

A handwritten signature in black ink, consisting of the letters 'e', 's', 'p', and 'c' in a cursive, lowercase style. The 'e' is connected to the 's', which is connected to the 'p', which is connected to the 'c'. The signature is positioned in the upper left quadrant of the page.

**The Development of a Quality of
Life Index for Alberta
Data Set**

**Submitted by
The Edmonton Social Planning Council
Submitted to:
Health Canada, Health Promotion and Programs Branch**

November, 1998



Introduction

The following is a composite of indicators from various data sets that were reviewed in the development of a Quality of Life Index for Alberta. It is not a model but a guide that assisted in the development of a methodology .

These indicators were selected based upon their use in existing models; and the availability of data. Data is limited to selected years and boundaries vary between sources which poses as an obstacle to developing a consistent model. Expected changes to data collection will make information less difficult to consolidate.

There is no uniform measure to define quality of life due to the subjective nature of the term. In developing a model, objective measures should be used in conjunction with more qualitative data to allow for policy makers to have an introspective view of their community's well-being.

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INDICATORS

Health Indicators

- ◆ Low Birth Weight Babies
- ◆ Sexually Transmitted Diseases
- ◆ Infant Mortality
- ◆ Age standardized Mortality for Suicide
- ◆ Age Standardized Mortality for Heart Disease
- ◆ Teen Birth Rate
- ◆ Sexual and Physical Assault

Social Indicators

- ◆ Child Protection Caseloads
- ◆ Reports of Allegations of Abuse or Neglect
- ◆ Child Protection Investigations Completed
- ◆ Supports for Independence (SFI) Caseloads
- ◆ Housing
- ◆ Crime Rate
- ◆ Enrollment Rates

Economic Indicators

- ◆ Labour Force Participation Rate
- ◆ Unemployment Rate
- ◆ Employment Rate
- ◆ Consumer Bankruptcy
- ◆ Business Bankruptcy

Environment Indicators

- ◆ Air Quality
- ◆ Solid Waste
- ◆ Water Quality

BOUNDARIES

The following boundaries are used in evaluating the quality of life indicators.

Regional Health Authorities

Region 1	Chinook Regional Health Authority
Region 2	Palliser Health Authority
Region 3	Headwaters Health Authority
Region 4	Calgary Regional Health Authority
Region 5	Health Authority 5
Region 6	David Thompson Regional Health Authority
Region 7	East Central Regional Health Authority
Region 8	WestView Regional Health Authority
Region 9	Crossroads Regional Health Authority
Region 10	Capital Health Authority
Region 11	Aspen Regional Health Authority
Region 12	Lakeland Regional Health Authority
Region 13	Mistahia Regional Health Authority
Region 14	Peace Regional Health Authority
Region 15	Keeweenok Lakes Regional Health Authority
Region 16	Northern Lights Regional Health Authority
Region 17	Northwestern Regional Health Authority

Family and Social Services Districts

North West
North East
Edmonton
Central
Calgary
South

Economic Regions

- 1 Lethbridge - Medicine Hat
- 2 Drumheller - Stettler
- 3 Calgary
- 4 Athabasca - Jasper - Banff
- 5 Red Deer - Rocky Mountain House
- 6 Edmonton
- 7 Grande Prairie - Peace River
- 8 Fort McMurray - Camrose

