Urban Growth Area Update

City of Spokane
Land Quantity Analysis

August 2010

RESIDENTIAL LAND QUANTITY ANALYSIS

The City of Spokane Land Quantity Analysis (LQA) report estimates the amount of land available and its development capacity within the City of Spokane to support residential and non-residential growth. The Steering Committee of Elected Officials will use this quantitative information to make a recommendation to the Board of County Commissioners as the Urban Growth Areas (UGAs) are reviewed.

County-wide Planning Policies direct jurisdictions to utilize the LQA methodology developed by the Washington State Department of Community Trade and Economic Development and from the guidebook, "Issues in Designating Urban Growth Areas". The Steering Committee of Elected Officials adopted this methodology on November 3, 1995. This report analyzes land quantity using updated 2010 data. The analysis included reviewing 2009 aerial photography to verify the accuracy of results of using several sources of land use information.

Below is a summary of the City of Spokane's application of the adopted methodology:

Step 1 - *Identify land that can accommodate future growth.*

In determining residential land quantity, land with residential capacity falls into one of four categories:

Capacity within Approved Developments
Approved projects include projects that have not been built or are under construction but not occupied. This also includes approved and vested preliminary plats and planned unit developments with future phases yet to be finalized, and other vested projects with remaining housing units to be completed.

Vacant land
Vacant lands are identified as parcels with improvements valuing less than $500. This includes vacant lots under an acre where it is assumed they will not be further subdivided and vacant parcels over an acre in size where it is assumed they will be further subdivided or developed to an assumed average zoned density. Vacant lots that are over 10 years old are reduced by the 30% market factor as it is assumed that some older lots will not be available for development within the next 20 year period.

Partially used land
Partially used land is land that contains existing residential development but is large enough to be further subdivided. Partially used residential land must include enough acreage to be subdivided into five or more lots based on existing zoning.

Areas where specific land use assumptions are being used
This includes areas where specific studies and plans have been developed within the City.

Step 2
Subtract all parcels that your community defines as not developable due to physical limitation.

In most cases within the City of Spokane most land can be developed with mitigating measures or the overall density allowed can be achieved by clustering the allowed units on the site. While recognizing that most land has development potential, certain properties have physical and/or regulatory constraints, such as wetlands, steep slopes, or regulated shorelines. Some properties may never develop or may develop at densities less than allowed by zoning. Therefore, land area containing physical limitations

within areas classified and regulated as Critical Areas are not included in the residential land supply. The Critical Areas that have been entirely removed from the assumed land supply are:

Critical Areas deduction

Wetlands & Wetland Buffers:	Inventoried wetlands and an associated 100 foot buffer area are subtracted from land inventory.
Fish and Wildlife Buffers:	Streams and associated riparian area buffers are subtracted from the land inventory.
Geologically Hazardous Areas:	Certain hazardous geologic units and slopes over 16% are deducted from the available land inventory.

The above critical area deductions amount to a 39% reduction in the total area of the available vacant land supply.

Step 3
Subtract lands that will be needed for other public purposes.

Land needed for public purposes is addressed in three different ways. In the first case, land that is necessary for new infrastructure, such as road right-of-way & rain water retention is subtracted from the acreage figures generated in Step #1. A 20% across the board reduction is taken from residential land initially identified as vacant or partially-used for these purposes.

It should be noted that land zoned for multi-family uses (the RMF and RHD zones) has a 20% deduction for future public right of way that is often not dedicated as public right-of-way. The zoning code allows the density calculation to be applied to a whole site and does not require that the number of units allowed on a site deduct for internal traffic circulation. Often there is little if any land dedicated for public right of way in multi-family developments and applying the 20% right-of-way deduction has the potential to underestimate the residential capacity in these multi-family zoning categories.

Other databases are used to further determine if the land is to be set aside for other public purposes. Land within the following Spokane County Assessor's property class codes and exemptions are used to identify lands that may appear to be vacant but, in reality, are not available for residential development. These situations involve both public and private properties owned by entities such as utility companies, school districts, or parks departments. The following table illustrates the Assessor property use codes and exemptions that are evaluated to determine if they are not available.

Assessor Exemption & Property Use Codes

41 Trans – Railroad	67 Service – Governmental	76 Park
42 Trans – Motor	68 Service – Educational	77 Churches
43 Trans – Aircraft	71 Cultural Activity	79 Other Cultural
44 Trans – Marine	72 Public Assembly	Cemetery Exempt
45 Trans – Highway	73 Amusement	DoR Institutional Exempt
46 Trans – Parking	74 Recreational	Government Property Exempt
47 Communication	75 Resort- Camping	Operating Property Exempt
48 Utilities	State Levy Exempt	
49 Trans – Other	Public Schools Exempt	

Step 4
Subtract all parcels which your community determines are not suitable for development for social and economic reasons.

