it would be reckless to proceed with the present proposal absent a detailed safety analysis of the entire infrastructure upon which the rail-line depends.

* * *

4. **The plan map amendment either: (a) responds to a substantial change in conditions applicable to the area within which the subject property lies; (b) better implements applicable comprehensive plan policies than the current map designation; or (c) corrects an obvious mapping error;**

The Staff Report finds that "[t]he proposed overlay map and policies are a response to . . . new legislation (ESB 5517) amending the GMA," and concludes that "Criterion 4 has been met."¹⁶ Reading "change in legislation" for "change in conditions applicable to the area within which the subject property lies" is inconsistent with Washington case law holding that "the proponents of the rezone [Clark County in the present case] have the burden of proof in demonstrating that conditions have substantially changed since the original zoning."¹⁷ In *Parkridge*, the City of Seattle failed to carry its burden of demonstrating "a change in this neighborhood as would justify a rezone for the public health, safety, morals or general welfare[; and] the rezone was void."¹⁸

¹³See right column of *Railroad Rezone - Parcels List* annexed hereto as Exhibit 1.

¹⁴RCW 36.70A.060(1)(a).

¹⁵<https://tickets.bycx.org/history>, a copy of which is annexed hereto as Exhibit 2.

¹⁶*Staff Report* at 4.

¹⁷*Parkridge v. Seattle*, 89 Wash.2d 454, 462-63, 573 P.2d 359 (1978); see also CCC 40.560.010(D)(3)(i).

¹⁸*Id.*

Of course, the proponent need not show changed conditions for a rezone which carries out the Comprehensive Plan;¹⁹ however, ESB 5517 did not amend the Comprehensive Plan; rather, it authorized development regulations to assure development of freight-rail-dependent-uses. In order to amend the Comprehensive Plan, and avoid the requirement of demonstrating changed conditions, the County must analyze and address the following criteria:

1. The cumulative impacts of all plan map changes on the overall adopted plan, plan map and relevant implementing measures, and adopted environmental policies;
2. The cumulative land use environmental impacts of all applications on the applicable local geographic area and adopted capital facilities plans; and
3. Where adverse impacts are identified, the county may require mitigation. Conditions which assure that identified impacts are adequately mitigated may be proposed by the applicant and, if determined to be adequate, imposed by the county as a part of the approval action. [²⁰]

Such analysis is beyond the scope of the present proposal, and should be conducted as part of a comprehensive periodic review.²¹

* * *

5. **Where applicable, the proponent shall demonstrate that the full range of urban public facilities and services can be adequately provided in an efficient and timely manner to serve the proposed designation. Such services may include water, sewage, storm drainage, transportation, fire protection and schools. Adequacy of services applies only to the specific change site.**

The foregoing provision emphasizes the importance of public facilities and services under the County Code. While the empowering legislation authorizes modification of development regulations to include “freight-rail-dependent-uses that do not require urban governmental services in rural lands,”²² no such modifications are included in the present proposal. As noted above, the entire area proposed for Comprehensive Plan amendment is served by septic systems.

¹⁹*SORE v. Snohomish County*, 99 Wash.2d 363, 370, 662 P.2d 816 (1983).

²⁰CCC 40.560.010(T).

²¹CCC 40.560.010(F)(1), (6).

²²RCW 36.70A.060(1); RCW 36.70A.108(2).

We find no storm drainage plans on the record of this proposal. It is extremely unlikely that all employees working in freight-rail-dependent-uses will ride the rail line, so transportation analysis is essential. There is no evidence in the record that fire protection is sufficient to serve proposed uses.

Based upon the foregoing, adoption of the proposed freight-rail-dependent-use designation would not comply with the County Code nor the *Growth Management Act*, and must be denied.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark A. Erikson', written in a cursive style.

Mark A. Erikson
Attorney at Law

MAE/ke
GRAH0101.L02.wpd

cc: Clients

RAILROAD REZONE - PARCELS LIST

PAGE 1 OF 2

<u>MAP ID</u>	<u>TAX ID NUMBER</u>	<u>OWNER NAME</u>	<u>PROPERTY ADDRESS</u>	<u>ACRES</u>	<u>MAILING ADDRESS</u>
N1	608177000	T L & STEPHANIE GRIFFITH	10811 NE 149TH ST BRUSH PRAIRIE, WA 98606	0	10811 NE 149TH ST BRUSH PRAIRIE, WA 98606
N2	196656000	ACKERLAND, LLC	10901 NE 149TH ST		P O BOX 1300
1	198384000	ROBERT & KATHE SUMRILL	BRUSH PRAIRIE, WA 98606	155.85	BRUSH PRAIRIE, WA 98606
2	198330000	THOMAS BARNES	13816 NE LAURIN RD VANCOUVER, WA 98662	2.77	13816 NE LAURIN RD VANCOUVER, WA 98662
3	198383000	LESLIE & LINDA COTTON	13802 NE LAURIN RD VANCOUVER, WA 98662	0.41	13802 NE LAURIN RD VANCOUVER, WA 98662
4	198336000	MICHAEL PETERSON	N/A	1.81	17709 NE 102ND AVE BATTLE GROUND, WA 98604
5	198358000	MICHAEL PETERSON	N/A	0.18	13714 NE LAURIN RD VANCOUVER, WA 98662
6	198328000	MICHAEL PETERSON	13714 NE LAURIN RD VANCOUVER, WA 98662	0.37	13714 NE LAURIN RD VANCOUVER, WA 98662
7	198329000	VIKTOR BELZA	13700 NE LAURIN RD VANCOUVER, WA 98662	1.64	P O BOX 90340 PORTLAND, OR 97290
8	198378000	LESLIE & LINDA COTTON	N/A	14.99	17709 NE 102ND AVE BATTLE GROUND, WA 98604
9	198386000	LESLIE & LINDA COTTON	N/A	0.45	17709 NE 102ND AVE BATTLE GROUND, WA 98604
10	198303000	RICHARD JAGELSKI	10500 NE 134TH ST VANCOUVER, WA 98662	8.29	10404 NE 134TH ST VANCOUVER, WA 98662
11	198304000	JOHN JAGELSKI/MRJ LIFE ESTATE	13208 NE LAURIN RD VANCOUVER, WA 98662	23.49	13208 NE LAURIN RD VANCOUVER, WA 98662
12	198308000	DON & JEANETTE KITTERMAN	12904 NE LAURIN RD VANCOUVER, WA 98662	15	12904 NE LAURIN RD VANCOUVER, WA 98662
13	198331000	HOWARD & KATHERINE GRAMAN	12816 NE LAURIN RD VANCOUVER, WA 98662	10	12816 NE LAURIN RD VANCOUVER, WA 98662

EXHIBIT /

RAILROAD REZONE - PARCELS LIST

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<u>MAP ID</u>	<u>TAX ID NUMBER</u>	<u>OWNER NAME</u>	<u>PROPERTY ADDRESS</u>	<u>MAILING ADDRESS</u>
14	198333000	ROBERT ZASTOUPIL	12712 NE LAURIN RD VANCOUVER, WA 98662	12712 NE LAURIN RD VANCOUVER, WA 98662
15	198325000	WILLIAM & MARGARET ZIMMERMAN	N/A	9504 NE 119TH ST VANCOUVER, WA 98662
16	198376000	ARCHIE & BARBARA SOMERS	12510 NE LAURIN RD VANCOUVER, WA 98662	12510 NE LAURIN RD VANCOUVER, WA 98662
A	198332000	HANS & DORIS TANNINEN	13817 NE LAURIN RD VANCOUVER, WA 98662	P O BOX 669
B	198343000	RONALD & LISA HOFFMAN	13719 NE LAURIN RD VANCOUVER, WA 98662	BRUSH PRAIRIE, WA 98606
C.1	198344000	EDWARD & COLLEEN RUNYON	13711 NE LAURIN RD VANCOUVER, WA 98662	P O BOX 1546
C.2	606576000	ROBERT HENDERLING	13711 NE LAURIN RD VANCOUVER, WA 98662	BRUSH PRAIRIE, WA 98606
D	198370000	FREDERICK & JEANETTE KNITTLE	13617 NE LAURIN RD VANCOUVER, WA 98662	13711 NE LAURIN RD VANCOUVER, WA 98662
E	198324000	ACKERLAND, LLC	N/A	13617 NE LAURIN RD VANCOUVER, WA 98662
F	198323000	MYRON & SHEILA STRUCK	13811 NE LAURIN RD VANCOUVER, WA 98662	P O BOX 1300
G	198369000	JOSHUA & ELISABTH GARNER	10901 NE 137TH CIR VANCOUVER, WA 98662	BRUSH PRAIRIE, WA 98606

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- [How to Find Us](#)
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 - Restaurants (0)
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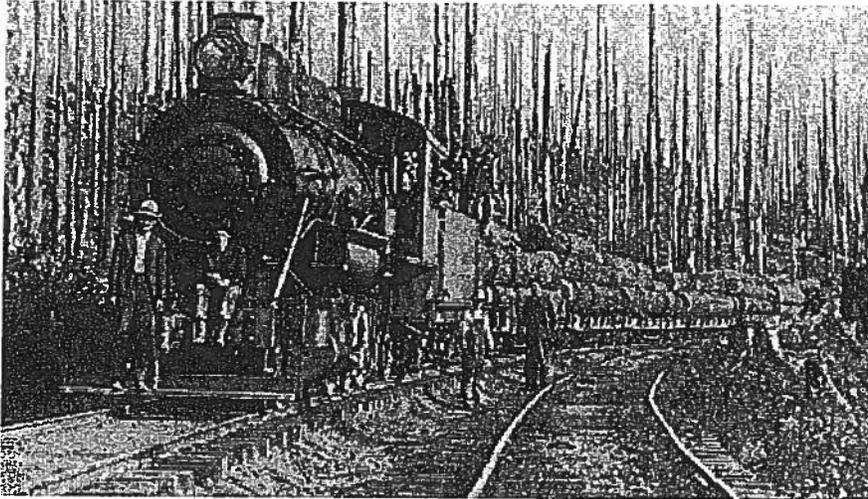
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[History](#)

Tickets (42)	Schedule (0)	Merchandise (0)	How to Find Us (0)	History (0)	Nearby (0)
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History

History of the Chelatchie Prairie Railroad



There had been on-going discussion about the need for a railroad out of Vancouver for quite some time since the completion of the trans-continental railroad. The first person to take action was L.M. Hidden, a Vancouver businessman. Hidden was involved in farming, brick making, hotel operation and philanthropic endeavors. Hidden was also involved in Clark County activities and helped form the Clark County Fair Association.

There is an unverified story that Hidden and his family, along with several friends and their families, went on a picnic at Moulton Falls. They were so impressed with the abundant timber in the area that they decided to build a railroad to gain access to it.

In any event, on 7/8/1886 Hidden and 5 associates left Vancouver to survey the proposed route to Yakima. Hidden felt that the route would give him access to the timber, the wheat growing country around Yakima and there might be coal and other minerals along the way. They were gone a month and returned with estimates of timber and mining resources and certain that a practical route could be laid out.

On 9/22/1887, the Clark County Register announced that the Vancouver, Klickitat and Yakima, Vancouver's first railroad, had recently been incorporated with one million dollars in funding. L. M. Hidden was vice-president. On 1/31/1888, work began, and the first locomotive for the line arrived in Vancouver on 12/20/1888. The goal of the railroad was to serve Vancouver and Yakima by way of the Klickitat Pass. It was envisioned that it would ultimately connect with the Great Northern Railroad and the Manitoba line of the Canadian National Railway at Yakima creating a transcontinental connection.

The line was eventually built to Brush Prairie, but the country fell into an economic depression and money ran out for further expansion and operations. Finally, on 11/25/1897, the railroad was broke and had to be sold. It was renamed the Portland, Vancouver and Yakima Railroad by the new owners.

Within four months under the new ownership, the railroad was bringing 50,000 board feet of logs a day from Brush Prairie to Vancouver. In November of 1898, the stockholders increased their capital stock from \$50,000 to \$250,000 and sought right of way to extend the line to Chelatchie Prairie.

By September 1901, there were 4 work camps working on extending the rail line to Yacolt. During that period, crews were working on a 300-foot long tunnel between the Lewis River and Battle Ground at Moulton Falls.

The summer of 1902 was exceptionally dry and by the second week in September, there were fires all over the Northwest. One fire started near Bonneville, in Skamania County and moved through the timber covered hills taking 10 days to reach the Yacolt area. The wind changed and Yacolt was spared. By the time the fire burned out near Mt. St. Helens, the loss in property and resources reached approximately 13 million dollars. Much of the burned land was owned by the Weyerhaeuser Timber Co., which mounted a huge salvage operation, based in Yacolt. Operations were conducted by the Weyerhaeuser subsidiaries Clarke County Timber Company and Twin Falls Logging Company. The Twin Falls Logging Company laid track and ran logging trains through the woods.

In 1903, the railroad was completed to Yacolt, and the town boomed. The Vancouver Independent wrote:

"Keep your eye on Yacolt and Battle Ground. Both of these little towns are now experiencing booms that are almost phenomenal. During the past month there has been quite a movement in real estate in both places and a number of new buildings have been erected. The booms in both towns are occasioned by the increase in the logging business. The Columbia River Lumber Company have just established three camps on a spur near Battle Ground and in the Yacolt Country preparations are being made for an extensive logging business."

Also in 1903 the P,V&K merged with the Washington and Oregon Railroad and they became the Washington Railway and Navigation Company. This company lasted only 3½ months and it was transferred to the Northern Pacific Railroad on 11/11/1903 to be under control of that company's Pacific Division.

The new owners immediately began regular passenger service to Yacolt, with one passenger coach making the trip each way daily. A one-way ticket from Yacolt to Vancouver cost \$1.07. Prior to the addition of passenger coaches by the Northern Pacific, passengers rode wherever space was available; in the caboose, on freight cars, even on the engine.

The salvage of burned timber was completed by 1910, and by the mid-1920's, logging of green timber in the area was winding down. On December 4, 1929, George S. Long, general manager of Weyerhaeuser, wrote the stockholders of the Clarke County Timber Company regarding the closure of operations in the area. The area had been logged off, he wrote, and that there was no demand for the land for agricultural purposes as it would cost more for the purchaser to clear the land of stumps than he could buy an already cleared and cultivated parcel for.

As for Yacolt, Long wrote:

"At Yacolt we have two or three worn out buildings, all vacant and without any perceptible value whatever, these including an old warehouse, a residence formerly occupied by our logging Superintendent, a hospital building, which has been robbed of much of its equipment, and one or two very small buildings of no value, in fact none of them have any value today for Yacolt is absolutely dead with no promise for a future life."

After the departure of Weyerhaeuser, The Northern Pacific continued to operate logging trains on the line to serve the remaining small-scale operations in the area, but there was no longer any need for passenger service. By the mid-1940's, the Northern Pacific was only running one train a week to Yacolt.

In 1948, Harbor Plywood completed the long planned extension to Chelatchie Prairie, opening that area to logging. Two years later, the Longview, Portland and Northern bought the rail line Harbor Plywood and later bought the remainder of the line from the Northern Pacific. International Paper Company, the parent company of the L,P&N, built a huge lumber and plywood plant there in 1960.

Even though the Northern Pacific sold the line, it was not the end of NP involvement in the area. In the late 1950's NP was running one log train a day from Kelso to Yacolt. The train would leave Kelso at 7:00am, pick up empty cars at Longview, stop at Battle Ground where the crew would eat lunch, and arrive at Yacolt at 12:30pm. On the return trip, the train would drop off the log cars at Longview and be back in Kelso at 7:45pm.

When the mill was closed in 1979, the entire line was put up for sale.

Three Vancouver businessmen bought the line in March 1981 and changed its name to the Chelatchie Prairie Railroad. It was used both commercially and for passenger traffic until January of 1984 when the owners filed for abandonment in order to tear it up, sell the tracks and ties and 340 acres of right-of-way.

Clark County purchased the railroad and leased it to the Lewis and Clark Railroad, which had run excursion service and continues to use a portion of the line for commercial purposes.

Over time, with severe winter weather, lack of maintenance and changes in ownership, the track-bed, rails, bridges, and buildings north of Battle Ground have deteriorated. A group of community volunteers came together in 1998 with the goal of restoring the line and building the Chelatchie Prairie Railroad into a functioning historical railroad. Working with the support of Clark County, the track from Moulton Falls to Chelatchie Prairie has been restored, and excursion service resumed on May 26, 2001. Work continues on improving the track and upgrading equipment with the goal of restoring service to Battle Ground.

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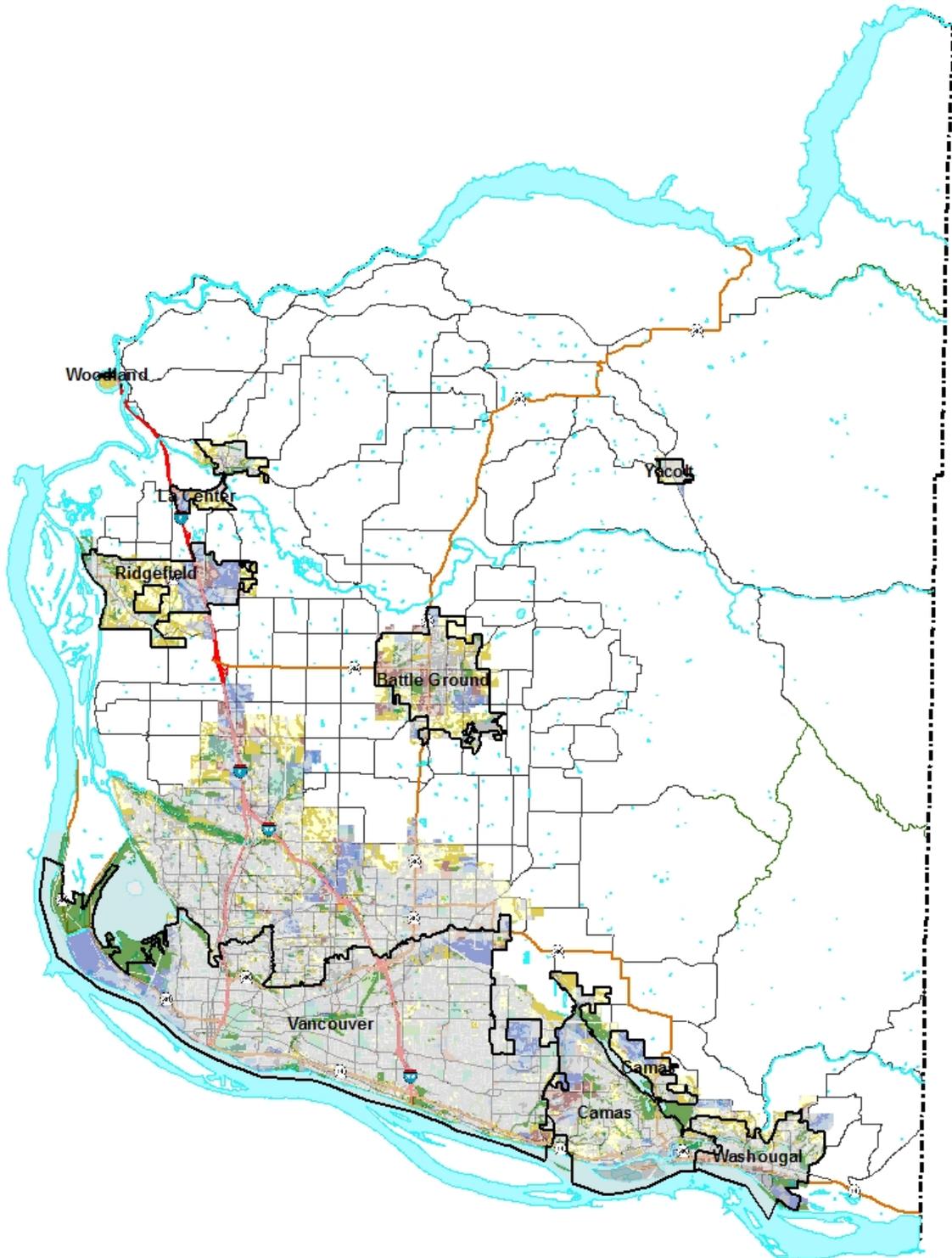
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BUILDABLE LANDS REPORT, June 2015



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Tom Mielke

Jeanne Stewart

County Manager

Mark McCauley

Clark County Community Planning

Oliver Orjiako, Director

Gordy Euler, Program Manager

Gary Albrecht, Planner II

**Clark County Information and
Technology**

Jon Levitre

Community Planning would like to thank:

Clark County GIS

Ken Pearrow

Barbara Hatman

EXECUTIVE SUMMARY

The Growth Management Act (GMA) requires the county and its cities to provide sufficient land to accommodate specific population and employment targets. This is the third buildable lands report since 1990. It presents a series of basic, quantifiable indicators in Clark County and tracks how they are changing each year.

Clark County coordinated with its cities to compile data that shows the progress of each community's comprehensive plan toward the goals of sprawl reduction and concentrated urban growth identified in the Growth Management Act. Each community collects development data, which is forwarded to the county and added to a central database located at this webpage: http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity

The primary sources of data are new commercial, industrial and residential building permits from July 1, 2006 through December 31, 2014. Clark County's Geographic Information System (GIS) was used to associate new building permits issued with city and urban growth area boundaries, Vacant Buildable Land Model (VBLM), employment, assessor information, and constrained land.

Following are the major observations presented in this report:

- Residential development within urban growth areas of Clark County consumed 1,245 acres with a density of 4.7 dwelling units per acre. Based on the VBLM, there are 7,513 net buildable acres that can accommodate 51,436 households. At 2.66 persons per household urban growth areas can accommodate 136,820 persons.
- There were 1,387 building permits issued in the rural area on 7,799 acres. Given the underlying zoning, the total vacant and development potential in the rural area is 9,390 lots. Assuming 2.66 persons per household, there is potential for additional rural capacity of 24,977 persons. Overall, the county can accommodate 161,797 persons.
- Review of development indicates that 43% of all residential development occurred on land with some environmental constraint. More importantly, this percent does not imply that development is occurring on lands with critical areas, because in general environmentally constrained lands are not being developed.
- Building permit review and evaluation has indicated that commercial and industrial development in the UGAs during the period consumed 3,372 acres of land. Commercial uses consumed 2,704 acres and industrial uses consumed 668 acres. Based on the 2015 VBLM inventory there are 2,057 net buildable commercial acres and 3,982 net buildable industrial acres.

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Introduction

The Growth Management Act (GMA) requires the county and its cities to provide sufficient land to accommodate specific population and employment targets. This report responds to and satisfies the review and evaluation requirements of the Washington State Growth Management Act (GMA) in RCW 36.70A.215, commonly referred to as the “buildable lands” statute. The report was prepared by county staff and the cities using the Clark County Community Framework process, the county’s adopted multi-jurisdictional process for GMA issues.

The Comprehensive Plan indicates the Buildable Lands Program, at a minimum should answer the following questions:

- What is the actual density and type of housing that has been constructed in UGA’s since the last comprehensive plan was adopted? Are urban densities being achieved within UGA’s? If not, what measures could be taken, other than adjusting UGA’s, to comply with the GMA?
- How much land was actually developed for residential use and at what density since the comprehensive plan was adopted? Based on this and other relevant information, how much land would be needed for residential development during the remainder of the 20-year comprehensive planning period?
- To what extent have capital facilities, critical areas, and rural development affected the supply of land suitable for development over the comprehensive plan’s 20-year timeframe?
- Is there enough suitable land in Clark County and each city to accommodate county-wide population growth for the 20-year planning period?
- Does the evaluation demonstrate any inconsistencies between the actual level of residential, commercial, and industrial development that occurred during the review period compared to the vision contained in the county-wide planning policies and comprehensive plans and the goals and requirements of the GMA?
- What measures can be taken that are reasonably likely to increase consistency during the subsequent eight-year period, if the comparison above shows inconsistency?

Process

Clark County, in consultation with each city, has been working cooperatively to address the requirements of Section 215. In 2005, Community Planning received a grant from Washington State Department of Commerce formerly known as Community Trade and Economic Development (CTED). That grant provided a valuable opportunity to unify buildable lands data into one system and make collection and analysis easier for individual cities and the county. Through that process, a methodology was developed for collecting the buildable land data in the

link below (see Data Transfer Protocols and Monitoring of Growth Management Trends).
http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity

The data collection methods and procedures were developed through the Clark County Growth Management Act (GMA) Technical Advisory Committee (TAC). An Amendment to the countywide planning policies was adopted by reference as Ordinance 2000-12-16 by the Board of County Commissioners.

The Ordinance amended language in the Community Framework Plan to comply with the requirements of RCW 36.70A.215. The Growth Management Act requires Clark County to compile data that shows the process of each community's comprehensive plan toward the goals of the Growth Management Act. Each community collects development data, which is forwarded to the county and added to a central database. The web site draws data from that database. It allows citizens, interest groups, elected officials and advisory boards the most comprehensive source of development data.

Methodology

Following the first Buildable Lands report, the county met with each building official and city staffs to refine how data was to be compiled in the future. Each month, staff in each jurisdiction (except Yacolt) forwards an electronic spreadsheet to the county with updated development data such as permit types, parcel numbers, numbers of units, etc. Staff performs a quality assurance check to ensure data has permit number, permit type, parcel number, number of units, building square feet for non-commercial permits, and issue dates. They look for duplicates and check for errors with parcel numbers, addresses, number of units and square feet.

If data is missing or incorrect, staff contacts the respective jurisdiction. Staff also adds missing parcel numbers by using the parcel match option in Clark View.