Housing

Provincial Figures

Crime Rate

K-Division Figures

Enrollment Numbers

Provincial Figures

Environment

Provincial Figures

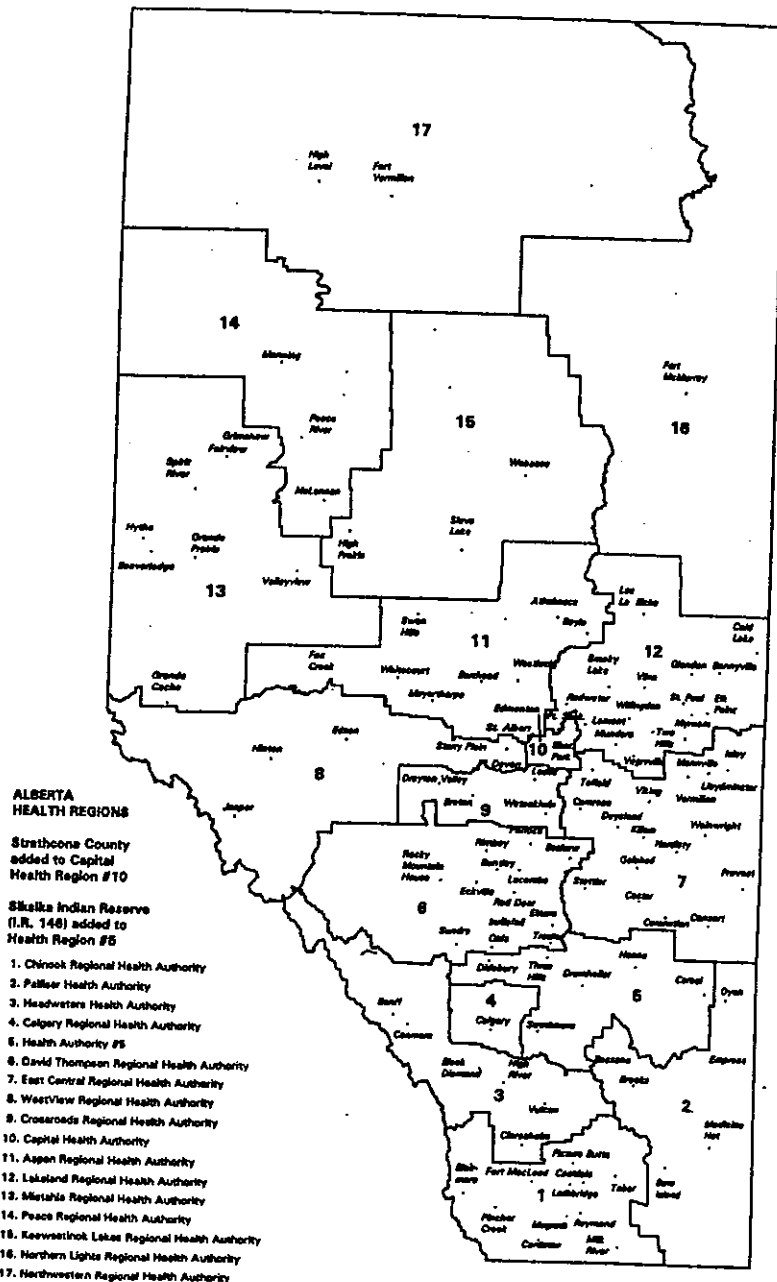
RESULTS

Health Indicators

The following Quality of Life Indicators were selected based on their availability on a regional and provincial level, current literature and indices and sufficient data for future trend analysis.

- ◆ Low Birth Weight Babies
- ◆ Sexually Transmitted Diseases
- ◆ Infant Mortality
- ◆ Suicide
- ◆ Age Mortality for Heart Disease
- ◆ Teen Birth Rate
- ◆ Sexual and Physical Assault

