

Orton Junction, Smart Growth Development?
Protecting our Disappearing Agricultural Resource Lands
Gina M. Owens
University of Washington, Tacoma

GIS Certificate Program, Urban Studies

Dr. Matthew Kelley

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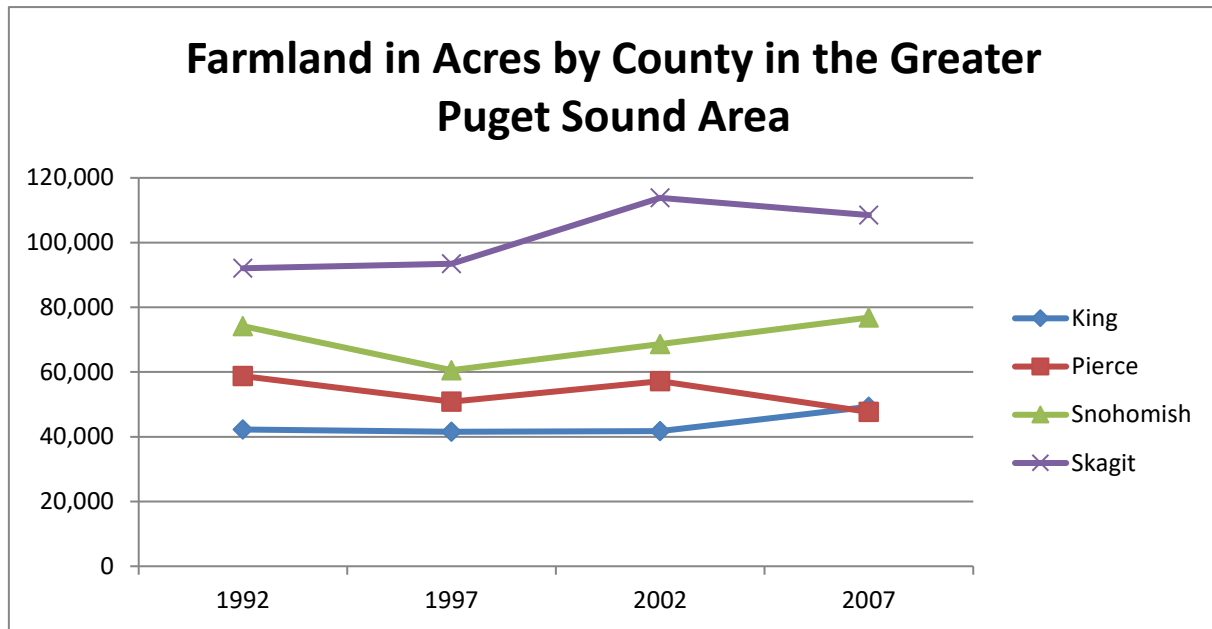
Introduction

In 1990, the Washington State Legislature adopted the Washington Growth Management Act (GMA) in order to coordinate unplanned growth and development across the state at regional and local levels. The intent of the GMA and supporting legislature is to "...encourage high-density, compact, in-fill development and redevelopment within existing urban areas in order to further existing goals of chapter [36.70A](#) RCW, the growth management act, to promote the use of public transit and encourage further investment in transit systems, and to contribute to the reduction of greenhouse gas emissions by: (1) Encouraging local governments to adopt plans and regulations that authorize compact, high-density urban development as defined in section 2 of this act; (2) providing for the funding and preparation of environmental impact statements that comprehensively examine the impacts of such development at the time that the plans and regulations are adopted; and (3) encouraging development that is consistent with such plans and regulations by precluding appeals under chapter [43.21C](#) RCW."

The GMA requires state and local governments to identify and protect critical areas and natural resource lands, define urban growth areas, and prepare comprehensive plans that align with state development goals. Agriculture has played an enormous role in the development of the communities in and around the Puget Sound, becoming an essential for survival during the days of early settlers, (Beck, 2006). Agricultural Resource Land is vital to maintain a vibrant agricultural economy in the Puget Sound Area.

