

**CONSUMPTION OF TAX-SUPPORTED  
MUNICIPAL SERVICES IN THE CITY OF  
NORTH VANCOUVER FOR THE  
2003 TAX YEAR**

**Prepared for:**

**North Shore Waterfront Industries  
Association**

**Prepared by:**

**MMK Consulting Inc.**  
Stuart MacKay  
James Pammenter

**April 5, 2004**

## Contents

<b>1.</b>	<b>Summary .....</b>	<b>3</b>
1.1.	Study objectives and scope .....	3
1.2.	Background – Trends in property tax rates .....	3
1.3.	Overview of City expenses and revenues .....	4
1.4.	Basis for assigning expenses and revenues among property classes .....	5
1.5.	Results of the consumption analysis.....	5
1.6.	Sensitivity of results .....	6
1.7.	Conclusion .....	7
<b>2.</b>	<b>Objectives, Scope and Methodology .....</b>	<b>8</b>
2.1.	Objectives .....	8
2.2.	Scope of the study .....	8
2.3.	Methodology .....	8
<b>3.</b>	<b>The City’s Tax Environment .....</b>	<b>10</b>
3.1.	Taxes in the City of North Vancouver.....	11
3.2.	Comparisons with other jurisdictions .....	13
<b>4.</b>	<b>Structure of the City Budget.....</b>	<b>15</b>
4.1.	Overall structure .....	15
4.2.	Treatment of utilities .....	15
4.3.	“Direct” and “support” services .....	16
<b>5.</b>	<b>Distribution Methodology .....</b>	<b>17</b>
5.1.	General principles of distribution .....	17
5.2.	Methodology for different types of service.....	17
5.3.	Frequently-used cost drivers .....	19
<b>6.</b>	<b>Results of the Consumption Analysis .....</b>	<b>22</b>
	<b>Appendices .....</b>	<b>25</b>
	Appendix A – City Manager .....	26
	Appendix B – Mayor and Council .....	29

Appendix C – City Clerk ..... 30

Appendix D – Human Resources Department..... 32

Appendix E – Finance Department ..... 34

Appendix F – Information Technology Department ..... 39

Appendix G – Community Development Department..... 41

Appendix H – Fire Department ..... 45

Appendix I – R C M P ..... 48

Appendix J – Engineering, Parks and Environment Department .... 50

Appendix K – Summary of gross consumption, revenues  
attributed and net consumption, by department..... 52

Appendix L – Comparison of taxes from 1984 to 2003..... 55

Appendix M – The North Shore Waterfront Industrial Association  
and its Members ..... 59

Appendix N – Map of the District and City of North Vancouver..... 62

## 1. Summary

### 1.1. Study objectives and scope

The objective of this study is to compare the property taxes and grants in lieu of taxes (GIL) paid for different property classes in the City of North Vancouver (“the City”), relative to the consumption of tax-supported services by each of these property classes. The study distinguishes among the residential, business and industrial property classes.

This assignment was commissioned by the North Shore Waterfront Industrial Association (“the NSWIA”), and was performed by MMK Consulting. The NSWIA represents all the major industry and many of the light industry taxpayers in the District and City of North Vancouver. The scope of the study covers all services provided by the City that are supported by property taxes. This report is a companion document to a parallel analysis of tax consumption patterns in the District of North Vancouver (“the District”).

All analyses and conclusions are those of MMK Consulting. Because the City declined to provide assistance in performing this study, where direct data is lacking we have applied our general knowledge, developed through similar assignments in the City of Vancouver and the District, in assigning costs and revenues among property classes.

### 1.2. Background – Trends in property tax rates

From 1984 British Columbia municipalities were authorized to charge differential tax rates in respect of different property classes. Since then the industry group’s share of taxes increased 23% while its share of value dropped 70%. In 2003 fewer than half of one percent of property owners paid 18.6 cents of every tax dollar levied by the City, as the following data illustrates:

Property Class	1984 % of Total		2003 % of Total		
	Value	Taxes	Value	Taxes	Properties
<u>Non-business group</u>					
1 Residential	66.2	59.8	77.4	45.6	92.20
8 Recreational/non-profit	0.0	0.0	0.1	0.0	0.33
	66.2	59.8	77.4	45.7	92.53
<u>Industrial Group</u>					
2 Utilities	1.0	1.3	0.1	1.0	0.18
4 Major Industry	9.6	13.8	2.8	16.5	0.07
5 Light Industry			0.3	1.1	0.21
Sub total	10.6	15.1	3.2	18.6	0.45
6 Business/Other	23.2	25.1	19.3	35.7	7.02
	100.0	100.0	100.0	100.0	100.00

In 1984 industry and utilities combined represented 10.6% of total assessed values and 15.1% of municipal property taxes paid. By 2003, the industry property classes accounted for fewer than half of 1% of properties, only 3.2% of total assessed values in the City (a 70% decline), but accounted for 18.6% of property taxes paid (a 23% increase).

Tax burdens on industrial properties grew because their tax rates increased at the same time as residential tax rates fell. The following table summarizes tax relationships in 1984 and 2003:

	Tax Rates		Tax Rate Ratios	
	1984	2003	1984	2003
Residential	6.69	3.51	1.00	1.00
Industry				
• Utilities	9.04	40.00	1.35	11.40
• Major Industry	10.68	35.52	1.60	10.13
• Light Industry		22.00		6.27
Business	8.02	10.98	1.20	3.13

“Tax rate ratio” is the relationship between tax rates for non-residential and residential properties. The analysis illustrates that, in 2003, the property tax rates per \$1,000 of assessed value applied to the industry property classes ranged from 6.3 to 11.4 times the rate paid by residential property owners, and were also much higher than the rates applied to the business property class.

The analysis also illustrates how these relationships have changed over time. In 1984 industry represented a single property class. Since that year, the degree of discrimination against non-residential properties (measured by the “tax rate ratio”) has increased by an order of magnitude, relative to residential properties. Major industry and utilities property owners suffered by far the greatest increase in tax burden.

### **1.3. Overview of City expenses and revenues**

The City has 10 operating departments. Its 2003 budgeted operating expenses and revenues were:

	\$ million
Total expenses	45.915
Revenues and fees	(15.252)
Municipal taxes	30.663

Of the revenues and fees, \$1.761 million represented Federal and Provincial GIL for government-owned properties for which the property tax class is known. In subsequent analysis we group these GIL together with the relevant municipal taxes.

In addition to the operating budget the City has three break-even utilities:

	<u>\$ million</u>
Water	7.244
Sewer and drainage	8.738
Solid waste	1.588

We were unable to examine the cost and revenue structure of the utilities. However in the District we found that revenues and consumption for utilities appeared to be reasonably related. We assume this to be the case in the City, and thus have not included these utilities or analysis.

#### **1.4. Basis for assigning expenses and revenues among property classes**

To assign City revenues and expenditures among property classes, we examined each of the departments individually, analyzing cost and revenue drivers for each department, and assigning costs and revenues among the residential, business, and industrial property groups. Specific assumptions and methodologies are detailed in the main report and detailed appendices.

#### **1.5. Results of the consumption analysis**

In 2003 industrial taxpayers and GIL payers in the City subsidized residential taxpayers to the extent of \$3.646 million.

Appendices A to J describe the details of the analysis of consumption patterns of tax-supported services, between residential, industry and business taxpayer groups. The attribution of GIL is described in Appendix E. The analysis has been carried out on an integrated model.

Appendix K summarizes gross consumption, revenues attributed, and net consumption of costs, by department. Results are summarized in the following exhibit.

**Services consumed versus property taxes paid, by property class groups**

	Residential	Industrial	Business	Total
<b>A. Consumption of tax-supported services</b>				
- Gross services consumed (\$ mill)	30,420	4,676	10,819	45,915
	66.3 %	10.2 %	23.6 %	100.0 %
- Less: Revenues attributed (\$ mill)	(6.172)	(2.159)	(5,578)	(13,909)
- Net to be covered by property taxes and GIL (\$ mill)	24,247	2,517	5,242	32,006
	75.8%	7.9%	16.4%	100.0%
<b>B. Property taxes and grants in lieu (\$ mill)</b>				
- Municipal taxes	14.011 <sup>1</sup>	5.717	10.949	30.676 <sup>2</sup>
- Grants in lieu of taxes	0.039	0.446	0.858	1.343
- Total	14.050	6.163	11.807	32.019
	% 43.9 %	19.2 %	36.9 %	100.0 %
<b>C. Comparison of tax-supported consumption to property taxes</b>				
- Excess/(Deficit) of consumption over taxes and grants (\$ mill)	10.197	(3.646)	(6.565)	0.013 <sup>2</sup>
- Payment per dollar of net services consumed	\$0.58	\$2.45	\$2.25	\$1.00
- "Consumption payment ratio" (see text)	1.00	4.23	3.89	

Totals may not balance exactly because of rounding

The "consumption payment ratio" is the cost of a dollar's worth of services to business and industrial taxpayers, relative to the cost of a dollar's worth of service to residential taxpayers.

In summary, industrial properties pay \$2.45 in property taxes for each dollar of net services they consume, while residential taxpayers pay \$0.58 and business taxpayers pay \$2.25. Owners of industrial property pay 4.23 times what residents pay, for an equivalent value of services

**1.6. Sensitivity of results**

For most of the departments analyzed, the overall study findings are not particularly sensitive to the methodology employed in assigning revenues and expenses among property classes. The notable exceptions to this general rule are (1) Fire and Rescue Services and (2) RCMP. Each of these cost categories is significant, and differences in assignment methodologies

<sup>1</sup> Includes \$120,000 taxes for Recreation/Non-profit properties.

<sup>2</sup> Taxes calculated from assessed values and tax rates differ slightly from budgeted taxes.

can lead to significant variations in results. Unfortunately, our depth of analysis for these two key Departments has been constrained by the limited availability of detailed information (see Appendices for details).

Based on the methodologies employed, we have attributed approximately 18% of Fire and Rescue Services net costs and 7% of RCMP costs to the industrial property classes, even though these property classes constitute only 4.1% of the value of improvements (buildings and other structures) in the City. Our expectation is that, if more information were available, the estimated share of consumption by the industry property classes would likely be reduced.

### **1.7. Conclusion**

Based on the detailed analysis as described, we conclude that:

- Residential property owners represent 46% of the property tax bases (44% when government properties are included) and consume 76% of tax-supported services. They pay approximately \$0.58 for each dollar of property-tax-supported services consumed.
- Business property owners represent 36% of the property tax base (37% when government properties are include) and consume 16% of tax-supported services. They pay approximately \$2.25 for each dollar of property-tax-supported services consumed.
- Industrial property owners represent 19% of the property tax base (19% when government properties are included) and consume 8% of tax-supported services. They pay approximately \$2.45 for each dollar of property-tax-supported services consumed.

## **2. Objectives, Scope and Methodology**

### **2.1. Objectives**

For several years the NSWIA has suspected that industrial property owners in the City pay more in property taxes and fees than they consume in services.

Accordingly the NSWIA asked MMK Consulting Inc. to conduct a study, similar in scope to the one KPMG carried out for the City of Vancouver in 1995. The MMK professionals conducting this study also completed the Vancouver study while they were with KPMG.

The objective of this study is to compare taxes and fees paid by different classes of GIL payers and taxpayers with the consumption of services funded by the taxes and fees.

### **2.2. Scope of the study**

This study includes all City municipal departments that are supported by property tax dollars. We also examined the three utilities – Solid Waste, Water, and Sewer and Drainage. A review of the costs and revenues of the utilities indicated that they appeared to be reasonably related, with the possible exception of storm water drainage.

### **2.3. Methodology**

Our work program included the following key steps;

- (1) We held an initial meeting with the NSWIA, along with City representatives, to establish working relationships and begin the study. The City representatives declined to assist us in the conduct of the study
- (2) We reviewed the methodology used in the City of Vancouver study, and determine which adjustments are required for the City. Whereas the Vancouver study distinguished between two property classes (residential and non-residential), in this study we analyzed the results for three classes (residential, business and industry).
- (3) We conducted the study of City services.
- (4) For the City we obtained public information on taxes, population and employment.

- (5) Where available we used City data, and where necessary we used consumption ratios from the City of Vancouver or District studies to complete the City analysis.
- (6) We wrote up the results in a concise draft report, with full documentation in supporting Appendices.
- (7) We reviewed this draft report with NSWIA representatives.
- (8) We finalized and issued the report.

### **3. The City's Tax Environment**

In 1983 the provincial government allowed municipalities to set different tax rates by class of property. Exhibit 3a describes the various property classes as listed on BC Assessment's web-site, grouping them into "commercially oriented" and "non-commercially oriented" categories.

#### **Exhibit 3a Property class descriptions**

---

##### **Residential (non-commercially oriented)**

###### Class 1 – Residential

Includes single-family residences, duplexes, multi-family residences, duplexes, apartments, condominiums, nursing homes, seasonal dwellings, manufactured homes, recreational property, some vacant land, farm buildings and daycare facilities.

###### Class 8 – Recreational Property and Non-Profit Organizations

Includes land, but not improvements on that land, used solely as an outdoor recreation facility for activities such as golf, skiing, tennis, public swimming pools, waterslides, amusement parks, marinas and hang gliding. Improvements on the land (such as a clubhouse) fall into Class 6. Also includes property used for at least 150 days per year by a non-profit organization for a meeting hall or place of public worship.

###### Class 9 – Farm

Farm land must produce primary agricultural products for sale such as a crop of livestock.