Partial deduction for parcels with development potential, but with a higher than average improvement value related to parcel size.

Single family residential parcels that are large enough to be further subdivided into five or more lots, but have an improvement value greater than 3 times the lot area are considered unlikely to be further subdivided or redevelop and are excluded from the available land supply calculations.

Step 5
Subtract …that percentage of land… which you assume will not be available for development within your plan's 20 year time-frame.

In the adopted *Land Quantity Analysis Methodology for Spokane County*, a technical committee of elected officials and technical experts determined that a build-out factor of 70% was an acceptable average countywide, also referred to as a "market factor". The adopted methodology assumes that 30% of the vacant land supply with residential development capacity will not be available for development during the next twenty year planning horizon.

Step 6
Safety Factor

The methodology states that if a jurisdiction is not capable of monitoring its land supply it may build in a safety factor of additional land area in addition to projected 20-year land area needs to assure adequate land capacity. A safety factor has not been included. The land supply information will be continually monitored and updated using the City's GIS inventory, permit system and data from the Spokane County Assessor Office.

Additionally an amendment to the Countywide Planning Policies in 2008 established criteria for monitoring population growth and mandating land quantity and population capacity studies when certain growth triggers are met. This strategy is intended to ensure that adequate land supply will be monitored and maintained throughout the planning horizon.

Step 7
Determine total capacity.

Density Assumptions

The density assumptions used for vacant and partially used land categories are summarized below. A very general summary of the City of Spokane Comprehensive Plan Land Use Designations and Zoning categories is available at the following web address:

http://www.spokaneplanning.org/Documents/Handout%20Land%20Use%20and%20Zoning%207-19.pdf

Lower Density Residential Zones

Residential Single Family Zone (RSF): This zone allows a density range of 4 to 10 du / acre. An average density of 6 dwelling units per acre (lot size of 7,200 sq.ft. lot size) is used.

Residential Two Family Zone (RTF): This zone allows a density of up to 20 du / acre. An assumed density of 15 dwelling units per acre (average of 2,900 sq.ft. per residential unit) is used.

Higher Density Multi-Family Residential Zones

Residential Multifamily Zone (RMF): This zone allows a density range of 15 to 30 du / acre. At this time a density of 22.9 du / acre (average of 1,900 sq.ft. per residential unit) is used.

Residential High Density (RHD): No maximum density is specified for this zone. Density is often restricted by other standards such as parking requirements and height limits. An assumed density of 43.5 du / acre (average of 1,000 sq. ft. per residential unit) is used.

Mixed use, commercial and industrial zones

Mixed Use Zoning: Within the zones that allow a mix of residential and commercial uses, 20% of available vacant land is counted for mixed residential / commercial use at a density of 1,900 sq.ft. per residential unit or 22.9 units per acre. Mixed use zoning includes zones that allow for high density residential uses and include the Commercial and Center & Corridor zones.

Light Industrial: Though residential uses are allowed within a quarter mile of the Spokane River within the Light Industrial Zone no residential capacity is assumed within this area at this time. Residential uses are allowed within the quarter mile of the river to encourage uses in close proximity to the river that can take better advantage of the river as an amenity and to help protect the river from uses that are potentially harmful. Until development trends can be examined further within this river buffer in the light industrial zones no residential capacity is being counted.

Heavy Industrial: No residential use is allowed within the heavy industrial zones and no residential capacity is assumed within these areas.

Specific Plan Areas:
Within the Downtown and University District areas the City has created sub-area plans and detailed housing studies with forecast housing needs and capacities. In these areas specific assumptions are used based upon projected housing demand as the zoned development capacity is much larger than the projected twenty year demand. Typically these areas allow for a mixed of uses and very high density housing.

Downtown Plan and Housing Study:
Two detailed Downtown housing studies have been conducted for Downtown. The Downtown Spokane Economic Analysis prepared by Keyser Marston Associates, Inc., in 1998 and in 2003, discussed the potential for residential development in this area. The 2000 and 2008 Downtown Plans estimated that there is enough land capacity in the Downtown area to support more than 4,000 residential units along with capacity to meet commercial needs for the next 20 years. The 2003 Downtown housing area study determined that the market for Downtown housing was continually increasing over time.