Between 1992 and 2007 almost one-fourth of Pierce County's farmland was lost; more than any other county in the Puget Sound region (Agricultural Census, 1992-2007) – refer to Graph A-1. In 2004 Pierce County designated approximately 31,000 acres of land as 'Agricultural Resource Lands' (Pierce County); meaning lands containing the richest soil in the

county and most vulnerable to development in order to preserve some of this rich agricultural land.



Graph A-1
Data Source: US Census of Agriculture, 1992-2007

According to Washington Administrative Code, WAC 365-190-050, agricultural resource land is classified as:

- Land that is not already characterized by urban growth.
- Land that is used or capable of being used for agricultural production; based on soil quality and physical and geographic characteristics.
- The land has long-term commercial significance for agriculture.

Furthermore, the WAC also states:

(5) When applying the criteria in subsection (3)(c) of this section, the process should result in designating an amount of agricultural resource lands sufficient to maintain and enhance the economic viability of the agricultural industry in the county over the

long term; and to retain supporting agricultural businesses, such as processors, farm suppliers, and equipment maintenance and repair facilities.

In early 2011, the cities of Sumner, Bonney Lake, and Orting petitioned Pierce County for several comprehensive plan amendments that would redefine their urban growth areas. The City of Orting petitioned Pierce County to de-designate 120 acres of agricultural resource land and rezone another 122 acres of working farmland for commercial and light industrial development. The City of Bonney Lake petitioned to de-designate 191 acres of ARL for parks and recreation use. The City of Sumner, partnered with Investco Financial Corporation (IFC), petitioned the de-designation of 182 acres zoned as ARL and rural land for mixed use development which would also include a new YMCA facility (Pierce County Planning and Land Services).

The Pierce County Planning department denied all proposals on the grounds they were “inconsistent” with the county’s land use policies in a significant number of ways. Sumner’s proposal also goes against state growth policies; which expressly advises against routing urban growth into rural and agricultural designated areas. The encouragement of this kind of development practice, or sprawl as it is known, is one that is of much controversy and debate, (Batchis, 2010). A part of this controversy could be in part by lack of understanding of ‘density’. Vicki Cheng (2010) summarized this well; *“The word ‘density’, although familiar at first glance, is a complex concept upon closer examination. The complexity mainly stems from the multitude of the term in different disciplines and under different contexts...”*

After their proposal was denied, Sumner and IFC began working on a new proposal mediated by Cascade Land Conservancy (CLC), now ForTerra, which was unanimously approved by the Pierce County Council in October 2011. The new proposal consists of

preserving almost 400 acres with conservation easements and returning 100 acres of currently zoned urban growth area. Although it is commendable of CLC to win back more land, it is not a question of quantity, rather the quality of the land exchanged. Can this truly be considered a better deal?

Purpose of Analysis

The main goal behind a capacity analysis is to determine the growth potential of an area and what the potential development needs may be based on development trends and population growth. Rather than perform a traditional capacity analysis for Sumner, which was already completed and filed with Pierce County in 2010, my analyses will explore Sumner's current development levels rather than capacity levels. I hope to answer three questions in performing this study. First, to what level is Sumner currently developed and how much of their developable space underutilized? Based on proposed zoning for Orton Junction, what is the development capacity? And can the development goals for Orton Junction be fulfilled in current City of Sumner boundaries?

In 2006, Pierce County and its partners commissioned a consultant team led by Barney & Worth, Inc. to develop a strategic plan to address the loss of agricultural lands (Pierce County, 2006). The consultants used their expertise to analyze economic development, agricultural economics, and competitive strategies. Data sources have confirmed the negative effects development on Pierce County agriculture.

Land use has always been a topic of conflict amongst planners, environmental groups, and government agencies. More restrictive zoning laws created to preserve land for agricultural use created a drastic policy shift (Gardner, 1977). There are some that have the idea that agricultural land preservation is overrated and development provides greater economic potential.

