City of Nanaimo Land Inventory & Residential Capacity Analysis

Prepared for:

City of Nanaimo

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Prepared by:

Eric Vance & Associates
Planning and Management Consultants

Executive Summary

Background

The City of Nanaimo is currently conducting a review of its Official Community Plan (OCP), which was last updated and adopted in 1996 (also known as Plan Nanaimo). A key component of the OCP review is conducting a land inventory and capacity analysis associated with residential, commercial and industrial lands. This is an important building block of the OCP review process and will help the City better understand its current land supply, including the location of vacant land, remaining capacity, and its adequacy to meet projected demand.

This report contains:

- a residential land inventory and a residential capacity assessment by type of dwelling,
- a commercial land inventory, and
- an industrial land inventory.

The land inventory and capacity assessment were conducted under current OCP land use designations and existing zoning and other land use-related bylaws. It is therefore a base case land inventory and capacity assessment.

Residential Land Inventory and Capacity Assessment

There are currently 4,880 ha of land that is zoned for single-family residential, multi-family residential or rural agricultural / residential uses, excluding parks, roads, and road right-of-ways (Table 1). Of this, 2,876 ha are zoned for single-family uses, with 99% of that land located within the Urban Containment Boundary. There are 589 ha of multi-family zoned residential land and all of that land is located within the Urban Containment Boundary. There are 1,415 ha of rural agricultural / residential land with 87% of that land located outside the Urban Containment Boundary.

Table 1: Breakdown of Residentially Zoned Land by Urban Containment Subarea, Unconstrained

Urban Containment Boundary Subarea	Single-family Residential (ha)	Multi-family Residential (ha)	Rural Agricultural Residential (ha)	Total Area (ha)
Inside Urban Containment Boundary	2,848	589	190	3,627
Linley Valley (Outside UCB)	0	0	171	171
Rest of Outside UCB	28	0	1,054	1,082
TOTAL	**2,876**	**589**	**1,415**	**4,880**

Taking into account the water setbacks and slopes of 30% or greater (considered undevelopable in this study due to cost of servicing, building costs, and potential risk of slope failures), the amount of developable residentially zoned land is 4,036 ha. Therefore, 17% of the residentially zoned land is constrained. Of the land zoned for single-family residential or multi-family residential uses (excluding constrained land, and rural agricultural / residential uses), 348 ha is currently vacant land

and an additional 289 ha is effectively vacant[1]. Approximately 97% of the vacant land zoned for single-family and multi-family use is located within the Urban Containment Boundary. The subareas of Chase River, Diver Lake, Five Acres, Hammond Bay, Long Lake, North Slope, and Rutherford represent 70% of the vacant residential land zoned for single-family or multi-family uses. An additional 216 ha of land zoned for residential use is identified as underutilized.

In 2005, it is estimated that there were 32,400 dwelling units[2] in the city (excluding secondary suites) and BC Stats estimates that the population was 79,600. The residential capacity of the City's currently zoned land supply was estimated. A GIS-based Residential Build-out Model was developed for this purpose. This analysis removes from the capacity assessment land that is constrained, including riparian, lake, and wetland setback areas and slopes of 30% or greater. Calculations were conducted to estimate both the theoretical dwelling unit capacity as well as the practical dwelling unit capacity. The theoretical capacity is the maximum dwelling unit capacity if all developable lands were built out to their maximum allowable density. Under theoretical capacity, 68,200 dwelling units (excluding secondary suites) could be accommodated at build-out and an estimated 152,800 people (Table 2).

Table 2: Dwelling Units and Population, City of Nanaimo, 2005, Practical Capacity and Theoretical Capacity

City of Nanaimo	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	Total Population
2005 (estimate)	20,700	2,400	1,400	6,200	1,700	**32,400**	**79,600**
City share (2005) (%)	*63.9%*	*7.3%*	*4.3%*	*19.2%*	*5.3%*	***100.0%***	***N/A***
Total Practical Capacity	30,000	5,100	1,500	17,200	2,100	**55,900**	**124,500**
City Share (Capacity) (%)	*53.7%*	*9.1%*	*2.7%*	*30.7%*	*3.8%*	*100.0%*	***N/A***
Total Theoretical Capacity	36,800	7,100	2,300	19,900	2,100	**68,200**	**152,800**
City Share (Capacity) (%)	*53.9%*	*10.4%*	*3.4%*	*29.2%*	*3.1%*	*100.0%*	***N/A***

* Note: Total dwelling units excludes secondary suites; total population includes estimated population from suites

The practical capacity approach takes the existing dwelling units and adds capacity for new dwelling units only onto lands that were identified as vacant, effectively vacant, underutilized, or for mixed residential/commercial use. The practical capacity will always be lower than the theoretical capacity. Under practical capacity, 55,900 dwelling units (excluding secondary suites) and an estimated 124,500 people could be accommodated at build-out. The difference between the theoretical versus the practical capacity is 12,300 dwelling units. This difference indicates that many of the already residentially developed areas of the city have been built-out to much lower densities than that allowed under current zoning.

As the practical capacity is a more realistic and conservative estimate of the capacity in the city, it is used as the basis for calculating remaining capacity and for comparison with projected housing occupancy demand. Of the 55,900 units of practical capacity, there is zoned practical capacity for

[1] Effectively vacant residential land includes single-detached lots that are greater than 2 acres in size that are occupied by a dwelling unit, but where the density allowed by residential zoning is at least more than double the current density of the site.

[2] The dwelling unit estimate is primarily based on data from the BC Assessment Authority. Due to data gaps in the data source, it is believed that the number of apartment units is underestimated. Therefore the total number of dwelling units was likely higher than this estimate in 2005.

30,000 units of single-detached housing, 8,700 units of other ground-oriented units (including townhouses and mobile homes), and 17,200 units of apartments.

Based on an estimate of the existing dwelling units (2005) and the calculated practical capacity, there is remaining practical capacity in the city for 23,500 dwelling units. Almost half of the practical capacity is for apartment units, which represents 11,000 units of remaining capacity. There are an estimated 9,300 units of remaining capacity for single-detached units and 3,200 units of other ground-oriented units (including townhouses and mobile homes) (Table 3).

Table 3: Remaining Practical Capacity in City of Nanaimo by Structural Type (as of 2005)

City of Nanaimo	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings
Remaining Practical Capacity	*9,300*	*2,700*	*100*	*11,000*	*400*	***23,500***
City Share (%)	*39.6%*	*11.6%*	*0.5%*	*46.7%*	*1.7%*	*100.0%*

The total remaining practical capacity is located on lands that are identified as vacant, effectively vacant, underutilized, or in mixed residential / commercial areas as discussed in the methodology section.

Approximately 28% of the remaining practical capacity, or 6,600 units, are located on the 216 ha of land identified as underutilized. It is estimated that 35% of the remaining practical capacity, or 8,100 units, is located on the 348 ha of land that are identified as vacant. A further 22% of the remaining practical capacity, or 5,100 units, are located on the 292 ha of residentially zoned lands that are identified as effectively vacant. Lands zoned for A1, A2, or A3 uses (rural agricultural / residential) only comprise 2% of the remaining practical capacity in the city, or 450 units. There are also 3,400 units of remaining practical capacity located on lands that are identified as mixed residential / commercial, or 14% of the remaining practical capacity.

The practical capacity was compared with a recent housing occupancy demand projection for the city to determine the adequacy of the remaining capacity to accommodate projected housing demand. The housing demand projected by Urban Futures Incorporated (November 2006) was compared with the calculated practical residential capacity at build-out (Table 4). Urban Futures projects a housing demand of 53,300 dwelling units by 2031, which would accommodate a population of 118,000. In comparison, the capacity analysis found that there is practical capacity to accommodate approximately 60,400 dwelling units at build-out (55,900 units excluding suites).

Table 4: Comparison of Projected Housing Demand in 2031 with Practical Residential Capacity

Dwellings by Structural Type	Existing Units, 2005 (estimate*)	UFI Housing Occupancy Projection, 2031 (November 2006)	Practical Capacity at Build-out (Sheltair)	Remaining Practical Capacity as of 2005
Single-detached	20,700	31,600	30,000	9,300
Other ground-oriented (incl. townhouses and mobile homes)	5,500	10,500**	8,700	3,200
Secondary suites (estimate)	N/D	**	4,500	N/A
Apartment	6,200	11,300	17,200	11,000
TOTAL (excl. secondary suites)	32,400	**	55,900	23,500
TOTAL (incl. secondary suites)	**N/D**	**53,300****	**60,400**	**28,000**

* Estimate of existing units by Sheltair primarily based on BC Assessment Authority data

** Urban Futures did not explicitly account for suites other than the rates that would have been accounted for in the 2001 Census.

For single-detached units, Urban Futures estimates the housing demand to be 31,600 units in 2031. The practical capacity for single-detached units is estimated at 30,000 units. Therefore, the practical capacity falls short of housing demand in 2031 by approximately 1,600 units. Past development of lands zoned for single-detached use has occurred at densities much below the densities that are allowed. Past development of single-detached lands has occurred on average at 70% to 80% of theoretical capacity. Therefore, if these development trends continue for the development of the remaining lands zoned for single-detached development, the practical capacity may be less than 30,000 units and the shortfall higher than the estimated 1,600 units.

Urban Futures estimates that the housing demand for other ground-oriented units (including townhouses and mobile homes) is 10,500 units in 2031[3]. The practical capacity for other ground-oriented units is estimated at 8,700 units and 4,500 secondary suites. Therefore, there is sufficient supply to accommodate the other ground-oriented demand to 2031. As with single-detached housing, if the remaining practical capacity is developed at lower densities than allowed under current zoning, the demand for other ground-oriented units may exceed supply before 2031.

Urban Futures estimates that the total housing demand for apartments will be for 11,200 units in 2031. The practical capacity for apartments was estimated to be 17,200 units. Therefore, there is ample capacity to accommodate the anticipated demand in apartment units to at least 2031. It is noted that the 2005 estimate and practical capacity for apartments is the most difficult to estimate due to data gaps with the data sources and due to the complexity of mixed residential / commercial developments. However, the magnitude that supply exceeds demand indicates that there is sufficient capacity to meet demand even with the uncertainty in some of the data.

In the short- and medium-term (5-15 years), there is sufficient capacity to meet the projected housing demand for all structural types. However, over the longer-term (15 years and beyond), the City may start to approach its practical capacity for single-detached units depending on the efficiency at which the remaining residential land is developed.

Residential Land Recommendations

In order to further improve the accuracy of this analysis and future studies, it is recommended that the City:

- identify the boundaries of the Local Service Centres, Neighbourhood Villages, and Mainstreets to allow the residential capacities of these areas to be estimated in the future,
- conduct a more detailed analysis of the mix of residential and commercial floor space in each of the Town Centres as it is more difficult to differentiate the residential portion of the floor area from the commercial floor space
- identify the boundaries for the top of bank for riparian setbacks and update the constraints layer in the Residential Build-out Model,
- review housing demand again in the next 5 to 10 years to identify changes in housing demand and supply that have occurred and determine remaining capacity, and
- monitor the actual densities vs. theoretical densities of new residential developments to understand the gap between the on the ground dwelling unit densities vs. the theoretical capacity.

[3] Urban Futures did not explicitly account for suites in the housing demand study other than the number and rates of suites that would have been included in the 2001 Census of Canada. Therefore, the supply and demand of other ground-oriented units can only generally be compared between the two studies.

Commercial Land Inventory

In 2005, there were 292 ha of land that were zoned commercial inside Town Centres or zoned or designated commercial outside Town Centres, excluding parks and roads. Of this area, 51 ha were constrained by lake, stream, and wetland setbacks or were located in areas with slopes of 10% or greater (defined as not suitable for commercial development or activities in this study). Therefore the basic commercial land inventory, excluding road and right-of-ways and constraints, is 241 ha.

The vast majority of the commercial areas are located in the north and central portions of Nanaimo. This includes Downtown Town Centre and Woodgrove Regional Shopping Town Centre, which are the two dominant commercial areas in the city. Only 11 ha of zoned and designated commercial land is located in the southern portion of the city (south of 7th St.). However, as the population increases in the southern portion of the city and the Chase River Town Centre, demand for commercial services will very likely warrant additional commercial land being made available in this area.

The commercial land inventory found that approximately 215 ha, or 90%, of the realistic supply of land available for commercial uses is already developed for commercial uses. Only 34 ha of the commercially zoned land is vacant and, once constraints are taken into account, there are only 26 ha of developable vacant commercial land. If the 16 ha commercial nursery site, which is located in the Woodgrove Regional Shopping Town Centre but zoned A2 (Rural Agricultural / Residential Zone), is included, that would increase the amount of vacant commercial land to 42 ha, excluding constraints.

A retail / service and office floor space forecast was conducted by Urbanics as part of the Growth Centre Concept Assessment (February 2005) undertaken for the City of Nanaimo. The study forecasts:

- between 1.3 million and 1.8 million additional square feet of department-store type merchandise by 2031,
- between 2.0 million and 2.8 million additional square feet of retail / restaurant / service by 2031, and
- between 0.9 million and 1.7 million additional square feet of office space by 2031.

This floor space area was not converted into a land area requirement in the Urbanics study. In general, if the additional floor space demand were to be solely accommodated on vacant commercial land, there would be a shortfall of vacant commercial land in the next 10 to 15 years, depending on land absorption rates. Demand for commercial land can also be accommodated on existing developed, but underutilized sites. An assessment of underutilized commercial lands was not conducted as part of this study. However, redevelopment of existing commercial areas has been occurring in the city, such as in the Rutherford Town Centre and Terminal Park Mall. There appears to be significant potential to increase the floor space in existing developed commercial areas to accommodate large amounts of the additional commercial floor space demand for the city.

As discussed below, there is a rapidly looming shortage of light industrial land in the city. Therefore, there is the potential for growing conflict in the near future as both commercial and industrial developments compete for a decreasing supply of land suited to their needs.

Commercial Land Recommendations

In order to improve the inventory of commercial land and better understand the amount of commercial land demanded in the future, it is recommended that:

- the City identify the boundaries of the Local Service Centres, Neighbourhood Villages, and Mainstreets to allow the commercial capacities of these areas to be estimated in the future,
- a medium- to long-term commercial land demand forecast be prepared by the City based on the floor space forecast in the Growth Centre Concept Assessment report prepared by Urbanics and UMA. The demand study should break out a medium- to long-term forecast for the southern portion of the City, including the Chase River Town Centre, that takes into account population growth projected for that area, as well as demand generated by residential development to the south of the municipality,
- the commercial land inventory be updated regularly to monitor absorption of commercial lands and remaining capacity,
- a detailed assessment be conducted identifying underutilized commercial lands and the barriers to their redevelopment, particularly in Downtown Nanaimo, and
- the City consult with local commercial realtors, the Regional District of Nanaimo and other appropriate professionals and agencies on a regular basis to review commercial supply and demand trends.

Industrial Land Inventory

In 2005, there were 776 ha of land in the City of Nanaimo's industrial land inventory, net of parks and roads. However, 220 ha of this land base is constrained by water feature setbacks and slopes that are 10% or greater (defined as unsuitable for industrial uses in this study). Therefore, the developable industrial land inventory is estimated at 556 ha. Of this, there are 224 ha of vacant industrial land, or over 40% of the industrial land supply that is unconstrained. Approximately 50 ha is located in lands that are believed to be unavailable in the short-term (Assembly Wharf, Inucan lands and other lands south of Cedar Road). There are also sites that are vacant but have been acquired for future use, such as the site for a future solid waste management facility in Duke Point. Of the remaining 175 ha of vacant industrial land available in the short- to medium-term inventory, approximately 147 ha are zoned for industrial uses. Approximately 100 ha are zoned I4 (Heavy Industrial) and are primarily located in Duke Point. The remaining 47 ha are zoned for lighter industrial uses, with most of that land being located in the Parkway and East Wellington Industrial Areas.

A forecast of the future demand for industrial land was not available and was not conducted as part of this study. Depending on future absorption rates for industrial land, it is believed that there is sufficient land that is zoned heavy industrial to meet demand for the next 10 to 20 years (dependent on a land demand forecast). However, the supply of light industrial land may be insufficient to meet demand in the next 5 to 15 years, depending on the rate of light industrial demand. This potential shortage of light industrial land will be exacerbated if demand for non-industrial uses, such as large-format retail, is met by using light industrial land.

Ensuring that the City's industrial land base is maintained is important to the continued economic prosperity of Nanaimo, as well as the broader regional economy.

Industrial Land Recommendations

In order to improve the analysis related to industrial land availability, it is recommended that:

- a medium- to long-term industrial land demand forecast be prepared for both light industrial and heavy industrial uses and the characteristics of that demand be determined,
- the industrial land inventory be updated regularly to monitor absorption of industrial lands and remaining capacity,
- a detailed assessment be conducted identifying underutilized industrial lands and the barriers to their redevelopment, particularly for light industrial areas inside the Urban Containment Boundary,
- the City consult with local industrial realtors, the Nanaimo Port Authority, Regional District of Nanaimo, Duke Point Development Limited, and other appropriate stakeholders and professionals on a regular basis to review industrial land supply and demand trends, and
- the City work with the Nanaimo Port Authority and other stakeholders to review the demand for port-based industrial land and light industrial land in the context of the redevelopment of the Assembly Wharf site.

Summary

The land inventory and capacity analysis has shown that there is sufficient capacity to accommodate the projected housing demand for apartment and other ground-oriented units to 2031. However, there is an anticipated shortfall of approximately 1,600 single-detached units by 2031 based on the practical capacity estimate. There is also a potential future shortage of light industrial and vacant commercially zoned land. In addition, there appears to be a shortage of commercially zoned land in the southern portion of the city. A summary of the breakdown of the developed and vacant residential, commercial, and industrial land located inside and outside the Urban Containment Boundary is shown in Table 4.

Table 5: Summary of Developed and Vacant Residential, Commercial, and Industrial Land, 2005 (excluding lands with major constraints)

		Land Area (ha)			
		Residential	**Commercial**	**Industrial**	**Total**
Developed	Inside Urban Containment Boundary	2,125	214	176	2,515
	Outside Urban Containment Boundary	174	1	156	331
	Subtotal	***2,299***	***215***	***332***	***2,846***
Underutilized	Inside Urban Containment Boundary	216	N/A	N/A	216
	Outside Urban Containment Boundary	0	N/A	N/A	0
	Subtotal	***216***	***N/A***	***N/A***	***216***
Vacant	Inside Urban Containment Boundary	620	26	68	714
	Outside Urban Containment Boundary	17	0	156	173
	Subtotal	***637***	***26***	***224***	***887***
TOTAL	Inside Urban Containment Boundary	2,961	240	244	3,445
	Outside Urban Containment Boundary	191	0	312	503
	Subtotal	***3,152***	***241***	***556***	***3,949***

* Notes: 1) Land areas are net of existing roads and road right-of-ways
2) Residential land in the table excludes lands zoned Agricultural / Residential (ie. Areas zoned A1, A2, or A3)
3) Residential land excludes land zoned for mixed residential / commercial uses
4) N/A: Underutilized commercial and industrial land is not calculated and only discussed in general in the report.

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The consultants would like to acknowledge the following people for providing assistance and data for completing the project or for attending one of the workshops. On May 4, 2006, a commercial and industrial lands workshop was held in Nanaimo. A second workshop on August 10, 2006, was held with City staff to review and validate the residential capacity results. In addition, we would also like to thank the B.C. Assessment Authority for providing floor space data for use in the commercial and industrial land inventory and an estimate of the number of multi-family units.

City of Nanaimo
Lisa Bhopalsingh, Community Planner, Development Services Dept.* ◆ (Contract Manager for project)
Pauline Hackwood, GIS Technician, Development Services Dept. ◆
Andrew Tucker, Manager, Community Planning Division, Development Services Dept.*
Dale Lindsay, Manager, Planning Division, Development Services Dept.*
Karen Lindsay, Economic Development Research and Information Analyst*
Deborah Jensen, Community Planner, Development Services Dept. ◆
Jason Carvalho, Planner, Development Services Dept. ◆
Jeremy Holm, Subdivision Planner, Development Services Dept. ◆
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* Denotes a participant at the May 4, 2006, Commercial and Industrials Lands Workshop
◆ Denotes a participant at the August 10, 2006, Residential Capacity Assessment Workshop

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1. Introduction

1.1 Background

The City of Nanaimo is conducting a review of its Official Community Plan (OCP), which was last adopted in 1996 (also known as Plan Nanaimo). A key component of the OCP review is conducting a land inventory and capacity analysis associated with residential, commercial and industrial lands. This is an important building block of the OCP review process and will help the City better understand its current land supply, including the location of remaining capacity, and its adequacy to meet projected demand.

This report contains:

- A residential land inventory and capacity assessment by type of dwelling for the following areas:
    - By subarea (e.g. Dover)
    - Inside and outside the Urban Containment Boundary
    - Within each designated Town Centre (e.g. Rutherford Town Centre)
- A commercial land inventory for the following areas:
    - Inside and outside the Urban Containment Boundary
    - Within each Town Centre and rest of the city
- An industrial land inventory for the following areas:
    - Inside and outside the Urban Containment Boundary
    - Within each Industrial Area and rest of the city

This inventory was conducted under current OCP land use designations and current zoning and other land use-related bylaws. It is therefore a base case capacity assessment.

This report documents the methodology and findings of the land inventory and capacity analysis. This provides the City with basic information necessary for policy development that will be considered when reviewing the OCP.

1.2 Scope

The capacity assessment was conducted for the City of Nanaimo geographic area. It does not include Indian Reserves. The report focuses on residential, commercial, and industrial lands. Institutional lands and institutional housing are not included in the assessment.

1.3 Regional Context

The City of Nanaimo is situated within the Nanaimo Regional District (RDN). In 1999, the Regional District Board adopted a Regional Growth Strategy in conjunction with its member municipalities, including the City of Nanaimo. A key feature of the Regional Growth Strategy is an Urban Containment Boundary (UCB), which supports the Strategy's goal of providing "Strong Urban Containment" to limit sprawl and focus development within well-defined urban boundaries. The City of Nanaimo contains portions of its municipality that are located both inside and outside the Urban Containment Boundary. This report documents the capacity for these geographies.

1.4 Literature Review

A literature review was conducted that included review of the following documents:

- Plan Nanaimo Official Community Plan (1996) as amended,
- City of Nanaimo Zoning Bylaw No. 4000 (1993) as amended,
- City of Nanaimo Community Profile (Economic Development Office, May 2005),
- Growth Centre Concept Assessment – Policy Directions Report (UMA et. al. , February 2005),
- Land Inventory Analysis for Regional District of Nanaimo (Westland Resource Group, September 2001),
- Regional Growth Strategy for the Regional District of Nanaimo (RDN, amended April 2003),
- Secondary Suites: A Framework for Discussion (City of Nanaimo, May 2003),
- Steep Slope Development Permit Area Guidelines (City of Nanaimo, June 2005),
- Population and Housing Projections for the City of Nanaimo, 2006 to 2031 (Urban Futures Incorporated, November 2006), and
- Linley Valley Build-out Study (2005).

1.5 Report Outline

The report is organized into five sections following this introduction section:

- Section 2 documents the methodology, assumptions, and limitations for this study,
- Section 3, 4, and 5 present the results of the analysis for the residential, commercial, and industrial sectors respectively, and
- Section 6 provides a set of conclusions and recommendations from the study.

The appendices present the tabular data for each of the geographic areas.

2.0 Methodology

2.1 Assumptions

The following are the key assumptions that were used in the analysis:

- the dwelling unit capacities are based on existing zoning (2005) rather than OCP land use designations,
- parkland remains fully intact and unavailable for residential, commercial, or industrial development, even if zoned for another use,
- the Urban Containment Boundary remains in its current location,
- no development (residential, commercial, or industrial) is allowed in the leave strip setback areas as defined in Development Permit Area 23 (Watercourses). For the watercourses, GIS data was not available for the top-of-bank; therefore, the centerline or edge of the stream was used. The following setbacks were used:
    - 30 metres from the edges of the of the Millstone and Nanaimo Rivers
    - 15 metres from the centerline of other creeks and streams and the edge of lakes, ponds, and wetlands shown on Schedule B of the OCP
    - 7.5 metres for small creeks and streams
- no residential development occurs in areas where slopes are 30% or greater (considered undevelopable in the study due to cost of servicing, building costs, and potential risk of slope failures) (see discussion in Section 2.4.2)
- commercial and industrial lands are considered undevelopable for commercial and industrial purposes in areas where slopes are 10% or greater (see discussion in Section 2.4.2),
- commercial and industrial lands remain unavailable for residential development (except mixed use commercial/residential areas),
- the average floor space for an apartment was assumed to be 100 m^2 (for use in floor area calculations where a dwelling unit density is not specified), and
- ALR lands are not used for future urban residential development, commercial or industrial uses.

More detailed assumptions for each of the three sectors (residential, commercial, and industrial) are included later in this section.

2.2 Data Sources

There were a wide variety of data sources used for this study.

For existing residential dwelling units by subarea, the data sources included:

- BC Assessment Authority data at a parcel level (2005 data),
- An estimate of multi-unit dwellings from the BC Assessment Authority (2005 data),
- A City of Nanaimo estimate of mobile homes (2005 data), and
- 2001 Census of Canada (Statistics Canada) data from PCensus

For existing average household size by structural type, the data source was:

- 2001 Census of Canada (Statistics Canada) (for the Nanaimo Census Agglomeration).

For existing and future commercial and industrial land, the main data sources were:

- Zoning,
- OCP land use designations, and
- BC Assessment Authority data.

Estimates of residential capacity at build-out are based on the City's:

- Zoning layer,
- Cadastral base (to net out roads and road right-of-ways),
- Streams, wetlands, and lakes riparian setback areas, and
- Steep slopes layer (slopes 30% or greater).

The land inventory of commercial and industrial land is based on the City's:

- Zoning layer
- OCP land use designation layer,
- Cadastral base (to net out roads and road right-of-ways),
- Streams, wetlands, and lakes riparian setback areas, and
- Steep slopes layer (slopes 10% or greater).