Regional Health Authorities

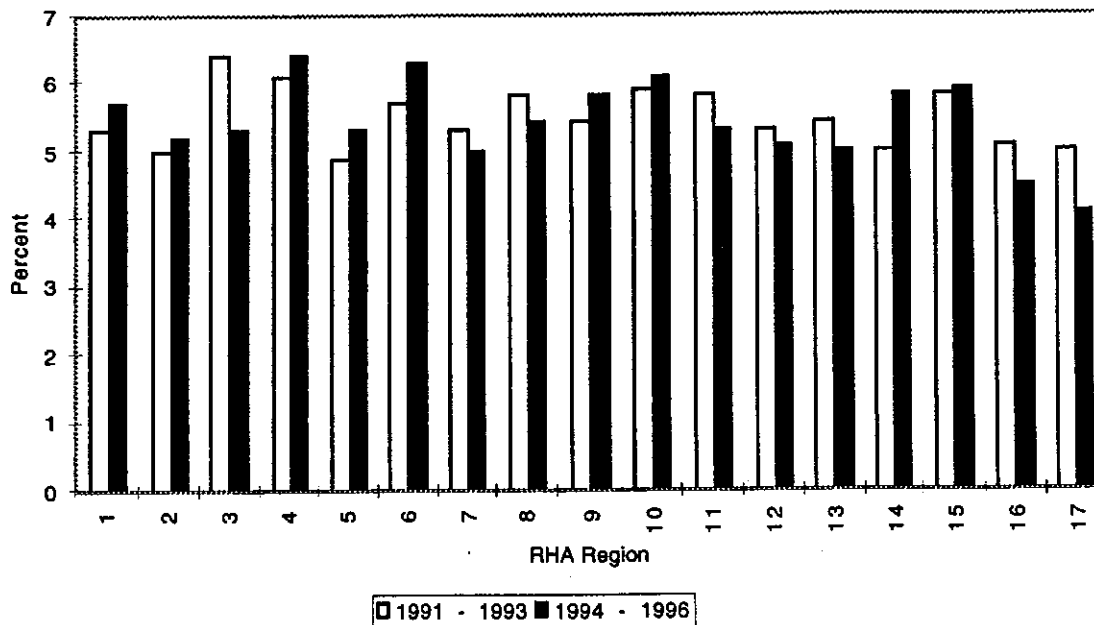


Low Birth Weight Babies

Rationale

Low birth weight babies (LBW) are prone to long term physical, developmental and psychological impairment. Various factors such as a mother's poor judgment in healthy living, income, lack of accessibility to medical services and a poor social network can make the mother susceptible to delivering a LBW (<2500 grams) baby. (Canadian Institute of Child Health, 1994).

Low Birth Weight Babies as a percentage of Total Live Births



Source: Alberta Health. Information to Support The Health Authority. Business Plans and Annual Reports. November, 1997.