Information Technology extracts permit data for Clark County and Yacolt, and transfers the files to a server. The server completes the following steps: normalize and read data, translate data, import data, obtain GIS data, generate reports in PDF format, and generates an exception report. The exception report contains permits that are not recognized by the server. If the error rate is greater than one to three percent per jurisdiction for the total number of permits, the county contacts the jurisdiction to correct the discrepancy. County staff also performs a visual check to confirm that the data has merged into the database correctly. The county runs another program that creates a report and a PDF file that is automatically placed on the web.

The primary sources of data were from new commercial, industrial and residential building permits issued from July 1, 2006 through December 31, 2014. Clark County's Geographic Information System (GIS) was used to link parent parcel serial numbers taken from new building permits issued to identify parcels within city and urban growth area boundaries, acreage and critical lands coverage.

Baseline Assumptions

The 2007 Comprehensive Plan planning assumptions have to do with growth rates, population, and persons per household, and are listed below:

- No more than 75 percent of any product type of detached/attached housing
- Average residential densities in urban areas would be 8 units per net acre for Vancouver, 6 for Battle Ground, Ridgefield, Camas, Washougal, 4 units per net acre for La Center, and no minimum for the town of Yacolt
- Infrastructure factor of 27.7 percent for residential development and 25 percent for industrial and commercial development
- 2.59 persons per household
- 20 employees per commercial acre; 9 employees per industrial acre
- A total population of 584,310 by 2024, from an annual growth rate of 2.0 percent, with 2.2 percent assumed in 2004-2010 for capital facilities planning purposes

COUNTYWIDE TRENDS, 2007-2014

Housing and Job Totals

Background and Relevance

Tracking the number of people who live and work in the community is a fundamental measure of how fast the community is growing and what additional land may be needed to accommodate future growth. A goal of growth management is to encourage the development of housing in proximity to job growth. The strategy of balancing housing and job growth is intended to reduce the need for long commutes, and to keep living and working communities easily accessible to each other. However, when housing growth occurs it often takes several years for sufficient job growth to occur in the area and vice-versa. Reduced vehicle trips result in less demand on the existing street infrastructure.

Under the GMA, Clark County and its cities are required to plan for a total population projection as provided by the state Office of Financial Management. Clark County's population forecast for the 20-year planning period ending 2035 is 578,391 in 2035. Since 2007, the County's population has increased by 34,139 persons or by 1.13 percent annually.

Data Collection

Official population estimates as of January 1st for all cities and counties are produced annually by Clark County GIS. Employment estimates were provided by the local office of the Washington Department of Employment Security (ESD). Employment data includes workers covered by state employment insurance, not including self-employed workers. On the following page, table 1 shows the estimated population trends of urban growth areas in Clark County from 2007 to 2014. Table 2 illustrates Clark County household and job patterns from 2007 to 2014.

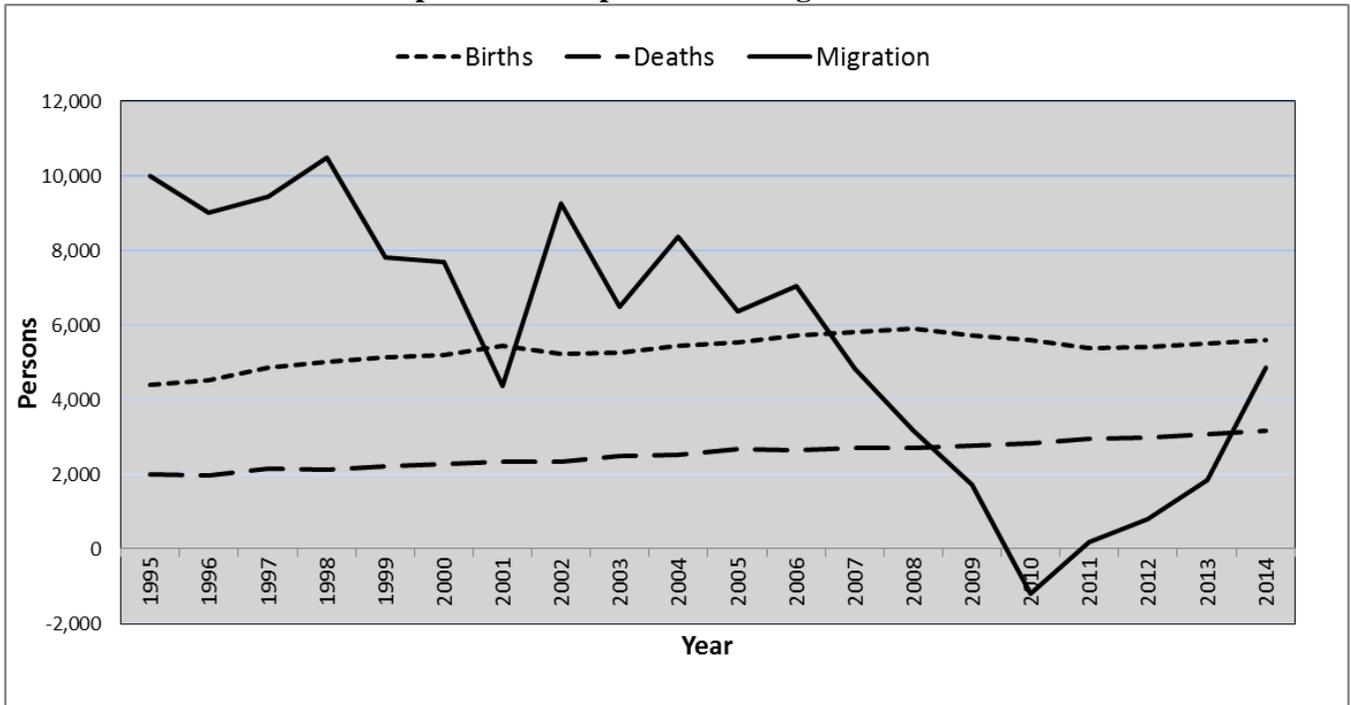
Table 1
Annual Population Estimates for Clark County, 2007-2014

Urban Growth Areas	2007	2008	2009	2010	2011	2012	2013	2014	2007-2014 Growth Rate
Battle Ground	18,654	18,867	19,297	19,479	19,851	20,052	20,163	20,871	1.60%
Camas	20,015	20,311	20,626	21,073	21,588	21,911	22,049	22,843	1.89%
LaCenter	3,017	3,069	3,010	3,050	3,220	3,135	3,163	3,209	0.88%
Ridgefield	5,015	5,112	5,175	5,402	5,608	5,741	6,150	6,575	3.87%
Vancouver	293,973	296,859	300,055	300,525	302,108	304,262	307,767	315,460	1.01%
Washougal	14,003	14,722	14,862	15,007	15,328	15,249	15,502	15,932	1.84%
Woodland	88	88	89	88	92	91	88	89	0.19%
Yacolt	1,535	1,578	1,613	1,636	1,645	1,644	1,653	1,661	1.13%
Rural County	58,408	58,840	59,642	59,689	60,049	60,280	60,112	62,205	0.90%
Total	414,708	419,445	424,368	425,949	429,490	432,365	436,647	448,847	1.13%

SOURCE: Clark County Department of GIS

NOTE: A portion of the City of Woodland is in Clark County.

Chart 1
Components of Population Change 1995-2014



SOURCE: Washington State Office of Financial Management, <http://www.ofm.wa.gov/>

Table 2
Clark County Household & Jobs, 2007-2014

Year	Households	Jobs	Jobs Per Household
2007	162,715	137,500	0.85
2008	164,796	137,300	0.83
2009	165,755	131,800	0.80
2010	166,989	130,400	0.78
2011	168,148	131,600	0.78
2012	169,467	134,400	0.79
2013	172,715	138,500	0.80
2014	173,827	144,300	0.83
Annual Average Percent change	0.94%	0.69%	

SOURCE: Clark County GIS and ESD.

Observations

- Population growth has three components: births, deaths and migration. Migration is the most volatile and has not recovered to pre-recession levels.
- Births and deaths have remained relatively constant over the last 20 years however deaths have been trending slightly higher due to the aging population
- During this period, 6,800 new jobs and 11,112 new households were added to Clark County.

Employment

The GMA does not mandate a source that must be considered in planning for future employment. However, in this report the county uses ESD to make comparisons between employment and employment densities. In 2007, commercial and industrial employment assumptions were 20 and 9 jobs per acre, respectively, to plan for future employment.

Observations

- From 2007 to 2014, Clark County added 11,112 new households, an annual average change of 0.94%; for the same period job growth was 0.69%.
- National recession starting in 2008 reversed a period of fast economic growth and low unemployment, resulting in significant layoffs and unemployment rates increasing to 11% by February 2013 in Clark County.

GROWTH TARGETS AND CAPACITY

In 1992, Clark County began the VBLM analysis to determine the potential capacity of urban growth areas to accommodate projected growth for the next 20 years to the year 2012. County staff met with interested parties from the development and environmental community to collectively examine criteria to be used to compute the supply of land available for development within each urban growth boundary. From the process, a methodology was developed using Clark County’s Department of Geographic Information System (GIS) as the primary data source.

The evaluation component of the RCW 36.70A.215 Review and Evaluation Program, at a minimum, shall: “Determine whether there is sufficient suitable land to accommodate the countywide population projection established for the county pursuant to RCW 43.62.035 and the subsequent population allocations within the county and between the county and its cities and the requirements of RCW 36.70A.110.”

The amount of land needed to accommodate projected growth through the 2035 planning horizon is the subject of this section. The amount of buildable land needed will be instrumental in the update of the comprehensive plan and provides a framework for addressing the land supply needs of a new 20-year planning horizon.

Tables 3 below and Table 4 on the following page indicate the amount of residential land needed to accommodate the projected population based on (1) the 2015 Comprehensive Growth Management Plan baseline assumptions; and (2) the densities observed since 2006. Each table provides the 2015 population (January 1st), the remaining population for planning horizon 2035, and the residential units and acres needed.

**Table 3
2035 Urban Growth Residential Land Need**

Jurisdiction	2015 Population	Remaining Population for planning horizon 2035	Residential units needed	Assumed units per net	Residential acres needed	Deficit	Surplus	2015 Vacant Buildable Land Inventory
Battle Ground	20,871	15,972	5,169	6	862		208	1,070
Camas	22,843	11,255	3,868	6	645		248	892
La Center	3,209	3,233	1,089	4	272		101	373
Ridgefield	6,575	13,087	4,377	6	729		280	1,009
Vancouver	315,460	52,786	21,723	8	2,715		907	3,622
Washougal	15,932	6,023	2,247	6	375		102	477
Woodland	89	229	83	4	21		5	25
Yacolt	1,661	303	88	4	22		22	44
Total	386,640	102,890	38,643		5,640			7,513

Source: Clark County Community Planning. Note: Land needs are based on the VBLM2015 model using net acres.

**Table 4
2035 Urban Growth Residential Land Need Based on Observed Density**

Jurisdiction	2015 Population	Remaining Population for planning horizon 2035	Residential units needed	Observed units per acre	Residential acres needed	Deficit	Surplus	2015 Vacant Buildable Land inventory
Battle Ground	20,871	15,972	5,169	4.2	1,231	-161		1,070
Camas	22,843	11,255	3,868	3.8	1,018	-125		892
La Center	3,209	3,233	1,089	1.9	573	-200		373
Ridgefield	6,575	13,087	4,377	5.2	842		168	1,009
Vancouver	315,460	52,786	21,723	7	3,103		519	3,622
Washougal	15,932	6,023	2,247	6.6	341		136	477
Woodland	89	229	83	4	21		5	25
Yacolt	1,661	303	88	3.4	26		18	44
Total	386,640	102,890	38,643		7,154			7,513

Source: Clark County Community Planning. Note: Land needs are based on the VBLM 2015 model using net acres. Observed densities are based on actual development in urban areas. City densities are within city limits, except for Vancouver which uses full UGA density. Residential units needed is based on person per household from the 2013 ACS data. Additional population not included in the vacant land model is 15,224 persons; bringing the 2035 estimate to 118,114.

Summary

- The observed unit per acre does not include existing platted, yet vacant lots or potential densities based upon maximum lot sizes and current zoning of vacant or underutilized land. The model relies on building permit data, not platted development data. A conclusion under GMA that a jurisdiction has a surplus or deficit in lands available within a jurisdiction to accommodate a planned population within a defined planning period, can only be concluded through a thorough analysis of the underlying zoning, site constraints, site infrastructure and platting patterns.
- Based on the 2015 VBLM there are 7,513 net buildable acres. At a potential of 7 dwelling units per acre and 2.66 persons per household, this land area will accommodate 136,820 persons. The Urban Growth estimate is 118,114 persons, and the January 1, 2015 Clark County population estimate is 448,845. Therefore, the 2015 VBLM has capacity to accommodate the anticipated Urban Growth population estimate.
- Based on the 2015 VBLM, there are 2,057 net buildable commercial acres and 3,982 net buildable industrial acres. Thus, there is potential job capacity of 76,978 plus the public sector jobs that are not included in the vacant and buildable lands model, and including 16,775 jobs that will occur from redevelopment totaling 101,153 potential jobs.
- Based on the existing zoning, the total vacant and development potential in the rural area is approximately 9,390 lots. Assuming 2.66 persons per household, there is capacity to add 24,977 persons in the rural areas.

- See Appendix D for the City of Ridgefield’s planning consultants reply, Elizabeth Decker, on the observed density surplus.

In conclusion, based on observed density and the 2015 VBLM, Battle Ground, Camas and La Center show small deficits. If residential development continues to develop at the observed densities, then this deficit might become true by 2035. It is important to note that the observed densities occurred at a period of a deep recession having a significant impact to development occurring in the housing sector. However, Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal and Clark County have adopted local development regulations that may reflect higher density development within the planning horizon.

Commercial and Industrial Needs Analysis

In 2014, the Board of County Commissioners chose to plan for a total of 91,200 net new jobs. The County has an estimated capacity of 101,153 jobs as follows: The 2015 VBLM, indicates a capacity of 76, 978 jobs. The cities of Battle Ground, La Center, and Ridgefield, have indicated they have additional capacity to accommodate 16, 755 jobs. Publicly owned land is not included in the model, therefore we assume that the 7,400 new public sector jobs estimated by ESD will occur on existing publicly owned facilities.

Residential Capacity Analysis

Tables 5-7 on the following pages provide the vacant buildable lands per urban growth area in the residential, commercial and industrial areas based on the 2015 VBLM. Countywide there are 7,513 net buildable residential acres with a capacity of 136,820 residents. See Appendix C for the Vacant Buildable Lands Model planning assumptions.

**Table 5
Residential Capacity Analysis, 2015**

Jurisdiction	Gross Acres	Net Acres	House holds	Population Capacity	Average Density per Net Acre
Battle Ground					
City	1,620.6	737.8	4,427	11,774	6
UGA	750.9	332.0	1,992	5,299	6
Total	2,371.5	1,069.8	6,419	17,073	6
Camas					
City	1,561.3	700.2	4,201	11,174	6
UGA	432.2	192.2	1,153	3,067	6
Total	1,993.5	892.3	5,354	14,242	6
La Center					
City	574.4	251.4	1,006	2,675	4
UGA	314.1	121.8	487	1,296	4
Total	888.5	373.2	1,493	3,971	4
Ridgefield					
City	1,583.2	654.0	3,924	10,438	6
UGA	858.2	355.2	2,131	5,669	6
Total	2,441.3	1,009.2	6,055	16,108	6
Vancouver					
City	1,208.4	567.1	4,536	12,067	8
UGA	6,764.4	3,055.4	24,443	65,019	8
Total	7,972.8	3,622.5	28,980	77,086	8
Washougal					
City	578.6	255.2	1,531	4,074	6
UGA	499.2	221.4	1,328	3,533	6
Total	1,077.8	476.6	2,860	7,606	6
Yacolt					
City	65.1	36.4	146	388	4
UGA	16.4	7.3	29	77	4
Total	81.6	43.7	175	465	4
Woodland					
City	5.8	2.0	8	21	4
UGA	88.9	23.3	93	247	4
Total	94.8	25.2	101	269	4
URBAN TOTAL	16,921.7	7,512.6	51,436	136,820	7
Urban Growth Estimate				118,114	

Source: Clark County Community Planning and VBLM 2015

Note: Residential market factor is included in the land capacity target.

**Table 6
Rural Capacity Analysis, 2014**

Comprehensive Plan Designation	Conforming Vacant Lots			Undersized Vacant Lots (no minimum lot size)	Total Potential Vacant Lots	Rural Capacity
	Current	Potential Dividable	Total			
R-5	1,203	2,648	3,851	1,470	5,321	14,154
R-10	146	536	682	475	1,157	3,078
R-20	19	33	52	70	122	325
FR-40	34	90	124	643	767	2,040
FR-80	21	609	630	307	937	2,492
AG-20	156	432	588	498	1,086	2,889
Total Rural	1,579	4,348	5,927	3,463	9,390	24,977

Source: Clark County GIS

**Table 7
Commercial and Industrial Capacity Analysis**

Jurisdiction	COMMERCIAL			INDUSTRIAL			Total Jobs
	Gross Acres	Net Acres	Jobs	Gross Acres	Net Acres	Jobs	
Battle Ground							
City	591.4	372.5	7,449	335.3	177.3	1,596	9,045
UGA	59.0	39.5	790	28.8	10.9	98	888
Total	650.4	411.9	8,239	364.1	188.3	1,694	9,933
Camas							
City	514.3	337.2	6,744	846.1	456.9	4,112	10,856
UGA	0.0	0.0	0	76.7	36.2	326	326
Total	514.3	337.2	6,744	922.8	493.1	4,438	11,182
La Center							
City	63.6	44.2	884	83.3	48.2	434	1,318
UGA	0.0	0.0	0	1.1	0.7	6	6
Total	63.6	44.2	884	84.4	48.8	440	1,324
Ridgefield							
City	270.1	179.3	3,587	942.0	506.2	4,556	8,143
UGA	17.8	12.2	245	65.5	35.6	321	565
Total	287.9	191.6	3,831	1,007.4	541.8	4,877	8,708
Vancouver							
City	519.9	369.1	7,383	2,706.5	1,391.1	12,520	19,903
UGA	868.3	604.2	12,083	1,861.1	1,022.4	9,202	21,285
Total	1,388.3	973.3	19,466	4,567.7	2,413.5	21,722	41,188
Washougal							
City	83.8	56.3	1,126	167.8	62.9	566	1,693
UGA	45.5	31.8	635	343.0	205.2	1,847	2,482
Total	129.3	88.1	1,762	510.8	268.1	2,413	4,175
Yacolt							
City	14.1	10.6	211	9.7	6.5	59	270
UGA	0.0	0.0	0	39.6	21.9	198	198
Total	14.1	10.6	211	49.2	28.5	256	468
Woodland							
City	0.0	0.0	0	0.0	0.0	0	0
UGA	0.0	0.0	0	0.0	0.0	0	0
Total	0.0	0.0	0	0.0	0.0	0	0
Urban Job Total	3,047.8	2,056.9	41,138	7,506.4	3,982.2	35,840	76,978
Public Sector							7,400
Redevelopment							16,775
Employment Growth Target							101,153

Source: Clark County Community Planning and VBLM 2015. Note: In February 2014, Clark County received an application for the establishment of an Industrial Land Bank on 601 acres with a potential of 5,400 jobs.

DEVELOPMENT TRENDS, 2006-2014

Residential

Monitoring building permits provides a measure of the level of construction activity and the rate at which residential land is being developed. Table 8 on the following page shows the number of new single-family and multi-family building permits issued, and the single-family and multi-family split from July 1, 2006 to December 31, 2014 for each of the Urban Growth Areas. Single family includes single-family residential, accessory dwelling units (ADU), and mobile homes (on individual lots). Multi-family includes multi-family residential, duplexes, and new mobile home parks. For the residential split, Countywide Planning Policy 1.1.12 in the 2007 Clark County Comprehensive Plan specifies that no more than 75 percent of new dwelling units to be a specific product type (i.e. single-family housing). See Appendix C for an annual breakdown of each jurisdiction's building permits.

Table 8
Single- and Multi-Family Building Permits, 2006-2014

Jurisdiction		Single-Family			Multi-Family			Total		
		Units	%SF	Acres	Units	%MF	Acres	Units	Acres	Units/Acre
Battle Ground										
	City	506	64%	175.1	280	36%	11.8	786	187	4.2
	UGA	45	100%	62.2	0	0%	0	45	62	0.7
	Sub Total	551	66%	237.3	280	34%	11.8	831	249	3.3
Camas										
	City	803	72%	267.9	306	28%	20.7	1,109	289	3.8
	UGA	21	100%	9.3	0	0%	0	21	9	2.3
	Sub Total	824	73%	277.2	306	27%	20.7	1,130	298	3.8
La Center										
	City	66	100%	34	0	0%	0	66	34	1.9
	UGA	7	100%	13.2	0	0%	0	7	13	0.5
	Sub Total	72	100%	47.2	0	0%	0	73	47	1.5
Ridgefield										
	City	680	99%	130.3	4	1%	0.2	684	131	5.2
	UGA	5	100%	62	0	0%	0	5	62	0.1
	Sub Total	685	99%	192.3	4	1%	0.2	689	193	3.6
Vancouver										
	City	1,728	38%	271.5	2,838	62%	135	4,566	406	11.2
	UGA	4,534	79%	1006	1,220	21%	51.8	5,754	1,058	5.4
	Sub Total	6,262	61%	1277	4,058	39%	186.9	10,320	1,464	7
Washougal										
	City	547	77%	99	163	23%	7.9	710	107	6.6
	UGA	7	100%	40.4	0	0%	0	7	40	0.2
	Sub Total	554	77%	139.4	163	23%	7.9	717	147	4.9
Yacolt										
	City	51	100%	15	0	0%	0	51	15	3.4
	UGA	0	0%	0	0	0%	0	0	0	0
	Sub Total	51	100%	15	0	0%	0	51	15	3.4
Clark County Rural		1,383	100%	7785.8	5	0%	15.6	1,388	7,801	0.2
Total Cities		4,381	55%	992.7	3,591	45%	175.7	7,972	1,168	6.8
Total UGAs		4,619	79%	1193.1	1,220	21%	51.8	5,839	1,245	4.7
Grand Total		9,000	65%	2185.8	4,811	35%	227.5	13,811	2,413	5.7

Source: Clark County Community Planning.

Chart 2 and chart 3 below show single-family and multi-family development by City from 2006 to 2014.

Chart 2
New Single-Family Development Density by City, 2006-2014

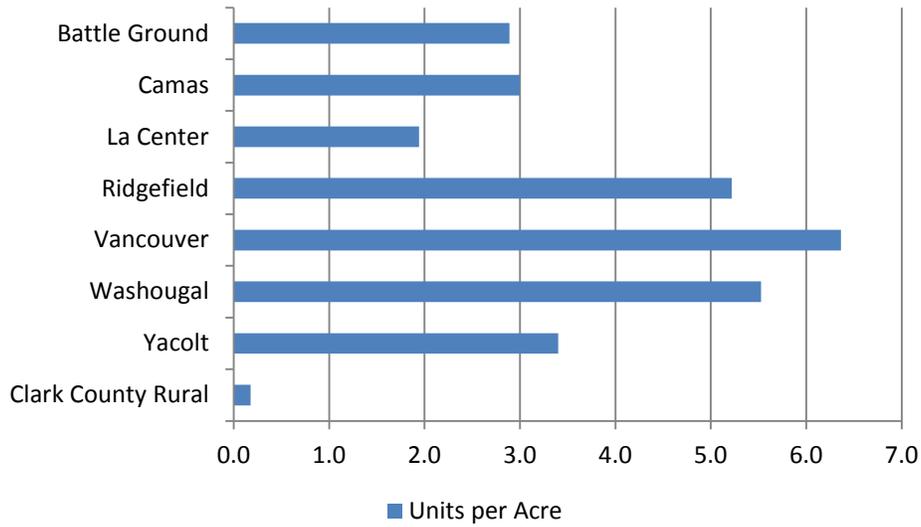
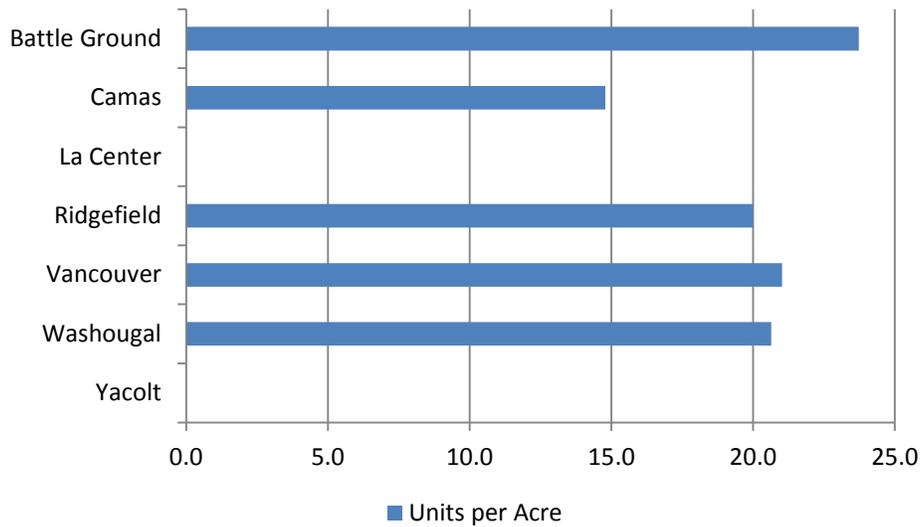


Chart 3
New Multi-Family Development Density by City, 2006-2014



Between 2006 and 2014:

- City of Vancouver achieved a density of 11.2 units per acre.
- City of Battle Ground’s multi-family residential land developed at 23.7 dwelling units per acre.
- Overall, observed density on Single- & Multi-family residential dwelling units per acre is 5.7.
- The unincorporated portion of the Vancouver UGA achieved a 79% single-family and 21% multi-family residential split which exceeds the County-wide planning policy of no more than 75% of the new housing stock of a single product type.
- The VUGA reported average of 7.0 units per acre appears to have been reduced by a very small number of developments on existing large properties in the Urban Holding zone and other properties with extensive critical areas. Data indicates new single family lots are becoming smaller. The median size of new residential lots in urban density zones created since 2007 was 5,400 sq.ft. within the City of Vancouver, 5,900 sq.ft. within the unincorporated Vancouver UGA.

