

## Dennis Saxman

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**From:** Wentlandt, Geoffrey <Geoffrey.Wentlandt@seattle.gov>  
**Sent:** Tuesday, November 05, 2013 12:20 PM  
**To:** Dennis Saxman; Pettyjohn, Jennifer  
**Cc:** Mills, William  
**Subject:** RE: Growth Capacity and Microhousing

Hi Dennis,

Thanks for following up on this. When we deliver a set of materials to you that respond to your discovery request, we can include: a.) documents that describe the assumptions used in the capacity analysis of the Lowrise Zones; and b.) a general overview document of how the city's development capacity analysis works.

From this point forward, it would really be better if you coordinated all of your communications through Bill Mills who is the main point of contact on this appeal.

Geoff

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**From:** Dennis Saxman [<mailto:peregrin@isomedia.com>]  
**Sent:** Tuesday, November 05, 2013 11:57 AM  
**To:** Pettyjohn, Jennifer  
**Cc:** Mills, William; Wentlandt, Geoffrey  
**Subject:** Growth Capacity and Microhousing

Jennifer:

Here is the appendix to the Director's Report that contains a document on Micro-Housing Volumes and Development Capacity.

I am looking for assumptions of the model as regards LR1, LR2, LR3, MR

Dennis Saxman

# Zoned Development Capacity

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The Department of Planning and Development utilizes and maintains a development capacity model. This model estimates the amount of new development that could be built in the City by comparing existing land uses, housing units and non-residential square feet to what could be built under current or proposed land use zoning. The difference between potential and existing development yields the capacity for new development. This capacity is measured as the number of housing units, the amount of non-residential square feet and the number of potential jobs that could be added to the existing base numbers.

Information about capacity enables the City to determine the effects of proposed zoning changes, policy revisions and development trends. It also aids in setting and allocating the 20-year growth targets that must be accommodated by the City's Comprehensive Plan, and in understanding the spatial distribution of potential development and its impact on public infrastructure such as roads and utilities. The model is based on land parcels identified by the King county Department of Assessments but results are aggregated for different geographies, such as urban villages or zoning designation across the entire city.

## **Indefinite Time Period Covered by the Estimates**

Development capacity is not a prediction that a certain amount of development will occur in some fixed time period. The capacity estimates do not include a time dimension because they do not incorporate any direct measurement of demand, which would help determine when parcels would be developed. Many parcels in the city today have zoning that allows for more development than currently exists on them, but not all of them are available or have a demand for development. Consider a single-family house in a commercial zone that is occupied by an owner who has no plans to sell. Some day that land will change hands and the new owner may be more willing to develop the parcel to its full development-potential, but that timing is unknown and impossible to predict.

Aside from the relatively small number of parcels that have either active or pending development permits, there is no way to know when actual redevelopment will happen. For the purposes of determining development capacity though, it is assumed within the model that development will eventually occur regardless of market forces. Therefore, development capacity is not a forecast and has no planning horizon. It is simply an estimate of the additional development that could occur under particular land use zoning regulations. This additional development could happen all in one year or not at all depending on the economy, attractiveness to development, or other market conditions. Capacity represents the amount of new growth that could be accommodated. The amount of growth that is expected to occur and that City policy intends to accommodate is established as the 20-year growth targets in the Comprehensive Plan.

The following chart demonstrates the relationships between existing and potential development, development capacity, and 20-year growth targets.

## **Development Capacity Analysis**

The actual level of development activity that occurs is a function of a variety of future factors, many of which are beyond our ability to predict or influence. These factors include such things as the future demand for a particular type of development (such as for townhouses, high-amenity multifamily or small-unit multifamily), whether the owner of any particular land is willing to sell or redevelop it, the financial feasibility of developing the land, and the intensity of development when it does occur. Other factors, such as the relative attractiveness of certain areas for living and commerce, and the relative densities allowed by the existing land use zoning, can cause some areas to be developed earlier or later than others. No one can predict with certainty the total effect of all these factors on the choices made by land developers.

These limitations notwithstanding, the City has created a model that identifies parcels that have the potential to develop and to estimate the amount of development that could occur. The two key determinants in this model are:

1. Available land
2. Land use zoning and the development standards described in the land use code

Available land refers to land that is either vacant or developed sufficiently below the potential allowed by the land use zoning to allow a significant increase in density if it were redeveloped. Land use zoning represents the rules to which new development must adhere including the uses and densities that are allowed.

In its simplest form, an estimate of capacity is the product of:

1. Determining availability of land for development
2. Multiplying the area of that land by the future expected densities assumptions of development zoning allows
3. Determination of what land will redevelop
4. Subtracting the existing development from the potential development

The formulas below summarize the capacity calculations:

$$\text{Potential Development} = \text{Developable Land Area} \times \text{Future Density Assumption}$$

$$\text{Development Capacity} = \text{Potential Development} - \text{Existing Development}$$

The City's development capacity estimate is the difference between the amount of development on the land today and the amount that could be built under the current zoning. On vacant land, we only need to estimate what the zoning would permit. For a parcel that already contains one or more buildings, the amount of development in those buildings is subtracted from the total that zoning would allow.

## **Availability of Land for Development**

The first task is to determine the land that is available for development. Seattle's capacity model excludes a number of parcels from the calculations based on ownership, use or land use zoning. All parcels owned by a public entity—federal, state, county, city, school district, port district—are excluded

from the calculations. Parcels used for cemeteries, public and private schools, churches, nursing homes, military bases, public utilities, railroads, hospitals, libraries, law enforcement and that contain landmark structures are also excluded. All of the land within the major institution overlay (MIO) is excluded; the jobs and housing units that institutions may provide are determined by each institution's master plan and are counted over and above the capacity. In addition, some parcels are excluded based on specific knowledge of unique circumstances.

No land is excluded to represent additional rights-of-way or other public purposes because Seattle's street system is nearly completely laid out, and most facilities to satisfy public purposes are already in place to the point that no significant quantity of land now within private parcels will be needed for these uses. Nor was land excluded from the calculations because of critical area designations (except for parcels that are shown as creeks or streams) since the City's critical areas ordinance does not prohibit development on critical areas and allows clustering to enable the property developer to achieve the same densities on the developable portion of the parcel as would be allowed on the entire parcel.

Parcels not in the categories listed above are considered available for development. Subsequently their redevelopment status is determined through a comparison of existing development to potential future development and classified as developed, vacant, or redevelopable.

**Future Density Assumptions**

To determine the number of potential housing units or amount of non-residential floor area that could be developed on each parcel, two assumptions are made:

1. Density of housing units to be built
2. Floor Area Ratio (FAR) to determine the non-residential floor area that could be built

Table 1 below shows the equations for calculating potential housing and floor area using the density assumptions.

Residential	Non-Residential
<b>Potential Housing Units = (Developable Land Area x Expected Floor Area Ratio) ÷ Expected Square Feet per Unit</b>	<b>Potential Building Floor Area = Developable Land Area x Expected Floor Area Ratio</b>

Table 1.

For those zones where the Land Use Code defines maximum density limits, the capacity estimates have, in past practice, assumed that those maximums would be achieved on the parcels that developed. However, examination of historical permitting data has shown that those maximums are not always achieved in all zones. Moreover, not all of Seattle's zones have prescribed minimum or maximum density limits, requiring an analysis to make an assumption of what densities could be achieved.

An analysis of the actual densities that have resulted from development in each different zone from 1996-2005 has led to the creation of a set of "observed" density assumptions. These density assumptions are revised periodically as part of the City's reporting under the Buildable Lands program mandated by the Growth Management Act and are used in capacity analysis related to the