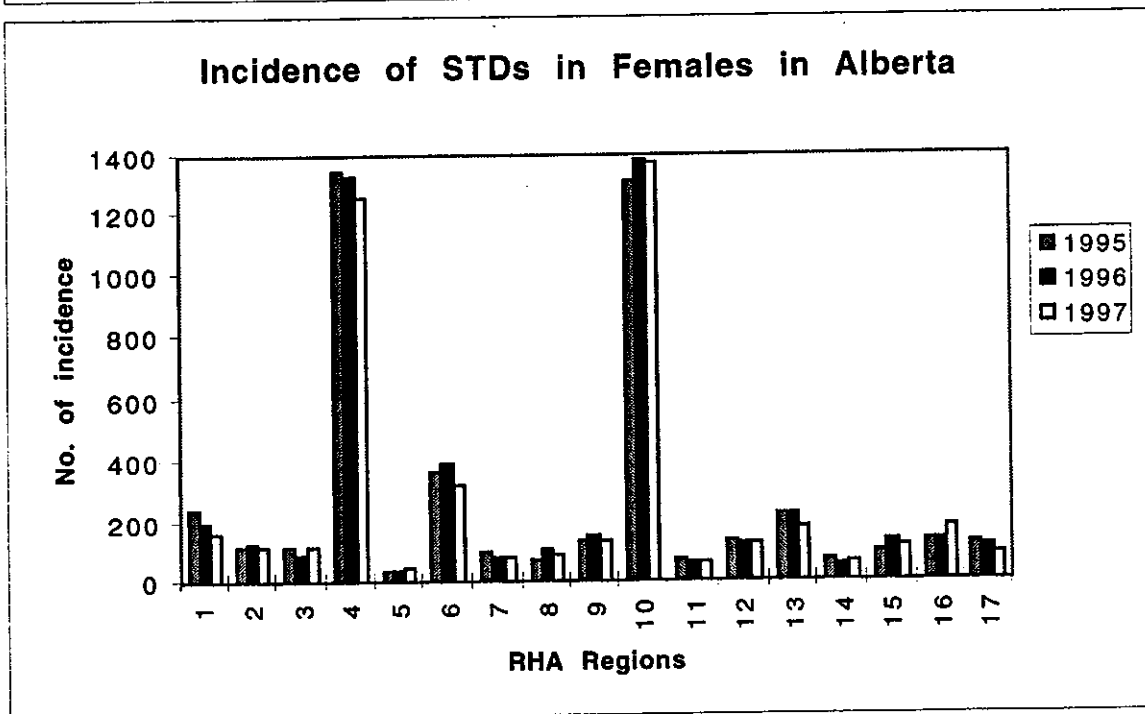
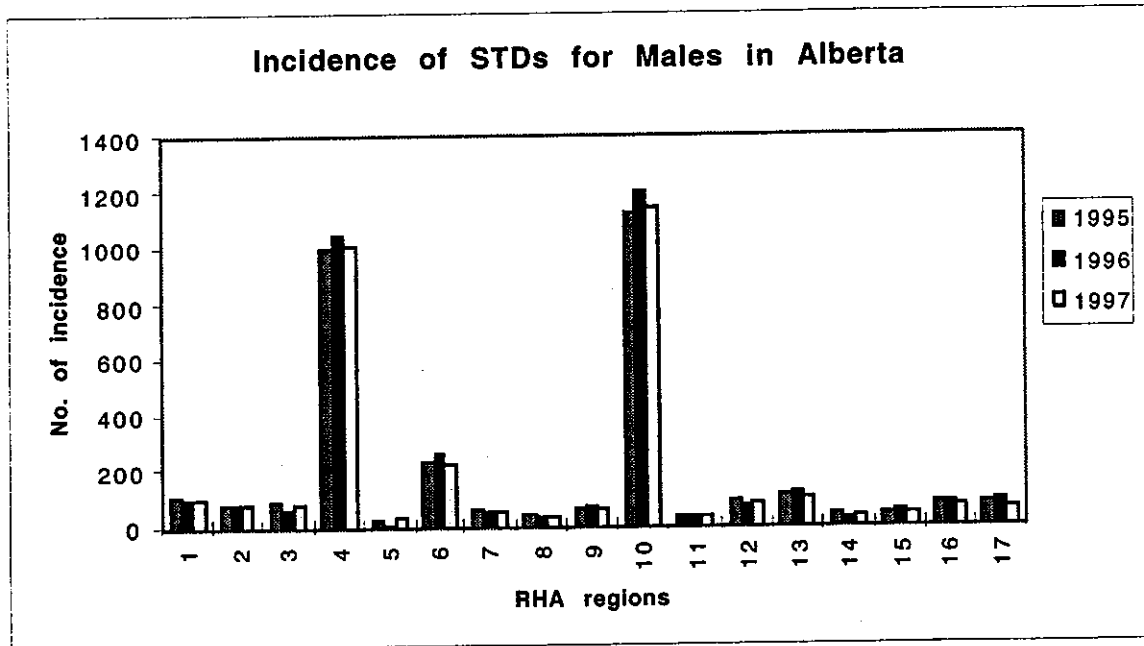
REGIONAL COMPARISON Low Birth Weight Babies (<2500 grams) (Appendix Table 1)		
	1991 - 1993	1994 - 1996
Highest	Region 3 - Headwaters	Region 4 - Calgary
Lowest	Region 5 - Health Authority 5	Region 17 - Northwestern

Sexually Transmitted Diseases
(NGU/MPC, Chlamydia, Gonorrhea, Syphilis)

Rationale

Despite increased education, Sexually Transmitted Diseases (STDs) continue to be a major concern in certain sectors of the population. STDs continue to be prevalent for individuals under 30 and can lead to poor mental health and physical problems such as infertility. (Population Health and Research, Capital Health)

(The following graphs show the incidence of STDs in males and in females in Alberta. The incidences are calculated according to the place of treatment. For raw data refer to Tables 2 and 3 in the Appendix.)



