

CITY OF VANCOUVER COMPREHENSIVE PLAN IMPLEMENTATION MONITORING REPORT FOR 2003 and 2004

December 2005



INDEX

1. Population and Jobs Totals.....	Page 4
2. Land Consumption.....	Page 5
3. Development Activity.....	Page 6
4. Housing Densities.....	Page 8
5. Retail Sales and Assessed Property Value Per Capita.....	Page 9
6. Housing Prices.....	Page 10
7. Capital Facilities Plan Implementation.....	Page 11
8. Development in Critical Areas.....	Page 12
9. Annexation Activity.....	Page 13
10. Development on Vacant and Underutilized Land.....	Page 14
11. Infrastructure.....	Page 15
12. Employment Densities.....	Page 16
13. Redevelopment.....	Page 17
14. Restrictive Covenants.....	Page 18

KEY TERMS:

Geographic Information Systems (GIS) Computer software used to draw maps and make tabulations of spatial areas.

Growth Management Act (GMA). State legislation establishing requirements for local land use planning.

Tidemark. Software used by Vancouver and Clark County for tracking development permits

Vacant Buildable Lands Model (VBLM). The analysis used by Clark County to determine the amount of land needed to accommodate future growth forecasts.

Vancouver Urban Growth Area (VUGA). The area around the City of Vancouver in which urban growth can occur. UGAs are established by Clark County, and must contain sufficient land for 20-years growth at the time of establishment. These areas are anticipated to be annexed over the 20-year plan period.

In May 2004 the City of Vancouver adopted its first complete update of its Comprehensive Plan, providing policy guidance for how Vancouver grows and provides services through 2023. This is the first report of how development under the plan is occurring on the ground. The report measures a series of basic, quantifiable indicators in the City of Vancouver and Vancouver Urban Growth Area, and tracks how they are changing each year. The indicators were chosen to provide a quick way of gauging how well original plans and estimates for how and where growth would or should occur are faring. This report will be provided to Clark County to meet GMA requirements for monitoring, as well as used to size UGA boundaries.

Because this is the first monitoring report covering less than two years, it is difficult to discern trends. Since most of the lands added to the Vancouver UGA in 2004 carry Urban Holding zoning which prevents immediate urbanization, less change has occurred than would otherwise be expected. This report establishes a baseline and format for monitoring trends in the future.

Where possible, the indicators are tracked in five different geographic areas: the City of Vancouver, the Vancouver Urban Growth Area (VUGA), and three smaller sample areas located within city limits or the VUGA. In order to be consistent, the City limits boundary for this report was defined as of December 31, 2004, and the VUGA boundary was defined as of September, 2004, prior to the adoption of the County Comprehensive Plan. The sample areas include 3 square miles along SE Mill Plain Avenue (T2NR2E sections 34, 35, 36), 3 square miles along NE 117th Avenue (T2NR2E sections 3 and 10, and T3R2, section 34), and 2 square miles along I-5 in the Hazel Dell area (T3NR1E sections 34, 35). Figure 1 is a map showing the reporting areas.

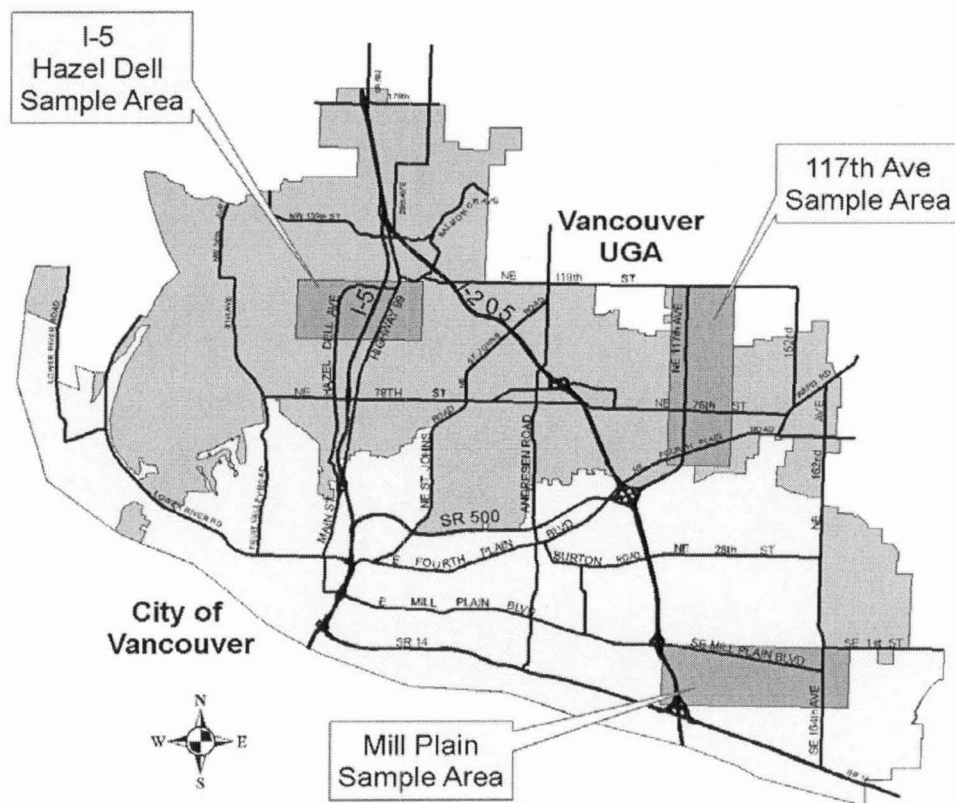


Figure 1. Monitoring study areas

1. POPULATION AND JOBS TOTALS

Indicator: Estimated total population and jobs

Why track it? Tracking the number of people living and working in a community is a fundamental measure of how fast it is growing and what its land needs are. Comparing the population to the number of jobs is one indication of how well land uses are balanced.

