

BC Municipal Solid Waste Tracking Report

2003-2005

Prepared by:



Acknowledgement

The Ministry of Environment and the Recycling Council of BC would like to thank the regional districts that participated in the completion of this report by supplying data. We greatly appreciate their cooperation and efforts, as without their input this project would not have been possible.

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Commonly Used Acronyms

DLC	Demolition, Land-clearing and Construction
MOE	Ministry of Environment
MSW	Municipal Solid Waste
LFG	Landfill Gas
RCBC	Recycling Council of British Columbia
RD	Regional District
SWMP	Solid Waste Management Plan

Definitions

These definitions are based on industry standard terminology and did not originate from the B.C. Ministry of Environment.

Electric Fencing – used to deter wildlife from entering the landfill.

Landfill Gas (LFG) - By-product of the natural decomposition process occurring at a landfill, composed of roughly 50% methane, a very potent greenhouse gas.

LFG Collection/Flaring – collection of gas and burning to release less potent greenhouse gas, carbon dioxide.

LFG Utilization – collected landfill gas is cooled, compressed, transported to generating facility where it is burned to generate electricity.

Per capita disposal rate – waste disposed per unit of population.

Tipping Fee – the fee charged for unloading solid waste at a landfill or transfer station.

Zero Waste - Zero Waste emphasizes waste prevention rather than waste management, by targeting inefficiencies through all stages of product life cycle: resource extraction, manufacturing, consumption and disposal/recycling.

Executive Summary

This report presents 2003-2005 municipal solid waste (MSW) tracking data provided to the Ministry of Environment (MOE), formerly the Ministry of Water, Land and Air Protection (WLAP), by BC regional districts.

In 2003, the provincial disposal rate was **0.609** tonnes per capita. This represents a **30.7%** reduction in the per capita amount of MSW requiring disposal, compared to 1990. In 2004, the provincial disposal rate was **0.646** tonnes per capita. This represents a **26.5%** reduction in the per capita amount of MSW requiring disposal, compared to 1990. In 2005, the provincial disposal rate was **0.663** tonnes per capita. This represents a **24.5%** reduction in the per capita amount of MSW requiring disposal, compared to 1990.

Between 1990 and 2005, the total waste disposed per year dropped from **2,890,516** tonnes to **2,822,067** tonnes, a reduction of **2.4%**. During the same period of time the provincial population increased by **29%**.

Compared to 2002 when the disposal rate was **0.628** tonnes per capita, in 2003 there was a **2.8%** decrease in the total amount of MSW landfilled and incinerated and a **0.32%** increase in the population. Compared to 2003 when the disposal rate was **0.609** tonnes per capita, in 2004 there was a **7.3%** increase in the total amount of MSW landfilled and incinerated and a **1.1%** increase in the population. And compared to 2004 when the disposal rate was **0.646** tonnes per capita, in 2005 there was a **3.9%** increase in the total amount of MSW landfilled and incinerated and a **1.25%** increase in the population.

Trends in waste reduction vary widely between regional districts. This variation can be attributed to different levels of MSW reduction initiatives undertaken by each regional district, the ability of each regional district to track disposal, and the tracking methodology used.

In 2003, sixteen regional districts had per capita disposal rates lower (better) than the provincial rate, and two regional districts achieved per capita disposal rate reductions greater than 50%, compared to their 1990 base rate. In 2004, seventeen regional districts had per capita disposal rates lower (better) than the provincial rate, and three regional districts achieved per capita disposal rate reductions greater than 50%, compared to their 1990 base rate. In 2005, eighteen regional districts had per capita disposal rates lower (better) than the provincial rate, and five regional districts achieved per capita disposal rate reductions greater than 50%, compared to their 1990 base rate.

1.0 Introduction

1.1 Background

In 1990, MOE established the MSW tracking system to monitor British Columbia's progress toward meeting its year 2000 reduction goal. An annual MSW Tracking Report is published by MOE, based on data supplied by the regional districts.

Since 1996, the Recycling Council of BC (RCBC) has prepared the tracking reports under contract to MOE. RCBC is a multi-sectoral non-profit organization promoting the principles of Zero Waste through information services, the exchange of ideas and research.

1.2 Objectives and Purpose

The primary objective of the tracking process is to monitor the amount of MSW landfilled or incinerated within each regional district and the province as a whole.

The purpose of this report is to present the 2003-2005 MSW tracking results as provided by the regional districts.

1.3 Data Uncertainties and Limitations

The data included in this report reflects the amount and type of waste that regional districts are able to track. However, the accuracy of the data provided varies according to local circumstance such as the availability of staff and/or weigh scales at disposal sites. As a result, some regional districts are able to provide more rigorous data than others.

Information is generally more accurate for urban areas than for rural areas. This reflects the larger and more sophisticated waste facilities serving urban areas, most of which have weigh scales and tipping fees. In contrast, many rural facilities are not staffed and/or lack scales or tipping fees.

As the most relevant analysis when studying MSW tracking results is to consider yearly trends rather than absolute numbers, it is important to acknowledge the factors that affect the accuracy of one year's data compared to the next. Such factors could result in either more accurate or less accurate data. A good example is the addition of a weigh scale to a disposal facility that did not have one previously.

A sensitivity analysis was carried out for the 1997/98 Report. The results of this analysis indicated that the larger the population of a regional district, the larger its per cent contribution to the total waste disposed in the province, and thus the larger the potential impact of uncertainty in its disposal figures on the provincial disposal rate reduction. For

a more complete explanation of the effect of regional district populations see Section 3.1.2 in the BC Municipal Solid Waste Tracking Report 1997/1998.

The ministry acknowledges the above uncertainties as an inherent part of the tracking system. Attention is thus focused on the amount of waste disposed, rather than the amount of waste recycled, as the former is the most rigorous and relevant to the waste reduction goal. A set of guidelines and protocols also accompanied each data collection form with the assumption that this would establish a standard for the information provided by the regional districts.

Although every attempt has been made to confirm anomalous figures with the regional district, the ministry does not accept responsibility for verifying the accuracy of submitted data. That responsibility rests with the regional district.

2.0 Methodology

2.1 Collection of 2003-2005 Data

The format of the 2003-2005 data collection sheet was not modified from that used previously in the 2001/2002 study. Again, this year's data collection sheet only included information on waste disposed, and did not include sections on recycling materials and programs.

The collection form was distributed to each regional district electronically. Data received from regional districts was formatted in the output model and disposed waste breakdown table. Verified data is labeled as 'Confirmed by Regional District.'

2.2 Accounting for Missing Disposal Data

In the 2001/2002 Tracking Report, calculations for regional districts that did not supply disposal data were based on the assumption that regional waste per capita disposal rates had not changed from the last year with good data. Accordingly, the total waste disposed value for each regional district with missing data was calculated by multiplying its 2001 and 2002 populations by its 2000 disposal rate. For the 2003-2005 Tracking Report the calculations remain the same as those in the 2001/2002 Report to maintain consistency and because an alternative method has yet to be considered. Therefore, the total waste disposed values for each regional district with missing data was calculated by multiplying its 2003, 2004 and 2005 populations by its 2002 disposal rate.

One regional district did not submit any data and one regional district provided only partial disposal data for the 2003-2005 report, with their combined population being 4.4% of the provincial total. The missing disposal rates for these regional districts were estimated using the method described above. Regional district disposal rates calculated using these methods are labelled as 'Estimated Per Capita Disposal Rate.'

2.3 Calculations

The per capita disposal rate was calculated as follows:

$$\text{Per Capita Disposed} = \text{Regional MSW Disposed} \div \text{Regional District Population}$$

The total MSW disposed includes amounts disposed within the regional district, as well as any amount incinerated or exported via transfer stations.

For the provincial figures, the BC STATS estimates of the 2003, 2004, and 2005 population was used, so as to minimize the compounding of error that would result if the sum of all 27 regional districts populations had been used.

Again for regional district figures, the BC STATS estimates of the 2003, 2004, and 2005 population was used, so as to maintain consistency in the estimation process, and since some regional districts did not supply population estimates.

These population estimates and other BC STATS information can be found at: <http://www.bcstats.gov.bc.ca/data/pop/pop/mun/Mun9605e.asp>

3.0 Discussion and Analysis

3.1 Provincial MSW Overview

3.1.1 Provincial MSW Trends

The provincial disposal rate in 2003 was **0.609** tonnes per capita, in 2004 was **0.646**, and in 2005 was **0.663** tonnes per capita. The 2003 rate represents an insignificant change from 2002 (**0.628**), whereas the 2005 rate represents the largest per capita increase since 1997 (**0.670**).

The 1990 population value used in this report is the same as the value used in the 2001/2002 Report, which was based on revisions to provincial population estimates for 1990 by BC STATS. This changed the 1990 baseline reduction rate from **0.944** used previously to **0.879** tonnes per capita. Consequently, the disposal rate in 2003 represents a **30.7%** reduction compared to 1990, in 2004 represents a **26.5%** reduction compared to 1990, and in 2005 represents a **24.5%** reduction compared to 1990.

The percentage increase over the past three years is not as important as the trend. As seen in the chart in Section 3.1.3, the disposal rate over time curve has remained relatively stable for an extended period of time, after an initial decrease in the post-1990 years. The seemingly large increase in disposal rate for 2004 and 2005 may not be significant in consideration of the margin for error in calculations based on a combination of weighed, estimated and interpolated data.

The provincial disposal rate reduction was therefore likely stable at around **28%** since 1996 and this trend has continued in 2003. This suggests that the implementation of curbside recycling programs and any other new programs introduced by BC municipalities in the late 1990s has accounted for the bulk of this reduction in disposal rate. Contrarily, the disposal rate increase seen in 2004 and 2005 is indicative of the absence of any new approaches made by municipalities in the early part of this century. This suggests that new approaches both locally and provincially will be necessary to achieve significant reductions in the amount of waste requiring disposal.

Comparing 2005 to 2002, there was an **8%** increase in the total amount of MSW disposed in landfills and a **2.7%** increase in the population. Table 1 illustrates the percentage of the provincial population that resides in regional districts where the total waste disposed and per capita waste disposed increased, decreased or remained virtually the same.

Table 1: Changes in the amount of waste disposed in landfills and per capita disposal rate by regional district from 2002 to 2005

from 2002 to 2003	Increase in Total Waste Disposed	Decrease in Total Waste Disposed	0-1% Change	Increase in Tonnes Per Capita Disposed	Decrease in Tonnes Per Capita Disposed	0-1% Change
Number of Regional Districts	12	13	2	15	10	2
Percentage of BC population	21	70	9	31	65	4

from 2003 to 2004	Increase in Total Waste Disposed	Decrease in Total Waste Disposed	0-1% Change	Increase in Tonnes Per Capita Disposed	Decrease in Tonnes Per Capita Disposed	0-1% Change
Number of Regional Districts	19	6	2	16	5	6
Percentage of BC population	85	14	1	82	12	7

from 2004 to 2005	Increase in Total Waste Disposed	Decrease in Total Waste Disposed	0-1% Change	Increase in Tonnes Per Capita Disposed	Decrease in Tonnes Per Capita Disposed	0-1% Change
Number of Regional Districts	10	12	5	8	16	3
Percentage of BC population	74	19	7	70	25	5

Between 1990 and 2003, the total waste disposed per year dropped from 2,890,516 tonnes to 2,529,251 tonnes, a **12.5%** reduction. During the same period of time the provincial population increased by **26%**.

Between 1990 and 2004, the total waste disposed per year dropped from 2,890,516 tonnes to 2,714,172 tonnes, a **6%** reduction. During the same period of time the provincial population increased by **28%**.

Between 1990 and 2005, the total waste disposed per year dropped from 2,890,516 tonnes to 2,822,067 tonnes, a **2.4%** reduction. During the same period of time the provincial population increased by **29%**.

Between 2003 and 2004 the total amount of MSW disposed has increased from 2,529,251 tonnes to 2,714,272 tonnes, a **7%** increase. During the same period of time the provincial population increased by **1.1%**. And the provincial per capita disposal rate increased from **0.609** to **0.646**, a **26.5%** change.

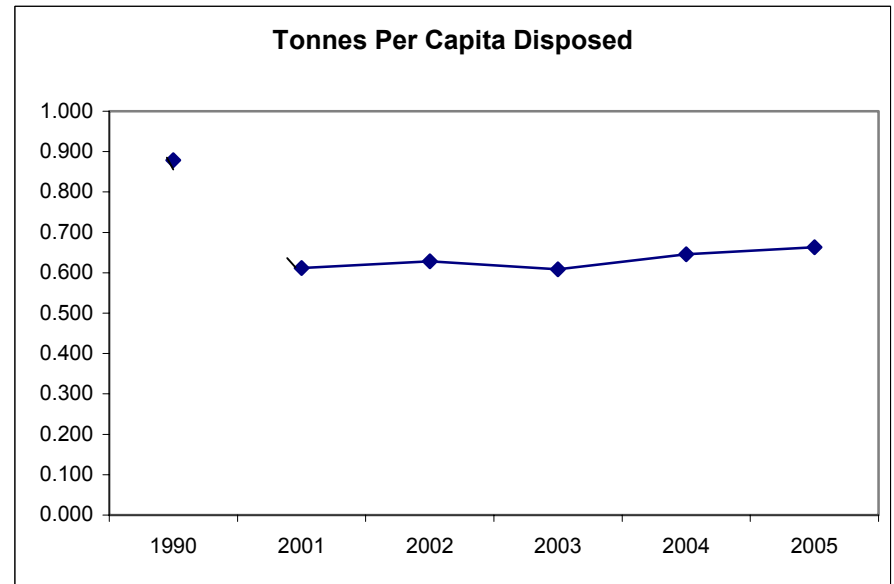
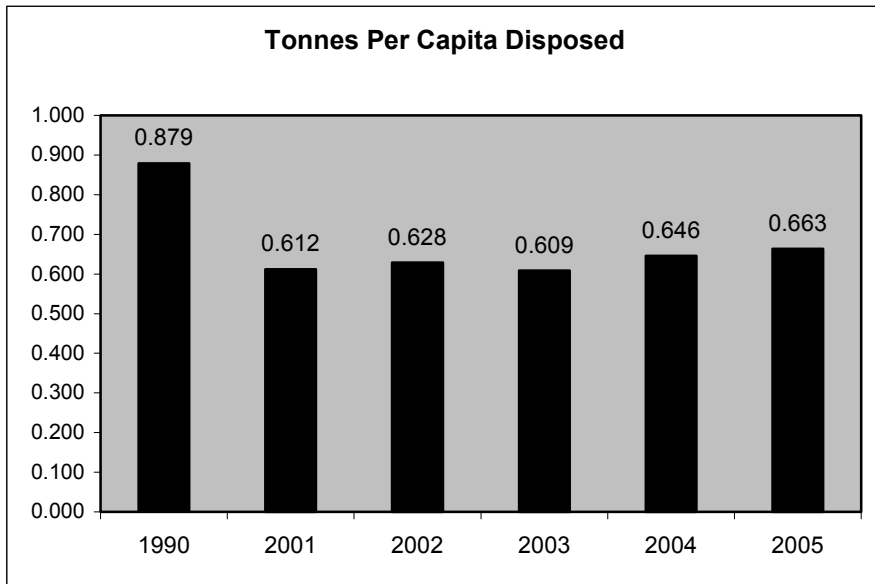
Between 2004 and 2005 the total amount of MSW disposed has increased from 2,714,272 tonnes to 2,822,067 tonnes, a **3.9%** increase. During the same period of time the provincial population increased by **1.25%**. And the provincial per capita disposal rate increased from **0.646** to **0.663**, a **24.5%** change.

3.1.2 British Columbia Municipal Solid Waste Data Summary

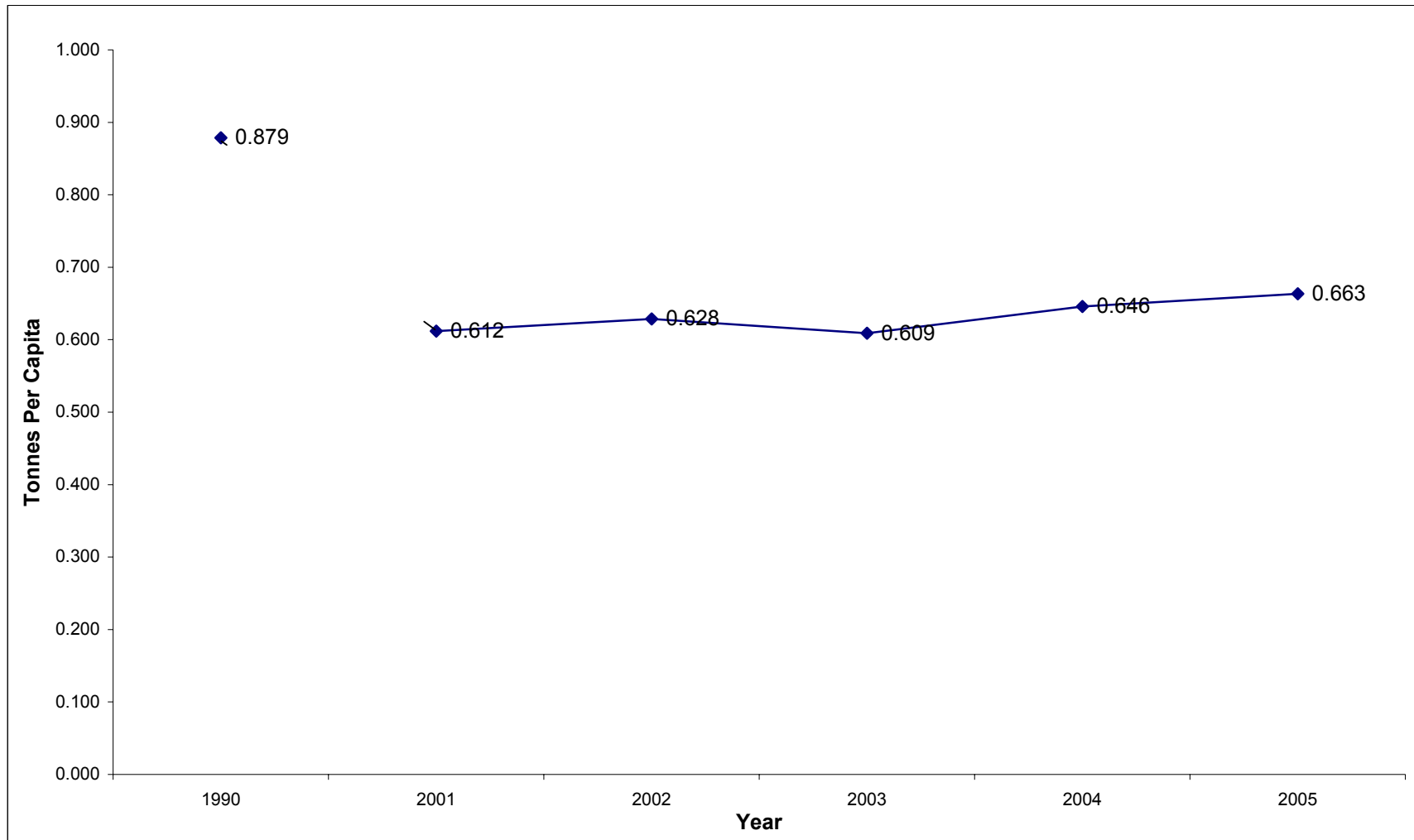
British Columbia Municipal Solid Waste Data Summary

Year	Population	% change from previous year	Total Waste Disposed (tonnes)	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	3,289,259		2,890,516		0.879	
2001	4,101,579		2,509,088		0.612	-30.39
2002	4,141,272	0.97	2,602,716	3.73	0.628	-28.48
2003	4,154,591	0.32	2,529,251	-2.82	0.609	-30.72
2004	4,201,867	1.14	2,714,172	7.31	0.646	-26.49
2005	4,254,522	1.25	2,822,067	3.98	0.663	-24.52

% Reduction in per capita disposal from 1990 rate: -30.72 in 2003, -26.49 in 2004 & -24.52 in 2005



3.1.3 British Columbia, Tonnes Per Capita Disposed, 1990, 2001-2005



*Note: Please see Section 2.1 of the 2000 Report for an explanation of the disposal rate data from 1990-1995. For 1996-2002 data see the tracking report for those years. Section 3.1.2 of this year's Report displays data for 2003-2005.