2.3 Limitations

The following limitations apply to this study:

- actual development yields for residential, commercial, and industrial development may be lower than estimated due to additional topographical and site constraints (beyond steep slopes), land assembly issues, servicing, land cost, and public opposition. The development yields (except for the residential sector where practical capacities are also calculated) are theoretical maximum yields and may be higher than the on the ground capacities.
- population in collective dwellings[4] is not taken into account in this study. Therefore, the capacity assessment is only for the population in private households.
- there were data gaps in the City's GIS and issues with some of the GIS files, which resulted in slivers – this is believed to be a minor issue for the study.
- the share of single-detached dwellings with secondary suites is difficult to estimate and forecast.
- it is difficult to estimate the portion of floor space in residential /commercial mixed use development that is residential and this varies site-by-site. These areas, such as in the Town Centres, are likely to have the largest amount of error.
- there are some inconsistencies between zoning and land use designations – therefore there may be some double counting, for example for the purpose of the land inventory (e.g. a residentially zoned area in an area designated industrial is counted in both the residential and industrial inventories).

The approach used in the method allows alternative assumptions to be used in the Residential Build-out Model. This allows a sensitivity analysis to be conducted to obtain a high and low estimate, for assumptions such as the share of single-detached dwellings with secondary suites.

[4] Collective dwellings as defined in the 2001 Census dictionary are dwellings used for commercial, institutional or communal purposes, such as a hotel, a hospital or a work camp.

2.4 Method

2.4.1 Generation of Land Use-Density Polygons

The basic geographic unit in the database and Residential Build-out Model are land use-density polygons. A land use-density polygon is a group of parcels that have been aggregated to form agglomerations of blocks (or sub-blocks) that have the same characteristics (land use, zoning, geographic location, etc). A sub-land use polygon is net of existing roads and road right-of-ways. The land use-density polygon file begins with the cadastral base, which is net of roads and road right-of-ways, and is built up with other layers.

Various geographic areas have been "cut" into the land use-density polygons in order to aggregate the results to various levels of geography. This includes the following spatial boundaries and geographic units:

- Urban Containment Boundary,
- Sub-areas (e.g. Dover),
- Town Centres (e.g. Rutherford Town Centre),
- Industrial Areas (e.g. Boban Industrial Area),
- Official Community Plan land use designations,
- Zoning, and
- Agricultural Land Reserve.

After each union, the data was coded appropriately in the database. The City's OCP land use file was not consolidated before the consultant study and a composite working version was created by the consultant in order to prepare the sub-land use polygon file.

The land use-density polygon approach allows the land inventory and capacity data to be aggregated to virtually any level of geography and is also a net area as roadways have already been removed from the file.

2.4.2 Preparation of Constraints Layer

A constraints layer was prepared which included the water setbacks and the steep slopes. In addition, parks were included as areas where no development is permitted, even if zoned otherwise.

The City has adopted an Environmentally Sensitive Development Permit Area (Area 24) and a Steep Slope Development Permit Area (Area 25). The City has also developed a Steep Slope Development Permit Area Guidelines. The City defines steep slopes as land in their natural state that have a slope angle of 20% or greater for a minimum horizontal distance of 10 metres. The lots that are affected by the guideline satisfy the above condition and are located where the lots are greater than or equal to 0.5 ha with 10% or more of their areas affected by slopes that are greater than or equal to 20%. The City estimates that there are 1,591 ha of land that meets the above criteria. In both situations (DP Area 24 and DP Area 25), development is allowed but there are conditions and guidelines to be met first to obtain a development permit.

For this study, lands on slopes of 30% or greater are assumed to be non-developable for residential purposes. Lands of 30% slope or greater are generally much more difficult to develop, more costly to service, and have a greater risk of slope failure. The steep slope development guidelines indicate that studies have found that soil slips are more common on slopes greater than 33% and slower moving earth flows occur most often on slopes of 30% to 60%. However, other factors such as moisture content influence slope stability. A threshold of slopes that are 30% or greater was chosen by the consultant as land that is considered not suitable for residential development and lands above this threshold have been excluded from the capacity analysis.

Steep slopes have also been taken into consideration in the City's zoning bylaw. For example, the RS7 and RS8 zoning are Steep Slope Residential and Steep Slope Suburban Residential that allow 12 units per ha and 8 units per ha respectively, which is lower than in other comparable zones in the City.

The composite constraints for residential build-out model consist of the water setbacks and the slopes of 30% or greater and this represents areas where no residential development is allowed or assumed to not occur in those areas.

Based on the discussion from the May 4, 2006, Commercial and Industrial Lands workshop, a threshold slope of 10% was considered unsuitable for commercial and industrial lands. Commercial and industrial lands greater than or equal to 10% slope are excluded from the developable inventory as are the water setback areas.

2.4.3 Use of CommunityViz Scenario 360 for Residential Build-out

A Residential Build-out Model was developed for the residential build-out portion of this study using CommunityViz®[5]'s Scenario 360 software. Scenario 360 is a low-cost ArcGIS® extension that functions like a spatial spreadsheet and features interactive scenario development capabilities.

CommunityViz is well-suited for conducting residential and other build-out analyses. Scenario 360 helps you view, analyze and conduct build-out analyses. It also permits constraints analysis. A major benefit of the software is that it has indicators that are dynamically linked so that changes to zoning, densities, and assumptions result in automatically updated indicator results.

The CommunityViz model was populated with:

- the land use-density polygon layer,
- the constraints layer, and
- a zoning lookup table that includes for each zone the following: residential density, mix of dwelling types allowed, and floor area ratios for mixed commercial/residential zones.

Formulas were then developed to conduct the build-out calculations by structural type.

[5] CommunityViz® is a registered trademark of the Orton Family Foundation. ArcGIS is a registered trademark of ESRI.

2.4.4 Residential Build-out

The residential build-out was conducted under the City's current zoning. The following describes the key components for the residential build-out and these are shown in Figure 2-1. The approach identifies:

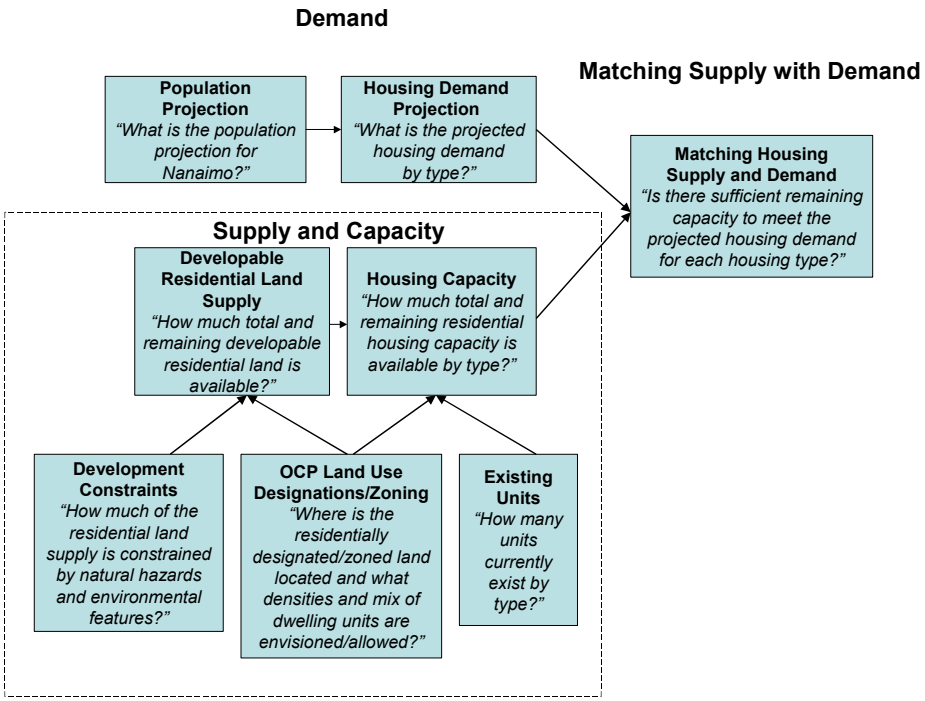
- the amount of land that is developable for residential uses taking into account constraints and existing zoning,
- the total dwelling unit capacity by structural type based on the allowable densities and floor area ratios from the zoning bylaw and the amount of zoned land,
- the existing dwelling unit capacity as of 2005 by structural type, and
- the remaining dwelling unit capacity by structural type.

The existing number of dwelling units by structural type was estimated primarily using data from BC Assessment Authority. A number of methodologies were used to estimate the number of units by structural type. The dwelling count of apartment units posed a challenge as BC Assessment Authority does not have data for the number of apartment units in non-stratified buildings. It is believed that the estimate of the number of apartment units in 2005 is underestimated. As the existing dwelling units was estimated at the parcel level, this enabled an estimate of the number of existing dwelling units at all levels of geography in this study.

The analysis was broken down for the following structural types:

- Single-detached houses,
- Townhouses,
- Other ground-oriented units (e.g. duplex, triplex, quadruplex),
- Apartments, and
- Mobile homes.

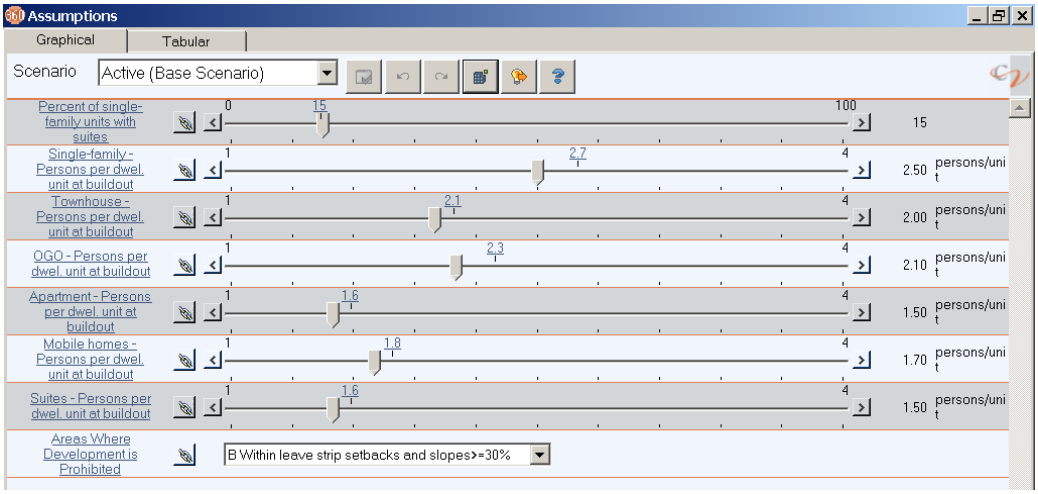
Figure 2-1: Components of the Residential Build-out Study



The results were tabulated at various geographies. They are also compared to the housing demand projection by structural type to 2031 conducted by Urban Futures Incorporated.

There are a number of specific assumptions for the residential build-out. An input screen in CommunityViz documents these assumptions and users can alter these assumptions and re-run the analysis. The assumptions include the percentage of single-family units with a secondary suite. There are also assumptions regarding average household size by structural type as well as an option to run the model a) without constraints, b) prohibiting development in water setback areas and slopes of 30% or greater or c) prohibiting development in water setback areas only. For the results in this study, the model was run with option b) (both constraints).

Figure 2-2: Assumptions Screen from Residential Build-out Model



Secondary Suites

The City has recently allowed secondary suites within single-family dwellings across all residential zones. The City estimates that it is aware of about 1,300 secondary suites as of March 2006, either registered suites or known suites based on utility account data. This represents approximately 6% to 7% of the existing single-detached units. However, in the City's report Secondary Suites: A Framework for Discussion report (May 2003), a more realistic estimate was that between 15% and 20% of existing single-detached homes contain a secondary suite. The City assumed 1.5 persons per suite in the secondary suite study, which would yield approximately 4,500 people currently living in legal or illegal secondary suites in Nanaimo. For the residential build-out model, it is assumed that 15% of single-detached homes have a secondary suite and 1.5 persons per suite is used for the average household size value, which is similar to the average household size for apartments in Nanaimo in 2001.

Average Household Size

In addition to determining the capacity in terms of dwelling units, a population is also estimated at build-out. To convert dwelling units at build-out to a population, an assumed average household

size was used. Data on average household size for the Nanaimo Census Agglomeration[6] for 2001 was available by structural type (Table 2-1). These values were then aggregated to the six dwelling types used in the model (Table 2-2). The population and housing projection by Urban Futures Incorporated indicated that the average household size falls from 2.36 in 2001 to 2.21 in 2031, or a decline of 6%. The 2001 average household size was factored down by 6% for each of the structural types used in the model. As there is no survey data on the average household size for secondary suites, the average value for apartments is used for the average household size at build-out (i.e. 1.5 persons/household).

Table 2-1: Average household size by structural type, Nanaimo Census Agglomeration, 2001

Structural Type	2001 Average household size
Single-detached house	2.7
Semi-detached house	2.4
Row house	2.1
Apartment, detached duplex	2.2
Apartment, 5 or more stories	1.4
Apartment, Fewer than 5 stories	1.6
Other single-attached house	2.3
Movable Dwelling	1.8
All Structural Types	2.4

Table 2-2: Assumed Average Household Size at Build-out

Structural Types used in Residential Build-out Model	Assumed Average household size at build-out
Single-detached house	2.50
Townhouse/Row	2.00
Other ground-oriented	2.10
Apartment	1.50
Movable Dwelling	1.70
Secondary Suites	1.50

The Residential Build-out Model has been set up so that any of these assumptions can be altered and the model re-run to see the impact of the changes in assumptions on the indicators and results.

Classifying Vacant, Effectively Vacant, and Underutilized Residential Land

The residential land in the land inventory database is classified by various development status categories. The Actual Use codes from the BC Assessment Authority database were used to identify the development status, supplemented by validation using orthophotos.

[6] The Nanaimo Census Agglomeration data for 2001 for average household size was used as a proxy for the City of Nanaimo as the data is readily available on the Statistics Canada website. The Nanaimo Census Agglomeration includes the City of Nanaimo, Nanaimo RDA A, C, and D, Nanaimo Indian Reserves 1, 2, 3, and 4 and the Nanoose Indian Reserve. Most of the population of the Nanaimo Census Agglomeration is located in the City of Nanaimo.

Vacant residential land was identified through querying the BC Assessment Authority data for those parcels that have the following Actual Use codes:

- 001 (Vacant Residential Less than 2 Acres)
- 051 (Multi-family Vacant)
- 061 (2 Acres or More – Vacant)

The vacant land was cross-queried with the zoning information to determine that the vacant lot was located in a valid residential zone.

A separate category of land was identified called "effectively vacant" residential land. Effectively vacant residential land includes single-detached lots that are greater than 2 acres in size that are occupied by a dwelling unit, but where the density allowed by residential zoning is at least more than double the current density of the site. In other words, this means that the lands had a single-detached dwelling unit located on them in 2005 and the lot had a maximum existing density of 1.25 units/ha, but the zoning was at least for 2.5 units/ha or greater. In many cases, the lots are zoned to a much higher density (e.g. RS3, RS7, RS8). Therefore for the purpose of this study, these sites are effectively vacant other than the one building on the lot. The following BC Assessment Authority Actual Use code was used to identify these sites:

- 060 (2 Acres or More – Single family dwelling, duplex)

The effectively vacant land was cross-queried with the zoning information and relevant densities to determine that the lot was located in a valid residential zone and had an allowable density in excess of 2.5 units/ha.

A third category of residential land is land that is zoned A1, A2, or A3 (Rural Agricultural / Residential). These lands were also classified as effectively vacant but kept as a separate category.

A fourth category of residential land is underutilized residential land. Underutilized residential lands were identified by calculating the ratio of existing units to the theoretical capacity at build-out for each polygon. A threshold of 20% was used to identify underutilized lands. This is a very conservative threshold. For example, if a polygon has a theoretical capacity of 20 units and there are 4 or fewer units on the site in 2005, then the polygon is classified as underutilized. Again, the underutilized land was cross-queried with the zoning information to determine that the lot was located in a valid residential zone.

Practical vs. Theoretical Capacity

The Residential Build-out Model was developed to estimate both the theoretical capacity by structural type at various levels of geography as well as practical capacity. The theoretical capacity is the maximum dwelling unit capacity if all developable lands were built-out to their maximum allowable density. The theoretical capacity estimates conducted in this analysis are based on the maximum dwelling unit density allowed under the current zoning, taking roads, parks, and major constraints into consideration and some minor adjustments.

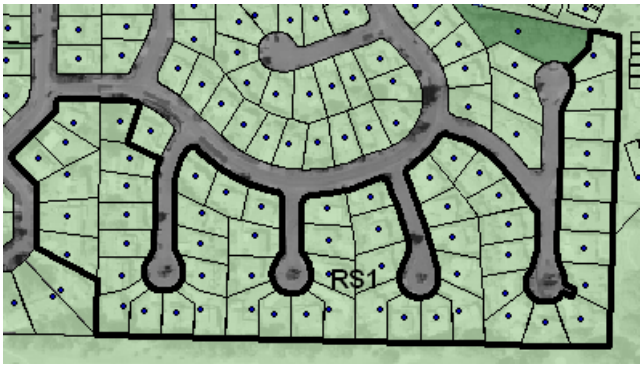
However, actual development yields in many already developed residential areas in the city are much lower than the densities allowed in the zoning bylaw. Recognizing that not all areas will develop to the theoretical capacity, a practical capacity was calculated. The practical capacity approach takes the existing dwelling units and adds capacity for new dwelling units only onto

lands that were identified as residentially vacant, effectively vacant, rural agricultural / residential, or underutilized. Therefore, if a polygon is already developed as residential and does not meet the underutilized criteria, it receives no additional capacity for new dwelling units. Its capacity is the same as the existing number of dwelling units.

The following example illustrates the difference between theoretical and practical capacity. For example, Figure 2-3 shows one polygon that is zoned RS1 (the polygon with the thick black outline is one record in the GIS as it has all the same characteristics). The key attributes for the polygon are:

- Net land area of 5.7 ha
- Zoning is RS1 (16.7 units/ha net density)
- 3% of the site is constrained
- There are 59 existing single-detached units (2005)

Figure 2-3: Example of an RS1 (Single Family Residential) Polygon that is Already Developed (the thick outlined polygon)



The theoretical capacity for the site is the net land area (less the percent that is constrained) multiplied by the net density of the site. Therefore the theoretical capacity for the polygon is 92 single-detached units. However, there are only 59 existing single detached units. The build-out ratio of this polygon is 64% (ie. 59 existing units / 92 theoretical units). According to the residential land inventory classification, this site is not identified as underutilized (that would only apply if the build-out ratio was 20% or less). Therefore, this polygon is classified as residentially developed and the practical capacity is equivalent to the existing units. Therefore, the practical capacity is 59 units and there is no remaining practical capacity identified for the polygon.

Based on discussions with City staff, it was identified that the practical capacity approach was the more realistic estimate of capacity and remaining capacity. This is the approach used in this study. The theoretical capacity is also given for comparison purposes.

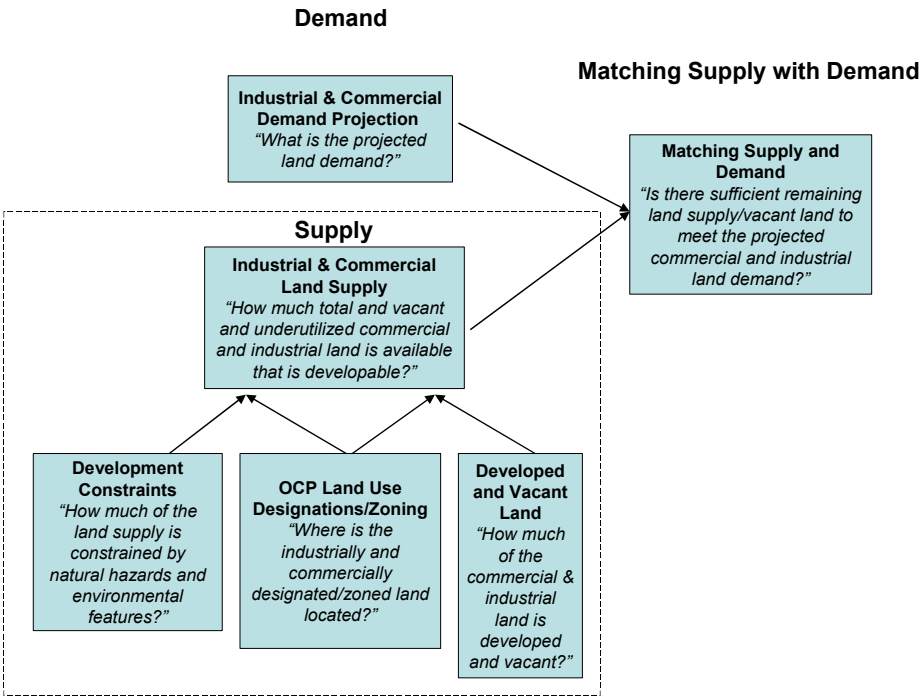
One of the limitations of this approach is that it may underestimate the redevelopment potential of existing already developed areas. For example, some single-detached lots may be large enough to be split into two lots with two units. This additional remaining capacity is not accounted for in this approach. The method also does not take into account factors that could contribute to redevelopment in already developed areas, such as the age of the housing stock, lot sizes, improvement values, and market economics. This would take considerable more effort and resources and require a separate study. It is believed that the practical approach is a realistic method for arriving at a plausible capacity and remaining capacity for the city.

2.4.5 Commercial and Industrial Land Inventory

The key components of the commercial and industrial land inventory are shown in Figure 2-3. The approach identifies:

- the amount of zoned and/or designated commercial and industrial land,
- the amount of land that is developable for commercial or industrial uses taking into account constraints and existing zoning, and
- the amount of land that is developed and vacant.

Figure 2-4: Components in the Commercial and Industrial Land Inventory



Focus of the Non-Residential Component of this Study

Land in the commercial land inventory consists of land that is:
a) zoned or designated commercial and located outside a Town Centre, or
b) zoned commercial and located inside a Town Centre

Therefore, land that is currently zoned non-commercial inside a Town Centre is not included in the commercial inventory. Land that is vacant in a Town Centre but is currently zoned for a non-commercial use, such as residential or institutional, could be a potential source of commercial land. However, for this study it is assumed that this land is unlikely to be used for commercial. The only exception is for land that is zoned for agriculture (e.g. A1, A2 or A3) where it is believed that this could become commercial in the medium to long-term.

Vacant commercial land in this study includes land that is part of the commercial land inventory as defined above and are:

- primarily greenfield sites, or

- land that is cleared but is not occupied by vehicles (excluding parking lots) or by a building.

Land in the industrial land inventory consists of land that is:
a) zoned industrial, or
b) designated industrial.

Vacant industrial land in this study includes:

- Primarily greenfield sites that are designated or zoned for industrial use, and
- Industrially designated or zoned land that is cleared but is not occupied by vehicles or structures and does not appear to be used for industrial activities.

In order to identify the vacant and developed commercial and industrial land, a number of data sources were used, including:

- BC Assessment Authority actual use codes for vacant commercial and industrial land,
- parcels that have no water, no sewer, or both no water or sewer connections (City of Nanaimo data), and
- orthophotos (from 2003).

A commercial and industrial land inventory database was coded to assist with this process.

A workshop with realtors was held on May 4, 2006, to review the preliminary results of the industrial and commercial land inventory and to discuss anticipated demand of industrial and commercial lands over the next 15 to 20 years. The BC Assessment Authority was also consulted. This input helped shape the conclusions reached in this study.

3.0 Residential Capacity Assessment

3.1 Residential Land Use Designations

The City's Official Community Plan designates land for residential use. Schedule "A" includes the following land use designations for residential lands:

- Neighbourhoods – the predominant use is intended to be low density residential land uses with a target gross density of 15 units per hectare with a target mix of 60% single-family and 40% multi-family,
- Suburban Neighbourhoods – primarily lower density residential with a density up to 8 units per hectare with single-detached, cluster housing, or mobile homes,
- Town Centre – mixed use including residential,
- Regional Shopping Town Centre – mixed use including residential,
- Neighbourhood Village (Precise locations are to be determined in future neighbourhood plans) – target residential densities of 25 to 50 units per hectare,
- Local Service Centres – Residential is allowed only in second and third storeys above commercial space,
- Mainstreets – defined in the OCP as "pedestrian oriented forms of commercial and residential development that form the core or center of Neighbourhood Villages" and some Town Centres,
- Rural Resource Lands – allows rural residential (single-detached dwellings including mobile homes on large lots with on-site or limited serves) as well as agricultural and forest lands, and recreational lands and includes land in the Agricultural Land Reserve,
- Subareas of the Old City Neighbourhood that allow residential,
- Chase River Mainstreet (Commercial/Residential) – with buildings up to a maximum of 3 storeys,
- Chase River Medium-High Density Residential – with a target residential density of 100 to 150 units per ha, and
- Chase River Low-Medium Density Residential – with a target residential density of 50 units per ha.

In addition, residential dwelling units are allowed in most commercially designated areas.

3.2 Growth Centres

The City's Official Community Plan identifies a hierarchy of growth centres, including "Regional Shopping Town Centres", "Town Centres", and "Neighbourhood Villages". These are identified as part of the OCP goal to "build complete, viable communities". In the OCP, the Centres are intended to "offer a broad range of shopping and commercial services, employment opportunities, housing forms, open space, and amenities."