How the data was collected: Official population estimates for all cities and counties in the state are produced annually as of April 1 by the Washington Office of Financial Management (OFM). Population estimates for the unincorporated Vancouver UGA and the sample areas were developed by Clark County GIS, based on the OFM estimates and local development information. Employment estimates were informally provided by the local office of the Washington Department of Employment Security (ESD), based on interpolations of Clark County jobs totals covered by state employment insurance. The number of countywide "covered" jobs within the City of Vancouver and the VUGA are then estimated by Clark County GIS. Further estimates of "non-covered" full time employment (such as self employed, sales or construction, or corporate officers) are then added to arrive at the estimated total. A similar method was used to estimate existing jobs in the Vancouver Comprehensive Plan.

What the data says:

Table 1a. December 31, 2004 estimated population and employment

	City of Vancouver	Unincorporated Vancouver UGA	Mill Plain sample area	117 th Avenue sample area	I-5/Hazel Dell sample area
Population	154,400	120,876	16,289	7,522	7,703
Employment	85,977	In Process	In Process	In Process	In Process

Note: 2004 employment data has not yet been released by State.

Table 1b. Comparison of annual population growth rates

	2004	Annual Average, 2000-05
City of Vancouver	1.3%	1.5%
Clark County	2.1%	2.5%
Washington State	1.4%	1.2%

Observations: Estimated population in the City of Vancouver increased 1.3% during calendar year 2004, and 1.4% in 2003. Vancouver population growth was slower than Clark County as a whole, probably in part because limited supplies of vacant land within city limits means most growth results from infill and redevelopment. Estimated employment in Vancouver grew more rapidly than population, increasing approximately 2.5% in 2004 and 2.4% in 2003. 2004 employment data for the Vancouver UGA and study areas will be provided as it becomes available from ESD, and geocoded to specific subareas by Clark County.

The Vancouver Comprehensive Plan does not project annual growth rates for individual years, but does anticipate that over the full 20-year period, annual growth will average 0.8% per year for population and 1.6% for employment, with faster growth in the early years of the plan. Growth rates are highly influenced by the amount of available land, so future annexations may increase growth.

2. LAND CONSUMPTION

Indicator: Estimated amount of land consumed by development

Why track it? Determining how much land is available for development and how rapidly it is being consumed provides a way of estimating whether there is sufficient capacity for future growth, and whether original assumptions about land needs are correct. GMA requires that at least every 10 years, Urban Growth Area boundaries must be resized to accommodate the next 20 years of growth.

How the data was collected: Clark County GIS information was used to compare the total amount of land zoned for residential, commercial, and industrial purposes and also classified as vacant or underutilized (and thus assumed available for development) on January 1, 2003, and again on December 31, 2004. The difference between the two provides an indication of how much land has been consumed. Since the County methodology for determining available land has changed, the comparison was done twice, once using the 2005 Vacant Buildable Lands Model (VBLM) assumptions, and once using the 2004 assumptions.

What the data says:

Table 2a. Land consumed in 2003 and 2004 (new VBLM assumptions)

	City of Vancouver		Unincorporated Vancouver UGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Residential	636.5	27%	1566	20%	49	62%	35	19%	15	18%
Commercial	132.9	22%	340.3	17%	26	17%	15	26%	20	9%
Industrial	416.4	16%	548.1	12%	22	49%	1	48%	18	7%

Table 2b. Land consumed in 2003 and 2004 (old VBLM assumptions)

	City of Vancouver		Unincorporated Vancouver UGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Residential	659.8	27%	1633	20%	42	60%	36	20%	15	18%
Commercial	114.8	19%	376.6	22%	11	8%	15	26%	41	21%
Industrial	365.5	16%	677.4	18%	24	53%	1	48%	29	14%

Observations: The data indicates that approximately 300 acres of residential land in the City of Vancouver and 800 acres in the VUGA were consumed each year over the 2-year period examined. The higher consumption in the unincorporated VUGA is probably due to larger supplies of vacant land where most growth within the City is infill or redevelopment. Commercial and industrial rates of land consumption are slightly less than that of residential land. Higher land absorption rates are expected in the early years of the plan, with roughly half the available land absorbed in the first six years of the twenty year period. Rates of infill and redevelopment are expected to increase over the life of the plan, consistent with changing demand due to the aging of the population. Land consumption is consistent with planning timeframes, since state law requires the City and County to revisit UGA boundaries at least every 10 years.

3. DEVELOPMENT ACTIVITY

Indicator: Volume and location of residential, commercial and industrial development activity

Why track it? The amount and type of local development provides an indication of how Vancouver is growing and changing over time, and how fast. Mapping the locations of development activity indicates where growth is concentrated.

How the data was collected: Approved building permits for new residential, commercial and industrial building construction and demolitions were obtained from Vancouver and Clark County's Tidemark permit tracking software. Estimated square footage and construction valuation for the permit approval was also obtained from Tidemark. The construction valuation totals are taken from estimates made for the purpose of permit review, and may understate total construction investment.

What the data says:

Table 3. Building Permit Activity (new or expanded buildings only, not including remodels, alterations, or tenant improvements)

	Number of Permits		Units/square feet		Estimated Value	
	2003	2004	2003	2004	2003	2004
City of Vancouver						
Single Family Residential	397	354	397	354	\$44.2m	\$40.2m
Duplex & Multi-family	183	138	713 units	491 units	\$49.4m	\$46.1m
Mobile homes	17	13	17	13	\$0.13m	\$0.06m
Commercial and government	42	16	659,666 s.f.	387,517 s.f.	\$65.3m	\$28.7m
Industrial	13	2	160,407 s.f.	7,392 s.f.	\$5.1m	\$0.2m
Demolition (all types)	89	105	-	-	\$0.7m	\$0.6m
Vancouver UGA						
Single Family Residential	1144	1317	1144	1317	\$148.0m	\$167.5m
Duplex & Multi-family	63	187	233 units	359 units	\$18.1m	\$32.5m
Mobile homes	13	23	13	23	\$0.4m	\$0.5m
Commercial and government	43	22	1,834,346 s.f.	291,333 s.f.	\$118.8	\$18.0m
Industrial	13	8	158,672 s.f.	75,651 s.f.	\$5.0m	\$2.4m
Demolition (all types)	51	37	-	-	\$.06m	\$0.3m

Observations: Table 3 shows a slight decline in single family housing over the past two years, with more fluctuation in multi-family activity. Commercial, government, and industrial activity showed a substantial decrease. The table also illustrates how the City of Vancouver has lower volumes of single family residential development than the unincorporated VUGA, but higher levels of multi-family development. It also reveals more demolition activity in the City, which is consistent with a mature city with older housing that needs upgrade or replacement.