Non-residential

Data on commercial building permits issued from July 1, 2006 through December 31, 2014 was collected (Table 9). Tenant improvements were excluded unless the improvement resulted in an increase of building square footage. The parcel serial number from each building permit was linked to a GIS coverage to determine the parcel size, geography and critical area. Commercial building permits include commercial, industrial and multi-family development. Table 10 below reflects industrial building permits sorted by comprehensive plan designation for industrial uses. The Department Information and Technology provided information for both tables below that are shown as net acres. See Appendix B for Commercial and Industrial Building Permits by Year and Jurisdiction.

**Table 9
Commercial Building Permits by UGA**

UGA	Number of Permits	Acre	Critical Acres	Percent Critical
Battle Ground	63	224.8	168.1	75%
Camas	27	102.8	16.9	16%
La Center	2	4.5	0.3	7%
Ridgefield	6	33.5	12.6	38%
Vancouver	293	1,539.2	547.9	36%
Washougal	2	2.2	1.1	50%
Yacolt	1	1.1	0.0	0%
Total	394	1,908.0	747.0	39%
Rural	19	795.7	552.6	69%
County Total	413	2,703.6	1,299.6	48%

**Table 10
Industrial Building Permits by UGA**

UGA	Number of Permits	Acres	Critical Acres	Percent Critical
Battle Ground	2	2.2	1.4	66%
Ridgefield	4	26.1	10.7	41%
Vancouver	68	465.6	222.0	48%
Washougal	1	1.2	1.2	101%
Total	75	495.0	235.2	48%
Rural	4	173.4	130.1	75%
County Total	79	668.3	365.4	55%

Observations

- Based on commercial building permits issued, development occurred on 2,703.6 acres of commercially designated land and 668.3 acres of industrial designated land.

Employment Density Methodology

Information for employment below is based on new construction permits from July 1, 2006 to June 30, 2014. The building permit information was matched to parcels and employment locations to obtain acres and employment. In table 11, a total of 224 records matched between the new construction permits and the employment records. Commercial values include the following permit types: commercial, institutional, office and retail permit types. Industrial values include industrial permit types.

**Table 11
Commercial and Industrial Employment Density**

		Urban Growth Area								
		Battle Ground	Camas	LaCenter	Ridgefield	Vancouver	Washougal	Yacolt	Rural	Grand Total
Commercial	Employees	882	127	22	223	15,523	0	0	195	16,972
	Acres	79	11	5	14	1,462	0	0	249	1,819
	Employees per Acre	11.1	11.7	4.7	16.3	10.6	0.0	0.0	0.8	9.3
Industrial	Employees	21	0	0	12	3,043	7	0	10	3,093
	Acres	1	0	0	2	273	1	0	7	284
	Employees per Acre	23.7	0.0	0.0	6.0	11.1	6.0	0.0	1.4	10.9

Source: Clark County GIS

Observations

A caveat of the observations below is that they are from a limited set of employment data.

- The planning assumptions applied in 2007 were based on employees per net acre; twenty (20) for commercial and nine (9) for industrial. The result is that the observed densities are

lower than the 2007 planning assumptions.

- From 2006 to 2014, new permits show employees per net acre for commercial at 9.3 employees per acre and industrial at 10.9 employees per net acre.
- Clark County has seen employment gains from 2006 to 2014. It is likely that some businesses have added employees, which would not require new building permits and may account for the low employment density reported.

Development on Constrained Parcels

Background and Relevance

Tracking development on parcels with critical lands provides an indicator of impacts from growth to the environment and illustrates the general effectiveness of environmental protection measures. It is also an indicator of land demand. When there is a high demand for land, development tends to occur more frequently on areas that are more difficult to develop. Critical lands are identified in Clark County code Title 40 Unified Development.

Data Collection

Only the constrained portion of a parcel is identified in the VBLM. Table 12 illustrates the percent of vacant and underutilized constrained land that converted to built by UGA for residential, commercial and industrial land from 2007 to 2014. The critical layer is based on best available science, and includes a new slopes layer and the most recent habitat and species information. See Appendix C for a description of constrained acres.

Table 12
Vacant and Underutilized Land Converted to Built, 2007-2014

Urban Growth Area	Residential			Commercial			Industrial		
	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints	Total Converted to Built (Acres)	Of Total Built-Converted w/Constraints (Acres)	Percent Built w/Constraints
Battle Ground	286	190	66.5%	105	74	70.3%	105	91	86.2%
Camas	366	228	62.4%	13	5	40.1%	124	82	66.0%
La Center	23	7	29.2%	5	4	82.7%	0	0	0.0%
Ridgefield	322	162	50.4%	16	10	62.3%	189	87	46.2%
Vancouver	1,577	526	33.3%	338	96	28.6%	626	237	37.8%
Washougal	152	65	42.7%	11	4	34.6%	83	46	55.0%
Woodland	0	0	0.0%	0	0	0.0%	0	0	0.0%
Yacolt	14	6	40.7%	1	0	0.0%	0	0	0.0%
Total UGAs	2,739	1,183	43.2%	489	193	39.6%	1,126	542	48.1%

Source: Community Planning and Clark County GIS

Observations

Between 2007 and 2014:

- 1,183 acres of residential development occurred on parcels with some constrained areas, or 43.2%.
- 193 acres of commercial development occurred on parcels with some constrained areas or

39.6%.

- 542 acres of industrial development occurred on parcels with some constrained areas or 48.1%

Infrastructure Analysis

Background and Relevance

Land used for infrastructure is not available for housing or employment development. It is important to know the amount of available land that will be needed to provide the necessary infrastructure for development. This indicator will help calculate the amount of land needed for growth.

Data Collection

The 2007 Comprehensive Growth Management Plan assumed infrastructure will consist of 27.7 percent for residential development and 25 percent for industrial and commercial development. The Vacant Buildable land model comparison report provides a breakdown of easements & infrastructure by residential, industrial, and commercial land. Table 13 below shows percentages of residential, commercial and industrial portions of vacant and underutilized land that converted to infrastructure from January 1, 2007 to December 31, 2014.

Table 13
Infrastructure Summary

Easement & Infrastructure	Residential Acres	Percent of Residential Converted to Infrastructure	Commercial Acres	Percent of Commercial Converted to Infrastructure	Industrial Acres	Percent of Industrial Converted to Infrastructure
Vacant & Underutilized Land (2007)	2,739.4		488.7		1,126.4	
Easements & Right of Way	213.8	7.8%	46.8	9.6%	66.4	5.9%
Schools	10.2	0.4%	0.0	0.0%	0.0	0.0%
Public Lands (Except Right of Way)	171.0	6.2%	29.4	6.0%	123.8	11.0%
Greenway (Public & Private)	339.0	12.4%	19.6	4.0%	51.9	4.6%
Easement & Infrastructure Total	733.9	26.8%	95.7	19.6%	242.2	21.5%

Source: Clark County Community Planning and Clark County GIS.

Note: In 2012, the County acquired the Lechner industrial properties of 120.96. It was not included in this table as it is under remedial action through a consent decree under the Jurisdiction of Washington State Department of Ecology.

Observations

From January 1, 2007 to December 31, 2014, Residential easements and infrastructure consumed less than the assumed 27.7 percent of development. About 734 acres or 26.8 percent of residential vacant and underutilized land converted to infrastructure in all UGAs. For commercial, almost 96 acres or 19.6% converted to infrastructure. Industrial had 242 acres converted to infrastructure or 21.5%. There have been recent changes to Stormwater regulations that may lead to more land being set aside for the retention of stormwater. However, there is insufficient development data under the new regulations to warrant a change to the planning assumptions. This is an area we will continue to monitor and update, as necessary.

The data collected for this report is available online at http://www.clark.wa.gov/planning/comp_plan/monitoring.html#capacity or via CD-ROM from Clark County Community Planning.

APPENDIX A – Residential Building Permits by Year and Jurisdiction

The following residential tables are reported by year from July 1, 2006 to December 31, 2014 for each jurisdiction and assembled by Clark County Community Planning.

**Table 1
Rural Annual Residential Development**

Clark County	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
Single Family	198	1,268.2	0.2	286	1,501.2	0.2	150	872.8	0.2	105	644.5	0.2	109	520.8	0.2	85	412.3	0.2	112	681.2	0.2	168	894.8	0.2	171	989.9	0.2	1,384	7,785.8	0.2
Multi-Family																														
Rural	0			0			0			0			0			1	0.9		1	5.3		1	3.2		2	6.2		5	15.6	0.3
Total Rural	198			286	1,501.2	0.2	150	872.8	0.2	105	644.5	0.2	109	520.8	0.2	86	413.2	0.2	113	686.5	0.2	169	898.0	0.2	173	996.1	0.2	1,389	7,801.4	0.2

**Table 2
Battle Ground Annual Residential Development**

Battle Ground	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
Single Family	23	7.5	3.1	86	17.6	4.9	66	38.4	1.7	47	16.6	2.8	59	21.3	2.8	32	8.9	3.6	41	19.6	2.1	70	22.4	3.1	82	22.8	3.6	506	175.1	2.9
UGA	4	7.1	0.6	7	7.2	1.0	2	2.2	0.9	3	3.1	1.0	7	8.0	0.9	5	6.8	0.7	6	9.6	0.6	7	10.7	0.7	4	7.6	0.5	45	62.2	0.7
Multi-Family																														
City	0			20	1.4	14.6	4	0.4	10.5	80	4.3	18.5	0			24	0.8	30.3	30	1.0	30.3	122	4.0	30.7	0			280	11.8	23.7
Total UGA	27	14.7	1.8	113	26.1	4.3	72	40.9	1.8	130	23.9	5.4	66	29.3	2.3	61	16.5	3.7	77	30.2	2.6	199	37.1	5.4	86	30.4	2.8	831	249.1	3.3

**Table 3
Camas Annual Residential Development**

Camas	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
Single Family	59	24.8	2.4	91	86.2	1.1	58	10.5	5.5	65	17.3	3.8	127	37.7	3.4	60	12.7	4.7	68	15.8	4.3	116	30.0	3.9	159	32.8	4.8	803	267.6	3.0
UGA	0			0			0			1	1.1	1.0	0			3	1.0	2.9	3	0.5	6.5	5	0.7	7.7	9	6.1	1.5	21	9.3	2.3
Multi-Family																														
City	20	1.4	14.1	23	1.9	12.4	25	1.6	16.1	11	0.6	18.3	63	3.6		0			67	6.09	11.0	10	0.5	19.6	87	5.1	17.1	306	20.8	14.7
Total UGA	79	26.2	3.0	114	88.0	1.3	83	12.0	6.9	77	19.0	4.1	190	41.3	4.6	63	13.8	4.6	138	22.3	6.2	131	31.1	4.2	255	44.0	5.8	1130	297.7	3.8

**Table 4
La Center Annual Residential Development**

La Center	2006			2007			2008			2009			2010			2011			2012			2013			2014			Total 2006-2014		
	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre	Units	Acres Used	Units/Acre
Single Family	2	5.3	0.4	14	5.5	2.6	6	1.3	4.7	4	0.6	6.6	12	1.94	6.2	6	6.2	1.0	5	1.0	5.2	11	11.2	1.0	6	1.06	5.7	66	34.0	1.9
UGA	0			1	1.5		0			0			0			2	7.5	0.3	2	2.0	1.0	1	1.2	0.9	1	1.0	1.0	7	13.2	0.5
Multi-Family																														
City	0			0			0			0			0			0			0			0			0			0		
Total UGA	2	5.3	0.4	15	7.0	2.2	6	1.3	4.7	4	0.6	6.6	12	1.9	6.2	8	13.7	0.6	7	3.0	2.3	12	12.3	1.0	7	2.1	3.4	73	47.2	1.5

APPENDIX B – Commercial & Industrial Building Permits by Year and Jurisdiction

The following commercial and industrial tables are reported by year for each jurisdiction from July 1, 2006 to December 31, 2014, and are from Clark County Information Technology.

Table 1
Battle Ground Annual Commercial and Industrial Permits

Battle Ground UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	7	15.3	13.3	87%
	2007	15	84.4	70.3	83%
	2008	17	40.9	28.6	70%
	2009	2	10.2	9.7	95%
	2010	6	23.9	20.4	85%
	2011	1	10.0	9.5	95%
	2012	2	1.5	1.3	86%
	2013	8	31.7	11.5	36%
2014	5	6.9	3.7	53%	
Commercial Total		63	224.8	168.1	75%
Industrial	2013	1	0.9	0.1	15%
	2014	1	1.3	1.3	100%
Industrial Total		2	2.2	1.4	66%

Table 2
Camas Annual Commercial Permits

Camas UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2007	3	3.2	0.2	5%
	2008	4	16.3	0.6	4%
	2009	2	22.8	1.9	8%
	2010	2	16.6	5.7	34%
	2011	6	22.8	0.2	1%
	2013	2	18.4	8.4	46%
	2014	8	2.7	0.0	0%
Commercial Total		27	102.8	16.9	16%

**Table 3
La Center Annual Commercial Permits**

La Center UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2007	1	4.2	0.3	8%
	2013	1	0.2	0.0	0%
Commercial Total		2	4.5	0.3	7%

**Table 4
Ridgefield Annual Commercial and Industrial Permits**

Ridgefield UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	3	14.0	11.0	79%
	2013	1	5.7	0.4	7%
	2014	2	13.8	1.1	8%
Commercial Total		6	33.5	12.6	38%
Industrial	2007	1	2.3	1.5	65%
	2008	3	23.8	9.2	39%
Industrial Total		4	26.1	10.7	41%

**Table 5
Vancouver Annual Commercial and Industrial Permits**

Vancouver UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	34	67.9	24.1	36%
	2007	53	338.0	101.6	30%
	2008	49	230.0	81.3	35%
	2009	25	226.5	59.4	26%
	2010	32	99.1	14.0	14%
	2011	27	142.2	110.5	78%
	2012	24	57.9	5.7	10%
	2013	15	119.4	11.6	10%
	2014	34	258.2	139.7	54%
Commercial Total		293	1,539.2	547.9	36%
Industrial	2006	7	15.0	0.2	1%
	2007	15	41.2	17.6	43%
	2008	13	215.7	91.5	42%
	2009	7	50.5	17.1	34%
	2010	3	5.1	0.0	0%
	2011	6	43.9	25.7	59%
	2012	8	43.8	27.9	64%
	2013	4	38.7	38.5	100%
	2014	5	11.8	3.5	30%
Industrial Total		68	465.6	222.0	48%

**Table 6
Washougal Annual Commercial and Industrial Permits**

Washougal UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2010	1	1.1	1.1	100%
	2014	1	1.1	0.0	0%
Commercial Total		2	2.2	1.1	50%
Industrial	2014	1	1.2	1.2	100%
Industrial Total		1	1.2	1.2	100%

**Table 7
Yacolt Annual Commercial Permits**

Yacolt UGA	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2012	1	1.1	0.0	0%
Commercial Total		1	1.1	0.0	0%

**Table 8
Rural Clark County Commercial and Industrial Permits**

Rural Clark County	Year Issued	Number of Permits	Acres	Critical Acres	Percent Critical
Commercial	2006	3	6.0	3.7	62%
	2007	3	212.5	170.1	80%
	2009	3	46.4	32.2	69%
	2010	2	9.5	5.5	58%
	2011	3	316.5	192.6	61%
	2013	4	202.3	148.5	73%
	2014	1	2.5	0.0	0%
Commercial Total		19	795.7	552.6	69%
Industrial	2007	1	7.3	7.1	97%
	2009	2	15.0	4.9	33%
	2011	1	151.1	118.2	78%
Industrial Total		4	173.4	130.1	75%

APPENDIX C – VACANT BUILDABLE LANDS MODEL

The Vacant Buildable Lands Model (VBLM) is a planning tool developed to analyze residential, commercial, and industrial lands within urban growth areas. The model serves as a tool for evaluating urban area alternatives during Clark County 20-year Comprehensive Growth Management Plan updates and for monitoring growth patterns during interim periods. The VBLM analyzes potential residential and employment capacity of each urban growth area within the county based on vacant and underutilized land classifications. This potential capacity is used to determine the amount of urban land needed to accommodate projected population and job growth for the next 20 years during plan updates and to analyze land consumption or conversion rates on an annual basis for plan monitoring purposes.

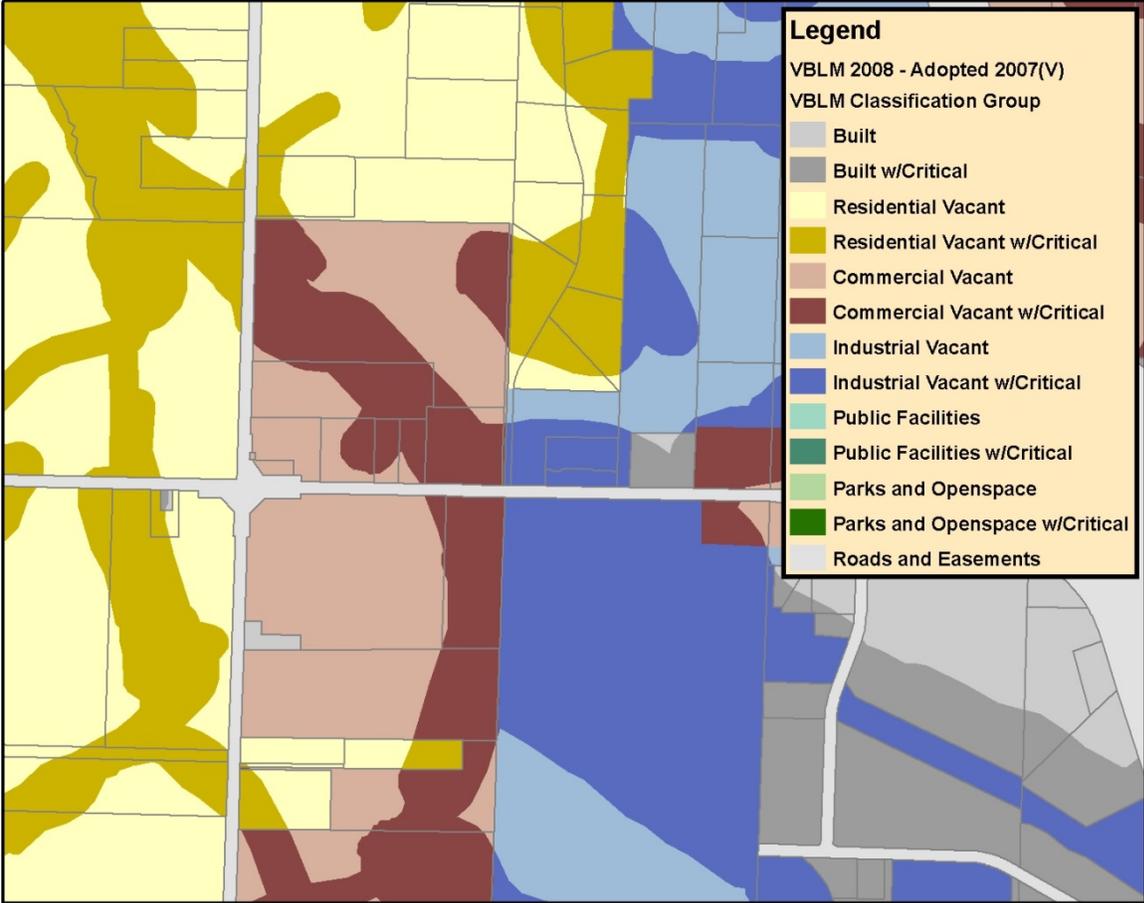
In 1992, Clark County began evaluating vacant lands as part of the initial 20-year growth management plan. At that time, County staff met with interested parties from development and environmental communities to examine criteria and establish a methodology for computing potential land supply available for development. A methodology relying on the Clark County Assessor's database and Geographic Information System (GIS) as primary data sources was developed. As a result the VBLM is a GIS based model built on geoprocessing scripts.

In the spring of 2000, the Board of Clark County Commissioners appointed a technical advisory committee consisting of local government agencies, Responsible Growth Forum members, and Friends of Clark County to revisit this process. They reviewed definitions for each classification of land and planning assumptions for determining potential housing units and employment.

Another comprehensive review of the VBLM criteria and assumptions was undertaken in 2006 as part of the growth management plan update. This review compared the 1996 prediction to the 2006 model. This review demonstrated that for the most part the model was a good predictor of what land would develop. However, changes were made to the model based on results of this review. Important changes to the model include:

- Underutilized land determination for all models was changed to a building value per acre criteria.
- The industrial model and commercial model now have consistent classifications. The industrial model was revised to match the commercial process.
- Environmental constraints methodology changed from applying assumptions to parcels based on percentage of critical land to simply identifying constrained and non constrained land by parcel and applying higher deductions to constrained lands.

Example Map of Constrained Lands



Benefits of the current improvements are more consistency and easier monitoring of the model. Better accounting for private open space, constrained lands, and exempt port properties. And calculations for underutilized lands are more dynamic.

Model Classifications

The model classifies lands into three urban land use categories--residential, commercial, and industrial. Lands are grouped into land use codes based on comprehensive plan designations for model purposes. Lands designated as parks & open space, public facility, mining lands, or airport within the urban growth areas are excluded from available land calculations. Additionally, all rural and urban reserve designated lands are excluded from the model. Table 1 lists a breakdown of the land use classes.

Table 1: Land Use Classes

LU	Comprehensive Plan Classification	VBLM Model
1	Urban Low Density Residential	Residential – Urban Low
1	Single-Family_Low	Residential – Urban Low
1	Single-Family_Medium	Residential – Urban Low
1	Single-Family_High	Residential – Urban Low
2	Urban Medium Density Residential	Residential – Urban High
2	Urban High Density Residential	Residential – Urban High
2	Multi-Family_Low	Residential – Urban High
2	Multi-Family_High	Residential – Urban High
3	Neighborhood Commercial	Commercial
3	Community Commercial	Commercial
3	General Commercial	Commercial
3	City Center	Commercial
3	Regional Center	Commercial
3	Downtown	Commercial
3	Commercial	Commercial
4	Mixed Use	Commercial
4	Town Center	Commercial
5	Office Park/Business Park	Commercial
5	Light industrial/Business park	Commercial
5	Employment Campus	Commercial
6	Light Industrial	Industrial
6	Heavy Industrial	Industrial
6	Railroad Industrial	Industrial
6	Industrial	Industrial
33	Mixed use - Residential	Residential
34	Mixed use - Employment	Commercial

The model classifies each urban parcel as built, vacant, or underutilized by the three major land uses. Additionally lands with potential environmental concerns and/or geologic hazards as consistent with the applicable section of the Clark County and other municipal codes are classified as constrained (critical lands) lands. Constrained lands are identified by parcel in the model.

Constrained lands include:

- 100 year floodplain or flood fringe
- Wetlands inventory (NWI, high quality, permitted, modeled) with 100 foot buffer
- Slopes greater than 15 percent (>25% for City of Vancouver)

- Land slide area that has active or historically unstable slopes
- Designated shorelines
- Hydric soils with 50 foot buffer
- Habitat areas with 100 foot buffer
- Species areas with 300 foot buffer
- Riparian stream buffers by stream type (Table 2)

Table 2: Riparian Buffers

Stream Type	Countywide	Vancouver Exception
Type S (Shoreline)	250 Feet	175 Feet
Type F (Fish Bearing)	200 Feet	175 Feet
Type NP (Non-fish bearing, perennial)	100 Feet	150 Feet
Type NP (Non-fish bearing, seasonal)	75 Feet	100 Feet

Residential Model

Important residential classifications include vacant, vacant critical, underutilized, and underutilized critical. These classes are used to determine gross acres available for development. Vacant exempt, vacant lots less than 5,000 square feet and all other classes are excluded from available land calculations. Table 3 lists all residential classes.

Table 3: Residential Classifications

RESCLASS	Description
0	Not Residential
1	Built
2	Unknown
3	Vacant
4	Underutilized
5	Roads and Easements
6	Mansions and Condos
12	Built Exempt
13	Vacant Exempt
14	Vacant Critical
18	Underutilized Critical
19	Less than 5,000 square feet
20	Private Open Space
21	Parks and Open Space

Criteria for classifying residential lands are as follows:

- Residential Vacant Criteria
 - Building value less than \$13,000
 - Not tax exempt
 - Not an easement or right of way
 - Not a state assessed or institutional parcel
 - Not a mobile home park
 - Parcel greater than 5,000 square feet
- Underutilized
 - Same as Vacant except building value criteria is replaced with a building value per acre criteria.
 - Building value per acre of land is below the 10th percentile of building value per acre for all residential parcels within all UGAs. The 10th percentile is calculated by the model for each year and for each UGA alternative.
 - Parcel size greater than 1 acre
- Mansions and Condos
 - Parcel size greater than 1 acre
 - Building value per acre greater than the 10th percentile.
- Residential Exempt
 - Properties with tax exempt status
- Easements and right of ways
- Constrained (Critical lands)
 - All classifications may be subdivided into constrained vs. not constrained. Constrained lands are described above.

Commercial and Industrial Models

Commercial and industrial lands are classified using consistent criteria with one exception; industrial classes include exempt port properties in the current model.

Important commercial classes for determining gross acres available for development include vacant, vacant critical, underutilized, and underutilized critical. Vacant exempt and vacant lots less than 5,000 square feet are excluded from available land calculations. Table 4 lists all commercial classes.