##### **Non-Residential (commercially oriented)**

###### Class 2 – Utilities

Includes structures and land of railways, pipelines, telegraph/telephone systems, electrical systems and closed circuit TV systems, but does not include offices or sales outlets. Examples include: Telus, Terasen, BC Rail, CN Rail and Shaw Cable.

###### Class 4 – Major Industry

Includes land and improvements (buildings) of major industrial properties. Improvements include buildings used for lumber mills, pulp mills, heavy manufacturing, mining, smelting, shipbuilding and loading terminals (including grain elevators and associated storage). Examples include James Richardson, Neptune Bulk Terminals, Saskatchewan Wheat Pool, Vancouver Drydock Co. and Western Stevedoring.

###### Class 5 – Light Industry

Property used or held for extracting, manufacturing, or transporting products, including ancillary storage. A scrap metal yard, winery or boat building operation all fall within this category. Exceptions include properties used for the production of food and non-alcoholic beverages, which fall into Class 6. Lafarge Canada is an example.

###### Class 6 – Business and Other

Includes everything not included in another class. Property used for offices, retail, warehousing, hotels and motels all fall within this category.

---

### 3.1. Taxes in the City of North Vancouver

Municipal taxes are intended to fund the cost of municipal services to property owners within the municipality. In 1984 British Columbian municipalities were given more discretion to levy differential municipal tax than any other province except Newfoundland enjoys. In most other provinces there are requirements to treat all non-residential property classes equally, or to maintain fixed or maximum relationships between residential and non-residential tax rates. In some US jurisdictions utilities and industry are taxed at lower rates than commercial properties, because it is recognized that they consume proportionately fewer services. Even though subsidies lead to the economic misallocation of resources, most British Columbia municipalities have increasingly discriminated against non-residential property owners, requiring them to pay significantly higher tax rates than residential property owners.

Appendix L shows the details of property assessments, tax rates and taxes paid from 1984 to 2003 in the City. Until 1988 there was no distinction between major and light industry. Exhibit 3b summarizes the shares of assessments and shares of taxes by property class at the beginning and end of the 20 years.

#### Exhibit 3b Comparison of taxable values and taxes paid – 1984 and 2003

Property Class	1984 % of Total		2003 % of Total		
	Value	Taxes	Value	Taxes	Properties
<u>Non-business group</u>					
1 Residential	66.2	59.8	77.4	45.6	92.20
8 Recreational/non-profit	0.0	0.0	0.1	0.0	0.33
	66.2	59.8	77.4	45.7	92.53
<u>Industrial Group</u>					
2 Utilities	1.0	1.3	0.1	1.0	0.18
4 Major Industry	9.6	13.8	2.8	16.5	0.07
5 Light Industry			0.3	1.1	0.21
Sub total	10.6	15.1	3.2	18.6	0.45
6 Business/Other	23.2	25.1	19.3	35.7	7.02
	100.0	100.0	100.0	100.0	100.00

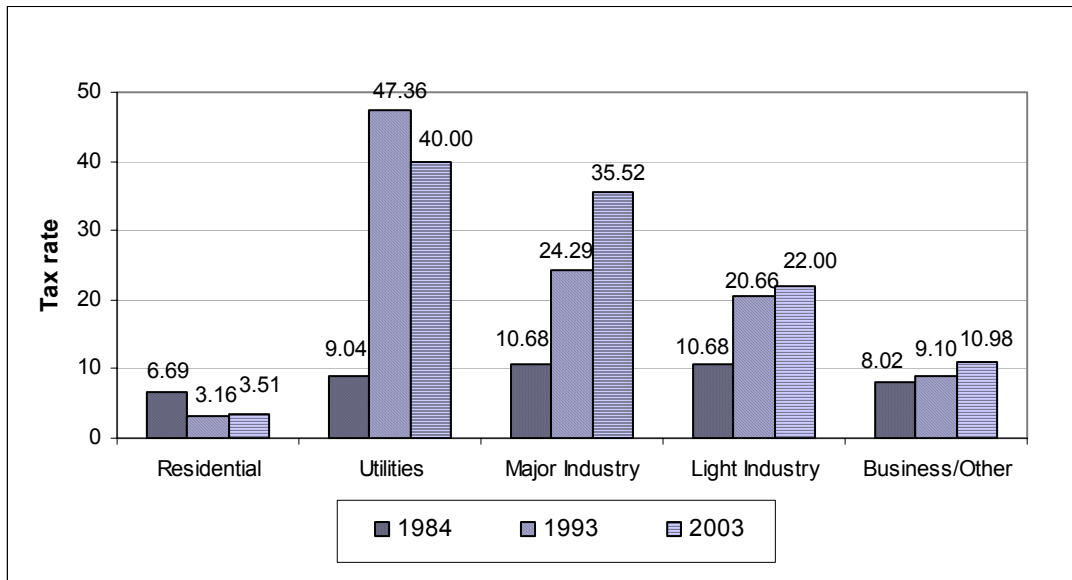
Totals may not add due to rounding

The relative changes in assessments and tax rates since 1984 produced different results for the different property classes. Assessments are, of course, the responsibility of the B.C. Assessment Authority. Changes in assessments have left non-business properties with a rising percentage of total assessed values (66% to 77%). In spite of this, their share of taxes fell from 60% to 46%. Industrial property classes, which represented 10.6% of assessed value in 1984, now account for only 3.2% (a 70% decline).

Nevertheless, their share of taxes has jumped from 15.1% to 18.6% (a 23% increase). In other words, in 2003 fewer than half of one percent of property owners paid 18.6 cents of every tax dollar levied by the City

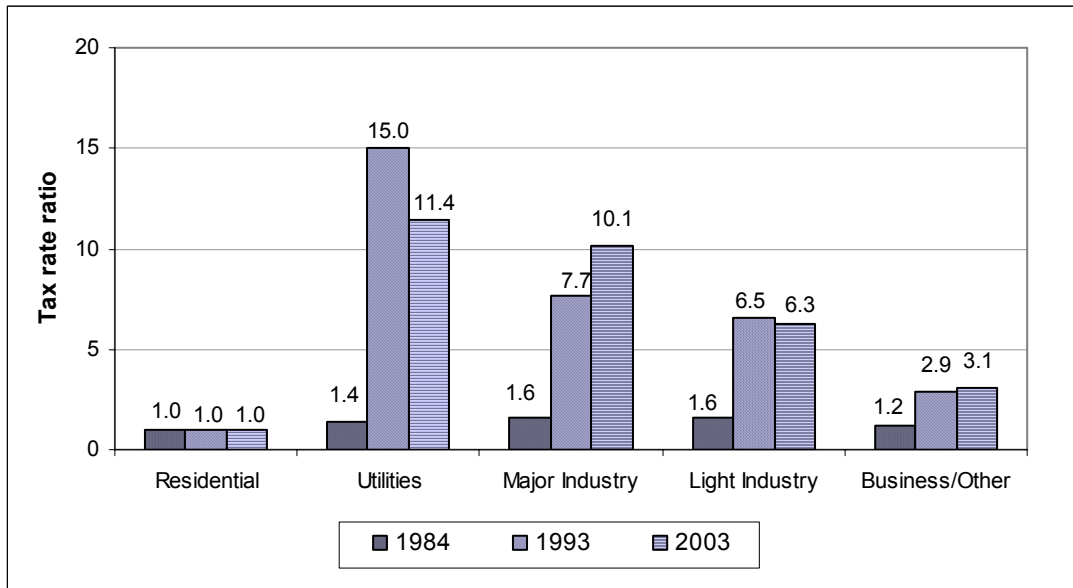
All non-residential tax rates increased between 1984 and 2003. Between 1993 and 2003 tax rates for different property classes have moved in different directions, as Exhibit 3c illustrates. Rates for residences and utilities have fallen, while rates on major industry, light industry and business have increased.

**Exhibit 3c**  
**City of North Vancouver tax rate comparison**



Absolute tax rates are only one measure of the relative burden on different property classes. A “tax rate ratio” relates tax rates per \$1,000 of assessed value for non-residential property, to the tax rate for the residential property classes. Exhibit 3d summarizes the change in tax rate ratios for non-residential property classes.

**Exhibit 3d**  
**City of North Vancouver tax rate ratio comparison**



In every case the tax rate ratios for non-residential properties increased over the period. The ratio for major industry rose from 1.60 in 1984 to 7.68 in 1993 and to 10.13 in 2003. In other words, in 2003 the major industry tax (per \$1,000 of assessed value) was 10 times as high as the tax rate on residential properties (compared to less than 2 times as high, 20 years ago). For light industry the ratio increased from 1.60 to 6.54 and then fell to 6.27. The business ratios were 1.30, 2.88 and 3.13. It is obvious that, after utilities, major industry has suffered the greatest increase in tax burden.

**3.2. Comparisons with other jurisdictions**

In a recent report<sup>1</sup> Professor Bish of the School of Public Administration at the University of Victoria compared property tax rates in all of the province’s 153 municipalities. All charged higher rates for business (classes 2 to 6), than for the residential class. Exhibit 3e summarizes tax ratios for major industry and light industry property classes:

<sup>1</sup> Property Taxes on Business and Industrial Property in British Columbia: Comparisons and Business Climate Observations. Robert L. Bish. October 23, 2003.

**Exhibit 3e**  
**2003 industrial tax ratios in British Columbia (for 153 municipalities)**

		Major Industry	Light Industry
Provincial	1 <sup>st</sup> Quartile	3.40	2.75
	2 <sup>nd</sup> Quartile	4.86	3.40
	3 <sup>rd</sup> Quartile	8.12	4.31
	4 <sup>th</sup> Quartile	19.55	13.63
City ratios		10.13	6.27
City rank in Province		13 <sup>th</sup> highest	14 <sup>th</sup> highest

The industrial tax ratios in the City are among the highest in the province. In other words, the City discriminates more highly against major industry taxpayers than all but 12 of 153 British Columbia municipalities. In the Lower Mainland, only Burnaby, Coquitlam, Maple Ridge, the District and Port Moody have higher ratios.

For Light Industry the City ranks 14<sup>th</sup>. The only Lower Mainland municipalities with higher ratios are Burnaby, Coquitlam and Port Moody.

## 4. Structure of the City Budget

### 4.1. Overall structure

The City prepares a draft financial plan towards the end of each calendar year for the forthcoming fiscal year (April to March). After deliberation by council a “final” budget is issued. Throughout the year budgeted funds may be transferred from account to account, so individual budgeted figures at the end of a fiscal year may differ from those at the beginning of the year. We have used the final budget prepared for the 2003 fiscal year for this consumption analysis. Exhibit 4a summarizes the budgeted costs and revenues of the services being analyzed.

#### Exhibit 4a

#### City of North Vancouver’s 2003 tax-financed services – (\$ million)

Appendix	Expenses	Revenues	Net
A City Manager	1.876	0.069	1.807
B Mayor and Council	0.581		0.581
C City Clerk	1.175	0.737	0.438
D Human Resources	0.607		0.607
E Finance	14.330	9.709	4.621
F Information Technology	2.418		2.418
G Community Development	5.119	2.748	2.371
H Fire	5.566	0.004	5.562
I RCMP	8.780	0.244	8.536
J Engineering, Parks and Environment	5.463	0.398	5.065
	45.915	13.909	32.006
Property Taxes and GIL		32.006	(32.006)
Total Operating Budget	45.915	45.915	0

Municipalities are precluded by Provincial legislation from budgeting for a loss. Revenues and expenses must be equal. However, this does not preclude municipalities from transferring funds to and from reserves as required to achieve the necessary balance. These transfers are found in many areas of the budget. We deal with them in the analyses described in the appendices.

### 4.2. Treatment of utilities

The City operates three utilities – the Solid Waste Utility, the Water Utility and the Sewer and Drainage Utility. All three operations break even. This is

not by itself a reason to exclude them from analysis, because the property classes responsible for the revenues may not be the same as those consuming the services.

We understand that the Solid Waste utility serves residential customers only, so the taxpayer group paying for the service consumes it.

Water is charged at a flat rate to single family dwellings and to some multiple family residences. Consumption is metered and charged for industrial, commercial and other large users. In the District un-metered consumption represents 63% of total volume and 66% of total billed revenue. In the City, un-metered revenue is 67% of total revenue. We do not know what percentage of consumption this represents. However, industry and business represents a higher share of assessed value in the City than in the District (22% vs. 8%). If assessed value may be considered to reflect likely water demand, we conclude that no significant cross-subsidization occurs between property classes in the City.

Sewer charges are also levied on a flat fee basis for most residential properties, and are based on water consumption for other users. The billed revenues are paid 71% by un-metered consumers. In the District where un-metered consumers pay 73% of billed revenue and consume 63% of water, we concluded that no cross-subsidization occurs. On the basis of information at our disposal, we conclude that the City has no obvious cross-subsidization of sewer charges.

Storm drainage charges are levied on taxpayers in proportion to total assessments. On the reasonable assumption that all properties are metered, this means that industry pays 3.2% and business pays 19.3% of costs. Storm drainage requirements are a function of area and surface permeability. A cursory inspection of the City zoning map indicates that these percentages do not seem unreasonable. However, we are aware of at least one case where the City gives no financial relief to a major industry taxpayer who is not even connected to the storm water drainage system.

#### **4.3. “Direct” and “support” services**

Some of the City’s units provide internal support services rather than services directly to taxpayers. The treatment of support service is described in the next chapter, and in the relevant appendices.

## **5. Distribution Methodology**

This chapter outlines the general principles in distributing costs, and then describes the specific approaches in analyzing different types of agencies.