Schedule "A" designates and delineates one Regional Shopping Town Centre and five Town Centres within the City boundaries (Fig. 3-1), which are:

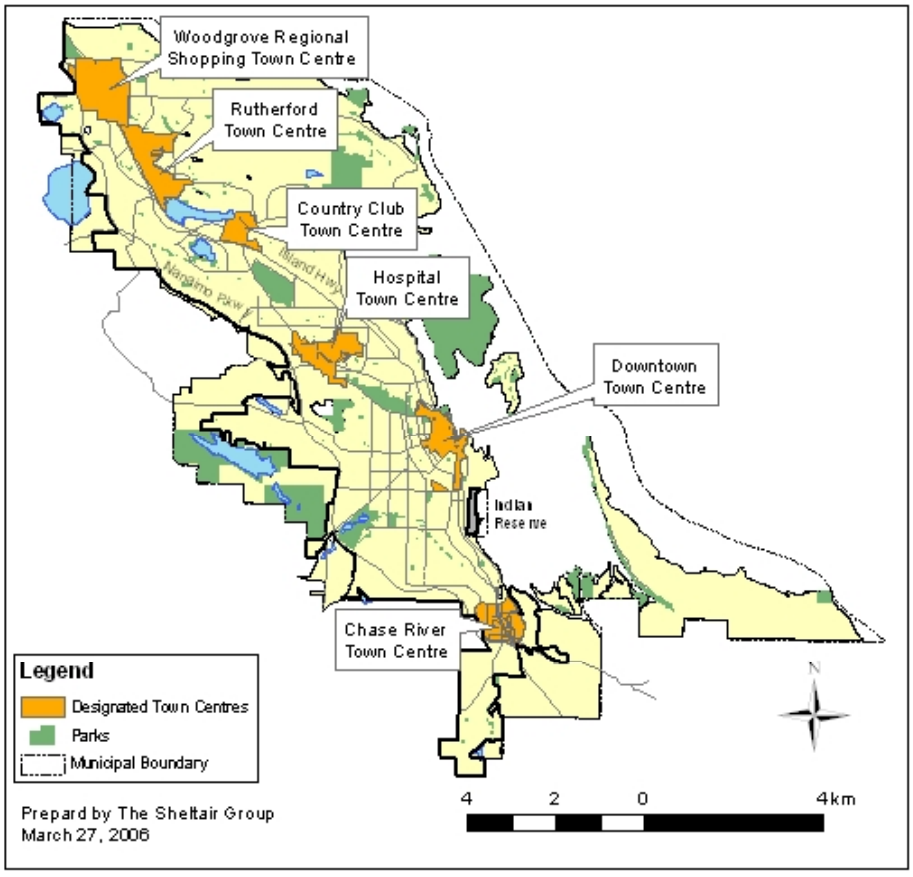
- Woodgrove Regional Shopping Town Centre
- Downtown Town Centre

- Townsite Town Centre (also known as Hospital)
- Country Club Town Centre
- Rutherford Town Centre, and
- Chase River Town Centre (also known as Southgate).

The OCP specifies that each Town Centre have a target population of between 5,000 and 10,000 persons. The target gross residential densities for the core area (approximately 20 ha) of each Town Centre is 100 to 150 units per ha. High-rises are allowed in the core areas of Town Centres and the Regional Shopping Town Centre. Around the core district, the OCP indicates that there generally will be a transition area of approximately 50 ha with target gross residential densities of up to 50 units per ha.

The OCP also designates 11 Neighbourhood Villages, which are shown in conceptual locations on Schedule "A". These villages are intended to have a population of 1,500 to 3,000.

Figure 3-1: Location of Town Centres and Regional Shopping Town Centre



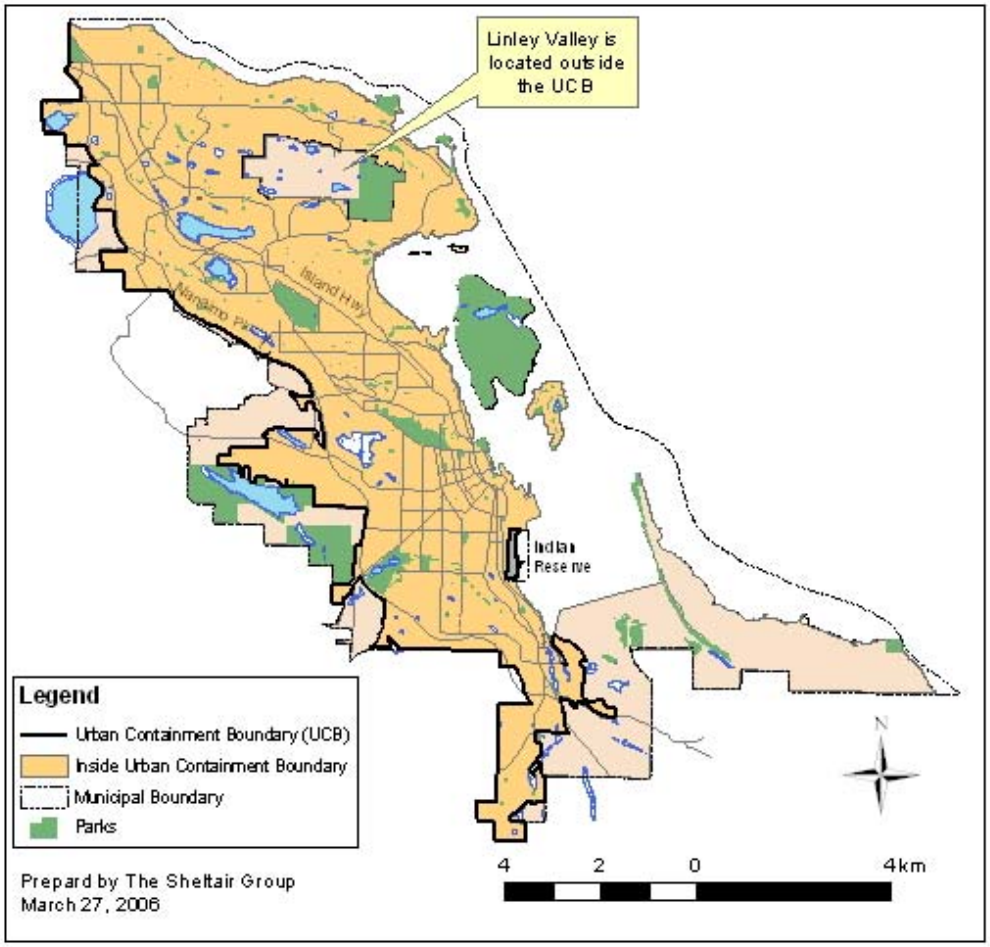
The Town Centes, as envisioned, would accommodate a total population of between 30,000 to 60,000 at build-out and the Neighbourhood Villages would accommodate between 16,500 and 33,000 people. Together, the Town Centres and Neighbourhood Villages as defined in the OCP are envisioned to ultimately accommodate between 46,500 and 93,000 people at build-out.

3.3 Urban Containment Boundary

The City has designated an Urban Containment Boundary (UCB), which is intended to "clearly define those areas of the city where urban growth is expected and where urban services will be available." This policy is in support of the OCP goal to "manage urban growth" which is defined as "preventing the spread of residential and commercial development into the rural land areas of the city and focusing growth in the urban areas of the city." The Urban Containment Boundary concept is part of the Regional District of Nanaimo's Regional Growth Strategy, of which the City of Nanaimo is a participating member municipality. One of the key policies in the Regional Growth Strategy was for the Regional District and member municipalities to designate Urban Containment Boundaries consistent with the Regional Growth Strategy in their official community plans "for the purpose of defining urban and rural areas."

The OCP indicates that there is sufficient vacant zoned and serviced land within the UCB and there is therefore "no need to encroach on the remaining rural and resource lands in order to meet our growth needs for the life of this Plan." The UCB is shown on Schedule A of the OCP (Future Land Use and Mobility map) (Fig. 3-2). The OCP states that land use designations outside the UCB will be Rural Resource Lands and Industrial Enterprise Lands.

Figure 3-2: Location of Urban Containment Boundary



The intent in the OCP is to direct growth into the UCB and focus future urban development in Town Centres and Neighbourhood Villages.

3.4 Residential Land by Generalized Zoning

There are currently 4,880 ha of land zoned for single-family residential, multi-family residential, or rural agricultural residential, net of roads and excluding parks (Table 3-1) in the city. This amount excludes mixed residential/commercial lands due to the difficultly of separating the use from the zoning. Of this, 2,876 ha are zoned for single-family use, with 99% of that located within the Urban Containment Boundary. There are 589 ha of residential land zoned for multi-family uses, all located within the Urban Containment Boundary. There are 1,415 ha of rural agricultural residential with 87% of that located outside the Urban Containment Boundary.

Table 3-1: Breakdown of Residentially Zoned Land by Generalized Zoning Category and Urban Containment Subarea (unconstrained)

Urban Containment Boundary Subarea	Single-family Residential (ha)	Multi-family Residential (ha)	Rural Agricultural Residential (ha)	Total Area (ha)
Inside Urban Containment Boundary	2,848	589	190	3,627
Linley Valley (Outside UCB)	0	0	171	171
Rest of Outside UCB	28	0	1,054	1,082
TOTAL	**2,876**	**589**	**1,415**	**4,880**

When the water setbacks and slopes of 30% or greater are taken into account, the amount of residentially zoned land available is 4,036 ha (Table 3-2). Approximately 15% of the land zoned for both single-family residential and multi-family residential use is constrained. For the land zoned rural agricultural / residential, 21% of that land is constrained.

Table 3-2: Breakdown of Residentially Zoned Land by Generalized Zoning Category and Urban Containment Subarea (excluding constrained lands)

UCB Subarea	Single-family Residential (ha)	Multi-family Residential (ha)	Rural Agricultural Residential (ha)	Total Area (ha)
Inside UCB	2,396	504	144	3,043
Linley Valley (Outside UCB)	0	0	91	91
Rest of Outside UCB	18	0	883	902
TOTAL	**2,414**	**504**	**1,118**	**4,036**

3.5 Developed and Vacant Residential Land

The amount of developed and vacant residentially zoned land was estimated primarily using data from the BC Assessment Authority. For the purpose of this study, only lands zoned purely for single-family and multi-family residential, or for rural agricultural / residential use are included in the developed and vacant totals. Lands that are zoned for mixed-use residential/commercial developments are not included in the total.

Table 3-3 provides a breakdown of the developed, underutilized, and vacant residentially zoned land inside and outside the Urban Containment Boundary. All values in the table exclude the constrained lands. The table indicates that approximately 2,300 ha of land in the city has been developed for residential use (excluding constraints), or 57% of the residentially zoned and developable land. Almost all of the developed residential land is located within the Urban Containment Boundary. There are approximately 216 ha of residentially zoned land in the city that was identified as underutilized, or 5% of the residentially zoned land. All of this land is located within the Urban Containment Boundary. There are approximately 640 ha of residentially zoned land that is identified as vacant or effectively vacant residentially zoned land, or 16% of the residentially zoned land. Approximately 97% of this vacant land is located within the Urban Containment Boundary. There are approximately 880 ha of land that is unconstrained and zoned A1, A2, or A3, or 22% of the city's residentially zoned and developable land. Only 10% of this land is located within the Urban Containment Boundary.

There are approximately 1,000 ha of residentially or agriculturally zoned land that is located outside the Urban Containment Boundary (including Linley Valley). Approximately 80% of this land is zoned A1, A2, or A3 (0.5 to 1.25 units/ha). Therefore, there is less than 200 ha of residentially zoned land located outside that is zoned for higher residential densities.

Table 3-3: Amount of Developed, Underutilized, and Vacant Residentially Zoned Land inside and outside the Urban Containment Boundary, 2005 (excluding constrained lands)

UCB Subarea	Amount of Developed and Residentially Zoned Land (ha)	Amount of Underutilized and Residentially Zoned Land (ha)	Vacant Residentially Zoned Land (ha)	Effectively Vacant Residentially Zoned Land (ha)	Land Zoned A1, A2, or A3 (Agricultural / Residential) (ha)	TOTAL Residentially Zoned Land (ha)
Inside UCB	2,125	216	338	282	81	3,043
Linley Valley (Outside UCB)	11	0	0	0	79	91
Rest of Outside UCB	163	0	10	7	722	902
TOTAL	**2,299**	**216**	**348**	**289**	**883**	**4,036**
% of Total Residentially Zoned Land	57%	5%	9%	7%	22%	100%

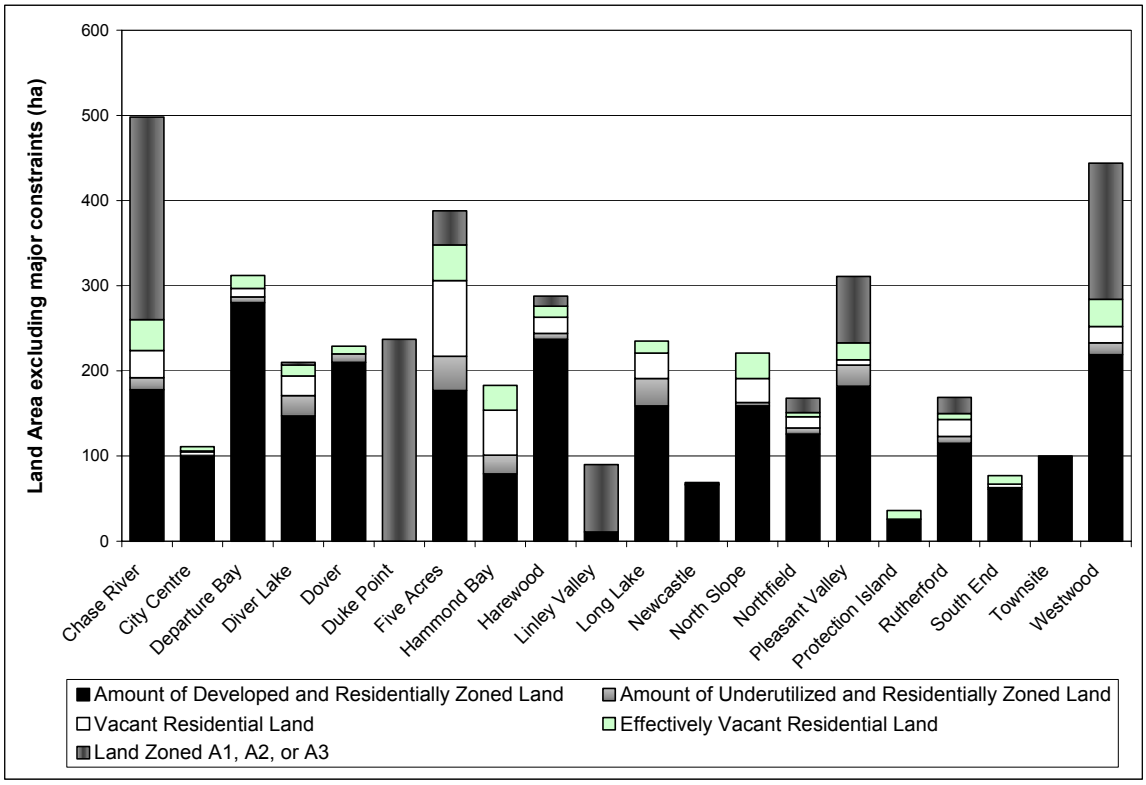
* Note: Data exclude residential / commercial lands

Figure 3-3 shows the breakdown of the developed and vacant residential land by subarea. The subareas that have 90% or more of their residentially zoned land developed include the City Centre, Departure Bay, Dover, Newcastle, and Townsite.

For vacant or effectively vacant residential and developable land, the following subareas comprise approximately 75% of the total: Chase River, Diver Lake, Five Acres, Hammond Bay, Long Lake, North Slope, and Westwood.

For lands zoned for rural agricultural / residential use, approximately 90% of this land area is located within Chase River, Duke Point, Linley Valley, Pleasant Valley, and Westwood. These zones have very low densities of between 0.5 and 1.25 units per ha. Therefore this land is not a significant source of residential capacity but does have some minor capacity to accommodate residential growth.

Figure 3-3: Breakdown of Developed and Vacant Residentially Zoned Land by Subarea, 2005



3.6 Existing Residential Dwelling Units

The Census of Canada estimates that there were 30,670 occupied private dwelling units in the City of Nanaimo in 2001. This represents an increase in dwelling units of 9.4% from 1996 when there were 28,035 units. Single-detached homes comprise the majority of the housing stock, representing 60.7% of the dwelling units in 2001 (see Table 3-4).

Table 3-4: Dwelling Units by Structural Type, 1996 and 2001

Structural Type	1996	% of Total Units in 1996	2001	% of Total units in 2001
Single-detached	17,615	62.8%	18,630	60.7%
Semi-detached house	1,165	4.2%	1,215	4.0%
Row house	1,360	4.9%	1,485	4.8%
Apartment, detached duplex	1,410	5.0%	1,350	4.4%
Apartment, 5 or more stories	800	2.9%	820	2.7%
Apartment, Fewer than 5 stories	4,970	17.7%	5,845	19.1%
Other single-attached house	50	0.2%	150	0.5%
Movable Dwelling	660	2.4%	1,180	3.8%
TOTAL	**28,035**	**100.0%**	**30,670**	**100.0%**

Source: Census of Canada

There was a count of 32,422 dwelling units in the City of Nanaimo in 2001 according to the Census of Canada (Statistics Canada). The difference between the census dwelling count and the population in occupied private dwellings is primarily due to the population in collective dwellings. The data has not been adjusted for the Census undercount.

An estimate of the dwellings was also conducted for this study based on BC Assessment Authority data for 2005. Using a number of methodologies, the number of dwelling units excluding suites was estimated at 32,435 units in 2005. It is believed that there is an undercount of apartment units (possibly in the order of up to 1,000 units) due to difficulties of estimating the number of units in apartment complexes that are not stratified using the BC Assessment Authority data (e.g. rental units).

The City estimates that it is aware of about 1,300 secondary suites as of March 2006, either registered suites or known suites based on utility account data. This represents approximately 6% to 7% of the existing single-detached units. However, the City estimates that between 15% and 20% of single-detached homes contain suites based on the report Secondary Suites: A Framework for Discussion (City of Nanaimo, May 2003).

For the rest of this study, the 2005 estimate and distribution of dwelling units (excluding suites) is used as the official estimate of existing units in this study. The 2005 data were estimated at the parcel level and are aggregated for each level of geography for use in estimating remaining capacities. Secondary suites are not included in the total number of units unless explicitly stated.

3.7 City-wide Capacity Results

Total Capacity

The Residential Build-out Model was used to estimate the dwelling unit capacities at build-out. The capacities were estimated using the City's current zoning and excluded development in areas with water setbacks and areas with slopes that are 30% or greater and took into consideration roads and road right-of-ways. The results are subject to the limitations and assumptions described in the methodology section. The total theoretical capacity was estimated at 68,200 dwelling units (excluding secondary suites). The theoretical capacity is the maximum capacity for the City if all developable lands were built-out to their maximum allowable density. The theoretical capacity will not be higher than this level unless the City rezones or upzones lands to accommodate additional residential units. Under theoretical capacity, 152,800 people could be accommodated at build-out.

The total residential practical capacity for the city was estimated at 55,900 dwelling units (excluding secondary suites). The practical capacity approach takes the existing dwelling units and adds capacity for new dwelling units only onto lands that were identified as vacant, effectively vacant, underutilized, or mixed residential/commercial use. The practical capacity is much lower than the theoretical capacity as many of the residentially zoned lands in the city have been built-out to lower densities than that allowed under current zoning. Under practical capacity, 124,500 people could be accommodated at build-out. The difference between the theoretical versus the practical capacity is 12,300 dwelling units.

The Land Inventory Analysis for the Regional District of Nanaimo (Westland Resource Group, September 2001) estimated a dwelling unit capacity of 73,400 units for the City of Nanaimo. Therefore the results generated by the Residential Build-out Model for theoretical capacity are within the same order of magnitude as the Westland study. However, the practical capacity of the City is much lower than Westland estimated, by almost 17,500 units.

In this report, the discussion of a realistic capacity estimate is based on the practical instead of the theoretical capacity. Redevelopment of existing built-out areas that have the same zoning as when they were initially developed is a complex phenomenon that depends on many factors including the age of the dwelling stock, lot sizes, lot configurations, land economics, outcome of public consultation processes, and requires a site-by-site analysis. Significantly underutilized or effectively vacant land has been taken into account in the practical capacity. It is believed that the practical capacity captures a realistic capacity estimate subject to the limitations discussed in the methodology section. For the remainder of this section, the results are presented for the practical capacity.

Total Remaining Practical Capacity

In 2005, there were approximately 32,400 dwelling units. As the practical capacity for buildout is 55,900 units, the total remaining practical capacity is therefore for 23,500 units (as of 2005).

Total Remaining Practical Capacity by Vacant or Underutilized Lands

The total remaining practical capacity of 23,500 units (as of 2005) is located in lands that are vacant, effectively vacant, underutilized, or in mixed residential / commercial areas as discussed in the methodology section.

Approximately 28% of the remaining practical capacity, or 6,600 units are located on lands identified as underutilized. In 2005, there were only 500 units located on the 221 ha of land identified as underutilized and zoned for residential uses (2 units per ha). At build-out, it is estimated that there would be 7,100 units (32 units per ha) located on these underutilized lands. Most of the practical remaining capacity on the identified underutilized lands is associated with apartments and single-detached units, with some townhouses.

It is estimated that 35% of the remaining practical capacity, or 8,100 units, is located on lands that are identified as vacant. In 2005, there were essentially no units located on the 348 ha of lands that were identified as vacant and zoned residential. At build-out, it is estimated that there would be 8,100 units (23 units/ha) located on these vacant lands. The remaining practical capacity of vacant residential land is roughly equally distributed between single-detached units, townhouses, and apartments.

A further 22% of the remaining practical capacity, or 5,100 units, are located on the 292 ha of residentially zoned lands that are identified as effectively vacant. This means that the lands had a single-detached dwelling unit located on them in 2005 and the lot was greater than 2 acres in size (max of 1.25 units / ha) but the zoning was at least for 2.5 units/ha or greater. In 2005, there were only 170 single-detached units located on these lands (0.6 units/ha). In the minimum case, at least one additional unit can be fit onto the lot within the existing zoning (subject to lot configurations and other potential site issues). In many other cases the zoning is for much higher residential densities on these effectively vacant residential lands (e.g. RS3, RS7, RS8). Approximately 80% of the practical remaining capacity on these lands is for single-detached units, 18% for apartments, and 2% for townhouses.

Lands zoned for A1, A2, or A3 uses (rural agricultural / residential) only comprise 2% of the remaining practical capacity in the city, or 450 units. In 2005, there were 150 units located on the 880 ha of developable land with this zoning. At build-out, it is estimated that there would be 600 units (0.7 units/ha). The remaining capacity in this area is all for single-detached units.

There are also 3,400 units of remaining practical capacity located on lands that are identified as mixed residential / commercial, or 14% of the remaining practical capacity. It is difficult to accurately estimate the capacity for these areas due to the uncertainty of how much of the floor space in mixed use zones will be dedicated to commercial vs. residential uses. Therefore, this is a more generalized estimate of practical remaining capacity. All of the remaining practical capacity in these areas is for apartment units.

Total Practical Capacity by Structural Type

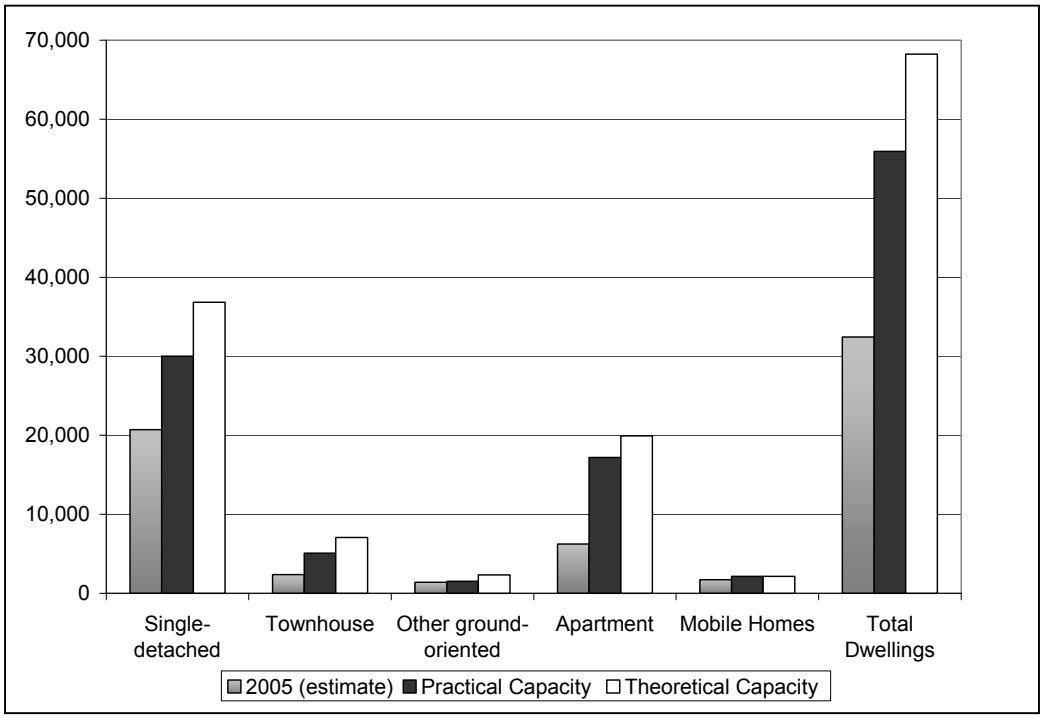
There is total practical capacity for approximately 30,000 single-detached units and 2,100 mobile home units under current zoning (Table 3-5 and Figure 3-4). Table 3-5 and Figure 3-4 also shows the results of the theoretical capacity for comparison purposes. For multi-family units, there is capacity for 5,100 townhouses, 1,500 other ground-oriented units (such as duplexes, triplexes, and quadruplexes), and 17,200 apartment units. There is a higher remaining capacity for multi-family dwellings in the city than single-detached units. As a result, at build-out (if the city were fully built-out under current zoning), the share of single-detached units would decline from 63.9% in 2005 to 53.7% at build-out (practical capacity). The proportion of the city's dwelling units that are townhouses would increase from 7.3% in 2005 to 9.1% at build-out. Similarly, the share of the city's dwelling units that are apartment would increase from just under 20% in 2005 to 29% at build-out.