Table 4: Commercial Classifications

COMCLASS	Description
0	Not Commercial
1	Built
2	Vacant
3	Underutilized
5	Vacant Lot less than 5,000 sq feet
7	Vacant Critical
9	Underutilized Critical
10	Vacant Exempt

Important industrial classes for determining gross acres available for development include vacant, vacant critical, exempt vacant port property, exempt vacant port property critical, underutilized, underutilized critical, exempt underutilized port property, and exempt underutilized port property critical. All exempt not port properties are excluded in the available land calculations. Table 5 lists all industrial classes.

Table 5: Industrial Classifications

INCLASS	Description
0	Not Industrial
1	Vacant
2	Underutilized
3	Vacant Critical
4	Underutilized Critical
6	Built
7	Exempt Vacant Port Property
8	Exempt Vacant Not Port
9	Exempt Vacant Port Property Critical
10	Exempt Underutilized Port
11	Exempt Underutilized Port Critical
12	Exempt Underutilized Not Port
15	Easements

Commercial and industrial models classify vacant and underutilized land as follows:

- Vacant land
 - Building value less than \$67,500
 - Not “Assessed With”- Some parcels are assessed with other parcels. These parcels are often parking lots, or multiple parcels comprising a single development. All assessed with parcels are considered built.
 - Not Exempt.

- ◆ Port property is exempt, and is included as a separate classification in the Industrial land model.
 - Not an Easement or right of way
 - Parcel greater than 5,000 square feet
 - Not a state assessed or institutional parcel
- ◆ Underutilized Lands
 - Same as vacant except building value criteria is replaced with a building value per acre criteria of less than \$50,000.
- ◆ Constrained (Critical lands)
 - All classifications may be subdivided into constrained vs. not constrained. Commercial and industrial constrained lands are defined the same as residential constrained lands and are listed above.
- ◆ Exempt Port Properties in the Industrial Model
 - Includes lands that are under port ownership and available for development. Buildable exempt port properties are included in available land calculations.
 - Port properties can be classified as vacant, underutilized, or constrained.

The model produces a summary of gross residential, commercial, and industrial acres available for development. Gross acres are defined as the total raw land available for development prior to any deductions for infrastructure, constrained lands, and not to convert factors.

Planning Assumptions

The next step in the buildable lands process is applying planning assumptions to the inventory of vacant and underutilized gross acres in order to arrive at a net available land supply. These assumptions account for infrastructure, reduced development on constrained land, and never to convert factors. Use factors along with employment and housing units per acre densities are applied to derived net acres to predict future capacities.

Residential Model Planning Assumptions:

- ◆ 27.7% deduction to account for both on and off-site infrastructure needs. 20% infrastructure deduction for mixed use lands.
- ◆ Never to convert factor
 - 10% for vacant land
 - 30% for underutilized
- ◆ 50% of available constrained (critical) land will not convert

- 60% of mixed use land will develop as residential, 85% residential for Battle Ground mixed use - residential and 25% residential for mixed use - employment.

Commercial and Industrial Model Planning Assumptions

- 25% infrastructure factor applied for both commercial and industrial lands.
- 20% of available constrained (critical) commercial and mixed use land will not convert
- 50% of available constrained (critical) industrial land will not convert
- 40% of mixed use land will develop as commercial, 15% commercial for Battle Ground mixed use - residential and 75% commercial for mixed use - employment.

Employees and unit per acre density assumptions are applied to net developable acres to predict future employment and housing unit capacities. Densities are set by the Current Planning staff based on observed development and comprehensive plan assumptions for each UGA.

Applied residential densities vary by UGA. Table 6 lists the units per acre by UGA.

Table 6: Residential units per Acre

Urban Growth Area	Applied Housing Units per Net Developable Acre
Battle Ground	6
Camas	6
La Center	4
Ridgefield	6
Vancouver	8
Washougal	6
Woodland	6
Yacolt	4

Applied employment densities vary by land use as well. Commercial classes which includes commercial, business park, and mixed use categories apply 20 employees per acre while industrial classes apply 9 employees per acre.

Applying residential and employment planning assumptions to the VLM results produce housing units and employment carrying capacity estimates for urban growth areas.

These estimates help monitor growth on an annual basis and is part of the criteria used for setting UGA boundaries during growth management plan updates.

Current model layers and reports are available for viewing in Clark County’s GIS Maps Online web application at:

<http://gis.clark.wa.gov/vblm/>

Underutilized land classes are grouped with vacant classes by land use in Maps Online and on other map products. Table 7 lists the group classes used for mapping.

Table 7: Group Classes

GRPCLASS	Description
1	Built
2	Built w/Critical
3	Residential Vacant
4	Residential Vacant w/Critical
5	Commercial Vacant
6	Commercial Vacant w/Critical
7	Industrial Vacant
8	Industrial Vacant w/Critical
9	Public Facilities
10	Public Facilities w/Critical
11	Parks and Open Space
12	Parks and Open Space w/Critical
13	Roads and Easements

For more information on the model inputs, structure and outputs, please contact Clark County Community Planning at (360) 397-2280 or Clark County Geographic Information System (GIS) at (360) 397-2002.

APPENDIX D – ASSESSMENT OF REASONABLE MEASURES

Clark County and the incorporated cities within the county have completed review under RCW 36.70A.215 which includes comparisons between development that has occurred and the original planning assumptions and targets.

In summary, several of the cities have addressed their reasonable measures by adopting local development regulations. However, these changes in regulations may not immediately reflect higher density development within the time reviewed (2006-2014). The market and economy might regulate development and density, which may delay development with higher densities. These adopted measures will likely be reflected in the next buildable lands evaluation report. If cities do not increase their densities, then county-wide planning policies will need to be amended possibly before the next Buildable Lands Report is completed.

The following actions were previously identified as necessary revisions to local development regulations. These revisions were to be incorporated into the update process and adopted in an ordinance or resolution to ensure compliance with the GMA. These measures reflect changes in regulation that would gradually allow for higher density development within the planning horizon.

City of Battle Ground

- The City of Battle Ground Comprehensive Plan, 2004, Chapter 3: Land Use Element, reviewed the ratio of zoned land to density goals, assuring the plan is implementing current countywide density goals and housing type mix.
- Battle Ground has developed a mixed-use ordinance, Ord. 04-024 § 20 (part), 2004. Their updated 2006 development code, Title 17, Chapter 17.101.040 and 2004 Comprehensive Plan, examine minimum densities in certain districts as tools to achieve density goals.
- Battle Ground Comprehensive Plan, 2004, contains a growth management element that addresses annexation and sub-area planning in four growth management goals, listed below.

Growth Management Goal 1: The City will seek a sustainable rate of growth

Objectives

GMO1.1 The City will coordinate its growth projections and growth goals with other jurisdictions.

GMO1.2 The City will balance its growth with other City goals.

GMO1.3 The City will strive to grow at a rate that maintains its small town character.

GMO1.4 The City will work to provide adequate urban services concurrently

with development.

GMO1.5 The City will encourage efficient growth within the existing city limits before pursuing additional annexations.

GMO1.6 The City will coordinate with Battle Ground School District during annexation processes to maintain District service standards

Growth Management Goal 2: Future growth is to occur primarily to the west and south of the current city limits and in all directions consistent with the 50-year vision.

Objectives

GMO2.1 The City will primarily focus future planning efforts to the south and west of the current city limits.

GMO2.2 The City will focus secondary planning efforts for future growth to the north and east.

Growth Management Goal 3: The City will encourage the efficient and sustainable expansion of the City through the Urban Growth Areas.

Objectives

GMO3.1 The City will seek to achieve desirable growth patterns through annexations.

GMO3.2 The City will seek to achieve a jobs/housing balance through annexations.

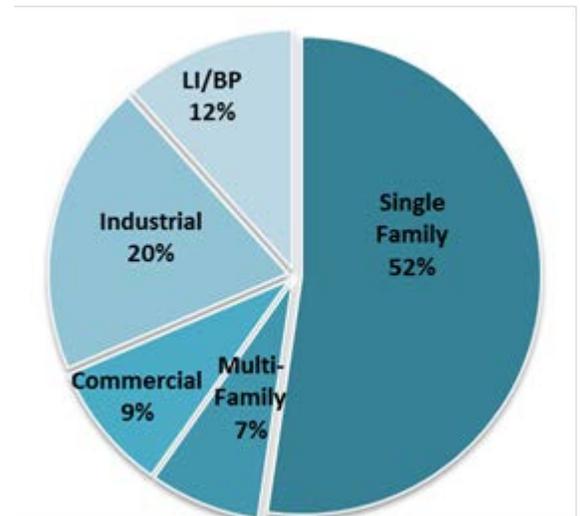
Growth Management Goal 4: The City will work with the County and other jurisdictions in determining growth policies for the Area of Influence.

Objectives

GMO4.1 The City will seek to preserve the Area of Influence for future urban growth patterns anticipated by the Vision.

City of Camas

- The City of Camas designated and zoned land, consistent with the 2007 Clark County Framework Plan, 52% of the land for single-family residential and 7% for multifamily with a range of densities such that the average density for new development can yield six units per acre. The City has designated the remaining area for 20% to industrial development, 12% for Light Industrial/Business Park development, and 9% for Commercial development.



- According to the County’s 2035 projections, the City must accommodate 3,868 additional housing units within the 20-year planning horizon. The City has approximately 3,607 vacant, platted or approved lots/multi-unit complexes within the existing city limits. There are also development agreements within vacant lands that will provide an additional 583 units. Notwithstanding lands within the UGB that have not been annexed, this combined data provides the city with 4,190 future residential units—a surplus of 322 units within the 20-year planning horizon. A study in 2013 for the purpose of updating the City’s transportation impact fees in 2013, forecasted that the City can accommodate a total of 7,002 additional housing units within the 20 year planning horizon. Both methods of factoring future units conclude that there will be a surplus of residential units within the planning horizon and densities in excess of 6 units per acre.
- The City of Camas adopted development standards that encourage density and efficient development of land. The following regulations in Camas Municipal Code (CMC) allow for flexible lot sizes and dimensions, to include: the Planned Residential Development code (CMC Chapter 18.23); Accessory Dwelling Units code (CMC Chapter 18.27); Mixed Use codes (CMC Chapters 18.22 and 18.24); and Flexible Development codes (CMC Chapter 18.26).
- The City has approximately 2,854 acres designated for employment (combined commercial and industrial lands), or 41% of the overall acreage. The County estimates that there is 1,279 gross acres of vacant and underutilized employment land, with a potential for creating 12,157 additional jobs.

City of La Center

- In 2006, the City La Center adopted new density requirements with single family zoning (LDR-7.5) at a minimum density of four (4) dwelling units per acre. Ninety percent of all new parcels in this district must average within 10 percent of 7,500 square feet as a total development and any phase within the development. LCMC18.130.080.
- In 2006, the City of La Center’s medium density residential (MDR-16) set a minimum requirement of eight units per net acre, and a maximum density of 16 units per net acre. LCMC 18.140.010
- In 2007, the City of La Center adopted critical area development regulations that prohibit the creation of lots in wetlands or wetland buffers, allowing the city to achieve a higher net density. LCMC 18.300.050.4.f.iii.
- In 2010, La Center amended their municipal code Title 18 Subdivision Provisions to mandate applicants remainder lost must contain at least 50 percent buildable area, and that the remainder lot is capable of being developed to urban density standards. LCMC 18.210.100.
- See City of La Center’s correspondence to their observed density.

La Center Correspondence

From: [Eric Eisemann](#)
To: [Albrecht, Gary](#); [Orjiako, Oliver](#); [Lebowsky, Laurie](#)
Cc: [Jeff Sarvis](#); "[Elizabeth Decker](#)"; [Naomi Hansen](#)
Subject: Buildable land report - Remedial action
Date: Friday, May 08, 2015 11:58:15 AM
Attachments: [BLR_Subdivivision table v2.docx](#)
[MultFamilyHousingMap.pdf](#)

Hello Gary,

I response to the recent iteration of the Buildable Land Report (BLR) the City of La Center would like to add the attached information in the County record and make the following comments.

Residential Land Supply. La Center, like every other jurisdiction in Clark County, experienced a dramatic run-up of housing activity in the early 2000s and an equally dramatic crash of housing starts as a result of the great recession. The City is recovering slowly, more so than Ridgefield or Camas. During the run-up, from 2005 – 2008, La Center approved 305 new single family lots. Each of the preliminary plats met the City's 4 DU/NET ACRE standard. Two subdivisions reached Final Plat (Hanna's Farm and Gordon Crest), however, 40% of their combined lots remain vacant as a result of the recession. Five (5) additional subdivisions, totaling 188 lots, were moving forward but abruptly stopped. Now, two are very close to final plat approval (Kays and Gordon Crest II) and two more have awakened and are moving forward. Earlier this year the City conducted a pre-application conference for Sunset Terrace, a new 121 lots subdivision along NE 339th St. Given this 'ground-truthing' information, it is highly unlikely that La Center has a surplus of residential land.

County-approved subdivision in La Center UGA. During the recession, Clark County approved the subdivision of approximately 75 acres of land within the La Center UGA creating 13 new lots. The average density of these new developments is 1 DU/5 acres. It is difficult to imagine how these lands in the La Center UGA will develop to urban densities during the 20-year planning horizon. I encourage you to consider the effect County-approved 5 acre lots has on La Center's density performance. (These lots at the City boundary limits and along arterial streets were approved with septic service. La Center requires all dwellings built on newly created land to connect to City sanitary sewer.)

Net Density. In La Center new subdivisions must achieve 4 DU/NET acre. 90% of all new subdivision lots must be within 10% of 7,500 S.F. The maximum allowable lot is 10,000 S.F. and the minimum 6,000SF. Like other jurisdictions La Center has an abundant supply of critical lands. The City prohibits the creation of lots in wetlands or wetland buffers. (LCMC 18.300.050.4.f.iii.) Consequently the city is able to achieve a higher net density.

Multi-family dwellings. La Center has 56 multi-family units in the City limits. See attached map. The Residential Professional (RP) zoning district allows single family development (4 DU/acre), multi-family units (8-16 units/acre), and retail/office uses. The Timmen Mixed Use (MX) zoning district allows single family development (4 DU/acre), multi-family units (8-16 units/acre), and retail/office uses. In the MX zone no single use may be less than 25 percent, nor more than 50 percent, of the net acreage. Regrettably, the multi-family and mixed use market has not yet found La Center a favorable location.

We recognize that the BLR is a general model. That is why we are pleased to provide this information to you in hopes that the model will more accurately tell the story of what is happening in La Center.

If you have any questions, please contact me directly.

Thank you.

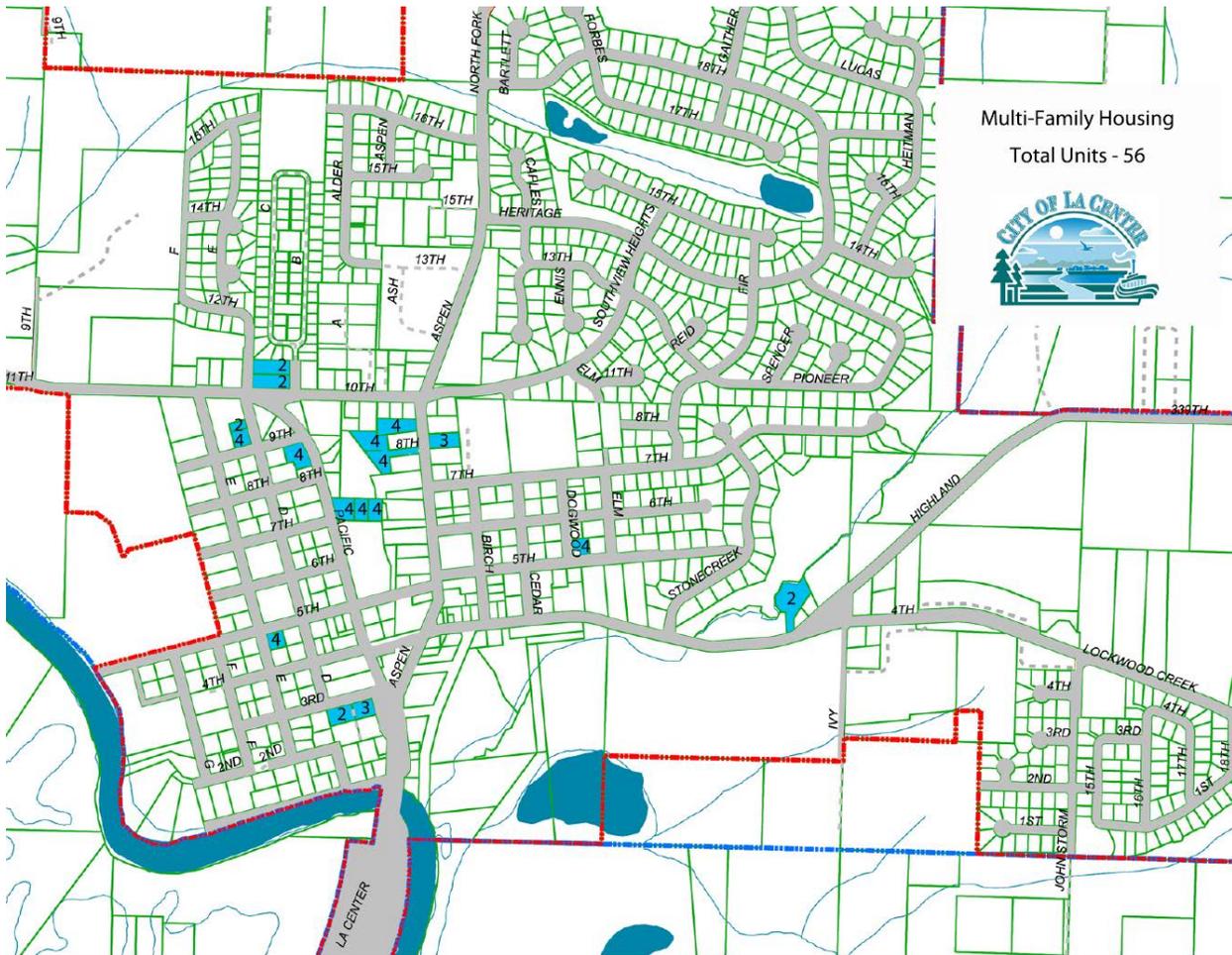
Eric

Eric Eisemann
E2 Land Use Planning, LLC
215 W. 4th Street, Suite # 201
Vancouver, WA 98660
360.750.0038
e.eisemann@e2landuse.com

[Attachment: BLR Subdivision table v2.docx](#)

Subdivision	PIN	Location	File	Gross Acres	Lots
		La Center UGA	Approved by Clark County		
East Fork Estates (Goode Cluster)	986028830	1514 NW 339 th St. La Center, WA	PLD2010-00008 Final plat 2010	40+	10
Perrott Short Plat	209062000	2219 NE 339 th St. La Center, WA	PLD-2008-0005 Final Plat in 2009	35+	3
Totals			5.7 DU/Acre	75+	13
		City of La Center	Approved by City of La Center	Gross Acres *	Lots
Hanna's Farm	258905000 62965040 258924000 62965094	North of NW Pacific Highway	2005-001-SUB 21 vacant lots	17.07	57
Gordon Crest	258894000 258896000 258943000	West of Aspen Ave	2005-007-SUB 26 vacant lots	18.19	60
Total Final Plats			3.31 DU/ <u>Gross</u> ac.	35.26	117
Approved Preliminary Plats					
Kays	209488000	South West of NW Pacific Highway	2008-016-SUB	11.8	37
Gordon Crest II	258892000	West of Aspen Ave	2006-012-SUB	6.74	26
Highland Terrace	258636000 258644000 258702000 258703000 258704000 258727000 258763000	East of NW Pacific Highway	2006-019 SUB	25.3	100
Dana Heights	62647000	North of East 7 th Street	2006-002-SUB	3.87	14
Sargent	258717000	34102 NW 9th Avenue	2006-033-SUB	5.3	11
Preliminary Plat Total			3.55 DU/ <u>Gross</u> ac.	53.01	188

Note: New subdivisions must achieve 4 DU/Net acre. New plats must achieve 7,500 S.F. average lot size. The maximum lot size, allowable at the perimeter of the City Limits, is 11,000 S.F.



Ridgefield Correspondence

From: [Elizabeth Decker](#)
To: [Albrecht, Gary](#); [Orjiako, Oliver](#); [Eric Eisemann](#); [Jeff Niten](#)
Subject: VBLM remedial actions for Ridgefield **Date:**
Friday, May 08, 2015 5:13:20 PM **Attachments:**
[VBLM_PreliminaryPlatInfo.docx](#)

Hi Gary,

I had a few comments to submit regarding the recent version of the Buildable Lands Report for the City of Ridgefield, and would like to have these comments included in the record.

Residential Land Supply: A couple of things I want to put in the record for the VBLM report for Ridgefield since the change in methodology shows the City with a 63 acre surplus for residential land, when the previous versions showed Ridgefield with a significant deficit. The City, as have most areas, suffered a tremendous downturn in development activity during the great recession. We have several hundred lots platted preliminarily and those lots still exist, and are going through the final plat process and/or being constructed now at a rapid pace. Several subdivisions and PUDs I want to bring to your attention include Ridgefield Woods which just received signatures on the final plat last week and contains 34 single family home lots. Canterbury Trails received preliminary plat approval in 2006 and is now going through the process to finalize the plat. Canterbury Trails will provide for 69 single family home lots. Pioneer Canyon Phases 3 and 4 are rapidly coming on-line and will provide both single family and multi family home sites. Bella Noche is coming forward with a revised preliminary plat that will provide 30 lots. Hawks Landing was preliminary platted recently and will move forward with 57 lots in the near future. Additionally, the Kemper subdivision was approved in 2007 for a total of 200 single family homes sites, none of which have been constructed at this time. In total, Ridgefield knows of 444 single and multifamily lots that will be coming forward within a year for final plat or have been final platted within the past month.

We estimate an additional 290 lots may move forward to final plat within the coming years, based on existing preliminary plat approvals, for a total of 734 lots on over 200 acres of residential land. These lots have already been committed to development and should not be calculated and vacant and buildable in the County's report.

Another factor that will impact the development potential of the residential land in the City's UGA is the City's strong commitment to parks. The City requires 25% of residential land be dedicated to park and open space during the development approval process. While up to half of that dedication may contain critical areas, the other half must contain active usable space. An override for the standard infrastructure deduction would be an appropriate remedy to accurately reflect the residential land Ridgefield has available for future development. We would suggest an additional 12.5% of gross acres be deducted from the VBLM totals to account for active usable space required for parks use, assuming that the critical areas have already been accounted for in the VBLM standard deduction.

A final consideration is that some of the residential land within Ridgefield's UGA has already been developed as large lot subdivisions under County standards, which will make it unlikely and difficult for that land to be developed at urban densities.

Multifamily Targets: The City currently has sufficient low and medium density residential land to achieve a 75/25 split for new development, however, the market for single-family development has moved more quickly than multifamily development. While on-the-ground supply of multifamily housing does not yet meet the 25% split, the City will comply at full build-out as proposed in the 20-year plan. Further, there are additional opportunities for higher density residential development in the City's commercial and mixed-use zones.

The City is under taking several major planning efforts including the 45th and Pioneer sub-area plan which is expected to provide up to 2,000 dwelling units during the planning horizon along with commercial uses. Ridgefield Junction sub-area and the Downtown/Waterfront sub-area are expected to promote additional dwelling units as well.

The VBLM can't, unfortunately, take into account what is planned for in our current boundary and only recognizes what is on the ground at a moment in time. However, I think this e-mail should provide the county policy makers with the appropriate information to determine that the 63 acre surplus is not reflective of the development activity occurring now, or expected to occur over the next several years. Additionally, the model or the staff discussion of the model should take into account the additional ways in which Ridgefield can satisfy its 75/25 housing split with future mixed use development.

Thank you,

Elizabeth

Elizabeth Decker
City of Ridgefield Consulting Planner
[503.705.3806](tel:503.705.3806)
edecker@jetplanning.net

Technical information: Supplemental VBLM Information City of Ridgefield

The following are active preliminary plats with potential to be final platted.

Subdivision Name	Assessor serial number	Location	Number of lots
Ridgefield Woods	986036007	45 th and Pioneer	34 (has been recorded on GIS now)
Canterbury Trails	213958000	N 45 th Ave and Pioneer	69
Kemper	213745000	Pioneer and Bertsinger	200
Bella Noche	213707000	Pioneer and N 35 th Ave	30
Hawks Landing	215825000	Hillhurst and S 35 th Place	57
Pioneer Canyon Phase 3	986027692	Pioneer and N 40 th Ave	54 (final plat approved by Council April 23)
Pioneer Canyon Phase 4	986027694 and surrounding	NW corner of N 45 th Ave and Pioneer	50 (estimated)
Taverner Ridge Phases 7-9	220025000, 220034000, 220032114, 216032010, 216032005, 216032015	Hillhurst and Great Blue Rd	105 (estimated)
Garrison Ridge Phase 2	121105000	Hillhurst and S Refuge Rd	15 (estimated)
Stephenson Manor	220016000	Hillhurst and Great Blue Rd	30 (estimated)
Columbia Acres	213710000	Reiman and N 10 th St	30 (estimated)
Cedar Creek	213713000	N 35 th Ave and N 10 th St	30 (estimated)
Pioneer Place	213800000, 213798000	N 35 th Ave and N 10 th St	30 (estimated)
Total known			444
Total estimated			290
Combined total expected			734

APPENDIX E- ADDENDUM

Background:

In response to the Growth Management Hearings Board Case No. 16-2-0005c Final Decision and Order as seen in Issue 5: UGA EXPANSION AND BUILDABLE LANDS REPORTS, the Cities of Battle Ground, La Center, and Ridgefield have provided additional information about their Comprehensive Growth Management Plans and development.