Source: STD Services, Disease Control and Prevention (special run).

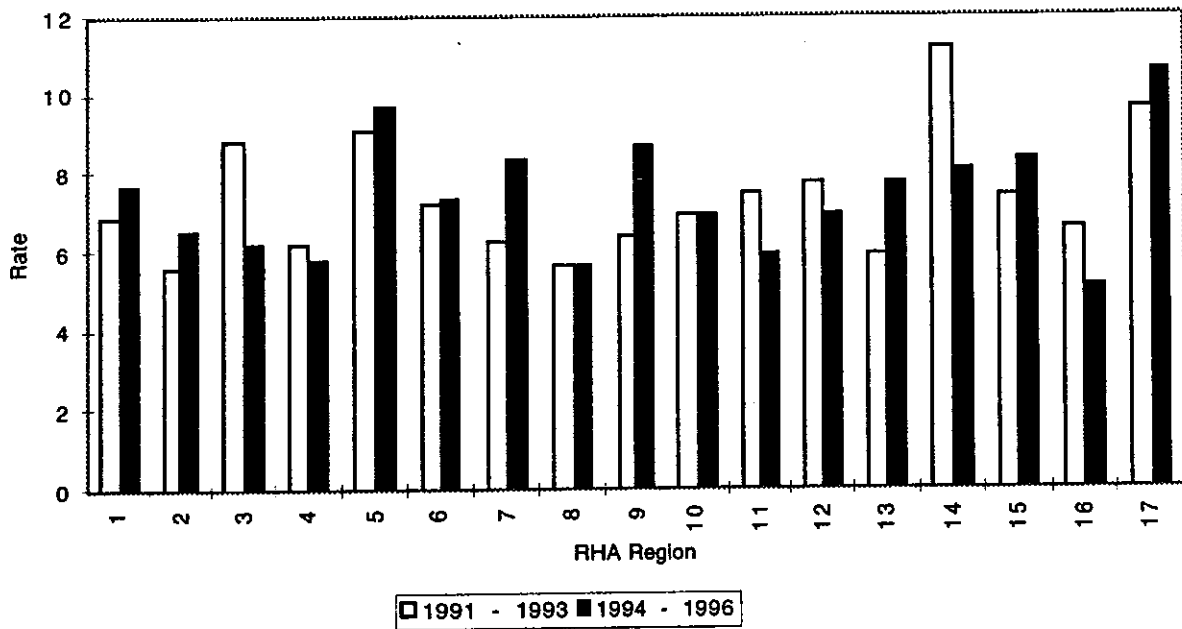
REGIONAL COMPARISON Sexually Transmitted Diseases (Appendix Tables 2 and 3)						
	1995 (M)	1995 (F)	1996 (M)	1996 (F)	1997 (M)	1997 (F)
Highest	10 Capital	4 Calgary	10 Capital	10 Capital	10 Capital	10 Capital
Lowest	5 RHA 5	5 RHA 5	5 RHA 5	5 RHA 5	RHA 14	RHA 5

Infant Mortality

Rationale

The rate of death amongst infants during their first year of life has decreased over the last 50 years because of medical advancement and services. However, a postneonatal infant's life expectancy can be attributed to environmental factors that are independent of genetic influences. Some of these environmental factors include adequate housing, proper nutrition, and parental coping skills. (Population Health and Research, Capital Health) (Gus Thompson, 1997)

Infant Mortality according to the different regions per 1,000



Source: Alberta Health. Information To Support The Health Authority. Business Plans and Annual Reports. November, 1997.