3.2 Regional MSW Overview

3.2.1 Regional District MSW Trends

In 2003, two regional districts achieved per capita disposal rate reductions greater than 50%, in 2004 three regional districts achieved per capita disposal rate reductions greater than 50%, and in 2005 five regional districts achieved per capita disposal reductions greater than 50%, compared to their 1990 base rate.

Table 2 below shows the per capita disposal rates for all regional districts in order of increasing disposal rate. This shows that sixteen regional districts in 2003 had per capita disposal rates lower (better) than the provincial rate, comprising **30%** of the population. In 2004, seventeen regional districts had per capita disposal rates lower (better) than the provincial rate, comprising **38%** of the total population, and in 2005, eighteen regional districts had per capita disposal rates lower (better) than the provincial rate, comprising **38%** of the total population.

A summary of per capita disposal rates for all regional districts in 1990 and 2001-2005 that is separated into two groups based on population for ranking purposes is included in Appendix A.

In any comparison among regional districts it should be recognized that regionally specific circumstances, resources and infrastructure are paramount in determining the capacity of each regional district to provide waste diversion programs.

Table 2: Per Capita Disposal rates, 2002, 2003, 2004, and 2005

Rank 2002	Regional District	Disposal Rate (in tonnes) 2002	Rank 2003	Regional District	Disposal Rate (in tonnes) 2003
1	Powell River	0.256	1	Powell River	0.244
2	Central Kootenay	0.372	2	Central Kootenay	0.340
3	Central Coast	0.378	3	Central Coast	0.384
4	Cariboo	0.381	4	Cowichan Valley	0.401
5	Cowichan Valley	0.382	5	Cariboo	0.405
6	Bulkley-Nechako	0.399	6	Capital	0.418
7	Capital	0.412	7	Kootenay-Boundary	0.454
8	Nanaimo	0.426	8	Comox-Strathcona	0.465
9	Columbia Shuswap	0.429	9	Sunshine Coast	0.473
10	Sunshine Coast	0.453	10	Central Okanagan	0.475
11	Comox-Strathcona	0.465	11	Kitimat-Stikine	0.479
12	Kitimat-Stikine	0.500	12	Nanaimo	0.483
13	mount Waddington	0.518	13	Bulkley-Nechako	0.509
14	Kootenay Boundary	0.528	14	Mount Waddington	0.525
15	Alberni-Clayoquot	0.544	15	North Okanagan	0.579
16	North Okanagan	0.554	16	Columbia Shuswap	0.589
17	Fraser Valley	0.555	17	Greater Vancouver	0.644
18	Squamish-Lillooet	0.630	18	Squamish-Lillooet	0.645
19	Skeena-Queen Charlotte	0.646	19	Fraser Valley	0.654
20	Greater Vancouver	0.692	20	Thompson-Nicola	0.654
21	Thompson-Nicola	0.710	21	East Kootenay	0.682
22	Central Okanagan	0.717	22	Alberni-Clayoquot	0.745
23	Fraser-Fort George	0.752	23	Fraser-Fort George	0.759
24	East Kootenay	0.763	24	Peace River	0.793
25	Peace River	0.901	25	Okanagan-Similkameen	0.998
26	Okanagan-Similkameen	1.000	26	Northern Rockies	1.833
27	Northern Rockies	1.591	27	Skeena-Queen Charlotte	
	Province	0.628		Province	0.609
Rank 2004	Regional District	Disposal Rate (in tonnes) 2004	Rank 2005	Regional District	Disposal Rate (in tonnes) 2005
1	Powell River	0.235	1	Powell River	0.225
2	Central Coast	0.388	2	Central Coast	0.256
3	Cariboo	0.403	3	Cariboo	0.406
4	Central Kootenay	0.409	4	Cowichan Valley	0.416
5	Capital	0.434	5	Capital	0.452
6	Cowichan Valley	0.439	6	Comox-Strathcona	0.465
7	Comox-Strathcona	0.465	7	Bulkley-Nechako	0.470
8	Kitimat-Stikine	0.475	8	Kootenay-Boundary	0.471
9	Nanaimo	0.476	9	Kitimat-Stikine	0.476
10	Bulkley-Nechako	0.489	10	Central Okanagan	0.492
11	Kootenay-Boundary	0.490	11	Sunshine Coast	0.493
12	Sunshine Coast	0.508	12	Central Kootenay	0.494
13	Central Okanagan	0.521	13	Nanaimo	0.496
14	Mount Waddington	0.540	14	Fraser Valley	0.499
15	Columbia Shuswap	0.561	15	Mount Waddington	0.526
16	Fraser Valley	0.578	16	Squamish-Lillooet	0.554
17	Thompson-Nicola	0.633	17	Columbia-Shuswap	0.603
18	Squamish-Lillooet	0.650	18	North Okanagan	0.654
19	Greater Vancouver	0.692	19	Thompson-Nicola	0.690
20	North Okanagan	0.713	20	Greater Vancouver	0.731
21	Fraser-Fort George	0.832	21	Fraser-Fort George	0.812
22	Alberni-Clayoquot	0.861	22	Alberni-Clayoquot	0.839
23	Peace River	0.863	23	East Kootenay	0.873
24	East Kootenay	0.891	24	Peace River	0.969
25	Okanagan-Similkameen	1.019	25	Okanagan-Similkameen	1.001
26	Northern Rockies	1.842	26	Northern Rockies	1.695
27	Skeena-Queen Charlotte		27	Skeena-Queen Charlotte	
	Province	0.646		Province	0.663

3.2.1.1 2003-2005 Data

Twenty-five of the 27 regional districts supplied MSW disposal data in some capacity for the years 2003 to 2005. Comox-Strathcona stated explicitly that no data would be provided and Okanagan-Similkameen provided partial data. Thus, both Comox-Strathcona and Okanagan-Similkameen disposal data was estimated (see section 2.2 Accounting for Missing Disposal Data). It can be assumed that these regional districts were unable to provide data due to lack of resources, monetary or otherwise.

Due to a substantive discrepancy between Skeena-Queen Charlotte's 2003-2005 disposal data and that of previous year's disposal data, it has been excluded from the rankings in both Section 3.2 **Table 2** and in Appendix A **Regional District Per capita Disposal Rate Summary**. This has been done in order to maintain consistency with past reports and to ensure that Skeena-Queen Charlotte's disposal rate is not portrayed as an exaggerated or understated statistic.

3.2.1.2 Waste Disposal Facilities

In 2005, there were **112** landfills operating within BC compared to 108 in 2002. Of this total, **59%** charge tipping fees, which range from \$5-155 per tonne, and **42%** have weigh scales. Only **10%** operate with no staff present; **66%** of the landfills accept DLC waste; **33%** have a salvage area open to the public and **38%** have electric fences to keep wildlife away from covered use. Regarding landfill gas management, **13%** of landfills employ utilization techniques and **10%** utilize collection/flaring.

For those regional districts that did not supply rigorous data indicating factors such as tipping fees and weigh scales, data obtained from the 2001/2002 Report was used.

3.1.2.3 Status of Waste Management Plans

Most regional districts that supplied data for this report also had approved solid waste management plans as of 2005. Of those regional districts that did not have a plan as of the 2001/2002 Report, East Kootenay now has an approved plan. Central Coast remains the only regional district to not have an approved solid waste management plan.

3.2.2 Regional District Data

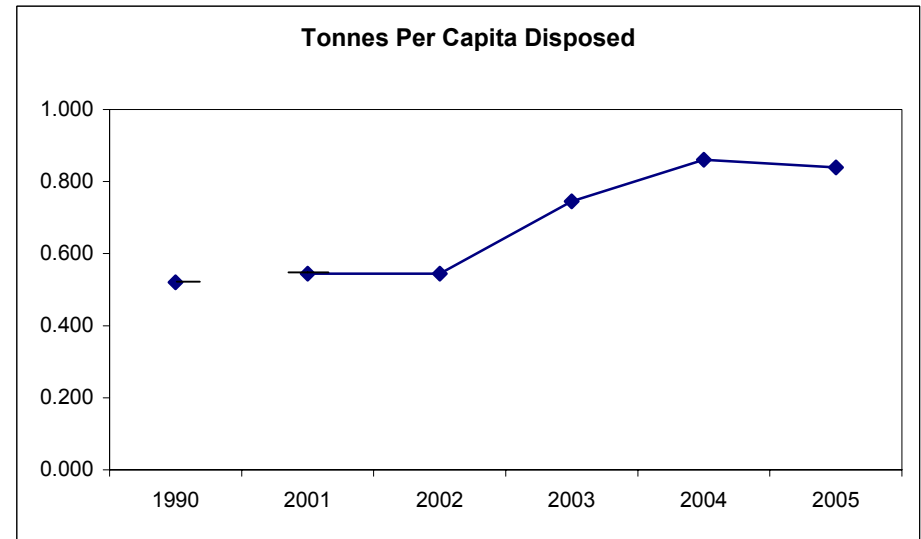
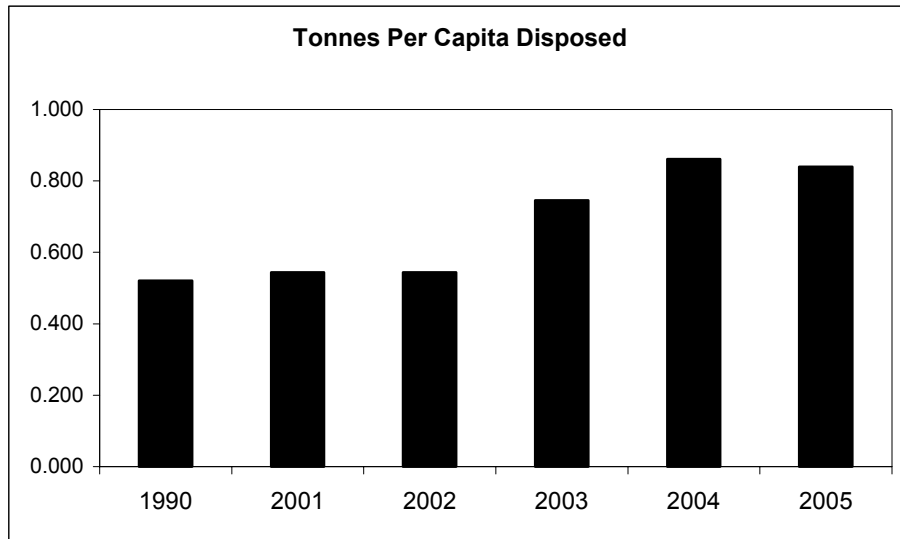
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Alberni-Clayoquot Regional District

Regional District area (square km): 7,738

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	31,961		16,641		0.521	
2001	31,718		17,255		0.544	4.48
2002	31,753	0.14	17,274	3.25	0.544	4.48
2003	31,877	0.23	23,761	1.26	0.745	43.16
2004	32,312	1.60	27,813	11.28	0.861	65.32
2005	32,692	-0.60	27,440	-2.88	0.839	61.21

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **February 13, 1997**



Data status: Confirmed by Regional District

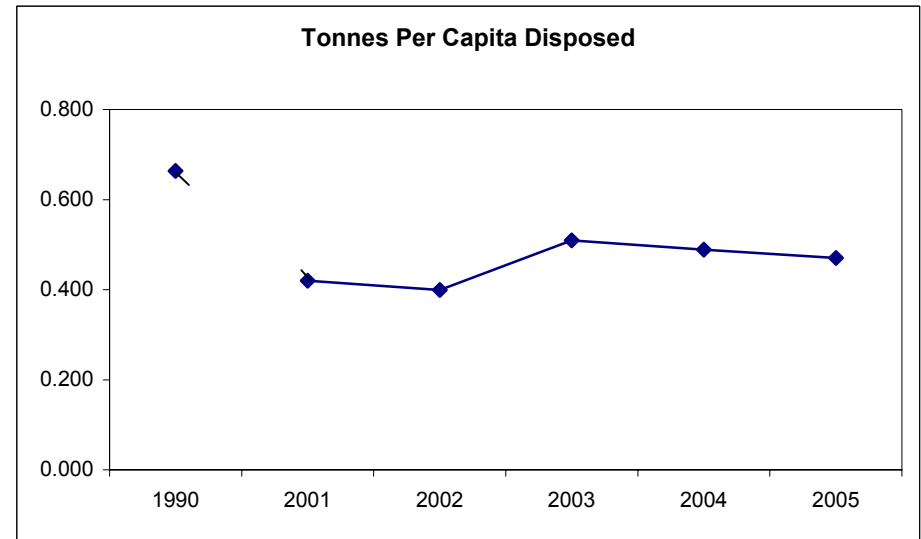
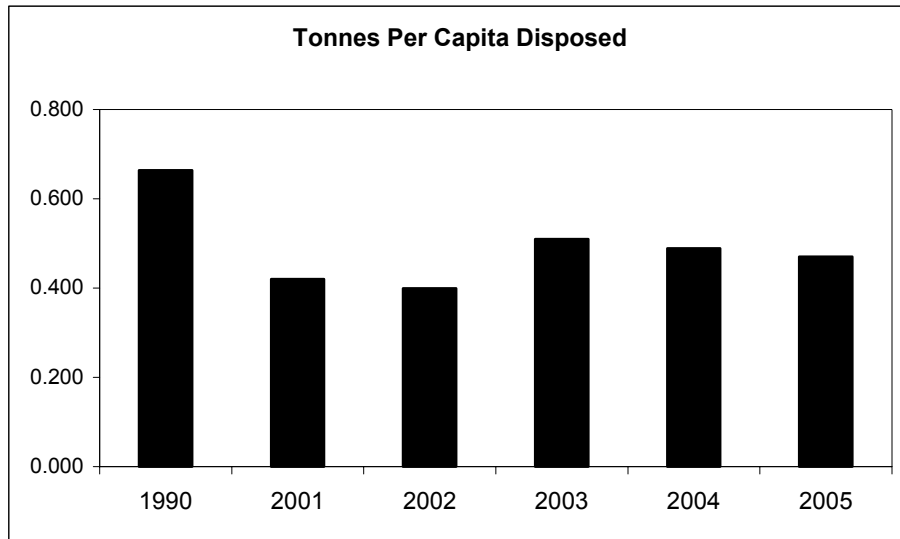
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Buckley-Nechako Regional District

Regional District area (square km): 72,101

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	39,172		25,995		0.664	
2001	42,890		18,021		0.420	-36.68
2002	43,513	1.45	17,371	-3.61	0.399	-39.84
2003	42,643	-2.00	21,720	25.04	0.509	-23.25
2004	43,815	2.75	21,432	-1.33	0.489	-26.29
2005	43,933	0.27	20,663	-3.59	0.470	-29.13

Approved solid waste management plan: **YES** SWMP State of implementation: **0-25%** Date SWMP approved: November 1, 1997



Data status: Confirmed by Regional District

Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Regional District of Bulkley-Nechako

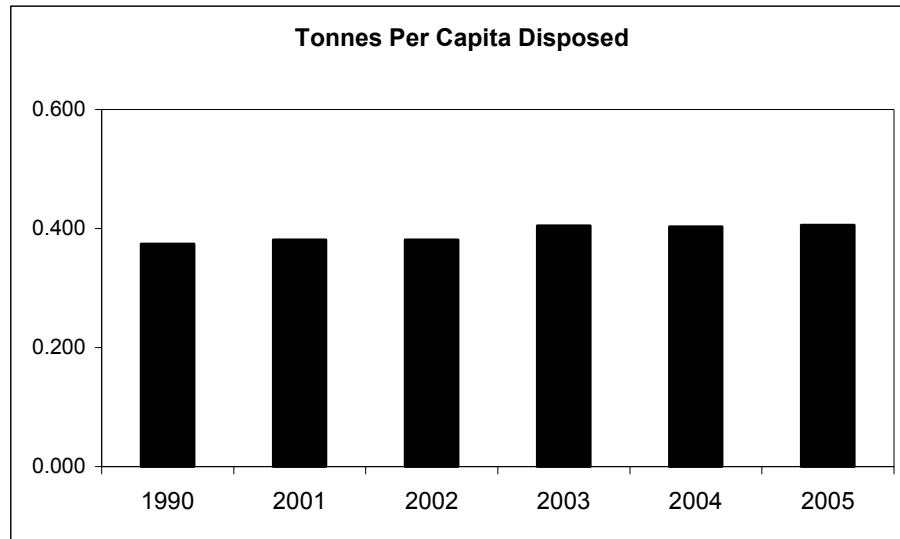
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Burns Lake	XP	N	Y	Y	N	Y	N	Y	N	N/A	N/A	2,646	2,600	2,600
Clearview	LF	N	Y	Y	N	Y	In Process	Y	N	N/A	Not avail	N/A	N/A	2,126
Fort Fraser	LF	N	Y	Y	N	Y	N	N	N	2004	Not avail	406	406	406
Fort St. James	XP	N	Y	Y	Y	Y	N	Y	N	N/A	N/A	1,802	1,802	1,802
Fraser Lake	LF	N	Y	Y	N	Y	N	N	N	2004	Not avail	895	895	895
Granisle	LF	N	Y	Y	N	Y	N	N	N	2004	Not avail	185	185	185
Knockholt (Houston)	LF	N	Y	Y	N	Y	In Process	Y	N	2050	748,700	4,216	4,216	4,216
Manson Creek	LF	N	N	Y	N		N	N	N	2010	Not avail	20	20	20
Smithers / Telkwa	XP	N	Y	Y	Y		Y	Y	N	N/A	N/A	5,487	5,487	5,487
Southside	XP	N	N	N	N		N	N	N	N/A	N/A	288	46	46
Vanderhoof	LF	N	Y	Y	N		N	Y	N	2003	Not avail	5,775	5,775	1,577
Vanderhoof	XP	N	Y	Y	N		N	Y	N	N/A	N/A	N/A	N/A	1,303
TOTAL												21,720	21,432	20,663