Table 3-5: Dwelling Units and Population, City of Nanaimo, 2005 and Build-out

City of Nanaimo	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	Total Population
2005 (estimate)	20,700	2,400	1,400	6,200	1,700	**32,400**	**79,600**
City share (2005) (%)	*63.9%*	*7.3%*	*4.3%*	*19.2%*	*5.3%*	***100.0%***	***N/A***
Total Practical Capacity	30,000	5,100	1,500	17,200	2,100	**55,900**	**124,500**
City Share (Capacity) (%)	*53.7%*	*9.1%*	*2.7%*	*30.7%*	*3.8%*	*100.0%*	***N/A***
Total Theoretical Capacity	36,800	7,100	2,300	19,900	2,100	**68,200**	**152,800**
City Share (Capacity) (%)	*53.9%*	*10.4%*	*3.4%*	*29.2%*	*3.1%*	*100.0%*	***N/A***

* Note: Total dwellings exclude suites. Total population includes population from suites.
Source for 2005 estimate for dwellings is primarily based on BC Assessment Authority data; for total population in 2005 the estimate is from BC Stats.

Figure 3-4: Dwelling Units by Structural Type, 2005, Practical Capacity, and Theoretical Capacity



The capacity of secondary suites was estimate separately as there is a higher degree of uncertainty over the existing number of suites and the number that could realistically occur in the city at build-out. Assuming that 15% of the city's single-detached units have suites at build-out, this suggests that there would be 4,500 occupied suites at build-out (in addition to the dwelling units shown in the above table).

Remaining Residential City-wide Capacity

This analysis indicates that there are approximately 23,500 units of remaining practical capacity in the city (as of 2005) (see Table 3-6).

Table 3-6: Remaining Capacity in City of Nanaimo by Structural Type (as of 2005)

City of Nanaimo	Single-detached+	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings
Remaining Practical Capacity	*9,300*	*2,700*	*100*	*11,000*	*400*	***23,500***
City Share (%)	*39.6%*	*11.6%*	*0.5%*	*46.7%*	*1.7%*	*100.0%*

There is remaining capacity for approximately 9,300 single-detached units and 400 mobile homes, which represent just over 40% of the city's remaining capacity. Approximately 47% of the city's remaining practical capacity is in apartments, which is more than twice the share of the existing dwelling stock. The last portion of the remaining practical capacity consists of 12% townhouses and 1% other ground-oriented units.

Past development patterns indicate that the city's residentially zoned land is being built out in places significantly below its theoretical capacity. On average, the city's land that is zoned for single-detached and already developed has occurred at net densities that are approximately 70% to 80% of the theoretical capacity. If the city's lands continue to be developed at lower densities than are allowed under current zoning, the practical capacity will be even lower than that shown.

3.8 Results by Urban Containment Area

In 2005, there were an estimated 32,300 dwelling units located within the Urban Containment Boundary (UCB), or 99% of the city's housing stock. Approximately 200 dwelling units were located outside the UCB in 2005 (including Linley Valley). The practical capacity estimate for the area inside the UCB is for 55,100 units at build-out, representing approximately 99% of the city's housing capacity (see Table 3-7). The theoretical capacity estimate for the area inside the UCB is for 67,400 units. In comparison, Westland Resource Group (2001) had estimated that there was a capacity of 70,800 units inside the UCB, which is similar in magnitude to, but slightly higher than the results of this study for the theoretical capacity. However, the practical capacity estimated in lower than the Westland study by approximately 15,000 units.

Outside the UCB, there are less than 100 units of total capacity in Linley Valley and approximately 800 units of total capacity outside rest of the UCB.

Table 3-7: Dwelling Units Inside and Outside the Urban Containment Boundary, 2005 and Build-out

Urban Containment Subarea		Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	% of City-wide Dwellings
Inside UCB	2005 (estimate)	20,500	2,400	1,400	6,200	1,700	**32,300**	99.4%
	Total Practical Capacity	29,200	5,100	1,500	17,200	2,100	**55,100**	98.5%
Linley Valley (Outside of UCB)	2005 (estimate)	20	0	0	0	0	**20**	0.1%
	Total Practical Capacity	60	0	0	0	0	**60**	0.1%
Rest of Outside of UCB	2005 (estimate)	200	0	0	0	0	**200**	0.5%
	Total Practical Capacity	800	0	0	0	0	**800**	1.4%
City of Nanaimo	**2005 (estimate)**	**20,700**	**2,400**	**1,400**	**6,200**	**1,700**	**32,400**	**100.0%**
	Total Practical Capacity	**30,000**	**5,100**	**1,500**	**17,200**	**2,100**	**55,900**	**100.0%**

In 2005, there were 20,500 single-detached units located within the UCB. There is an estimated capacity of 29,200 units of single-detached housing located within the UCB. Virtually, all the city's capacity for townhouses, other ground-oriented units, apartment units, and mobile homes are located inside the UCB. Outside the UCB (including Linley Valley), there is capacity for approximately 900 single-detached units.

There is remaining practical capacity for approximately 22,800 units within the UCB as of 2005 (see Table 3-8). Of these, there is remaining practical capacity for 8,600 single-detached units, 2,700 townhouses, 500 other ground-oriented units or mobile homes, and 11,000 apartments. Over 97% of the city's remaining capacity is located within the UCB. There are less than 700 units of remaining capacity outside the UCB (including Linley Valley) all of which are single-detached units.

Table 3-8: Remaining Practical Capacity Inside and Outside the Urban Containment Boundary by Structural Type (as of 2005)

Urban Containment Subarea	Single-detached	Townhouse	Other ground oriented	Apartment	Mobile Homes	Total Remaining Dwelling Capacity	% of City's Remaining Dwelling Capacity
Inside UCB	*8,600*	*2,700*	*100*	*11,000*	*400*	***22,800***	*97.2%*
Linley Valley (Outside UCB)	*40*	*0*	*0*	*0*	*0*	***40***	*0.2%*
Rest of Outside of UCB	*600*	*0*	*0*	*0*	*0*	***600***	*2.6%*
City of Nanaimo	***9,300***	***2,700***	***100***	***11,000***	***400***	***23,500***	***100.0%***

3.9 Results by Subarea

Figure 3-5 presents a map that shows the location of the subareas. The subareas generally coincide with Census Tract boundaries or the subarea boundaries included in Map 1 of the 1996 Plan Nanaimo OCP. However, a number of changes were made to disaggregate the geographies into more meaningful categories.

Figure 3-5: Location of Subareas

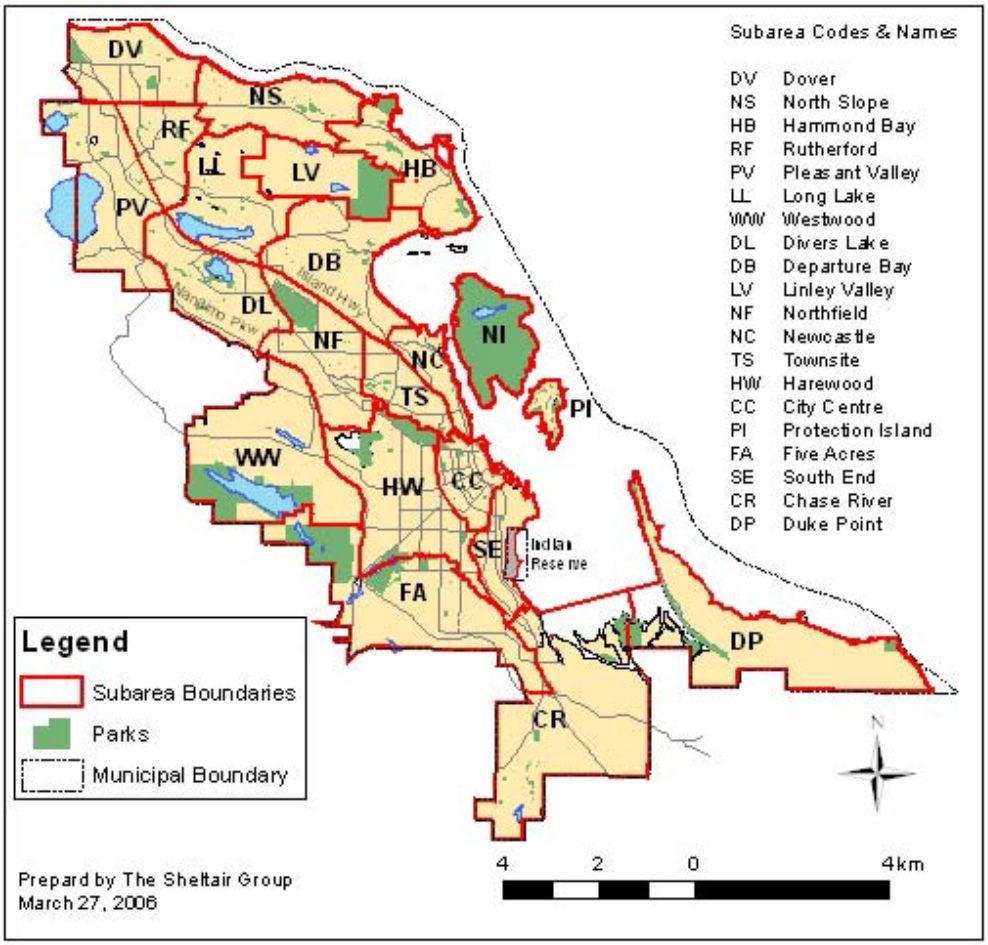
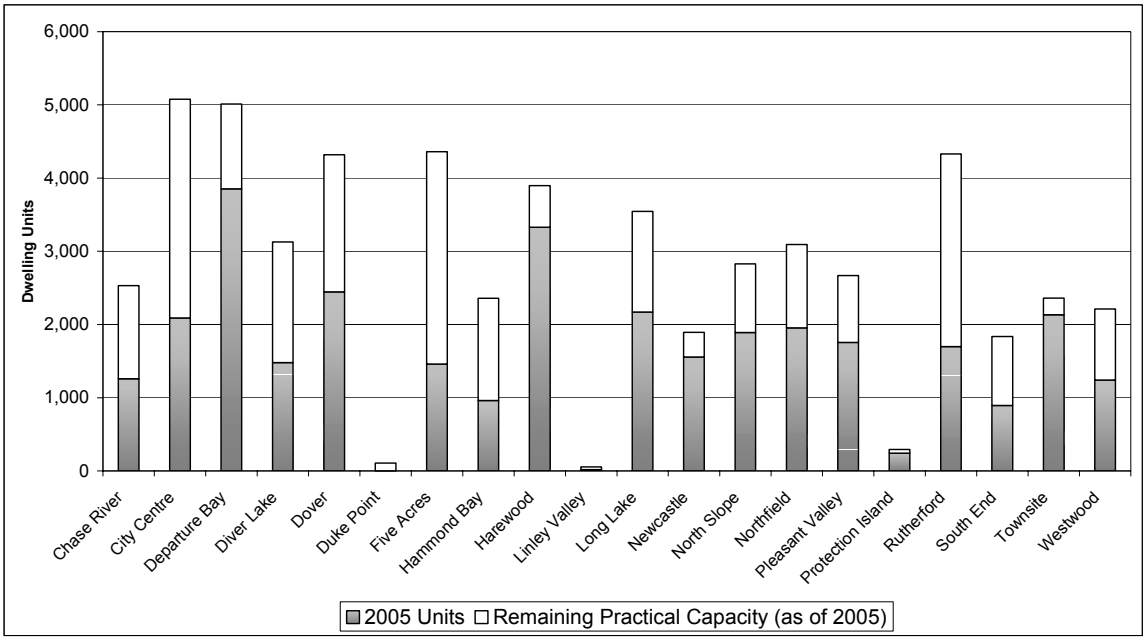


Figure 3-6 shows the breakdown of existing units (2005) and remaining practical capacity by subarea. As can be seen, there is very little remaining practical capacity in the subareas of Duke Point, Linley Valley, Newcastle, Protection Island, and Townsite. In addition, Newcastle Island has no practical capacity.

Figure 3-6: 2005 Total Dwelling Units and Remaining Practical Capacity by Subarea



To better understand the location of remaining practical capacity, the following graphs show the breakdown of the existing units and remaining practical capacity by structural type.

Figure 3-7 shows the location of the remaining practical single-detached capacity by subarea. As noted, there are approximately 9,300 units of remaining practical capacity for single-detached units in the city. Approximately 83% of the remaining practical capacity for single-detached units is located in Chase River, Diver Lake, Five Acres, Hammond Bay, Long Lake, North Slope, Pleasant Valley, and Westwood. There is an estimated loss of approximately 50 single-detached units in the City Centre as lands become redeveloped to higher densities. There is virtually no practical remaining capacity for single-detached units in Newcastle and Townsite. There is some modest remaining practical capacity for single-detached units in the areas of Dover, Duke Point, Linley Valley, Northfield, Protection Island, and South End.

The location of the remaining practical townhouse capacity by subarea is shown in Figure 3-8. Approximately 87% of the townhouse remaining practical capacity is located in Departure Bay, Diver Lake, Five Acres, Hammond Bay, North Slope, Northfield, and Rutherford. There are no existing townhouse units or capacity for townhouses in the areas of Duke Point, Linley Valley, Newcastle, or Protection Island.

Figure 3-7: 2005 Single-detached Dwelling Units and Remaining Practical Capacity by Subarea

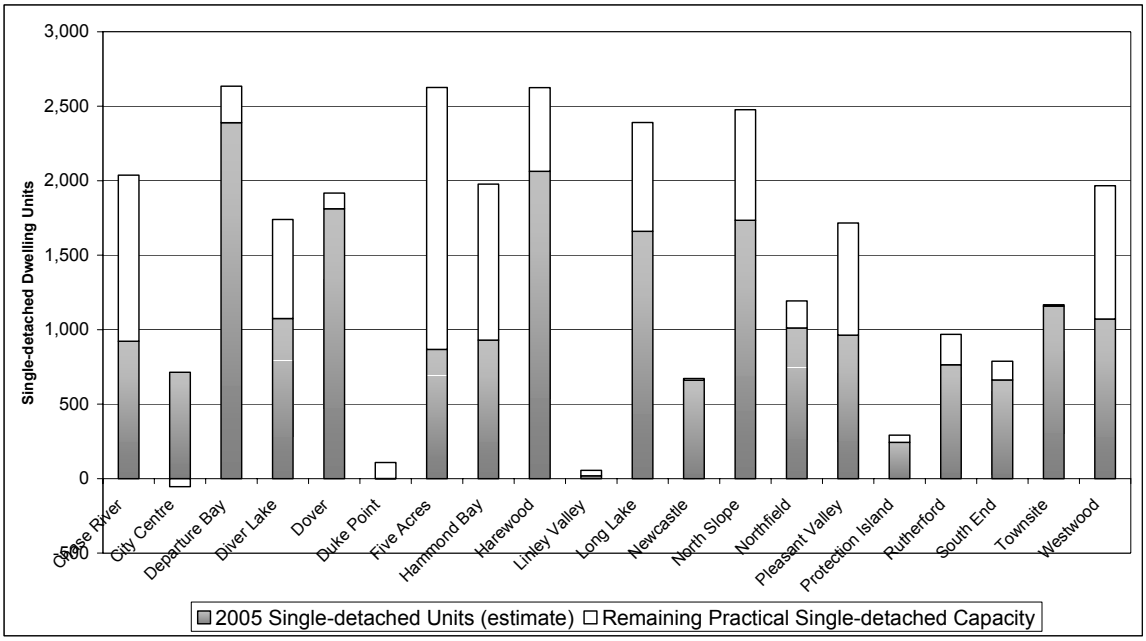


Figure 3-8: 2005 Townhouse Dwelling Units and Remaining Practical Capacity by Subarea

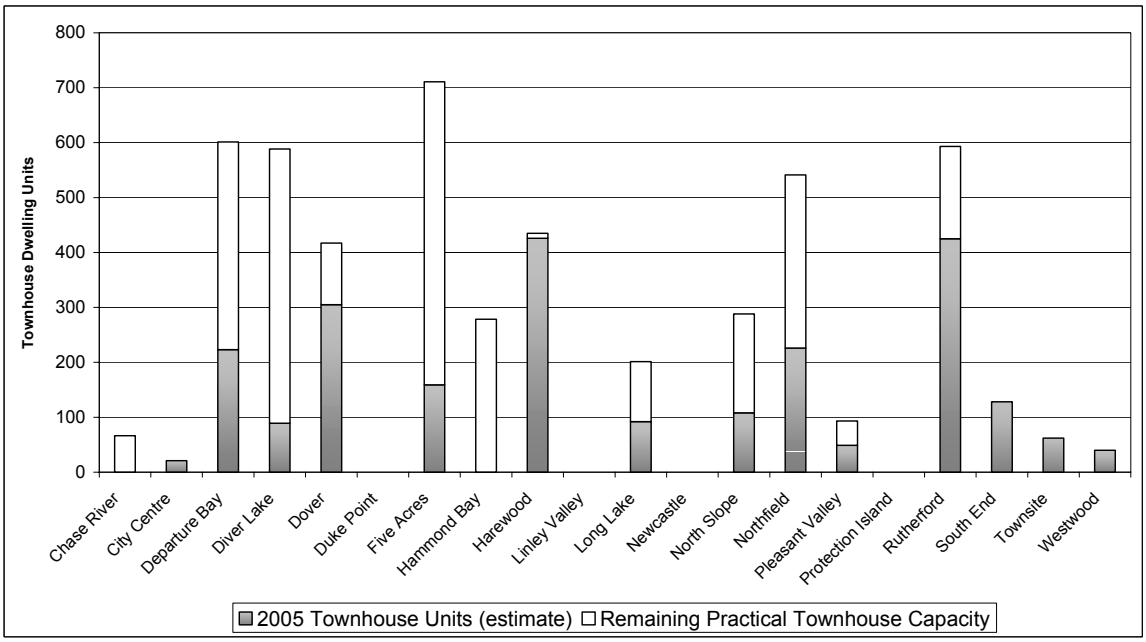
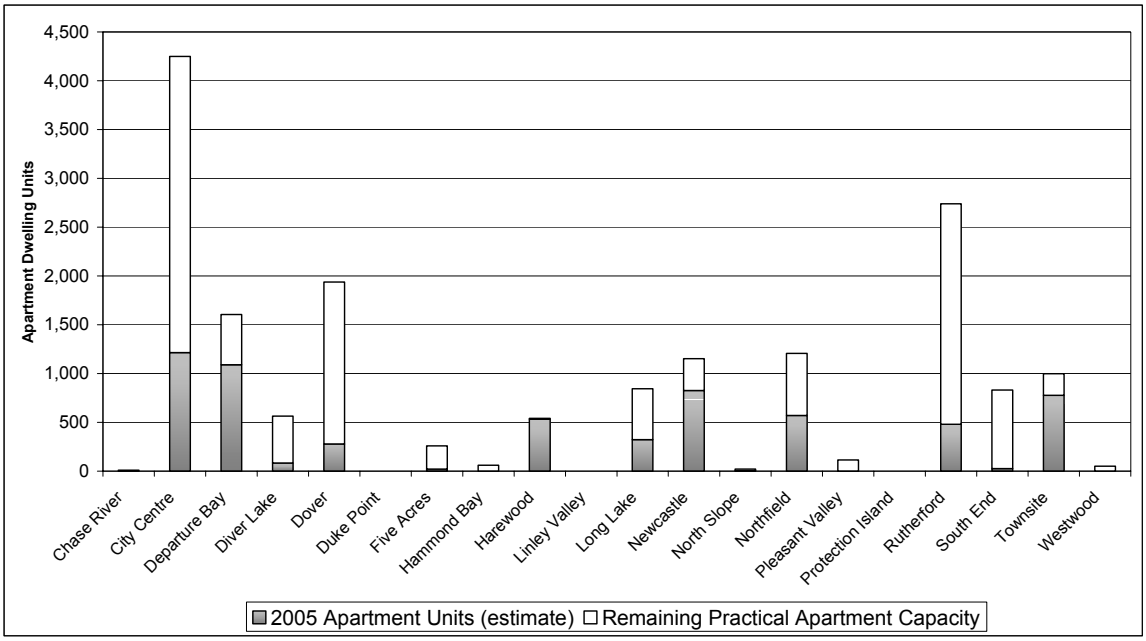


Figure 3-9 shows the location of the existing apartment units and remaining practical capacity by subarea. There are some data gaps for the distribution and count of existing apartment units. In addition, there are uncertainties with the share of floor space in mixed residential / commercial areas that are intended for residential use. Therefore, the distribution of existing units and

remaining practical capacity for apartments has a wider margin of error than the other structural types. Just over 25% of the remaining capacity for apartment units is located in the City Centre. Other significant sources of remaining practical apartment capacity include Dover and Rutherford, which comprise 35% of the remaining apartment capacity together. There are no existing apartment units or apartment capacity in Duke Point, Linley Valley, and Protection Island.

Figure 3-9: 2005 Apartment Units and Remaining Practical Capacity by Subarea



There is only practical remaining capacity for 400 mobile homes. For mobile homes, approximately 85% of the remaining practical capacity is located in Five Acres. There is also remaining practical capacity for mobile homes in Chase River and Westwood.

More detailed results by subarea can be found in Appendix B.

3.10 Results by Town Centre

In 2005, approximately 3,900 dwelling units, or approximately 12% of the city's dwellings, were located within the Town Centres in 2005 (Table 3-9). The Residential Build-out Model estimated that there is capacity for 11,900 units in the Town Centres, or over three times the current number of units. At build-out, it is estimated that 21% of the city's dwelling units would be located in Town Centres if the city built out to its full capacity. The capacity estimates are more challenging in the Town Centres due to the mixed nature of the commercial and residential land use in these areas. Therefore, there is a wider margin of error for these calculations, particularly by structural type.

Table 3-9: Dwelling Units and Population by Town Centre, 2005 and Build-out

Town Centres		Single-detached	Townhouse	Other ground oriented	Apartment	Mobile Homes	Total Dwellings	% of City-wide Dwellings
Country Club Town Centre	2005 (estimate)	50	40	10	300	0	**400**	1.4%
	Total Practical Capacity	60	40	10	700	0	**800**	1.4%
Downtown Town Centre	2005 (estimate)	60	10	20	700	30	**800**	2.5%
	Total Practical Capacity	50	10	20	3,100	30	**3,200**	5.7%
Hospital Town Centre	2005 (estimate)	80	110	40	900	0	**1,100**	3.5%
	Total Practical Capacity	80	340	50	1,400	0	**1,900**	3.3%
Rutherford Town Centre	2005 (estimate)	10	160	10	600	10	**800**	2.4%
	Total Practical Capacity	130	380	10	3,000	10	**3,500**	6.3%
Southgate / Chase River	2005 (estimate)	50	0	0	0	260	**300**	0.9%
Town Centre	Total Practical Capacity	190	0	0	0	290	**500**	0.9%
Woodgrove Regional	2005 (estimate)	80	120	20	200	10	**400**	1.3%
Shopping Town Centre	Total Practical Capacity	100	120	20	1,800	10	**2,000**	3.7%
Town Centres Subtotal	**2005 (estimate)**	**300**	**400**	**100**	**2,700**	**300**	**3,900**	**11.9%**
	Total Practical Capacity	**600**	**900**	**100**	**10,000**	**300**	**11,900**	**21.3%**
City of Nanaimo	**2005 (estimate)**	**20,700**	**2,400**	**1,400**	**6,200**	**1,700**	**32,400**	**100.0%**
	Total Practical Capacity	**30,000**	**5,100**	**1,500**	**17,200**	**2,100**	**55,900**	**100.0%**
Town Centres as % of	**2005 (estimate)**	**1.6%**	**18.7%**	**7.7%**	**42.8%**	**17.9%**	**11.9%**	**N/A**
City-wide Totals	**Total Practical Capacity**	**2.0%**	**17.5%**	**7.6%**	**58.0%**	**16.0%**	**21.3%**	**N/A**

There are an estimated 8,100 units of remaining capacity in the Town Centres (Table 3-10). Approximately 7,300 units of this remaining capacity is apartment units. The majority of the remaining apartment capacity is located in the Downtown Town Centre, Rutherford Town Centre, and Woodgrove Regional Shopping Town Centre. There is also capacity for approximately 400 townhouses in the Hospital Town Centre and Rutherford Town Centre combined. In addition, there is approximately 300 units of single-detached capacity, primarily located in the Southgate / Chase River Town Centre and the Rutherford Town Centre as of 2005.

Table 3-10: Remaining Practical Capacity Inside and Outside the Urban Containment Boundary by Structural Type (as of 2005)

Subareas	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Remaining Dwelling Capacity	% of City's Remaining Dwelling Capacity
Country Club Town Centre	*10*	*0*	*0*	*340*	*0*	***400***	*1.5%*
Downtown Town Centre	*-10*	*0*	*0*	*2,370*	*0*	***2,360***	*10.0%*
Hospital Town Centre	*0*	*220*	*10*	*510*	*0*	***740***	*3.1%*
Rutherford Town Centre	*120*	*220*	*0*	*2,440*	*0*	***2,780***	*11.9%*
Southgate / Chase River TC	*150*	*0*	*0*	*30*	*30*	***210***	*0.9%*
Woodgrove Regional Shopping	*20*	*0*	*0*	*1,610*	*0*	***1,630***	*7.0%*
Town Centres Subtotal	***300***	***400***	***10***	***7,300***	***30***	***8,100***	***34.4%***
City of Nanaimo	***9,300***	***2,700***	***100***	***11,000***	***400***	***23,500***	***100.0%***
Town Centres as % of City-wide Totals	***3.0%***	***16.4%***	***6.4%***	***66.7%***	***8.2%***	***34.4%***	***N/A***

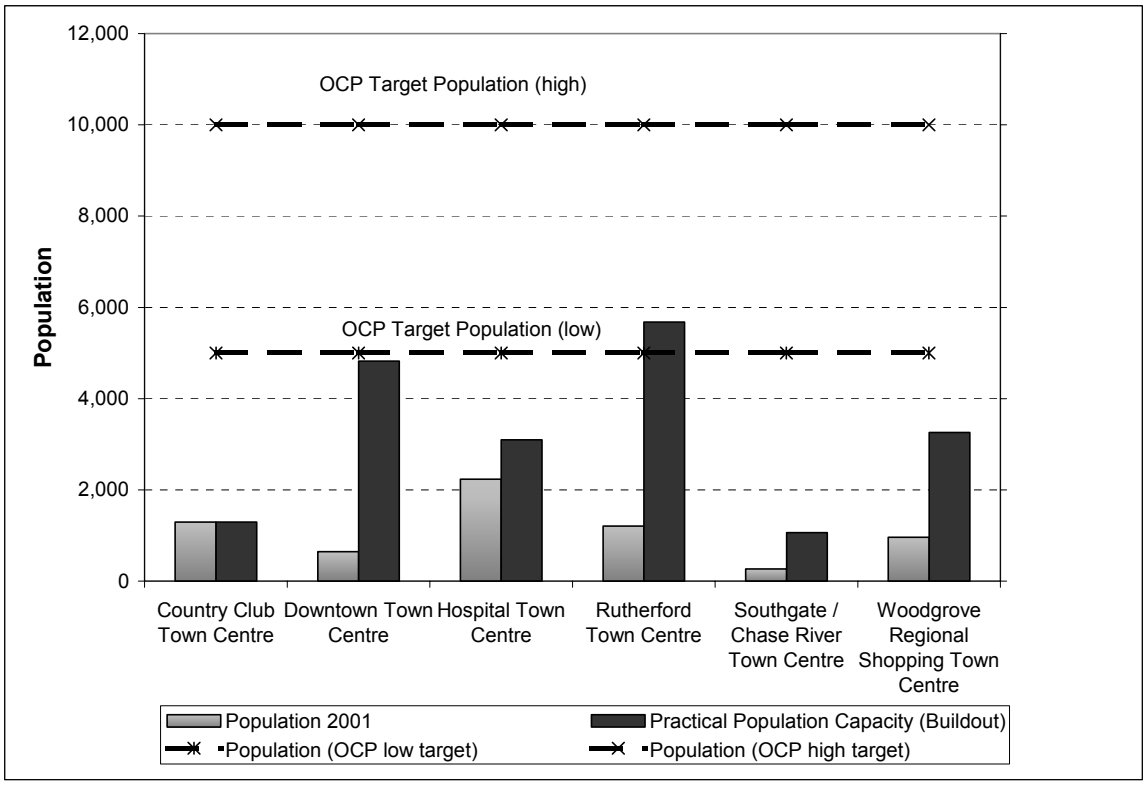
It is estimated that just over 34% of the city's remaining practical capacity is located in the Town Centres. This includes approximately two-thirds of the city's remaining capacity for apartment units.