### **5.1. General principles of distribution**

We have developed the following general principles in distributing costs based on consumption patterns, and revenue based on attribution patterns:

- We distinguished between three groups of taxpayers:
  - Residential
  - Industrial (utilities, major industry and light industry)
  - Business/other.

We ignored Recreational/non-profit as being insignificant.

- We assigned consumption costs and attributed revenues to the three groups based on ratios developed for each cost driver.
- We focused on the direct consumers of the service rather than attempting to analyze the ultimate beneficiaries of a service.
- We performed stand-alone analyses of each major department, to reflect the different nature of cost drivers among departments.

### **5.2. Methodology for different types of service**

In Chapter IV we described two types of service; direct and support. For purposes of describing the distribution methodology, we have five categories:

- Direct services and revenues
- Support services and revenues
- Debt charges
- Transfers to and from reserves
- Services provided to, and revenues derived from, non-taxpayer groups.

The following sections summarize the principles adopted in each case.

#### **5.2.1. Direct services and revenues**

We followed these steps in distributing costs and revenues of direct services to the three taxpayer groups:

- **Determine possible cost drivers.** Cost drivers are cost/consumption relationships, and may be simple or complex. For example, a simple driver could be a manager’s estimate of time spent serving the various groups. Some services may be 100% residential or non-residential. In other cases more complex drivers are appropriate. We describe the most significant drivers below.
- **Group costs and revenues into cost pools.** The costs and revenues of services within departments are grouped into totals for which a single cost driver is appropriate.
- **Distribute costs and attribute revenues to taxpayer groups.** The ratio of each driver that relates to each taxpayer group is used to distribute the total cost and attribute the total revenue pool over the three groups.

### 5.2.2. Support services

The cost and revenues of support services may be classified according to whether the support service net costs can be identified with:

- Specific direct service units
- General administrative support for the City as a whole.

The following methodology is adopted in each case:

- **Support service to specific support and direct service departments.** These portions of support service costs are distributed to the taxpayer groups according to the final cost consumption percentages determined for the support direct service agencies that are served. The distribution is based on “cost” consumption only. For this purpose revenues are not netted out, as this would cause distortions in the distribution if, for a department as a whole, cost and revenue ratios are different.
- **General City-wide support.** General support or overhead costs are distributed to the taxpayer groups according to the weighted average of the City-wide ratio of total costs consumed

### 5.2.3. Debt charges

The City has incurred no debt to acquire assets to be used for direct service delivery. If it had, the charges would have been distributed according to the service or cost pool provided by the asset.

### 5.2.4. Transfers to and from reserves

Over the medium term transfers to and from reserves should balance out. The result of a transfer from reserves is to reduce the amount of taxes than must be levied in the current year. The result of a transfer to reserves is the

opposite. We distribute these transfers in the same proportion as taxes paid. This may seem unreasonable, but the following example illustrates the validity of the principle.

Assume that the City has reserves equal to one full year's taxes and transfers an amount equal to the current year's expenses (which are analyzed as to consumption by taxpayer groups). The City continues to levy taxes but transfers the full amount to reserves replacing the original transfer from reserves. The two transfers, distributed in the same ratio as taxes, cancel each other out, and we are left with annual taxes as revenue. The task of analyzing consumption of services financed by the taxes is unchanged.

**5.2.5. Services provided to, and revenues derived from, non-taxpayer groups**

Some departments such as Library, Recreation Commission, and Museum and Archives provide services to, and may derive revenue from, people who live outside the City. For the District analysis we treated these costs and revenues in the same manner as transfers to and from reserves. Revenue from non-taxpayer groups reduces the money that would be required from taxes to provide the same overall level of service. Conversely, the cost of providing such services is borne by the taxpayer groups in proportion to their taxes. Unfortunately, without the cooperation of City staff we are not able to identify the extent of services to, and revenues from, non-residents..

**5.3. Frequently-used cost drivers**

We established four cost drivers that are used in more than one case:

**5.3.1. Tax share of taxpayer groups**

Appendix L shows the detail of tax payments in 2003. Appendix E – Finance Department describes the attribution of GIL to the property groups. We combine them to develop a cost driver to use for general revenues and transfers. The relative shares are:

	Taxes \$ million	GIL \$ million	Combined \$ million	%
Residential	14.011	0.039	14.050	43.9%
Industrial	5.717	0.446	6.163	19.2%
Business/other	10.949	0.858	11.807	36.9%
	30.676	1.343	32.019	100.0%

This excludes the negligible 0.04% of taxes paid by the Recreation/Non-profit taxpayer class.

**5.3.2. Value of improvements**

Improvements are the buildings and other structures added to land. We believe that the value of improvements is a more direct measure of investment and economic activity than the value of land. Consequently we use the value of improvements as surrogate for the level of activity by the taxpayer groups. The relative values are:

	\$ million	%
Residential	1,270	73.8
Industry	48	4.1
Business/other	213	22.1
	100.0	

**5.3.3. Distribution of social vs. working time**

The social vs. working time driver is used for some services relating to the protection of residents and employees.

The population of the City according to the 2001 census was 47,000. Of these, 26,800 were employed.

The estimated split of social vs. working time per year is:

		Million hrs	%
Total time	47,000 x 8,760 hours	403	100.0
Working time	26,800 x 230 days x 8 hrs	49	12.2
Social time	Difference	354	87.8

No data on employment *within* the City is available, so we are required to assume that the number of employed City residents is the same as the number of people employed in the City. As well, the above drivers assume that residents spend the same proportion of time socializing in the City as working in the City. This may not be the case. However, we are unable to quantify the impact of differences.

Working time must be split between industry and business taxpayer groups. A significant portion of the total represents estimated employment in government sectors (School Board 900; Municipality 400; GVRD; Lion’s Gate Hospital 2,500; other health care; Provincial Government; Federal Government). However, the total is unknown, and we assume that all employees fall within the industry and business groups. Other than the staffing of members of the NSWIA (958) nothing is known of employment numbers. We use the relative value of improvements (4.1%/22.1%) to split employment. The resulting distribution of time is:

	%
Residential	87.8
Industry	1.9
Business/other	10.3

**5.3.4. Use of streets**

The City has no data on the relative use of street by different vehicles for different purposes, so we use the GVRD 1999 Trip Diary Surveys and the 1999 Truck Freight Study. These are the most recent data available, and we assume that the City trip patterns mirror those of the GVRD as a whole. These studies reported the number of daily trips by persons and trucks. The survey combined work trips with trips to post-secondary institutions. Translink staff stated that 10% of the combined total referred to Post Secondary Institutions. We have made the adjustment in the figures summarized below:

	<u>Trips per year ('000)</u>	
	<u>Residential</u>	<u>Non-residential</u>
To/from work		1,726
During work		157
Grade school and PSI	767	
Social/rec/personal	2,827	
Light trucks		127
Heavy trucks		60
	<u>3,594</u>	<u>2,070</u>
	63 %	37 %

Non-residential trips must be distributed between industry and business on the basis of estimated employment (say 20/80). The resulting cost drivers are:

Residential	63%
Industry	8%
Business/other	29%

We are aware that trucks place an order of magnitude more wear on roads than do automobiles. However, road wear represents only a small portion of the cost pools for which we use this driver. In some cases (traffic fines, traffic management) we see no reason to discriminate. For other pools (street lighting maintenance and hydro) it is likely that trucks make less use of the service than do automobiles. Furthermore, the major volume of commodities handled by NSWIA members is moved by rail. Accordingly we believe it is equitable to treat trucks and automobiles equally.

## 6. Results of the Consumption Analysis

Appendices A to J describe the details of the analysis of consumption patterns of tax-supported services, between residential, industry and business taxpayer groups. The analysis has been carried out on an integrated model. The relevant pages for each department and/or division are included after the text for each appendix. We have deliberately built circular references into the model (100 iterations) to enable cross distribution of support services.

Appendix K summarizes gross consumption, revenues attributed, and net consumption of costs, by department. Exhibit 6a compares municipal taxes and other revenues with services consumed. Exhibit 6b summarizes the net consumption results by department.

### Exhibit 6a Taxes paid compared with consumption of tax-financed services and attribution of revenues – 2003 budget

	Residential	Industrial	Business	Total
Taxes paid - \$million	14.011 <sup>1</sup>	5.717	10.949	30.676 <sup>2</sup>
Grants in lieu of taxes - \$million	0.039	0.446	0.858	1.343
	14.241	6.241	11.56	32.437
%	43.9 %	19.2 %	36.9 %	100.0 %
<hr/>				
Gross services consumed - \$mill	30.420	4.676	10.819	45.915
%	66.3 %	10.2 %	23.6 %	100.0%
<hr/>				
Revenues attributed \$mill	(6.172)	(2.159)	(5.578)	(13.909)
%	44.4 %	15.4 %	40.2 %	100.0%
<hr/>				
Net services consumed \$mill	24.247	2.517	5,242	32.006
%	75.8 %	7.9 %	16.4 %	100.0 %
<hr/>				
Subsidy \$mill	10.197	(3.646)	(6.565)	13 <sup>2</sup>
Payment per \$ of net services consumed	\$058	\$2.45	\$2.25	\$1.00
“Consumption payment ratio”	1.00	4.23	3.89	
<hr/>				
Totals may not balance due to rounding.				

<sup>1</sup> Includes \$11,000 taxes for Recreation/Non-profit properties.

<sup>2</sup> Taxes calculated from assessed values and tax rates differ slightly from budgeted taxes.

The “consumption payment ratio” is the relationship between the cost of a dollar’s worth of service to residential taxpayers, and the cost of a dollar’s worth of services to other taxpayers.

The implication of the analysis is that industrial taxpayers pay \$2.45 for each \$1 of net services they consume, while residential taxpayers pay \$0.58. Business taxpayers pay \$2.25. In short industry and business pay around four times as much as residential taxpayers for the equivalent value of services.

Overall, industry consumes 10.2% of the gross cost of services. A review of the revenue section of Appendix J reveals that the largest revenue items are in Finance - Appendix E (transfers from reserves, other external revenues) and in Community Development - Appendix G (licences, permits and property operations). Industry is attributed with 15.5% of these revenues – a lower proportion than it pays of total taxes. The final result is that industry consumes 7.9% of net service costs, summarized on Exhibit 6b, overleaf. Industry also pays 19.2% of property taxes and GIL. The difference means that industrial taxpayers in the City subsidized residential taxpayers to the extent of \$3.646 million in 2003.

**Exhibit 6b**  
**Summary of consumption patterns of net costs of tax supported services – 2003 budget**

App. Department	Percentage Distribution			Consumption \$million			Total
	Residential	Industry	Business	Residential	Industry	Business	
A City Manager	62 %	10 %	28 %	1.113	0.184	0.510	1.807
B Mayor and Council	50 %	20 %	30 %	0.291	0.116	0.174	0.581
C City Clerk	77 %	11 %	12 %	0.338	0.048	0.052	0.438
D Human Resources	66 %	11 %	23 %	0.401	0.069	0.137	0.607
E Finance	107 %	(4 %)	(4 %)	4.964	(0.176)	(0.167)	4.621
F Information Technology	66 %	11 %	23 %	1.596	0.277	0.546	2.418
G Community Development	104 %	9 %	(13 %)	2.458	0.217	(0.304)	2.371
H Fire	59 %	18 %	23 %	3.304	1.001	1.257	5.562
I RCMP	65 %	7 %	28 %	5.548	0.598	2.390	8.536
J Engineering, Parks and Environment	84 %	4 %	13 %	4.235	0.184	0.646	5.065
<b>Total City tax and GIL consumption</b>	<b>75.8%</b>	<b>7.9%</b>	<b>16.4%</b>	<b>24.247</b>	<b>2.517</b>	<b>5.242</b>	<b>32.006</b>

Note: Totals may not balance because of rounding..

## **APPENDICES**

- A. CITY MANAGER**
- B. MAYOR AND COUNCIL**
- C. CITY CLERK**
- D. HUMAN RESOURCES DEPARTMENT**
- E. FINANCE DEPARTMENT**
- F. INFORMATION TECHNOLOGY DEPARTMENT**
- G. COMMUNITY DEVELOPMENT DEPARTMENT**
- H. FIRE DEPARTMENT**
- I. RCMP**
- J. ENGINEERING, PARKS AND ENVIRONMENT**
- K. SUMMARY OF GROSS CONSUMPTION, REVENUES  
ATTRIBUTED AND NET CONSUMPTION**
- L. COMPARISON OF TAXES FROM 1984 TO 2003**
- M. THE NORTH SHORE WATER FRONT INDUSTRIAL  
ASSOCIATION AND ITS MEMBERS**
- N. MAP OF THE DISTRICT AND CITY OF NORTH VANCOUVER**

## Appendix A – City Manager

### A.1 Cost pools

The City Manager’s department has six cost pools:

- 1 Administration and public communications
- 2 Business promotion
- 3 Noise control
- 4 Emergency management
- 5 Health and animal services to residents
- 6 Environmental stewardship.

### A.2 Key principles and assumptions

- 1 Administration is distributed to taxpayer classes on the basis of the total City-wide consumption of expenditures.
- 2 Business promotion is treated as consumed by the business group.
- 3 Noise control is distributed to industry as the major cause of noise, even though traffic noise may be as great a problem.
- 4 Emergency management was distributed in the ratios estimated by the manager of the North and West Vancouver Emergency management Office.
- 5 The health and animal services are treated as residential consumption.
- 6 The costs of environmental stewardship are distributed on the same basis as used for the District (based on manager’s estimate of the origin of issues).