Resistance to infill development (development of vacant parcels within urban boundaries) or redevelopment (re have reduced the effectiveness of comprehensive land use plans (Johnston, 1984). The third portion of my analysis, will hopefully that identify perspective areas for infill development that is otherwise proposed for development in Orton Junction.

Methodologies & Exclusions

To perform an accurate and detailed analysis of development levels, infill and redevelopment opportunities in Sumner would require extensive research to include field analysis to verify parcel level data, detailed examination and understanding of Sumner's zoning codes, applicable building codes, and Washington State's GMA. This level of analysis is beyond the requirements of this class and project conditions. Instead I offer a high level analysis based on existing parcel data and information.

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Determining Maximum Capacities of Zoning Designations

To determine existing development levels, I had to first determine the maximum capacity for each zoning code. Sumner has 16 zoning codes (Table A-1). Zoning codes are used as guidelines for development standards. These guidelines have many variables and exceptions that are dependent on specific parcel location. As this analysis a high level analysis, only the very general guidelines for each zoning code was used. Based on information from Title 18 – Zoning, of the Sumner Municipal Code, the maximum lot coverage percentage and maximum building height were listed for each zoning code. For building codes, The City of Sumner has adopted the

2009 International Building Code, pursuant to RCW 35A.12.140, including Appendix Chapter H and I and as amended by the Washington State Building Code Council in chapter 51-50 of the Washington Administrative Code (WAC). According to section 1208.2 of the 2009 IBC, the minimum ceiling heights for occupiable spaces “...shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).” Based on this information as well as taking into account requirements for structural and other building components (fire protection systems, HVAC systems, plumbing, electrical, etc.) a maximum floor height of 10 feet was used; architectural styles and other specific variables were not taken into account.

Zoning Designation	Zoning Description	Maximum Lot Coverage Percentage	Maximum Building Height	Minimum Floor Height	Approximate Number of Floors	Maximum Allowable Floors
CBD	Central Business District	1	35	10	3.5	3
GC	General Commercial	0.75	35	10	3.5	3
IC	Interchange Commercial	0.8	45	10	4.5	4
NC	Neighborhood Commercial	0.75	35	10	3.5	3
MUD	Mixed Use Development	0.8	35	10	3.5	3
M2	Heavy Industrial	0.8	35	10	3.5	3
M1	Light Industrial	0.7	35	10	3.5	3
HDR	High Density Residential	0.45	35	10	3.5	3
MDR	Medium Density Residential	0.35	35	10	3.5	3
LDR-12	Low Density Residential 12000	0.35	30	10	3	3
LDR-85	Low Density Residential 8500	0.35	30	10	3	3
LDR-72	Low Density Residential 7200	0.35	30	10	3	3
LDR-6	Low Density Residential 6000	0.4	30	10	3	3
LDR-4	Low Density Residential 4000	0.4	30	10	3	3
RP	Residential Protection	0.25	35	10	3.5	0
AG	Agriculture	0.25	35	10	3.5	0

Table A-1

Using the general maximum lot coverage percentage and maximum building height, outlined in Title 18 of the Sumner Municipal Code and the minimum floor heights as determined above, the maximum allowable number of floors was calculated. Area designated as Agriculture (AG) or Residential Protection (RP) were excluded from the development capacity analysis of this project.

A Sumner Land Use feature was created by clipping the Sumner area from the Pierce County Land Use feature downloaded from the Washington State Geospatial Data Archive (WAGDA, 2012), which includes the current land uses of parcels. I then imported the data table that was created (Table A-1) into ArcMap 10 and joined it to the Sumner Zoning data feature that was acquired from the City of Sumner planning department. Once the zoning capacity information was joined with my zoning layer I then had to apply zoning codes to the individual parcels that could be found. In order to perform this procedure, I added a new field to my new Sumner Land Use layer, Zoning Abbreviations. Once these polygons were selected; first by selecting each zoning designation (by attribute the zoning abbreviation) from the layer then selecting by location, target layers from the Sumner Land Use feature that had their centeroids within my selected zoning polygons; I was able to apply the appropriate zoning designation to the selected parcels using the field calculator. Once this process was performed for each zoning designation, I found that I had 39 parcels that were not selected in this process. This was because either the parcel was in more than one zoning designation, or their centroid was not within the zoning parcel layer. Since there were only 39 parcels, I was able to individually select them and applied the zoning code using the field calculator, if it was clear which zoning applied. I was able to successfully apply a zoning designation to 30 of the missed parcels. The other 9 parcels were excluded from my analysis.