Cariboo Regional District

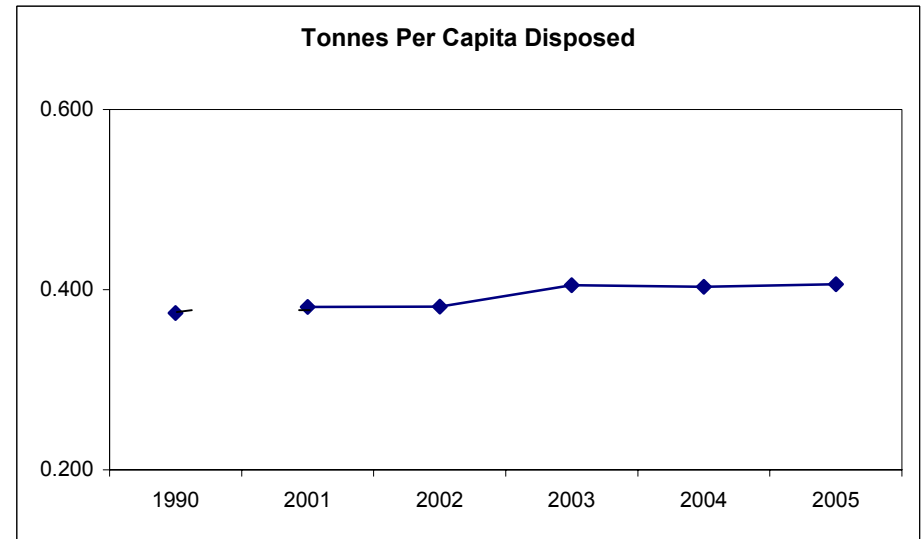
Regional District area (square km): 82,523

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	62,718		23,456		0.374	
2001	68,728		26,185		0.381	1.87
2002	69,558	1.21	26,502	1.21	0.381	1.88
2003	68,600	-1.38	27,779	4.82	0.405	8.28
2004	69,835	1.80	28,162	1.38	0.403	7.83
2005	70,329	0.71	28,555	1.40	0.406	8.56

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **October 25, 1995**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Cariboo Regional District

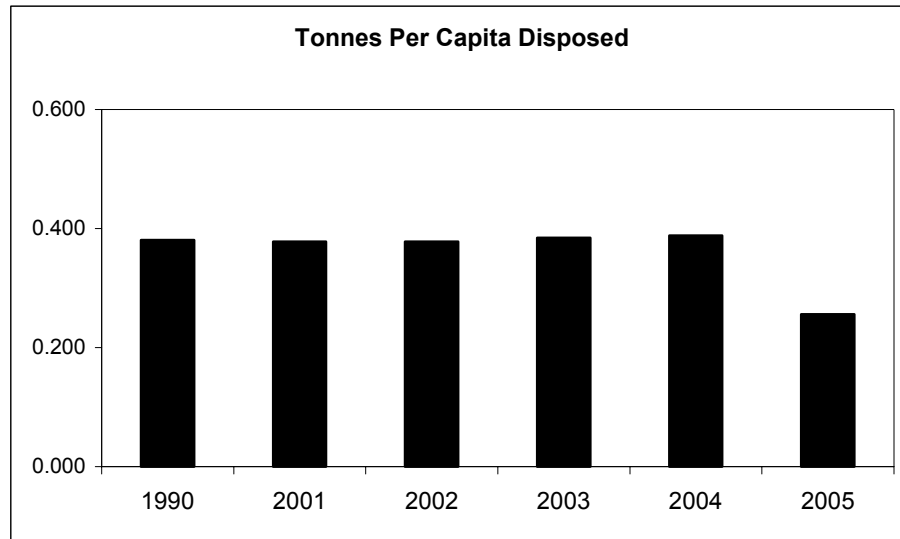
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/ Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
100 Mile House	LF													
Nemiah Valley	LF													
Punzti	LF													
Cochin Lake	LF													
Talta Lake	LF													
Klenna Kleene	LF													
West Chilcotin	LF													
Mahood Lake	LF													
Big Lake	LF													
Likely	LF													
Nazko	LF													
Lake Gibraltar Mines	LF			Y										
Williams Lake	LF			Y										
TOTAL											27,779	28,162	28,555	

Central Coast Regional District

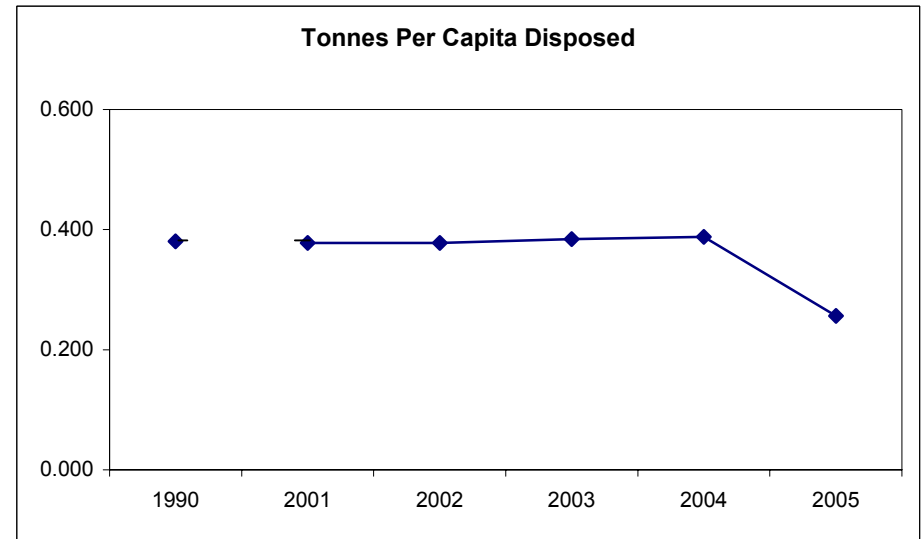
Regional District area (square km): 25,000

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	3,679		1,400		0.381	
2001	3,973		1,502		0.378	-0.65
2002	4,013	1.01	1,516	0.93	0.378	-0.73
2003	3,902	-2.77	1,500	-1.06	0.384	1.02
2004	3,866	-0.92	1,500	0.00	0.388	1.96
2005	3,905	1.01	1,000	-33.33	0.256	-32.71

Approved solid waste management plan: **YES** SWMP State of implementation: **unknown** Date SWMP approved: **unknown**



Data status: Confirmed by Regional District



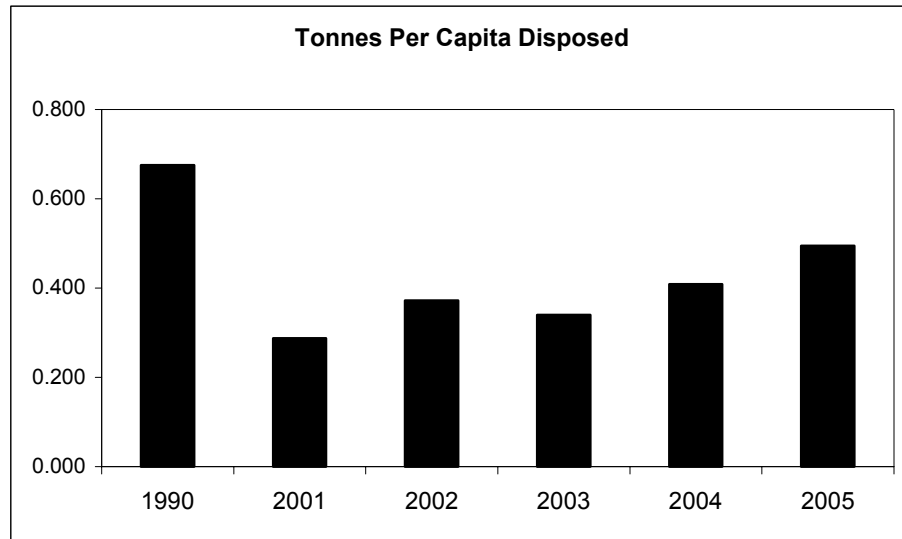
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Central Kootenay Regional District

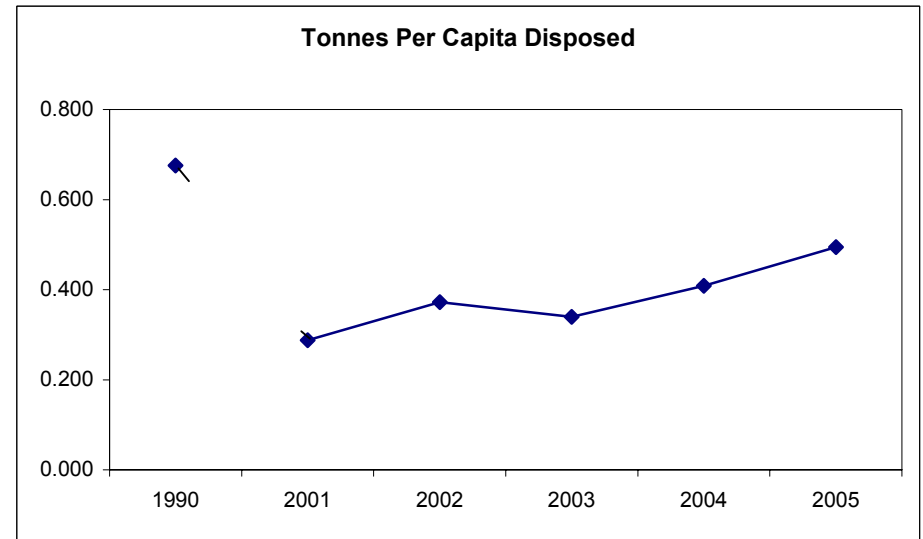
Regional District area (square km): 25,000

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	51,456		34,760		0.676	
2001	59,540		17,121		0.288	-57.43
2002	59,245	-0.50	22,038	28.72	0.372	-44.93
2003	60,209	1.63	20,445	-7.23	0.340	-49.73
2004	59,874	-0.56	24,474	19.71	0.409	-39.49
2005	60,237	0.61	29,781	21.68	0.494	-26.81

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **1999**



Data status: Confirmed by Regional District



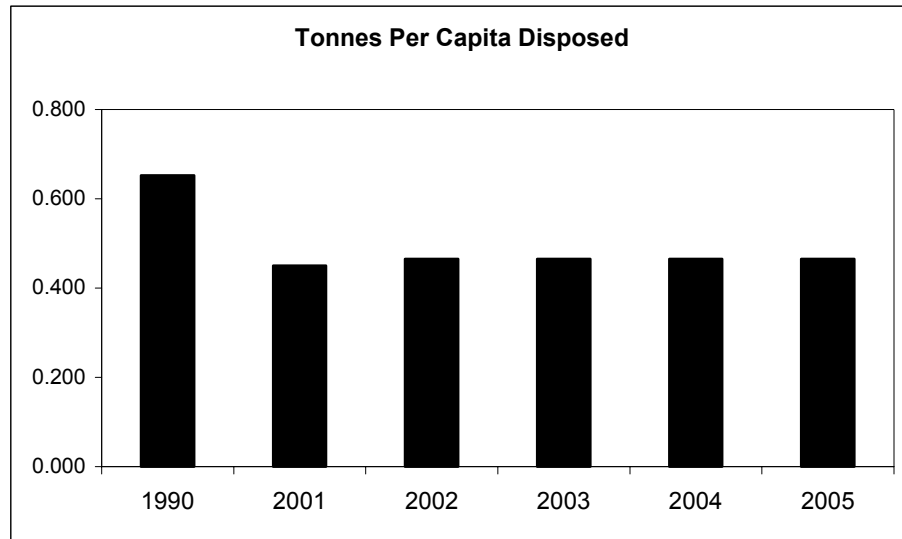
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Comox-Strathcona Regional District

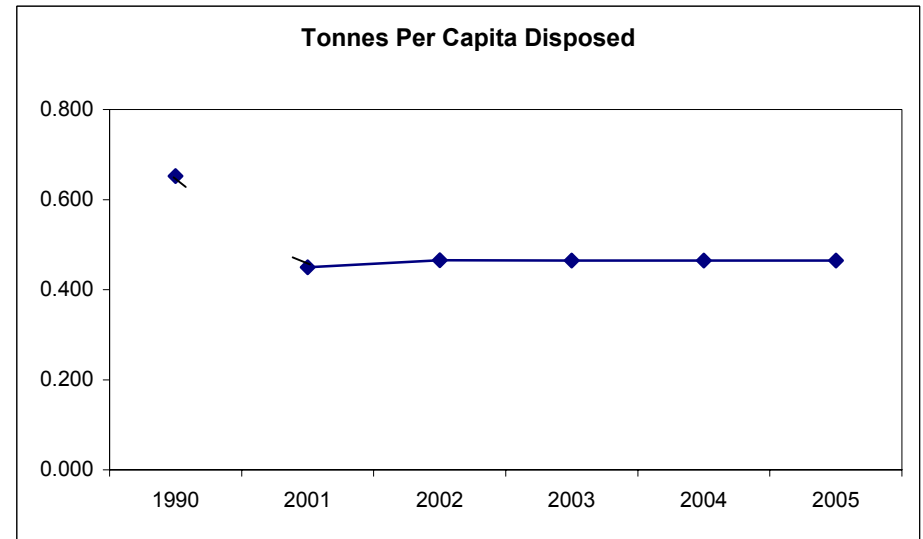
Regional District area (square km): 20,202

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	82,101		53,546		0.652	
2001	105,000		47,240		0.450	-31.02
2002	106,000	0.14	49,305	3.25	0.465	-28.68
2003	101,953	0.23	47,408	1.26	0.465	-28.70
2004	103,268	1.60	48,019	11.28	0.465	-28.70
2005	105,327	-0.60	48,977	-2.88	0.465	-28.70

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **September 1, 1995**



Data status: Estimated Per Capita Disposal Rate



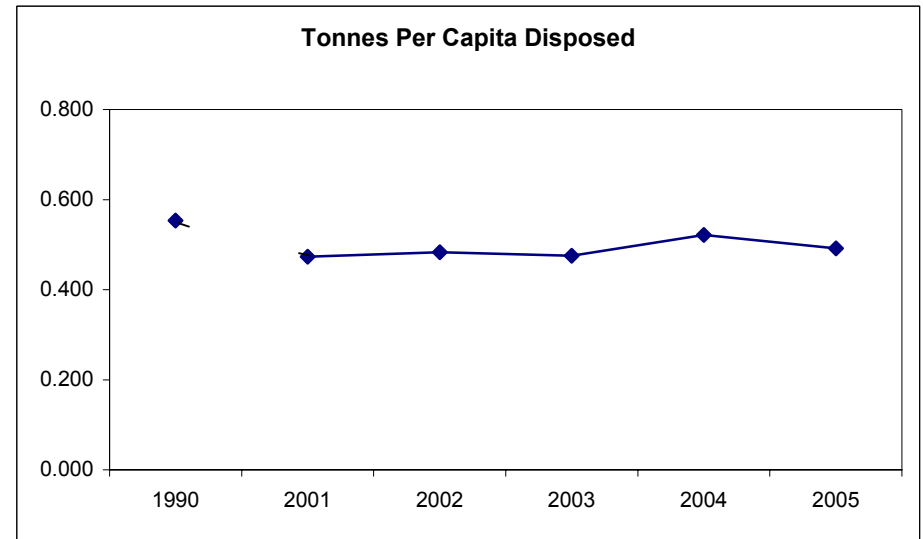
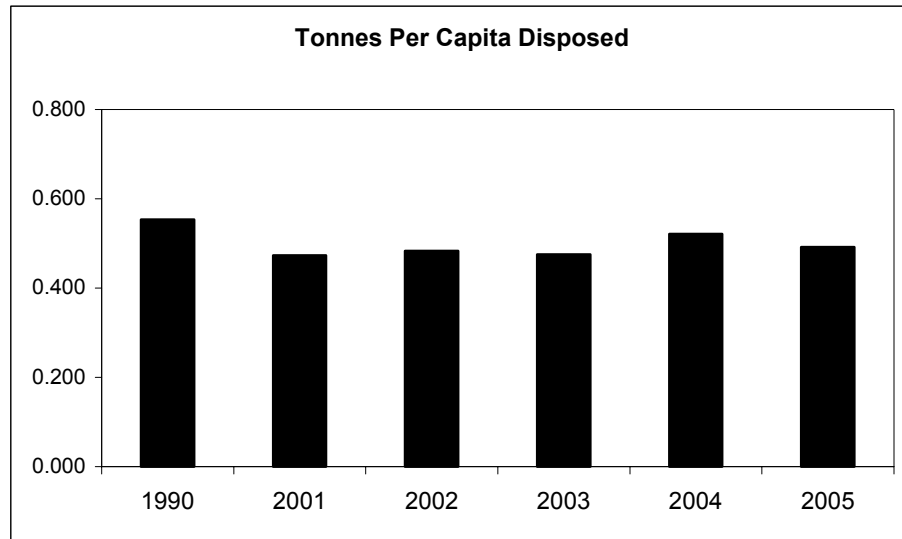
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Estimated Per Capita Disposal Rate