There is no population estimate for subareas within the city for 2005. Therefore, population estimates from the 2001 Census are used for the following discussion. According to data from PCensus, 6,600 people lived in the designated Town Centres in 2001. In comparison, the OCP indicates that the total population target for the Town Centres combined is 30,000 to 60,000 people. The capacities calculated by the Residential Build-out Model are for a capacity of 19,200 people in all of the Town Centres combined. Therefore, the capacities estimated by the Residential Build-out Model fall significantly short of the targets in the OCP for the Town Centres (see Figure 3-10). However, the model shows that there is capacity for a significantly higher population in the Town Centres over current levels with almost a tripling of population.

The only two Town Centres that are shown to have capacities that approach the City's 1996 Plan Nanaimo target of 5,000 to 10,000 people per center are the Downtown Town Centre and the Rutherford Town Centre (Figure 3-10).

The Southgate / Chase River Town Centre was estimated to have the lowest residential capacity. This is believed to be a more realistic estimate given that this is the smallest of the Town Centres and given the current zoning of the area. The model estimated the capacity of the Country Club Town Centre to be roughly equal to its present number of dwelling units. There is likely additional capacity beyond what is shown in the Country Club Town Centre. However, a more detailed analysis or refinement of the model would be required.

Figure 3-10: 2001 Population and Population at Build-out by Town Centre



3.11 Adequacy of Current Residential Capacity to Meet Future Demand

The housing demand projected by Urban Futures Incorporated (November 2006) was compared with the calculated practical residential capacity at build-out. Urban Futures projects a housing demand of 53,300 dwelling units by 2031, which would accommodate a population of 118,000 (Figure 3-11).

Figure 3-11: Comparison of Housing Demand with Residential Capacity, 2031

Dwellings by Structural Type	Existing Units, 2005 (estimate*)	UFI Housing Occupancy Projection, 2031 (November 2006)	Practical Capacity at Build-out (Sheltair)	Remaining Practical Capacity as of 2005
Single-detached	20,700	31,600	30,000	9,300
Other ground-oriented (incl. townhouses and mobile homes)	5,500	10,500**	8,700	3,200
Secondary suites (estimate)	N/D	**	4,500	N/A
Apartment	6,200	11,300	17,200	11,000
TOTAL (excl. secondary suites)	32,400	**	55,900	23,500
TOTAL (incl. secondary suites)	**N/D**	**53,300****	**60,400**	**28,000**

* Estimate of existing units by Sheltair primarily based on BC Assessment Authority data

** Urban Futures did not explicitly account for suites other than the rates that would have been accounted for in the 2001 Census.

The capacity analysis found that there is practical capacity to accommodate approximately 60,400 dwelling units at build-out (55,900 total units excluding secondary suites).

In 2005, there were approximately 20,700 single-detached units in the city. For single-detached units, Urban Futures estimates the housing demand to be for 31,600 units in 2031. The practical capacity for single-detached units is estimated at 30,000 units. Therefore, the practical capacity falls short of housing demand in 2031 by approximately 1,600 units. Past development of lands zoned for single-detached use has occurred at densities much below the densities that are allowed. Past development of single-detached lands has occurred on average at 70% to 80% of theoretical capacity, even after excluding constraints, roads and road right-of-ways. Therefore, if these development trends continue for the development of the remaining lands zoned for single-detached development, the practical capacity may be less than 30,000 units and the shortfall higher than the estimated 1,600 units.

In 2005, there were an estimated 5,500 other ground-oriented units (including townhouses and mobile homes). Urban Futures estimates that the housing demand for other ground-oriented units is 10,500 units in 2031[7]. The practical capacity for other ground-oriented units is estimated at 8,700 units, as well as an estimated 4,500 secondary suites. Therefore, there is sufficient supply to accommodate the other ground-oriented demand to 2031. As with single-detached housing, if the remaining practical capacity is developed at much lower densities than is allowed under current zoning, the demand for other ground-oriented units may exceed supply before 2031.

There were an estimated 6,200 apartment units in 2005. Urban Futures estimates that the total housing demand for apartments will be for 11,300 units in 2031. The practical capacity for apartments was estimated to be 17,200 units. Therefore, there is ample capacity to accommodate the anticipated demand in apartment units to at least 2031. It is noted that the

[7] Urban Futures did not explicitly account for suites in the housing demand study other than the number and rates of suites that would have been included in the 2001 Census of Canada. Therefore, the supply and demand of other ground-oriented units can only generally be compared between the two studies.

2005 estimate and practical capacity for apartments is the most difficult to estimate due to data gaps with the data sources and due to the complexity of mixed residential / commercial developments. However, the magnitude that supply exceeds demands indicates that there is sufficient capacity to meet demand even with the uncertainty in some of the data.

In total, under current zoning there is sufficient capacity to accommodate housing demand for other ground-oriented and apartment units out to 2031. However, it is estimated that there will be a shortfall in the number of single-detached units of approximately 1,600 units when comparing the demand to practical capacity in 2031. If the build-out of single-detached lands continues to be significantly below the theoretical capacity, there may be a shortfall of more than 1,600 single-detached units in 2031. Similarly, the remaining practical capacity for other ground-oriented units may be less than that shown if build-out occurs at lower densities than allowed.

In the short- and medium-term (5-15 years), there is sufficient capacity to meet the projected housing demand for all structural types. However, over the longer-term (15 years and beyond), the city may start to approach its practical capacity for single-detached units depending on the efficiency at which the remaining residential land is developed.

4.0 Commercial Land Inventory

4.1 Growth Centres

The City's Official Community Plan identifies a hierarchy of growth centres, including "Regional Shopping Town Centres", "Town Centres", and "Neighbourhood Villages". In the OCP, the Centres are intended to "offer a broad range of shopping and commercial services, employment opportunities, housing forms, open space, and amenities.

Schedule "A" designates one Regional Shopping Town Centre and five Town Centres within the City boundaries (see Fig. 4-1), which are:

- Woodgrove Regional Shopping Town Centre,
- Downtown Town Centre,
- Townsite Town Centre (also known as Hospital),
- Country Club Town Centre,
- Rutherford Town Centre, and
- Chase River Town Centre (also known as Southgate).

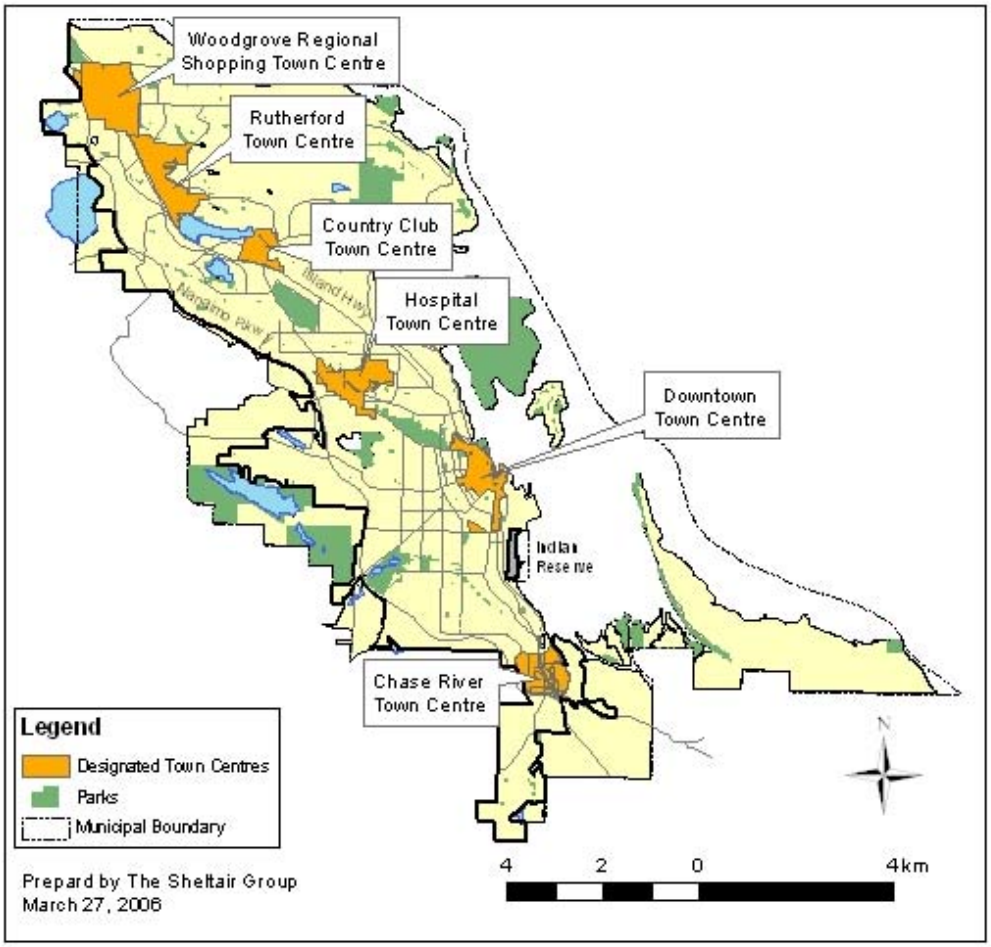
There are also 11 Neighbourhood Villages designated on Schedule "A". The City was interested in more detail with regards to one of the Neighbourhood Villages called Terminal Park Mall, where redevelopment and renovation are occurring, which the City wanted included in the analysis.

4.2 Other Commercial Areas

In addition to the Town Centres, the OCP has land use designations for other areas that provide commercial services, including:

- Highway Commercial – "places for service and commercial uses that are oriented to the public traveling by vehicle",
- Commercial (in Chase River) – "areas meant to serve the need of the traveling public and/or vehicle/ land intensive uses such as larger scale retail",
- Waterfront Designation – includes marine-related commercial uses such as retail marine supply centres, commercial and recreational water-based transportation, and tourism and hospitality business,
- Local Service Centres – "small scale service centres that provide commercial and community services for local neighbourhoods" (defined conceptually),
- Mainstreets – "pedestrian-oriented forms of commercial and residential development that form the core or centre of Neighbourhood Villages",
- "Downtown Subarea 2" – Infill Commercial Business and Professional Service / Commercial,
- "Downtown Subarea 5" – Central Commercial, and
- "Downtown Subarea 6" – Mixed Multi-family / Commercial.

Figure 4-1: Location of Town Centres and the Regional Shopping Town Centre



The "Highway Commercial", "Commercial (Chase River)", "Waterfront Designation", and "Downtown Subarea" land use designations are shown on Schedule "A". The "Local Service Centres" and "Mainstreets" are also shown on Schedule "A" but the locations are conceptual in nature and the OCP indicates that the precise locations and boundaries are to be determined in future neighbourhood plans.

4.3 Amount and Distribution of Commercial Land Supply

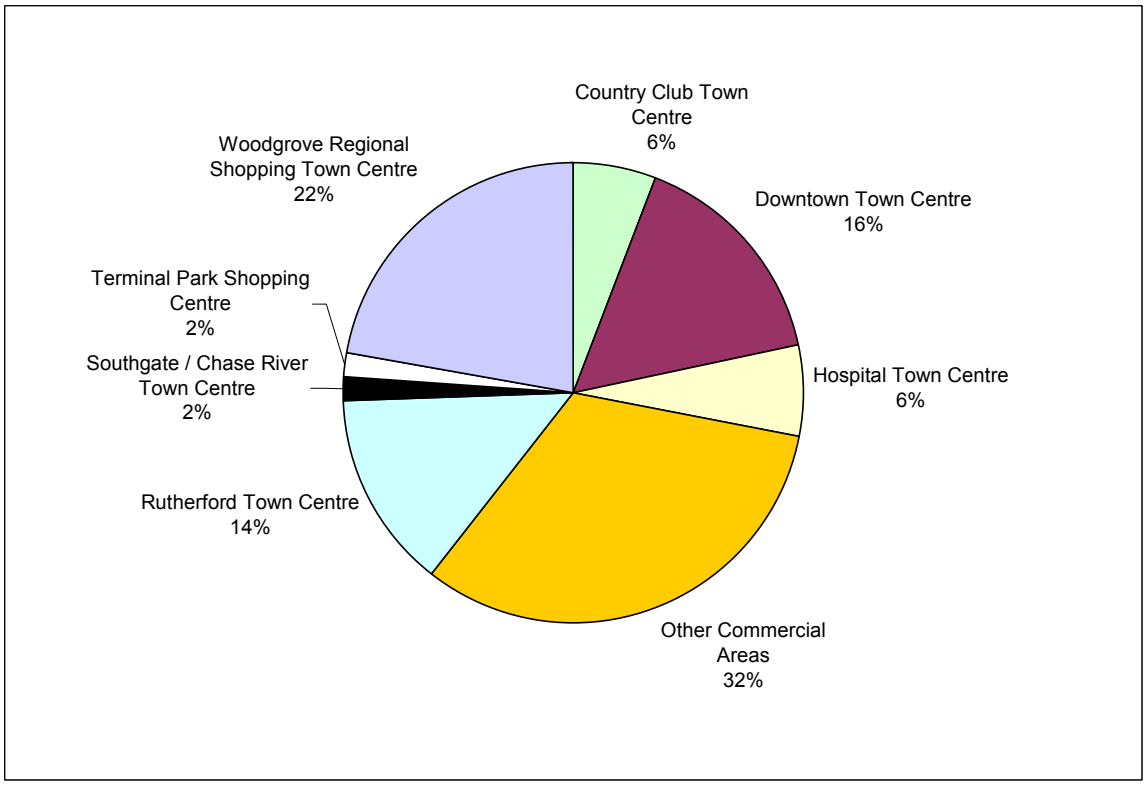
The commercial land inventory includes land that is zoned commercial *and* designated Town Centre or Regional Shopping Town Centre, or zoned *or* designated commercial outside the Town Centres. In 2005, there were 292 ha of land that was included in the basic commercial land inventory using this definition. This value excludes parks and areas developed as non-commercial. Of this land, 51 ha are constrained by lake, stream, and wetland setbacks or are located in areas with slopes of 10% or greater. The commercial land inventory excludes existing road right-of-way and therefore the area is a net area. Therefore, the basic commercial land inventory is a net area of 241 ha, excluding constrained lands.

Approximately 99.8% of the commercial land inventory is located within the Urban Containment Boundary. There are some minor commercially zoned properties in Pleasant Valley that are located just outside the Urban Containment Boundary. There are no commercial lands in the Linley Valley area.

Approximately 68% of the commercially designated or zoned lands are located in the Town Centres or the Regional Shopping Town Centre. The remaining 32% is located in the Neighbourhood Villages, Local Service Centres, highway commercial, and other areas.

The Downtown Town Centre comprises 16% of the land in the Commercial Land Inventory (see Fig. 4-2). Outside Downtown, the largest commercial areas in terms of land area are the Woodgrove Regional Shopping Town Centre and the adjacent Rutherford Town Centre, which comprised 22% and 14% of the commercial land area respectively. Together, these two shopping areas comprised 36% of the commercial land area. The remaining three Town Centres (Country Club, Hospital Town Centre, and Chase River Town Centre) comprised 14% of the commercial land area. The remaining quarter of the commercial land supply is comprised of commercial lands outside the Town Centres.

Figure 4-2: Commercial Land Supply by Commercial Area, 2005

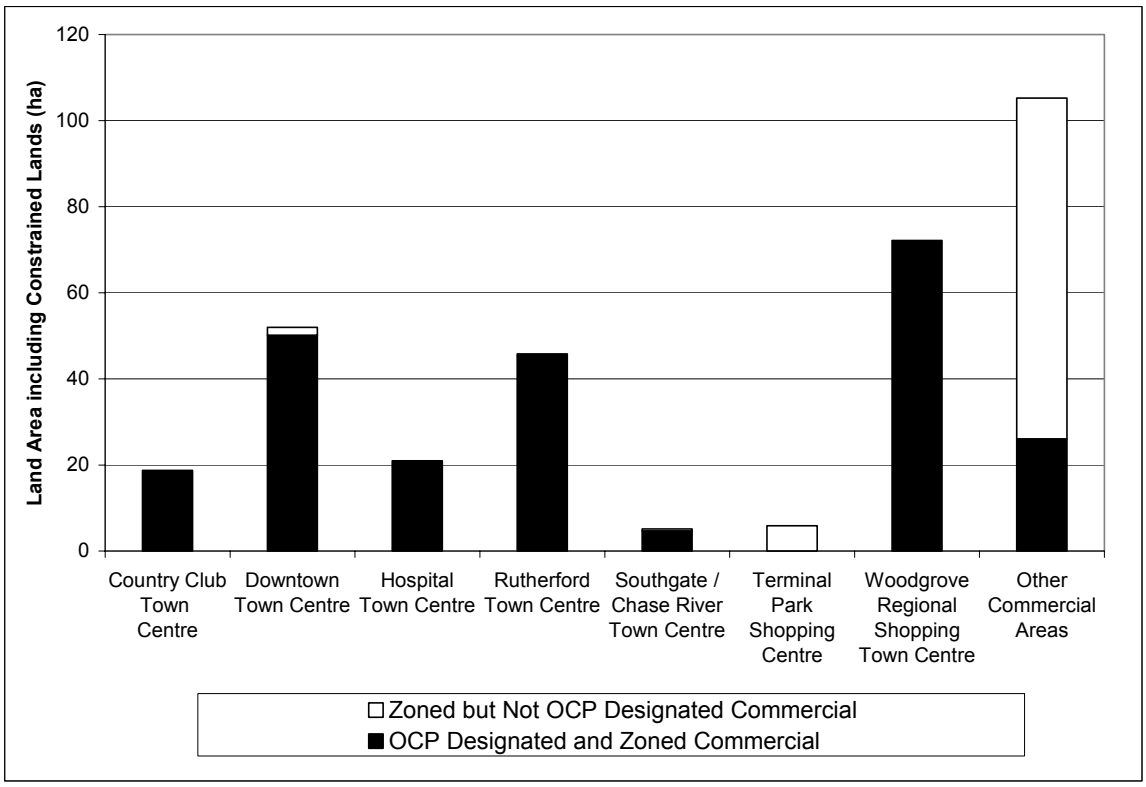


4.4 Commercial Land Supply by Status

Approximately 73% of the lands in the Commercial Land Inventory are both OCP designated Commercial or Town Centre, and zoned Commercial.

Fig. 4-3 provides a breakdown of the commercial areas by OCP and zoning status. Woodgrove Regional Shopping Town Centre, followed by the Downtown Town Centre and Rutherford Town Centre have the largest amounts of land that are both zoned and OCP designated commercial. The Chase River Town Centre has the smallest amount of land that is both zoned commercial and OCP designated commercial at 4.7 ha.

Figure 4-3: Commercial Areas by OCP and Zoning Status, 2005

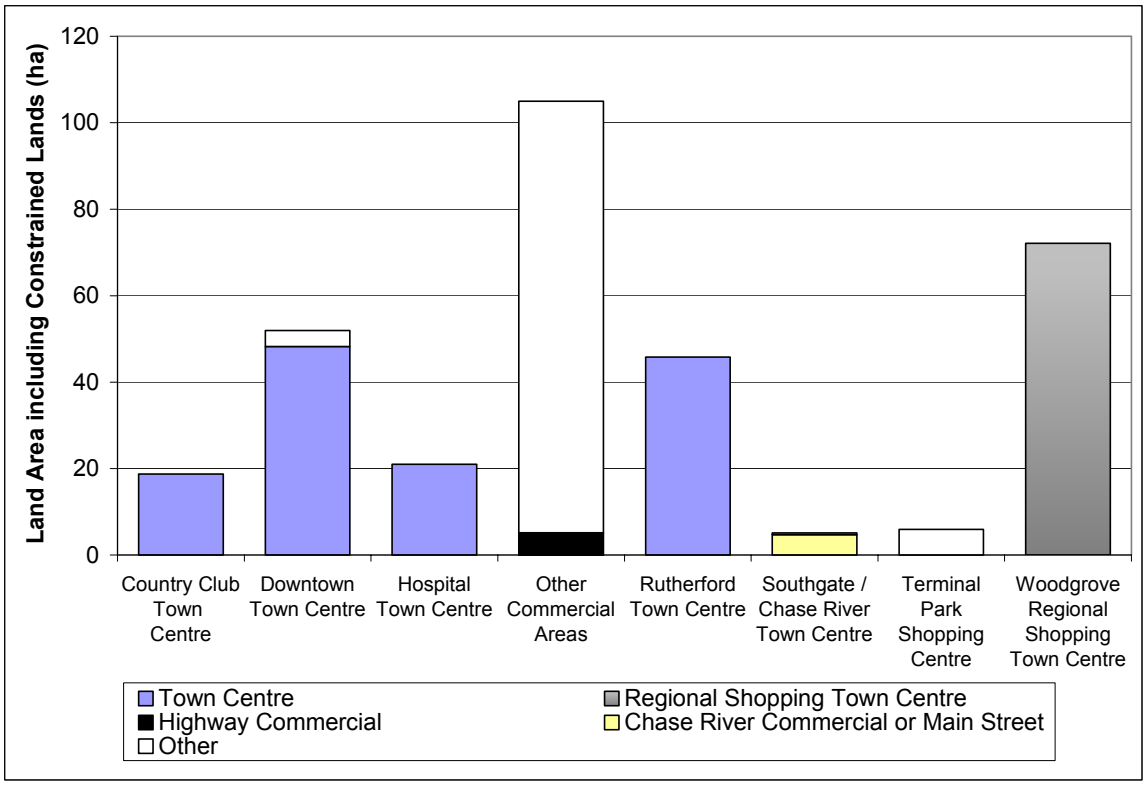


Virtually all of the commercial lands are located in the Downtown, central or northern portions of the city. Only 11.2 ha of zoned and designated commercial lands are located in the southern portion of the City (south of 7th St.). As Chase River is envisioned as a Town Centre and is a growing subarea of the city, there may be a lack of land that is both commercially designated and zoned for commercial uses to service future population growth in the area and in the far southern portions of the city, such as the Cinnabar Valley.

OCP Land Use Designations

As of 2005, there were 292 ha of land designated as Town Centre, Regional Shopping Town Centre, or for a type of commercial use. Fig. 4-4 shows the distribution of the OCP land use designations by the commercial areas. Country Club, Downtown, Hospital, and Rutherford are all designated and delineated as Town Centres in the OCP. Woodgrove is designated and delineated as a Regional Shopping Town Centre. The Chase River Town Centre does not have a delineated Town Centre land use designation. Instead, the principal commercial designations are Chase River Commercial and Chase River Mainstreet.

Figure 4-4: Commercial Areas by OCP Land Use Designation, 2005



Zoning

As of 2005, there were 292 ha of land that was zoned commercial, including the land-based portion of marine areas. Approximately 87% was zoned commercial, and 5% was zoned for marine uses. The remaining 8% is land in the inventory in a Land Use Contract.

Land Use Contracts

The largest Land Use Contract is 24 ha in size in the Woodgrove Regional Shopping Town Centre. While the zoning of this area is A2, it is included in the commercial land inventory as it is the location of the Woodgrove Mall and commercial uses are allowed in the contract.

4.5 Developed and Vacant Commercial Land

Developed commercial land in this study is defined as land that is in the commercial land inventory as defined and is a site that appears to be developed and in use for commercial activities. Developed land includes parking lots for shopping malls, even if the site is underutilized. A property is considered developed if a significant portion of the site has been cleared and there are structures on the site, such as an office building or shopping mall.