While the zoned development capacity within the Downtown is much higher than the forecast demand from the Downtown Plan and the demand potential outlined in the 1998 and 2003 Downtown Housing Study a forecast demand and assumed capacity of 2,000 housing units (the middle of the forecast range) is used for the next 20 years within this area.

The Downtown Plan is available at the following web address:
http://www.spokaneplanning.org/Documents/DT_Plan_09/DT_Plan_Update_Final_Draft_11-24-2008-24mb.pdf

The 2003 Downtown Housing Study is available at the following web address:
http://www.spokaneplanning.org/Documents/DT-plan/DT-res-market-potential-feb-2003.pdf

University District Housing Study:
The zoned development capacity within the U-District is higher than the forecast demand in the 2009 U-District Housing Study and at this time the forecast market demand is being used for the next 20 years within this area. The 2009 University District Housing Market Study states that there is demand for 1,740 housing units within U-District area.

The U-District Plan is available at the following web address:
http://www.spokaneuniversitydistrict.com/planning-documents.php

The 2009 U-District Residential Potential and Needs Analysis is available at the following web address:
http://www.spokaneplanning.org/Documents/DT_Plan_09/Housing_Study_and_Appendix_U-District-Spokane-8-2009.pdf

Population per dwelling unit
Dwelling units within Single Family Residential Zones and Two Family Residential Zones are calculated at 2.5 residents per household. All dwelling units in the Multi-family Zones are calculated at 1.6 residents per household.

Aerial Photography Review

A final step in the analysis included a review of recent aerial photography to compare the results of the GIS analysis to the existing landscape and identify any major errors or anomalies. The review identified a number of anomalies relating to land determined to be vacant using just the Assessor's property use codes. The LQA was modified to exclude the identified areas from lands available for development.

2010 Population Capacity

The 2010 population capacity for the City of Spokane is summarized in the table below. Maps included at the end of this report show the areas within the City with development capacity.

City of Spokane Population Capacity Summary

Residential Zoned Parcels	SF DU	MF DU	SF Pop @ 2.5 PPH	MF Pop @ 1.6 PPH	Population
Large Vacant Parcels	1,496	1,359	3,740	2,174	**5,914**
Partially Used	1,675	1,122	4,187	1,795	**5,982**
Vacant Platted Lots	2,428	484	6,070	774	**6,844**
Mixed Use Zoning	0	1,188	0	1,900	**1,900**
Sub-Category Total	5,599	2,965	13,997	4,743	**20,640**
Vested Projects and Plats	**SF DU**	**MF DU**	**SF Pop @ 2.5 PPH**	**MF Pop @ 1.6 PPH**	**Population**
Vested Projects and Plats	2,832	2,702	7,080	4,323	**11,403**
Sub-Category Total	2,832	2,702	7,080	4,323	**11,403**
Specific Plan Areas	**SF DU**	**MF DU**	**SF Pop @ 2.5 PPH**	**MF Pop @ 1.6 PPH**	**Population**
Downtown	0	2,000	0	3,200	**3,200**
U-District	0	1,740	0	2,784	**2,784**
Sub-Category Total	0	3,740	0	5,984	**5,984**
	SF DU	**MF DU**	**SF Pop @ 2.5 PPH**	**MF Pop @ 1.6 PPH**	**Population**
Grand Total	**8,431**	**9,407**	**21,077**	**15,050**	**38,027**

(SF = Single Family, MF = Multifamily, DU = Dwelling Units, Pop = Population, PPH = Persons per Household)

COMMERCIAL LAND QUANTITY ANALYSIS

On March 15, 1996, the Growth Management Steering Committee adopted a methodology for determining commercial land demand. The following is a summary of the City of Spokane's commercial land analysis using the adopted methodology. The following formula does not take into account current commercial vacancy rates and current developed commercial property that is beyond its useful life or being under-utilized.

The Commercial Land Demand Formula is shown using two different Commercial Land Efficiency assumptions to illustrate how commercial land demand is changed by an increase in land use efficiencies encouraged by changes to the Commercial Zoning Code requirements implemented since the Comprehensive Plan was adopted in 2001. The Commercial Land Demand methodology contemplated increased Commercial Densities as zoning codes where changed to implement the Comprehensive Plan.

