

Summary of Vacant Lands Analysis for Clark County, Washington

an application of G.I.S. technology

Background

In 1992, Clark County began the vacant land analysis to determine the potential capacity of urban areas to accommodate projected 2012 growth. The analysis is based on the County Assessor's Geographic Information System (GIS). The latest calculations of the development capacity of vacant land are based on the plan designations of the alternatives in the SEIS.

The analysis is necessary to determine the ability of the cities to accommodate 20 years of growth. The data provides a reasonable picture of the vacant land but does not show areas that are available for urban land uses. That is, whether property owners are willing to release the vacant property for development or if there are title problems that would prevent development.

The analysis required a number of assumptions about the choices property owners would make. For example, "underutilized land" is land that is not developed to the maximum permitted. The model assumes that only 70 percent of underutilized land will redevelop to higher density or intensity uses, because everyone (100 percent) of the property owners will not choose to convert their land in the 20-year planning period.

The following is a summary of the criteria used to define vacant and buildable land. The criteria have been divided into three categories: Vacant Buildable Land Criteria, Land Utilization Assumptions, and Development Standards.

Vacant Buildable Land Criteria:

The criteria listed below defines vacant buildable land. If all things were simple this would be equal to the acreage available for future uses. However, they aren't and that is the reason for land utilization assumptions.

- All publicly-owned and tax exempt land (government holdings, parks, open space, public and private school property, wildlife refuges, churches, etc.) are eliminated from the land inventory.
- Major right-of-way's, bodies of water, and easements (such as BPA and Northwest Pipeline), were excluded from the vacant land count.
- "Parcels less than 5,000 square feet and parcels with a land value of \$0.00 were also excluded because they are considered too small to develop readily or are slivers between R.O.W. and private parcels.

- All mobile home parks, personal property, mining property, and private commons areas were excluded, although they are considered “vacant” on the Assessor’s database.
- Parcels that are covered,50% or more, by critical areas:
 - 100 year floodplains, High Quality wetlands with a 75-foot buffer, slopes 25 to over 40 percent, hydric soils with a 75-foot buffer, fish and wildlife conservation areas, USGS streams with a 75-foot buffer, and vulnerable aquifer recharge areas were excluded.
- Underutilized” parcels were defined as parcels that are three times the minimum lot size (based on allowable density) and at least 2.5 acres in size. This standard recognizes that many small parcels are actually accessory to adjacent parcels and will never be utilized for infill or redevelopment. For example, an expensive house in the middle of a one-acre lot may never convert. For this reason, 2.5-acre parcels valued at \$250,000 or more and all parcels with structures having an assessed value greater than \$750,000 were also excluded.
- Pending plats were identified from the vacant land count so not to over estimate the vacant acreage available for development.
- “Vacant” residential parcels were defined as having no structure valued at more than \$10,000.
- “Vacant” commercial and industrial parcels were defined as having no structure valued at more than \$50,000.

Land Utilization Assumptions. Once a count of vacant acres and parcels was developed, then assumptions about land utilization were made to allow consideration of factors that limit the availability of the land such as utilization preferences, already platted property, density, and infrastructure:

- Ninety percent of all vacant land will convert over the 20-year time frame to its designated use.
- Seventy percent of all underutilized land will be converted to its designated use with the 20-year planning period.
- Vacant parcels between 5,000 and 20,000 square feet in size will be counted as one potential lot each, and assumed to develop as planned.
- Deductions for infrastructure were established based on the size of the parcel. Development capacity was reduced for infrastructure including roads,

drainage, parks, and other miscellaneous facilities such as pumping stations, power transformers, etc. The infrastructure deduction assumptions are:

- Vacant land
 - 0 percent deduction for parcels between 5,000 and 20,00 square feet
 - 25 percent deduction for parcels from 20,000 square feet to one acre
 - 30 percent deduction for parcels one acre to 2.5 acres
 - 40 percent deduction for parcels 2.5 acres and larger
- Underutilized land
 - 0 percent deduction for parcels one to 2.5 acres
 - 40 percent deduction for parcels 2.5 acres or larger
- Density
 - 6 du/acre for single-family
 - 16 du/acre for multi-family
 - 4.5 du/acre for pending plats
 - 4 du/ac for some critical areas (where development could occur with mitigation, were counted as buildable although at lower densities)
- An error factor of five percent was deducted for data limitations. The Assessor's database is updated for new construction once a year in July. As a result, it tends to under-report new development at any given point in time. As the work progresses, this limitation will be reduced through the County's Sierra System.
- Trend data on redevelopment, mixed use, and vacancy rates were not available. As a result, the County established a process to monitor these factors over time to determine how they affect the UGA and any future changes to vacant land within the UGA.

Development Standards.