Central Okanagan Regional District

Regional District area (square km): 2,888

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	108,700		60,180		0.554	
2001	154,440		73,055		0.473	-14.56
2002	156,033	1.03	75,429	3.25	0.483	-12.68
2003	160,718	3.00	76,376	1.26	0.475	-14.16
2004	162,986	1.41	84,992	11.28	0.521	-5.81
2005	167,936	3.04	82,542	-2.88	0.492	-11.22

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **August 1, 1992**



Data status: Confirmed by Regional District

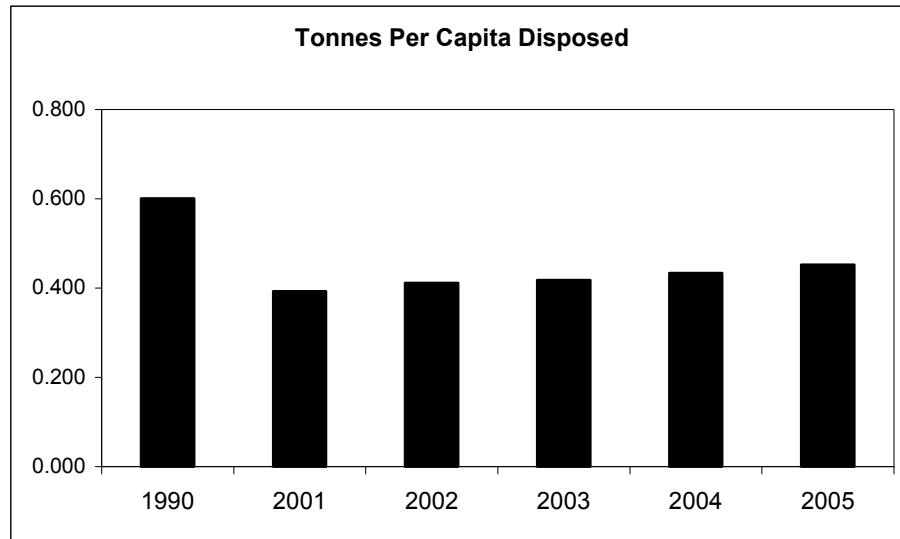
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Capital Regional District

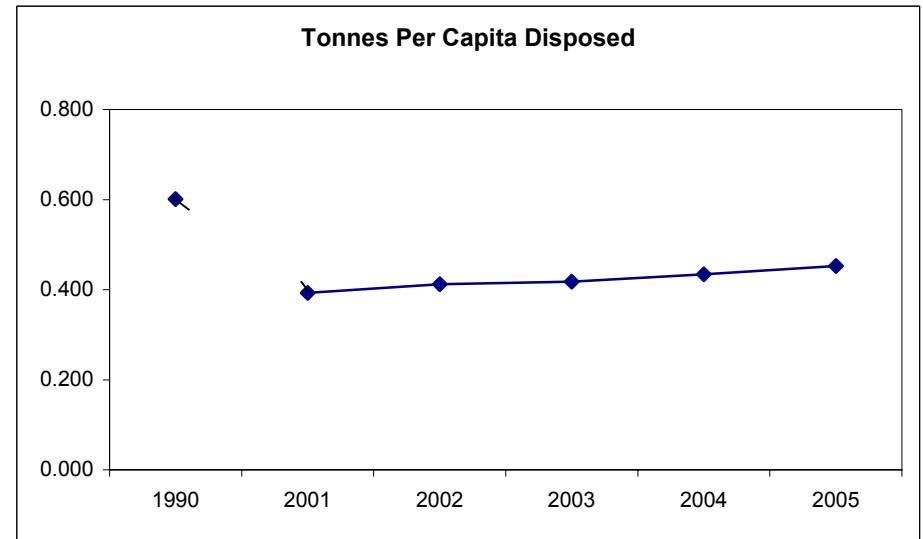
Regional District area (square km): 2,420

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	301,186		180,966		0.601	
2001	344,567		135,425		0.393	-34.59
2002	347,095	0.73	142,940	5.55	0.412	-31.46
2003	344,787	-0.66	144,000	0.74	0.418	-30.49
2004	347,439	0.77	150,800	4.72	0.434	-27.76
2005	351,022	1.03	158,800	5.31	0.452	-24.71

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **1995; amended in 2005**



Data status: Confirmed by Regional District



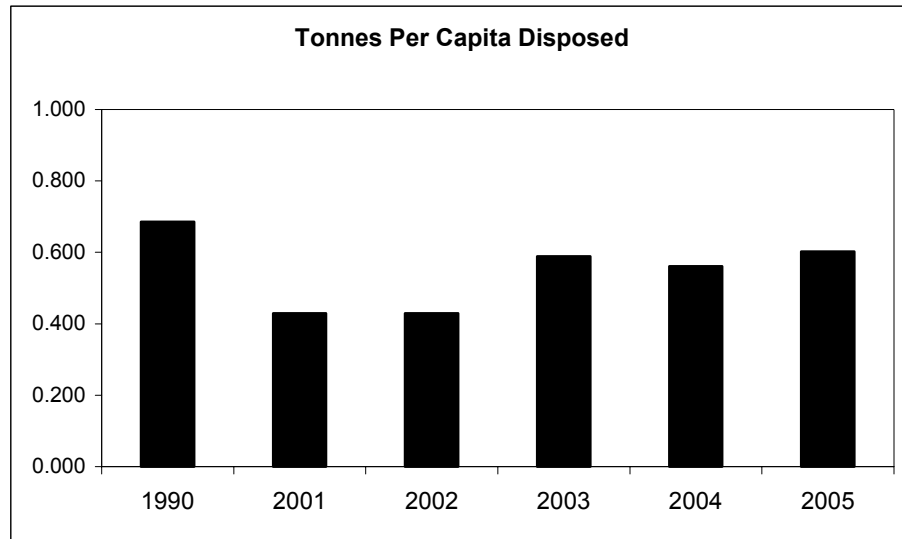
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Columbia-Shuswap Regional District

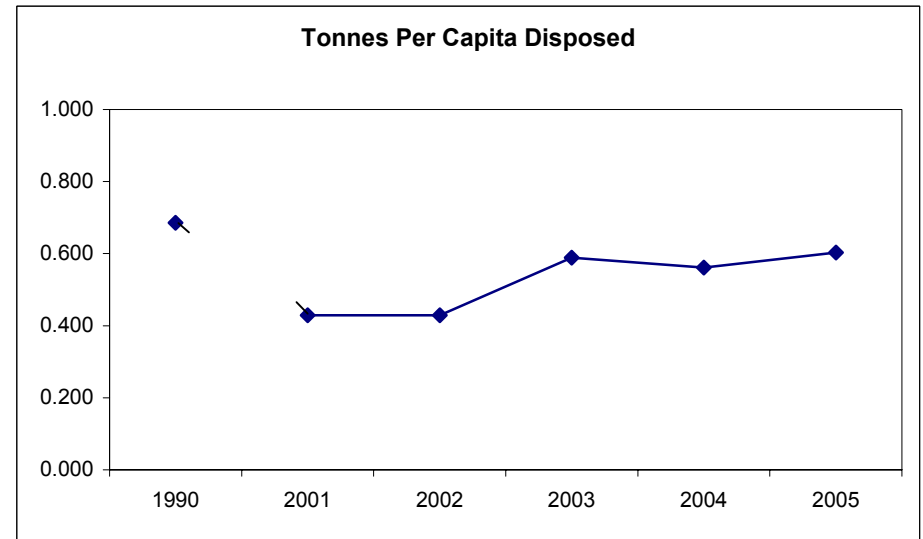
Regional District area (square km): 30,107

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	41,943		28,762		0.686	
2001	50,305		21,581		0.429	-37.44
2002	50,826	1.04	21,804	1.03	0.429	-37.44
2003	51,306	0.94	30,225	38.62	0.589	-14.09
2004	52,367	2.07	29,371	-2.83	0.561	-18.21
2005	53,245	1.68	32,085	9.24	0.603	-12.13

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **August 1, 1994**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Columbia-Shuswap Regional District

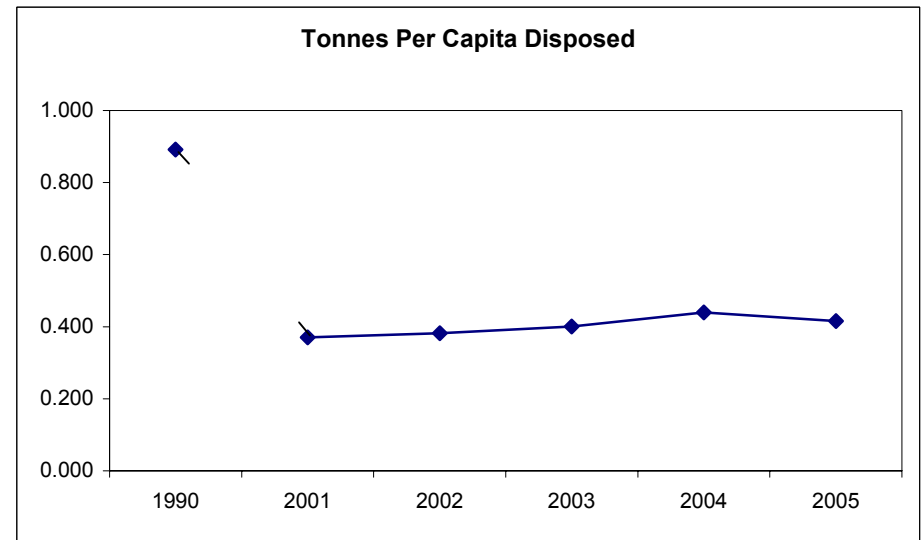
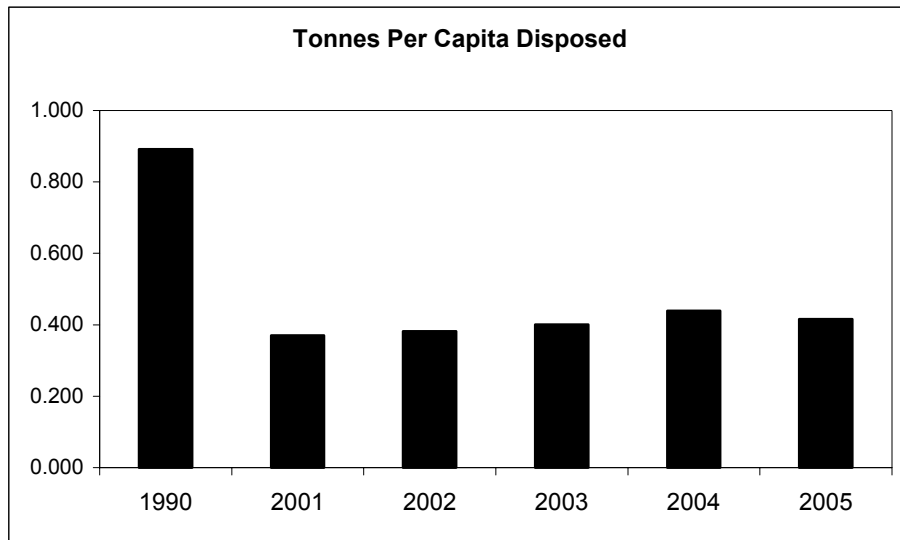
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Golden landfill	LF	\$60/tonne	Y	Y	Y	Y	Y	N	N	2080	815200 m3	5,115	5,281	5,869
Revelstoke landfill	LF	\$60/tonne	Y	Y	Y	Y	Y	N	N	2120	990000	6,202	6,050	6,915
Salmon Arm landfill	LF	\$60/tonne	Y	Y	Y	Y	Y	N	N	2080	2472000	11,991	12,342	15,778
Sicamous landfill	LF	\$60/tonne	Y	Y	Y	N	Y	N	N	2040	300000	2,517	2,035	2,398
Skimikin landfill	LF	\$60/tonne	Y	Y	Y					2005	206000	4,400	3,663	1,125
Falkland transfer	XP					N	N	N	N					
Glenemma transfer	XP					N	N	N	N					
Malakwa transfer	XP					N	N	N	N					
Scotch Creek transfer	XP					N	Y	N	N					
Seymour Arm transfer	XP					N	N	N	N					
Trout Lake transfer	XP					N	N	N	N					
Skimikin transfer	XP					Y	Y	N	N					
											TOTAL	30,225	29,371	32,085

Cowichan Valley Regional District

Regional District area (square km): 3,730

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	60,048		53,546		0.892	
2001	71,998		26,669		0.370	-58.46
2002	73,129	1.57	27,941	4.77	0.382	-57.15
2003	74,260	1.55	29,762	6.52	0.401	-55.06
2004	75,392	1.52	33,112	11.26	0.439	-50.75
2005	78,802	4.52	32,781	-1.00	0.416	-53.35

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **2002**



Data status: Confirmed by Regional District

Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Cowichan Valley Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Bings Creek	XP	\$100/tonne*	Y	N	N	N	Y	N/A	N/A	N/A	N/A	25,282	27,987	28,556
Meade Creek	XP	\$100/tonne*	Y	N	N	N	Y	N/A	N/A	N/A	N/A	N/A	included in Bings Creek total	
Peerless Road	XP	\$100/tonne*	Y	N	N	N	Y	N/A	N/A	N/A	N/A	1,205	included in Bings Creek total	
Elizabeth Compton	IN	\$200	N	N	N	N	N	N/A	N/A	N/A	N/A	1,750	2,500	1,150
Surgenor Landfill	LF									N/A		1,000		
Nanaimo Landfill	LF									N/A		525		
Ecowaste	LF									N/A			2,100	3,000
Aerosmith Environmental										N/A			0	
Mid-Island Burn Pit	IN									N/A			525	
Cheam Landfill	LF									N/A				75
TOTAL												29,762	33,112	32,781

Note: Surgenor Landfill & Nanaimo Landfill included in 2003 data only.

Aerosmith Environmental & Mid-Island Burn Pit included in 2004 data only.

Ecowaste included in 2004 & 2005 data only.

Cheam Landfill included in 2005 data only.

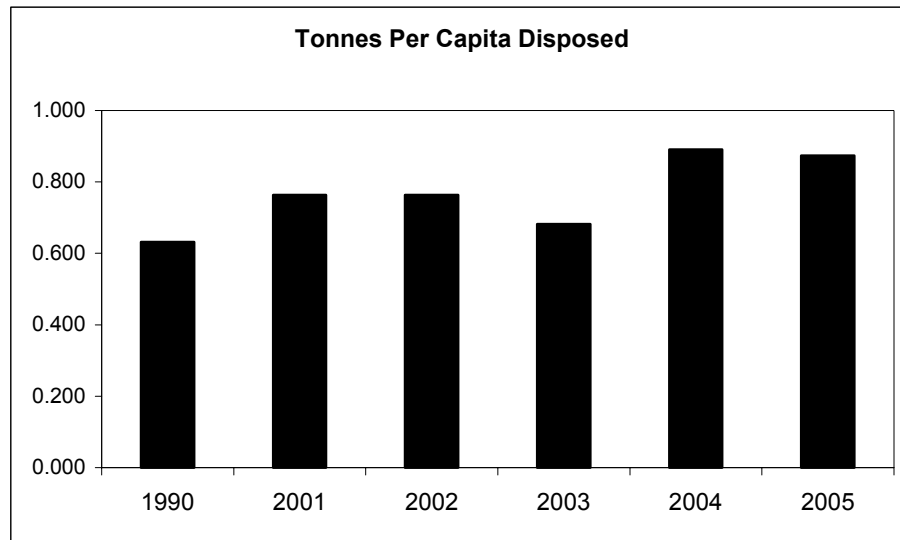
* As of April 28, 2005. In 2004 tipping fee was \$95/tonne; in 2003 tipping fee was \$90/tonne

East Kootenay Regional District

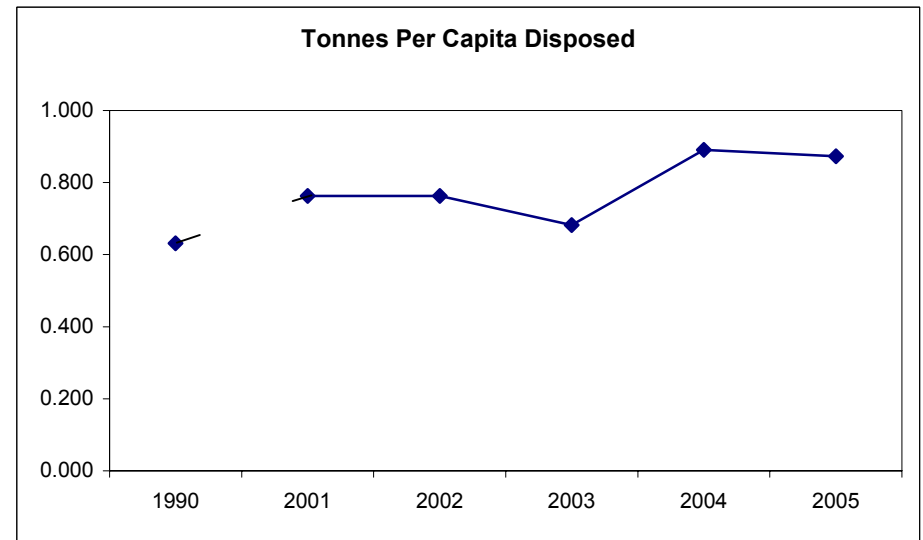
Regional District area (square km): 27,658

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	54,055		34,141		0.632	
2001	58,903		44,943		0.763	20.80
2002	60,234	2.26	45,959	2.26	0.763	20.81
2003	60,146	-0.15	41,005	-10.78	0.682	7.94
2004	60,958	1.35	54,293	32.41	0.891	41.02
2005	61,862	1.48	54,020	-0.50	0.873	38.26

Approved solid waste management plan: **YES** SWMP State of implementation: **unknown** Date SWMP approved: **unknown**