Determining Total Built-As Square Footage of Parcels

The next step required me to analyze current built square footage of each parcel. To do this, I downloaded the Improvement Built As data table, which is update weekly, from the Pierce County Tax Assessors data download site. The data in its raw form was not suitable to use within ArcMap. I first had to prepare the data in Microsoft Excel, excluding unnecessary data

fields, properly labeling data fields that would be used for my analysis, and aggregating total square footage of all built structures (mostly main residential structures and outbuildings) for each parcel so that there was only one record of data for each parcel number. Initially I joined the data table with the layer feature that included parcel land use information, zoning designations, and zoning capacities. I should have realized initially that vacant or undeveloped lands were not included in the Improvement Built As data. I further discovered that many of the parcel numbers from the Pierce County Land Use feature did not align with the tax parcel number from the Improvement Built As data table. This was because many larger parcels were developed into smaller tax parcels (housing developments, condos, etc.) that were not reflected in the Land Use data feature.

I located a data file within the Pierce County Tax Assessor data download site that I had hoped I could use to quickly, unfortunately the reparcelization code identifying parent and child parcels were not applied to the same parent and child parcels. In order to find the parent child relationships of these parcels I had to manually look up these parcels in the Pierce County parcel search database.

Once the child parcel was identified in the Improvement Built As data table, I replaced the parcel number with the parent parcel number (used in the Land Use data feature). This was a painstaking process that took several hours to accomplish. I also found that the Improvement Built As data table did not accurately reflect the total built square footage on the parcels. Several parcels were missing square footage for residential outbuildings. Since it was impossible to determine which parcels were missing due to the sheer number of records, I did not have the time to ground truth each parcel. Once I had, to my satisfaction, resolved the issue with the parcel numbers I was able to identify parcels that were listed in my Sumner Zoning and Land Use data

table and those that were omitted from the Improvement Built As data table. There is a total of 731 records not included in the Improvement Built As data table. I copied these 731 records to my Improvement Built As data table. Out of the 731 records I identified 507 parcels that were classified as “Vacant” or with no noticeable development. Some of these parcels had a recorded built as square footage of 1-2 square feet due to land improvement features. I entered a value of “0” for the total built square footage for these 507 parcels. The remaining 222 parcels were identified with a land use classification of “Unknown”, “Agricultural Use”, or “Community Service”. Most of the Community Service parcels were identified as schools, church facilities, or contained utility infrastructure. These parcels were excluded from the analysis.