REGIONAL COMPARISON Infant Mortality (<one year of life) (Appendix Table 4)		
	1991 - 1993	1994 - 1996
Highest	Region 14 - Peace	Region 17- Northwestern
Lowest	Region 2 - Palliser	Region 16 - Northern Lights

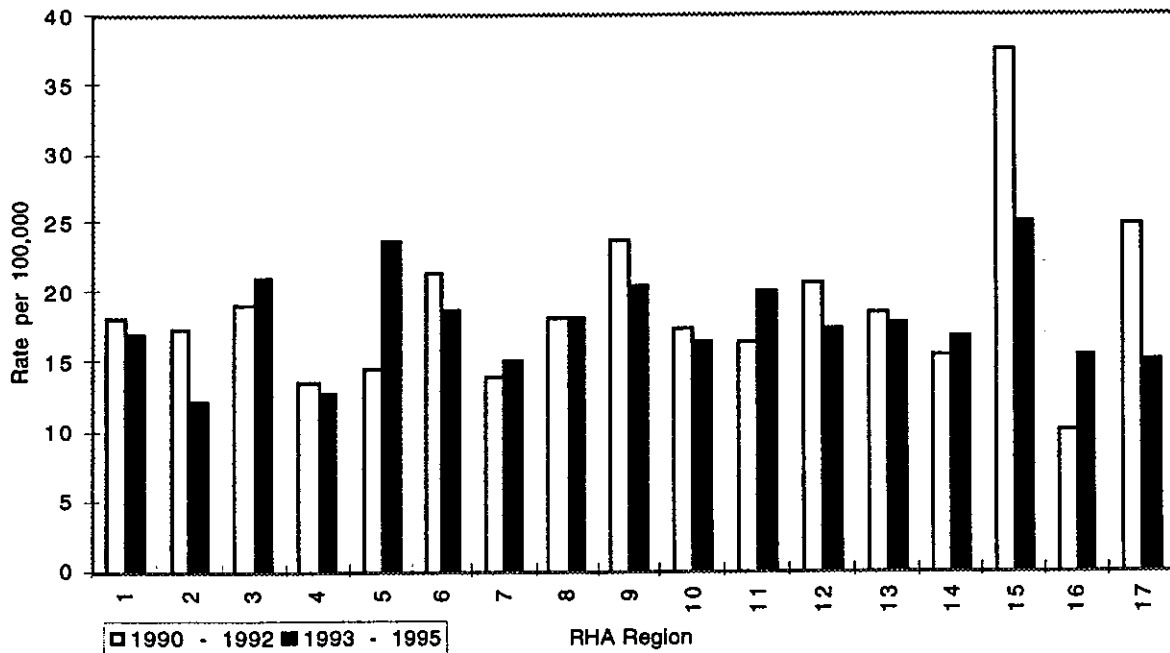
Suicide

Rationale

Suicide is an indication of poor mental health and emotional distress. Susceptible individuals are those experiencing financial loss, family separation and a loss of identity. Higher rates of males successfully complete suicide, but this does not allow for comparisons in the number of attempted suicides. Females are more likely than males to attempt suicide. (Alberta Health, Health Surveillance Branch, 1997)

(This indicator only reports successful and not attempted suicides)