Figure 2 highlights the locations of development activity in the City of Vancouver and the Vancouver UGA.

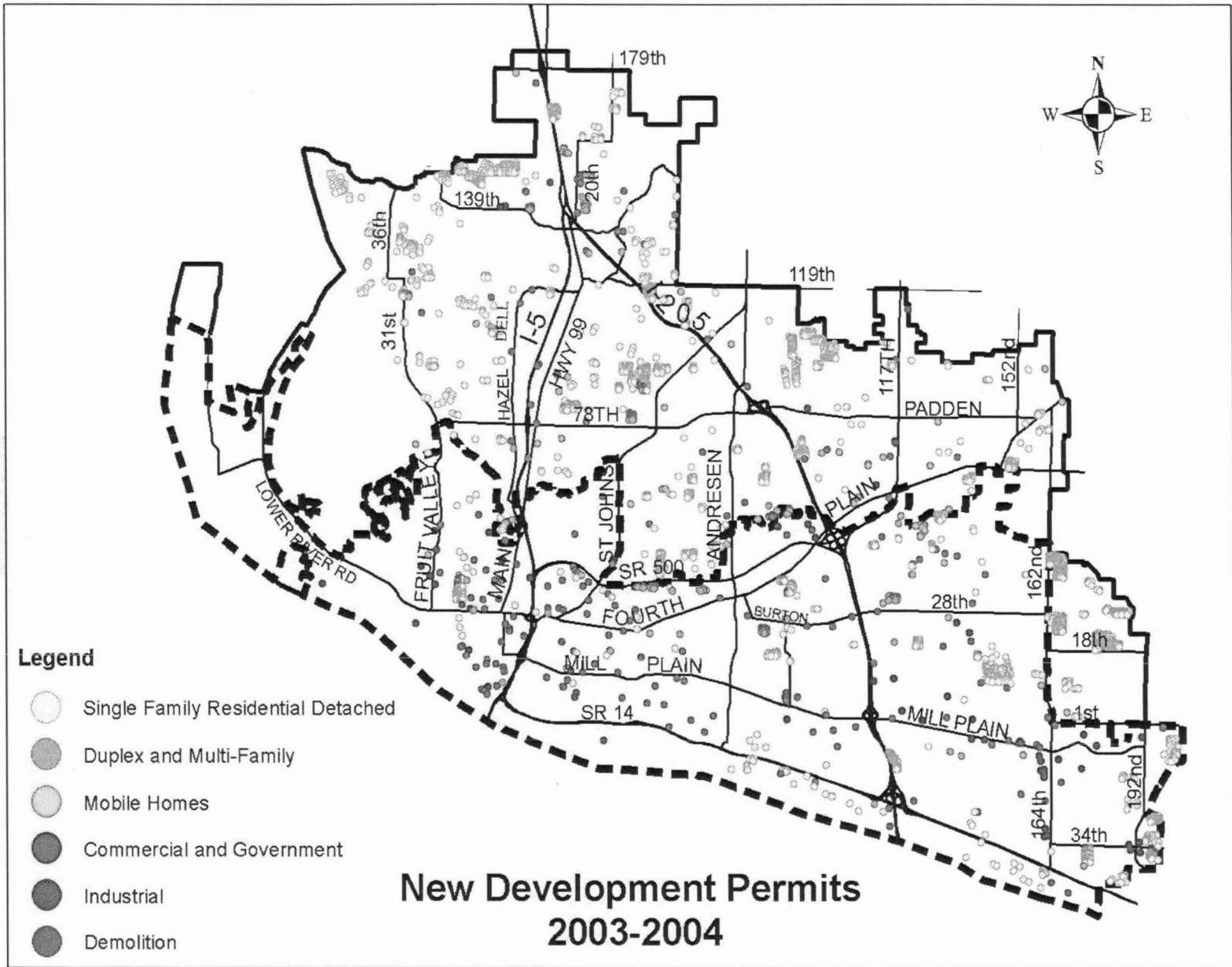


Figure 2. Locations of new development activity

4. HOUSING DENSITIES

Indicator: The number of housing units per acre of land, and ratio of single family to multi-family units.

Why track it? The type and density of housing shows how efficiently new land is used to accommodate population growth. The Community Framework Plan that was jointly adopted by all local jurisdictions has a goal that Vancouver and the VUGA average 8 units or more per net acre, and that no one housing type account for more than 75% of new units built. The intent of this goal is to provide a range of housing types suitable for variety of households, lifestyles, and income levels.

How the data was collected: County Assessor data was used to determine the number and size of properties with single and multi-family developments that were built in 2003 and 2004, and average densities were calculated. Attached single family development, duplex and town homes were classified as multi-family for this analysis. Mobile home placements and other impermanent developments were not counted in this analysis.

What the data says:

Table 4. Density of new residential development built in 2003 and 2004

	City of Vancouver			Unincorporated Vancouver UGA			Mill Plain sample area			117 th Avenue sample area			I-5/Hazel Dell sample area		
	Units	Acres	Units/Acre	Units	Acres	Units/Acre	Units	Acres	Units/Acre	Units	Acres	Units/acre	Units	Acres	Units/acre
Single Family	652	130	5.0	2422	404.7	6.0	37	7.0	5.3	32	10.2	2.9	54	15.4	3.5
Multi-Family	1323	86.3	15.3	483	49.4	9.8	259	11.1	23.3	0	0	0	0	0	0
Total	1975	216.3	9.1	2905	454.1	6.4	296	18.1	16.3	32	10.2	2.9	54	15.4	3.5

Observations: The data shows that new housing is being developed more densely in the City of Vancouver than the unincorporated Vancouver UGA, primarily because of the greater amounts of multi-family housing. Multi-family housing accounted for 67% of new units inside city limits, but only 17% of new units in the VUGA. Densities of multi-family housing were also greater within city limits. Interestingly, single family development in the city was less dense than in the unincorporated VUGA, possibly reflecting ongoing construction on previously established larger single family lots along the Columbia River and in eastern Vancouver. All reported densities are net, and do not count roads or other publicly owned lands.