Data status: Confirmed by Regional District



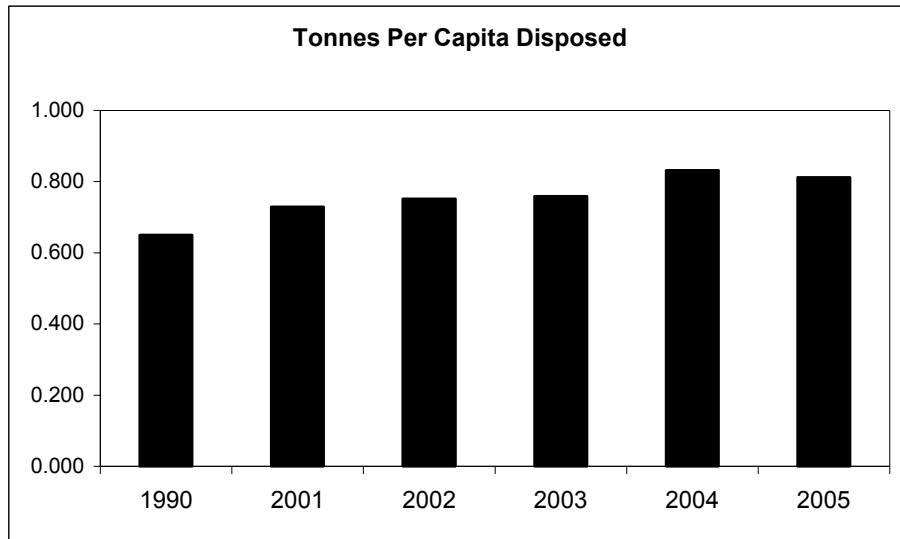
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Fraser-Fort George Regional District

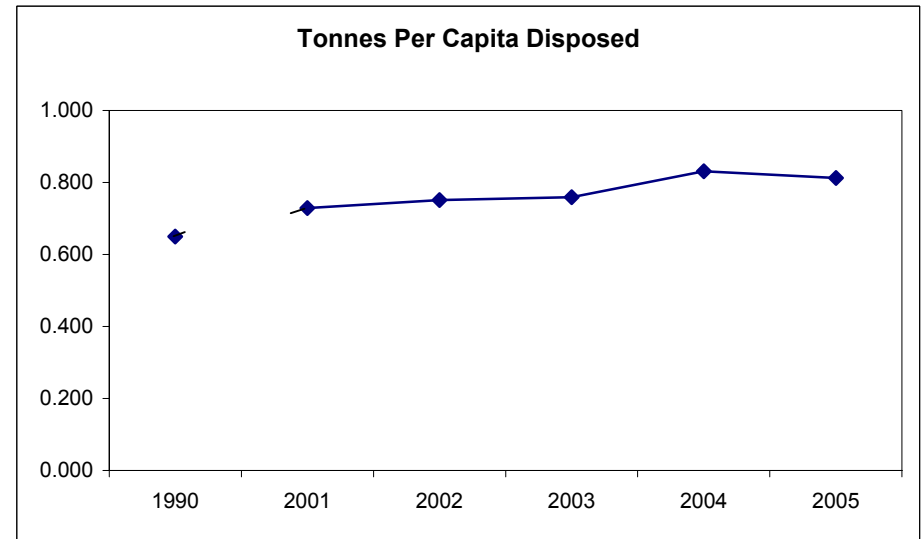
Regional District area (square km): 52,000

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	92,607		60,180		0.650	
2001	100,224		73,055		0.729	12.17
2002	100,366	0.14	75,429	3.25	0.752	15.65
2003	100,600	0.23	76,376	1.26	0.759	16.83
2004	102,214	1.60	84,992	11.28	0.832	27.96
2005	101,601	-0.60	82,542	-2.88	0.812	25.02

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **November 1, 1997**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Fraser-Fort George Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Foothills Blvd. Regional Landfill	LF	Variable Rate Base = \$40	Y	Y	Y	N	Y	Y	N	2040	N/A	70,093	80,474	78,124
Mackenzie Regional Landfill	LF	Variable Rate Base = \$41	Y	Y	Y	Y	Y	N	N	N/A	N/A	3264	3369	3678
Legrand Regional Landfill	LF	Variable Rate Base = \$42	N	Y	N	N	N	N	N	N/A	N/A	2479	535	200
Stone Creek Regional Landfill	LF	N	N	N	N	N	N	N	N	2005	N/A	260	260	260
Dome Creek Regional Landfill	LF	N	N	N	N	N	N	N	N	2006	N/A	80	80	80
Sinclair Mills Regional Landfill	LF	N	N	N	N	N	N	N	N	2006	N/A	200	200	200
TOTAL											76,376	84,992	82,542	

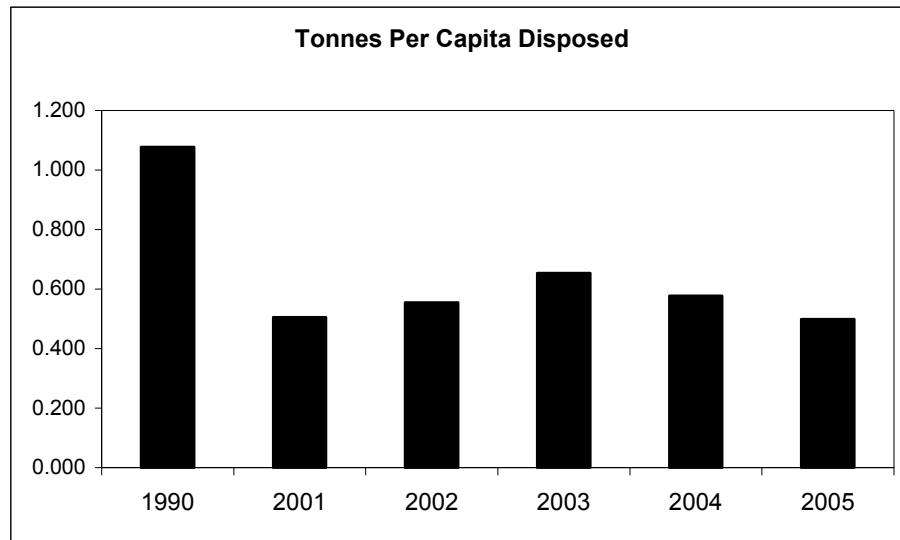
Note: The Foothills & Mackenzie Landfill facilities are equipped with scales so all material is weighed. The remainder of facilities are estimated weights based on service area population.

Fraser Valley Regional District

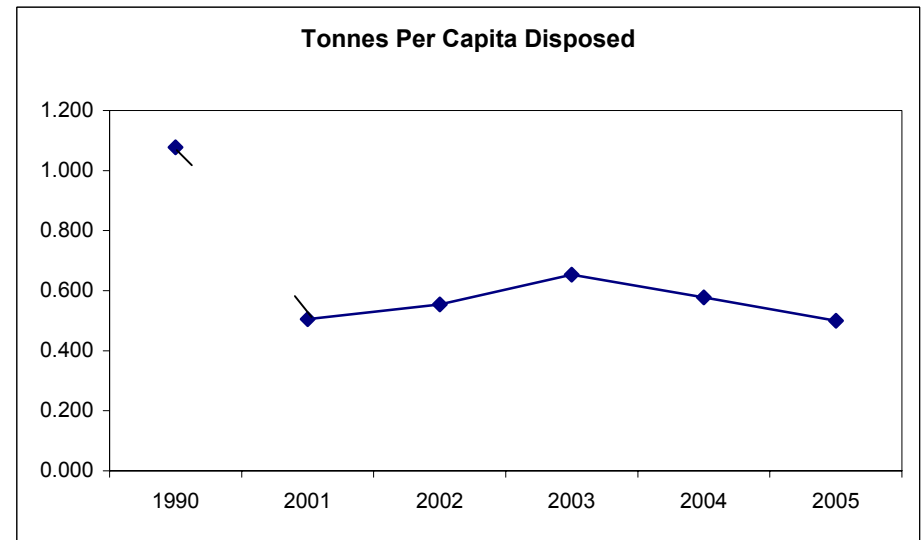
Regional District area (square km): 13,000

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	183,887		198,111		1.077	
2001	248,964		125,856		0.506	-53.08
2002	251,921	1.19	139,733	11.03	0.555	-48.52
2003	254,065	0.85	166,074	18.85	0.654	-39.33
2004	260,725	2.62	150,621	-9.30	0.578	-46.38
2005	264,370	1.40	132,024	-12.35	0.499	-53.65

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **November 14, 1996**; amendments adopted in 2000



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Fraser Valley Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/ Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Harrison Mills TS	XP	Y	Y	N	Y	N	N					36	28	28
Hemlock Valley TS	XP	N	N	N	N	N	N					70	65	49
Sylvester Road TS	XP	Y	Y	N	Y	N	N					71	93	94
Sunshine Valley TS	XP	N	N	N	Y	N	N					unknown	unknown	unknown
GVRD Matsqui TS	XP	Y	Y	Drywall only	Y	N	Y					116,153	95,029	78,238
Waste Services Inc. TS*	XP	\$70/tonne	Y	unknown	unknown	unknown	unknown					unknown	unknown	unknown
City of Chilliwack's Bailey Sanitary LF	LF	Y	Y	N	N	N	Y	N	N	2019	1.65million m3	30,929	35,138	32,808
District of Hope's LF	LF	Y	Y	N	N	Y	Y	N	N	2019	121,586 m3	3,438	3,800	3,750
Chaumox LF	LF	Y	Y	Asbestos only	N	Y	N	N	N	2088†	116,000 m3	340	340	340
District of Mission's Minnie's Pit LF	LF	Y	Y	Gyprock only	N	Y	Y	Y	N	2047	2.6 million m3	15,037	16,128	16,717
Valley Road LF Standby Cell	LF											0	0	0
Various unknown First Nations Landfills	LF	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Parr Road Green Depot (Fraser Cheam Soil & Fibre Ltd)	XP	Y	Y	Y	N	N	Y					unknown	unknown	unknown
TOTAL												166,074	150,621	132,024

*Private, old name is Salish

#17-20 XP to Matsqui TF

#21 XP to Hope LF

#22 XP to Rabanco LF in Roosevelt, Wash.

#29 XP to City of Chilliwack's Bailey Sanitary LF

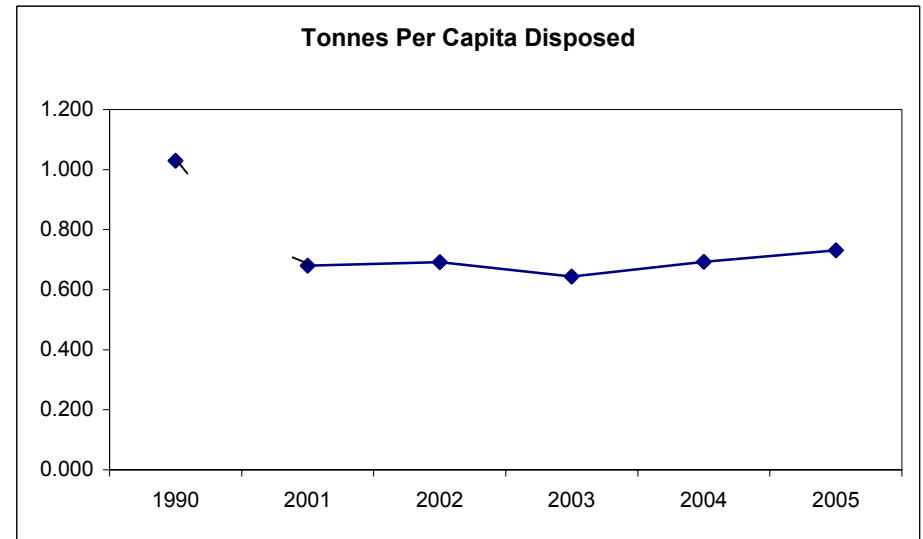
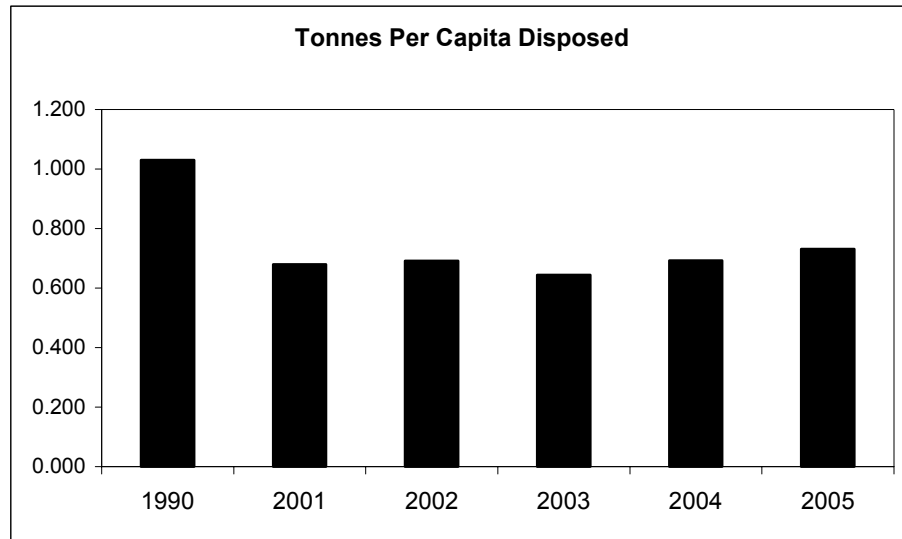
†Projected year of closure if alternative fill method utilized. Under current fill methods 2013.

Greater Vancouver Regional District

Regional District area (square km): 2,930

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	1,548,831		1,594,790		1.030	
2001	2,091,080		1,420,784		0.679	-34.01
2002	2,114,314	0.14	1,462,653	3.25	0.692	-32.81
2003	2,113,697	0.23	1,361,065	1.26	0.644	-37.46
2004	2,132,824	1.60	1,476,703	11.28	0.692	-32.76
2005	2,155,880	-0.60	1,575,601	-2.88	0.731	-29.02

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **1995**



Data status: Confirmed by Regional District

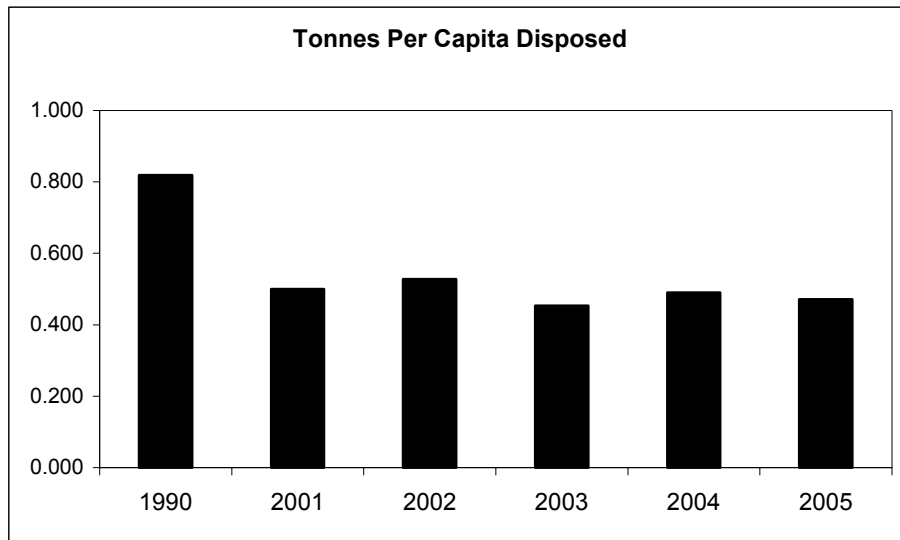
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Kootenay-Boundary Regional District

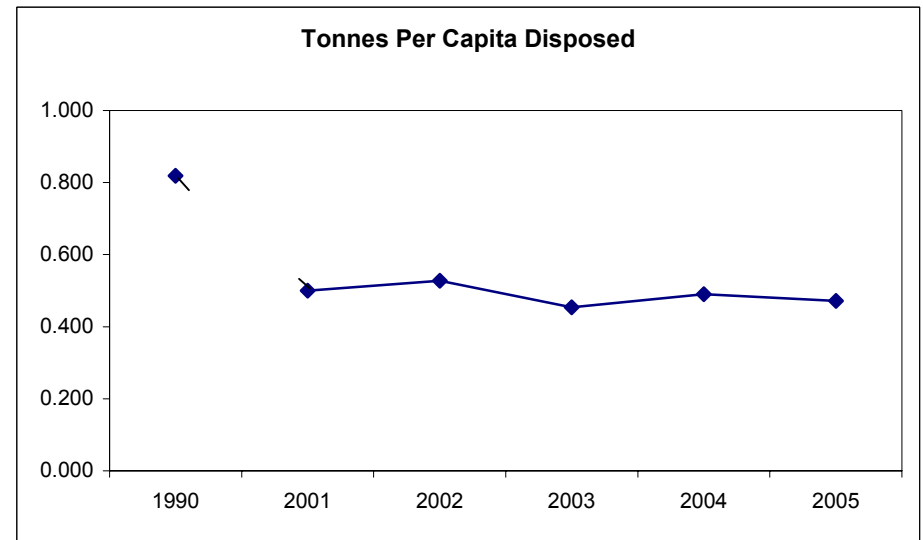
Regional District area (square km): 8,300

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	31,577		25,861		0.819	
2001	31,843		15,910		0.500	-38.99
2002	31,843	0.00	16,805	5.63	0.528	-35.56
2003	33,261	4.45	15,092	-10.19	0.454	-44.60
2004	32,863	-1.20	16,118	6.80	0.490	-40.11
2005	33,118	0.78	15,607	-3.17	0.471	-42.46