### A.3 Summary of analysis

The result of the analysis is the following consumption pattern:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Values \$'000	\$1,876	(\$69)	\$1,807
Residential	62 %	59 %	62 %
Industry	10 %	4 %	10 %
Business/other	29 %	38 %	28 %

Totals may not balance because of rounding.

### A.4 Details of analysis

<b>Step 1 - Initial Cost Pools (\$'000)</b>				<u>Expenses</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>
<u>Cost Pool 1 - Administration and public communications</u>							
101/11	1110	Admin City manager's office		559		559	Combined City services consumption
	1120	Admin City manager's corporate		370		370	
	1160	Communication and PR		3		3	
	1161	Cityviews		30		30	
	1162	Public hearings		60	25	35	
	1163	Community advertising		127		127	
	1164	Community report		8		8	
	1560	Training and development		33		33	
	1561	Corporate training		55		55	
	3010	General preparedness		34		34	
Total Cost Pool 1				1,279	25	1,254	
<u>Cost Pool 2 - Business promotion</u>							
101/11	1150	Economic development		61		61	Consumers (business)
	1151	Tourism initiative		79	20	59	
	1152	Tourism Vancouver		3		3	
Total Cost Pool 2				143	20	123	
<u>Cost Pool 3 - Noise control</u>							
101/11	3330	Noise control committee		4		4	Cause (industry)
	3331	Waterfront industrial noise contrc		20		20	
Total Cost Pool 3				24	-	24	
<u>Cost Pool 4 - Emergency Management</u>							
101/11	8205	NS emergency mgmnt office		93		93	Same as District of North Van consumption
Total Cost Pool 4				93	-	93	
<u>Cost Pool 5 - Services to residents</u>							
101/11	3350	NS health region		55		55	Consumers (residents)
	8210	Animal control		132	24	108	
Total Cost Pool 5				187	24	163	
<u>Cost Pool 6 - Environmental stewardship</u>							
	5040	Environmental stewardship		150		150	Source of environmental issues
				150	-	150	
Total City Manager				1,876	69	1,807	

<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
<b>Consumption of department services</b>								
1	City-wide service consumption %	66%	10%	24%	847	130	301	1,279
2	Consumers (business) %	0%	0%	100%	-	-	143	143
3	Causes (industry) %	0%	100%	0%	-	24	-	24
4	As for District of North Van %	81%	2%	18%	75	2	17	93
5	Consumers (residents)	100%	0%	0%	187	-	-	187
5	Origin of issues %	30%	20%	50%	45	30	75	150
Subtotal gross consumption		62%	10%	29%	1,154	186	536	1,876
<b>Attribution of department revenues</b>								
1	City-wideservice consumption %	66%	10%	24%	(17)	(3)	(6)	(25)
2	Users (business) %	0%	0%	100%	-	-	(20)	(20)
5	Consumers (residents)	100%	0%	0%	(24)	-	-	(24)
Subtotal revenues		59%	4%	38%	(41)	(3)	(26)	(69)
City Manager net consumption		62%	10%	28%	1,113	184	510	1,807

Note: Totals may not balance due to rounding

## Appendix B – Mayor and Council

### B.1 Cost pools

The Mayor and Council department is treated as a single cost pool.

### B.2 Key principles and assumptions

The costs are distributed on the basis of ratios determined in the City of Vancouver study. This places a higher load on industry and business than in the District. In the City, industry and business represent a greater portion of the economy.

### B.3 Summary of analysis

The result of the analysis is the following. Totals may not balance because of rounding.

	Net
Values \$'000	\$581
Residential	50 %
Industry	20 %
Business/other	30 %

### B.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>				Expenses	Revenue	Net	Cost Drivers	
Cost Pool 1 - Mayor and Council								
101/11	2610	Admin mayor and council		181		181	Estimate based on City of Vancouver study.	
	2620	Legislative		323		323		
	2631	Chiba sister city		25		25		
	2632	Valleyfield sister city		10		10		
	2640	Strategic planning		38		38		
	3340	NS congress		4		4		
		Total Cost Pool 1		581		581		
Total Mayor and Council				581	0	581		
<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
Consumption of department services								
1	Estimates	50%	20%	30%	291	116	174	581
	Subtotal gross consumption	50%	20%	30%	291	116	174	581
Mayor and Council consumption		50%	20%	30%	291	116	174	581
Note: Totals may not balance due to rounding								

## Appendix C – City Clerk

### C.1 Cost pools

The City Clerk’s department has four cost pools:

- 1 Administration
- 2 Minor service to residents
- 3 Filming administration
- 4 Bylaw enforcement

### C.2 Key principles and assumptions

- 1 Administration is assumed to be consumed by taxpayers in the same ratio as their consumption of City-wide costs.
- 2 The minor services are consumed by residents.
- 3 The costs and revenues from filming are assumed to relate to business.
- 4 Bylaw enforcement costs and revenues relate primarily to parking and traffic. They are distributed in the ratios of daily trips.

### C.3 Summary of analysis

The result of the analysis is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Values \$’000	\$1,175	(\$737)	\$438
Residential	61 %	51 %	77 %
Industry	8 %	6 %	11 %
Business/other	31 %	43 %	12 %

Totals may not balance because of rounding.

## C.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>				<u>Expenses</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>
<u>Cost Pool 1 - district-wide support service</u>							
101/13	1310	Admin Clerk's office		573	1	572	City service consumption
	1342	North Van Chronicle		19		19	
	1350	Election administration		28		28	
	3320	Lower Mainland Munic. Assoc.		3		3	
	1560	Training and development		8		8	
	2750	Board of variance		2		2	
		<b>Total Cost Pool 1</b>		<b>633</b>	<b>1</b>	<b>632</b>	
<u>Cost Pool 2 - Service to residents</u>							
101/13	1330	Cemetery administration		30		30	Consumers (residents)
	1341	Volunteer appreciation		12		12	
	3310	Substance abuse committee		8		8	
		<b>Total Cost Pool 2</b>		<b>50</b>	<b>-</b>	<b>50</b>	
<u>Cost Pool 3 - Service to business</u>							
101/13	1360	Filing administration		109	146	(37)	Consumers (business)
		<b>Total Cost Pool 3</b>		<b>109</b>	<b>146</b>	<b>(37)</b>	
<u>Cost Pool 4 - Bylaw enforcement</u>							
101/13	1390	Parking enforcement		-	590	(590)	Daily trips
	1391	Ticket processing		139		139	
	1392	Bylaw enforcement		244		244	
		<b>Total Cost Pool 4</b>		<b>383</b>	<b>590</b>	<b>(207)</b>	
<b>Total City Clerk</b>				<b>1,175</b>	<b>737</b>	<b>438</b>	

<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
<u>Consumption of department services</u>								
1	City-wide service consumption %	66%	10%	24%	420	64	149	633
2	Consumers (residents) %	100.0%	0.0%	0.0%	50	-	-	50
3	Consumers (business)	0%	0%	100%	-	-	109	109
4	Daily trips %	63%	8%	29%	241	31	111	383
	<b>Subtotal gross consumption</b>	<b>61%</b>	<b>8%</b>	<b>31%</b>	<b>711</b>	<b>95</b>	<b>369</b>	<b>1,175</b>
<u>Attribution of department revenues</u>								
1	City-wide service consumption %	66%	10%	24%	(1)	(0)	(0)	(1)
3	Consumers (business)	0%	0%	100%	-	-	(146)	(146)
4	Daily trips %	63%	8%	29%	(372)	(47)	(171)	(590)
	<b>Subtotal revenues</b>	<b>51%</b>	<b>6%</b>	<b>43%</b>	<b>(372)</b>	<b>(47)</b>	<b>(317)</b>	<b>(737)</b>
<b>City Clerk net consumption</b>		<b>77%</b>	<b>11%</b>	<b>12%</b>	<b>339</b>	<b>48</b>	<b>52</b>	<b>438</b>

Note: Totals may not balance due to rounding

## **Appendix D – Human Resources Department**

### **D.1 Cost pools**

The Human Resources department is initially treated as a single pool, distributed to taxpayer groups in two stages.

### **D.2 Key principles and assumptions**

The department's costs are initially split to all departments (excluding RCMP) in proportion to staffing. Departmental shares are then allocated to taxpayer groups in the same ratios as the distribution of total department cost consumption.

### **D.3 Summary of analysis**

The result of the analysis is:

	<u>Net</u>
Values \$'000	\$607
Residential	66 %
Industry	11 %
Business/other	23 %

Totals may not balance because of rounding.

## D.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>				<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>	
<b>Cost Pool 1 - support service</b>								
101/15	1510	Admin human resources	498		498		Primary per departmental staff. Secondary per departmental service consumption	
	1511	Special administration	26		26			
	1520	Recruitment	25		25			
	1541	Employee fitness	4		4			
	1542	Employee assistance	20		20			
	1560	Training and development	6		6			
	1570	Employee recognition	15		15			
	1580	Labour relations	3		3			
	1590	Health and safety	10		10			
		<b>Total Cost Pool 1</b>	<b>607</b>	<b>-</b>	<b>607</b>			
<b>Step 2 - Primary Distribution</b>								
		<u>Expenses</u>			<u>Revenues</u>			
<b>Cost Pool 1</b>		<u>FTEs</u>	<u>Net</u>	<u>FTEs</u>	<u>Net</u>			
1a	City Manager	5.0	15	5.0	0			
1b	Mayor and Council	1.6	5	1.6	0			
1c	City Clerk	17.5	52	17.5	0			
1d	Human Resources	5.8	17	5.8	0			
1e	Finance	33.6	99	33.6	0			
1f	Information Technology	14.6	43	14.6	0			
1g	Community Development	34.5	102	34.5	0			
1h	Fire	59.0	174	59.0	0			
1i	Engineering, Parks, Environment	34.0	100	34.0	0			
		<b>205.6</b>	<b>607</b>	<b>205.6</b>	<b>0</b>			
<b>Step 3 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	<u>Taxpayer Ratios</u>			<u>Costs and Revenues</u>			
		<u>Res.</u>	<u>Ind.</u>	<u>Bus.</u>	<u>Res.</u>	<u>Ind.</u>	<u>Bus.</u>	<u>Total</u>
<b>Consumption of department services</b>								
1a	City Manager consumption %	62%	10%	29%	9	1	4	15
1b	Mayor and Council consumption %	50%	20%	30%	2	1	1	5
1c	City Clerk consumption %	61%	8%	31%	31	4	16	52
1d	Human Resources consumption %	66%	11%	23%	11	2	4	17
1e	Finance consumption %	66%	11%	23%	65	11	23	99
1f	Information Tech. consumption %	66%	11%	23%	28	5	10	43
1g	Community Dev. consumption %	68%	9%	23%	69	9	24	102
1h	Fire Departments consumption %	59%	18%	23%	103	31	39	174
1i	Eng. Parks, Environ. consumption %	80%	4%	15%	81	4	15	100
	<b>Subtotal gross consumption</b>	<b>66%</b>	<b>11%</b>	<b>23%</b>	<b>401</b>	<b>69</b>	<b>137</b>	<b>607</b>
	<b>Human Resource consumption</b>	<b>66%</b>	<b>11%</b>	<b>23%</b>	<b>401</b>	<b>69</b>	<b>137</b>	<b>607</b>
<small>Note: Totals may not balance due to rounding</small>								

## **Appendix E – Finance Department**

### **E.1 Cost pools**

The Finance department has seven cost/revenue pools:

- 1 Administration and other City-wide services
- 2 Library
- 3 Museum and Archives
- 4 Recreation
- 5 Financial transactions, including minor, unidentifiable Grants in Lieu of taxes
- 6 Tax Grants in Lieu of taxes - Federal
- 7 Tax Grants in Lieu of taxes - Provincial

### **E.2 Key principles and assumptions**

The cost and revenue pools are distributed directly to taxpayer groups in a second step.

- 1 Administration and City-wide services are distributed to taxpayer groups in the same ratio as the total consumption of City costs.
- 2 The ratios established in the District were used for the Library, Museum and Archives, and Recreation
- 3 Financial transactions are transfers to and from reserves, minor grants in lieu of taxes and other outside revenue. They are treated as tax revenues and expenditures. They increase or reduce the need for taxes depending on whether the transaction is one of outgoing or incoming. Industry and Business together represent more than half the value of these transactions because they pay more than half total taxes.
- 4 Tax Grants in Lieu – Federal are treated as tax revenues for the property class of the federally owned properties to which the grants relate. The properties involved are a Defence Force Armoury (classed as business) and Vancouver Port Authority (classed as light industry).
- 5 Tax Grants in Lieu – Provincial are also treated as tax revenues for the property class of the federally owned properties to which the grants relate. They include residential, industrial and business properties. An anomaly in the City's revenue classification is the inclusion in this group of 1% levies on the billings of BC Hydro and BC Gas. These revenues are attributed to taxpayer groups in proportion to taxes paid. The identical levies for Shaw and Telus appear to be identified in the first cost pool, and we have shifted the BC Hydro and BC Gas levies to the first cost pool.

### E.3 Summary of analysis

The result of the analysis of net consumption is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Values \$'000	\$14,330	(\$9,709)	\$5,039
Residential	66 %	46 %	107 %
Industry	11 %	19 %	(4 %)
Business/other	23 %	36 %	(4 %)

The result of the analysis of Grants in lieu of Taxes (to be treated as taxes) is:

	Net
Values \$'000	\$1,343
Residential	13 %
Industry	30 %
Business/other	57 %

Because government owned properties are taxed at the same rate as regular properties, their values can be calculated. The following are the calculations:

	Taxes	Tax rate	Value
	\$'000	\$/\$'000	\$ million
Residential	39	3.51	11.111
Utilities	70	40.00	1.750
Light industry	376	22.00	17.091
Business	858	10.98	78.142
Total	1,343		108.094

These values will affect, very slightly, the percentage of total value represented by each taxpayer group.