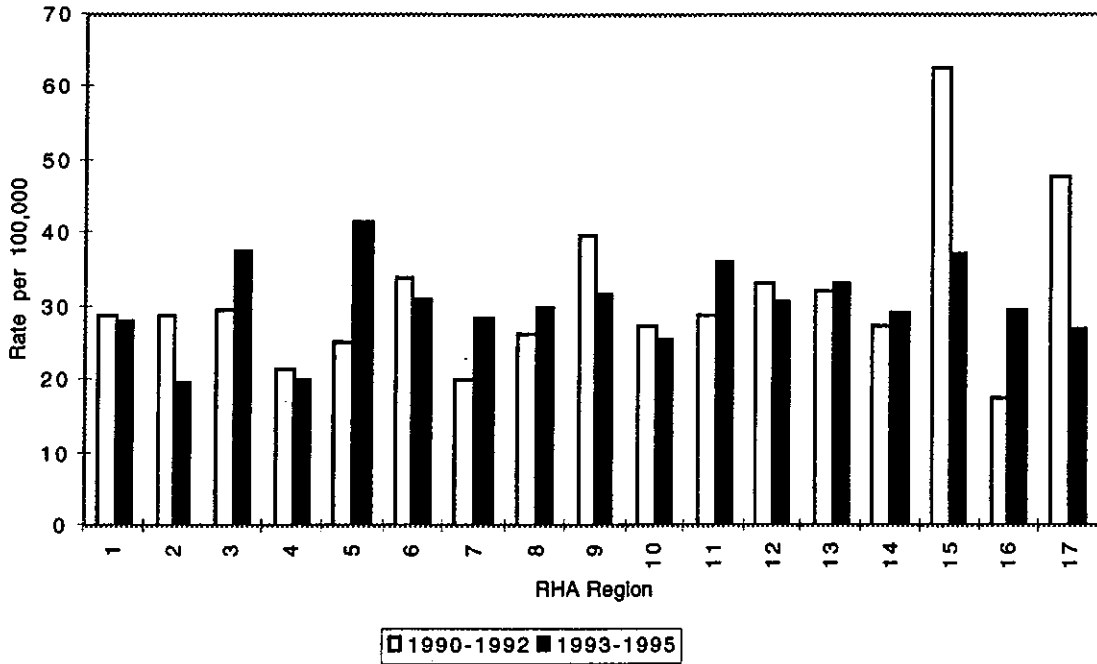
Suicide Rate per 100,000 Population



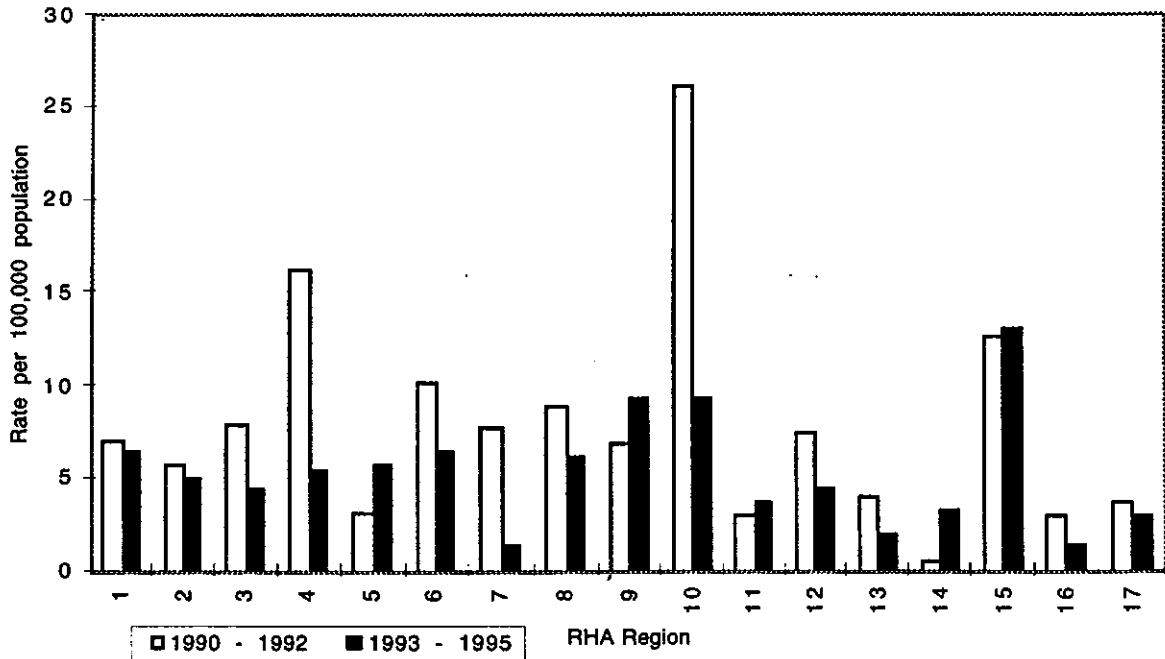
Source: Alberta Health. Information To Support The Health Authority Business Plans and Annual Reports. November, 1997.