Appendix E describes their following actions that were identified as necessary revisions to local development regulations. These revisions were incorporated into the update process and adopted in an ordinance to ensure compliance with the GMA. These measures reflect changes in regulation that would gradually allow for higher density development within the planning horizon.



City of Battle Ground

Community Development Department
109 SW 1st Street, Suite 127, Battle Ground, WA 98604
360.342.5047

May 12, 2017

Clark County Board of Councilors
Clark County Planning Commission
Attn; Oliver Orjiako
P.O. Box 9810
Vancouver, WA 98666

RE: Growth Management Hearings Board Compliance

Dear Mr. Orjiako,

In order to come into compliance with issue 5 in the Growth Management Hearings Board Final Decision and Order, the City of Battle Ground is proposing to remove the 82 acres that was added to the urban growth boundary during the 2015 Comprehensive Plan Update.

Attached please find two documents providing justification and background for why removing the additional acreage brings Battle Ground into compliance. Part 1 of the attached addresses actions and observations regarding density and employment capacity in regards to projected numbers verses actual development patterns as well as addresses reasonable measures. Part 2 of the attached is an analysis of capacity using updated numbers and accounting for recent development. The combination of these two documents show that Battle Ground's UGA, while perhaps slightly undersized, is sufficient to meet the 20-year projections.

The expansion area currently has a comprehensive plan designation of mixed use and an urban holding overlay. The City understands that this property, once removed from our UGA, will return to the original R-5 zoning and the urban holding overlay will be removed. The City is requesting that the urban reserve 20 overlay be placed on this 82 acres to protect against undue parcelization at this location and to preserve this area for future economic development.

We thank you for working with us throughout this process. If you need any addition information or have any questions, please do not hesitate to contact me. You can reach me at erin.erdman@cityofbg.org or (360) 342-5044.

Sincerely,

A handwritten signature in blue ink, appearing to read "Erin Erdman".

Erin Erdman
Community Development Director

cc: Jeff Swanson, City Manager
Sam Crummett, Planning Supervisor
Susan Drummond, Contract City Attorney

May 18, 2017

Battle Ground Response to Issue 5 - Part I of 2
Supplement to Buildable Lands Report for City of Battle Ground

Residential Land

In Issue 5 of the Order, the Growth Management Hearings Board found that Battle Ground's expanded Urban Growth Area (UGA) was larger than necessary to accommodate its projected growth over the 2015-2035 horizon. Based on the County's most recent Buildable Lands Report (BLR), the Board found the County erred by expanding the Battle Ground UGA by 82 acres.

Action Item 1. To resolve this issue, Battle Ground will be working with the County to eliminate the 82 acres added to its UGA. As part of this process, the zoning will revert to R-5 and the UH-20 zoning overlay will be removed, as this designation applies to lands located inside an urban growth area. To ensure this area is protected for economic development, and is not further subdivided,¹ the City will be working with the County to apply the rural area's UR-20 zoning overlay to these properties. The UR-20 Overlay would replace the UH-20 Overlay.

Action Item 2. In 2013, the City observed that residential densities were not being built to the 6 unit per acre targets established in the Plan. Staff found that the minimum lot size standards as well as the density transfer provisions in the City's development code were not allowing for developers to realize the densities authorized in the low density residential districts. The low-density districts authorized a maximum density as established in the Plan, with the imposed minimum lot sizes and the amount of land needed for infrastructure deductions; density targets were not being met. The City fixed this by reducing the minimum lot size standards within the low-density residential districts. As a result, the development trends since ordinance passage have proven to create higher density plats as indicated in Table 1 below. Please see Exhibit A, Ordinance 13-07 for the specific code changes. Given the recent adoption of these measures, the BLR land capacity analysis was unable to account for the increased densities resulting from Ordinance 13-07, which are described below.

Observation 1. Development trends have changed dramatically since BLR publication, so the VBLM analysis lacked current data on development capacity and density occurring in Battle Ground. This concern is noted in the BLR, as the report states, "it is important to note that the observed densities occurred at a period of a deep recession having a significant impact to development occurring in the housing sector. However, Battle Ground, Camas, La Center, Ridgefield, Vancouver, Washougal and Clark County have adopted local development regulations that may reflect higher density development within the planning horizon" (p. 11). Given the data the BLR analysis was based on was derived from a period of no or low growth, this BLR analysis is now being supplemented to account for recent development trends. With current development figures factored in, the County will have a more accurate picture of Battle Ground's residential density.

¹ As the Mayor addressed in prior testimony, this has been a challenge for lands just outside UGA borders.

Since the publication of the BLR, multi-family density took a sharp increase to 51.3 units per acre, due to new projects built during this time frame. For single-family residential platted lots, density is above 7 units per acre on average. In summary, Battle Ground’s present densities are not 4.2 units per acre, and the City is being developed out at fairly high urban densities. As indicated in Table 1 below, Battle Ground’s residential density is **13.37 units per acre**, far exceeding its residential density targets. This change is largely the result of the passage of Ordinance 13-07 along with the upturn in the market since the recession.

Table 1. Battle Ground Residential Densities from January 2015 to March 2017.

Single Family Subdivisions	Preliminary Approval	Net Acres	#Lots/ Units	Density
Cedars Landing	8/28/2014	24.72	172	6.96
Creekside Heights	5/21/2015	9.75	98	10.05
Cedars Village	7/7/2016	20.26	117	5.77
Eastbrook Subdivision	5/13/2016	9.23	80	8.67
Bloomquist Subdivision	2/24/2017	19.88	123	6.19
Parkway Heights	4/10/2017	8.45	39	4.62
Multi-Family Density		3.86	198	51.3
Platted Single-Family Density				7.04
Combined Residential Density				13.37

Employment Land

Action Item 1. As noted earlier, the City will be removing the requested 82 acres from the City’s Urban Growth Boundary that was brought in with this Plan update. Further detail is above.

Action Item 2. Second, the City has adopted the following policies in the Plan update to introduce more compact and efficient employment land use developments via mixed-use objectives, updating City long range plans, and promoting Old Town businesses through partnerships and other means. These new goals and objectives are listed below:

<p><i>Economic Development Goal 2:</i> <i>Provide a sufficient amount of land for commercial and business uses, through a supportive Land Use Plan and development regulations.</i></p> <p>Objectives EDO2.1 Maintain and update the City’s land use, transportation and utility plans on a regular basis to guide the future of the City’s major commercial areas and help them respond to change.</p>

EDO2.2 Provide a mix of uses that allows for the daily needs of resident to be met within Battle Ground.

Economic Development Goal 3:

The City encourages regional and local economic development strategies.

Objectives

EDO3.3 Partner with the Battle Ground Chamber of Commerce and Old Town Battle Ground Association to promote and market the City's retail establishments. Assist the Chamber and Old Town Battle Ground in development of community marketing materials.

Observation 1. Similar to Residential trends, Battle Ground’s employment sector is densifying at a greater rate than outlined in the BLR. The trends represented in the BLR were largely derived from the recession and not representative of Battle Ground’s employment density. Since that time, Battle Ground’s top 10 employers on average have grown by 8.4%. This growth has occurred within their existing site acreage, except for Anderson Plastics, which expanded a portion of their growth outside of the City. Tapani Underground, Battle Ground’s second largest employer, has experienced the largest amount of growth at 40%, adding 107 jobs. This has initiated on-site construction of approximately 27,000 square feet of warehousing and office space.

Battle Ground’s Top 10 Employers, Growth from 2015 – March 2017.

Employer	Employee Count		Percent change
	January 2015	March 2017	
BG School District	714	716	0.3%
Tapani Underground	270	377	40%
Cascade Student Transportation	192	200	4%
Walmart	183	172	-6%
Vancouver Clinic	131	148	13%
Anderson Plastics/Dairy	155	137*	*This decrease is a result of the company splitting operations outside of the City, but the company is experiencing overall growth.
JRT Mechanical	119	122	3%
Victory Health Care	88	102	16%
Safeway	87	87	0%
City of Battle Ground	75	79	5%
Average Growth			8.4%

With this growth, the City is exceeding its employment goals. Neither the City nor the County have an employment density target (i.e., jobs per acre). The Countywide land capacity analysis

assumed 20 employees per acre, but this is an average and extremely difficult to measure given the varying degrees of employment densities throughout the County. For Battle Ground it is understood that 10 employees per acre is a more reasonable assumption for considering the adequacy of commercial land supplies. However, to be conservative, the City's update analysis for the compliance matter continues to assume 20 employees per acre. Updated information on commercial land supplies is separately provided. That analysis also addresses the City's overall UGA size, population allocation, and whether there is sufficient land within the UGA to accommodate the next twenty years of growth.

<P:\Comprehensive Plan\2016 Update\Appeal\BG Reasonable Measures Response.docx>

May 18, 2017

Battle Ground Response to Issue 5 - Part 2 of 2
Supplement to Buildable Lands Report for City of Battle Ground

Residential Land

The land capacity analysis was based on an estimated January 1, 2015 population of 20,871. The current population as of January 2015 is 19,250.

UGA	Population estimated (January 1, 2015)	Population Allocation	2035 estimated population
Battle Ground	20,871	17,572	38,443

The Vacant Buildable Lands model has not accounted for some recent development that has occurred in the City. There have been 3 recent subdivisions that have occurred on 31.82 acres of land, resulting in 116 single family lots. The original analysis was also built off the 2015 model; the numbers below have been updated based on the 2016 model.

Land Use	Developable Net Acres per VBLM	Deductions	Current Net Developable acres	Housing Units	Persons
Residential	1,055.8	31.82	1,023	6,139	16,329

Housing units are calculated based on 6 units per acre target.

Persons are calculated at with the factor of 2.66 persons per household

The capacity analysis indicates we have capacity for 16,329 people and we are allocated 17,572. If the numbers are based off the actual population for January 2015 then the UGA is still slightly undersized, and as such does not have a surplus of residential land as indicated in the Growth Management Hearings Board FDO.

Employment Land

During the Comprehensive Plan update process the City of Battle Ground was allocated 10,060 jobs. Of that total number, 8,605 jobs were allocated based on capacity in 2015. The county projected that 24,175 jobs would occur countywide due to redevelopment and public sector jobs. The City was allocated 6% of this assumption totaling 1,455 additional jobs, bringing the total allocation to 10,060.

The 2015 VBLM capacity analysis includes the 82-acre expansion area, which has a net of 55 developable acres. The model also only accounted for a portion of the Alder Point Apartment project, since the model was run 5.29 acres have fully developed on this mixed-use project, as well as an office development on .34 acres. These current developments along with the loss of the 55 net acres totals 60.63 acres.

Several small industrial developments have occurred since the last model was run - averaging around 2 acres apiece and totaling 9.44 acres.

Below are the numbers from the 2016 model coupled with updated analysis on development that has occurred since. The City has an employment capacity of 8,058 jobs, which is just shy of the allocation of 8,605.

Land Use	Developable Net Acres per VBLM	Deductions	Current Net Developable acres	Jobs
Commercial	398.5	60.63	337.87	6,757
Industrial	154	9.44	144.56	1,301
				8,058

Conclusion

With the removal of the 82 acres added to the UGA and the update to the VBLM model to account for current development, the City of Battle Ground’s residential and employment capacity while adequate to meet the proposed 2035 projections for population and job growth, the UGA is on the small side. The City falls slightly short on both residential and employment capacity, but given market volatility and to be conservative, the City is not requesting additional acreage at this time. As a policy matter, rather than bringing in land incrementally, if the area proposed for economic development is to be brought in, it should be planned for and brought in a single action. Also, given recent market dynamics, the City wishes to wait to see if the present development patterns continue before requesting an expansion.



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305 NW Pacific Highway • La Center, WA 98629

May 1, 2017

Clark Board of County Councilors
1300 SW Franklin, Suite 680
Vancouver, WA 98660

Regarding: 2016-2035 La Center Comprehensive Plan: Reasonable Measures to Accommodate Residential Development

Dear County Councilors;

Background

The La Center City Council adopted the “2016-2036 La Center Comprehensive Plan” on March 23, 2016.ⁱ Since adoption, the City has implemented various plan policies to ensure that residential development makes efficient use of land within the La Center City limits. The primary implementation measures the city employed have been to annex land for medium density residential development and to amend the mixed use and medium density regulations to provide additional residential development options at higher densities. These efforts have yielded success and help the city meet its county-mandated target of four (4) residential units per acre. The city has also taken several reasonable measures to meet its goal of providing reasonable employment measures for its current and future citizens.

Measure A: Minimum densities for residential development

The La Center 2016-2036 Comprehensive Plan (LCCP) establishes minimum density goals for new residential development to ensure that the city develops land within its Urban Growth Area (UGA) consistent with Clark County Community-wide goals. The minimum residential density allowed is four (4) units an acre.ⁱⁱ LCCP Policy 1.2.3 establishes minimum densities in all zoning districts in which residential uses are allowed.ⁱⁱⁱ The mandatory minimum densities are:

- LDR-7.4 – minimum of 4 units an acre;
- MDR-16 – minimum of 8 units and acre and maximum of 16 units an acre;
- RP - minimum of 4 units and acre and maximum of 16 units an acre; and
- Mixed Use - minimum of 8 units and acre and maximum of 16 units an acre.

Residential development is regulated by La Center Municipal Code (LCMC) Title 18, Chapters 18. 110 through 18.150.

Measure B: Manufactured housing regulations and zoning

On July 8, 2015 the La Center City Council amended LCMC 18.140, Medium Density Residential Districts. The amendment facilitates the creation of manufactured home parks and subdivisions and establishes performance standards for parks and amenities within such developments. The Council’s action was a reasonable measure to meet the Clark County goal of encouraging a minimum of 25% of all new units to be a product type other than low density single family detached structures.^{iv} The minimum density



allowed in a manufactured housing subdivision or park is four (4) units per net acre and the maximum allowed is twelve (12) units a net acre.^v

On December 16, 2015 the La Center City Council adopted Ordinance 2015-011 rezoning a portion of Country Hills Estates from LDR 7.5 to MDR-16. The rezoning of approximately 8.54 net acres of land allowed for the creation of a 58 unit manufactured home subdivision. The resulting density of the subdivision is 6.79 units an acre.

Measure C: Residential options in Mixed-Use Districts

On February 23, 2017 the La Center Planning Commission conducted a public hearing on amendments to LCMC 18.150, Commercial-Mixed Use Districts 18.165, Mixed Use Districts. The Commission voted unanimously to approve the amendments which, in part, mandate that 65% of the net acres of a mixed use development shall include housing units, and the minimum density allowable is eight (8) units an acre, and the maximum density is sixteen (16) units an acre. The City Council will conduct a public hearing on the proposed amendments in June 2017.

The amendments apply most directly to the Timmen Road area which comprises approximately 43 gross acres of MX lands. The land will develop after the new sanitary sewer trunk line passes the intersection of La Center Road and Timmen Road in the fall of 2017. As the area develops 65% of the 43 gross acres will be dedicated to medium density residential uses. At a minimum of eight (8) units and acre, the Timmen Road MX zone could create approximately 223 new units of medium density units.

Measure D: Current zoning code amendments in process

The La Center Planning Commission is currently working on a sub-area plan for the La Center Junction. The plan would allow for the creation of approximately 15 acres of live/work mixed use development. The minimum allowed density is twelve (12) units and acre and the maximum allowed density is twenty-four (24) units a per net acre. Thirty-five percent (35%) of the net buildable area would be allowed for residential uses. The Planning Commission will conduct a public hearing on the proposed Junction sub-area plan on May 17, 2018. The City Council will complete its review of the plan and take final action prior to July 27, 2017. When fully developed, the Junction residential mixed use area could generate between 63 and 126 new medium density units in a live/work environment at the Junction.

Measure E: Rezoning low density residential land to Residential Professional

On February 22, 2017 the City Council approved Ordinance 2017-04 rezoning a 10,004 S.F. parcel from low density residential to Residential Professional (RP).^{vi} The RP zone allows development consistent with LCMC 18,140, Medium Density Residential. The RP zone allows the developer to construct three units on 10,004 S.F. rather than just one unit. The density on the site will increase from 4.35 units and acre to 13 units an acre.

Measure F: Annexation and development of medium density residential development

On May 11, 2016, the La Center City Council approved a petition to annex the Goode properties which were in the city UGA and contiguous to the La Center city limits.^{vii} The land added 46.59 acres to the corporate limits. The adoption ordinance zoned the land from Clark County low density residential use (one acre minimum) to La Center LDR-16 residential use. La Center LDR-16 zoning requires a minimum of eight (8) units an acre and allows a maximum of sixteen (16) units an acre.^{viii} Therefore, annexed land could yield 372 to 652 new medium density housing units.

In 2016-2017 the developer of the property submitted a preliminary plat application to develop 40.59 acres of the site with 379 medium density units. (The remaining six acres are a reserved tract.) The

effective density of the development, called Riverside Estates, is 10.70 units per acre. Within a two year period La Center's density will increase from 1.94 units per acre to more than 3.875 units per acre.

Table 8 of the 2015 Clark County Buildable Lands Report indicates that between 2006 and 2014 La Center developed 66 single family units on 34 acres of land and no medium density units. The resulting density was 1.94 units per acre. The Riverside Estate development alone will result in a 574% increase in housing, all of which are medium density units.

Measure G: Employment lands

The LCCP Table 3, La Center Planning Assumptions and Targets, adopts a 'jobs to housing balance' ratio of 1 job per 0.92 households. This target is less than that adopted by Clark County but indicates the city's reasonable measures to increase employment opportunities. The LCCP anticipates that under the current zoning regime and by enhancing employment opportunities at the La Center Junction can generate 2,051 new jobs over the following 20 years.

The LCCP Policy 1.3.2 includes four commercial districts to encourage commercial development; 1) Downtown Commercial, 2) Residential/Professional, 3) Card Room, and 4) Mixed Use. LMC 18.145 and LMC 18.150 are consistent with policy 1.3.2.

These policies and development regulations are likely to increase employment density within the City of La Center. In 2016 Clark Regional Economic Development Council completed work on the "Land for Jobs" study. The study included approximately 89 acres of employment lands at the La Center Junction. In the spring of 2017 the city will adopt a new Junction sub-area plan which includes an assessment of the city's employment opportunities within its traditional market area and the impact of the opening of the Ilani Casino and resort at the western edge of the city limits. The CREDC study and the city's study indicate that the La Center Junction can generate approximately 150,000 – 200,000 S.F. of new office campus use and 200,000 S.F. of new commercial uses over the next 20 years.

Sincerely,



Greg Thornton, Mayor

ⁱ ORDINANCE NO. 2016-01 ADOPTING AMENDMENTS TO THE LA CENTER COMPREHENSIVE PLAN IN ACCORDANCE WITH RCW 36.70A, PROVIDING FOR SEVERABILITY, AND PROVIDING FOR AN EFFECTIVE DATE. MOVED AND CARRIED UNANIMOUSLY THAT "THE CITY COUNCIL FINDS THE CITY OF LA CENTER HAS FULFILLED ITS OBLIGATION UNDER RCW 36.70A.130 WITH AMENDMENTS IN RESPONSE TO THE COUNTY'S CHANGES IN POPULATION; AND FURTHER MOVES THAT THE CITY ADOPT ORDINANCE 2016-01, INCLUDING EXHIBIT A, B AND C, AMENDING THE LA CENTER COMPREHENSIVE PLAN."

ⁱⁱ LCCP Table 3, page 16.

ⁱⁱⁱ See also, LCCP Policies 3.1.3 and 3.1.4 reiterating the city's commitment to securing a minimum of four units an acre in low density zones and eight units an acre in medium density zones.

^{iv} See Ordinance 2015-06.

^v See LCMC Table 18.130.030.

^{vi} An Ordinance Approving a Zone Change for a 10,004 SF lot from Low Density Residential (LDR 7.5) to Residential Professional (RP); and amending the La Center Zoning Map to reflect this Change.

^{vii} ORDINANCE NO. 2016-003, AN ORDINANCE APPROVING THE ANNEXATION OF CERTAIN PROPERTY TO THE CITY OF LA CENTER (Goode, et al.) and REZONING THAT PROPERTY CONSISTENT WITH THE LA CENTER COMPREHENSIVE PLAN

^{viii} The effective maximum density allowable in the MDR-16 zone is 14 units an acre. See LCMC Table 18.140.030.



THE CITY OF RIDGEFIELD

230 Pioneer Street | P.O. Box 608 | Ridgefield, WA 98642

Memorandum

To: Clark County Board of Councilors
 From: Jeff Niten, City of Ridgefield Community Development Director
 Date: April 18, 2017
 Re: Reasonable Measures to Implement Comprehensive Plan Residential Density Targets

Background

The 2016 Ridgefield Urban Area Comprehensive Plan (RUACP) was adopted in March 2016. Since adoption, the City has implemented various plan policies to ensure that residential development has efficiently used land within the City's UGA, to implemented the adopted minimum densities and related policies regarding the provision of housing units. The two primary implementation measures have been to ensure new residential developments achieve adopted density targets, and to implement mixed-use zoning to provide additional residential development options at higher densities. The City is succeeding with these two measures and has seen development of both residential and mixed-use projects at or above the 6.0 units per net developable acre density target for new development adopted in the RUACP.

Measure: Minimum Densities for New Residential Development

The RUACP establishes minimum density goals for new residential development to ensure that the City is efficiently developing the land within its UGB. Policy HO-1, Accommodate growth, includes the following objectives to provide an adequate supply of land to meet housing needs: New overall density target of six units per net acre and a minimum density of four units per net acre for single-family dwellings in any single-family development. (RUACP, page 38.) Additional provisions establish minimum and maximum densities for residentially designated land, with Urban Low Density Residential to be developed at 4 and 8 units per net acre, and Urban medium Density Residential to be developed at 8 and 16 units per net acre. (RUACP, page 13.)

Residential development is primarily regulated by Chapters 18.210 (Residential low-density districts) and 18.220 (Residential medium-density districts). Established densities range from 4 to 16 units per acre, consistent with adopted RUACP policies.

Table 1: Minimum and Maximum Allowed Densities

Plan Designation	Zone	Minimum Density	Maximum Density
Urban Low	RLD-4	4 units/net developable acre	4 units/net developable acre
	RLD-6	4 units/net developable acre	6 units/net developable acre
	RLD-8	6 units/net developable	8 units/net developable

		acre	acre
Urban Medium	RMD-16	8 units/net developable acre	16 units/net developable acre

There are also numerous opportunities through the development code to increase the maximum density of projects, while limiting opportunities to decrease minimum density. Cottage development, a form of clustered, single-family detached housing, is allowed in all RLD zones at up to double the maximum density of the zone. (See RDC Table 18.210.150-1.) The density transfer provisions of the Critical Areas code allows transfer of a portion of the density on lands encumbered with critical areas to the developable portion of the site, and reducing minimum lot dimensions by 20 percent to accommodate the increased density. (See RDC 18.280.070.) The Planned Unit Development (PUD) process allows for an increase in density, while prohibiting a decrease in minimum density. (See RDC 18.401.100.A.6 allowing increases in density and 18.401.080.A establishing minimum densities.) Almost all of recent development in Ridgefield has been required to use the PUD process, ensuring no reductions in minimum project densities.

Recent development has achieved target densities at an average of 6.0 units per net developable acre. Table 2 below summarizes residential development projects from 2015 to 2017 that have been preliminary platted, completed a post-decision review on a previous preliminary plat, or are under review for preliminary plat approval. Projects have utilized a variety of strategies that have resulted in higher net densities, including utilizing the PUD process, the critical areas (CA) density transfer provisions, and the higher densities allowed in the RMD-16 medium-density zone.

Table 2: Recent Residential Development Densities

Development	Total Units	Net Acres	Net Density	Strategies
Canterbury Trails PUD (PLZ-15-0026)	69	11.3	6.1	PUD, CA density transfer
Bella Noche PUD (PLZ-15-0045)	34	3.5	9.7	PUD, RMD-16 base zone
Cedar Creek (PLZ-15-0050)	31	4.6	6.7	CA density transfer
Ridgecrest PUD (PLZ-16-0035)	339	69.9	4.8	PUD
Taverner Ridge (PLZ-16-0059)	115	13.1	8.8	RMD-16 base zone
Cloverhill PUD (PLZ-16-0088)	455	75.9	6.0	PUD
Teal Crest PUD (PLZ-16-0084)	63	10.0	6.3	PUD, density transfer
Hillhurst Highlands PUD (PLZ-16-0104)	69	12.4	5.6	PUD, density transfer
Village at Canyon Ridge PUD (PLZ-17-0017)	23	2.1	11.0	RMD-16 base zone
Kennedy Farms (PLZ-17-0028)	245	37.9	6.5	PUD, CA density transfer
Total	1,443	240.7	6.0	

Measure: Residential Options in Mixed-Use Districts

The RUACP prioritizes mixed-use development to provide additional residential opportunities. Policy LU-6, Mixed-use development, states: “Facilitate development that combines multiple uses in single buildings or integrated sites. Target areas for mixed-use development include the Lake River waterfront and the central city

core, with additional opportunities at 45th & Pioneer.” (RUACP, page 14.) The adopted sub-area plans for 45th & Pioneer and the Ridgefield Junction establish more specific goals and objectives for mixed-use development in these areas that incorporates residential development.

The mixed-use districts are implemented by Chapter 18.235 of the Ridgefield Development Code (RDC). Together they provide expanded options for higher density residential development and a variety of housing types.