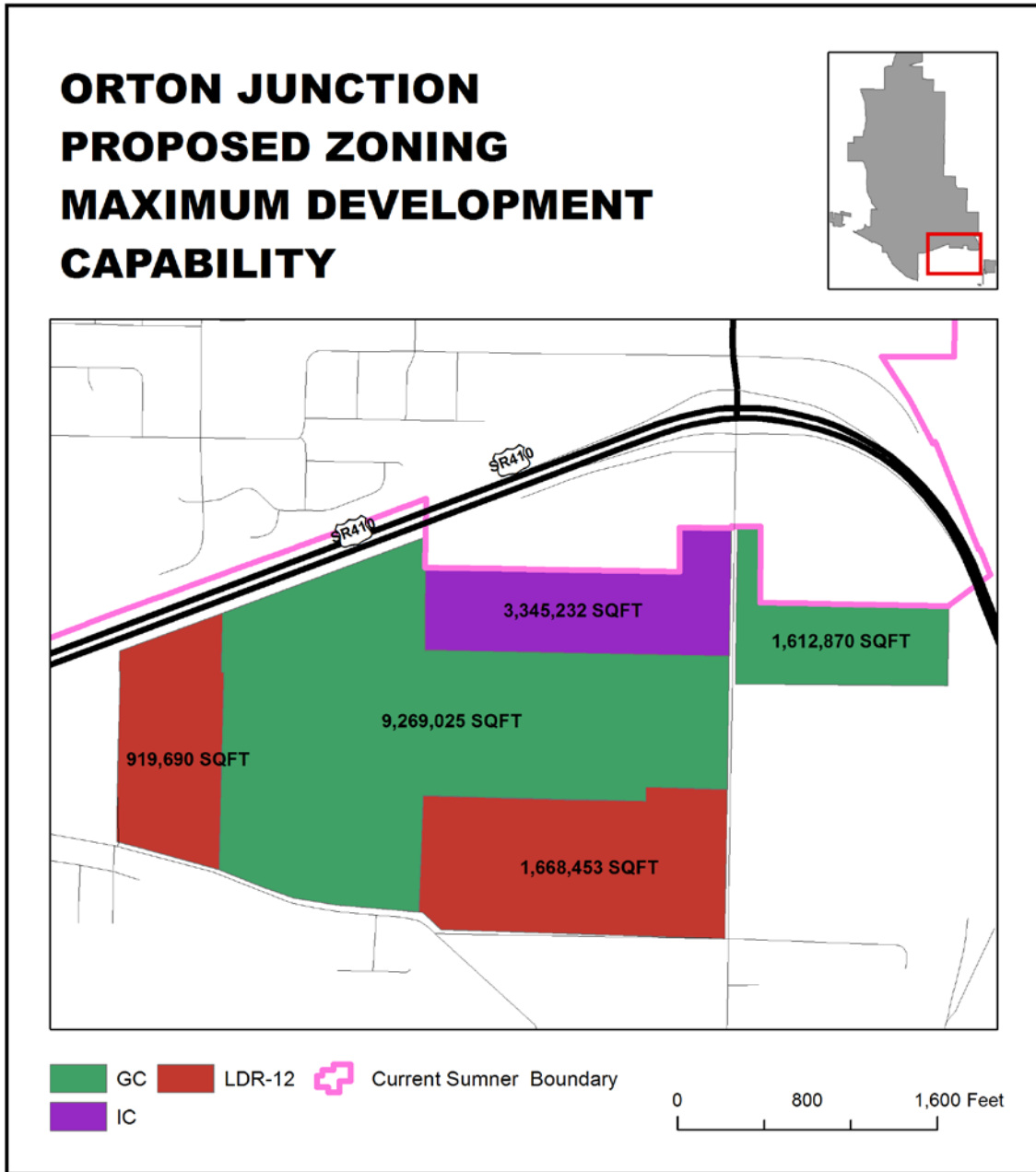
Determining Parcel Development Levels

Once I had determined the ‘built as’ square footage of all parcels, I was ready to calculate the development levels of each parcel. I joined the Improvement Built As data table to the Sumner Zoning and Land Use data feature and added two new fields. “Maximum Allowable Parcel SQFT” and “Development Levels Percentage”. The maximum allowable parcel square footage was calculated with the maximum lot coverage percentage (Table A-1) and maximum allowable floors.

Development Levels of Orton Junction

Orton Junction which is approximately 182 acres of designated agricultural resource and rural lands sits just south of current Sumner boundaries, along highway 410. The Sumner Planning Department did not have the proposed zoning for Orton Junction in a GIS-ready format. In order to analyze these parcels I digitized the zoning designations. Since most of the lands are designated for agricultural use, I did not perform a current development analysis, rather

just calculated maximum potential development based on the methodologies used in the previous analyses.



Map A-2

Analysis Results and Findings

As I analyzed my initial results my initial findings showed 126 parcels with a development capacity of over 100%. After further research it was found that 124 of these parcels were individual tax parcel (condo) units that were part of a larger land use parcel and was missed from my original data validation. I had to retrace my steps and reevaluate previous data tables. One parcel was showing a development level above 800 percent. Since this was near impossible, upon further investigation I found that the Pierce County Land Use data feature listed the parcel area at 105 square feet, but in the Pierce County parcel search database it is listed at 8,788 square feet. Rather than changing the square footage of the lot I excluded it from my analysis, but wished to document my findings here. With this new information, I determined that this particular parcel, with a total built as square footage of 2,564 square feet is at approximately 73% development capacity.