Totals may not balance because of rounding.

## E.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>					
		<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>
<u>Cost Pool 1 - City-wide services</u>					
101/21	1120	Subscriptions	17	17	
	1164	Community report (adv. Printing)	4	4	
	1315	Public process (consultant)	20	20	
	1560	Training and development	19	19	
	2110	Finance administration	1,253	1,253	
	2130	Purchasing	412	5	407
	2140	Facilities management	599	7	592
	2150	Risk liability and insurance	284	25	259
	2160	Fleet vehicle administration	25		25
	2180	Accounts payable recovery	(102)	5	(107)
	2192	Internal reporting	76		76
	2200	Payroll	(46)		(46)
	2420	Consultants	54		54
	2420	Contingencies	903		903
	2640	Strategic planning	3		3
	4710	Administrative police non-shared	(150)		(150)
	8401	Council community grants	86		86
	8405	Special event grants	21		21
	8410	Travel grants	3		3
		<b>Total Cost Pool 1</b>	<b>3,481</b>	<b>42</b>	<b>3,439</b>
<u>Cost Pool 2 - Library</u>					
101/21	8601	Library	1,988	1,988	
		<b>Total Cost Pool 2</b>	<b>1,988</b>	<b>-</b>	<b>1,988</b>
<u>Cost Pool 3 - Museum and Archives</u>					
101/21	8602	Museum	293	293	
		<b>Total Cost Pool 3</b>	<b>293</b>	<b>-</b>	<b>293</b>
<u>Cost Pool 4 - Recreation</u>					
101/21	8603	NV recreation committee	1,942	1,942	
	8604	Multi-purpose community centre	95	95	
		<b>Total Cost Pool 4</b>	<b>2,037</b>	<b>-</b>	<b>2,037</b>
<u>Cost Pool 5 - Financial transactions</u>					
101/21	2302	Interest on pre-authorized payments	83		83
	2302	Squamish Band		50	(50)
	2302	Interest on taxes		60	(60)
	2302	Penalties on taxes		140	(140)
	2302	Utility revenue levy		202	(202)
	2302	Commission on school taxes		25	(25)
	2302	Tax certificates		25	(25)
		BC Hydro 1% levy		218	(218)
		BC Gas 1% Levy		200	(200)
	2303	Other revenues	-	1,732	(1,732)
	2420	Transfer from reserve for future exp		7,015	(7,015)
	2420	Transfer to reserve for future exp	6,286		6,286
	2420	Transfer to reserves	162		162
		<b>Total Cost Pool 5</b>	<b>6,531</b>	<b>9,667</b>	<b>(3,136)</b>
<b>Subtotal, Net Consumption</b>			<b>14,330</b>	<b>9,709</b>	<b>4,621</b>

<u>Revenue Pool 6 - Tax Grants - Federal (treat as taxes)</u>				
101/21 2302	Armory	23	(23)	Class 5 - Business
	Vancouver Port	376	(376)	Class 6 - Light Industry
	Total Revenue Pool 6	-	399	(399)
<u>Revenue Pool 7 - Tax Grants - Provincial (treat as taxes)</u>				
101/21 2302	BC Railway	116	(116)	Class 6 - Business
101/21 2302	Liquor Distribution Branch	8	(8)	Class 6 - Business
101/21 2302	Catamaran Ferries	94	(94)	Class 6 - Business
101/21 2302	ICBC	390	(390)	Class 6 - Business
101/21 2302	ICBC	34	(34)	Class 6 - Business
101/21 2302	BC Building Corporation	93	(93)	Class 6 - Business
101/21 2302	BC Hydro	100	(100)	Class 6 - Business
101/21 2302	BC Hydro	62	(62)	Class 2 - Utilities
101/21 2302	BC Hydro	8	(8)	Class 2 - Utilities
101/21 2302	BC Housing Management	34	(34)	Class 1 - Residential
101/21 2302	BC Housing Management	1	(1)	Class 1 - Residential
101/21 2302	BC Housing Management	1	(1)	Class 1 - Residential
101/21 2302	BC Housing Management	2	(2)	Class 1 - Residential
101/21 2302	CMHC	1	(1)	Class 1 - Residential
	Total Revenue Pool 7	-	944	(944)
Subtotal, Tax Grants (include with taxes)		-	1,343	(1,343)
Total Finance Department		14,330	11,052	3,278

<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
<b>Consumption of department services</b>								
1	City-wide service consumption %	66%	10%	24%	2,306	355	820	3,481
2	Library consumption in DNV %	93.3%	1.3%	5.3%	1,857	26	105	1,988
3	Museum/Archives consumption in DNV % %	90%	4%	6%	264	12	18	293
4	Recreation consumption in DNV	98%	1%	1%	1,996	20	20	2,037
5	Tax shares of taxpayer groups %	45.6%	18.6%	35.7%	2,981	1,216	2,334	6,531
	Subtotal gross consumption	66%	11%	23%	9,404	1,628	3,298	14,330
<b>Attribution of department revenues</b>								
1	City-wide service consumption %	66%	10%	24%	(28)	(4)	(10)	(42)
5	Tax shares of taxpayer groups %	45.6%	18.6%	35.7%	(4,413)	(1,800)	(3,455)	(9,667)
	Subtotal revenues	46%	19%	36%	(4,440)	(1,804)	(3,464)	(9,709)
<b>Finance Department net consumption</b>		107%	-4%	-4%	4,964	(176)	(167)	4,621
<b>Federal and Provincial Grants in Lieu of Taxes</b>								
6	Armory	0%	0%	100%	-	-	(23)	(23)
6	Vancouver Port	0%	100%	0%	-	(376)	-	(376)
7	BC Railway	0%	0%	100%	-	-	(116)	(116)
7	Liquor Distribution Branch	0%	0%	100%	-	-	(8)	(8)
7	Catamaran Ferries	0%	0%	100%	-	-	(94)	(94)
7	ICBC	0%	0%	100%	-	-	(390)	(390)
7	ICBC	0%	0%	100%	-	-	(34)	(34)
7	BC Building Corporation	0%	0%	100%	-	-	(93)	(93)
7	BC Hydro	0%	0%	100%	-	-	(100)	(100)
7	BC Hydro	0%	100%	0%	-	(62)	-	(62)
7	BC Hydro	0%	100%	0%	-	(8)	-	(8)
7	BC Housing Management	100%	0%	0%	(34)	-	-	(34)
7	BC Housing Management	100%	0%	0%	(1)	-	-	(1)
7	BC Housing Management	100%	0%	0%	(1)	-	-	(1)
7	BC Housing Management	100%	0%	0%	(2)	-	-	(2)
7	CMHC	100%	0%	0%	(1)	-	-	(1)
		3%	33%	64%	(39)	(446)	(858)	(1,343)
<b>Total Finance Departments</b>		150%	-19%	-31%	4,925	(622)	(1,025)	3,278

Note: Totals may not balance due to rounding

## **Appendix F – Information Technology Department**

### **F.1 Cost pools**

The Information Technology department is initially treated as a single pool, distributed to taxpayer groups in two stages.

### **F.2 Key principles and assumptions**

The department's costs are initially split to all departments (excluding RCMP) in proportion to staffing. Departmental shares are then allocated to taxpayer groups in the same ratios as the distribution of total department cost consumption.

### **F.3 Summary of analysis**

The result of the analysis is:

	Net
Values \$'000	\$2,418
Residential	66 %
Industry	11 %
Business/other	23 %

Totals may not balance because of rounding.

## F.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>							
<u>Cost Pool 1 - Support Service</u>			<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>	
101/25	2510	Admin Information Technology	1,479		1,479		
	1560	Training and development	25		25	Primary per departmental staff.	
	1561	Corporate training	45		45	Secondary per departmental	
	2520	Support services	869		869	service consumption.	
			2,418	-	2,418		
Total Information technology			2,418	0	2,418		

<b>Step 2 - Primary Distribution</b>					
<u>Cost Pool 1</u>		<u>Expenditures</u>		<u>Revenues</u>	
		<u>FTEs</u>	<u>Net</u>	<u>FTEs</u>	<u>Net</u>
1a	City Manager	5.0	59	5.0	0
1b	Mayor and Council	1.6	19	1.6	0
1c	City Clerk	17.5	206	17.5	0
1d	Human Resources	5.8	68	5.8	0
1f	Finance	33.6	395	33.6	0
1g	Information Technology	14.6	172	14.6	0
1e	Community Development	34.5	406	34.5	0
1h	Fire	59.0	694	59.0	0
1i	Engineering, Parks, Environment	34.0	400	34.0	0
		205.6	2,418	205.6	0

<b>Step 3 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	<u>Taxpayer Ratios</u>			<u>Costs and Revenues</u>			
		<u>Res.</u>	<u>Ind.</u>	<u>Bus.</u>	<u>Res.</u>	<u>Ind.</u>	<u>Bus.</u>	<u>Total</u>
Consumption of department services								
1a	City Manager consumption %	62%	10%	29%	36	6	17	59
1b	Mayor and Council consumption %	50%	20%	30%	9	4	6	19
1c	City Clerk consumption %	60%	8%	31%	124	17	65	206
1d	Human Resources consumption %	66%	11%	23%	45	8	15	68
1f	Finance consumption %	66%	11%	23%	259	45	91	395
1g	Information Tech. consumption %	66%	11%	23%	113	20	39	172
1e	Community Dev. consumption %	68%	9%	24%	275	35	95	406
1h	Fire Departments consumption %	59%	18%	23%	412	125	157	694
1i	Eng. Parks, Environ. consumption %	80%	4%	15%	321	18	61	400
	Subtotal gross consumption	66%	11%	23%	1,596	277	546	2,418
Information Technology consumption		66%	11%	23%	1,596	277	546	2,418

Note: Totals may not balance due to rounding

## Appendix G – Community Development Department

### G.1 Cost pools

The Community Development department includes property management, and permits and licences.

We have established six cost pools:

- 1 Administration
- 2 Property operation
- 3 Property development
- 4 Licence revenues
- 5 Business services and charges
- 6 Support to community groups

### G.2 Key principles and assumptions

- 1 Administration is treated as a City-wide service, and is distributed in the same ratio as the consumption of total costs..
- 2 Property operations earn revenues for taxpayers. Costs and revenues are distributed according to the tax shares of taxpayer groups.
- 3 Property development costs and revenues result from making available property to residential, industry and business taxpayer groups. We use the relative value of improvements to represent the relative consumption of costs and attribution of revenues.
- 4 Licence revenues are paid by industry and business taxpayers.
- 5 Business services and charges are allocated to business.
- 6 We treat support to community groups as being consumed by the residential taxpayer group.

### G.3 Summary of analysis

The result of the analysis is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Values \$'000	\$5,119	(\$2,748)	\$2,371
Residential	68 %	37 %	104 %
Industry	9 %	8 %	10 %
Business/other	24 %	55 %	(13 %)

Totals may not balance because of rounding.

Business has a negative net cost because it pays a large proportion of the revenues.

## G.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>			<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>
<u>Cost Pool 1 - City-wide support services service</u>						
101/17	1710	Admin community development	193		193	City-wide service consumption
	1315	Public process	17		17	
	1560	Training and development	17		17	
	1721	CD development general	1,117		1,117	
	1750	Property information	-	2	(2)	
	1950	Heritage planning	191		191	
	1951	Community plan OCP	35		35	
Total Cost Pool 1			1,570	2	1,568	
<u>Cost Pool 2 - property operations</u>						
	1970	Property management	441		441	Tax shares of taxpayer groups
	1971	Property facilities	586	859	(273)	
Total Cost Pool 2			1,027	859	168	
<u>Cost Pool 3 - property development services</u>						
101/17	1730	Development approvals	-	56	(56)	Value of improvements
	1761	Permits general	865		865	
	1770	Building	-	646	(646)	
	1790	Plumbing and gas	-	154	(154)	
	1980	Real estate (survey, registry)	17		17	
Total Cost Pool 3			882	856	26	
<u>Cost Pool 4 - licence revenues</u>						
101/17	1710	Commercial plates		20	(20)	Consumers (industry and business)
	1800	Inter-municipal program (licences)	10	26	(16)	
	1900	Business licences	-	740	(740)	
Total Cost Pool 4			10	786	(776)	
<u>Cost Pool 5- business services and charges</u>						
101/17	1840	Street occupancy	-	10	(10)	Consumers (business)
	1860	Licenses/signs	-	3	(3)	
	1973	Parking lots revenue	107	232	(125)	
	8500	NV chamber of commerce	33		33	
	8510	NS tourism committee	9		9	
Total Cost Pool 5			149	245	(96)	