Table 3: Residential Development Potential in Mixed-Use Zones

District	Size (Gross Acres)	Portion Allowed as Residential	Minimum Density	Maximum Density
Downtown RDC 18.235.020, Central Mixed Use District	22 acres, estimated	25 to 70%, must be upper-story uses	8 units/nda	16 units/nda, or up to 32 units/nda with bonuses
Waterfront RDC 18.235.030, Waterfront Mixed Use District	44 acres, estimated	No percentage limit, must be upper-story uses	4 units/nda	18 units/nda
Pioneer & 45th RDC 18.235.060, Ridgefield Mixed Use Overlay	392 acres eligible for RMUO overlay	20 to 60% in commercial base zones	8 units/nda	28 units/nda, with no limit for upper-story residential above non-residential use
Ridgefield Junction, RDC 18.235.060, Ridgefield Mixed Use Overlay	661 net developable acres eligible for RMUO overlay	0 to 60% in employment base zone 40 to 80% in multifamily base zone		

Because the RMUO overlay was implemented recently (Fall 2016), it is still early to see what development patterns will result. However, early proposals are promising. The City has conducted a pre-application conference for a mixed-use development known as Ridgefield Crossing (PLZ-17-0028) that would include 232 units of multifamily housing on 13.7 net acres, for a net density of 16.9 units per net developable acre, as part of a larger 39-acre project. This project would exceed the City’s overall density goal for new residential development. Additionally, the project is proposed on non-residentially-zoned property, providing additional residential development potential beyond what was forecast in the RUACP.



Environmental Protection Authority

Guidance for the Assessment of Environmental Factors

(in accordance with the
Environmental Protection
Act 1986)

Separation Distances between Industrial and Sensitive Land Uses

No. 3

June 2005

Western Australia

FOREWORD

The Environmental Protection Authority (EPA) is an independent statutory authority and is the key provider of independent environmental advice to Government.

The EPA's objectives are to protect the environment and to prevent, control and abate pollution and environmental harm. The EPA aims to achieve some of this through the development of environmental protection Guidance Statements for the environmental impact assessment (EIA) of proposals and schemes.

This document is one in a series being issued by the EPA to assist proponents, consultants, responsible authorities and the public generally to gain additional information about the EPA's thinking in relation to aspects of the EIA process. The series provides the basis for the EPA's evaluation of, and advice on, development proposals and schemes subject to the EIA process. The Guidance Statements are one part of assisting proponents and responsible authorities in achieving an environmentally acceptable outcome. Consistent with the notion of continuous environmental improvement and adaptive environmental management, the EPA expects proponents and responsible authorities to take all reasonable and practicable measures to protect the environment and to view the requirements of this guidance as representing the **minimum** necessary process to achieve an appropriate level of environmental protection.

This document provides advice on the use of generic separation distances (buffers) between industrial and sensitive land uses to avoid conflicts between incompatible land uses.

This Guidance Statement has the status of "**Final**" which means it has been reviewed by stakeholders and the public. The EPA has signed off the Guidance Statement and published it although it will be updated regularly as new information come to hand.

I am pleased to release this document which now supersedes the draft version.



Walter Cox
CHAIRMAN
ENVIRONMENTAL PROTECTION AUTHORITY

June 2005

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Guidance Statement No. 3

SEPARATION DISTANCES BETWEEN INDUSTRIAL AND SENSITIVE LAND USES

Key Words: buffer, industrial land use, sensitive land use, separation distance

1 PURPOSE

Guidance Statements generally are developed by the EPA to provide advice to proponents, responsible authorities¹, stakeholders and the public, about the minimum requirements for environmental management which the EPA would expect to be met when the Authority considers a proposal or scheme¹ during the EIA process. The generic process for Guidance Statements is set out in Appendix 2.

This Guidance Statement is termed “Final”, and thus the EPA expects that proponents will give full attention to the information provided when they submit proposals for assessment.

This Guidance Statement replaces the draft Guidance Statements “Industrial-Residential Buffer Areas (Separation Distances)” released in July 1997, and “Separation Distances between Industrial and Sensitive Land Uses” released in June 2004. It specifically addresses generic separation distances between industrial and sensitive land uses to avoid conflicts between these land uses. It takes into account protection of the environment as defined by the *Environmental Protection Act 1986* (EP Act) with a focus on protecting sensitive land uses from unacceptable impacts on amenity that may result from industrial activities, emissions and infrastructure.

During the EIA process the EPA principally considers impacts to the physical and/or biological environment. In association with the Department of Health, it also considers health risk assessment from predicted emissions under normal operations. Industrial activities may also lead to increased levels of individual risk of fatality. The EPA currently considers off-site individual risk, as outlined in the EPA Guidance Statement No. 2 *Risk Assessment and Management: Off-site*

¹ This term is used in this Guidance Statement in the same way as it is defined in the *Environment Protection Act 1986* (see Section 7 Definitions).

individual risk from Hazardous Industrial Plant, when assessing new hazardous plant. The EPA seeks technical advice regarding off-site individual risk from the Department of Industry and Resources (DoIR), where the proposal relates to petroleum or major hazard facilities under DoIR's statutory regulation. Public risk assessment and management in Western Australia is undergoing review to ensure public safety issues are appropriately addressed by Government. It is expected that this Guidance Statement will need to be updated once the risk review and the legislative amendments to empower the responsible authority(s) has been completed.

Proponents and responsible authorities are encouraged to consider their proposals and schemes in the light of the guidance given. A proponent or responsible authority wishing to deviate from the advice in this Guidance Statement would be expected to put a well-researched, robust and clear justification arguing the need for that deviation.

This document provides the generic buffer (separation) distances referred to in the State Industrial Buffer Policy (Government of Western Australia 1997).

2 THE ISSUE

A number of emissions are generated by industrial, commercial and rural activities and infrastructure. These include noise and air emissions (gases, dust and odours). The levels of emissions may at times exceed amenity levels considered acceptable in residential areas and at other sensitive land uses.

In line with the requirements of the EP Act, it is necessary for individual industrial developers to take all reasonable and practicable measures to prevent or minimise emissions from their premises. It is generally expected that, through appropriate site layout, design of facilities, and the implementation of engineering and process controls, emissions from an individual industrial land use can be prevented from causing an adverse environmental impact beyond the boundaries of the particular site or beyond the boundaries of an industrial estate.

Generally, but not always, impacts on the environment decrease with increasing distance from the source of the emission. If the impacts from a particular industry or industrial estate are considered to be unacceptable at the boundary of the site or estate, then there is usually a need for a buffer area to separate industrial land use and sensitive land use.

The determination of the buffer area is necessary in many situations to avoid or minimise the potential for land use conflict. While not replacing the need for best practice approaches to emission management, the use of buffers is a useful tool in achieving an acceptable environmental outcome.

The EPA's preferred hierarchy for the management of industrial emissions is:

- avoidance of impacts;
- minimise the creation and discharge of waste by implementing best practice (see EPA Guidance Statement 55, *Implementing Best Practice in proposals submitted to the Environmental Impact Assessment process*); or
- ensure environmental impacts from industrial emissions are acceptable and meet the relevant regulations and health criteria beyond the boundary of the site, industrial estate or buffer area.

The area that may be adversely affected by industrial emissions will depend on site- and process-specific factors such as the scale of the operation, plant processes and emission controls, storage of raw material and waste, local wind patterns and topography. The possibility of future expansion will also be relevant in the consideration of an appropriate separation distance.

A sound site-specific technical analysis is generally found to provide the most appropriate guide to the separation distance that should be maintained between an industry or industrial estate and sensitive land use.

However, in recognition that a site-specific study may not be necessary in all situations, generic separation distances have been developed. The generic separation distances in Appendix 1 are based on the experience of the Department of Environment (DoE) and other regulatory authorities (e.g. Environmental Protection Authority, Victoria) and limited site-specific quantitative scientific assessment. The table in Appendix 1 includes industries that historically have been associated with amenity impacts from gaseous, dust, noise and odorous emissions, as well as with elevated levels of off-site risk to the public. For some industries, separation distance ranges are specified. For others, generic distances are not applicable and separation distances need to be determined case by case.

This Guidance Statement provides advice on the use of the generic separation distances that have been developed by the DoE for a range of industrial land uses. The use and application of the generic separation distances is explained in more detail in Section 4 of this Guidance Statement.

2.1 Types of industrial land uses

For the purposes of this Guidance Statement, "industrial land use" is used in a general way to encompass a range of industrial, commercial and rural activities, and infrastructure, associated with off-site emissions that may affect adversely the amenity of sensitive land uses.

The term includes:

- general industry;
- light industry;
- service industry;
- some commercial activities, e.g. service stations;
- rural industry and some forms of agriculture;
- rural intensive land use;
- resource processing industry;
- hazardous industry;
- noxious industry;
- extractive industry;
- technology parks;
- freight terminals;
- waste water treatment plants;
- power generation facilities;
- power distribution terminals and substations;
- solid waste disposal sites;
- resource recovery plants; and
- gas and petroleum pipelines.

The table in Appendix 1 includes a variety of land uses that may require consideration of buffers to manage off-site impacts on the environment. However, the list is not definitive. Other land uses where buffers need to be considered include airports and major sporting facilities, e.g. speedway racing, football and soccer. The principles in Section 4.1 apply to these land uses as well as to those listed in Appendix 1.

2.2 Types of industrial emissions

The generic separation distances are based on the consideration of typical emissions that may affect the amenity of nearby sensitive land uses. These include:

- gaseous and particulate emissions;
- noise;
- dust; and
- odour.

The generic separation distances table also identifies a range of industrial land uses associated with higher levels of risk of injury or death from accidents.

2.3 Types of sensitive land uses

Land uses considered to be potentially sensitive to emissions from industry and infrastructure include residential developments², hospitals, hotels, motels, hostels, caravan parks, schools, nursing homes, child care facilities, shopping centres, playgrounds, and some public buildings. Some commercial, institutional and industrial land uses which require high levels of amenity or are sensitive to particular emissions may also be considered “sensitive land uses”. Examples include some retail outlets, offices and training centres, and some types of storage and manufacturing facilities.

3 SCOPE OF THE GUIDANCE

This Guidance Statement is intended to provide advice on generic separation distances between specific industry and sensitive land uses to avoid or minimise the potential for land use conflict. The distances outlined in Appendix 1 are not intended to be absolute separation distances, rather they are a default distance for the purposes of:

- identifying the need for specific separation distance or buffer definition studies; and
- providing general guidance on separation distances in the absence of site-specific technical studies.

The separation distances are intended to be used as a tool, supplemented by other appropriate techniques, to assist in the assessment of:

- new individual industries, infrastructure and estates, in the vicinity of existing/proposed sensitive land uses; and
- new individual sensitive land uses or estates, in the vicinity of existing/proposed industry and infrastructure.

The separation distances are also intended to provide assistance to strategic planning studies and processes.

The separation distances outlined are not intended to replace the need for proponents and relevant authorities to take all reasonable and practicable measures to minimise emissions and off-site impacts.

To ensure an appropriate environmental outcome, the generic separation distances will need to be complemented by other assessment tools and the consideration of the full range of environmental factors.

The reader should be aware that the generic distances do not take into account:

² Residential development in a planning sense can also mean subdivision.

- cumulative impacts;
- non-typical emissions;
- the protection of natural resources and significant elements of the natural environment; and
- potential health impacts from emissions.

As part of comprehensive environmental impact management, the EPA expects that these will also be considered and managed as appropriate.

3.1 Relationship of the separation distances to codes of practice and management guidelines

A number of environmental codes of practice and management guidelines issued by State Government agencies provide advice on separation distances between specific industries, other land uses and natural resources. The DoE for example has issued codes of practice on turf farms, piggeries, cattle feedlots, the poultry industry, vineyards and dairies. This Guidance Statement has attempted to incorporate advice relating to separation distances from the various codes and guidelines to provide a comprehensive overview.

Some codes and guidelines may contain more detailed information on buffers that may be relevant to the achievement of an acceptable environmental outcome.

3.2 Relationship of the separation distances to the State Industrial Buffer Policy

The Western Australia Planning Commission has prepared a Statement of Planning Policy entitled *State Industrial Buffer Policy* (Government of Western Australia 1997). This is a statutory policy prepared pursuant to the *Town Planning and Development Act 1928*. The Policy is intended to provide a consistent Statewide approach to the definition and securing of buffers for industry and infrastructure, protect industry and infrastructure from the encroachment of incompatible landuses, provide for the safety and amenity of land uses surrounding industry and infrastructure, and provide for the protection of the interests of both landowners affected by buffers, and industry and infrastructure encroached upon by sensitive land uses.

A role of this Guidance Statement is to complement and assist the implementation of the Western Australian Planning Commission's *State Industrial Buffer Policy*. The Policy makes specific reference to the generic buffer (or separation) distances developed by the DoE. At the time of publication of this Guidance Statement, the table in Appendix 1 lists the Department's and the EPA's generic separation distances.

4 THE GUIDANCE

4.1 The EPA approach to protecting the amenity of sensitive land uses from emissions from industrial land uses

As stated in Section 2, the EPA's preferred hierarchy for the management of industrial emissions is:

- avoidance of impacts;
- minimise the creation and discharge of waste by implementing best practice (see EPA Guidance Statement 55, *Implementing Best Practice in proposals submitted to the Environmental Impact Assessment process*); or
- ensure environmental impacts from industrial emissions are acceptable and meet the relevant regulations and health criteria beyond the boundary of the site, industrial estate or buffer area.

To ensure an appropriate level of environmental protection, the EPA expects that individual industrial developers will take all reasonable and practicable measures to prevent or minimise emissions from their premises. This entails not only compliance with all recognised environmental protection criteria but also the adoption of best practicable measures for prevention or minimisation of adverse environmental impacts.

Wherever practicable, it is expected that adverse environmental impacts should not extend beyond the boundary of a particular industrial site. Where this is not possible, adverse environmental impacts should not extend beyond the boundaries of a buffer area, which should contain only compatible land uses. New sensitive land uses are not appropriate in the buffer.

Where a buffer has been agreed to by the relevant authorities, the EPA expects that effective measures will be applied, generally through the land use planning process, to ensure that only compatible land uses are allowed in the buffer area. The EPA also expects that appropriate management and monitoring of industries and the buffer area will be implemented to ensure that emissions do not exceed acceptable levels at the outer boundary of the buffer.

Generally, protection of sensitive land uses from industrial emissions is assisted by the identification of suitable buffers at the strategic and structure planning stages of the land use planning process, and in the early project formulation stages in the case of individual projects.

A sound site-specific technical analysis will provide the most appropriate guide to the separation distance that should be maintained between a particular industry and sensitive land uses, or between industrial precincts and sensitive land uses, to avoid or minimise land use conflicts.

Where a site-specific study is carried out, it should generally include a technical analysis and report on the nature and level of the possible emissions from the

industry, the site context, predicted impacts, acceptable criteria, and proposed management. Guidance on appropriate technical studies for particular circumstances is available from a range of sources including the DoE, other government agencies and the EPA, in the case of proposals and schemes subject to the EIA process.

A site-specific technical study to determine separation distances is generally expected in the case of a major heavy industrial estate, or a general industrial estate where emissions may result in cumulative impacts.

Where a proposal or scheme subject to the EIA process involves industrial development near sensitive development, the EPA will take into account the likelihood of industrial emissions that may affect the amenity of the sensitive land use, the management measures (including monitoring), and the separation proposed. Where separation is proposed, the EPA will consider the ability to apply effective mechanisms for establishing and enforcing the separation distance or buffer area.

Generally, the EPA expects the potential for land use conflicts to be resolved through the land use planning process, following consideration of adequate technical information and advice from the relevant agencies.

Generic separation distances have been developed by the EPA in recognition that a site-specific study to determine a buffer may not always be necessary, and that generic guidelines are a useful tool at the design and planning stages. The generic separation distances are included in this Guidance Statement in Appendix 1.

4.2 When to use the generic separation distances

The generic separation distances are a tool to assist in the determination of suitable distances between industry and sensitive land uses where industry may have the potential to affect the amenity of a sensitive land use.

The data is helpful in the following instances:

- to identify the need for specific buffer definition studies where:
 - a new industrial land use is proposed near an existing or proposed sensitive land use; or
 - a new sensitive land use is proposed near an existing or proposed industrial land use; and
- to provide general guidance on separation distances in the absence of site-specific technical studies, or, where only an estimation of the area that could be subject to land use conflicts is required.

It is not appropriate to use the generic separation distances where the industry involved is very large, utilises non-typical technology, or in some other way the circumstances are not typical.

Further, the separation distances should be used with caution in strategic and structure planning exercises, and in situations where cumulative impacts may result from the co-location of many industries.

4.3 Risk and the generic separation distances table

For some industries, the table indicates the possibility of risk, in the sense of risk of an accident or incident causing injury or death to the public. This is provided for general information only. The EPA's current approach to risk is to identify whether a proposal for a new hazardous plant meets the EPA's off-site individual risk criteria (EPA 2000). The EPA seeks technical advice from DoIR for proposals under DoIR's statutory responsibility.

4.4 How to use the generic separation distances in Appendix 1

The generic separation distances for a range of industrial land uses are listed in Appendix 1. This section addresses the use of the table in the following instances.

4.4.1 A new industrial land use is proposed near existing or proposed sensitive development, OR sensitive development is proposed near an existing/proposed industry

Where the separation between the industrial and sensitive land uses is **greater** than the generic distance, there will not usually be a need to carry out site-specific technical analyses to determine the likely area of amenity impacts due to emissions from the industry. The need for technical analyses is likely to be limited to such instances as major industrial developments, industries using new or non-typical processing techniques, or areas subject to cumulative impacts.

Where the separation distance is **less** than the generic distance, a scientific study based on site- and industry-specific information must be presented to demonstrate that a lesser distance will not result in unacceptable impacts.

If the distance from the industrial land use to the sensitive land use is less than the recommended separation distance, and it cannot be demonstrated that unacceptable environmental impacts are likely to be avoided, then other options should generally be pursued.

These may include:

- modifying the project to reduce emissions via engineering controls such as process design, process enclosure or other means; and
- pursuing land use planning and management controls (e.g. land acquisition, rezoning) to reduce environmental impacts to acceptable levels.

For proposals and schemes subject to the EIA process, where it cannot be demonstrated that there will be acceptable emission levels at present and future residences and other sensitive premises, the EPA is likely to recommend that the proposal or scheme is not environmentally acceptable.

If a referral is made to the EPA, information that will assist the EPA to set an appropriate level of assessment includes information on the location of existing industrial and sensitive premises, land zoning and scheme provisions, the results of any site-specific studies and consultation, and the proposed planning and environmental management measures.

4.4.2 General guidance is required on separation distances in the absence of site-specific technical studies, OR an estimation of the area that could be subject to land use conflicts is required

In most cases, land use conflicts resulting from industrial emissions are not expected where the generic separation distances are maintained. Further investigations should be carried out, however, in non-typical situations, and where cumulative impacts may occur.

Where a separation under consideration is less than in the table, it is recommended that a new project does not proceed in the absence of site-specific investigations and a report demonstrating that the separation distance will meet acceptability criteria and that enforceable management techniques will be applied to ensure an appropriate environmental outcome.

5 APPLICATION

5.1 Area

This Guidance Statement applies to all proposals and schemes subject to the EIA process throughout the State of Western Australia.

5.2 Duration and Review

The duration of this Guidance Statement is for five years unless some unforeseen circumstances require it to be revised earlier.

6 RESPONSIBILITIES

6.1 EPA responsibilities

The EPA will apply this Guidance Statement to proposals and schemes that are subject to the EIA process under Part IV of the EP Act.

6.2 DoE responsibilities

The DoE will assist the EPA in applying this Guidance Statement to the EIA of proposals and schemes, and in conducting its functions under Part V of the EP Act.

6.3 Proponent and responsible authority responsibilities

Where proponents and responsible authorities demonstrate to the EPA that the requirements of this Guidance Statement are incorporated into proposals and schemes in a manner which ensures that they are enforced and audited, the assessment of such proposals and schemes is likely to be assisted.

7 DEFINITIONS

In this Guidance, the terms listed have the following definitions.

Amenity – factors which combine to form the character of an area and include the present and likely future amenity. For the purpose of this Guidance Statement, consideration of loss of amenity is limited to unreasonable impact on a person from gaseous, dust, noise and odorous emissions and risk.

Buffer – all the land between the boundary of the area that may potentially be used by an industrial land use, and the boundary of the area within which unacceptable adverse impacts due to industrial emissions on the amenity of sensitive land use are possible. This may be represented by the separation distance.

Emission – discharge of waste, emission of noise, odour or electromagnetic radiation or transmission of electromagnetic radiation.

Industrial land use, industry – a general term used in this Guidance Statement to encompass a range of industrial, commercial and rural land uses and infrastructure associated with emissions that may affect the amenity of sensitive land uses.

Residential development – any permanent structure whose primary use is as a dwelling place.

Responsible authority – as defined in the *Environmental Protection Act 1986*, and

generally, the authority responsible for:

- a town planning scheme, a regional planning scheme, a redevelopment scheme, or an amendment to any of the above;
- a statement of planning policy, or amendment to such a statement; or
- a subdivision or strata plan.

Scheme – as defined in the *Environmental Protection Act 1986*, and generally:

- a town planning scheme, a regional planning scheme, a redevelopment scheme, or an amendment to any of the above; or
- a statement of planning policy or an amendment to such a statement.

Sensitive land use – land use sensitive to emissions from industry and infrastructure. Sensitive land uses include residential development, hospitals, hotels, motels, hostels, caravan parks, schools, nursing homes, child care facilities, shopping centres, playgrounds and some public buildings. Some commercial, institutional and industrial land uses which require high levels of amenity or are sensitive to particular emissions may also be considered “sensitive land uses”. Examples include some retail outlets, offices and training centres, and some types of storage and manufacturing.

Separation distance – the shortest distance between the boundary of the area that may potentially be used by an industrial land use, and the boundary of the area that may be used by a sensitive land use.

8 REFERENCES

Environmental Protection Authority 1997 *Industrial-Residential Buffer Areas (Separation Distances)* Draft Guidance No. 3, Environmental Protection Authority, Perth Western Australia

Environmental Protection Authority 2000 *Guidance for Risk Assessment and Management: Offsite individual risk from Hazardous Industrial Plant* Guidance No. 2, Environmental Protection Authority, Perth Western Australia

Environmental Protection Authority 2004 *Separation Distances between Industrial and Sensitive Land Uses* Draft Guidance No. 3, Environmental Protection Authority, Perth Western Australia

Western Australian Planning Commission 1997 *State Industrial Buffer Policy: Statement of Planning Policy No. 4* Government of Western Australia, Perth Western Australia

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Appendix 1: Separation Distances between Industrial and Sensitive Land Uses

Note:

These generic guidelines do not take into account:

- cumulative impacts;
- non-typical emissions;
- the protection of natural resources and significant elements of the natural environment; and
- potential health impacts from emissions.