The other parcel showing a development capacity above one hundred percent (118%) is in a low density residential zoning designation, but its land use classifies it as a church. This is an example how land usage and zoning can be used to increase development efficiencies. Overall my analysis was not quite what I had expected. I had an expectation of a certain level of underutilization within parcels or parcel groups. Many may argue that my methodology in determining capacity may not be ideal. However, this analysis was never about architectural aesthetics, politics of land ownership and usage, or the many variables and factors that can only be applied on per parcel basis. It is rather to show the maximum development potentials of smart growth planning.

My final analyses determined that of the 3,356 parcels that were analyzed, 587 parcels were classified as 'vacant' or had no noticeable development. Two of the most underutilized

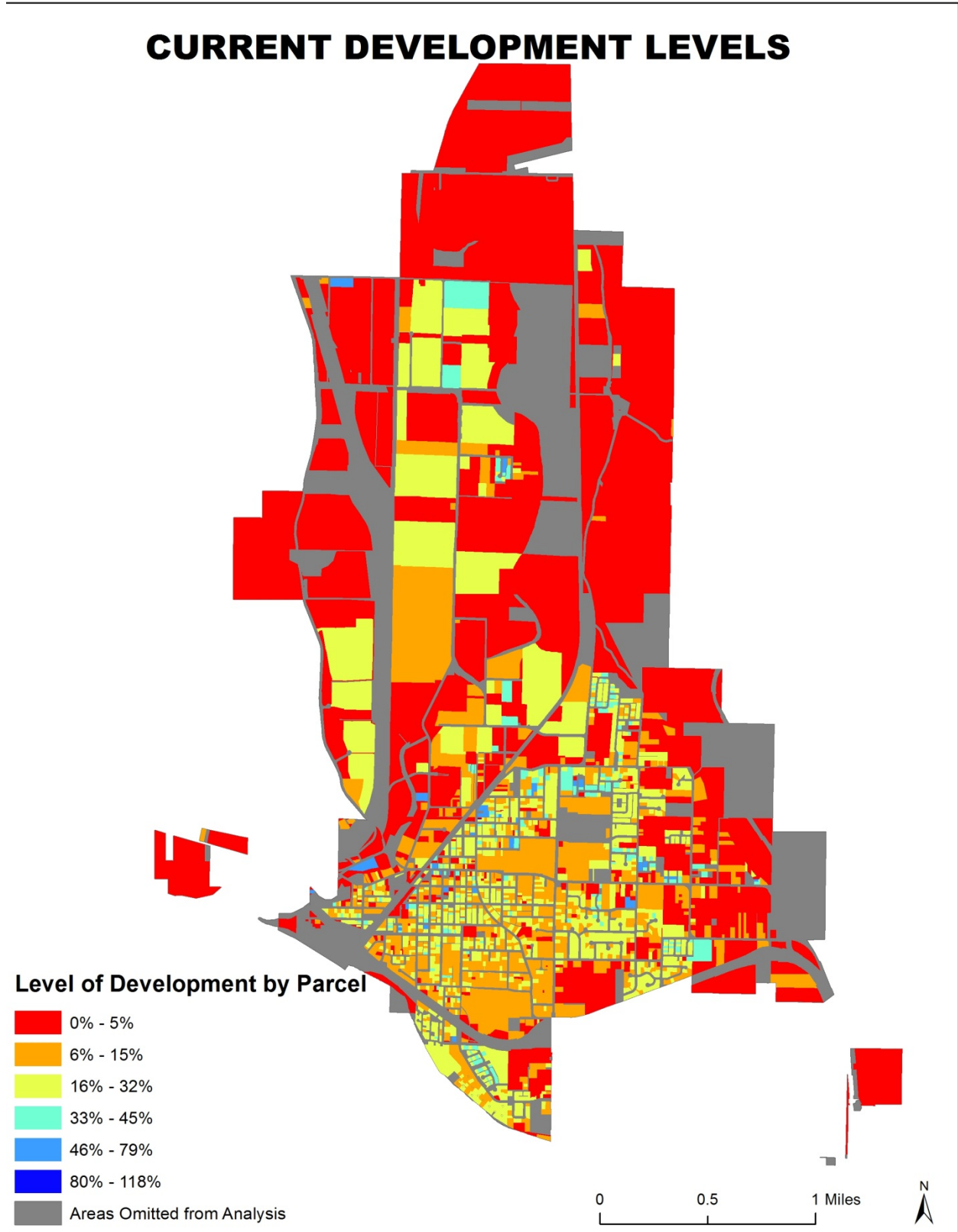
zoning designations are Interchange Commercial (IC) and Neighborhood Commercial (NC) at 1.04% and 2.50% respectively. Since one of the major goals for Orton Junction, is to boost their economy, they already have the development potential to reach some of those goals.