<u>Cost Pool 6- Support to community groups</u>					
101/17	2720	Advisory design panel	10	10	
	2730	Social planning adv cmt	8	8	
	2731	Social services grants	90	90	
	2740	Advisory planning	8	8	
	2760	Heritage advisory	5	5	
	3010	General preparedness	2	2	
	3110	NS Family court youth justice	23	23	
	3120	NS adv cmt disability issues	3	3	
	3360	NV restorative justice	15	15	
	8010	Cultural	28	28	
	8021	Arts assistance grants	49	49	
	8022	Arts and culture commission	73	73	
	8031	Community public art program	93	93	
	8040	Community art program	26	26	
	8050	Community art gallery	78	78	
	8070	Presentation house	42	42	
	8080	BC photo and media arts	57	57	Beneficiaries (residents)
	8090	Arts council	19	19	
	8112	NS family services	40	40	
	8120	Capilano community services	12	12	
	8130	Silver harbour centre	102	102	
	8140	NS neighbourhood house	38	38	
	8231	School anti-violence program	20	20	
	8305	Youth services devel. worker	48	48	
	8311	P and P teens	10	10	
	8312	Queen Mary school	79	79	
	8313	Youth lounge operating grant	8	8	
	8314	Youth worker NSNH	91	91	
	8317	Youth worker youth lounge	49	49	
	8350	NS comm. services child care	10	10	
	8355	Daycare program	37	37	
	8360	Youth initiatives	23	23	
		<b>Total Cost Pool 6</b>	<b>1,196</b>	<b>-</b>	<b>1,196</b>
<u>Cost Pool 7- transfers to reserves</u>					
101/17	1980	Real estate transfer to reserves	285	285	Tax shares of taxpayer groups
		<b>Total Cost Pool 7</b>	<b>285</b>	<b>-</b>	<b>285</b>
<b>Total Community Services</b>			<b>5,119</b>	<b>2,748</b>	<b>2,371</b>

<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
<b>Consumption of department services</b>								
1	City-wide service consumption %	66%	10%	24%	1,040	160	370	1,570
2	Tax shares of taxpayer groups %	43.9%	19.2%	36.9%	451	197	379	1,027
3	Value of improvements %	73.8%	4.1%	22.1%	651	36	195	882
4	Industry and business taxpayers	0	39	991	0	0	10	10
5	Business taxpayers	0	0	991	0	0	149	149
6	Residential taxpayers	100%	0%	0%	1,196	0	0	1,196
7	Tax shares of taxpayer groups	45.6%	18.6%	35.7%	130	53	102	285
	<b>Subtotal gross consumption</b>	<b>68%</b>	<b>9%</b>	<b>24%</b>	<b>3,468</b>	<b>447</b>	<b>1,204</b>	<b>5,119</b>
<b>Attribution of department revenues</b>								
1	City-wide service consumption %	66%	10%	24%	-1	-0	-0	-2
2	Tax shares of taxpayer groups %	43.9%	19.2%	36.9%	-377	-165	-317	-859
3	Value of improvements %	73.8%	4.1%	22.1%	-632	-35	-189	-856
4	Industry and business taxpayers	0	39	991	0	-30	-756	-786
5	Consumers (business) %	0%	0%	100%	0	0	-245	-245
	<b>Subtotal revenue &amp; transfers</b>	<b>37%</b>	<b>8%</b>	<b>55%</b>	<b>-1,010</b>	<b>-230</b>	<b>-1,508</b>	<b>-2,748</b>
	<b>Community Services net consumption</b>	<b>104%</b>	<b>9%</b>	<b>-13%</b>	<b>2,458</b>	<b>217</b>	<b>-304</b>	<b>2,371</b>

Note: Totals may not balance due to rounding

## **Appendix H – Fire Department**

### **H.1 Cost pools**

We treated the Fire Department as a single cost pool and revenue pool.

### **H.2 Key principles and assumptions**

Fire and Rescue Services responds to fire, accident and hazardous material emergencies. The department also has units providing fire education and safety inspections. The Fire and Rescue budget does not indicate the overall costs of these services.

The consumption of services is a function of the probability of demand, the intensity of demand (how many officers for how long), and the cost of equipment used.

By the nature of its activities, industry places high demand on services. Hazardous material equipment is expensive, and is maintained largely to meet industrial accidents. Some of the North Shore industries work around the clock. Others maintain normal business hours.

A business is also likely to place a higher demand on the service than a residence, because of the size of many businesses and the number of people involved.

In the absence of hard data, we are forced to develop consumption ratios on a logical basis. For the purposes of this analysis we assume that, compared to the average residence:

- The average major industry consumes 500 times as much service,
- The average light industry consumes 50 times as much service, and
- The average business (occupied during business hours only) consumes 5 times as much service.

We ignore utilities that have no employees and insignificant improvements (\$297,000 in total), and Recreation/Non- profits with only \$11,000 in improvements).

Major industries have multiple property accounts for different parcels of contiguous land used for a single purpose. We suspect that the same may be true for larger light industry and business, but we have hard data only for major business. The City has 5 major industries with 10 tax accounts:

Vancouver Drydock Company  
James Richardson International  
Saskatchewan Wheat Pool  
Neptune Terminals  
Western Stevedoring

These assumptions generate the following consumption ratios:

	Properties/ Accounts	Demand Ratio	Weighted Factors	Consum Ratio
Residential	13,007	1	13,007	59.4 %
Industry				
Major	5	500	2,500	
Light	<u>29</u>	50	<u>1,450</u>	
Total	34		3,950	18.0 %
Business/other	<u>991</u>	5	<u>4,955</u>	<u>22.6 %</u>
Total	14,032		21,912	100.0 %

The numbers above are intuitive, but would require a more detailed analysis than we were able to carry out to confirm or amend. However, they are a genuine attempt to reflect the varying demands of the different property classes. MMK and the NSWIA would welcome the opportunity to establish the consumption relationships from objective data.

The Fire Department's revenue is derived from outside parties as fees for service. We treat these as outside receipts as direct reimbursement for the service. The ratio used is the same as the consumption of services.

### **H.3 Summary of analysis**

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Value \$'000	\$5,566	(\$4)	\$5,562
Residential	59 %	59 %	59 %
Industry	18 %	18 %	18 %
Business/other	23 %	23 %	23 %

Totals may not balance because of rounding.

## H.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>						
			<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>
<u>Cost Pool 1 - Direct Fire service</u>						
101/40	4010	Admin fire department	4,924		4,924	Estimate of need
	1560	Training and development	22		22	
	4020	Fire apparatus	271		271	
	4030	Fire operations	337	4	333	
	4040	Fire prevention	12		12	
		Total Cost Pool 1	<u>5,566</u>	<u>4</u>	<u>5,562</u>	
Total Fire Department			<u>5,566</u>	<u>4</u>	<u>5,562</u>	

<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
Consumption of department services								
1	Estimate of need %	59.4%	18.0%	22.6%	3,306	1,002	1,258	5,566
	Subtotal gross consumption	59%	18%	23%	3,306	1,002	1,258	5,566
Attribution of department revenues								
1	Estimate of need %	59.4%	18.0%	22.6%	-2	-1	-1	-4
	Subtotal revenue	59%	18%	23%	-2	-1	-1	-4
Fire Department net consumption		<u>59%</u>	<u>18%</u>	<u>23%</u>	<u>3,304</u>	<u>1,001</u>	<u>1,257</u>	<u>5,562</u>

Note: Totals may not balance due to rounding

## Appendix I – R C M P

### I.1 Cost pools

Although the RCMP has a large number of specialized units we were unable to split the costs. The superintendent responsible for the North Vancouver detachment informed us that cost breakdowns and case statistics were unavailable.

Accordingly we have kept all RCMP costs in a single pool.

### I.2 Key principles and assumptions

The consumption of services by taxpayer groups is a function of the nature of the crime or potential crime, time devoted to it, and the cost of the units attending. Unfortunately none of this information is available.

In the absence of statistics relevant to North Vancouver we have used consumption ratios developed for KPMG’s City of Vancouver study. These were 65/35 for residential/non-residential. We split the non-residential 20/80 between industry and business, the same ration as estimated working hours and value of improvements.

### I.3 Summary of analysis

The result of the analysis is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Value \$’000	\$8,780	(\$244)	\$8,536
Residential	65 %	65 %	65 %
Industry	7 %	7 %	7 %
Business/other	28 %	28 %	28 %

Totals may not balance because of rounding.

## I.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>				<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>	
<u>Cost Pool 1 - direct RCMP service</u>								
101/45	4600	GB building facility operation		115		115	Estimated use (per City of Vancouver study)	
	4601	GB building repair and maintenar		100		100		
	4602	GB building janitorial		226		226		
	4603	GB building grounds maintenanc		20		20		
	4610	Admin police shared		1,151	97	1,054		
	4621	NS despatch police		174		174		
	4630	Keep of prisoners		243		243		
	4641	Victim services		210		210		
	4642	Crime prevention		40		40		
	4644	Auxilliary police		10		10		
	4645	Bicycle patrol		15		15		
	4646	F.A R.P.		6		6		
	4660	Fleet vehicles		24		24		
	4700	Police contract		6,376		6,376		
	4710	Admin police non-shared		2	147	(145)		
	4720	CNV community policing		63		63		
	8220	Greater Van crime stoppers		5		5		
		Total Cost Pool 1		<u>8,780</u>	<u>244</u>	<u>8,536</u>		
Total Police Department				<u>8,780</u>	<u>244</u>	<u>8,536</u>		
<b>Step 2 - Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
Consumption of department services								
1	Estimated use	65%	7%	28%	5,707	615	2,458	8,780
	Subtotal gross consumption	65%	7%	28%	5,707	615	2,458	8,780
Attribution of department revenues								
1	Estimated use	65%	7%	28%	-159	-17	-68	-244
	Subtotal revenue	65%	7%	28%	-159	-17	-68	-244
R C M P net consumption		65%	7%	28%	<u>5,548</u>	<u>598</u>	<u>2,390</u>	<u>8,536</u>
Note: Totals may not balance due to rounding								

## Appendix J – Engineering, Parks and Environment Department

### J.1 Cost pools

PEPR Administration Services has 5 cost pools:

- 1 Administration
- 2 Services to residents
- 3 Environmental issues
- 4 Parks
- 5 Streets and Traffic

### J.2 Key principles and assumptions

- 1 The Administration pool is distributed to taxpayer groups in the same proportions as the consumption ratios for City costs as a whole. The revenues are fees for commercial vehicle plates, paid by industry and business.
- 2 Major direct users of design and drafting are the utilities, Transportation division and properties division (for development applications). Costs are initially distributed to these units in proportion to the staff FTEs serving each unit. Subsequently the costs are allocated to taxpayer groups in the same proportion as the relevant direct service unit totals. Work for utilities is treated as work for outside entities and is distributed to taxpayer groups in proportion to their tax shares.
- 3 The costs of environmental issues are distributed on the same basis as used for the District (based on manager’s estimate of the origin of issues).
- 4 Parks costs and revenues are treated as residential consumption.
- 5 Streets and traffic costs are distributed on the basis of daily trips. Revenues are a grant from the Federal Government and are treated as a reduction in taxes that would otherwise be required.

### J.3 Summary of analysis

The result of the analysis is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Value \$'000	\$5,463	(\$398)	\$5,065
Residential	80 %	37 %	84 %
Industry	4 %	14 %	4 %
Business/other	15 %	48 %	13 %

Totals may not balance because of rounding.

## J.4 Details of analysis

<b>Step 1 - Initial Cost Pools</b>				<u>Expense</u>	<u>Revenue</u>	<u>Net</u>	<u>Cost Drivers</u>	
<u>Cost Pool 1 - departmental support service</u>								
101/50	3260	Commercial bike racks	2	2	-	Expenses prerity-wide services consumption. Revenues per industry and business.		
	5010	Admin engineering	156	92	64			
	1315	Public process	5		5			
	1560	Training and development	39		39			
	Total Cost Pool 1		202	94	108			
<u>Cost Pool 2- services to residents</u>								
	1330	Cemetery admin	4		4	Consumers (residents)		
	2820	Joint bicycle advisory committee	4		4			
	8232	School crossing guard	70		70			
	Total Cost Pool 2		78	-	78			
<u>Cost Pool 3 - environmental issues</u>								
	2810	Environmental advisory committee	5		5	Same as District of North vancouver		
	5040	Environmental stewardship	30		30			
	Total Cost Pool 3		35	-	35			
<u>Cost Pool 4 - Parks</u>								
	2850	Parks and rec advisory cmte	12		12	Consumers (residents)		
	5070	Parks	2,438	17	2,421			
	5071	Parks special events	30		30			
	Total Cost Pool 4		2,480	17	2,463			
<u>Cost Pool 5 - streets and traffic</u>								
	5160	Streets	2,287	287	2,000	Expenses per daily trips. Revenues per tax shares of taxpayer groups		
	5170	Survey	11		11			
	5180	Traffic and transportation	370		370			
	5120	Yard	-		-			
	Total Cost Pool 5		2,668	287	2,381			
Total Eng, Parks and Environment Dept			5,463	398	5,065			
<b>Step 2- Drive Costs to Taxpayer Groups</b>								
Pool	Cost Driver	Taxpayer Ratios			Costs and Revenues			
		Res.	Ind.	Bus.	Res.	Ind.	Bus.	Total
<u>Consumption of department services</u>								
1	City-wide service consumption %	66%	10%	24%	134	21	48	202
2	Consumers (residents) %	100%	0%	0%	78	-	-	78
3	Estimated ratio of calls %	30%	20%	50%	11	7	18	35
4	Consumers (residents) %	100%	0%	0%	2,480	-	-	2,480
5	Daily trips %	63%	8%	29%	1,681	213	774	2,668
	Subtotal gross consumption	80%	4%	15%	4,383	241	839	5,463
<u>Attribution of department revenues</u>								
1	Industry and business number	0	39	991	-	(4)	(90)	(94)
4	Consumers (residents) %	100%	0%	0%	(17)	-	-	(17)
5	Tax shares of taxpayer groups %	45.6%	18.6%	35.7%	(131)	(53)	(103)	(287)
	Subtotal revenues	37%	14%	48%	(148)	(57)	(193)	(398)
Eng., Parks and Env. Net consumption		84%	4%	13%	4,235	184	646	5,065
Note: Totals may not balance due to rounding								

**Appendix K – Summary of gross consumption, revenues attributed and net consumption, by department**

The following pages list the calculated ratios of gross consumption, revenues attributed and net consumption for each department, and for the City as a whole. Gross consumption ratios have been used in the financial model to distribute support centers to taxpayer groups in the same ratios as the department being supported. Grants in Lieu of Taxes amounting to \$1.761 million are added to tax revenues in subsequent analyses.