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **1999**



Data status: Confirmed by Regional District



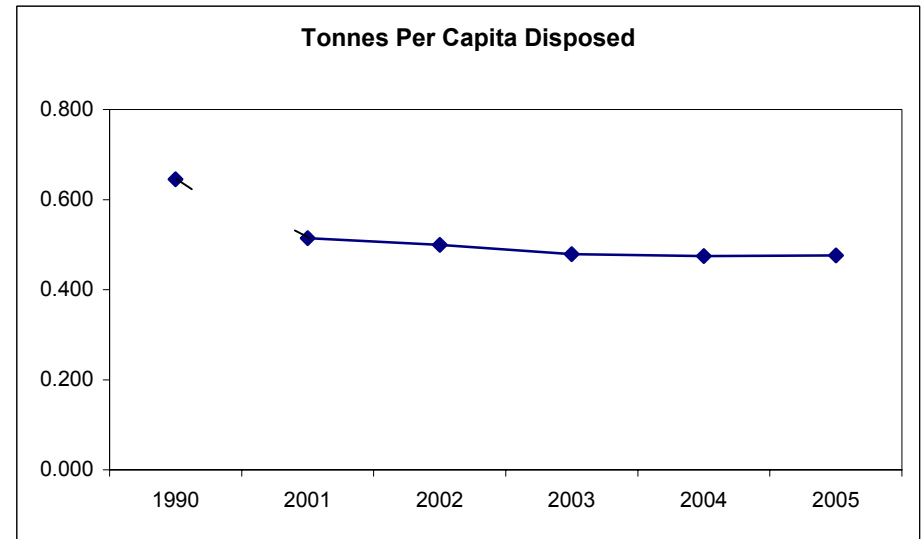
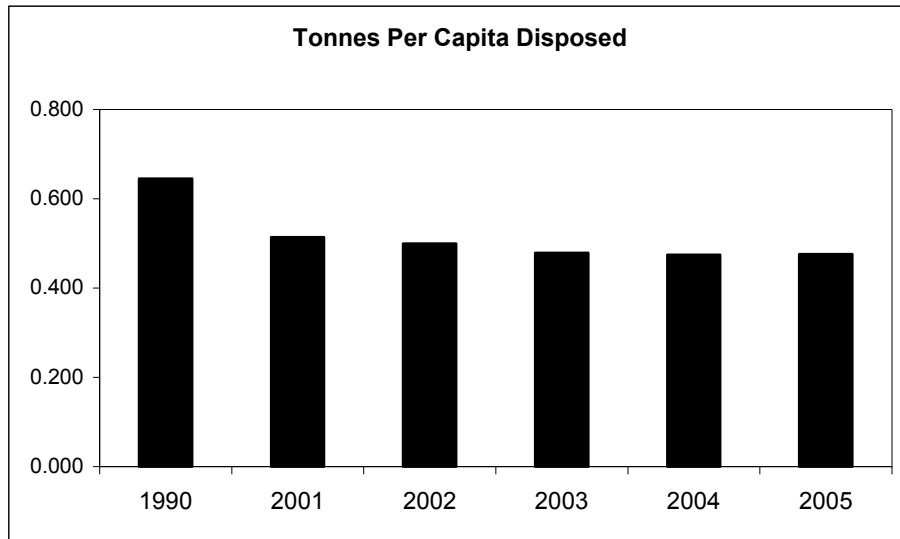
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Kitimat-Stikine Regional District

Regional District area (square km): 91,909

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	42,776		27,602		0.645	
2001	40,876		21,012		0.514	-20.34
2002	40,876	0.00	20,426	-2.79	0.500	-22.56
2003	42,669	4.39	20,426	0.00	0.479	-25.81
2004	43,043	0.88	20,426	0.00	0.475	-26.46
2005	42,919	-0.29	20,426	0.00	0.476	-26.24

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **February 26, 1996**



Data status: Confirmed by Regional District

Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Kitimat-Stikine Regional District

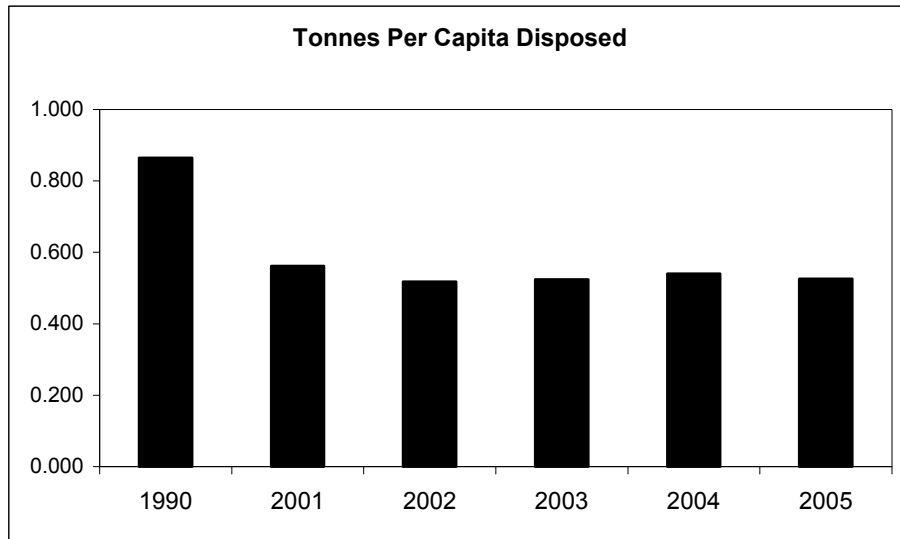
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Thornhill	LF	\$12.50-50/load	Y	Y	Y	Y	N	N	N	2007		4,500	4,500	4,500
Hazelton	LF		Y	Y	Y	Y	N	N	N					
Kitiwanga	LF		Y	Y	Y	Y	N	N	N	2007				
Rosswood	LF		Y	Y	Y	Y	N	N	N	2025	3000			
Iskut	LF			Y	Y		N	N	N	2035	12000			
Terrace	LF	\$12.50-50/load	Y	Y		Y	N	N	N	2007				
Kitimat	LF	\$	Y	Y		Y	N	N	N					
Stewart	LF	\$	Y	Y		Y	N	N	N					
Telegraph/Bob	LF			Y			N	N	N					
Meziadin	LF											150	150	150
Nass	LF		Y	Y		Y	N	N	N					
TOTAL												20,426	20,426	20,426

Mount Waddington Regional District

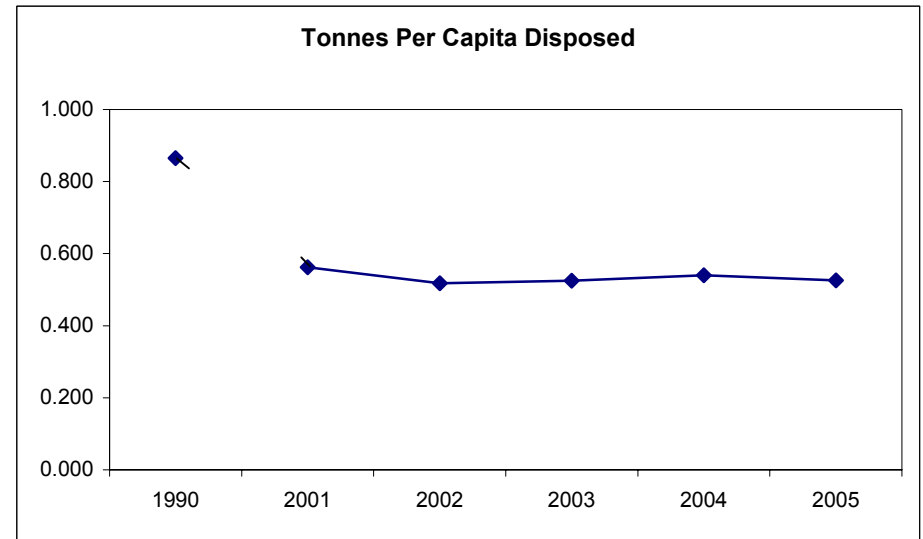
Regional District area (square km): 21,464

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	14,654		12,677		0.865	
2001	13,111		7,365		0.562	-35.07
2002	13,111	0.00	6,794	-7.75	0.518	-40.10
2003	13,531	3.20	7,098	4.47	0.525	-39.36
2004	13,537	0.04	7,313	3.03	0.540	-37.55
2005	13,684	1.09	7,194	-1.63	0.526	-39.23

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **July 22, 1996**



Data status: Confirmed by Regional District



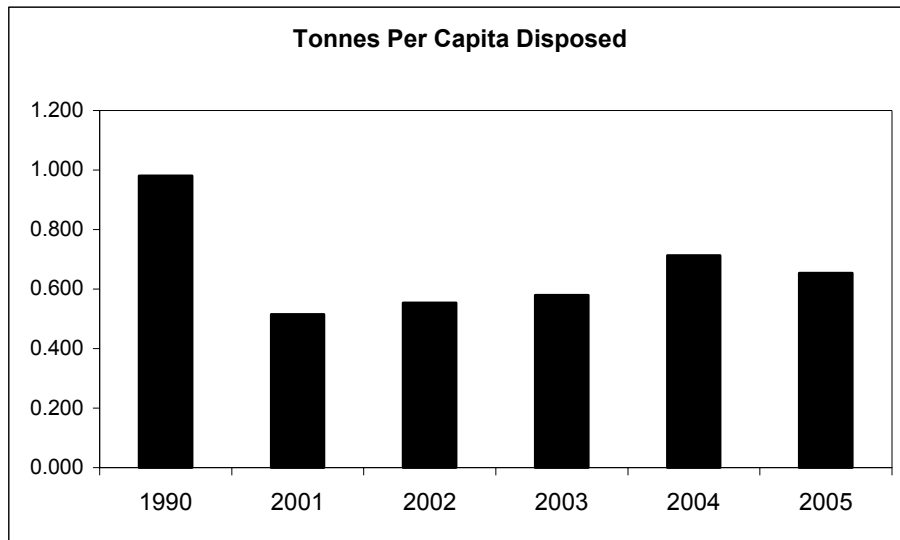
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

North Okanagan Regional District

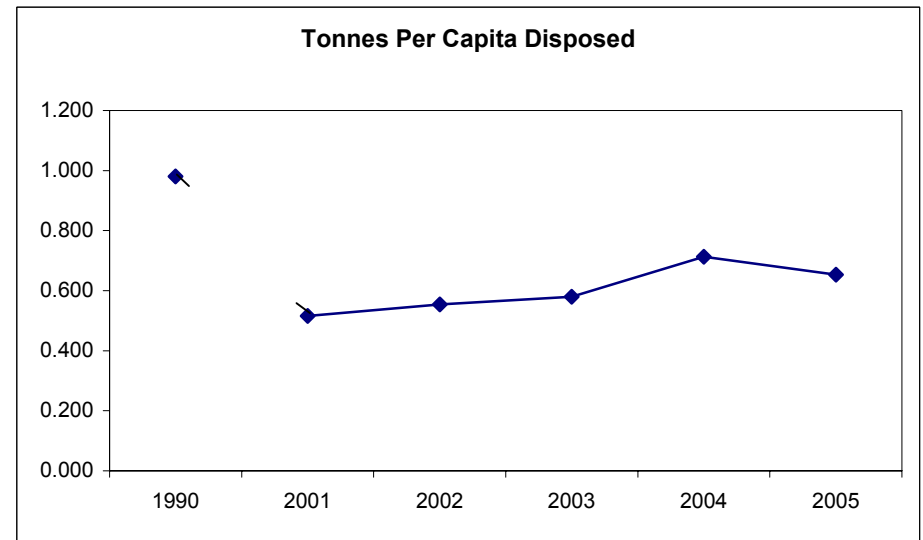
Regional District area (square km): 7,872

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	61,128		59,915		0.980	
2001	73,227		37,737		0.515	-47.42
2002	74,691	2.00	41,389	9.68	0.554	-43.46
2003	77,965	4.38	45,173	9.14	0.579	-40.89
2004	79,097	1.45	56,361	24.77	0.713	-27.30
2005	80,474	1.74	52,608	-6.66	0.654	-33.30

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **2002**



Data status: Confirmed by Regional District



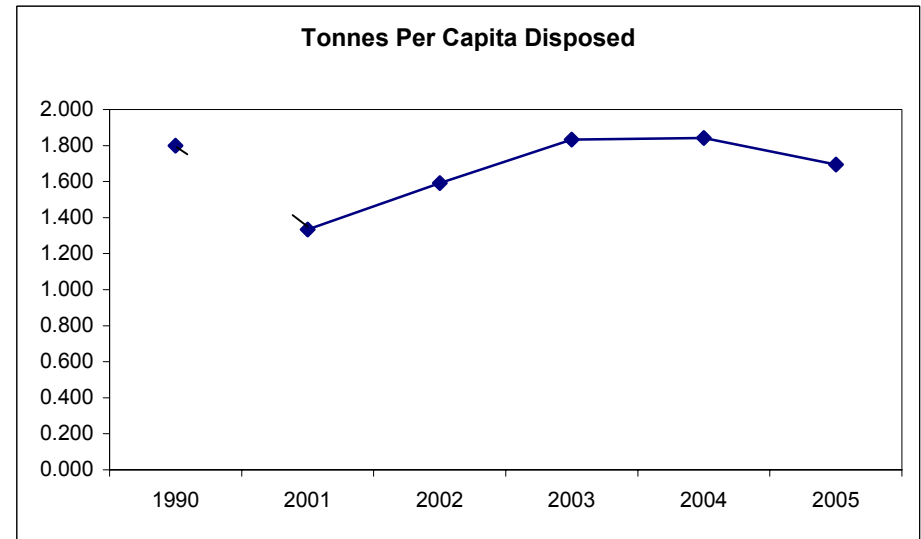
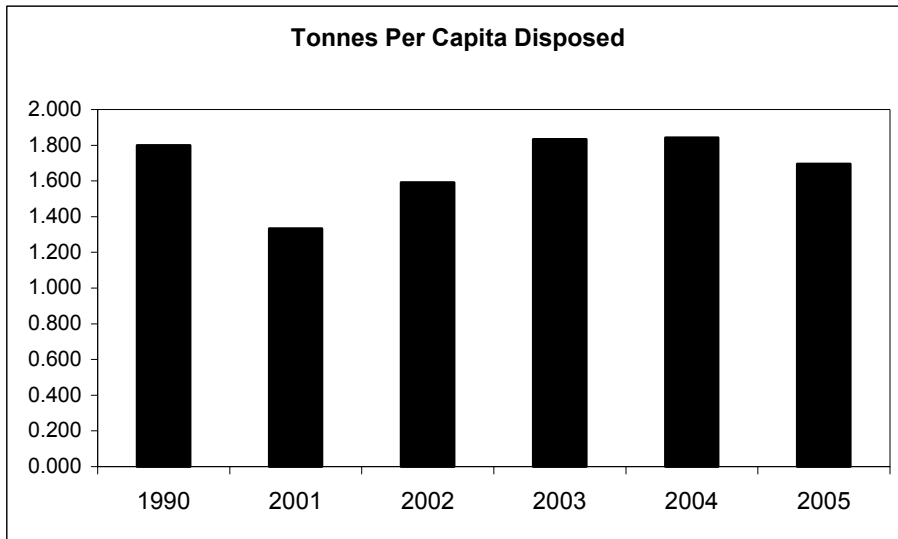
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Northern Rockies Regional District

Regional District area (square km): 91,909

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	4,565		8,217		1.800	
2001	6,049		8,067		1.334	-25.91
2002	6,131	1.36	9,757	20.95	1.591	-11.59
2003	6,127	-0.07	11,230	15.10	1.833	1.83
2004	6,451	5.29	11,885	5.83	1.842	2.35
2005	6,607	2.42	11,200	-5.76	1.695	-5.82

Approved solid waste management plan: **YES** SWMP State of implementation: **0-25%** Date SWMP approved: **June 17, 1996**



Data status: Confirmed by Regional District

Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Northern Rockies Regional District

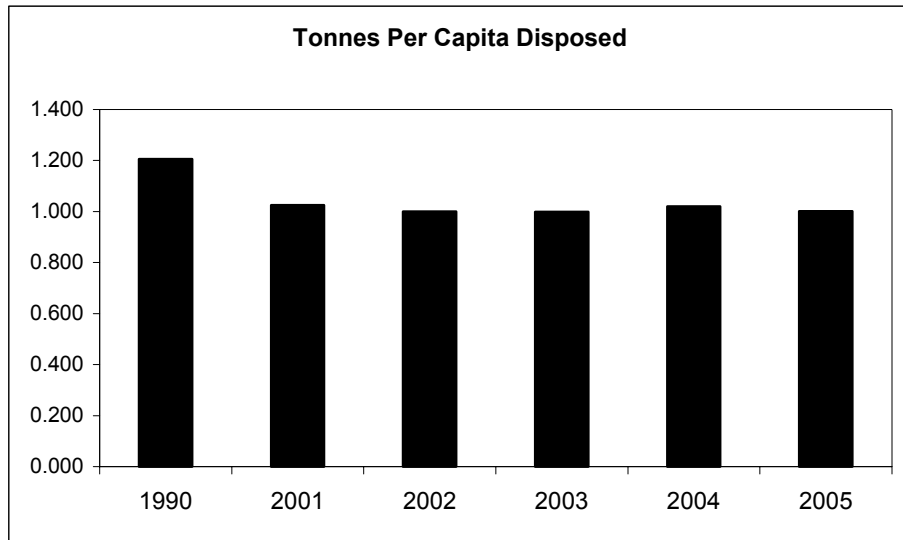
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
NRRD Landfill	LF	\$25	Y	Y	N	Y	Y	N	N	2050	500,000	11,230	11,885	11,200
TOTAL											11,230	11,885	11,200	

Okanagan-Similkameen Regional District

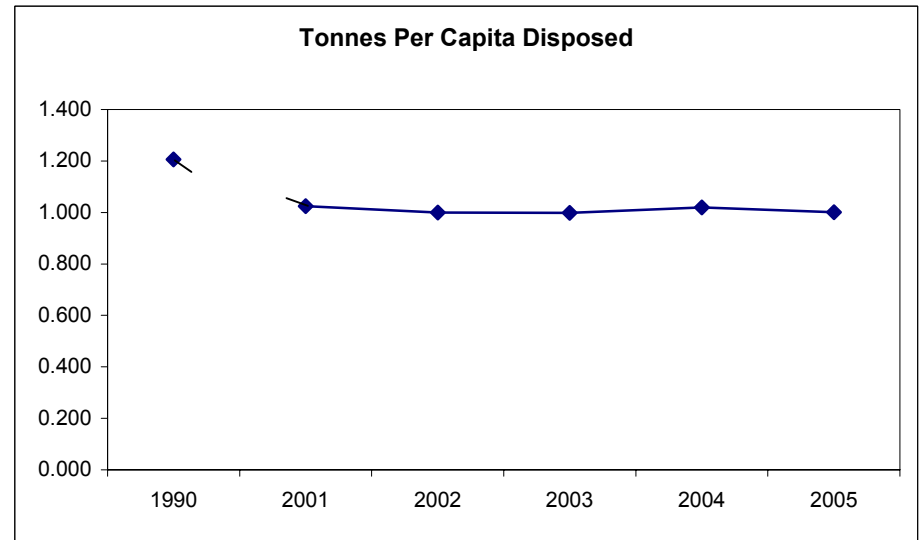
Regional District area (square km): 10,401

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	65,920		79,487		1.206	
2001	79,645		81,636		1.025	-15.00
2002	79,472	-0.22	79,472	-2.65	1.000	-17.07
2003	80,996	1.92	80,831	1.71	0.998	-17.24
2004	81,665	0.83	83,252	3.00	1.019	-15.46
2005	83,037	1.68	83,109	-0.17	1.001	-17.00