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Abattoir	killing of animals for human consumption or pet food – no rendering	√ (15) (Reg. 1)	DAWA, WRC, local gov't	CoP - Aug 1996. Regs. in Sept 1996		√	√	√		500-1000, depending on size
Abrasive blasting operations	metal or other material is cleaned or abraded by blasting with any abrasive material	√ (Reg. 5)	local gov't	CoP - 1993. Regs. in Sept 1996		√	√			case by case
Aluminium production	using electrolytic fusion technique	√ (44)	DoIR		√	√	√		√	1500-2000

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Ammonia importation	unloading ammonia from ships and storage		DoIR, DPI		√ NH ₃				√	case by case
Ammonium nitrate import/export	transfer of chemical from ship to land-based transport and vice versa	√ (58, 86)	DoIR, DPI						√	case by case
Ammunition production	includes explosives and fireworks		DoIR						√	1000
Animal feed manufacturing	manufacture of animal feed from grain and other food products	√ (23)	DAWA, local gov't			√	√	√		500
Animal feedlot	intensive rearing of cattle (in rural zone, away from towns)	√ (1, 68)	DAWA, WRC, local gov't	Cattle Feedlots Guidelines - 2002		√	√	√		1000-2000, depending on size
Animal feedlot	other intensive rearing, e.g. sheep (in rural zone, away from towns)	√	DAWA, WRC, local gov't			√	√	√		1000-2000, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Aquaculture – ponds or tanks & natural waters included	propagation or rearing of aquatic fauna, with supplementary feeding	√ (3, 4)	Fisheries, WRC, local gov't	Fisheries, & WRC guidelines		√		√		100-300, depending on size
Asphalt works	asphalt is mixed and prepared	√ (35)	local gov't	CoP - 1991		√	√	√		1000
Automotive spray painting	liquid paint is directed onto automotive surfaces by airless, compression, electrostatic or other methods		local gov't	CoP - Oct 1997		√	√	√		200
Bakeries	day-time operations		local gov't			√		√		100-200, depending on size
	large night-time operations		local gov't			√		√		500
Bauxite refining	premises on which alumina is produced	√ (46)	DoIR			√	√	√		case by case

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Beverage manufacturing – alcoholic	alcoholic beverages are manufactured – brewery, distillery or winery	√ (25)	WRC		√	√	√	√		200-500, depending on size & type of product
– non-alcoholic	non-alcoholic beverages are manufactured, processed or packaged	√ (24)	WRC			√	√	√		200-500, depending on size
Boat building and maintenance – vessels are built,	organotin compounds are not used or removed from vessels	√ (82)	DPI, local gov't		√	√	√	√		200-500, depending on size
maintained or refurbished	organotin compounds are used or removed from vessels	√ (49)	DPI, local gov't		√	√	√	√		500-1000, depending on size
Briquettes manufacture	compressed coal-dust or wood-dust production		local gov't			√	√	√		300-500, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Bulk material loading or unloading	clinker, coal, ore, ore concentrate or any other bulk granular material is loaded/unloaded from vessels	√ (58, 86)	DoIR, DPI			√	√		√	1000-2000
Calcium-based compounds production, other than lime	calcium compounds are produced, mixed, blended or packaged (see cement works for lime manufacture)	√ (31, 33, 72, 74, 75)	DoIR, WRC		√	√	√	√	√	500-1000, depending on size & type of product
Carbon stripping	reprocessing of carbon granules (gold extraction)	√ (79)	local gov't		√ acid fume			√		200-300
Carpet backing	process using latex		local gov't		√	√		√		500
Cattery zones	in urban areas		local gov't			√		√		200
Cement product manufacturing works	concrete or cement is mixed, prepared or treated – up to 5000 tonnes per year	√ (77)	DoIR, WRC, local gov't	√		√				300-500, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
	concrete or cement is mixed, prepared or treated – from 5000 to 150 000 tonnes per year	√ (77)	DoIR, WRC, local gov't	√		√	√			500-1000, depending on size
	concrete or cement is mixed, prepared or treated – greater than 150 000 tonnes per year	√ (77)	DoIR, WRC	√		√	√			1000-1500, depending on size
Cement or lime manufacturing works – use of furnace or kiln	Production of cement clinker or lime or cement or similar is ground or milled	√ (43)	DoIR, WRC, local gov't		√	√	√	√		1000-2000, depending on size
Ceramic goods manufacturing	premises on which ceramic kitchen or table ware or other non-refractory ceramic products are made	√ (76)	DoIR, WRC, local gov't		√	√	√	√		300-500, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Charcoal production	wood, carbon material or coal is charred to produce a fuel or material of enriched carbon content	√ (37)	DoIR, local gov't		√	√	√		√	1000
Chemical blending or mixing	chemicals or chemical products are blended, mixed or packaged	√ (33, 74, 75)	DoIR, WRC, local gov't	draft - on hold	√	√	√	√	√	300-500, depending on size & type of chemicals involved
Chemical fertilizers	manufacture of artificial fertilizers	√ (31, 72)	DoIR, WRC, Water Corp.		√ HF, NH ₃ , SO ₂	√	√	√	√	1000-2000, depending on size
Chemical manufacturing	chemical products are manufactured by a chemical process	√ (31, 72)	DoIR, WRC, Water Corp.		√	√	√	√	√	300-1000, depending on size & type of chemicals involved
	inorganic industrial chemical manufacture (other than listed elsewhere)	√ (31, 72)	DoIR, WRC, local gov't		√	√	√	√		300-1000, depending on size & type of chemicals involved

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
	organic industrial chemical manufacture (other than listed elsewhere)	√ (31, 72)	DoIR, WRC, local gov't		√	√	√	√	√	500-1500, depending on size & type of chemicals involved
Chemicals – non-industrial	production – other than listed elsewhere		WRC, Water Corp.			√	√			300-1000, depending on size & type of chemicals involved
Chemical or oil recycling	waste liquid hydrocarbons or chemicals are refined, purified, reformed, separated or processed	√ (39)	DoIR, WRC, Water Corp.		√ VOCs			√	√	500-1000, depending on size
Chemicals storage – minor	non-bulk storage of chemicals	√	WRC, Water Corp.	draft in preparation	√			√	√	200-300
– bulk/major	bulk storage of acids, alkalis or chemicals	√ (73)	DoIR, WRC, Water Corp.		√				√	500-1000, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Chlor-alkali works	manufacture of caustic soda and chlorine	√ (31, 72)	DoIR, WRC		√ Cl ₂	√		√	√	2000-3000
Clay bricks or ceramic/refractory products works	premises on which fired-clay bricks, tiles, pipes or pottery are manufactured	√ (41)	DoIR, DAWA, WRC		√ HF, HCl, SO ₂	√	√	√		300-1000, depending on size
Clay extraction or processing	Mining, extraction or processing of clay	√ (80)	DoIR, WRC			√	√			500-1000, depending on size & processing
Coal mine	extraction of coal – open cut method	√ (9)	DoIR, WRC			√	√			1000-2000
Coke production	coke is produced, quenched, cut, crushed and graded	√ (38)	DoIR, WRC		√	√	√	√	√	1000-2000

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Composting facility	outdoor uncovered, regularly turned windrows	√ (67A)	WRC, local gov't	draft Organic Wastes Guidelines - Dec 1997		√	√	√		1000 for manures, mixed food/putrescible & vegetative food waste; 500 for biosolids & 150 for green waste
	outdoor covered, turned windrows	√ (67A)	WRC, local gov't	draft Organic Wastes Guidelines - Dec 1997		√	√	√		750 for manures, mixed food/putrescible & vegetative food waste; 250 for biosolids & 150 for green waste
	outdoor covered windrows with continuous aeration	√ (67A)	WRC, local gov't	draft Organic Wastes Guidelines - Dec 1997		√	√	√		500 for manures, mixed food/putrescible & vegetative food waste; 250 for biosolids & 150 for green waste

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
	enclosed windrows with odour control	√ (67A)	WRC, local gov't	draft Organic Wastes Guidelines - Dec 1997		√	√	√		250 for manures, mixed food/putrescible & vegetative food waste; 150 for biosolids
	in-vessel composting with odour control	√ (67A)	WRC, local gov't	draft Organic Wastes Guidelines - Dec 1997		√	√	√		150 for manures, mixed food/putrescible & vegetative food waste; 150 for biosolids
Concrete batching plant or cement products (bricks) manufacture	concrete is made (batched) and loaded for transport or cement products are made	√ (77)	local gov't	CoP - 1991. Regs. 1998		√	√			300-500, depending on size
Cosmetics production	manufacture of cosmetics and toiletries		local gov't			√		√		100
Crematoria			local gov't		√	√			√	200-300

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Crude oil extraction	oil or gas production from wells	√ (10)	DoIR		√	√		√	√	case by case
Crushing of building material	crushing or cleaning of waste building or demolition material	√ (13)	local gov't			√	√			1000
Dairies	milking shed operations		DAWA, WRC, local gov't	CoP - March 1998		√	√	√		500
Dog kennels	in rural zones		local gov't			√		√		500
	in or near urban areas		local gov't			√		√		1000
Dry-cleaners	dry-cleaning operations		local gov't			√		√		100
Edible oil or fat processing (vegetable oil production)	vegetable oil, oil seed or animal fat is processed – includes seed crushing and use of solvents to refine oils	√ (19)	WRC, Water Corp., local gov't			√	√	√		500

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Electric power generation	generating electricity – 20 megawatts or more (total) for natural gas & 10 megawatts or more (total) for other fuels	√ (52)	DoIR, WRC		√ NO _x , SO _x	√	√			3000-5000, depending on location & size
	natural gas-fuelled electricity production – more than 10, but less than 20, megawatts total	√ (84)	DoIR, WRC		√ NO _x	√				2000-3000
Extractive industries – hard rock, Darling Scarp	quarrying (including blasting), crushing and screening	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√		√	1000
– not hard rock	blasting, grinding and milling works – material processed by grinding, milling or separated by sieving, aeration etc	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√		√	case by case

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
– no blasting conducted	grinding and milling works – material processed by grinding, milling or separated by sieving, aeration etc	√ (5, 12, 70)	DoIR, WRC	CoP - 1990, revised in 1995		√	√			case by case
– sand and limestone extraction	no grinding or milling works		WRC, local gov't			√	√			300-500, depending on size
Fellmongering	animal skins or hides are dried, cured or stored	√ (83)	WRC, Water Corp., local gov't			√		√		500
Fibreglass reinforced plastic manufacturing	using Low Styrene Emission (LSE) resins	√ (Reg. 3)	DoIR, local gov't	CoP - 1993. Regs. in Sept 1996			√	√		200
	using non-LSE resins	√ (Reg. 3)	DoIR, local gov't	CoP - 1993. Regs. in Sept 1996			√	√		500
Flour mill	grain or seed milling premises		local gov't			√	√			300-500, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Fly ash disposal	premises on which fly ash is disposed	√ (53)	WRC, local gov't				√			case by case
Foam products manufacturing	resin is used to prepare or manufacture plastic foam or foam products using MDI or TDI	√ (51)	DoIR, local gov't		√			√	√	500
Food processing	fruit, vegetables or meat is cooked, dried, preserved, bottled, canned or processed	√ (18)	WRC, Water Corp., local gov't			√	√	√		200-500 for fruit & vegetables, 500 for meat
Food or beverage products	manufacture of food and beverage products not categorised	√ (18, 24, 25)	WRC, local gov't			√		√		100-300, depending on size & type of product
Formaldehyde	Formaldehyde production	√ (31)	DoIR, local gov't		√	√		√	√	500
Foundries – metal melting or casting	ferrous metals (alloys)	√ (45)	DoIR, local gov't	CoP - 1992		√	√	√		300-500, depending on size

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
	non-ferrous, aluminium	√ (45)	DoIR, local gov't	CoP - 1992		√	√	√		300-500, depending on size
	non-ferrous, other than aluminium	√ (45)	DoIR, local gov't	CoP - 1992	√ fume	√	√	√	√	500-1000, depending on metal & size
Fuel burning	any boiler(s) capable of consuming 500 kg or more per hour of combustible material, either alone or aggregate, for the supply of steam or in power generation equipment	√ (67, 87)	DoIR, WRC		√ NO _x , SO _x	√	√	√	√	200-500, depending on type of fuel used & size
Fuel importation	fuel unloading from ships, storage and despatching		DoIR, DPI						√	1000

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					Gaseous	Noise	Dust	Odour	Risk	
Fuel storage – crude oil and petroleum products in tanks or vessels exceeding 2000 tonnes capacity	Fixed Rooves	√ (73)	DoIR	draft in house				√	√	300-500, depending on type of fuel stored & size
	Floating Rooves	√ (73)	DoIR	draft in house				√	√	200-1000, depending on fuel stored & size
Gas distribution	works to supply mains		Alinta Gas					√	√	300
Gasworks	premises on which coal, coke and oil (mixtures or derivatives of) are processed to produce combustible gas	√ (11, 34)	DoIR		√	√	√	√	√	1000-2000, depending on raw materials used, odorising process used & size
Glass or glass fibre works	premises on which glass or glass fibre is produced	√ (40)	DoIR, local gov't		√	√	√			500

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					Gaseous	Noise	Dust	Odour	Risk	
Gold ore	grinding and milling works – rocks ore etc processed by grinding, milling or separated by sieving, aeration etc	√ (5, 12, 70)	DoIR, WRC			√	√			1000-2000, depending on location, process used & size
Gold roaster	gold extraction from sulphide ores	√ (44)	DoIR		√ SO ₂	√	√	√		5000
Grain cleaning (no milling)	premises on which grain or seed is cleaned, graded, sorted or processed		local gov't			√	√	√		300-500, depending on size
Grain elevator	grain transfer using conveyor belts etc		local gov't			√	√		√	500
Greenhouse/ hothouse	using manure		local gov't			√		√		200-300
	using compost		local gov't			√		√		200-300
Hay processing plant	hay processing, handling or storage premises		local gov't			√	√	√	√	500-1000, depending on size

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Heavy industrial site	proposals for "greenfield" sites	√ various	√ various		√	√	√	√	√	case by case
Horse stables	keeping horses		local gov't	draft in preparation		√	√	√		100-500, depending on size
Incineration	for biomedical, chemical or organic waste	√ (59, 60)	local gov't		√	√	√	√	√	500-1000, depending on size
	for plastic or rubber waste	√ (60)	local gov't		√	√	√	√		1000
	for waste wood	√ (60)	local gov't			√	√	√		300
Industrial gases	production, processing, refining or storage of industrial gases	√ (31, 72)	DoIR, local gov't		√	√		√	√	500-1000, depending on size & type of gases
	commercial/retail outlets		local gov't		√	√			√	50
Iron ore smelting	production of iron from iron ore	√ (44)	DoIR		√	√	√	√		1000

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					Gaseous	Noise	Dust	Odour	Risk	
Joinery & wood working premises	production of wooden furniture & household items such as doors, kitchen fittings, flooring & mouldings		local gov't	CoP - 1995, being revised		√	√	√		100-300, depending on size
Liquid Petroleum (LP) gas retailing – above ground tanks	LP gas storage & handling at automotive retail outlets – up to 8000L tank – 8000L to 16 000L tank		DoIR, local gov't	AS 1596 Supplement No.1 - 1994				√	√	55 for sensitive uses & up to 8000L tank, 85 for sensitive uses & from 8000L to 16 000L 15 for residential uses
– underground tanks	LP gas storage & handling at automotive retail outlets – up to 65 000L tank		DoIR, local gov't	AS 1596 Supplement No.1 - 1994				√	√	55 for sensitive uses & 15 for residential uses
Livestock saleyard or holding pen	holding of live animals pending sale, shipment or slaughter	√ (55)	DAWA, WRC, local gov't			√	√	√		at least 1000, depending on size
Malt-works	malt production from grain		local gov't			√	√	√		500

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					Gaseous	Noise	Dust	Odour	Risk	
Market gardens	broad-scale operations		WRC, local gov't	draft in house	√	√	√	√		300-500, depending on size
Metal coating	metal products are powder-coated or enamelled	√ (81)	local gov't	Powder coating - July 1994. Regs. 1998		√	√	√		200
Metal coating – industrial spray-painting	site on which spray-painting is conducted inside a spray booth	√ (81)	local gov't	CoP - Sept 1995. Regs. 1998		√	√	√		200
	work is conducted in the open (no spray booth)	√ (81)	local gov't	CoP - Sept 1995. Regs. 1998		√	√	√		500
Metal fabrication	sheet metal, structural metal and iron and steel products – up to 50 000 tonnes per year		DoIR, local gov't			√	√			500-1000, depending on size
Metal finishing	galvanizing	√ (48A)	DoIR, WRC, local gov't		√ acid fume	√	√	√		500

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					Gaseous	Noise	Dust	Odour	Risk	
	other than galvanizing	√ (48)	DoIR, WRC, local gov't		√ acid fume	√	√	√		200
Metal leaching – vat or <i>in situ</i>	metal extraction from ore with a chemical solution	√ (7)	DoIR, WRC			√	√	√		500
Metal smelting, refining, melting, casting, fusing, roasting or processing works	where metal, metal ores, concentrates or wastes are treated to produce metal (other than iron & aluminium)		DoIR, local gov't							
	• up to 100 tonnes per year				√	√	√	√		100-200
	• between 100 & 1000 tonnes per year	√ (45)			√	√	√	√		300-500
	• greater than 1000 tonnes per year	√ (44)			√	√	√	√	case by case, depending on process	

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					Gaseous	Noise	Dust	Odour	Risk	
Milk processing	milk is separated, evaporated or a dairy product is manufactured	√ (17)	WRC, local gov't			√		√		200-500, depending on size, wastewater treatment & disposal system
Mine dewatering, tailings or residue disposal	water extracted and discharged to allow mining of ore; or mining or processing of ore occurs and tailings or residue are discharged into a dam	√ (6)	DoIR, WRC			√	√			case by case
Mineral sands – dry processing only	grinding and milling works – material processed by grinding, milling or separated by sieving, aeration etc	√ (8)	DoIR		√ H ₂ S	√	√	√		1000-2000
– secondary treatment plant	treatment of primary concentrate from mine – zircon, rutile/leucoxene and ilmenite	√ (8)	DoIR, WRC			√	√	√		1000-2000

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					Gaseous	Noise	Dust	Odour	Risk	
– synthetic rutile plant	mining of mineral sands and processing to produce concentrate	√ (8)	DoIR, WRC		√ H ₂ S SO ₂	√	√	√		3000-5000
Mineral wool or ceramic fibre	manufacture of mineral wool or ceramic fibre	√ (42)	DoIR, WRC		√	√	√	√		500
Motor body works	including panel beaters		local gov't	CoP - Oct 1997		√	√	√		200
Mushroom farm	using on-site blended soils or compost	√ (67A)	WRC, local gov't			√		√		500-1000, depending on size
Nurseries	no composting		local gov't			√				100
Oil or gas extraction from land or offshore	production from wells involving primary separation or treatment	√ (10)	DoIR, DPI		√	√		√	√	2000
Oil or gas production (other)	production of oil or gas, including gas reforming	√ (11)	DoIR		√	√		√	√	2000
Oil or gas refineries	crude oil or condensate is refined or processed	√ (34)	DoIR		√	√		√	√	2000

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Open cut mining (large operations)	other than coal	√ (5, 6, 12, 70)	√ various	√		√	√		√	1500-3000
Orchards	broad-scale operations		DAWA, local gov't		√	√				500
Paints and inks	blending and mixing	√ (33, 74)	WRC, Water Corp.		√ VOCs	√		√		200 for water-based, 300 for solvent-based
	manufacturing	√ (31, 72)	DoIR, WRC, Water Corp.		√ VOCs	√		√	√	500 for water-based, 1000 for solvent-based
Pesticides manufacturing	herbicide, insecticide or pesticide manufacture by a chemical process	√ (32)	DoIR, WRC, Water Corp.		√	√	√	√	√	300-1000, depending on size
Pharmaceuticals	Production – including veterinary products	√ (31, 72)	WRC, Water Corp.			√		√	√	300-1000, depending on size

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Piggery – intensive, – 5000 pigs or more – 500 to 5000 pigs – 50 to 500 pigs – less than 50 pigs	premises on which pigs are fed, watered and housed in indoor pens	√ (2, 69)	DAWA, WRC, local gov't	DAWA Guidelines for New & Existing Piggeries - May 2000		√		√		5000 for piggeries with more than 5000 pigs, 3500 for piggeries with 500 to 5000 pigs, 2000 for piggeries with 50 to 500 pigs, and 500 for piggeries with less than 50 pigs
Piggery – extensive (all premises)	premises on which pigs are fed, watered and housed in outside paddocks or enclosures		DAWA, WRC, local gov't	DAWA Guidelines May 2000			√	√		1000 for all extensive piggeries
Plaster manufacturing	plaster, plasterboard, gyprock or other products comprised wholly or mostly of gypsum are made	√ (78)	local gov't			√	√		√	200

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Ports	bulk material that is loaded or unloaded onto a vessel		local gov't			√	√		√	case by case
Poultry industry	intensive farming		DAWA, WRC, local gov't	CoP - 1999		√	√	√		300-1000, depending on size
Pulp, paper or paperboard manufacturing	manufacture of paper pulp, wood pulp, kraft paper, kraft paperboard, cardboard paper or paperboard	√ (30)	DoIR, WRC, Water Corp.		√ H ₂ S, SO ₂	√	√	√		1000-1500, depending on process used, wastewater treatment system & size
Quicklime plant	clay, limesand or limestone material fired in a furnace or kiln to produce quicklime	√ (43)	DoIR, local gov't		√	√	√			500 for no quarrying on the premises, 1000 if quarrying is conducted
Rabbitries	intensive husbandry		local gov't	1995 flyer			√	√		500
Raceways for motor vehicles	Speedways and drag strips	√	local gov't	draft in preparation		√	√			case by case

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Rendering works	animal matter is processed or extracted for use as fertilizer, stock food or other purposes	√ (16)	WRC, Water Corp., local gov't	CoP - 1991, revised in Oct 1995		√		√		1000-1500, depending on wastewater treatment/disposal system, location & size
Resins manufacturing	polyester resins manufacture	√ (31, 72)	DoIR		√	√	√	√	√	500-1000
Resins manufacturing	rubber & synthetic resins manufacture	√ (31, 72)	DoIR		√	√	√	√	√	1000
Rockwool manufacturing	mineral wool or ceramic fibre manufacture	√ (42)	DoIR, WRC			√	√	√		500
Rubber products manufacturing	using either organic solvents or carbon black		DoIR, local gov't		√ VOCs	√	√	√		300-500
Sawmill	timber (tree) milling		local gov't			√	√			500-1000, depending on location & size

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Scrap metal recycling works	scrap metal is fragmented or melted to recover metal (including lead battery reprocessing)	√ (45, 47)	DoIR, WRC, local gov't	CoP - 1992		√	√	√		300-500
Screening works	screening or sieving of sand, rocks, chemicals and minerals	√ (12, 70)	DoIR, local gov't			√	√			500
Seafood processing	fish or other seafood is processed or packaged	√ (22)	WRC, Water Corp., local gov't					√		500
Service stations, involving vehicle cleaning/detailing facilities & the retailing of spare parts & foodstuffs	for premises operating during normal hours, i.e. Monday - Saturday from 0700-1900 hours		DoIR, local gov't	draft in house	√	√		√	√	50
	freeway service centre (24 hour operations)		DoIR, local gov't		√	√		√	√	100

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	all other 24 hour operations		DoIR, local gov't	draft in house	√	√		√	√	200
Silicon refining	silicon smelter operations	√ (44)	DoIR		√	√	√		√	1500-2000
Smallgoods	not including abattoir facilities or rendering works		Water Corp., local gov't			√		√		100
Smoking, drying or curing operations	meat or other edible products are smoked, dried or cured	√ (Reg. 2)	Water Corp., local gov't	Regs. in Sept 1996	√	√		√		200-300, depending on size
Sodium cyanide manufacturing	production of sodium cyanide	√ (31, 72)	DoIR		√ HCN, NO _x	√	√		√	1000-2000
Sodium silicate manufacturing	production of sodium silicate	√ (31, 72)	DoIR			√	√	√	√	1000
Solar salt manufacturing	salt is produced by solar evaporation	√ (14)	DoIR			√	√			1000

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Starch manufacturing	starch or gluten is manufactured	√ (20)	WRC, local gov't			√	√	√		300-500, depending on size
Straw pulp and paper mill	processing cereal straw and mixing with waste paper to produce container board	√ (30)	WRC, local gov't		√ H ₂ S, SO ₂	√		√		1000-1500, depending on process used, wastewater disposal system & size
Sugar milling or refining	sugar cane is crushed or sugar is refined	√ (21)	DoIR, WRC			√	√	√		1000-1500, depending on wastewater disposal system & size
Sulphuric acid plant	production of sulphuric acid	√ (31, 72)	DoIR, WRC		√ SO ₂ , SO ₃	√	√	√		2000-3000
Tailings disposal	containing cyanide	√ (5)	DoIR, WRC				√	√	√	case by case
	not containing cyanide – (fly ash, red mud)	√ (5)	DoIR, WRC				√	√		case by case

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Tannery	treatment and drying of animal skins, leather and artificial leather – using sulphide process	√ (50)	WRC, Water Corp., local gov't		√ H ₂ S	√		√		1000-2000, depending on process used, wastewater treatment system & location
Tannery	treatment and drying of animal skins, leather and artificial leather – small premises, non-sulphide	√ (50)	WRC, Water Corp., local gov't			√		√		200-300, depending on size & wastewater treatment & disposal system
Textile production – artificial & synthetic fibre manufacturing or treatment	cellulose nitrate, viscose fibre, cellophane, artificial rubber or other man-made textiles manufacture	√ (26, 31, 72)	DoIR, local gov't			√	√	√		500

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– carpet making & other forms of manufacturing, ginning, milling or production of natural fibres	manufacture, bleaching, dyeing or finishing of cotton, linen, woollen yarns & other natural textiles	√ (26)	DoIR, WRC, Water Corp.			√		√		200-300, depending on type of fibre & wastewater treatment & disposal system
Textile operations – chemical or physical processes	using carbon disulphide (CS ₂) as a solvent	√ (26, 31, 72)	WRC, Water Corp., local gov't		√ CS ₂	√		√		500-1000, depending on wastewater treatment & disposal system
– chemical or physical processes	using other substances	√ (26, 31, 72)	WRC, Water Corp., local gov't			√		√		200-500, depending on process used & wastewater treatment & disposal system
Timber preserving premises	timber preservation by chemical means, including chromated copper arsenate (CCA)	√ (29)	WRC, local gov't			√	√	√		300-500, depending on size

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Titanium dioxide pigment plant	production of titanium dioxide (Cl ₂ process)	√ (31, 72)	DoIR, WRC		√ Cl ₂ , TiCl ₄	√	√	√	√	2000-3000
Transport vehicles depot	buses, trucks and other heavy vehicles depot		DoIR, local gov't		√	√	√	√		200
Turf farms and lawns	broad-scale turf production		WRC, local gov't	Guidelines - Dec 2001		√	√	√		500
Used tyre storage – general – tyre fitting	premises on which used tyres are stored	√ (56, 57)	WRC, local gov't				√		√	100-200, depending on size
– recycling	premises on which used tyres are crumbed, granulated or shredded	√ (56, 57)	WRC, local gov't		√	√	√	√	√	500-1000

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Vanadium mine	extraction and processing of vanadium	√ (5, 12, 70)	DoIR		√	√	√	√	√	1500-3000
Vineyards (viticulture)	broad-scale operations (including winery)	√ (25)	DAWA, WRC, local gov't	CoP - 2002	√	√	√	√		500
Waste disposal industrial liquid waste	site on which liquid waste from other premises is stored, reprocessed, treated or irrigated/discharged	√ (61)	DoH, WRC, local gov't			√		√		case by case
inert landfill site (Class 1)	site only accepting inert waste, contaminated solid waste (meeting criteria for Class 1), special wastes (type 1), as specified, for burial	√ (63)	WRC, local gov't	Draft CoP - May 1997. Guidelines for Acceptance of Solid Waste to Landfill - Jan 2001		√	√			150 for residential uses & an internal buffer of 25 from boundary

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putrescible landfill site (Class 2 & 3)	site accepting inert, putrescible, contaminated solid waste (meeting criteria for Class 2 & 3), special wastes (type 1 & 2), as specified, for burial	√ (64, 89)	WRC, local gov't	Guidelines for Acceptance of Solid Waste to Landfill - Jan 2001. Regs (Rural Landfill) 2002. Draft Rural Landfill Management CoP	√	√	√	√		500 for sensitive uses (subdivisions), 150 for single residences & an internal buffer of 35 from boundary
secure landfill site (Class 4)	site accepting inert waste, contaminated solid waste (meeting criteria for Class 2, 3 & 4) and special wastes (type 1 & 2), as specified, for burial	√ (65)	DoH, WRC, local gov't	Guidelines for Acceptance of Solid Waste to Landfill - Jan 2001	√	√	√	√	√	case by case