The result of the analysis is:

	<u>Costs</u>	<u>Revenues</u>	<u>Net</u>
Value \$'000	\$45,915	(\$13,491)	\$32,424
Residential	66.3 %	44.4 %	75.8 %
Industry	10.2 %	15.5 %	7.9 %
Business/other	23.6 %	40.1 %	16.4 %

Totals may not balance because of rounding.

**Gross Consumption**

App. Department	Calculated net consumption ratios			Net Consumption \$'000			
	Residential	Industry	Business	Residential	Industry	Business	Total
A City Manager	62%	10%	29%	1,154	186	536	1,876
B Mayor and Council	50%	20%	30%	291	116	174	581
C City Clerk	60%	8%	31%	711	95	369	1,175
D Human Resources	66%	11%	23%	401	69	137	607
E Finance	66%	11%	23%	9,404	1,628	3,298	14,330
F Information Technology	66%	11%	23%	1,596	277	546	2,418
G Community Development	68%	9%	24%	3,468	447	1,204	5,119
H Fire	59%	18%	23%	3,306	1,002	1,258	5,566
I R C M P	65%	7%	28%	5,707	615	2,458	8,780
J Engineering, Parks, Environment	80%	4%	15%	4,383	241	839	5,463
City-wide gross service consumption	66.3%	10.2%	23.6%	30,420	4,676	10,819	45,915

**Revenues Attributed**

App. Department	Calculated net consumption ratios			Net Consumption \$'000			
	Residential	Industry	Business	Residential	Industry	Business	Total
A City Manager	59%	4%	38%	(41)	(3)	(26)	(69)
B Mayor and Council				-	-	-	-
C City Clerk	51%	6%	43%	(372)	(47)	(317)	(737)
D Human Resources				-	-	-	-
E Finance	46%	19%	36%	(4,440)	(1,804)	(3,464)	(9,709)
F Information Technology				-	-	-	-
G Community Development	37%	8%	55%	(1,010)	(230)	(1,508)	(2,748)
H Fire	59%	18%	23%	(2)	(1)	(1)	(4)
I R C M P	65%	7%	28%	(159)	(17)	(68)	(244)
J Engineering, Parks, Environment	37%	14%	48%	(148)	(57)	(193)	(398)
City-wide revenues attributed	44.4%	15.5%	40.1%	(6,172)	(2,159)	(5,578)	(13,909)

Note: Totals may not balance due to rounding

**Net Consumption**

App. Department	Calculated net consumption ratios				Net Consumption \$'000			
	Residential	Industry	Business	Total	Residential	Industry	Business	Total
A City Manager	62%	10%	28%	100%	1,113	184	510	1,807
B Mayor and Council	50%	20%	30%	100%	291	116	174	581
C City Clerk	77%	11%	12%	100%	338	48	52	438
D Human Resources	66%	11%	23%	100%	401	69	137	607
E Finance	107%	-4%	-4%	100%	4,964	(176)	(167)	4,621
F Information Technology	66%	11%	23%	100%	1,596	277	546	2,418
G Community Development	104%	9%	-13%	100%	2,458	217	(304)	2,371
H Fire	59%	18%	23%	100%	3,304	1,001	1,257	5,562
I R C M P	65%	7%	28%	100%	5,548	598	2,390	8,536
J Engineering, Parks, Environment	84%	4%	13%	100%	4,235	184	646	5,065
City-wide net service consumption	75.8%	7.9%	16.4%	100%	24,247	2,517	5,242	32,006

Note: Totals may not balance due to rounding

## Appendix L – Comparison of taxes from 1984 to 2003

Property Class	General Taxable Values	Municipal Tax Mill Rates	Tax Rate Tatio	Total Municipal Taxes	% of Total Assessment	% of Total Taxes	
<b>2003</b>							
Residential	3,989,742,511	3.5089	1.00	13,999,448	77.39		45.64
Recreation	2,452,500	4.5956	1.31	11,271	<u>0.05</u>	77.44	<u>0.04</u> 45.67
Utilities	7,415,805	40.0000	11.40	296,632	0.14		0.97
Major Industry	142,853,000	35.5285	10.12	5,075,349	2.77		16.54
Light Industry	15,667,500	22.0013	6.27	344,705	<u>0.30</u>	3.22	<u>1.12</u> 18.64
Business	997,104,800	10.9806	3.13	10,948,789	19.34		35.69
<b>Total</b>	<b>5,155,236,116</b>	<b>-</b>	<b>-</b>	<b>30,676,193</b>	<b>100.0</b>		<b>100.0</b>
<b>2002</b>							
Residential	3,647,690,712	3.7510	1.00	13,682,597	77.19		45.60
Recreation	2,322,200	4.7836	1.28	11,108	<u>0.05</u>	77.24	<u>0.04</u> 45.63
Utilities	6,957,005	41.5810	11.09	289,279	0.15		0.96
Major Industry	118,786,000	44.0931	11.75	5,237,648	2.51		17.45
Light Industry	11,105,800	22.3101	5.95	247,771	<u>0.24</u>	2.90	<u>0.83</u> 19.24
Business	938,963,000	11.2246	2.99	10,539,484	19.87		35.12
<b>Total</b>	<b>4,725,824,717</b>	<b>-</b>	<b>-</b>	<b>30,007,887</b>	<b>100.0</b>		<b>100.0</b>
<b>2001</b>							
Residential	3,538,586,313	3.7014	1.00	13,097,830	77.32		46.16
Recreation	2,295,900	4.6944	1.27	10,778	<u>0.05</u>	77.37	<u>0.04</u> 46.19
Utilities	6,954,005	41.5196	11.22	288,727	0.15		1.02
Major Industry	119,836,000	42.0421	11.36	5,038,157	2.62		17.75
Light Industry	8,453,600	22.5225	6.08	190,396	<u>0.18</u>	2.96	<u>0.67</u> 19.44
Business	900,592,400	10.8278	2.93	9,751,389	19.68		34.36
<b>Total</b>	<b>4,576,718,218</b>	<b>-</b>	<b>-</b>	<b>28,377,277</b>	<b>100.0</b>		<b>100.0</b>
<b>2000</b>							
Residential	3,465,720,913	3.4508	1.00	11,959,336	77.49		46.18
Recreation	2,024,400	4.3906	1.27	8,888	<u>0.05</u>	77.53	<u>0.03</u> 46.21
Utilities	6,888,665	40.0000	11.59	275,547	0.15		1.06
Major Industry	121,192,000	39.0334	11.31	4,730,538	2.71		18.26
Light Industry	6,967,200	20.8460	6.04	145,238	<u>0.16</u>	3.02	<u>0.56</u> 19.89
Business	869,880,100	10.0937	2.93	8,780,344	19.45		33.90
<b>Total</b>	<b>4,472,673,278</b>	<b>-</b>	<b>-</b>	<b>25,899,891</b>	<b>100.0</b>		<b>100.0</b>
<b>1999</b>							
Residential	3,419,843,813	3.3023	1.00	11,293,316	77.83		46.29
Recreation	2,077,800	4.1130	1.25	8,546	<u>0.05</u>	77.88	<u>0.04</u> 46.32
Utilities	7,262,540	40.0000	12.11	290,502	0.17		1.19
Major Industry	120,134,000	37.7335	11.43	4,533,071	2.73		18.58
Light Industry	6,835,100	20.4302	6.19	139,642	<u>0.16</u>	3.06	<u>0.57</u> 20.34
Business	837,580,400	9.7110	2.94	8,133,710	19.06		33.34
<b>Total</b>	<b>4,393,733,653</b>	<b>-</b>	<b>-</b>	<b>24,398,787</b>	<b>100.0</b>		<b>100.0</b>
<b>1998</b>							
Residential	3,464,003,413	3.0587	1.00	10,595,451	78.46		45.89
Recreation	3,938,500	4.1807	1.37	16,466	<u>0.09</u>	78.55	<u>0.07</u> 45.96
Utilities	7,630,590	40.0000	13.08	305,224	0.17		1.32
Major Industry	122,811,000	35.2371	11.52	4,327,508	2.78		18.74
Light Industry	6,895,500	19.7506	6.46	136,190	<u>0.16</u>	3.11	<u>0.59</u> 20.66
Business	809,498,500	9.5206	3.11	7,706,911	18.34		33.38
<b>Total</b>	<b>4,414,777,503</b>	<b>-</b>	<b>-</b>	<b>23,087,750</b>	<b>100.0</b>		<b>100.0</b>

*North Shore Waterfront Industrial Association  
City of North Vancouver Tax Consumption Study  
April 2004*

Property Class	General Taxable Values	Municipal Tax Mill Rates	Tax Rate Tatio	Total Municipal Taxes	% of Total Assessment	% of Total Taxes	
<b>1997</b>							
Residential	3,268,645,413	3.0922	1.00	10,107,240	78.22		47.03
Recreation	3,655,500	4.3732	1.41	15,986	<u>0.09</u>	78.31	<u>0.07</u> 47.11
Utilities	7,753,013	40.0000	12.94	310,121	0.19		1.44
Major Industry	84,521,000	31.5289	10.20	2,664,852	2.02		12.40
Light Industry	53,611,000	19.2035	6.21	1,029,521	<u>1.28</u>	3.49	<u>4.79</u> 18.63
Business	760,433,800	9.6819	3.13	7,362,414		18.20	34.26
<b>Total</b>	<b>4,178,619,726</b>	<b>-</b>	<b>-</b>	<b>21,490,134</b>	<b>100.0</b>		<b>100.0</b>
<b>1996</b>							
Residential	3,160,933,002	3.0483	1.00	9,635,472	78.28		45.72
Recreation	3,495,900	4.4225	1.45	15,461	<u>0.09</u>	78.37	<u>0.07</u> 45.80
Utilities	8,275,672	38.8801	12.75	321,759	0.20		1.53
Major Industry	127,792,000	30.4276	9.98	3,888,397	3.16		18.45
Light Industry	7,779,500	20.0609	6.58	156,064	<u>0.19</u>	3.56	<u>0.74</u> 20.72
Business	729,476,500	9.6733	3.17	7,056,423		18.07	33.48
<b>Total</b>	<b>4,037,752,574</b>	<b>-</b>	<b>-</b>	<b>21,073,576</b>	<b>100.0</b>		<b>100.0</b>
<b>1995</b>							
Residential	3,116,269,302	2.9648	1.00	9,239,053	78.45		45.48
Recreation	2,668,500	4.3478	1.47	11,602	<u>0.07</u>	78.52	<u>0.06</u> 45.54
Utilities	8,221,652	37.9184	12.79	311,752	0.21		1.53
Major Industry	133,019,000	28.7859	9.71	3,829,073	3.35		18.85
Light Industry	7,292,700	20.3946	6.88	148,732	<u>0.18</u>	3.74	<u>0.73</u> 21.12
Business	704,651,900	9.6142	3.24	6,774,629		17.74	33.35
<b>Total</b>	<b>3,972,123,054</b>	<b>-</b>	<b>-</b>	<b>20,314,841</b>	<b>100.0</b>		<b>100.0</b>
<b>1994</b>							
Residential	2,946,754,000	2.9910	1.00	8,813,859	77.57		45.00
Recreation	3,438,300	3.2602	1.09	11,210	<u>0.09</u>	77.67	<u>0.06</u> 45.06
Utilities	8,440,320	35.1772	11.76	296,907	0.22		1.52
Major Industry	139,441,200	27.1818	9.09	3,790,261	3.67		19.35
Light Industry	9,799,400	19.7049	6.59	193,096	<u>0.26</u>	4.15	<u>0.99</u> 21.85
Business	690,723,700	9.3834	3.14	6,481,323		18.18	33.09
<b>Total</b>	<b>3,798,596,920</b>	<b>-</b>	<b>-</b>	<b>19,586,656</b>	<b>100.0</b>		<b>100.0</b>
<b>1993</b>							
Residential	2,688,751,879	3.1614	1.00	8,500,247	76.24		45.61
Recreation	3,409,400	3.1614	1.00	10,779	<u>0.10</u>	76.33	<u>0.06</u> 45.67
Utilities	5,572,194	47.3632	14.98	263,917	0.16		1.42
Major Industry	147,729,242	24.2869	7.68	3,587,888	4.19		19.25
Light Industry	5,969,900	20.6646	6.54	123,366	<u>0.17</u>	4.52	<u>0.66</u> 21.33
Business	675,432,402	9.1045	2.88	6,149,447		19.15	33.00
<b>Total</b>	<b>3,526,865,017</b>	<b>-</b>	<b>-</b>	<b>18,635,644</b>	<b>100.0</b>		<b>100.0</b>
<b>1992</b>							
Residential	2,102,589,250	3.9455	1.00	8,295,787	72.69		47.65
Recreation	3,472,900	3.9455	1.00	13,702	<u>0.12</u>	72.81	<u>0.08</u> 47.73
Utilities	7,386,335	31.0736	7.88	229,520	0.26		1.32
Major Industry	149,766,259	20.4686	5.19	3,065,509	5.18		17.61
Light Industry	9,011,900	16.6300	4.21	149,868	<u>0.31</u>	5.74	<u>0.86</u> 19.79
Business	620,302,900	9.1187	2.31	5,656,331		21.44	32.49
<b>Total</b>	<b>2,892,529,544</b>	<b>-</b>	<b>-</b>	<b>17,410,717</b>	<b>100.0</b>		<b>100.0</b>