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **March 29, 1996**



Data status: See note in Section 3.2.1.1



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Estimated Per Capita Disposal Rate

Okanagan-Similkameen Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
CMSL	LF	\$43/tonne	Y	Y	N	Y	Y	N	N	50 YRS	N/A	36,537	38,268	36,666
Oliver Landfill	LF	\$45/tonne	Y	Y	N	N	Y	N	N	N/A	N/A	5,100	5,466	6,262
Keremeos Landfill	LF	N/A	Y	N*	N	N	N	N	N	closed	N/A	N/A	N/A	N/A
Okanagan falls Landfill	LF	N/A	Y	Y	N	N	N	N	N	N/A	N/A	N/A	N/A	N/A
Osoyoos†	LF	\$40/tonne	Y	Y	N	N	Y	N	N	2020	N/A	4,001	4,034	4,102
Princeton†	LF	\$40/tonne	Y	Y	N	N	Y	N	N	2035	N/A	3,596	3,626	3,686
Summerland†	LF	\$36/tonne	Y	Y	N	N	N	N	N	2050	N/A	31,597	31,858	32,393
TOTAL												80,831	83,252	83,109

* DLC was accepted in 2003 & 2004

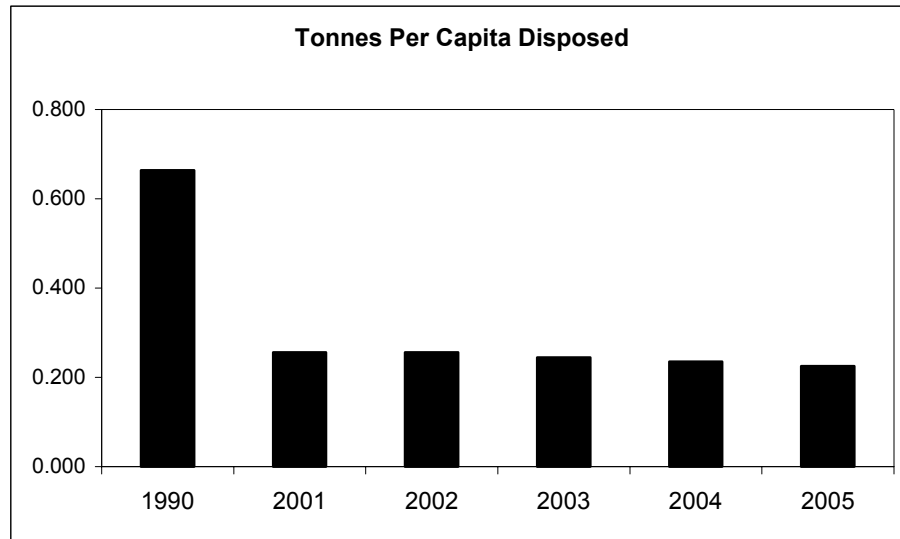
† Data obtained from 2001/2002 Report; Total Waste Disposed is estimated; more recent data not supplied by regional district (see Section 2.2 Accounting for Missing Disposal Data)

Powell River Regional District

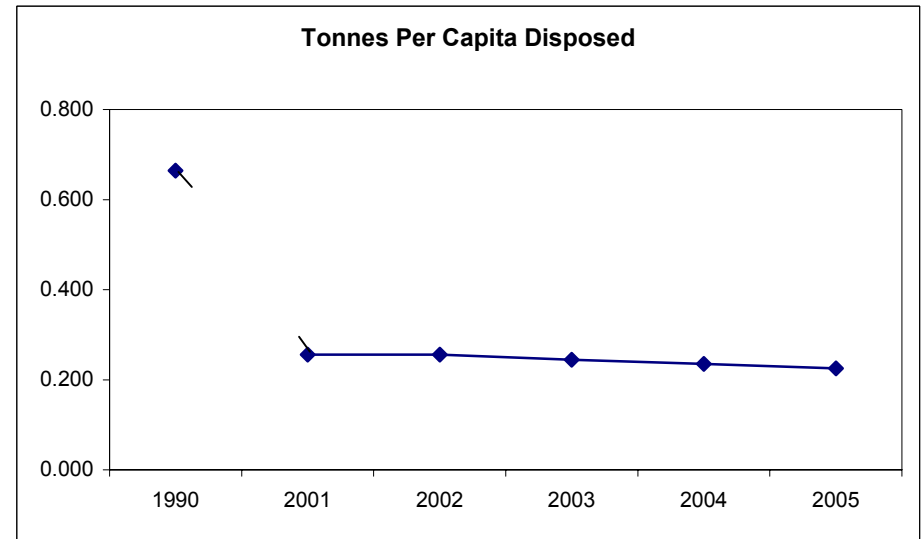
Regional District area (square km): 5,101

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	19,457		12,922		0.664	
2001	20,645		5,285		0.256	-61.45
2002	20,781	0.66	5,320	0.66	0.256	-61.45
2003	20,775	-0.03	5,078	-4.55	0.244	-63.20
2004	20,906	0.63	4,918	-3.15	0.235	-64.58
2005	21,114	0.99	4,758	-3.25	0.225	-66.07

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **August 22, 1996**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Powell River Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Transfer Site	XP	\$155/tonne*	Y	N	Y	N	Y	N/A	N/A	N/A	N/A	5,078	4,918	4,758
											TOTAL	5,078	4,918	4,758

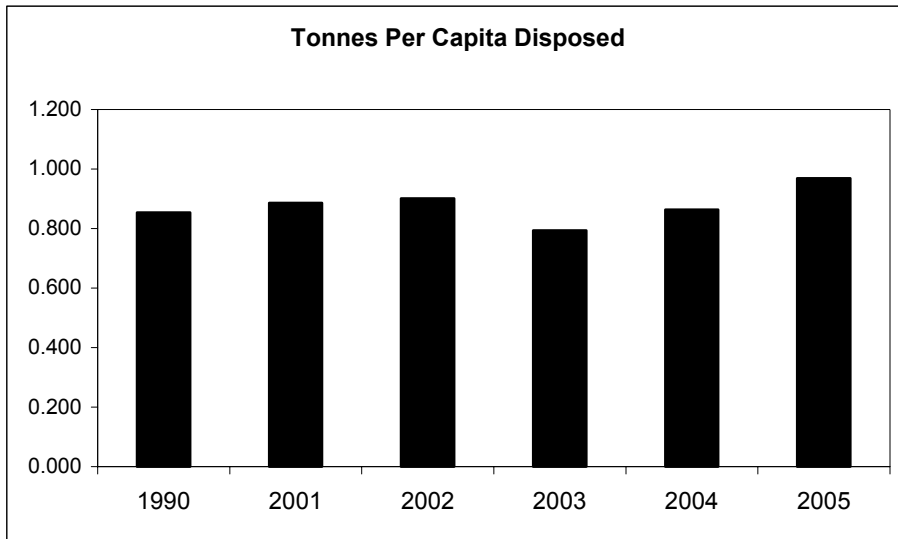
* as of June 1, 2005

Peace River Regional District

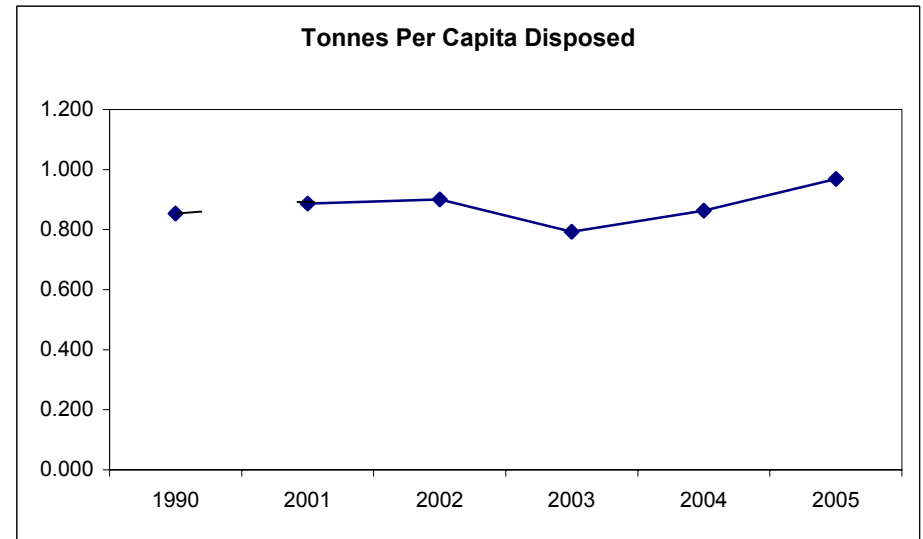
Regional District area (square km): 119,937

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	53,958		46,076		0.854	
2001	57,957		51,375		0.886	3.81
2002	58,997	1.79	53,158	3.47	0.901	5.52
2003	58,704	-0.50	46,566	-12.40	0.793	-7.11
2004	62,096	5.78	53,600	15.11	0.863	1.08
2005	62,967	1.40	61,000	13.81	0.969	13.45

Approved solid waste management plan: **YES** SWMP State of implementation: **76-100%** Date SWMP approved: **June 25, 1996**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Peace River Regional District

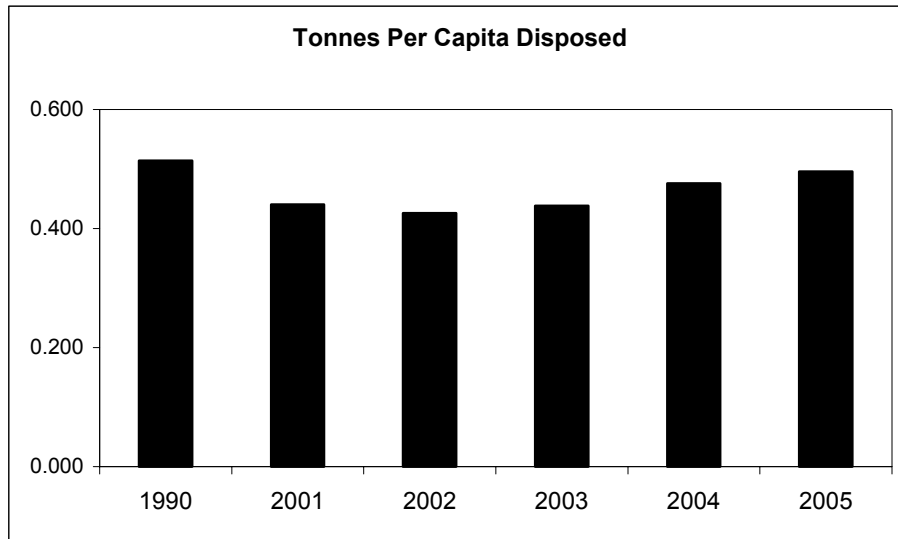
Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Bessborough	LF	\$ / tonne	Y	Y	Y	Y	Y	N	N	2040	N/A	15,600	16,300	17,600
Chetwynd	LF	\$ / tonne	Y	Y	Y	Y	Y	N	N	2015	N/A	5,366	6,800	6,700
Fort St. John	LF	\$ / tonne	Y	Y	Y	N	Y	N	N	2009	N/A	24,000	28,700	34,700
Rose Prairie	LF	\$ / tonne	Y	Y	Y	Y	N	N	N	N/A	N/A	1,600	1,800	2,000
											TOTAL	46,566	53,600	61,000

Regional District of Nanaimo

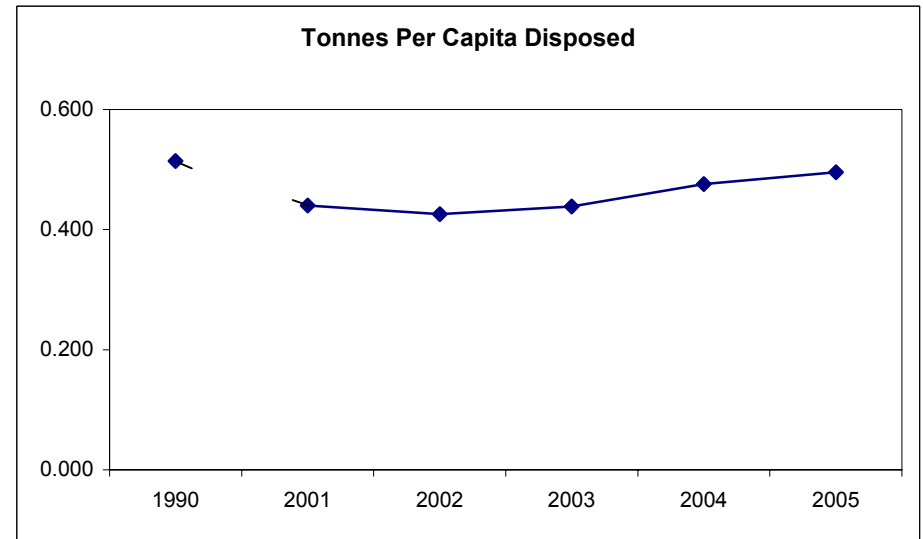
Regional District area (square km): 2,041

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	98,278		50,533		0.514	
2001	132,456		58,314		0.440	-14.38
2002	133,988	1.16	57,080	-2.12	0.426	-17.15
2003	136,315	1.74	59,745	4.67	0.438	-14.76
2004	137,946	1.20	65,666	9.91	0.476	-7.42
2005	141,080	2.27	69,922	6.48	0.496	-3.61

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **2004**



Data status: Confirmed by Regional District



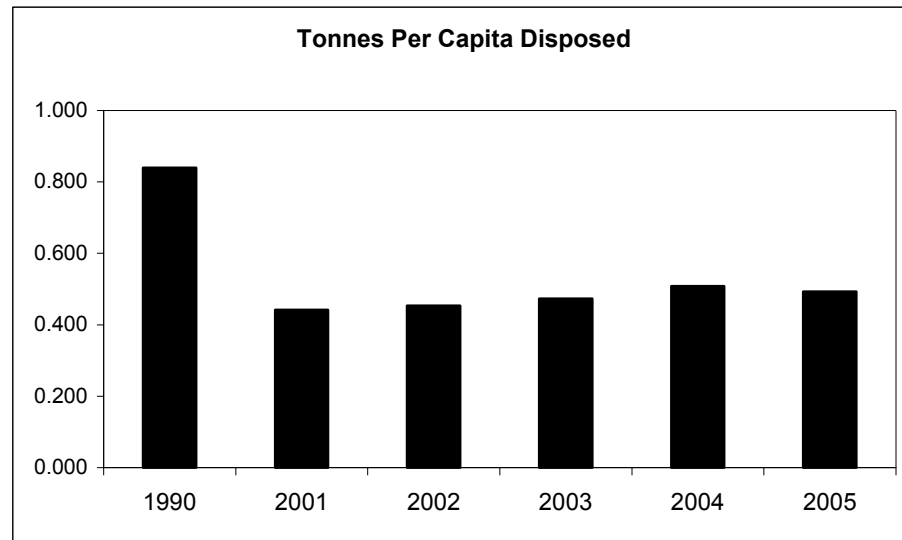
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Sunshine Coast Regional District

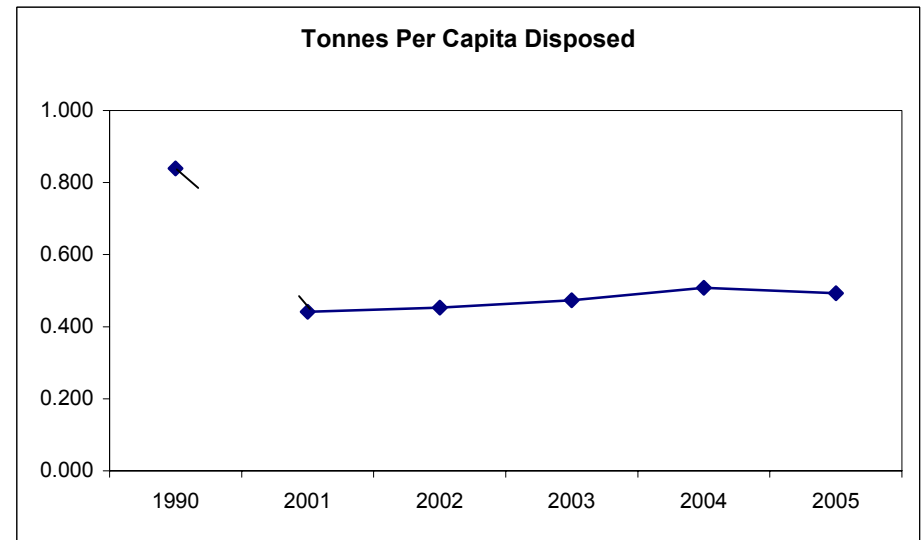
Regional District area (square km): 3,824

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	20,492		17,207		0.840	
2001	26,586		11,735		0.441	-47.43
2002	27,110	1.97	12,288	4.71	0.453	-46.02
2003	27,389	1.03	12,961	5.48	0.473	-43.64
2004	27,702	1.14	14,075	8.60	0.508	-39.49
2005	28,557	3.09	14,079	0.03	0.493	-41.29

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **December, 2003**



Data status: Confirmed by Regional District



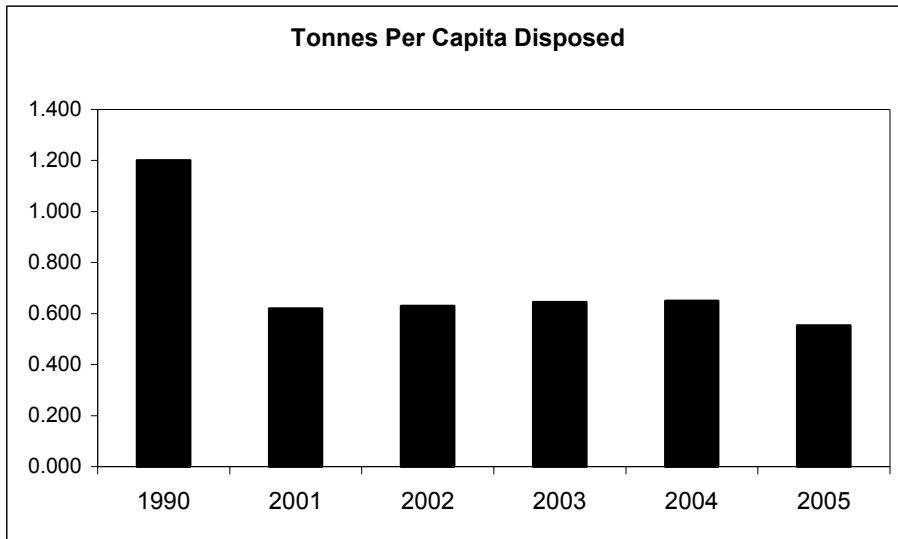
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Squamish-Lillooet Regional District