I found several parcels that were greater than one acre in size that had built as square-footage at 2000 square feet or less. One of these parcels, excluded from my analysis due to multiple zoning designations, had a parcel size of 96,000+ square feet. Approximately 85% of the parcel was designated as LDR-4, or Low Density Residential with a minimum lot size of 4,000 square feet. The other 15% was designated as NC – Neighborhood Commercial. The total square footage of all built structures totaled less than 1,800 square feet. Unfortunately this is a recurring theme found in most of the parcels analyzed. As shown in the table below, current available development levels far exceed the maximum development capacity of Orton Junction's proposed zoning and usage.

Orton Junction maximum development capacity only represents a fraction of developable lands still within Sumner's borders. Is it worth developing over lands that would be better utilized for a greater good?

Zoning Designation Description	Total Number of Parcels Analyzed	Number of Vacant/ Undeveloped Parcels	Underutilized Development Capacity (SQFT)	Orton Junction Maximum Development Capacity (SQFT)
Central Business District	117	34	2,400,725	
General Commercial	151	54	14,114,139	10,881,896
High Density Residential	240	18	5,222,153	0
Interchange Commercial	50	41	18,271,549	2,352,116
Low Density Residential 4,000	41	12	1,879,073	0
Low Density Residential 6,000	1,023	70	10,977,425	0
Low Density Residential 7,200	205	12	2,194,405	0
Low Density Residential 8,500	607	56	16,340,905	0
Low Density Residential 12,000	95	40	21,012,430	5,546,023
Light Industrial	257	150	136,184,877	0
Medium Industrial	73	34	13,343,115	0
Medium Density Residential	454	51	5,709,052	0
Mixed Use Development	20	7	1,114,428	0
Neighborhood Commercial	23	8	2,962,900	0
TOTALS	3,356	587	251,727,176	18,780,035

Table A-3



Map A-1

Map A-1 is a visualization of current development percentages at the parcel level. Red represents the lowest level of development while blue represents the most efficient levels of development. I

Conclusion

Although this project was only a high level general analysis, it clearly shows how grossly underutilized parcels are in Sumner. Though there are many factors that contribute to parcel development, this project was not meant to explore them all. It was meant only to raise awareness to what levels the lands in within current Sumner city boundaries are underused or built below capacity. By raising awareness we can begin looking at smarter development alternatives.

There are others that feel the decision to annex Orton Junction is not in the best interest of the greater community. In December of 2011 a coalition of farmland protection advocates; Futurewise, American Farmland and Trust, The Friends of Pierce County, Tacoma Audubon Society, and the PCC Farmland Trust filed an appeal with the Washington State Growth Management Hearings Board. The City of Bonney Lake filed its own appeal in January 2012.

My analysis could have been far more accurate if the data from Pierce County did not contain so many discrepancies within their various data tables. An analysis can only be as good as the data available. However, even with the data at hand and the level of analysis, I hope to raise awareness

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