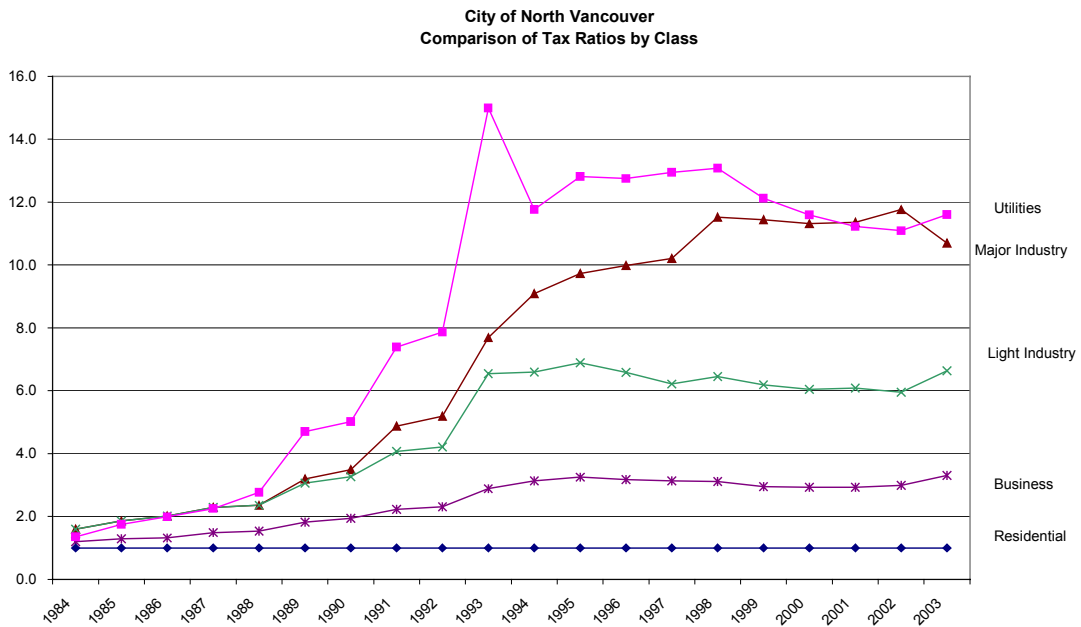
*North Shore Waterfront Industrial Association  
City of North Vancouver Tax Consumption Study  
April 2004*

Property Class	General Taxable Values	Municipal Tax Mill Rates	Tax Rate Ratio	Total Municipal Taxes	% of Total Assessment	% of Total Taxes	
<b>1991</b>							
Residential	2,060,947,400	3.8378	1.00	7,909,504	72.57		48.56
Recreation	3,472,900	3.8378	1.00	13,328	<u>0.12</u>	72.69	<u>0.08</u> 48.64
Utilities	7,569,555	28.3777	7.39	214,806	0.27		1.32
Major Industry	150,380,639	18.6928	4.87	2,811,035	5.30		17.26
Light Industry	7,194,900	15.6151	4.07	112,349	<u>0.25</u>	5.81	<u>0.69</u> 19.27
Business	610,434,300	8.5621	2.23	5,226,612		21.49	32.09
<b>Total</b>	<b>2,839,999,694</b>	<b>-</b>	<b>-</b>	<b>16,287,634</b>	<b>100.0</b>		<b>100.0</b>
<b>1990</b>							
Residential	1,422,482,442	5.2100	1.00	7,411,134	69.20		49.09
Recreation	2,886,950	5.2100	1.00	15,041	<u>0.14</u>	69.34	<u>0.10</u> 49.19
Utilities	7,084,704	26.1300	5.02	185,123	0.34		1.23
Major Industry	142,160,126	18.1600	3.49	2,581,628	6.92		17.10
Light Industry	6,085,050	17.0200	3.27	103,568	0.30	7.56	0.69 19.01
Business	474,889,950	10.1100	1.94	4,801,137		23.10	31.80
<b>Total</b>	<b>2,055,589,222</b>	<b>-</b>	<b>-</b>	<b>15,097,631</b>	<b>100.0</b>		<b>100.0</b>
<b>1989</b>							
Residential	1,387,573,192	5.0600	1.00	7,021,120	70.22		52.03
Recreation	1,924,250	5.0600	1.00	9,737	<u>0.10</u>	70.32	<u>0.07</u> 52.10
Utilities	7,084,704	23.7500	4.69	168,262	0.36		1.25
Major Ind.	134,132,907	16.1500	3.19	2,166,246	6.79		16.05
Light Ind.	5,224,650	15.4800	3.06	80,878	<u>0.26</u>	7.41	<u>0.60</u> 17.90
Bus. & Other	440,106,700	9.2000	1.82	4,048,982		22.27	30.00
<b>Total</b>	<b>1,976,046,403</b>	<b>-</b>	<b>-</b>	<b>13,495,224</b>	<b>100.0</b>		<b>100.0</b>
<b>1988</b>							
Residential	1,151,899,942	6.1000	1.00	7,026,590	68.57		55.58
Recreation	1,765,500	6.1000	1.00	10,770	<u>0.11</u>	68.68	<u>0.09</u> 55.67
Utilities	7,033,550	16.8600	2.76	118,586	0.42		0.94
Major Ind.	122,700,750	14.3600	2.35	1,761,983	7.30		13.94
Light Ind.	3,528,700	14.3600	2.35	50,672	<u>0.21</u>	7.93	<u>0.40</u> 15.28
Bus. & Other	392,861,750	9.3500	1.53	3,673,257		23.39	29.06
<b>Total</b>	<b>1,679,790,192</b>	<b>-</b>	<b>-</b>	<b>12,641,857</b>	<b>100.0</b>		<b>100.0</b>
<b>1987</b>							
Residential	1,118,799,392	6.1000	1.00	6,824,676	68.14		55.77
Seasonal	1,584,900	6.1000	1.00	9,668	<u>0.10</u>	68.24	<u>0.08</u> 55.84
Utilities	7,254,650	13.7400	2.25	99,679	0.44		0.81
Industrial	130,567,400	13.9400	2.29	1,820,110	<u>7.95</u>	8.39	<u>14.87</u> 15.69
Bus. & Other	383,710,950	9.0800	1.49	3,484,095		23.37	28.47
<b>Total</b>	<b>1,641,917,292</b>	<b>-</b>	<b>-</b>	<b>12,238,228</b>	<b>100.0</b>		<b>100.0</b>
<b>1986</b>							
Residential	1,020,346,992	6.5900	1.00	6,724,087	66.94		57.18
Seasonal	1,765,500	6.5900	1.00	11,635	<u>0.12</u>	67.06	<u>0.10</u> 57.28
Utilities	12,774,750	13.0900	1.99	167,221	0.84		1.42
Industrial	134,613,600	13.2800	2.02	1,787,669	<u>8.83</u>	9.67	<u>15.20</u> 16.62
Bus. & Other	354,779,800	8.6500	1.31	3,068,845		23.28	26.10
<b>Total</b>	<b>1,524,280,642</b>	<b>-</b>	<b>-</b>	<b>11,759,457</b>	<b>100.0</b>		<b>100.0</b>

*North Shore Waterfront Industrial Association  
City of North Vancouver Tax Consumption Study  
April 2004*

Property Class	General Taxable Values	Municipal Tax Mill Rates	Tax Rate Tatio	Total Municipal Taxes	% of Total Assessment	% of Total Taxes	
<b>1985</b>							
Residential	992,185,142	6.5100	1.00	6,459,125	67.28	58.48	
Seasonal	-	8.3900	1.29	0	<u>0.00</u>	67.28	<u>0.00</u> 58.48
Utilities	12,784,900	11.3800	1.75	145,492	0.87	1.32	
Industrial	135,705,950	12.0700	1.85	1,637,971	<u>9.20</u>	10.07	<u>14.83</u> 16.15
Bus. & Other	334,129,000	8.3900	1.29	2,803,342	22.66	25.38	
<b>Total</b>	<b>1,474,804,992</b>	-	-	<b>11,045,931</b>	<b>100.0</b>	<b>100.0</b>	

<b>1984</b>							
Residential	943,992,642	6.6900	1.00	6,315,311	66.23	59.84	
Seasonal	-	8.0200	1.20	0	<u>0.00</u>	66.23	<u>0.00</u> 59.84
Utilities	14,637,250	9.0400	1.35	132,321	1.03	1.25	
Industrial	136,440,550	10.6800	1.60	1,457,185	<u>9.57</u>	10.60	<u>13.81</u> 15.06
Bus. & Other	330,188,900	8.0200	1.20	2,648,115	23.17	25.09	
<b>Total</b>	<b>1,425,259,342</b>	-	-	<b>10,552,932</b>	<b>100.0</b>	<b>100.0</b>	



## **Appendix M – The North Shore Waterfront Industrial Association and its Members**

In 1999, major waterfront industrial users located in North Vancouver formed an industry association. **North Shore Waterfront Industrial Association** member companies play an important economic development role in the Port of Vancouver and in the City and District of North Vancouver.

NSWIA represents all major industrial waterfront infrastructures located on the North Shore of Vancouver Harbour. Deep-sea terminals handle a significant portion of Canada's resource based exports. Members include grain terminals, pulp and paper/lumber facilities, multi-product bulk terminals, chemical producers, full service stevedoring and terminal services, as well as shipyards, tug and barge operators, a wood chip handling facility and general services to the marine industry.

NSWIA's mandate is to improve both the economic viability and community understanding of the importance of waterfront industries on the North Shore. Thirteen member companies employ about 3,000 with a total payroll of about \$200 million.

### **NSWIA's objectives:**

- Create an awareness of the contribution of industry to the North Shore community
- Achieve an equitable and competitive tax position for industry
- Open communication channels with all levels of government

### **Waterfront Industries in Our Backyard School Program**

Sponsored by NSWIA, *Waterfront Industries in Our Backyard*, is a three-part program for students in grades 4 to 6. Under the direction of NSWIA, the program is presented by the Vancouver Maritime Museum and includes an introductory in-class visit, a boat tour of the harbour and in class visit by a representative from a waterfront industry. This program meets the requirements of the BC Ministry of Education grade 4-6 Social Studies Integrated Resource Plan (IRP). Since the program began in 2001, more than 4000 students in elementary schools in North Vancouver have shared this unique educational experience.

Phone: 1 (866) 738-0188 Fax: 1 (866) 738-0199

Website [www.nswia.com](http://www.nswia.com) Email [info@nswia.com](mailto:info@nswia.com)

Mailing Address C/o 448 West Queens Road  
North Vancouver BC  
V7N 2K7

<b>NSWIA Member</b>		<b>Class</b>	<b>Nature of Business</b>	<b>Staff</b>
Allied Shipbuilders	District	75% Major 25% light or business	Ship repair, refits, conversion, marine and general machinists and manufacturers of hydraulic tow pin units for tugboats	100
BCR Marine	District	Major	Multi-product terminal operators handling mineral concentrates, pulp and paper, liquids, sulphur and agriproducts.	195
Dow Chemical Terminals	District	Major	Stores and ships chemicals produced at their plant in Fort Saskatchewan, Alberta	12
Erco Worldwide	District	Major	Sodium chlorate supplier to world markets	31
Fibreco Export Inc	District	80% major 20% light	Consortium of interior BC sawmill companies. Wood chip handling facility exports member companies' wood chips to overseas pulp and paper manufacturing markets in Asia and Scandinavian countries and to the coastal pulpmills in BC	49
James Richardson	City	Major	Grain terminal/handler. Major exporter of canola and cereal grains to Pacific Rim	75
Lafarge Canada Inc	District	Light	Construction materials – cement, concrete and aggregates(crushed stone, sand and gravel) roofing, gypsum and specialty products	15

<b>NSWIA Member</b>		<b>Class</b>	<b>Nature of Business</b>	<b>Staff</b>
Neptune Bulk Terminals	City	Major	Multi-product bulk terminal, loading/unloading services and storage facilities for variety of bulk products such as coal, potash, fertilizer, grain products, canola oil, phosphate rock	210
Nexen Chemicals	District	Major	Global energy and chemicals company. Manufacturer of sodium chlorate, chlorine and caustic soda	165
Saskatchewan Wheat Pool	City	Major	Grain terminal/handler for distribution to worldwide markets. Wheat, canola, barley, flaxseed, feed barley, grain screening pellets and dried peas	128
Vancouver Pile Driving	City	Business other	Marine heavy construction, underwater drilling and blasting and dredging. Fleet of marine rigs, pile driving hammers	100
Washington Marine Group - Seaspam and VanShip	District	35% business 65% major	Marine transportation, ship repair, shipbuilding and component sales and services to the marine industry	850
- Vancouver Drydock - Cates Tugs - Manly Marine Closures	City City City	34% business 66% major		350
Western Stevedoring - Lynnterm - Eastgate	District	72% major 24% light 4% business		Full service stevedoring and terminals services. Consolidation centre for forest products, steel and breakbulk, general cargo
- Westgate	City	89% major 9% light 2% business	95	

**Appendix N – Map of the District and City of North Vancouver**