Taken together, new development in the City and VUGA averaged 7.3 units per acre, which is below the Community Framework Plan density goal for new development of at least 8 per net acre. Single-family development accounted for 63% of units constructed, and multi-family development 37%, which meets the Framework Plan goal of no more than 75% of units devoted to one housing type.

5. RETAIL SALES AND ASSESSED PROPERTY VALUE PER CAPITA

Indicator: Total taxable retail sales per person, and assessed property value per person.

Why track it? Retail sales and assessed property value per capita are indicators of the fiscal health of a community and the availability of funding to pay for services.

How the data was collected: Total retail sales for calendar years 2003 and 2004 were obtained from the Washington Department of Revenue. Total assessed property values for local jurisdictions were obtained from County Assessor data, and state valuation data was obtained from the Department of Revenue. Population estimates for per capita calculations were obtained from Washington OFM. The real change estimate was based on a 2004 inflation rate of 1.4% from University of Washington data.

What the data says:

Table 5a. Taxable retail sales per capita

	2003	2004	Change	Real Change (no inflation)
City of Vancouver	\$13,657	\$14,650	+7%	+6%
City of Battle Ground	\$11,757	\$10,904	-7%	-9%
City of Camas	\$9,108	\$8,722	-4%	-6%
Clark County	\$10,002	\$10,601	+6%	+5%
Washington State	\$14,301	\$15,034	+5%	+4%

Table 5b. Total assessed property value per capita

	2003	2004	Change	Real Change (no inflation)
City of Vancouver	\$67,935	\$71,544	+5%	+4%
City of Battle Ground	\$58,690	\$59,209	+1%	0%
City of Camas	\$155,248	\$148,952	-4%	-5%
Clark County	\$74,361	\$78,081	+5%	+4%
Washington State	\$87,998	NA	-	-

Observations: The data shows significant growth for the City of Vancouver in retail sales and assessed value per person. This may reflect a range of factors, including gradual recovery from a national recession, and extensive recent retail and office development, particularly in east Vancouver. Vancouver as a larger, centralized city with more freeway access had higher retail sales levels per capita than Battle Ground or Camas. Camas had much higher assessed valuation per capita because of its large industrial base relative to its population. Interestingly, both Battle Ground and Camas showed a decline in retail sales per capita, which probably resulted from high population growth levels rather than business closures.

6. HOUSING PRICE

Indicator: Median sales price of single family homes, and ratio of housing prices to income

Why track it? The cost of housing is a measure of economic activity, and when compared to incomes, an indicator of livability. The price of single family housing is an indicator of the ability of individuals and families to invest in their communities and personal futures. Provision of affordable housing is a goal of the Vancouver Comprehensive Plan.

How the data was collected: Median housing prices were estimated by Vancouver Planning and GIS staff from County Assessor data of all recorded sales of new or existing single family residential properties that occurred throughout calendar years 2003 and 2004. Vacant lands and lands with sales values below \$1500 were not counted. New home sales were those in which the home was built in the year of or the year before the sale. All other sales were considered to be sales of existing homes.

What the data says:

Table 6a. Median detached single family home sales price (new and existing)

	City of Vancouver	VUGA	Mill Plain sample area	117 th Avenue Sample area	I-5/Hazel Dell sample area
2003	\$154,800	\$169,540	\$157,000	\$136,500	\$154,000
2004	\$169,500	\$188,600	\$177,000	\$160,000	\$197,500

Estimated 2004 City of Vancouver median household income: \$46,189 (*ESRIBIS*)
 Estimated percentage of median income relative to median housing: 27.2%

Table 6b. Comparison of new and existing detached single family home sales in 2004

	New homes		Existing homes	
	City	VUGA	City	VUGA
Median price	\$210,000	\$210,000	\$168,000	\$180,000
Median house size	3,347 sqft.	2,656 sqft.	1,888 sqft.	2,150 sqft.
Median lot size	8,438 sqft.	5,732 sqft.	7,749 sqft.	8,560 sqft.

Table 6c. Single-family attached and condominium sales in 2004 (new and existing)

	Single-family attached dwellings		Condominiums	
	City	VUGA	City	VUGA
Median price	\$149,100	\$170,600	\$139,900	\$122,900
Median building size	1,474 sqft.	1,657 sqft.	1,164 sqft.	1,415 sqft.

Observations: Housing prices are clearly increasing rapidly throughout Vancouver, as they are in other areas. Median 2004 prices increased 9.5% in the City of Vancouver from 2003, and 11% in the VUGA. Incomes have risen as rapidly, and overall housing affordability has worsened somewhat. In 2000 median Vancouver household incomes represented 29% of the median housing price, and by 2004 this figure had fallen to 27%. U.S Department of Housing and Urban Development (HUD) guidelines consider levels less than 33% to be a hardship for low and moderate income individuals.

A comparison of new and existing housing prices is not encouraging, revealing that newly built homes are on average significantly more expensive than existing housing. Some of this is likely due to the larger size of the new homes. Interestingly, new home sales in the VUGA show a significant trend towards smaller lot sizes, but this has not yet resulted in more stable prices.

7. CAPITAL FACILITIES PLAN IMPLEMENTATION

Indicator: Actual expenditures on long term capital facilities plans adopted in 2004.