Vacant commercial land in this study includes:

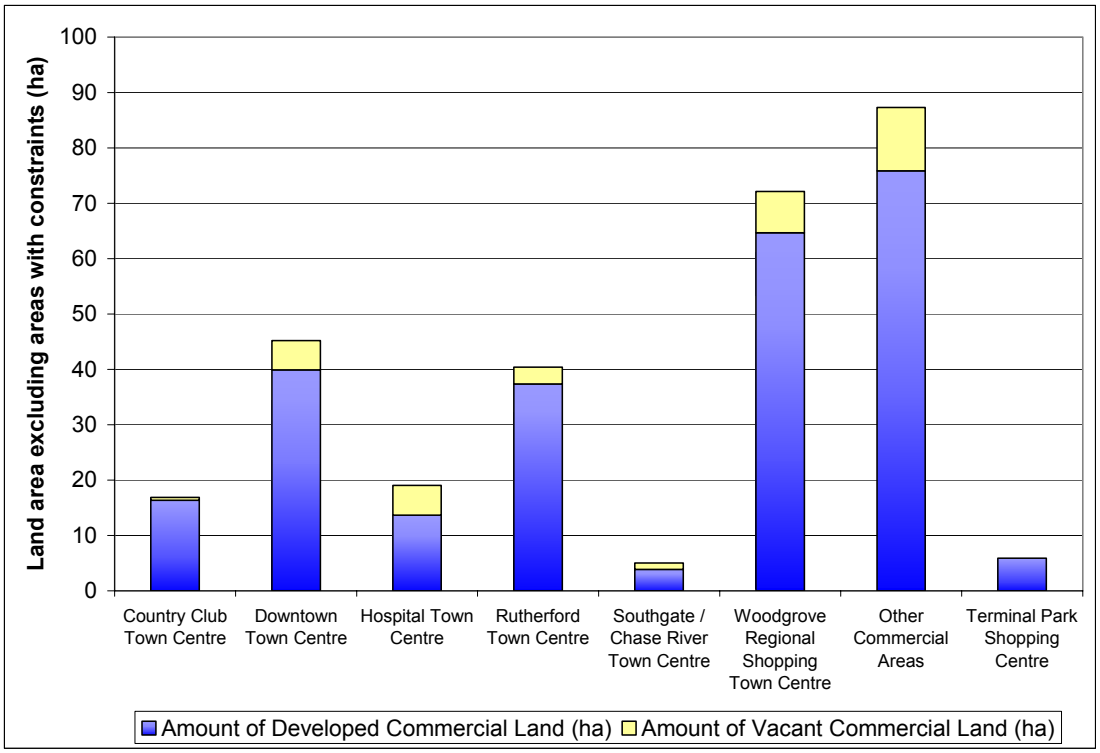
- Primarily greenfield sites that are:
    - zoned for commercial use, or
    - designated for commercial use and located outside a Town Centre
- Land that is cleared but is not occupied by vehicles (excluding parking lots) or by a building and is:
    - zoned for commercial use, or
    - designated for commercial use and located outside a Town Centre

Land that is vacant in a Town Centre but is currently zoned for a non-commercial use, such as residential or institutional, is a potential source of commercial land. However, for this study it is assumed that this land is unlikely to be used for commercial. The only exception is for land that is zoned for agriculture where it is believed that this could become commercial in the medium to long-term.

Large-format retail that is located on industrially zoned land is not included in the commercial inventory. It has been included in the industrial land inventory.

Figure 4-5 provides a breakdown of the developed and vacant commercial land by commercial area. The realistic commercial land supply before constraints is 292 ha of land. Taking into account constraints and excluding parks and right-of-ways, there are about 241 ha of land in the realistic commercial land inventory. It is estimated that 215 ha of land are developed as commercial, representing about 89% of the realistic commercial land inventory.

Figure 4-5: Breakdown of Developed and Vacant Commercial Land by Commercial Area, 2005

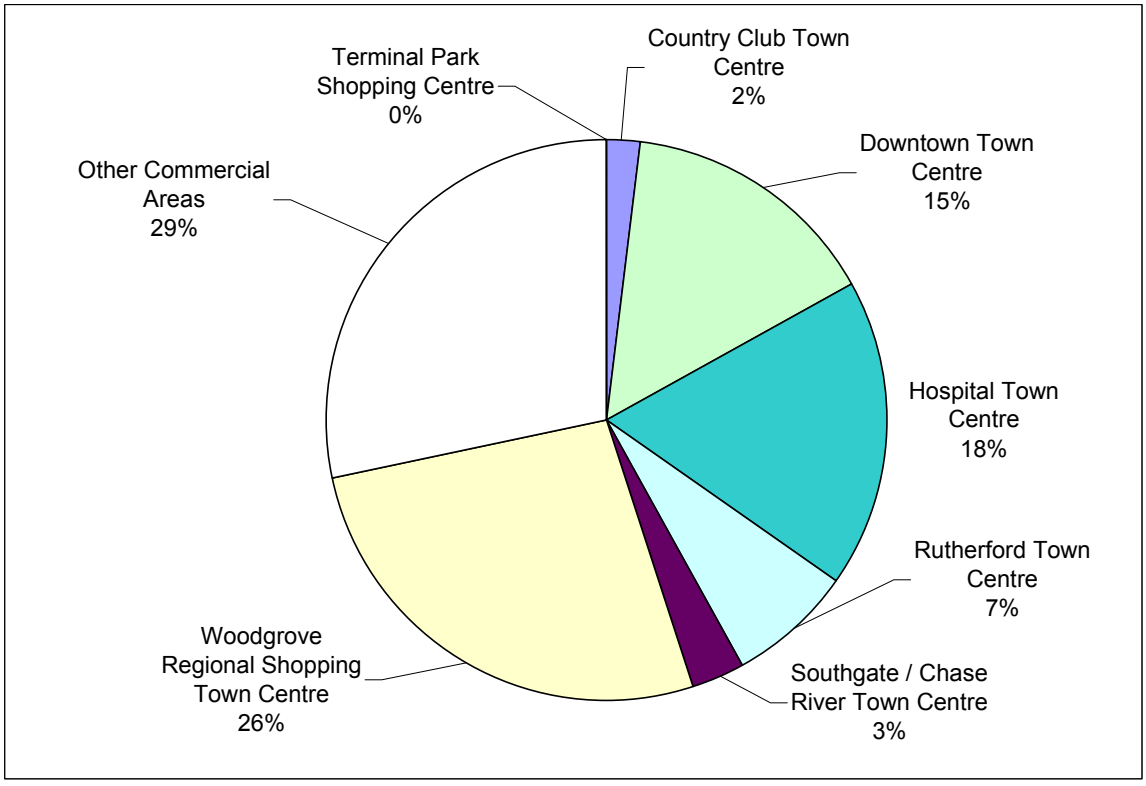


As of 2005, there were only 26 ha of land that is vacant and unconstrained, or just over 10% of the realistic commercial land inventory

There are also 87 ha of vacant land that is located within a Town Centre, but is not zoned for commercial uses. It is believed that most of this land would not be developed for commercial uses except for the possible exception for lands that are zoned rural agricultural / residential. For example, the Green Thumb Nurseries site, located in the Woodgrove Regional Shopping Town Centre, is zoned A2 (Rural Agricultural / Residential zone). It is possible that this could convert over to commercial at some point in the future. This would add 16 ha of land to the developable commercial land supply. If the Green Thumb Nurseries site is added to the inventory, this increases the vacant commercial land inventory to 42 ha of land. It is possible that additional vacant land could be rezoned in the other Town Centres, particularly the Chase River Town Centre.

Fig. 4-6 shows the breakdown of only the vacant and zoned commercial land. The largest location of vacant and commercially zoned land is in the Woodgrove Regional Shopping Town Centre (26%). Hospital Town Centre and the Downtown Town Centre comprise 18% and 15% of the vacant land respectively. Rutherford, Chase River, and Country Club Town Centres comprise only 7%, 3%, and 2% respectively of the vacant and commercially zoned land supply. The other commercial areas outside the Town Centres comprised 29% of the vacant commercial land.

Figure 4-6: Breakdown of Vacant and Commercially Zoned Land by Commercial Area, 2005



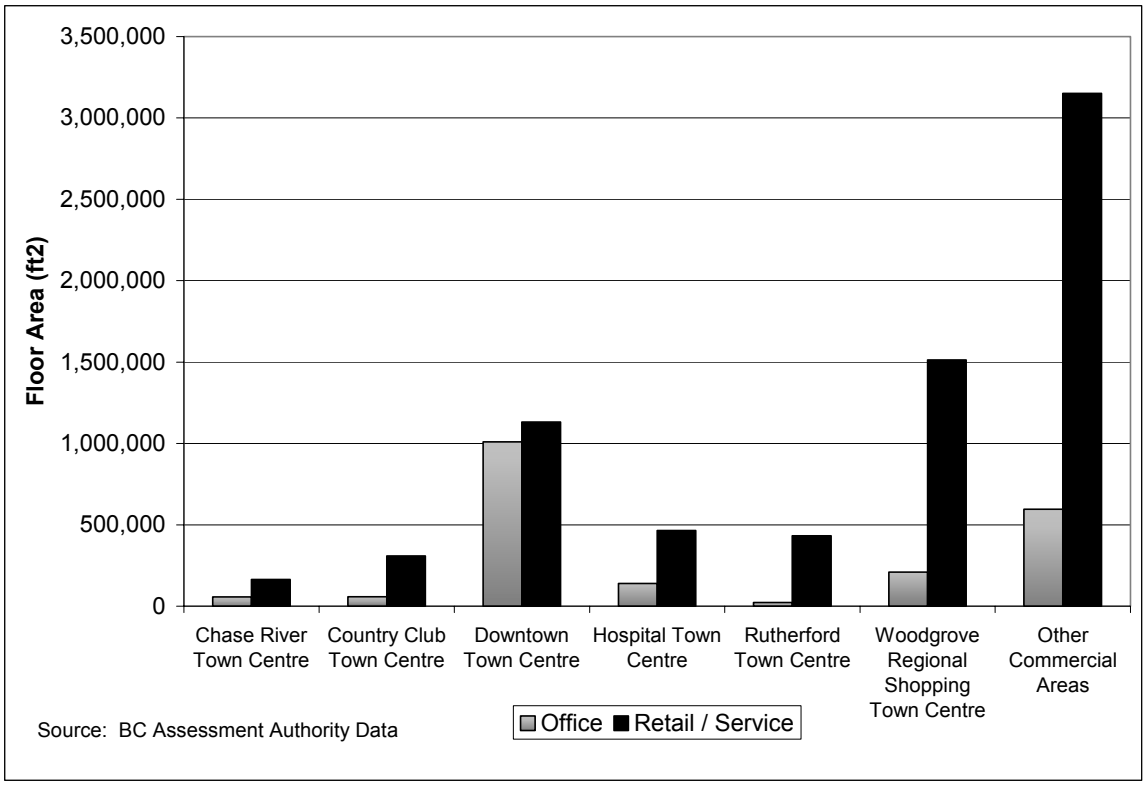
Factors such as location, site constraints, current uses, accessibility to highways, visibility, lot assembly, availability of servicing, land costs, and development costs may limit the amount of vacant land that may be developed for commercial uses in the short-term and mid-term.

4.6 Distribution of Retail/Service and Office Floor Space

An estimate of the amount of commercial floor space was developed based on data provided by the BC Assessment Authority (2005 data). There are some issues associated with the database so the following information should be interpreted only as providing an order of magnitude estimate rather than a precise figure on the amount of floor space.

Downtown Nanaimo contains the largest amount of office floor space in the city (Fig. 4-7). While the amount of floor space has been increasing in Downtown Nanaimo, the Urbanics study found that the proportion of office space located in downtown has declined from 61% of the city's total office space in 1984 to 46% in 2000. There is office space located in the other Town Centres, although it is considerably less than the amount of retail space located there. Rutherford Town Centre has the smallest amount of office space. There are also significant amounts of office space located outside the Town Centres.

Figure 4-7: Distribution of Retail/Service and Office Space by Commercial Area, 2005



Woodgrove Regional Shopping Town Centre contains the largest share of the city's retail / service floor space of any of the Town Centres, followed by Downtown Nanaimo. Chase River Town Centre has the smallest amount of retail / service floor space. There are significant amounts of both office and retail / service floor space located in the other commercial areas, including highway commercial, the neighbourhood villages, and the local service centres.

This floor space picture indicates that Downtown Town Centre and the Woodgrove Regional Shopping Town Centre are the two dominant commercial centres in the City.

4.7 Demand Trends for Commercial Floor Space

Urbanics Consultants with David Bell Associates conducted a forecast of floor space requirements as part of the Growth Centre Concept Assessment Study (UMA et al, February 2005). The study forecasts:

- between 1.3 million and 1.8 million additional square feet of Department-store type merchandise by 2031,
- between 2.0 million and 2.8 million additional square feet of retail / restaurant / service by 2031, and
- between 0.9 million and 1.7 million additional square feet of office space by 2031.

This floor space area was not converted into a land area requirement by the Urbanics study. A demand side analysis is outside the scope of this study and therefore it is not possible to definitely compare the land demand with the remaining supply.

The May 4, 2006 Commercial and Industrial Lands Workshop provided the following qualitative trends:

Some large-format retail stores have been locating in the city on lands zoned or designated for industrial use.

In addition, there have been instances of large office buildings locating in industrial areas. These industrial lands tend to be less expensive than commercially zoned properties. Finally, some more traditional commercial uses, such as car dealerships have located in some industrial areas. Therefore, there has been some crossover occurring in demand and supply of commercial and industrial lands.

The provincial government is consolidating several of its ministries in regional offices. This has occurred in the Nanaimo area, which has resulted in increased demand for office space.

4.8 Adequacy of Current Commercial Land Supply to Meet Future Demand

The commercial land inventory has shown that there are 42 ha of vacant commercially zoned land (including the commercial nursery site in the Woodgrove Regional Shopping Town Centre). It is believed that the available vacant commercially zoned land is insufficient to meet the long-term demand based on the forecast by Urbanics. The actual amount of land required depends on assumptions regarding floor space ratios for retail and office space and the portion of new commercial that would locate on vacant land versus redeveloping an existing site.

In the longer-term it is possible that there will be more commercial rezonings that will increase the supply of available commercial land. Some of the demand will also likely be met through better utilization of existing developed sites being redeveloped to higher floor area ratios. Some redevelopment is already occurring as evidenced by the redevelopment occurring in the Rutherford Town Centre. Also, Terminal Park Mall is being redeveloped.

Some of the commercial demand may also be located on lands zoned for industrial use, as has happened with some large-format retailers in Nanaimo. However, the industrial land inventory has also found that there is likely a shortage of light industrial in the mid- to long-term.

With commercial lands, it is easier to build "up" rather than "out", which is more difficult with the industrial land supply. Making more efficient use of the existing developed commercial land base would prolong the lifespan of the existing commercial land supply.

5.0 Industrial Land Inventory

5.1 Industrial Enterprise Areas

The City's OCP contains a policy to "establish 'Enterprise Areas' to provide new employment opportunities and to protect traditional industry and commerce."

The City of Nanaimo OCP identifies "Enterprise Areas" in recognition that traditional industrial and manufacturing uses are diversifying and the nature of industry is changing. The OCP designates three types of "Enterprise Areas" in Schedule A (Future Land Use and Mobility):

1. Industrial Enterprise Areas
2. Service Industrial Enterprise Areas, and
3. Research, Education, and Development Areas.

The Industrial Enterprise Areas are the areas that have a focus on "heavier" industrial uses while the Service Industrial Enterprise Areas allow "lighter" industrial uses. The Research, Education, and Development Areas include lands adjacent to Malaspina University College and Malaspina University College lands. There are 95 ha of these Research, Education, and Development Areas in the City. As the focus of the industrial inventory is on industrial lands, lands in this category are excluded from the industrial land inventory[8].

Fig. 5-1 shows the location of the industrial "Enterprise Areas" as well as other areas in the City that are zoned or designated industrial.

The designated Industrial Enterprise Areas include:

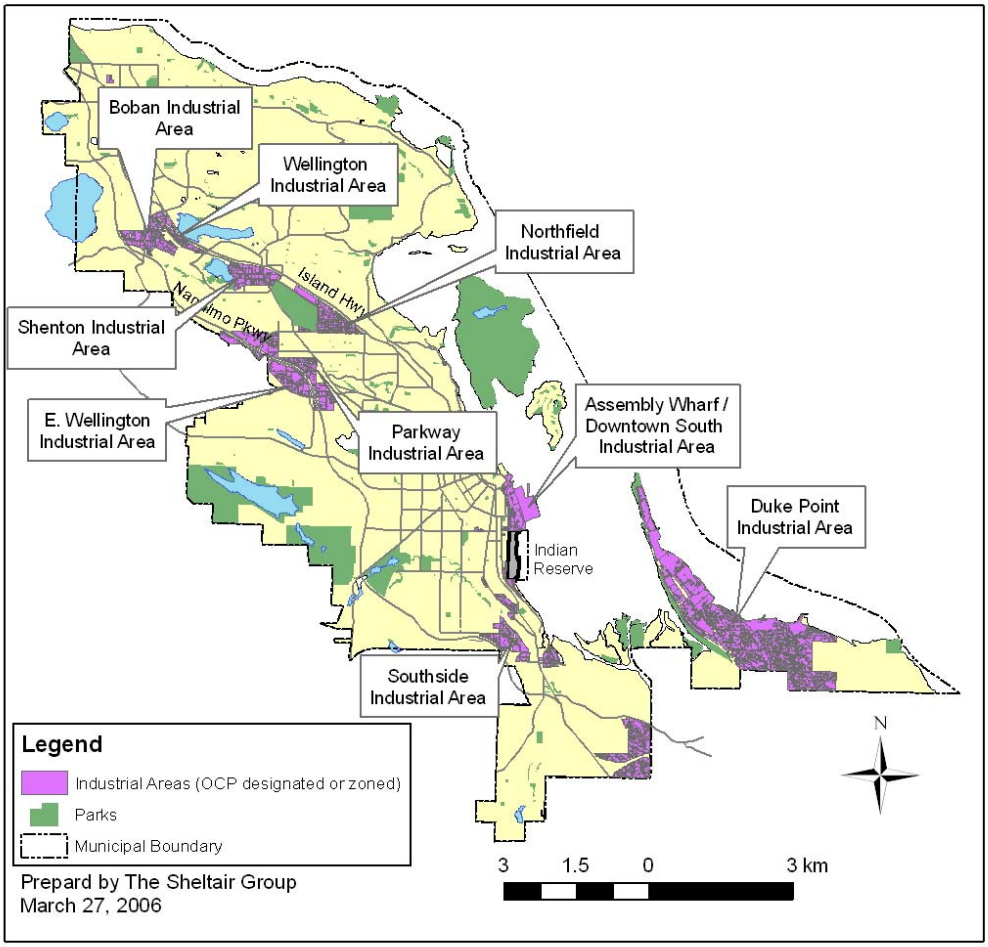
- Duke Point Industrial Park and Area,
- Assembly Wharf Industrial Enterprise Area (Downtown South),
- East Wellington (West of Parkway), and
- Other Industrial Areas (including Inucan Lands).

The designated Service Industrial Enterprise Areas include:

- Boban Service Industrial Park,
- Northfield Service Industrial Area,
- Parkway Service Industrial Park,
- East Wellington Service Industrial Area,
- Shenton Service Industrial Area, and
- Southside Service Industrial Park.

[8] There is one 1.8 ha parcel in the Boban Industrial Area that is designated as Research, Education, and Development Area but is located in a land use contract area. This parcel has been included in the industrial land inventory.

Figure 5-1: Location of Major Industrial Areas, 2005



5.2 Amount and Distribution of Industrial Land Supply

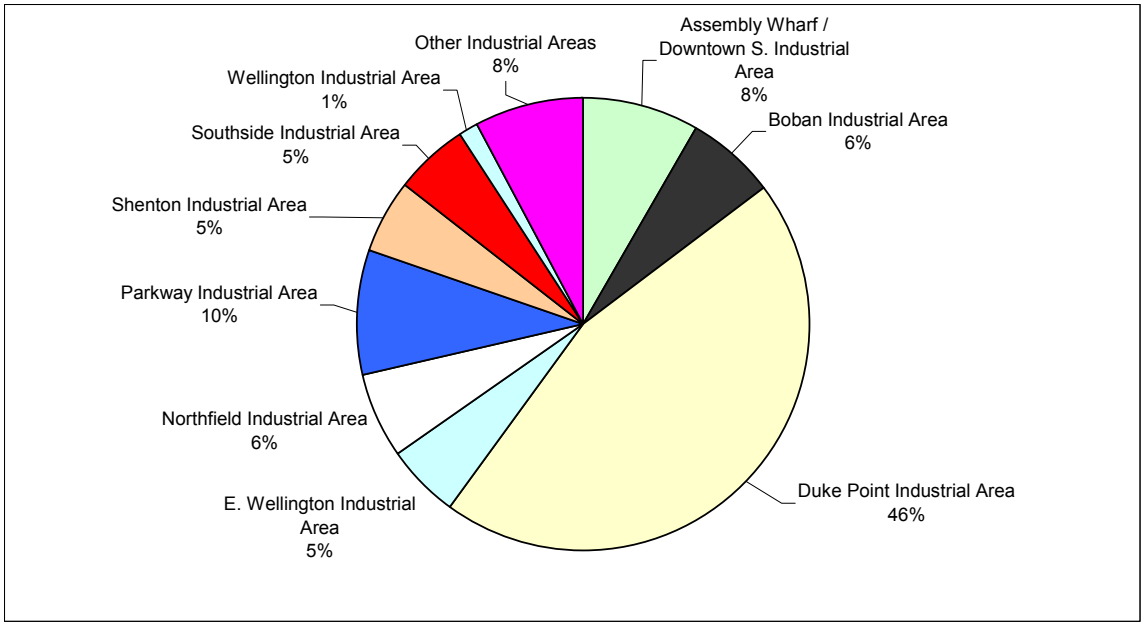
The industrial land supply for the city consists of land that is designated industrial in the City's OCP *or* zoned industrial. In 2005, there were 776 ha of land in the city of Nanaimo that were either OCP designated industrial or zoned industrial. Of this, 220 ha are constrained by lake, stream, and wetland setbacks or are located in areas with slopes of 10% or greater. The industrial land inventory also excludes existing road right-of-ways and therefore the land area is a net area. The developable industrial land inventory is 556 ha.

About 38% of the industrial land supply is located within the Urban Containment Boundary. The remaining 62% of the industrial land supply is located outside the Urban Containment Boundary, primarily in Duke Point, the Inucan and other industrial lands south of Cedar Road and the East Wellington/Parkway lands west of the Nanaimo Parkway. There are no industrial lands in the Linley Valley area.

Approximately 89% of the industrial land supply is located in the nine contained Industrial Enterprise Areas. The largest source of industrial land in the city is the Duke Point Industrial Park

and Area, which comprises 373 ha of zoned or OCP designated industrial land, or 48% of the unconstrained industrial land supply in the City (Fig. 5-2).

Figure 5-2: Industrial Land Supply by Industrial Area, 2005

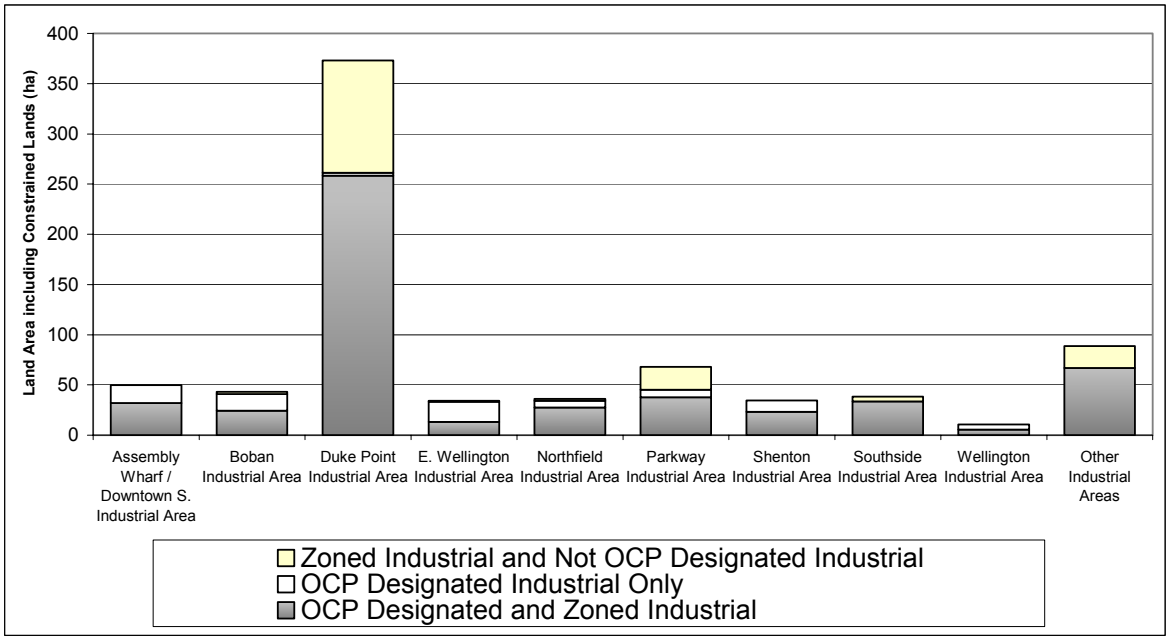


The remaining 11% of the industrial land supply is located in other industrial areas in the city, such as the Inucan lands and other industrial lands located south of Cedar Road and east of the Island Highway.

5.3 Industrial Land Supply by OCP Land Use Designation and Zoning

Approximately two-thirds of the industrial land supply is both OCP designated and zoned industrial. The remaining third is either only OCP designated industrial (11%) or only zoned industrial (21%). Almost 90% of the industrial lands supply is at least zoned industrial. Figure 5-3 shows the distribution of the industrial land supply by status and by industrial area.