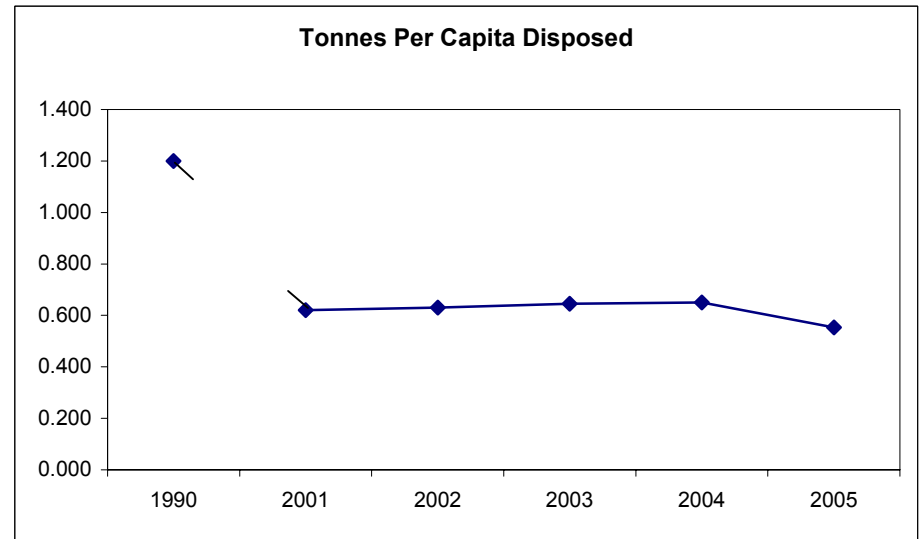
Regional District area (square km): 16,534

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	32,437		38,924		1.200	
2001	46,248		28,683		0.620	-48.32
2002	46,601	0.76	29,376	2.42	0.630	-47.47
2003	49,961	7.21	32,229	9.71	0.645	-46.24
2004	52,058	4.20	33,846	5.02	0.650	-45.82
2005	54,367	4.44	30,108	-11.04	0.554	-53.85

Approved solid waste management plan: **YES** SWMP State of implementation: **51-75%** Date SWMP approved: **1999**



Data status: Confirmed by Regional District



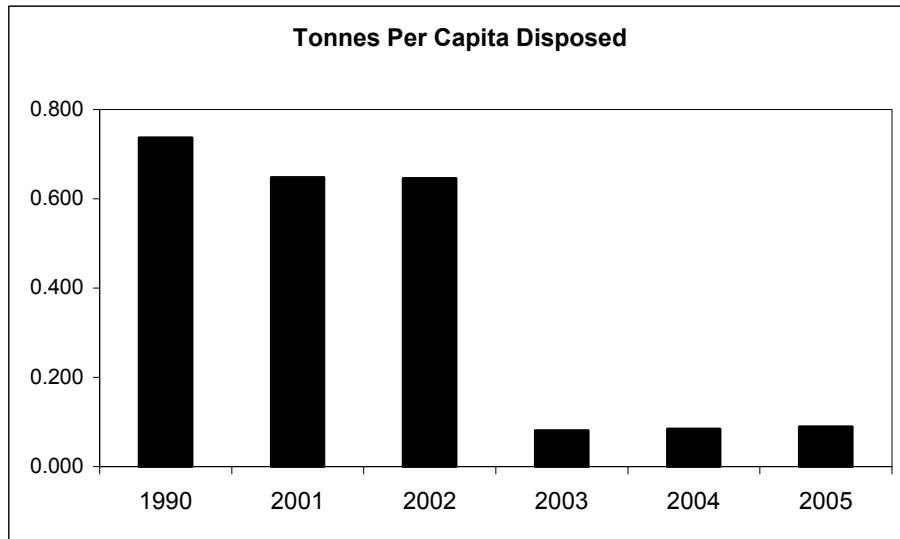
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Skeena-Queen Charlotte Regional District

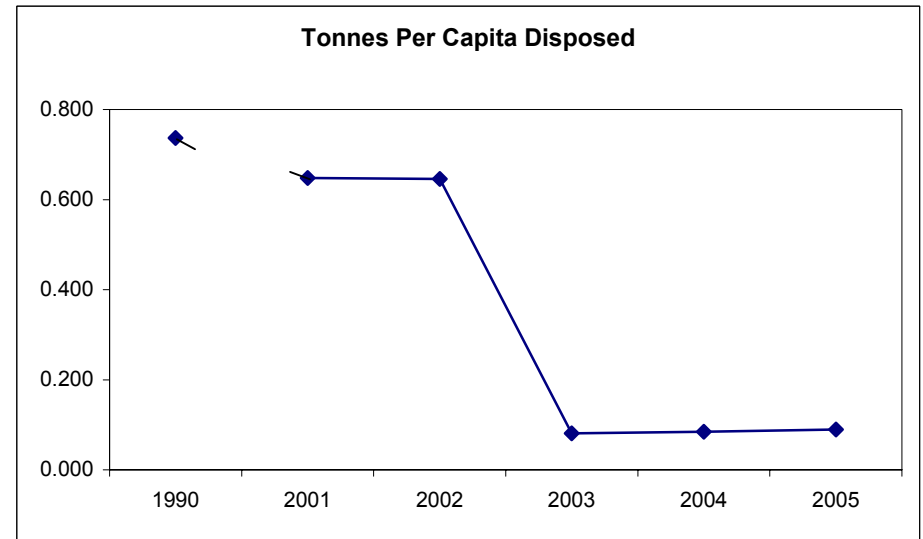
Regional District area (square km): 21,000

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	24,344		17,933		0.737	
2001	22,788		14,760		0.648	-12.07
2002	22,912	0.54	14,800	0.27	0.646	-12.31
2003	22,312	-2.62	1,809	-87.78	0.081	-88.99
2004	22,507	0.87	1,901	5.09	0.084	-88.53
2005	22,464	-0.19	2,015	6.00	0.090	-87.82

Approved solid waste management plan: **YES** SWMP State of implementation: **unknown** Date SWMP approved: **unknown**



Data status: See note in Section 3.2.1.1



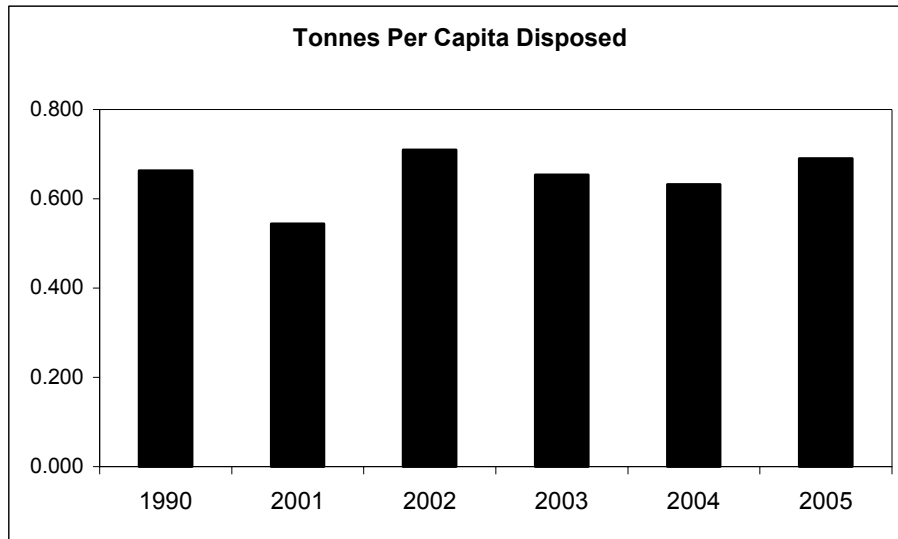
Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Thompson-Nicola Regional District

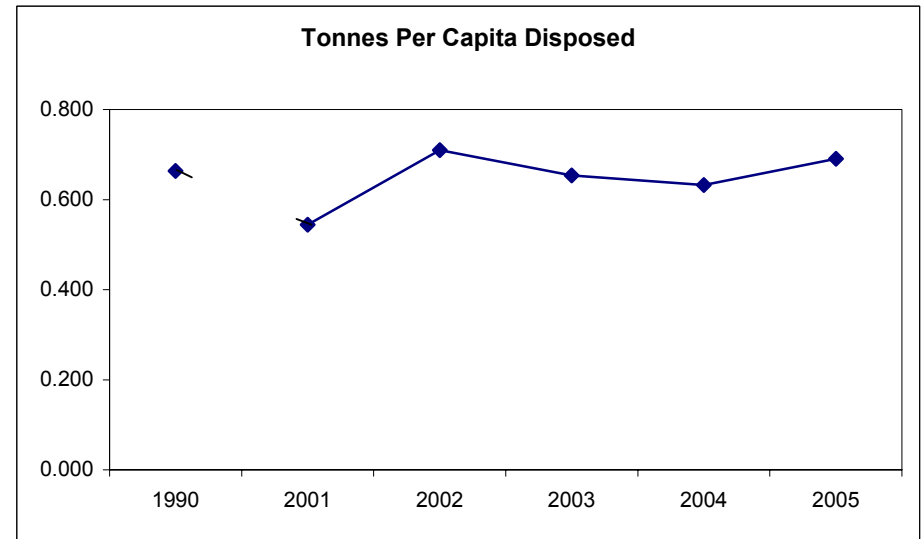
Regional District area (square km): 44,872

Year	Population	% change from previous year	Total Waste Disposed	% change from previous year	Tonnes per capita disposed	% change from 1990
1990	105,429		69,939		0.663	
2001	124,891		67,979		0.544	-17.95
2002	126,173	1.03	89,567	31.76	0.710	7.01
2003	125,924	-0.20	82,332	-8.08	0.654	-1.44
2004	127,532	1.28	80,664	-2.03	0.633	-4.65
2005	128,790	0.99	88,918	10.23	0.690	4.08

Approved solid waste management plan: **YES** SWMP State of implementation: **26-50%** Date SWMP approved: **December 21, 1995**



Data status: Confirmed by Regional District



Source of the Data: 1990 Previous MSW Tracking Reports
 2001-2002 Previous MSW Tracking Reports
 2003-2005 Regional District

Thompson-Nicola Regional District

Disposed Waste Breakdown and other information by Facility														
Disposal Facility	Disposal Method (LF/IN/XP)	Tipping Fee (\$/N/NA)	Staffed (Y/N)	DLC Accepted (Y/N)	Salvage Area (Y/N)	Electric Fencing (Y/N)	Weigh Scales (Y/N)	Landfill Gas Management		Expected Year of Closure	Design Capacity (tonnes)	Total Waste Disposed (tonnes)		
								Collection/Flaring (Y/N)	Utilization (Y/N)			2003	2004	2005
Mission Flats landfill	LF	\$25/tonne	Y	Y	Y	N	Y	N	Y	2055	4,000,000	47,877	43,612	50,555
Barnhartvale landfill	LF	\$25/tonne	Y	Y	Y	N	Y	N	Y	2020	215,000	3,900	3,900	3,900
Clearwater landfill	LF	see below	Y	Y	N	N	N	N	Y	2014	292,000 m3	5,507	5,842	6,576
Barriere Landfill	LF	see below	Y	Y	N	N	N	N	Y	2011	247,500 m3	2,145	2,281	2,164
Heffley Creek landfill	LF	see below	Y	Y	N	N	N	N	Y	2030	811,000 m3	6,659	7,505	8,723
Chase Landfill	LF	see below	Y	Y	N	N	N	N	Y	2009	98,000 m3	2,132	1,996	2,339
Lower Nicola Landfill	LF	see below	Y	Y	N	N	N	N	Y	2020	648,000 m3	6,630	7,409	7,542
Cache creek/Wastech	LF	see below	Y	Y	N	N	N	Y	Y	2009	~10,000,000	7,482	8,099	7,119
TOTAL												82,332	80,644	88,918

Note: Waste quantities at the Mission Flats and Barnhartvale sites were weighed. At TNRD landfills refuse volumes are estimated based on an annual landfill aerial survey and DTM analysis. The volume is cross-references using population estimates and estimates based on the number & types of vehicles hauling to the sites, recorded by site attendants and the TNRD.

Appendix A: REGIONAL DISTRICT POPULATION AND DISPOSAL STATISTICS, 1990, 2001-2005

Regional District Per Capita Disposal Rate Summary, 1990, 2001-2005

REGIONAL DISTRICT	1990*			2001			2002			2003			2004			2005		
	pop	disp rate	rank	pop	disp rate	rank	pop	disp rate	rank	pop	disp rate	rank	pop	disp rate	rank	pop	disp rate	rank
Regional Districts with populations less than or equal to 60,000 in 2003-2005																		
Alberni-Clayoquot	30,257	0.550	2	31,186	0.544	9	31,753	0.544	10	31,877	0.745	12	32,321	0.861	11	32,692	0.839	11
Bulkley-Nechako	37,136	0.700	4	42,890	0.42	5	43,513	0.399	4	42,643	0.509	7	43,815	0.489	5	43,933	0.470	3
Central Coast	3,500	0.400	1	3,973	0.378	3	4,013	0.378	3	3,902	0.384	3	3,866	0.388	2	3,905	0.256	2
Central Kootenay	49,587	0.701	7	59,540	0.288	2	59,245	0.372	2	60,209	0.340	2	59,874	0.409	3	60,237	0.494	7
Columbia Shuswap	40,510	0.710	7	50,305	0.429	6	50,826	0.429	5	51,306	0.589	9	52,367	0.561	9	53,245	0.603	10
East Kootenay	48,773	0.700	5	58,903	0.763	13	60,234	0.763	13	60,146	0.682	11	60,958	0.891	13	61,862	0.873	12
Kitimat-Stikine	39,431	0.700	6	42,894	0.505	8	42,914	0.505	7	42,669	0.479	6	43,043	0.475	4	42,919	0.476	5
Kootenay Boundary	30,425	0.850	9	33,184	0.5	7	33,013	0.528	9	33,261	0.454	4	32,863	0.490	6	33,118	0.471	4
Mount Waddington	14,086	0.900	10	13,768	0.562	10	13,656	0.518	8	13,531	0.525	8	13,537	0.540	8	13,684	0.526	8
Northern Rockies	4,565	1.800	14	6,049	1.334	15	6,131	1.591	15	6,127	1.833	14	6,451	1.842	14	6,607	1.695	14
Peace River	50,083	0.920	12	57,957	0.886	14	58,997	0.901	14	58,704	0.793	13	62,096	0.863	12	62,967	0.969	13
Powell River	18,728	0.690	3	20,645	0.256	1	20,781	0.256	1	20,775	0.244	1	20,906	0.235	1	21,114	0.225	1
Skeena-Queen Charlotte	22,700	0.790	8	22,788	0.648	12	22,912	0.646	12	22,312	†		22,507	†		22,464	†	
Squamish-Lillooet	32,437	1.200	13	35,042	0.620	11	35,565	0.630	11	49,961	0.645	10	52,058	0.650	10	54,367	0.554	9
Sunshine Coast	19,119	0.900	11	26,586	0.441	4	27,110	0.453	6	27,389	0.473	5	27,702	0.508	7	28,557	0.493	6
Regional Districts with populations greater than 60,000 in 2003-2005																		
Capital	291,880	0.620	3	341,564	0.393	3	341,563	0.412	3	344,787	0.418	3	347,439	0.434	2	351,022	0.452	3
Cariboo	58,641	0.400	1	68,728	0.381	2	69,558	0.381	1	68,600	0.405	2	69,835	0.403	1	70,329	0.406	1
Central Okanagan	103,304	1.210	12	154,440	0.64	9	156,033	0.717	9	160,718	0.475	5	162,986	0.521	6	167,936	0.492	5
Comox-Strathcona	82,378	0.650	4	100,401	0.45	5	101,038	0.465	5	101,953	0.465	4	103,268	0.465	4	105,327	0.465	4
Cowichan Valley	59,059	0.770	7	75,077	0.371	1	75,525	0.382	2	74,260	0.401	1	75,392	0.439	3	78,802	0.416	2
Fraser Valley	209,641	0.945	8	249,035	0.506	7	253,844	0.555	8	254,065	0.654	9	260,725	0.578	7	264,370	0.499	7
Fraser-Fort George	85,971	0.700	6	100,224	0.729	10	100,366	0.752	11	100,600	0.759	11	102,214	0.832	11	101,601	0.812	11
Greater Vancouver	1,610,899	0.990	9	2,091,080	0.494	6	2,114,314	0.498	6	2,113,697	0.644	8	2,132,824	0.692	9	2,155,880	0.731	10
Nanaimo	91,879	0.550	2	132,456	0.44	4	133,988	0.426	4	136,315	0.483	6	137,946	0.476	5	141,080	0.496	6
North Okanagan	57,611	1.040	10	76,413	0.515	8	77,268	0.554	7	77,965	0.579	7	79,097	0.713	10	80,474	0.654	8
Okanagan-Similkameen	66,239	1.200	11	79,645	1.025	12	79,472	1.000	12	80,996	0.998	12	81,665	1.019	12	83,037	1.001	12
Thompson-Nicola	104,386	0.670	5	124,891	0.745	11	126,173	0.745	10	125,924	0.654	9	127,532	0.633	8	128,790	0.690	9
Province	3,263,225	0.879		4,099,664	0.517		4,139,805	0.529		4,154,951	0.609		4,201,867	0.646		4,254,522	0.663	

* Regional district disposal rates for 1990 established in the 1998 Tracking Report

† See discussion in Section 3.2.1.4 of why SQRD data has been omitted

Note: GVRD claims that any comparison with other regional districts should reflect the greater amount of recycling in the GVRD prior to 1990.

It therefore calculates its disposal rate reduction with respect to waste generation not disposal in 1990 as the baseline, which results in a 48% reduction in the per capita disposal rate

Selected Sources

British Columbia Statistics

<http://www.bcstats.gov.bc.ca>

MSW Tracking Reports, 1996-2002

<http://www.env.gov.bc.ca/epd/epdpa/mpp/reduction.htm>