Why track it? Capital facilities plans under GMA list the individual capital projects, projected costs and funding sources needed to support growth planned over the first six years of the land use plan, and in less detail over the full 20-year planning period. Determining how many of the originally identified road, utility, school or other projects have been built, and at what cost, is one measure of how well services are keeping up with growth. Capital facilities include fixed infrastructure such as buildings, roads, utility lines, and parks. They do not include mobile equipment, salaries, or benefits.

How the data was collected: Individual service providers submitted data on recent expenditures and contracting of capital projects, which was then compared to the previously planned capital facilities summarized in the adopted Comprehensive Plan, Table 5-2.

Table 7. Planned and actual capital facilities expenditures

Service	Projected 2003-09 Capital Projects and Costs	Actual Expenditures and Contracts in 2004
Transportation	\$187,907,500 <ul style="list-style-type: none"> • 2004 projects - \$64,008,000 • Streets and intersections - \$111,832,000 • Pedestrian projects - \$8,522,500 • Bicycle projects - \$3,545,000 	\$21,909,000 (Estimated)
Water	\$42,537,000 <ul style="list-style-type: none"> • Water station projects • Distribution mains • Transmission mains SCIP • Roadway coordination projects 	\$7,807,000 (\$5,895,000 roadway projects, \$1,590,000 distribution mains, \$322,000 water station projects)
Sanitary Sewer	\$31,983,000 <ul style="list-style-type: none"> • Septic tank elimination • System enhancements 	\$5,728,214 (Roadway coordination, pump station program, system enhancement, sewer connection incentives)
Stormwater	\$12,030,000 <ul style="list-style-type: none"> • Regional facilities 	\$1,000,000 (est.) Burnt Bridge Creek Regional Wetland Bank & Greenway
Parks	\$52,901,000 <ul style="list-style-type: none"> • Community Parks - \$7,984,000 • Neighborhood Parks - \$9,713,000 • Urban Open Space - \$1,365,000 • Trails - \$12,789,000 • Community Centers - \$21,050,000 	Data in progress
Fire & EMS	\$9,338,554 <ul style="list-style-type: none"> • Major facility maintenance, remodels, and vehicle replacement - \$2,938,554 • New Stations - \$6,400,000 	\$2,828,714 (Major facilities, remodels, replacement \$1,138,713, new station \$1,690,000)
Police	\$24,350,000 <ul style="list-style-type: none"> • New or remodeled facilities, including land acquisition 	\$7,000,000 (East Precinct)
General Government	\$8,382,804 <ul style="list-style-type: none"> • Operations facility expansion and satellite operations center - \$3,882,804 • Major maintenance of existing City buildings and offices - \$4,500,000 	\$4,200,000 (East Operations Center)
Solid Waste	No capital expenses	None

8. DEVELOPMENT IN CRITICAL AREAS

Indicator: Percentage of total development that occurs in designated environmentally critical areas. In Vancouver these include wetlands, fish and wildlife habitat areas, frequently flooded areas, geologically hazardous areas, and aquifer recharge areas.

Why track it? Tracking development in critical lands provides an indicator of impacts from growth to the environment, and can be used to test assumptions used in sizing Urban Growth Areas, and the general effectiveness of environmental protection measures. Current UGA boundaries were established in 2004 assuming that 10% of future growth would occur on designated critical lands.

How the data was collected: Clark County GIS compared vacant and underutilized land inventories in 2003 and 2004, and determined the amount of development that occurred, and the amount of that development that occurred in designated critical areas. In 2005, the way critical areas are mapped and identified changed, so the analysis uses both the old and newer methods.

What the data says:

Table 8a. Development on critical lands in 2003 and 2004 (new VBLM assumptions)

Zoning type	City of Vancouver		Unincorporated Vancouver UGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Residential	124	19%	319	20%	1	2%	8	22%	4	26%
Commercial	22	16%	90	26%	0	0%	5	35%	0	0%
Industrial	172	41%	298	37%	0	0%	0	0%	1	5%

Table 8b. Development on critical lands in 2003 and 2004 (old VBLM assumptions)

Zoning type	City of Vancouver		Unincorporated Vancouver UGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Residential	137	20%	355	22%	1	2%	8	22%	0	0%
Commercial	22	19%	97	26%	0	0%	5	35%	0	0%
Industrial	121	33%	239	35%	0	0%	0	0%	2	6%

Observations: The data confirms that substantial portions of recent development have occurred on critical lands. In both Vancouver city limits and the VUGA, roughly 20% of residential and commercial development during 2003 and 2004 occurred on designated critical lands. Some development is expected in critical areas, as local land use regulations may allow development in the less sensitive portions of critical lands as a trade-off for replanting of vegetation or other measures which maintain the overall environmental function of the site.

The data also suggest that assumptions used to size urban boundaries did not fully account for the level of critical lands development. Assumptions used in the 2004 Comprehensive Plan projected that only 10% of total development would occur in critical areas. Clark County has recently revised its assumptions to project that portions of critical land (50% of residential and industrially zoned critical land, and 80% of commercial) will be available for development.

9. ANNEXATION ACTIVITY

Indicator: Total and type of new lands annexed to the City of Vancouver.

Why track it? Annexation is a means for unincorporated urban areas to transfer to municipal governance and services as they are developed. Annexation is encouraged by the Growth Management Act, by the Community Framework Plan adopted by all local jurisdictions, and by the Vancouver Comprehensive Plan. Vancouver annexation priorities are specified in the 10-Year Annexation Blueprint, which was last amended in 1997 and will be further updated once Vancouver UGA boundaries are finalized. Under state law annexations require local support, typically through an election or signing of petitions.

How the data was collected: Vancouver staff assembled from annexation requests.

What the data says: Three annexations occurred in Vancouver in 2004, as summarized in Table 9.

Table 9. Annexation summary

Annexations Completed	Size (acres)	Additional population (at time of annexation)	Method of Approval	Level of Support
Columbia Tech Center Phase 4 (1/04, Ordinance #M-3640)	80	0	Double majority (simple majority of qualified voters, and of local landowners as represented by total acreage)	100% property owner support (there were no residents)
Birtcher (1/04, Ordinance #M-3641)	218	1	Double majority	100% property owner and resident support
English Ridge (11/04, Ordinance #M-3668).	50	153	Petition (signatures of owner of at least 75% of area property values)	100% property owner support (support from residents is not collected for petition method)

10. DEVELOPMENT ON VACANT AND UNDERUTILIZED LAND

Indicator: Estimated rate of conversion of identified vacant and underutilized land.