Commercial Land Demand Density Comparison Summary	
	Acres
Additional Commercial Acreage needed at current density	-97.87
Additional Commercial Acreage needed at 10% density increase	-342.96

Minus indicates surplus acreage

The first step in determining the commercial land demand is to identify a growth factor. The growth factor is calculated by adding the current population of the City to the City of Spokane's population allocation adopted by the Board of County Commissioners (BoCC) and dividing it by the current population determined by the Office of Financial Management (OFM). The growth factor is then calculated by the City of Spokane's commercial acres currently in use. Table 8 illustrates the Assessor property use codes used to identify commercial acres in use.

Table 8 – Assessor Commercial Property Use Codes

Code	Description
16	Hotels and Motels
17	Lodging and daycare
46	Automobile parking
52	Building materials, lumber yard, nursery, florist, and farm equipment
53	Shopping centers
54	Grocery stores, convenient stores, and auto body repair
55	Automobile sales and service
56	Apparel, photography, and laundromats
57	Furniture and equipment
58	Restaurants, fast food, and taverns
59	Miscellaneous retail trade
61	Financial institutions
62	Personal services
63	Business services
64	Repair services
65	Professional services

The adjusted commercial acres of demand are then calculated by a market factor of 25% to determine the total demand of commercial acres. The total demand for new commercial acres is then subtracted from the vacant commercially zoned acres resulting in the demand for commercial acreage.

Using this methodology there was adequate commercial property for the next twenty years of commercial growth (see formula below).

Commercial Land Demand Formula @ Existing Average Density

Population Allocation + Current Population	/	Current Population	=	Growth Factor
244,900	/	206,900	=	1.18
Growth Factor	**X**	**Commercial Acres in Use**	**=**	**Commercial Acres of Demand**
1.18	X	1656.5	=	1960.74
Commercial Acres of Demand	**X**	**Land Utilization Factor**	**=**	**Adjusted Commercial Acres of Demand**
1,960.74	X	1.0	=	1960.74
Adj. Commercial Acres of Demand	**-**	**Commercial Acres in Use**	**=**	**Total New Vacant Commercial Acres of Demand**
1,960.74	-	1,656.50	=	304.24
Total New Vacant Commercial Acres of Demand	**X**	**Market Factor**	**=**	**Total Additional Commercial Acres of Demand**
304.24	X	1.25	=	380.30
Total Additional Commercial Acres of Demand	**-**	**Vacant Commercial Zoning**	**=**	**Additional Commercial Acreage needed**
380.30	-	478.17	=	-97.87
				Minus indicates surplus acreage

Commercial Land Demand Formula @ 10% Increase in Density				
Population Allocation + Current Population	**/**	**Current Population**	**=**	**Growth Factor**
244,900	/	206,900	=	1.18
Growth Factor	**X**	**Commercial Acres in Use**	**=**	**Commercial Acres of Demand**
1.18	X	1656.5	=	1960.74
Commercial Acres of Demand	**X**	**Land Utilization Factor**	**=**	**Adjusted Commercial Acres of Demand**
1,960.74	X	0.9	=	1764.66
Adj. Commercial Acres of Demand	**-**	**Commercial Acres in Use**	**=**	**Total New Vacant Commercial Acres of Demand**
1,764.66	-	1,656.50	=	108.16
Total New Vacant Commercial Acres of Demand	**X**	**Market Factor**	**=**	**Total Additional Commercial Acres of Demand**
108.16	X	1.25	=	135.21
Total Additional Commercial Acres of Demand	**-**	**Vacant Commercial Zoning**	**=**	**Additional Commercial Acreage needed**
135.21	-	478.17	=	-342.96
				Minus indicates surplus acreage

INDUSTRIAL LAND QUANTITY ANALYSIS

The Growth Management Steering Committee's adopted industrial land methodology discusses how planning for industrial land needs requires a regional approach. The City provides services to industrial zoned area outside of the current City limits. This industrial area land capacity is summarized within Spokane County's unincorporated UGA LQA report.

The following is a summary of the City of Spokane's industrial land capacity for industrial zoned land within the City. This does not take into account current industrial building vacancy rates and current developed property that is being under-utilized or land banking on existing developed parcels.

The industrial zoning categories allow for a very wide range of uses which include retail, office and heavy commercial in addition to manufacturing. Within a quarter mile of the Spokane River in the Light Industrial zoning category even residential uses are also allowed to allow taking advantage of the river amenity.