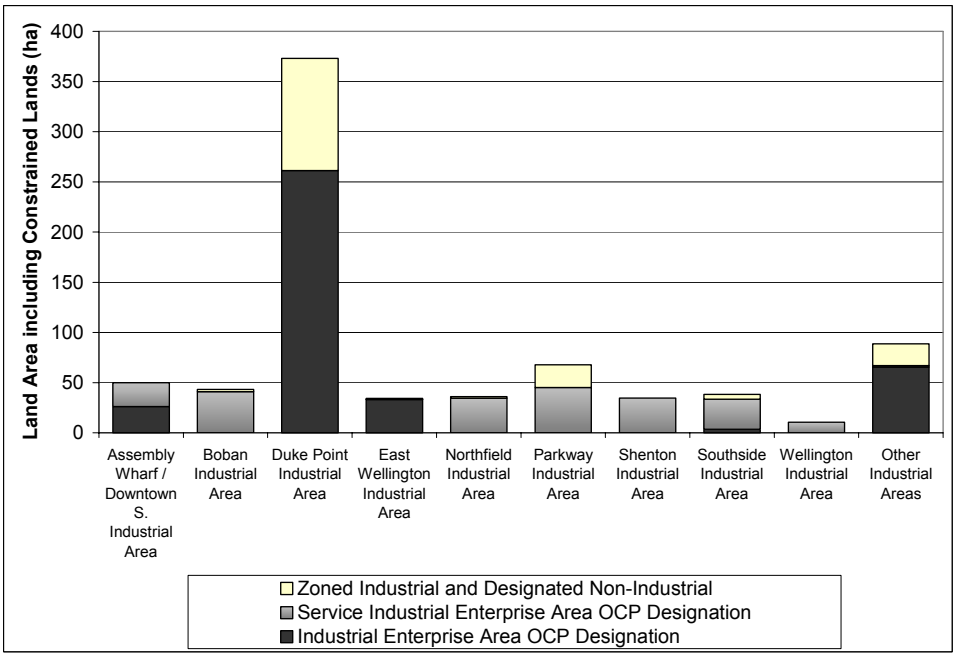
Figure 5-3: Industrial Areas by OCP and Zoning Status, 2005



OCP Land Use Designations

As of 2005, there were 390 ha of land designated as Industrial Enterprise Areas and 221 ha of land designated Service Industrial Enterprise Areas, excluding existing roads and right-of-ways. An additional 166 ha of land was zoned industrial but not designated industrial in the OCP. Fig. 5-4 shows the distribution of the designated "Enterprise Areas" by OCP Land Use designation.

Figure 5-4: Industrial Areas by OCP Land Use Designation, 2005



Zoning

As of 2005, there were 688 ha of land that was zoned industrial, net of existing roads and right-of-ways. Of this, 202 ha was constrained by lake, stream, and wetland setback areas and where slopes are 10% or greater. The City has several zones that include industrial uses, namely:

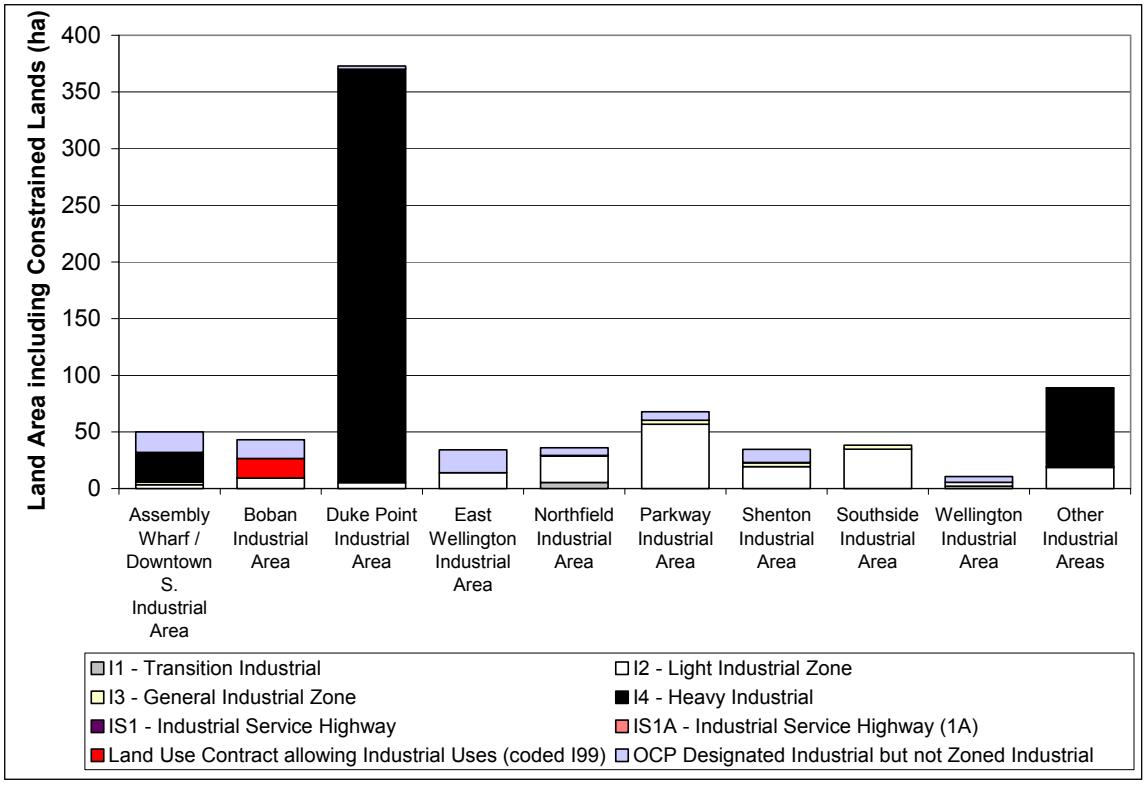
- I1 – Transitional Industrial
- I2 – Light Industrial Zone
- I3 – General Industrial Zone
- I4 – Heavy Industrial Zone
- IS1 – Industrial Service Highway, and
- IS1A – Industrial Service Highway (1A).

Land Use Contracts

In addition to industrial zoning, there is a Land Use Contract in the Boban Industrial Area that allows industrial uses on approximately 17 ha of land.

Fig. 5-5 shows the breakdown of each of the industrial areas by type of zoning. Approximately 69% of the industrially zoned land is zoned for Heavy Industrial (I4) and 28% for Light Industrial (I2) uses. Only 3% of the industrial zoned lands are zoned for Transition Industrial (I1), General Industrial (I3), or Industrial Service Highway (IS1 and IS1A).

Figure 5-5: Industrial Areas by Zoning, 2005



The Heavy Industrial zones (I4) are all contained within Duke Point Industrial Park and Area, Assembly Wharf / Downtown South Industrial Enterprise Area, and two other industrial areas (in the area east of the Island Highway and South of Cedar Road as well as a marine-access site).

The Light Industrial zoning (I2 zoning) is located in each of the industrial areas. The Industrial Service Highway (IS1 and IS1A zoning) is located in the Shenton and Northfield Industrial Areas. The land use contract is located in the Boban Industrial Area.

The Transition Industrial zone (I1) is located in only the Northfield and Wellington Industrial Areas. The General Industrial zone (I3) is located within the Assembly Wharf / Downtown South, Parkway, Shenton, Southside, and Other Industrial Areas.

5.4 Developed and Vacant Industrial Land

The industrial land supply is comprised of both developed and vacant industrial land. Developed industrial land is defined in this study as land that is industrially zoned or designated with a site that is or appears to be developed and in use for industrial activities. A property is considered developed if a significant portion of the site has been cleared and there are structures on the site or significant industrial activity is located on the site.

Vacant industrial land in this study includes:

- Primarily greenfield sites that are designated or zoned for industrial use,
- Industrially designated or zoned land that is cleared but is not occupied by vehicles or structures and does not appear to be used for industrial activities, and
- Industrially designated land that is currently zoned and used for a non-industrial use (e.g. residential).

Table 5-1 indicates that of the 556 ha of industrial lands without constraints, 332 ha was developed as of 2005, representing just under 60% of the industrial land supply. This value excludes the major constraints, such as the water setbacks and slopes of 10% or more.

Table 5-1: Summary of Industrial Land by Developed or Vacant Status, 2005 – Excluding Constrained Lands

Industrial Area	Amount of Developed Industrial Land (ha)	Amount of Vacant Industrial Land (ha)	Total Industrial Land (ha)	% of Total Industrial Land	% of Vacant Industrial Land
Assembly Wharf / Downtown S. Industrial Area	25	22	**47**	8%	10%
Boban Industrial Area	26	9	**35**	6%	4%
Duke Point Industrial Area	148	104	**252**	45%	47%
E. Wellington Industrial Area	3	25	**28**	5%	11%
Northfield Industrial Area	33	1	**34**	6%	0%
Parkway Industrial Area	24	26	**50**	9%	12%
Shenton Industrial Area	29	1	**29**	5%	0%
Southside Industrial Area	23	5	**29**	5%	2%
Wellington Industrial Area	6	1	**8**	1%	1%
Other Industrial Areas	15	29	**44**	8%	13%
TOTAL	**332**	**224**	**556**	**100%**	**100%**

There are 224 ha of vacant industrial land in the City of Nanaimo. There is little vacant industrial land available in the serviced areas of Northfield, Shenton, and Wellington Industrial areas. Northfield and Shenton have less than a hectare of vacant land available, while Wellington has just over a hectare of vacant land available. All of these industrial areas are centrally located. Southside and Boban Industrial areas are also predominantly developed but have 5 and 9 ha of vacant industrial land remaining respectively.

One of the major formerly developed industrial areas in the city is the Assembly Wharf / Downtown South Industrial Area, including the rail lands. However, the Nanaimo Port Authority indicates that this site has been underutilized since 1987. The Visiting Vessel Pier and Nanaimo Assembly Wharf Berth C are used for cruise ships. For the purpose of the inventory, half of the Assembly Wharf industrial area has been identified as "vacant" although the site is formerly developed and there is some activity occurring on the site. The Port Authority has commissioned a study to identify opportunities for additional cargo movement through the forest sector as well as non-traditional cargo opportunities. The Port Authority is also involved in a long-term strategic planning process to assess the Port's need for industrial land over the next one or two decades. It is possible that some or much of this site could be converted to non-industrial uses, such as residential or commercial. If that happens, it seems more likely that there would only be light industrial uses in the area rather than any heavy industrial uses. Therefore, the amount of vacant industrial land shown may be less going forward.

Fig. 5-6 illustrates the developed and vacant industrial land by main industrial areas. Fig. 5-7 shows the breakdown of the location of the vacant industrial land by industrial area. The Duke Point Industrial Enterprise Area contains 104 ha of vacant industrial land, or approximately 46% of the City's vacant industrial land. Anticipated changes to the forestry industry in the near future may result in the closure of forest industry operations at Duke Point. This would significantly increase the availability of vacant heavy industrial land at Duke Point. A decision in June 2005 by BC Hydro to abandon its proposed gas-fired electrical generating station in Duke Point also indicates that this project may not proceed, thereby reducing the demand for land in Duke Point. There are also vacant parcels that are included in the inventory but have been acquired for specific purposes in the future. For example, the Regional District of Nanaimo owns a large tract of land in Duke Point that it is considering for solid waste disposal or incineration. However, it is anticipated that this site will not be developed in the short-term, but is not available for other industrial uses. Any large-scale use of land in Duke Point could reduce the vacant industrial land supply there significantly.

The other significant sources of vacant industrial land in Nanaimo include the Parkway Service Industrial Area (11.6%), the East Wellington Industrial Area (11.1%), and Other Industrial Areas (13.0%). Together, the Parkway and East Wellington industrial areas contain just over 50 ha of vacant industrial land.

Figure 5-6: Breakdown of Developed and Vacant Industrial Land by Industrial Area, 2005

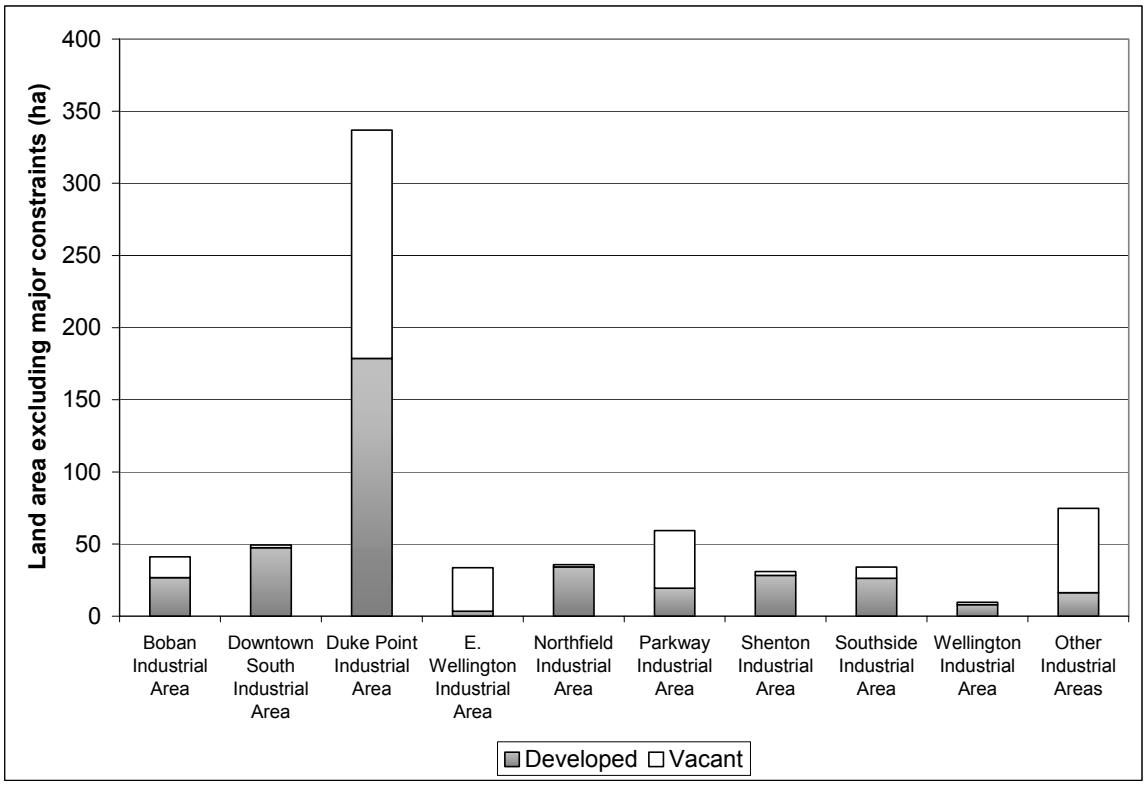
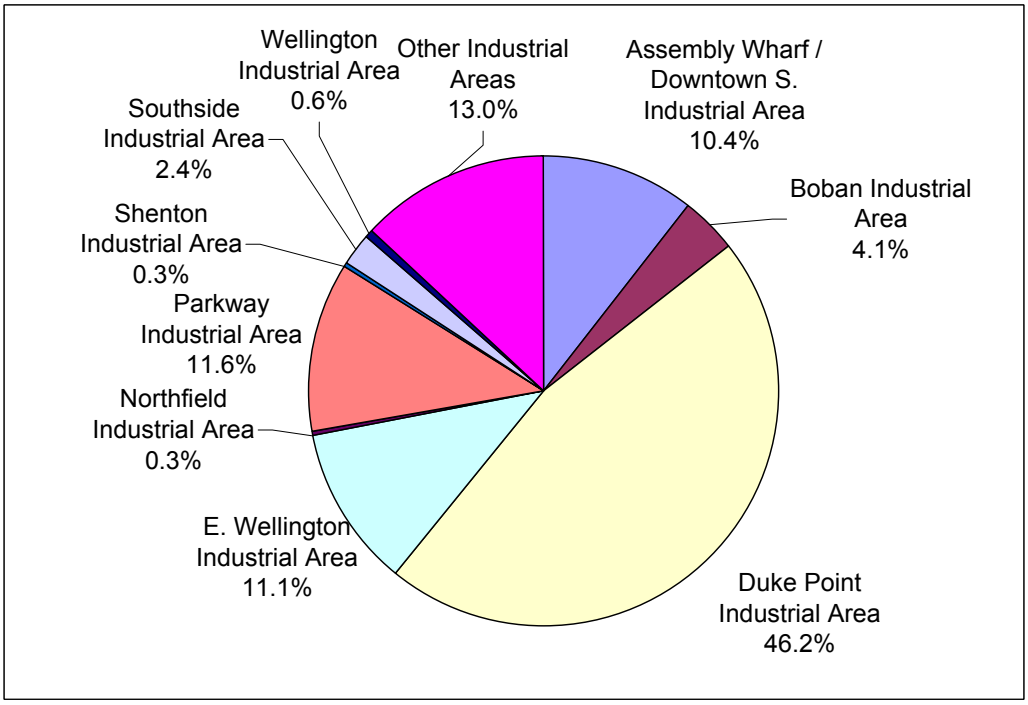


Figure 5-7: Location of Vacant Industrial Land by Industrial Area, 2005



The most significant vacant industrial lands in the "Other Industrial Areas" category is located east of the Island Highway and south of Cedar Road, and includes the Inucan lands. The lands north of Cedar Road are zoned A3 (Rural Agricultural / Residential Zone) and not included in the industrial land inventory, while the area south of Cedar Road is zoned I4 and included in the inventory. Over 50% of the lands south of Cedar Road are constrained by water feature setbacks and slopes that are 10% or greater. In addition, significant capital expenditures for providing servicing would be required to service this land. The area north of Cedar Road would also require a rezoning if desired for industrial purposes. It is believed that the Inucan lands and other lands south of Cedar Road would not be available for industrial use in the short-term. This would remove approximately 27 ha of land from the vacant industrial land inventory in the short-term.

Removing the industrial lands south of Cedar Road as well as the Assembly Wharf lands from the short-term inventory leaves approximately 175 ha of vacant industrial land. Of this total, over 100 ha of vacant industrial land are located in the Duke Point Industrial Area and 75 ha in the remaining industrial areas. Of this vacant industrial land, approximately 147 ha are zoned for industrial uses. Approximately 100 ha are zoned for Heavy Industrial (I4) and are located in Duke Point. The remaining 47 ha are zoned for lighter industrial uses, with most of that land (34 ha) being located in the Parkway and East Wellington Industrial Areas.

Factors such as location, site constraints, current uses, accessibility to transportation terminals and highways, lot assembly, availability of servicing, land costs, and development costs may limit the amount of vacant land that be developed for industrial purposes in the short- and mid-term.

5.5 Industrial Demand Trends

An estimate of industrial land demand is outside the scope of this project. However, based on discussions with City staff, industrial and commercial realtors at the May 4 workshop, and the BC Assessment Authority a number of qualitative trends were identified that have been impacting demand for industrial land.

First, there has been a significant demand for non-industrial uses on industrially zoned or designated land. For example, some large-format retail stores have been locating in the city on lands zoned or designated for industrial use. In addition, there have been instances of large office buildings locating in industrial areas. These industrial lands tend to be less expensive than commercially zoned properties. There has also been an instance of a church being located in an industrial area. Finally, some more traditional commercial uses, such as car dealerships have located in some industrial areas.

Second, the demand for industrial land in Nanaimo appears to be predominantly light industrial in nature. The more successful industrial areas have been the ones that specialize on the lighter industrial side.

Third, there is a shortage of industrial lands in the Capital Regional District (Greater Victoria). It is believed that this demand will be displaced shifting up-island. In addition, there appears to be a displacement of some demand for industrial land from Nanaimo to the Combs-Errington area.

Additional research is required to quantify these demand trends. In addition, a forecast of demand for industrial land is recommended.

5.6 Adequacy of Current Industrial Land Supply to Meet Future Demand

The land inventory has shown that there are approximately 100 ha of land zoned Heavy Industrial (I4) (and located outside of areas of major constraints) that are available in the near term. Including the Inucan lands and industrially zoned lands south of Cedar Road would increase this to 127 ha of land, but these would only be available in the long-term. Changes in the forest industry will likely increase the amount of vacant heavy industrial land. However, significant portions of the vacant land base are being tied up for specific purposes, such as the Regional District of Nanaimo's future solid waste facility. It is believed that there is sufficient land in the Duke Point Industrial Area and other areas zoned heavy industrial to meet the heavy industrial demand in Nanaimo for the next 10 to 15 years, depending on absorption rates. However, an industrial demand forecast is required to provide a more accurate estimate for when the existing industrial land supply will be depleted.

For industrial land that is zoned for lighter industrial uses, there are only 47 ha that is zoned I1, I2, I3, or IS1 or IS1A, with most of that land (34 ha) being located in the Parkway and East Wellington Industrial Areas. Northfield, Shenton, and Wellington have little vacant land available.

In addition, if there is continued spillover demand for non-industrial uses of the remaining light industrial land base, the amount of vacant light industrial land will be depleted sooner. It is believed that there may be a future shortage of lands for light industrial in the city in the mid-term, particularly in locations that are central, although this depends on future rates of demand. In addition, there may be a demand for larger industrial parcels, such as for warehousing, in more centrally located areas that may not be being met in Nanaimo.

A land inventory for the Regional District of Nanaimo in 2001 found that there were 883 ha of industrially designated land, of which approximately 60% were in the city of Nanaimo. With a short supply of light industrial land, firms may choose to locate outside the city where land costs are cheaper.

5.7 Underutilized Industrial Lands

In addition to vacant lands, some of the developed industrial land may be underutilized. One methodology was used to calculate the underutilized developed industrial lands based on the ratio of floor space to the total land area of the site. This approach was used in the Metro Portland Industrial Land Supply study and also used as one of the approaches considered by the GVRD in its Industrial Lands Inventory for Greater Vancouver. A site was considered underutilized or believed to have redevelopment potential when the ratio of improvements square footage and land area square footage is equal to or less than 10%. The threshold of 10% is considered to be quite conservative.

This methodology was applied to a sample of the industrial sites that were classified as "developed" and that had floor area data available from the BC Assessment Authority. The sample showed that about 22% of the sites, representing 36% of the land area of the sample fell

below the threshold ratio of 10%. In comparison, about 20% of the developed industrial land base in Greater Vancouver was determined to have underutilized sites using the same criteria.

If we assume that approximately 30% of the developed industrial land base in the City of Nanaimo is underutilized, this would yield approximately 100 ha of land that have redevelopment potential. If this underutilization rate were lower at 20%, there would be approximately 66 ha of additional industrial land available for redevelopment. If 40% of the sites were underutilized, there would be 132 ha of industrial land available for redevelopment.

This is a rough ballpark estimate of underutilized lands based on a high-level study and a simplified single-parameter criterion. In addition, there are data issues and some industrial parcels do not have data for this calculation. Also, some industrial sites can be fully utilized even if they do not have a structure on the site. The identification of underutilized industrial lands requires a site-by-site analysis as well as validation of floor area data. In addition, other factors such as heavy site usage not requiring a building and the ratio of improvements to total property assessment and improvements per unit site area would need to be used to screen out underutilized sites.

Making more efficient use of the developed industrial lands would extend the lifespan of the existing industrial land supply even further. Including the estimated underutilized industrial lands with the existing vacant industrial lands would increase the undeveloped or underdeveloped industrial land supply from 225 ha to between 291 and 357 ha.

6.0 Conclusions and Recommendations

6.1 Residential

The analysis shows that there are approximately 4,880 ha of land that is zoned for residential or rural agricultural / residential use in the city. Approximately 17% of this land area is constrained by steep slopes and water setbacks, leaving 4,036 ha of developable residential land. Of this, approximately 216 ha are identified as underutilized, 348 ha are vacant, 289 ha are effectively vacant, and 880 ha are zoned for A1, A2, or A3 uses (Rural Agricultural / Residential). Approximately 2,300 ha are classified as developed.

In 2005, it is estimated that there were 32,400 dwelling units in the city and the population was 79,600. The theoretical capacity for the city at build-out under current zoning is 68,200 units, which could accommodate 152,800 people.

The practical capacity is much lower than the theoretical capacity as many residential areas of the city have been built out at lower densities than are allowed in the zoning bylaw. The practical capacity is estimated at 55,900 units, corresponding to a population of 124,500 people. The practical capacity is believed to be the more realistic estimate of capacity in the city.

Of the practical capacity, there is zoned capacity for 30,000 units of single-detached housing, 8,700 units of other ground-oriented units (including townhouses and mobile homes) and 17,200 units of apartments. There is also an estimated capacity of 4,500 secondary suites assuming that 15% of single-detached homes contain a suite.

There is remaining practical capacity for 23,500 units (as of 2005). Approximately 28% of this capacity is located on residentially zoned lands being underutilized. A further 35% and 22% of the remaining practical capacity is located on residentially zoned land identified as vacant or effectively vacant respectively. Approximately 2% of the remaining capacity is located on lands zoned for rural agricultural / residential uses. The last 14% of the remaining capacity is located in mixed residential / commercial areas.

In 2005, approximately 99% of the dwelling units were located within the Urban Containment Boundary. The capacity analysis shows that 97% of the remaining residential capacity is located within the Urban Containment Boundary.

Urban Futures Incorporated estimates that the housing demand in 2031 will be 53,300 units, which would accommodate a population of 118,000. For single-detached units, Urban Futures estimates the housing demand to be 31,600 units in 2031. Therefore the practical capacity falls short of the projected housing demand in 2031 by approximately 1,600 units. If the trend of developing residential lands to much lower densities than allowed in the zoning bylaw continues, the shortfall will be higher than the 1,600 units.

The practical capacity for other ground-oriented units and apartments is sufficient to meet the projected housing demand of 10,500 and 11,300 units respectively in 2031.

In the short- and medium-term (5-15 years), there is sufficient capacity to meet the projected housing demand for all structural types. However, over the longer-term (15 years and beyond), the city may start to approach its practical capacity for single-detached units depending on the efficiency at which the remaining residential land is developed.

The Official Community Plan has a target population of between 5,000 and 10,000 for each Town Centre. The capacities found in this study indicate that only two of the Town Centres (Downtown Town Centre and Rutherford Town Centre) would approach a population of 5,000. It is believed that the target populations for the centres in the OCP are overestimated. However, there are still significant capacities in the Town Centres, which could accommodate over three times the current number of units. Approximately 34% of the city's remaining dwelling unit capacity is located in the Town Centres, with most of this capacity being apartments. Approximately two-thirds of the city's remaining apartment capacity is located in the Town Centres.

One of the limitations of this study is the difficulty of separating out future capacity in mixed use commercial / residential areas in Town Centres. Therefore the residential capacities estimated for the Town Centres are believed to be more generalized.