Why track it? The rate that land assumed to be available is built upon is an important assumption used in establishing urban growth boundaries. The 2004 Clark County Comprehensive Plan assumed that 90% of vacant land and 70% of underutilized land would develop over 20 years. Vacant lands were defined as residential properties with no buildings, or buildings valued at less than \$13,000. Underutilized lands were identified as properties of 1 to 2.5 acres with buildings valued at less than \$325,000, or properties of 2.5 to 7 acres with buildings valued at less than \$520,000, or larger properties with buildings valued at less than \$975,000.

How the data was collected: Clark County GIS data was used to compare the amount of vacant and underutilized land in January 1, 2003, and the resulting amount that was built on by December 31, 2004. As with the land consumption indicator in this report, the comparison was done twice, using both the old and new County Vacant Buildable Lands Model (VBLM) assumptions.

What the data says:

Table 10a. Percentage of available land consumed in 2003 and 2004 (new VBLM assumptions)

	City of Vancouver		Unincorporated VUGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Vacant	Under.	Vacant	Under.	Vacant	Under.	Vacant	Under.	Vacant	Under.
Residential	34%	24%	30%	15%	65%	50%	23%	14%	26%	3.5%
Commercial	18%	20%	17%	15%	8%	93%	22%	0%	0.5%	0%
Industrial	29%	-	17%	-	49%	-	50%	-	8%	-

Table 10b. Percentage of available land consumed in 2003 and 2004 (old VBLM assumptions)

	City of Vancouver		Unincorporated VUGA		Mill Plain sample area		117 th Avenue sample area		I-5/Hazel Dell sample area	
	Vacant	Under.	Vacant	Under.	Vacant	Under.	Vacant	Under.	Vacant	Under.
Residential	34%	23%	31%	14%	58%	58%	24%	16%	26%	4%
Commercial	18%	20%	21%	10%	8%	0%	22%	0%	20%	0%
Industrial	39%	-	29%	-	51%	-	50%	-	13%	-

Observations: The data indicate that land classified as vacant and underutilized land at the beginning of 2003 was consumed at a relatively rapid rate in 2003 and 2004. In Vancouver, approximately 1/3 to 1/4 of available residential land was consumed in the two year period, along with approximately 1/5 of commercial lands and 1/3 of industrial lands. Consumption rates in the Vancouver UGA were generally similar.

Comparing the observed 2-year consumption rates with the 20-year assumptions used to size urban growth areas is problematic, since the time frame is short. In addition, the amount of land available in 2003 upon which the 2-year consumption rates are based has already been reduced by development that was approved from 1994 to 2002. Even accounting for these factors, the 2-year observations if continued over the longer term would result in 20-year consumption rates above 100% for all categories of vacant lands, and from 95% to over 100% for underutilized lands.

This data is similar to that used to assess land consumption rates on page 5 of this report. That information showed that if consumption rates observed over the last two years continue without greater levels of redevelopment, total new land supplies will be depleted before 20 years time. However, since state law requires UGAs to be updated at least every 10 years and sooner if needed, land supplies are within planning timeframes. The data in this analysis more specifically suggests that the County VBLM assumptions of how much of the available land will convert (90% of vacant land and 70% of underutilized land will develop over 20 years) may be too low.

11. LAND USED FOR INFRASTRUCTURE

Indicator: Infrastructure land as a proportion of total development

Why track it? Land used for infrastructure is not available for use for housing or employment development. There has been a lot of discussion about what percentage of total acreage should we assume will go to infrastructure when sizing 20-year Urban Growth Areas.

How the data was collected: City GIS staff catalogued all land uses in three areas selected as representative of developing parts of Vancouver and the VUGA, using classifications in the 2005 County tax assessor data. Critical lands were then excluded, to be consistent with countywide UGA-sizing analysis (VBLM) which deducts critical lands before considering infrastructure needs. Vacant and underutilized lands were also excluded to avoid counting vacant or partially built areas where infrastructure may not be complete. The remaining total land was then divided by the total infrastructure identified in the assessor's data. "Infrastructure" was defined to include roads, parks, schools, cemeteries, churches, lodges, and common areas.

What the data says:

Table 11. Infrastructure land needs – base data

Type	East Mill Plain		117th Avenue		I-5/Hazel Dell	
	Acres	Percent	Acres	Percent	Acres	Percent
Cemetery	0.0	0.0%	4.7	0.4%	2.3	0.3%
Church or Lodge	24.5	1.4%	16.9	1.3%	11.7	1.3%
Common Area	52.3	2.9%	3.7	2.7%	3.4	2.7%
Park	25.4	1.4%	0.0	1.3%	0.0	1.3%
Road, Local	350.3	19.4%	157.9	18.2%	151.9	18.2%
Road, Private	1.2	0.1%	0.0	0.1%	0.0	0.1%
Road, State	45.5	2.5%	72.2	2.4%	19.7	2.4%
School	88.4	4.9%	55.0	4.6%	46.8	4.6%
Government	7.2	0.4%	66.1	0.4%	8.7	0.4%
Commercial	273.9	15.1%	118.3	14.3%	42.9	14.3%
Mining	0.0	0.0%	69.9	6.3%	0.0	0.0%
Group Housing	14.3	0.8%	0.0	0.7%	0.0	0.7%
Industrial	62.7	3.5%	176.6	3.3%	10.1	3.3%
Multi Family	287.8	15.9%	66.5	15.0%	51.5	15.0%
Single Family	576.7	31.9%	294.8	30.0%	403.5	30.0%
Grand Total	1809.9		1102.6		752.5	
Total acres	1809.9		1102.6		752.5	
Total infrastructure	587.4	32.5%	310.4	28.2%	235.8	31.3%
Average, all sample areas						30.6%

Observations: Infrastructure accounted for an average of 30.6% of developed land in the three sample areas in 2005. Specific results were 32.5% in the East Mill Plain area, 28.2% in the 117th Avenue area, and 31.3% in the I-5/Hazel Dell area. The results from the sample areas are consistent with each other, and several other studies, suggesting they are probably a reasonable approximation for the extent of infrastructure land needs for the full urban area as it is built out. A 2002 Vancouver analysis of two sample areas found an average of 29%, and in 2005 Clark County GIS found that infrastructure countywide accounted for 27%.