Industrial Zoning – Vacant Land	
	Acres
Vacant Industrial Zoning	355.66

Spokane Area Economic Studies and Analysis

The City of Spokane Valley, as part of the planning process for the Sprague-Appleway Revitalization Plan, conducted economic analyses providing a basis for recommendations in the Plan. The most recent study performed by Gibbs Planning Group, Inc. in 2007 specifically examined the economic feasibility of establishing a town center in Spokane Valley. The Gibbs study examined three trade area scenarios: 1) Micro Trade Area, 2) Primary Trade Area, and 3) 100 Mile Trade Area. These trade areas are discussed in more detail below.

Micro Trade Area

This model established the minimal possible trade area for the proposed town center site. The Spokane Valley Mall and downtown Spokane were excluded from the trade area (supply side) in an effort to create the largest possible retail void. It was expected that this model would yield a strong demand for neighborhood goods and services. However, the Micro Trade Area analysis indicated an over-supply of all retail categories except for specialty foods such as ice cream, bagels, and coffee. Overall, the Micro Trade Area 2006 retail sales were reported at $1.29 billion, with a consumer demand of only $738 million. The Micro Trade Area thus had an over-supply of $550 million per year or approximately 2 million square feet.

Primary Trade Area

The Primary Trade Area included most of the Spokane Valley region where most of the study area's (Spokane Valley Town Center) potential shoppers reside. The Spokane Valley Mall and surrounding retail were included in this model; downtown Spokane was excluded from this model. The estimated Primary Trade Area's overall 2006 retail sales (supply) were $2.23 billion with total consumer demand (spending) of only $1.46 billion. This resulted in an over-supply of $805 million per year or almost 3 million square feet surplus retail stores in the Primary Trade Area.

100 Mile Trade Area

Due to the relatively remoteness of Spokane, Gibbs' opinion was that it is likely that the total Spokane trade area extends 100 miles or beyond. The 100 Mile Trade Area would account for the largest potential demand for retail and restaurants in the greater Spokane region. Within the 100 Mile Trade Area, most categories are over-supplied especially jewelry, sporting goods and books. A small demand was indicated for home furnishing, appliances, electronics, and limited service restaurants. The overall 2006 retail sales (existing supply) was estimated at $9.48 billion, while the 2006 overall consumer demand was estimated at $8.17 billion yielding retail over-supply of $1.31 billion. This results in an existing over-supply of up to 4.7 million square feet of retail space in the Spokane Region.

Resources:

Residential Land Quantity Methodology for Spokane County, 1995

Commercial & Industrial Land Demand Allocation and Ratio Development Methodology, 1995

WA - CTED Guidebook: "Art & Science in Designating Urban Growth Areas, Part II: Suggestions for Criteria and Densities, 1992"
http://www.cted.wa.gov/_CTED/documents/ID_1073_Publications.pdf

WA - CTED Guidebook: "Issues in Designating Urban Growth Areas: Part I: Providing Adequate Urban Land Supply, 1992"
http://www.cted.wa.gov/_CTED/documents/ID_1074_Publications.pdf

Residential Market Potential – Downtown Spokane, February 2003, Zimmerman / Volk Associates, Inc.
The 2003 Downtown Housing Study is available at the following web address:
http://www.spokaneplanning.org/Documents/DT-plan/DT-res-market-potential-feb-2003.pdf

U-District Residential Market and Demand Potential:
The 2009 U-District Residential Potential and Needs Analysis is available at the following web address:
http://www.spokaneplanning.org/Documents/DT_Plan_09/Housing_Study_and_Appendix_U-District-Spokane-8-2009.pdf

City of Spokane Valley Regional Commercial Market Analysis:

http://www.spokanevalley.org/sub.aspx?id=392

Growth Capacity Areas Land Quantity Report

Map: North Spokane

Legend

- City of Spokane
- Rivers

Areas with Growth Capacity

- Vacant Commercial
- Residential Capacity
- Vested Development
- Specific Plan Areas
- Vacant Industrial

0.5 0.25 0 0.5 1 Miles

Source: GIS
Date: 08/2010

N W E S

THIS IS NOT A LEGAL DOCUMENT:
The information shown on this map is compiled from various sources and is subject to constant revision. Information shown on this map should not be used to determine the location of facilities in relationship property lines, section lines, roads, etc.

Growth Capacity Areas Land Quantity Report

Map: South Spokane

Legend

- City of Spokane
- Rivers

Areas with Growth Capacity

- Vacant Commercial
- Residential Capacity
- Vested Development
- Specific Plan Areas
- Vacant Industrial

0.5 0.25 0 0.5 1 Miles

N W E S

Source: GIS
Date: 08/2010

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