To improve future residential capacity assessments, it is recommended that the City:

- identify the boundaries of the Local Service Centres, Neighbourhood Villages, and Mainstreets to allow the residential capacities of these areas to be estimated in the future,
- conduct a more detailed analysis of the mix of residential and commercial in the Town Centres,
- assess each of the Town Centres individually for estimating their realistic residential capacity as the Town Centres differ significantly,
- identify the boundaries for the top of bank for riparian setbacks (and an accurate shoreline) and update the constraints layer in the residential build-out model,
- monitor the actual densities vs. theoretical densities of new residential developments to better understand the gap between the dwelling unit densities on the ground vs. the theoretical capacity, and
- Review housing demand and supply again in the next 5 to 10 years to identify changes in housing demand and supply that have occurred and determine remaining capacity.

6.2 Commercial

Downtown Town Centre and Woodgrove Regional Shopping Town Centre are the two dominant commercial areas in Nanaimo. The majority of the commercial areas are located in the north and central portions of the city. Only 11 ha of zoned and designated commercial land is located in the southern portion of the city (south of 7th St.). It is believed that as population increases in the southern portion of the city and the Chase River Town Centre, demand for commercial services may warrant additional commercial land for this area. However, additional study would be required at a submunicipal level for a definitive conclusion.

The commercial land inventory found that approximately 90% of the realistic supply of land available for commercial uses is already developed for commercial uses. Only 26 ha of the commercially zoned land are vacant and unconstrained. If the commercial nursery located in the Woodgrove Regional Shopping Town Centre (but is zoned A2) were included, that would increase the amount of vacant commercial land to 42 ha, excluding constraints.

A retail / service and office floor space forecast was conducted by Urbanics. However, this was not translated into a land area demand. In general, if the additional floor space demand is to be solely accommodated on vacant land, there may be a shortfall of vacant commercial land in the medium to long-term. A similar shortage of light industrial land is also possible.

An assessment of underutilized commercial lands was not conducted as part of this study. However, redevelopment of existing commercial areas has been occurring in the city, such as in the Rutherford Town Centre and Terminal Park Mall. There is significant potential to increase the floor space in existing developed commercial areas to accommodate large amounts of the additional floor space requirements forecasted for the city.

For next steps, it is recommended that:

- the City identify the boundaries of the Local Service Centres, Neighbourhood Villages, and Mainstreets to allow the commercial capacities of these areas to be estimated in the future,
- a medium- to long-term commercial land demand forecast be prepared by the City,
- a medium- to long-term commercial land demand forecast be prepared for the southern portion of the city, including the Chase River Town Centre, that takes into account population growth projected for that area,
- the commercial land inventory be updated regularly to monitor absorption of commercial lands and remaining capacity,
- a detailed assessment be conducted identifying underutilized commercial lands and the barriers to their redevelopment, particularly in Downtown Nanaimo, and
- the City meet with local commercial realtors and other appropriate professionals on a regular basis to review commercial supply and demand trends.

6.3 Industrial

In 2005, there were 776 ha of land in the City of Nanaimo's industrial land inventory, net of roads and right-of-ways. However, 220 ha of this land base is constrained by water feature setbacks and slopes that are 10% or greater. Therefore the developable industrial land inventory is 556 ha.

Of this, there are 224 ha of vacant industrial land, or over 40% of the industrial land supply that is unconstrained. Approximately 50 ha of this is located in lands that are believed to be unavailable in the short-term (Assembly Wharf and Inucan lands and other lands south of Cedar Road). Of the 175 ha of land in the short- to medium-term inventory, approximately 147 ha are zoned for industrial uses. Approximately 100 ha are zoned for Heavy Industrial (I4) and are primarily located in Duke Point. The remaining 47 ha are zoned for lighter industrial uses, with most of that land being located in the Parkway and East Wellington Industrial Areas.

A forecast of the future demand for industrial land was not conducted as part of this study. Depending on future absorption rates for industrial land, there may be sufficiently zoned heavy industrial land to meet demand for the next 10 to 15 years. However, the supply of light industrial land may be insufficient to meet demand in the next 5 to 15 years, depending on the rate of industrial demand. This potential shortage may be exacerbated if demand continues in light industrial areas for non-industrial uses, such as large-format retail.

The preservation of the City's industrial land base is important for the continued economic growth of the City and the Island economy.

In order to ensure adequate industrial land is available in Nanaimo, it is recommended that:

- a medium- to long-term industrial land demand forecast be prepared by the City for both light industrial and heavy industrial uses and the characteristics of that demand be determined,
- the City monitor industrial land trends and supply constraints in the rest of the Regional District of Nanaimo and the Capital Regional District when considering the demand forecast,
- the industrial land inventory be updated regularly to monitor absorption of industrial lands and remaining capacity,
- a detailed assessment be conducted identifying underutilized industrial lands and the barriers to their redevelopment,
- the City meet with local industrial realtors, the Nanaimo Port Authority, Duke Point Development Ltd., and other appropriate professionals and stakeholders on a regular basis to review industrial supply and demand trends, and
- the City work with the Nanaimo Port Authority and other stakeholders to review the demand for port-based industrial land and light industrial land in the context of the redevelopment of the Assembly Wharf site.

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Appendix A: Residential Land Inventory Tables by Geographic Areas

Table A1: Amount of Vacant, Underutilized and Developed Residentially Zoned Land by Urban Containment Area, 2005 – Excluding Lands Constrained by Water Setbacks and Slopes >=30%

Urban Containment Boundary Subarea	Amount of Developed and Residentially Zoned Land (ha)	Amount of Underutilized and Residentially Zoned Land (ha)	Vacant Residentially Zoned Land (ha)	Effectively Vacant Residentially Zoned Land (ha)	Land Zoned A1, A2, or A3 (Rural Agricultural / Residential) (ha)	TOTAL Residentially Zoned Land (ha)	% of Total Residential Land Area
Inside Urban Containment Boundary	2,125	216	338	282	81	3,043	75%
Linley Valley (Outside UCB)	11	0	0	0	79	91	2%
Rest of Outside UCB	163	0	10	7	722	902	22%
TOTAL	**2,299**	**216**	**348**	**289**	**883**	**4,036**	**100%**
% of Total Residentially Zoned Land	57%	5%	9%	7%	22%	100%	N/A

Table A2: Amount of Vacant, Underutilized, and Developed Residentially Zoned Land by Subarea, 2005 – Excluding Lands Constrained by Water Setbacks and Slopes >=30%

Subarea	Amount of Developed and Residentially Zoned Land (ha)	Amount of Underutilized and Residentially Zoned Land (ha)	Vacant Residentially Zoned Land (ha)	Effectively Vacant Residentially Zoned Land (ha)	Land Zoned A1, A2, or A3 (Rural Agricultural / Residential) (ha)	TOTAL Residentially Zoned Land (ha)	% of Total Residential Land Area
Chase River	175	14	32	36	238	494	12%
City Centre	48	4	1	4	0	57	1%
Departure Bay	231	3	10	15	0	258	6%
Diver Lake	130	24	23	13	3	193	5%
Dover	163	10	0	7	0	179	4%
Duke Point	0	0	0	0	237	237	6%
Five Acres	170	40	89	42	40	381	9%
Hammond Bay	78	22	53	29	0	183	5%
Harewood	232	7	19	13	12	284	7%
Linley Valley	11	0	0	0	79	91	2%
Long Lake	131	32	30	13	0	207	5%
Newcastle	54	1	0	2	0	57	1%
North Slope	158	4	28	30	0	219	5%
Northfield	98	7	13	5	17	139	3%
Pleasant Valley	160	25	6	20	78	290	7%
Protection Island	26	0	0	10	0	36	1%
Rutherford	82	8	20	7	19	135	3%
South End	46	2	4	10	0	61	2%
Townsite	91	0	0	1	0	93	2%
Westwood	216	14	19	32	160	441	11%
TOTAL	**2,299**	**216**	**348**	**289**	**883**	**4,036**	**100%**
% of Total Residentially Zoned Land	57%	5%	9%	7%	22%	100%	

Appendix B: Residential Capacity Tables Inside and Outside the Urban Containment Boundary

Table B1: Dwelling Units by Structural Type Inside and Outside the Urban Containment Boundary, 2005 and Total Practical Capacity

Urban Containment Subarea		Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	% of City-wide Dwellings
Inside UCB	2005 (estimate)	20,500	2,400	1,400	6,200	1,700	**32,300**	99.4%
	Total Practical Capacity	29,200	5,100	1,500	17,200	2,100	**55,100**	98.5%
Linley Valley (Outside of UCB)	2005 (estimate)	20	0	0	0	0	**20**	0.1%
	Total Practical Capacity	60	0	0	0	0	**60**	0.1%
Rest of Outside of UCB	2005 (estimate)	200	0	0	0	0	**200**	0.5%
	Total Practical Capacity	800	0	0	0	0	**800**	1.4%
City of Nanaimo	**2005 (estimate)**	**20,700**	**2,400**	**1,400**	**6,200**	**1,700**	**32,400**	**100.0%**
	Total Practical Capacity	**30,000**	**5,100**	**1,500**	**17,200**	**2,100**	**55,900**	**100.0%**

*Note: Total dwellings exclude secondary suites.

Source for 2005 dwellings: Primarily based on BC Assessment Authority data

Table B2: Remaining Practical Dwelling Unit Capacity by Structural Type Inside and Outside the Urban Containment Boundary (as of 2005)

Urban Containment Subarea	Single-detached	Townhouse	Other ground oriented	Apartment	Mobile Homes	Total Remaining Dwelling Capacity	% of City's Remaining Dwelling Capacity
Inside UCB	*8,600*	*2,700*	*100*	*11,000*	*400*	***22,800***	*97.2%*
Linley Valley (Outside UCB)	*40*	*0*	*0*	*0*	*0*	***40***	*0.2%*
Rest of Outside of UCB	*600*	*0*	*0*	*0*	*0*	***600***	*2.6%*
City of Nanaimo	***9,300***	***2,700***	***100***	***11,000***	***400***	***23,500***	***100.0%***

* Note: Total dwellings exclude secondary suites.

Source for 2005 dwellings: Primarily based on BC Assessment Authority data

Appendix C: Residential Capacity Tables by Subarea

Table C1: Dwelling Units by Structural Type by Subarea, 2005 and Total Practical Capacity

Subareas		Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	% of City-wide Dwellings
Chase River	2005 (estimate)	900	0	100	0	300	**1,300**	3.9%
	Total Practical Capacity	2,000	100	100	0	300	**2,500**	4.5%
City Centre	2005 (estimate)	700	0	100	1,200	0	**2,100**	6.4%
	Total Practical Capacity	700	20	100	4,200	0	**5,100**	9.1%
Departure Bay	2005 (estimate)	2,400	200	100	1,100	0	**3,900**	11.9%
	Total Practical Capacity	2,600	600	200	1,600	0	**5,000**	9.0%
Diver Lake	2005 (estimate)	1,100	100	200	100	70	**1,500**	4.6%
	Total Practical Capacity	1,700	600	200	600	70	**3,100**	5.6%
Dover	2005 (estimate)	1,800	300	0	300	10	**2,400**	7.5%
	Total Practical Capacity	1,900	400	0	1,900	10	**4,300**	7.7%
Duke Point	2005 (estimate)	0	0	0	0	0	**0**	0.0%
	Total Practical Capacity	100	0	0	0	0	**100**	0.2%
Five Acres	2005 (estimate)	900	200	100	0	300	**1,500**	4.5%
	Total Practical Capacity	2,600	700	100	300	700	**4,400**	7.8%
Hammond Bay	2005 (estimate)	900	0	30	0	0	**1,000**	3.0%
	Total Practical Capacity	2,000	300	0	100	0	**2,400**	4.2%
Harewood	2005 (estimate)	2,100	400	100	500	200	**3,300**	10.3%
	Total Practical Capacity	2,600	400	100	500	200	**3,900**	7.0%
Linley Valley	2005 (estimate)	20	0	0	0	0	**20**	0.1%
	Total Practical Capacity	60	0	0	0	0	**60**	0.1%
Long Lake	2005 (estimate)	1,700	90	100	300	0	**2,200**	6.7%
	Total Practical Capacity	2,400	200	100	800	0	**3,500**	6.3%
Newcastle	2005 (estimate)	700	0	100	800	0	**1,600**	4.8%
	Total Practical Capacity	700	0	100	1,200	0	**1,900**	3.4%
North Slope	2005 (estimate)	1,700	110	0	0	0	**1,900**	5.8%
	Total Practical Capacity	2,500	300	0	0	0	**2,800**	5.1%
Northfield	2005 (estimate)	1,000	200	100	600	0	**2,000**	6.0%
	Total Practical Capacity	1,200	500	100	1,200	0	**3,100**	5.5%
Pleasant Valley	2005 (estimate)	1,000	50	100	0	700	**1,800**	5.4%
	Total Practical Capacity	1,700	100	100	100	700	**2,700**	4.8%
Protection Island	2005 (estimate)	240	0	0	0	0	**240**	0.7%
	Total Practical Capacity	290	0	0	0	0	**290**	0.5%
Rutherford	2005 (estimate)	800	400	20	500	10	**1,700**	5.2%
	Total Practical Capacity	1,000	600	20	2,700	10	**4,300**	7.7%
South End	2005 (estimate)	700	130	100	0	0	**900**	2.8%
	Total Practical Capacity	800	130	100	800	0	**1,800**	3.3%
Townsite	2005 (estimate)	1,200	60	100	800	0	**2,100**	6.6%
	Total Practical Capacity	1,200	100	100	1,000	0	**2,400**	4.2%
Westwood	2005 (estimate)	1,100	40	40	0	100	**1,200**	3.8%
	Total Practical Capacity	2,000	40	0	100	100	**2,200**	4.0%
City of Nanaimo	**2005 (estimate)**	**20,700**	**2,400**	**1,400**	**6,200**	**1,700**	**32,400**	**100.0%**
	Total Practical Capacity	**30,000**	**5,100**	**1,500**	**17,200**	**2,100**	**55,900**	**100.0%**

* Total dwellings exclude secondary suites Source for 2005 dwellings: Primarily based on BC Assessment Authority data

* Note: Total dwellings exclude secondary suites.

Source for 2005 dwellings: Primarily based on BC Assessment Authority data

Table C2: Remaining Practical Dwelling Unit Capacity by Structural Type by Subarea (as of 2005)

Subareas	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Remaining Dwelling Capacity	% of City's Remaining Dwelling Capacity
Chase River	1,100	100	40	0	0	**1,300**	**5.4%**
City Centre	-50	0	10	3,030	0	**2,990**	**12.7%**
Departure Bay	200	400	20	500	0	**1,200**	**4.9%**
Diver Lake	700	500	0	500	0	**1,600**	**7.0%**
Dover	100	100	0	1,700	0	**1,900**	**8.0%**
Duke Point	100	0	0	0	0	**100**	**0.5%**
Five Acres	1,800	600	0	200	400	**2,900**	**12.4%**
Hammond Bay	1,000	300	10	100	0	**1,400**	**5.9%**
Harewood	600	0	0	0	0	**600**	**2.4%**
Linley Valley	40	0	0	0	0	**40**	**0.0%**
Long Lake	700	100	10	500	0	**1,400**	**5.9%**
Newcastle	10	0	0	330	0	**340**	**1.4%**
North Slope	700	200	0	0	0	**900**	**4.0%**
Northfield	200	300	10	600	0	**1,100**	**4.9%**
Pleasant Valley	800	0	10	100	0	**900**	**3.9%**
Protection Island	50	0	0	0	0	**50**	**0.2%**
Rutherford	200	200	0	2,300	0	**2,600**	**11.2%**
South End	100	0	10	800	0	**900**	**4.0%**
Townsite	10	0	0	220	0	**230**	**1.0%**
Westwood	900	0	0	100	0	**1,000**	**4.1%**
City of Nanaimo	**9,300**	**2,700**	**100**	**11,000**	**400**	**23,500**	**100.0%**

* Total dwellings exclude secondary suites

Appendix D: Residential Capacity Tables by Town Centre

Table D1: Dwelling Units by Structural Type by Town Centre, 2005 and Total Practical Capacity

Town Centres		Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Dwellings	% of City-wide Dwellings
Country Club Town Centre	2005 (estimate)	50	40	10	300	0	**400**	1.4%
	Total Practical Capacity	60	40	10	700	0	**800**	1.4%
Downtown Town Centre	2005 (estimate)	60	10	20	700	30	**800**	2.5%
	Total Practical Capacity	50	10	20	3,100	30	**3,200**	5.7%
Hospital Town Centre	2005 (estimate)	80	110	40	900	0	**1,100**	3.5%
	Total Practical Capacity	80	340	50	1,400	0	**1,900**	3.3%
Rutherford Town Centre	2005 (estimate)	10	160	10	600	10	**800**	2.4%
	Total Practical Capacity	130	380	10	3,000	10	**3,500**	6.3%
Southgate / Chase River Town Centre	2005 (estimate)	50	0	0	0	260	**300**	0.9%
	Total Practical Capacity	190	0	0	0	290	**500**	0.9%
Woodgrove Regional Shopping Town Centre	2005 (estimate)	80	120	20	200	10	**400**	1.3%
	Total Practical Capacity	100	120	20	1,800	10	**2,000**	3.7%
Town Centres Subtotal	**2005 (estimate)**	**300**	**400**	**100**	**2,700**	**300**	**3,900**	**11.9%**
	Total Practical Capacity	**600**	**900**	**100**	**10,000**	**300**	**11,900**	**21.3%**
City of Nanaimo	**2005 (estimate)**	**20,700**	**2,400**	**1,400**	**6,200**	**1,700**	**32,400**	**100.0%**
	Total Practical Capacity	**30,000**	**5,100**	**1,500**	**17,200**	**2,100**	**55,900**	**100.0%**
Town Centres as % of City-wide Totals	**2005 (estimate)**	**1.6%**	**18.7%**	**7.7%**	**42.8%**	**17.9%**	**11.9%**	**N/A**
	Total Practical Capacity	**2.0%**	**17.5%**	**7.6%**	**58.0%**	**16.0%**	**21.3%**	**N/A**

* Total dwellings exclude secondary suites.

** Note: The Total Capacity for the Town Centres is likely higher than indicated. However, it is difficult to differentiate the amount of floor space that would be used for residential vs. commercial in mixed used areas in the Town Centres. In particular, the residential capacity for Country Club Town Centre, which is similar to the existing units, is likely higher than shown in the above table.

Source for 2005 dwellings: Primarily based on BC Assessment Authority data

Table D2: Remaining Practical Dwelling Capacity by Structural Type by Town Centre (as of 2005)

Subareas	Single-detached	Townhouse	Other ground-oriented	Apartment	Mobile Homes	Total Remaining Dwelling Capacity	% of City's Remaining Dwelling Capacity
Country Club Town Centre	*10*	*0*	*0*	*340*	*0*	***400***	*1.5%*
Downtown Town Centre	*-10*	*0*	*0*	*2,370*	*0*	***2,360***	*10.0%*
Hospital Town Centre	*0*	*220*	*10*	*510*	*0*	***740***	*3.1%*
Rutherford Town Centre	*120*	*220*	*0*	*2,440*	*0*	***2,780***	*11.9%*
Southgate / Chase River TC	*150*	*0*	*0*	*30*	*30*	***210***	*0.9%*
Woodgrove Regional Shopping	*20*	*0*	*0*	*1,610*	*0*	***1,630***	*7.0%*
Town Centres Subtotal	***300***	***400***	***10***	***7,300***	***30***	***8,100***	***34.4%***
City of Nanaimo	***9,300***	***2,700***	***100***	***11,000***	***400***	***23,500***	***100.0%***
Town Centres as % of City-wide Totals	***3.0%***	***16.4%***	***6.4%***	***66.7%***	***8.2%***	***34.4%***	***N/A***

* Total dwellings exclude secondary suites.

** Note: Negative numbers for single-detached remaining capacity is primarily due to the conversion of some single-detached units into townhouses and apartments.

Appendix E: Commercial Land Inventory Tables by Geographic Areas

Table E1a) Amount of Vacant and Developed Land in Commercial Land Inventory by Urban Containment Area, 2005 - Unconstrained

Urban Containment Subarea	Amount of Developed Commercial Land (ha)	Amount of Vacant Commercial Land (ha)	Total Commercial Land (ha)	% of Total Land	% of Vacant Land
Inside Urban Containment Boundary	257	34	**291**	99.7%	100.0%
Outside Urban Containment Boundary				0%	0%
Linley Valley	0	0	**0**	0%	0%
Rest of Outside UCB	1	0	**1**	0.3%	0.0%
TOTAL	**258**	**34**	**292**	**100%**	**100%**

Table E1b) Amount of Vacant and Developed Land in Commercial Land Inventory by Urban Containment Area, 2005 - Constrained by Water Setbacks and Slopes >=10%

Urban Containment Subarea	Amount of Developed Commercial Land (ha)	Amount of Vacant Commercial Land (ha)	Total Commercial Land (ha)	% of Total Land	% of Vacant Land
Inside Urban Containment Boundary	214	26	**240**	99.7%	100.0%
Outside Urban Containment Boundary				0%	0%
Linley Valley	0	0	**0**	0%	0%
Rest of Outside UCB	1	0	**1**	0.3%	0.0%
TOTAL	**215**	**26**	**241**	**100%**	**100%**

Table E2a) Amount of Vacant and Developed Land in Commercial Land Inventory by Commercial Area, 2005 - Unconstrained

Commercial Area	Amount of Developed Commercial Land (ha)	Amount of Vacant Commercial Land (ha)	Total Commercial Land (ha)	% of Total Land	% of Vacant Land
Country Club Town Centre	16	1	**17**	6%	2%
Downtown Town Centre	40	5	**45**	15%	15%
Hospital Town Centre	14	5	**19**	7%	16%
Rutherford Town Centre	37	3	**40**	14%	9%
Southgate / Chase River Town Centre	4	1	**5**	2%	3%
Woodgrove Regional Shopping Town Centre	65	7	**72**	25%	22%
Other Commercial Areas	76	11	**87**	30%	33%
Terminal Park Shopping Centre	6	0	**6**	2%	0%
TOTAL	**258**	**34**	**292**	**100%**	**100%**

Table E2b) Amount of Vacant and Developed Land in Commercial Land Inventory by Commercial Area, 2005 - Constrained by Water Setbacks and Slopes >=10%

Commercial Area	Amount of Developed Commercial Land (ha)	Amount of Vacant Commercial Land (ha)	Total Commercial Land (ha)	% of Total Land	% of Vacant Land
Country Club Town Centre	15	1	**16**	7%	2%
Downtown Town Centre	29	4	**33**	14%	15%
Hospital Town Centre	12	5	**17**	7%	18%
Rutherford Town Centre	27	2	**29**	12%	7%
Southgate / Chase River Town Centre	4	1	**4**	2%	3%
Woodgrove Regional Shopping Town Centre	61	7	**68**	28%	26%
Other Commercial Areas	61	7	**68**	28%	28%
Terminal Park Shopping Centre	6	0	**6**	2%	0%
TOTAL	**215**	**26**	**241**	**100%**	**100%**

Appendix F: Industrial Land Inventory Tables by Geographic Areas

Table F1a) Amount of Vacant and Developed Land in Industrial Land Inventory by Urban Containment Area, 2005 - Unconstrained

Urban Containment Subarea	Amount of Developed Industrial Land (ha)	Amount of Vacant Industrial Land (ha)	Total Industrial Land (ha)	% of Total Land	% of Vacant Land
Inside Urban Containment Boundary	206	89	**295**	38%	25%
Outside Urban Containment Boundary				0%	0%
Linley Valley	0	0	**0**	0%	0%
Rest of Outside UCB	215	266	**481**	62%	75%
TOTAL	**421**	**355**	**776**	**100%**	**100%**

Table F1b) Amount of Vacant and Developed Land in Industrial Land Inventory by Urban Containment Area, 2005 - Constrained by Water Setbacks and Slopes >=10%

Urban Containment Subarea	Amount of Developed Industrial Land (ha)	Amount of Vacant Industrial Land (ha)	Total Industrial Land (ha)	% of Total Land	% of Vacant Land
Inside Urban Containment Boundary	176	68	**244**	44%	30%
Outside Urban Containment Boundary				0%	0%
Linley Valley	0	0	**0**	0%	0%
Rest of Outside UCB	156	156	**312**	56%	70%
TOTAL	**332**	**224**	**556**	**100%**	**100%**

Table F2a) Amount of Vacant and Developed Land in Industrial Land Inventory by Industrial Area, 2005 - Unconstrained

Industrial Area	Amount of Developed Industrial Land (ha)	Amount of Vacant Industrial Land (ha)	Total Industrial Land (ha)	% of Total Industrial Land	% of Vacant Industrial Land
Assembly Wharf / Downtown S. Industrial Area	28	22	**50**	6%	6%
Boban Industrial Area	29	14	**43**	6%	4%
Duke Point Industrial Area	201	172	**373**	48%	48%
E. Wellington Industrial Area	4	31	**34**	4%	9%
Northfield Industrial Area	35	1	**36**	5%	0%
Parkway Industrial Area	33	35	**68**	9%	10%
Shenton Industrial Area	33	2	**35**	4%	1%
Southside Industrial Area	30	8	**38**	5%	2%
Wellington Industrial Area	9	2	**11**	1%	0%
Other Industrial Areas	19	69	**89**	11%	20%
TOTAL	**421**	**355**	**776**	**100%**	**100%**

Table F2b) Amount of Vacant and Developed Land in Industrial Land Inventory Industrial Area, 2005 - Constrained by Water Setbacks and Slopes >=10%

Industrial Area	Amount of Developed Industrial Land (ha)	Amount of Vacant Industrial Land (ha)	Total Industrial Land (ha)	% of Total Industrial Land	% of Vacant Industrial Land
Assembly Wharf / Downtown S. Industrial Area	25	22	**47**	8%	10%
Boban Industrial Area	26	9	**35**	6%	4%
Duke Point Industrial Area	148	104	**252**	45%	47%
E. Wellington Industrial Area	3	25	**28**	5%	11%
Northfield Industrial Area	33	1	**34**	6%	0%
Parkway Industrial Area	24	26	**50**	9%	12%
Shenton Industrial Area	29	1	**29**	5%	0%
Southside Industrial Area	23	5	**29**	5%	2%
Wellington Industrial Area	6	1	**8**	1%	1%
Other Industrial Areas	15	29	**44**	8%	13%
TOTAL	**332**	**224**	**556**	**100%**	**100%**