The samples used for the analysis in this report include near off-site infrastructure facilities such as schools and neighborhood parks, but do not include more remote off-site infrastructure such as regional parks and

sewer treatment plants. It has been argued that the samples under-represent the total land needed for infrastructure to support development. However, this is offset by the inclusion of larger state roads and major local arterials in these samples – facilities that serve the region, not just the sample areas.

12. EMPLOYMENT DENSITIES

Indicator: Average employees per net acre of commercial and industrial development

Why track it? Employment densities are a measure of how efficiently land supplies are able to support economic development, one of the base goals of the Vancouver Comprehensive Plan. Estimated employment densities are also an important assumption used to size urban growth area boundaries to accommodate future growth.

How the data was collected: Annually, Clark County GIS staff geocodes employment inventory data provided by the Washington Employment Security Department (ESD) to determine job totals at individual locations. County staff determined job totals within the three sample areas, and compared this with parcel sizes to estimate densities. Only properties identified as built by the County Vacant and Buildable Lands Model (VBLM) were counted, to avoid including underutilized, vacant, or partially developed properties. Data was only available for 2003, so the analysis is preliminary at this point.

Table 12. Average employees per net acre on developed properties, 2003

	Mill Plain sample area			117 th Avenue sample area			I-5/Hazel Dell sample area			Total from sample areas
	Jobs	Acres	Jobs/Acre	Jobs	Acres	Jobs/Acre	Jobs	Acres	Jobs/Acre	
Commercial	4174	241.7	17.3	1861	148.1	12.6	563	48.6	11.6	15.0 jobs per acre
Industrial	1036	81.8	12.7	1647	145.9	11.3	22	1.9	11.6	11.8 jobs per acre

Observations: The data indicates that average jobs per commercially zoned acre within the three sample areas are lower than previous area-wide analysis, perhaps due to the developing nature of the areas. The 2002 Clark County Buildable Lands Report indicated density levels of 24 employees per gross acre on commercial land and 11 on industrial land throughout the Vancouver UGA. Vancouver staff is in the process of establishing a formal agreement with Washington ESD to secure access to employment data allowing for updated citywide and UGA wide analysis.

13. REDEVELOPMENT ACTIVITY

Indicator: Percent of land shown as developed that is then redeveloped.

Why track it? Redevelopment is an indicator of economic vibrancy and investment in established urban areas. Assumptions about long term residential and non-residential redevelopment are used to size urban growth boundaries, and tracking redevelopment can test the accuracy of those assumptions over time.

How the data was collected: City staff reviewed 2002 county vacant lands data to determine which properties were considered built at the start of 2003, and then reviewed city and county permitting records from Tidemark data for 2003 and 2004 to determine which of the built properties had experienced additional development involving new or added residential units or non-residential floor space.

What the data says:

Table 13. Percentage of built properties redeveloped, 2003 and 2004

	City of Vancouver			Vancouver UGA		
	Acres built January 2003	Acres redeveloped in 2003 and 2004	2-year rate of redevelopment activity	Acres built January 2003	Acres redeveloped in 2003 and 2004	2-year rate of redevelopment activity
Single-family Residential	6874	12	0.2%	7068	17	0.2%
Multi-family Residential	592	9.5	1.6%	173	2	1.2%
Non-Residential (Commercial, office, industrial, or institutional)	2981	271.8	9.1%	2308	231.7	10.0%

Observations:

The data showed similar rates of redevelopment activity in the City of Vancouver and the Vancouver UGA. As expected, existing single family residential areas showed more stability and less redevelopment activity than multi-family or non-residential areas. The table primarily reflects zoning designations, and reflects how much redevelopment occurred in lands originally zoned for single family, multi-family or the non-residential zones, whether or not the new development fit those categories. The data does not capture redevelopment that changes the use, such as Vancouver Center, where a commercial site was converted to residential apartments.

The data shows how frequently redevelopment has occurred in the past two years, not how much additional growth is added when redevelopment occurs, so comparisons with the current assumptions used to size UGAs are difficult. The above data also does not capture employment growth that occurs when buildings are internally filled with more employees without the need for structural tear-downs or expansions. Clark County currently assumes that 5% of total future population growth and 5% of total future employment growth will occur through redevelopment over the next 20 years. Vancouver's Comprehensive Plan assumes that 10% of future population growth, 25% of future commercial employment growth, and 10% of future industrial growth will occur through redevelopment. A more direct comparison will be possible when state employment data becomes available to Vancouver through an agreement currently being finalized.

14. IMPACT OF PRE-EXISTING COVENANTS

Indicator: Percent of available new residential land prevented from urbanization by pre-existing covenants.

Why track it? The potential of previously established restrictive covenants to limit the ability of lands in UGA expansion areas to develop at urban densities has been cited by some as a problem reducing the amount of effectively available land, and resulting in undersized urban growth areas.

How the data was collected: City GIS staff mapped lands brought into the Vancouver UGA as part of the 2004 expansion that are zoned for residential development and identified by the Clark County Vacant and Buildable Lands Model (VBLM) as vacant or underutilized. These lands were then examined to identify previously recorded land divisions, and County Auditor records were searched to determine the existence and terms of any restrictive covenants that applied.