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intractable waste landfill site (Class 5)	site only accepting intractable waste, as specified, for burial	√ (66)	DoH, WRC, local gov't	Guidelines for Acceptance of Solid Waste to Landfill - Jan 2001		√	√	√	√	case by case
waste depot	premises on which waste is stored or sorted, pending final disposal or re-use	√ (62)	DoH, WRC, local gov't	Guidelines for Acceptance of Solid Waste to Landfill - Jan 2001		√	√	√		200
waste – resource recovery plant	premises on which solid waste is stored, reprocessed, treated or discharged	√ (60, 61A, 67)	DoH, WRC, local gov't		√	√		√	√	case by case

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Wastewater treatment plant	sewage treatment facility (including Mechanical/Biological and Pond Systems and Facultative Pond Systems) 20-100 m ³ per day >100 m ³ per day	√ (85) (54)	Water Corp., Fisheries, WRC, local gov't		√	√		√	√	buffer studies in progress to determine appropriate separation distances
Wastewater disposal site (treated sewage)	site from which treated sewage is discharged (including by Spray irrigation and Flood/Channel Irrigation): 20-100 m ³ per day >100 m ³ per day	√ (85) (54)	Water Corp., Fisheries, WRC, local gov't DoH					√	√	case by case
Wastewater pumping stations	vacuum pumping station		local gov't	√	√	√		√	√	20
	wastewater pumping station (</= 40L/s)		local gov't	√	√	√		√	√	10

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	wastewater pumping station (</= 90L/s)		local gov't	√	√	√		√	√	20
	wastewater pumping station (</= 180L/s)		local gov't	√	√	√		√	√	30
	wastewater pumping station (</= 350L/s)		local gov't	√	√	√		√	√	50
	wastewater pumping station – major		Water Corp., WRC		√	√		√	√	150
Wastewater tanking manhole	used as a temporary measure – buffer primarily for visual amenity		Water Corp., local gov't	√	√			√	√	100
oxygen injection site	with a storage tank		DoIR			√			√	10 (under review)
oxygen injection site	with an on-site generator		DoIR			√				20 (under review)

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					Gaseous	Noise	Dust	Odour	Risk	
odour control facility	varying process		DoIR			√				30 (under review)
Water treatment plants	including chemical dosing facilities for potable water	√ (Reg. 4)	DoIR, WRC	Regs. in Sept 1996	√	√		√	√	case by case – (under review)
Water pumping stations	minor		local gov't	√		√				20 (under review)
	major		local gov't	√		√				25 (under review)
Water supply regulating valves	>/= 300mm diameter		local gov't	√		√				16 (under review)
Cathodic protection ground beds	induced electrical current to protect pipes from corrosive soils		local gov't	√					√	case by case – (under review)
Wood-board manufacturing – (including MDF plants)	premises on which particleboard or chipboard is fabricated or manufactured	√ (28)	DoIR, WRC			√	√	√		1000-2000, depending on size and location

Industry	Description of industry	DoE Licence or Registration category (*)	Key Government agencies for advice or approvals	Code of Practice (CoP) / environmental requirements	Impacts					Buffer distance in metres and qualifying notes
					Gaseous	Noise	Dust	Odour	Risk	
Woolscouring	scouring and primary treatment of wool	√ (27)	DoIR, WRC			√	√	√		500-1000, depending on wastewater treatment & disposal system & size
Wreckers (automotive)	vehicle parts recycling		local gov't	CoP - Oct 1997		√	√			300

Notes on table

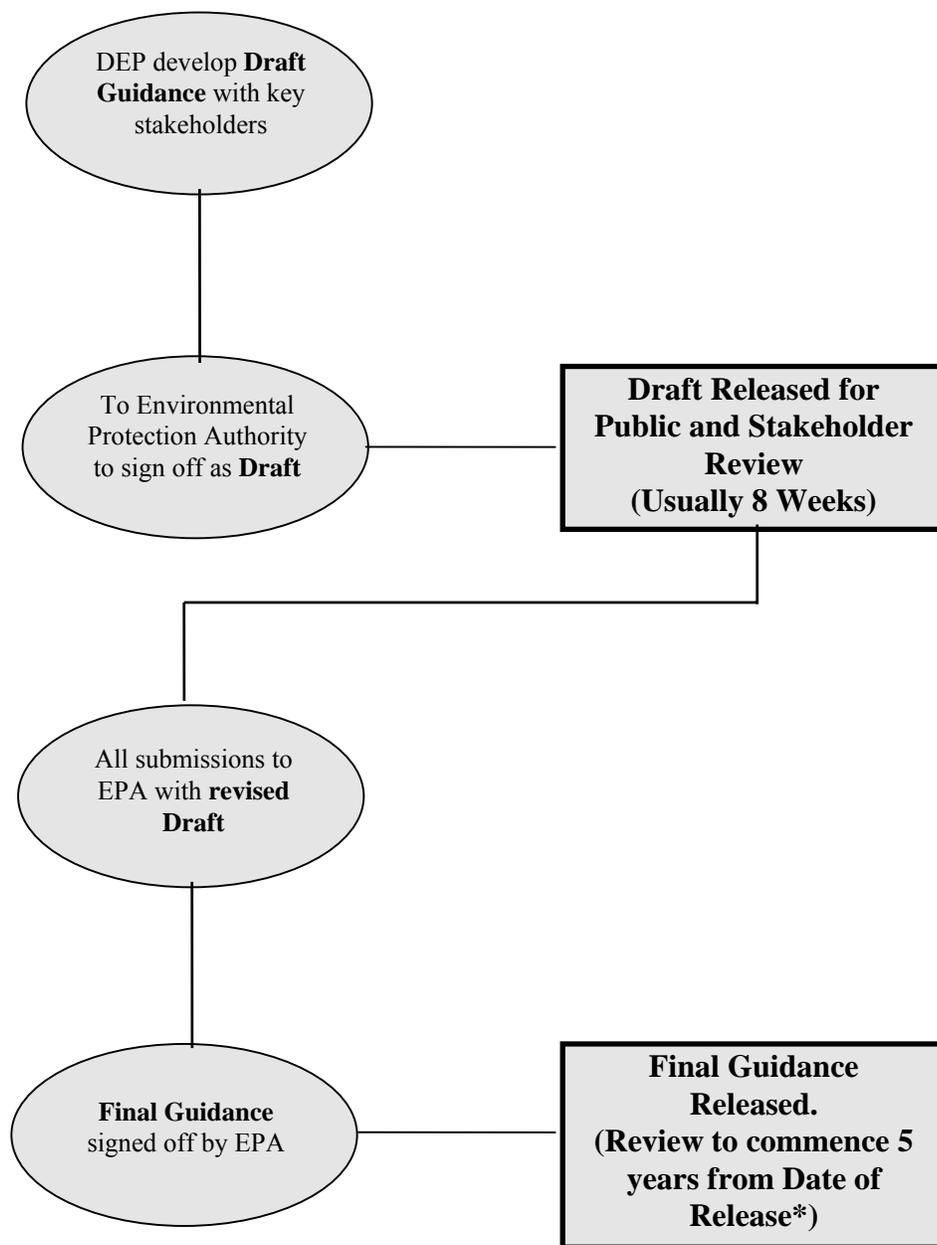
DAWA	Department of Agriculture Western Australia
DoE	Department of Environment
DoH	Department of Health
DoIR	Department of Industry and Resources
DPI	Department for Planning and Infrastructure
Fisheries	Department of Fisheries
WRC	Water and Rivers Commission (to become the Department of Environment)

* Certain industries with the potential to pollute the environment (prescribed premises) must hold a Works Approval (for construction) and a Licence or Registration (for operation) under the *Environmental Protection Act 1986*. The *Environmental Protection Regulations 1987* set out the categories for prescribed premises.

Prescribed premises must hold a Works Approval prior to commencing any work or construction on a premises that would cause the premises to become prescribed. Prior to operating these premises a Licence must be obtained for some categories of prescribed premises (covered under Schedule 1, Part 1 of the Regulations). The remainder of the categories of prescribed premises may be registered instead of holding a Licence but still require a Works Approval to construct (Schedule 1, Part 2). A further five categories of premises require a registration only and do not require a Works Approval (Schedule 2).

The Department of Environment can refer any proposal that needs a Works Approval, Licence or Registration to the EPA. Usually the Department refers a proposal to the EPA if it has the potential to cause significant environmental impacts. This is generally the case if the siting is inappropriate, i.e. too close to residential areas, coastal areas, wetlands or areas protected by Environmental Protection Policies.

Appendix 2: Generic Flow Diagram for the Guidance Statement Process



* Guidance may be reviewed earlier if circumstances require it.

December 5, 2018

The Honorable Marc Boldt, Council Chair
Clark County Board of County Councilors
PO Box 5000
Vancouver, Washington 98666-5000

Dear Chair Boldt and Councilors Stewart, Olson, Blom, and Quiring:

Subject: Comments on Phase I Freight Rail Dependent Uses Policies and Overlay included in Ordinance 2018-01-01 relating to the "Comprehensive Plan"

Sent via email to: boardcom@clark.wa.gov; communityplanning@clark.wa.gov and U.S. Mail

Thank you for the opportunity to comment on the on the Phase I Freight Rail Dependent Uses Policies and Overlay. Futurewise works throughout Washington State to support land-use policies that encourage healthy, equitable, and opportunity-rich communities, and that protect our most valuable farmlands, forests and water resources. We have members across Washington State including Clark County. We have several recommendations related to freight rail dependent uses.

Allowing freight rail dependent uses on agricultural and rural lands is not needed and will adversely impact nearby residential uses

The revised *Clark County Buildable Lands Report* estimates that there are 2,057 net buildable commercial acres and 3,982 net buildable industrial acres in the county.¹ The revised Clark County Buildable Lands Report concluded that the county has more than enough land to provide its planned employment for the next 20 years.

In 2014, the Board of County Commissioners chose to plan for a total of 91,200 net new jobs. The County has an estimated capacity of 101,153 jobs as follows: The 2015 [Vacant Buildable Land Model] VBLM, indicates a capacity of 76,978 jobs. The cities of Battle Ground, La Center, and Ridgefield, have indicated they have additional capacity to accommodate 16,755 jobs. Publicly owned land is not included in the model, therefore we assume that the 7,400 new public sector jobs estimated by [Washington State Employment Security Department] ESD will occur on existing publicly owned facilities.²

¹ *Clark County Buildable Lands Report* p. 9 (2017) enclosed in a separate email and with the paper original of this letter.

² *Id.* at p. 10.

Some of these sites are quite large. The Port of Vancouver's Gateway Industrial site is 500 acres.³ Another available industrial site is 224.81 acres and a third is 100.19 acres.⁴ These, and other, sites are currently in the urban growth area.⁵

While county has been provided with a list of business opportunities interested in locating in Clark County, there is no evidence that the existing industrial sites in the county cannot accommodate these uses. A significant number of these sites have rail access.

So, it is not necessary to pave over farmland and rural neighborhoods for industrial land. We recommend that the freight rail dependent uses be focused in the urban growth area and the existing Brush Prairie industrial area. This will provide job opportunities while protecting working farms and residential neighborhoods.

Freight rail dependent uses must be adjacent to short line railroads when these uses are allowed on agricultural and rural lands

RCW 36.70A.060(1)(a) provides in relevant part that “[a]ny county located to the west of the crest of the Cascade mountains that has both a population of at least four hundred thousand and a border that touches another state, and any city in such county, may adopt development regulations to assure that agriculture, forest, and mineral resource lands adjacent to short line railroads may be developed for freight rail dependent uses.”⁶ Similarly, RCW 36.70A.108(2) provides that “[a]ny county located to the west of the crest of the Cascade mountains that has both a population of at least four hundred thousand and a border that touches another state, and any city in such county, may include development of freight rail dependent uses on land adjacent to a short line railroad in the transportation element required by RCW 36.70A.070.⁷ Such counties and cities may also modify development regulations to include development of freight rail dependent uses that do not require urban governmental services in rural lands.”

Both provisions require that the freight rail dependent uses be on land or lands adjacent to shore line railroads on agricultural and rural lands. Adjacent means “‘abutting’ or ‘touching.’”⁸ This limitation makes sense since the legislative findings for the bill authorizing these uses stated that one of the purposes is to “alleviate strains on government infrastructure elsewhere” and that “there is a need for counties and cities to improve their planning under the growth management act to provide much needed infrastructure for freight rail dependent uses adjacent to railroad lines.”⁹

³ *Clark County Employment Land Inventory* p. 000134 & p. 000137 (Nov. 2, 2011) enclosed with the paper original of this letter. An 11- by 17-inch version of page 000137 is also enclosed with the paper original of this letter because it is easier to read.

⁴ *Id.*

⁵ *Id.* at p. 000137.

⁶ Underlining added.

⁷ Underlining added.

⁸ *City of Arlington v. Cent. Puget Sound Growth Mgmt. Hearings Bd.*, 164 Wn.2d 768, 791, 193 P.3d 1077, 1089 (2008).

⁹ Wash. Laws 2017 3rd Special Session Chapter 18 § 1.

However, both the overlay and the proposed policies allow freight rail dependent uses “on parcels” rather than land adjacent to the short line railroads as RCW 36.70A.060(1)(a) and RCW 36.70A.108(2) require. So, the overlay map should be limited to lands adjacent to a short line railroad. The policies should also be limited to lands adjacent to the short line railroad. If the county decides to allow freight rail dependent uses on agricultural and rural lands, Policy 3.9.2¹⁰ should be modified to read as follows with our additions single underlined and our deletions single struck through:

3.9.2: Freight rail dependent uses will be allowed on lands adjacent to a short line railroad parcels with a freight rail dependent use overlay and where such uses minimize impacts on adjacent rural and resource uses.

A policy should protect adjacent agricultural, forest, or mineral resource lands from impacts that would interfere with their continued use

RCW 36.70A.060(1)(a)’s requirement that the county’s development “regulations 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, or timber, or for the extraction of minerals” remains in effect. So, the county should adopt a policy to assure that freight rail depended uses do not interfere the continued use of adjacent agricultural, forest, or mineral resource lands for these natural resource uses. Buffers to prevent overspray and other natural resource impacts would be helpful as would measures to protect adjacent resource uses from noise, trespass, and other adverse impacts. We recommend the following new policy with our additions single underlined:

3.9.4: Freight rail dependent uses shall be designed and incorporate measures, such as buffers, to ensure that the uses do not interfere with the continued use of adjacent agricultural, forest, or mineral resource lands. Freight rail dependent uses shall not interfere with ground and surface waters that adjacent agricultural, forest, or mineral resource lands rely upon.

A policy should protect nearby residences from adverse impacts

We also recommend that buffers be used to protect nearby residential uses. Enclosed in a separate email is report documenting effective buffer widths.¹¹ We recommend the following new policy with our additions single underlined:

3.9.5: Freight rail dependent uses shall be designed and incorporate measures, such as buffers, to ensure that the uses do not adversely impact nearby residential uses.

¹⁰ See Ordinance 2018-01-01 Relating to “Comprehensive Plan” p. 11 of 65.

¹¹ Western Australia Environmental Protection Authority, *Guidance for the Assessment of Environmental Factors: Separation Distances between Industrial and Sensitive Land Uses No. 3* (June 2005) Appendix 1: Separation Distances between Industrial and Sensitive Land Uses accessed on Jan. 4, 2018 at: <http://www.epa.wa.gov.au/policies-guidance/separation-distances-between-industrial-and-sensitive-land-uses-gs-3> and enclosed in a separate email and with the paper original of this letter.

A policy should encourage freight rail dependent uses within urban growth areas

Freight rail dependent uses may be allowed both inside and outside urban growth areas.¹² So we recommend adding a policy encouraging freight rail dependent uses in the parts of urban growth areas appropriate for rail dependent industrial and manufacturing uses. We recommend that the overlay be expanded to include those urban growth areas. Because most residents and public facilities and services are within urban growth areas, those are the better locations for those uses. We recommend the following new policy with our additions single underlined:

3.9.6: Freight rail dependent uses shall be encouraged in parts of the urban growth area suitable for industrial and manufacturing uses.

Thank you for considering our comments. If you require additional information, please contact me at telephone 206-343-0681 Ext. 118 and email tim@futurewise.org

Very Truly Yours,



Tim Trohimovich, AICP
Director of Planning & Law

cc: Dr. Oliver Orjiako, Community Planning Director via email
oliver.orjiako@clark.wa.gov
Ms. Christine Cook, Clark County Prosecutor's Office - Civil Division via email:
Christine.Cook@clark.wa.gov

¹² RCW 36.70A.030(9).



Business Leaders Building Community

January 5, 2018

Clark County Board of County Councilors
PO Box 9810
Vancouver, WA 98666-9810
VIA EMAIL rebecca.tilton@clark.wa.gov

RE: Freight Rail Dependent Uses Comp Plan Change and Overlay Map

Dear Councilors:

Identity Clark County writes in support of the revised Comp Plan that was discussed at the December 20 board meeting. ICC is a privately-funded business organization with goals including economic expansion and vitality through improved transportation and infrastructure.

There is a strong interest in rail-served land in Clark County. Therefore, our region is uniquely positioned to attract new companies and jobs. ICC greatly appreciates the Councilors' effort to adopt Comp Plan and Overlay Map changes in the 2017 docket cycle to realize those opportunities quickly.

We understand the need to adopt a phased-in approach and are looking forward to ongoing discussions for development regulations that will follow, as well as additions to the Overlay Map in the future.

Your support of the proposed change to Policy 3.9.3 in the draft Comp Plan is consistent with the 2017 bill ESB 5517. We greatly appreciate your leadership and swiftness in this job-creating process.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ron Arp', is written over a light blue horizontal line.

Ron Arp, President
Identity Clark County

From: [Clark County Washington](#)
To: [Alvarez, Jose](#); [DL, Cnty Web Team](#)
Subject: Freight Rail Dependent Uses Comments
Date: Sunday, January 07, 2018 6:30:11 PM

FORM SUBMISSION from <http://www.clark.wa.gov/community-planning/freight-rail-dependent-uses-c...>

First Name: Karen

Last Name: Wood

Email Address: kwood@pacifier.com

Phone Number: (360) 256-9087

Street Address: 14910 NE 46th St

City: Vancouver

State: Washington

Zip Code: 98682

Message Subject: Freight Rail Dependent Uses

Parcel Number:

Comments: This comment is for the January 9th BOCC meeting agenda item on freight rail dependent uses.

I have previously commented on the RILB. My concerns about the properties included in the RILB carry forward to the properties included in the Freight Rail Dependent Uses project. The Ackerland properties are prime agricultural land. They are located near Salmon Creek, an ESA-salmon stream. There are better places to locate industrial development in Clark County than on the properties included in the proposed rail dependent uses overlay.

The legislation that allows the rail dependent uses overlay to be considered was obviously written in response to the County's effort to create a RILB in the area, which is currently in litigation.

The underlying issues with the RILB carry forward to the current proposed changes to the comprehensive plan and it should therefore not be approved.

November 30, 2017

Board of County Councilors
Public Service Center
1300 Franklin Street
Vancouver, WA 98660

RECEIVED
DEC - 5 2017
BOARD OF
COUNTY COUNCILORS

Dear Clark County Councilors:

I am writing to request that all of our property be included in the Rural Industrial Land Bank designation, including the property east of SR 503, to be a part of the Freight Rail Dependent Uses Overlay. The Lagler family owns the property on both sides of SR 503 that is operating as Lagler Dairy. Our vision is long term planning. Planning that will bring quality jobs and revenue for Battle Ground schools and economic health for the community. This project would maximize the use of the railroad, but it should not be limited to only the property that is adjacent to it. I have been committed to this effort for a very long time. Please include all parcels in the Rail Overlay. If only one parcel is included it creates problems for managing the properties. Selling the crop and grazing land while holding onto the other land for cattle is impossible. It is one business. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Dennis Lagler". The signature is written in black ink and is positioned to the right of the word "Sincerely,".

Dennis Lagler



Washington State Senate

110 Irv Newhouse Building
PO Box 40417
Olympia, WA 98504-0417

Senator Lynda Wilson
17th Legislative District

Phone: (360) 786-7632
Hotline: 1-800-562-6000
Lynda.Wilson@leg.wa.gov

January 8, 2018

Clark County Board of County Councilors
PO Box 9810
Vancouver, WA 98666-9810
VIA EMAIL rebecca.tilton@clark.wa.gov

RE: ESB 5517, Freight Rail Dependent Uses Comp Plan Change and Overlay Map

Dear Councilors:

Due to the start of the 2018 Legislative Session, I am unable to attend the public hearing on January 9 regarding ESB 5517, the legislation I sponsored to allow freight rail dependent uses on resource land in Clark County that is adjacent to the Chelatchie Prairie Railroad.

Let me express my sincere appreciation in your efforts to implement the Comp Plan and Overlay Map changes for the 2017 docket cycle. What a wonderful opportunity Clark County has here to create new jobs and support our rural neighbors so that they can work in the same area as they live and play. In this fast tracked world we have now, it is good to acknowledge the importance of the quality of life.

Councilors, again thank you for all your hard work and dedication to Clark County. I hope you share my excitement about the pending adoption of the Comp Plan and Overlay Map so that development regulations can follow. Thank you.

Warmest Regards,

Senator Lynda Wilson
17th Legislative District

From: [Orjiako, Oliver](#)
To: [Tilton, Rebecca](#); [Alvarez, Jose](#); [Wiser, Sonja](#)
Cc: [Cook, Christine](#)
Subject: RE: LETTER TO EDITOR
Date: Monday, January 08, 2018 9:27:26 AM

Thanks Rebecca.



Oliver Orjiako
Director
COMMUNITY PLANNING

360.397.2280 ext 4112



From: Tilton, Rebecca
Sent: Monday, January 08, 2018 9:21 AM
To: Orjiako, Oliver; Alvarez, Jose; Wiser, Sonja
Subject: FW: LETTER TO EDITOR

Hello,

Please see the below comments re: the Freight Rail Dependent Uses hearing. And I apologize if this is a duplicate.

Rebecca



Rebecca Tilton
Clerk of the Council
COUNTY MANAGER'S OFFICE

360.397.2232 ext 4305



From: Tony Morrell [<mailto:arm7@comcast.net>]
Sent: Tuesday, December 26, 2017 4:58 PM
To: Tilton, Rebecca

Subject: Fwd: LETTER TO EDITOR

Rebecca,

I'm enclosing a letter that was recently published in the local newspapers. I'd appreciate it if you would incorporate it into the written record relative to the upcoming January 9th meeting.

Thank you,

Tony Morrell
Brush Prairie, WA

RESIDENTS GET RAILROADED

Clark County politicians are now rushing ahead to implement Senate Bill 5517. This bill, **unbelievably**, allows for the development of "freight rail dependent uses" (read industrial) along the entirety of the Chelatchie Prairie Railroad. Remember, this 33 mile rail line cuts through some of the best residential and prime agricultural land in the county. For that reason, this bill and how the county plans to implement it, should concern us all.

Can you imagine the impact of dropping industrial enterprises into the middle of residential communities? How would that effect the livability of your neighborhood and the value of your home?

To give you an idea, the county has already received inquiries from glass manufacturers, paper manufacturers, chemical manufacturers, food processors and battery manufacturers. Which one would you like for a neighbor?

What makes this matter even worse is that the County is now formulating policies that could allow for industrial development on lands not just abutting or touching the railroad but "adjacent" to the railroad. How far does that reach? And what about spurs?

This bill is presented as a job producer and yes, jobs are important. It would be nice to have more jobs on this side of the river. But at what expense?

Perhaps there is more to this than jobs. There are industrial concerns anxious for a piece of Clark County's rural landscape. These industrial interests are more concerned with revenue than jobs. And what about the County? How objective will the County be in deciding between industrial interests and residential landowners?

Won't the County's objectivity be affected by the fact that they **own** the railroad and are looking for a way to make it profitable? And just how do you balance residential and agricultural uses with industrial development anyway? In reality, you can't. That is why most counties separate the two.

Because heavy industry is not compatible with residential and agricultural land uses, the county should develop policies that limit the types of industrial development along the rail line.

Let's not let the Chelatchie Prairie Railroad become a 33 long mile long scar that disfigures the face of Clark County!

Tony Morrell
16805 NE 137th Ave.

Brush Prairie, WA. 98606
(360) 256-2738



CLARK COUNTY RAILROAD ADVISORY BOARD

P.O. Box 5000, Vancouver, Washington 98666-5000

Clark County Board of Councilors

January 8, 2018

We have spent many years of effort on the voluntary board assisting in the development and implementation of the agenda of the railroad. With the passage of SB5517 we will finally gain access to needed land adjacent to the railroad and overcome one of the major impediments to the growth of the railroad and creation of jobs. We thank the Clark County Councilors, Planning Commission and county staff for their efforts in helping pass this important legislation and the earlier establishment of the Rural Industrial Land Bank.

We are very supportive of the work of the community planning staff and the Planning Commission, however, we continue to believe the proposed revisions to the comp plan and the overlay map need revision. We have worked with legislators and others throughout the development and passage of SB5517. We believe the intent and language included in bill provides the ability of the BOCC to implement development regulations and rules for the development of property adjacent to the railroad for rail dependent uses in urban and rural areas.

In addition the property included in the Rural Industrial Land Bank was always intended to be a property available for a large industrial development utilizing rail service. Although the land bank is now effective, it is in jeopardy as a result of legal attacks. Only a portion of the land bank property is included in the SB5517 implementation overlay. In order to give greater protection to the entire land bank property all of the Industrial Land Bank property should be included in the overlay.

We believe these implementation revisions should be adopted to clearly implement the legislation intended by SB5517.

Again we thank the County Councilors, the Planning Commission and the county staff for their efforts to implement this bill in 2017. The Railroad Advisory Board is ready to assist in any manner needed.

Thank you for your consideration.

Daniel C. Weaver, Chair
Clark County Railroad Advisory Board
360-904-1727
danielcweaver@q.com