In order to determine how much employment or population could be accommodated on the vacant land, the following development standards were assumed:

- Housing composition
 - 60/40 split for new single-family/multi-family (as mandated in the CFP)
 - 2.33 persons per single-family household
 - 1.8 persons per multi-family household
- Commercial/Industrial
 - 12 jobs per acre for commercial uses (based on regional averages)

9 jobs per acre for industrial uses (based on regional trends)

- **Demographics**
 - 123,000 new people in the next 20 years (OFM projection)
 - 58,000 new jobs in the next 20 years (Employment and Security projection)
- **Market Factor**

In recognition that land owners act in their own interest, not for the long term benefit of the community, and therefore monopolies could occur, an extra supply of vacant land was included to prevent artificial inflation of land prices which might make it impossible to achieve housing affordability and employment goals. This factor was:

 - 25 percent for residential and commercial zones
 - 50 percent for industrial zones

Methodology

These assumptions were used in the calculation of vacant buildable land in the urban areas of Clark County. The assumptions and data will be refined over time and maintained to allow review and adjustment at least every five years.

Step 1.

Starting with all parcels in the IUGAs, eliminate:

- Public and tax exempt lands;
 - government holdings
 - parks
 - greenways
 - municipal facilities
 - school properties
 - public wildlife refuges
 - institutional facilities (churches, private schools)

Major easements (BPA transmission lines, Northwest Pipeline, etc.); road rights-of-way, and Utility facilities

Bodies of water.

All parcels that are more than 50 percent:

- High-quality wetlands (Category 1 and 2), including a 75-foot buffer;
- Slopes between 25 and 40 percent and slopes greater than 40 percent
- 100 year floodplain (identify separately Floodways and Flood fringe (as defined by FEMA).
- Hydric soils, including a 75-foot buffer;
- Fish and wildlife conservation areas (priority habitat areas);
- Unstable slopes (as defined by DNR);

Vulnerable aquifer recharge areas¹ (when available); and
USGS stream coverage, including a 75-foot buffer.

(keep track of critical areas that with mitigation may develop - hydric soils,
25- 40 % slopes, etc.)

Exclude parcels less than 5,000 square feet in size.

All mobile home parks, personal property, mining property, and common areas;
and

Parcels with \$0.00 land value are excluded

Product: Total Vacant Buildable Land

Acres of critical exclusions by City and UGA

Acres of vacant land by parcel size (5,000 to 20,000 square feet; 20,000 square
feet to 1 acre; 1 acre to 2.5 acres; 2.5 to 5 acres; 5 to 10 acres; 10 or more acres)

Step 2.

From all lands remaining from Step 1, identify:

Vacant Residential land:

Parcels with structures assessed less than \$10,000;

All vacant buildable land that is planned for residential use; and

All residential parcels that are three times the minimum allowable density where
the resultant polygon is 2.5 acres or greater in area that have the potential to be
subdivided further.

Exclusions:

Parcels of 5 acres or more which are assessed at \$250,000 and all parcels assessed
at \$750,000 or more.

Product: Buildable Residential Land, that is:

Acres of "vacant" residential land by City and UGA;

Acres of "underutilized" residential land by City and UGA;

Acres of vacant residential land by parcel size (5,000 to 20,000 square feet; 20,000
square feet to 1 acre; 1 acre to 2.5 acres; 2.5 to 5 acres; 5 to 10 acres; 10 or more
acres) by City and UGA.

¹ Critical aquifer areas are classified as Type 2 critical areas. However, due to the uncertainty of the boundaries, these areas are not utilized to determine if a parcel is buildable or not. These areas will be administered through the zoning and land division codes, placing limits on what can or cannot be developed within these areas.

Step 3.

From all lands remaining after Step 1, identify:

Vacant Commercial lands²--

Identify all vacant, buildable commercially planned land
Subtract all commercial-zoned parcels of land smaller than 2.5 acres and
Parcels with structures with an assessed value of more than \$50,000; and
Land that lacks full public services (500 feet or more from sewer).

Product:

Commercial Land Available for Development

Acres of "vacant" commercial land with structures valued at less than \$50,000;
Acres of vacant land by parcel size (5,000 to 20,000 square feet; 20,000 square
feet to 1 acre; 1 acre to 2.5 acres; 2.5 to 5 acres; 5 to 10 acres; 10 or more acres)
by City and UGA.

Step 4. (completed by CREDC and Clark County) From all lands remaining after Step 1,
identify:

Vacant Industrial lands³

Include all vacant land with structures valued at less than \$50,000;
Identify all vacant, buildable, industrially planned land; and
Subtract all industrial parcels of fewer than five acres.

The remaining land was ranked as follows:

Primary industrial land has the following characteristics:

- immediate access to arterial streets;
- availability of sewer within 500 feet;
- location within an urban service area;
- little or no critical areas; and
- slopes less than 8 percent.

Secondary industrial land has the following characteristics:

- sewer available but more than 500 feet from parcel;
- slopes between 8 and 15 percent;
- critical Type 2 coverage on the site; and

² Commercial land: rural, neighborhood, convenience, community, limited, regional, highway, freeway, downtown, Central Business District, tourist, general, downtown business district, employment center, special opportunity, and historic concern.

³ Industrial land: office park; light and heavy industry; industrial park; light, medium, and heavy industry and business park; and general industry.

parcel smaller than 10 acres.

Tertiary industrial land has the following characteristics:

critical Type 1 areas on the parcel;

slopes greater than 15 percent; and

located outside of an urban service area.

Product:

Industrial Land Available for Development

Acres of vacant industrial land by City and UGA

Acres of vacant land by parcel size (5 to 10 acres; 10 or more acres) by
City and UGA.