What the data says:

Table 14. Pre-existing covenants applying to residential available land in 2004 VUGA expansion area

Plat Name	Plat #	Covenant #	Date	Is Future Redevison Prohibited?	Number of Lots	Total Lot Acres in Plat
Mountain View	G936	7811090268	9/29/1978	No	20	20.16
Fir View Slope	H420	8811220029	10/24/1988	No	12	3.08
Morning Meadows	H512	9001110132 9066190151	1/5/1990	Allowed	25	22.70
Katie's Hill	H274	8501290029	1/10/1983	No	6	20.00
Evergreen Acre Tracts	G411	G-551458	3/24/0971	No	28	27.51
Evergreen Acre Tracts – 2	G493	G-575914	5/28/1971	No	35	38.97
Morning Meadows Estates	310-801	3222245	3/21/2000	No	15	27.29
J.H. Wilson Tracts	F25	G-111202	7/29/1952	No	7	13.52
Berry Acres	C40	No number	12/8/1909	No	39	95.00
Short Plat	2-61	8407310001	7/24/1984	No	4	10.00
Short Plat	2-27	8311230064	9/21/1983	No	4	9.80
Short Plat	1-327	7806020075	5/2/1978	No	2	4.71
Short Plat	1-689	7912280027	10/15/1979	No	2	5.00
Short Plat	2-402	9001260136	12/26/1989	No	31	21.00
Short Plat	2-701	9209210377	9/27/1991	No	2	4.90
Short Plat	1-56	G754265	2/18/1977	No	1	1.76
Short Plat	1-663	7911130050	9/26/1979	No	4	4.40
Short Plat	2-291	8810250204	10/11/1988	No	2	4.81
Short Plat	1-670	7911200118	10/5/1979	No	3	4.75
Short Plat	1-118	G768321	5/9/1977	No	4	4.67
Short Plat	2-97	8508220009	8/9/1985	No	2	6
Short Plat	2-46	8405170128	5/9/1984	No	4	10
Short Plat	3-034	9510310172	10/23/1995	No	2	4.75
Short Plat	1-632	7908290159	8/23/1979	No	4	4.75
Short Plat	2-443	9006150230	5/25/1990	No	2	4.75
Short Plat	2-279	8808310008	8/24/1988	No	2	4.55
Short Plat	1-514	7903260147	11/29/1978	No	4	4.96
Short Plat	1-138	7707280118	7/21/1977	No	1	2.12
Short Plat	1-778	8009150126	8/28/1980	No	3	3.46
Short Plat	2-679	9207150129	6/26/1992	No	2	7.19
Short Plat	2-983	9506120108	6/5/1995	Yes, through 2000	2.	4.5
Total					274	401.0

Observations:

The data show that only 4.5 out of 401 acres (1%) of the land involved in recorded residential land divisions in the 2004 Vancouver UGA expansion area that was assumed to be developable had a restrictive covenant which prevented or hindered future land divisions at urban densities. Even in that case (Short Plat 2-983, the last one listed), the restriction expired in 2000 and is no longer applicable. An earlier study by Vancouver staff in 2003 of land divisions in and near the Vancouver UGA on which specific concerns had

been raised about future developability found that only 8 of 21 had restrictive language preventing redevelopment.

ADDITIONAL NOTES

1. Population and Jobs Totals: Vancouver year-end population based on straight line interpolation of OFM April 1 data. All other population estimates from Ken Pearrow. Employment data for City from Washington ESD Economist Scott Bailey. For future recommend working with Bailey to formalize his estimate methodology. Finalize contract with Washington ESD ensure future availability of state employment data.
2. Land Consumption: Data from Bob Pool based on County VBLM analysis. For future: Ensure future VBLM analysis is conducted at year end, and same assumptions are used at start and finish of monitoring period.
3. Development Activity: Building permit data from Tidemark listing of 2003 and 2004 approved permits (by permit number) for new development only (Tidemark census codes 213-327, not including additions, remodels, or tenant improvements). Tidemark data from Linda Devlin. Data sorting by Greg Newkirk and Bryan Snodgrass.
4. Housing Densities: County Assessor data of residential properties showing 2003 or 2004 year built status (even if a valuation had not yet been entered) were compiled for city limits and the VUGA. Assessor PT1 codes were used to determine single or multi-family housing type, with all attached housing, duplex, triplex, townhouse and apartments considered multi-family. Mobile homes were not included in single or multi-family data. Maps-on-line data was to clarify individual records where PT1 codes indicated land was vacant. Data sorting by Greg Newkirk and Bryan Snodgrass using Excel spreadsheets.
5. Retail Sales and Assessed Value: Retail sales for full calendar years 2003 and 2004 from WDR website. Population from OFM website. Inflation estimate based on UW data on Seattle inflation. Assessed property values obtained from Clancie Adams at County Assessor's office. 2004 tax data is from 04/05 period (04/05 is assessed in 2004, taxed in 2005).
6. Housing Price: Sorting of assessor data to determine median sales values by Bryan Snodgrass.
7. Capital Facilities Plan Implementation: Expenditure data from Phil Wuest (transportation), Tom Boyer (water) Don Skaggs (sewer) Annette Griffey (Stormwater) Ron Gibson (fire), Scott Moss (general government and police)
8. Development in Critical Areas: Data from Bob Pool based on VBLM analysis.
9. Annexation Activity: Summary provided by Suzan Wallace.
10. Development on Vacant and Underutilized Land: Data from Bob Pool based on VBLM analysis
11. Land Used for Infrastructure: Data from Greg Newkirk, based on County Assessor records. Cemeteries, churches/lodges, common areas, parks, roads, and schools counted as infrastructure.
12. Employment Densities: Data from Ken Pearrow, based on a geocoding of 2003 WESD data. Only businesses showing as built in the Clark County VBLM inventory, and having at least one job were counted.
13. Redevelopment: Data from Greg Newkirk based on City Tidemark permitting records.
14. Restrictive Covenants: Map data identifying recorded land divisions in VUGA expansion areas was provided by Greg Newkirk based on County Assessor data. Research of specific covenants applying to identified land divisions was conducted by Gary Albrecht using County Auditor records. Summary was completed by Bryan Snodgrass.
15. Base tables used for calculations for all indicators are stored on *I:/plan monitoring/2005PCReport/background tables*.