REGIONAL COMPARISON Suicide (Appendix Table 5)		
	1990 - 1992	1993 - 1995
Highest	Region 15 - Keeweenaw	Region 15 - Keeweenaw
Lowest	Region 16 - Northern Lights	Region 2 - Palliser

Suicide Rate Males per 100,000 Population



Suicide Rate Female per 100,000 Population



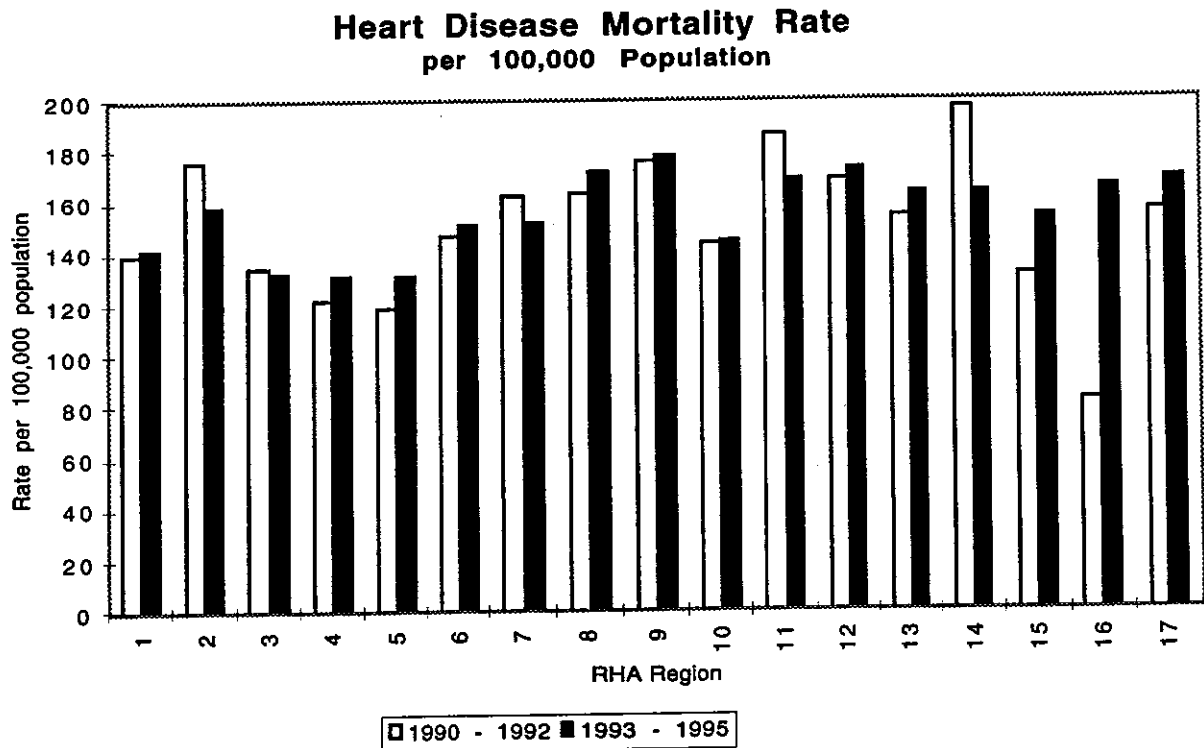
Source: Alberta Health. Information To Support The Health Authority. Business Plans and Annual Reports. November, 1997.

REGIONAL COMPARISON Suicide (Male/Female) (Appendix Tables 6 and 7)				
	1990-1992 (M)	1993-1995 (M)	1990-1992 (F)	1993-1995 (F)
Highest	15 Keeweenok	5 RHA 5	10 Capital	15 Keeweenok
Lowest	16 Northern Lights	2 Palliser	14 Peace	7 East Central 16 Northern Lights

Age Standardized Mortality for Heart Disease

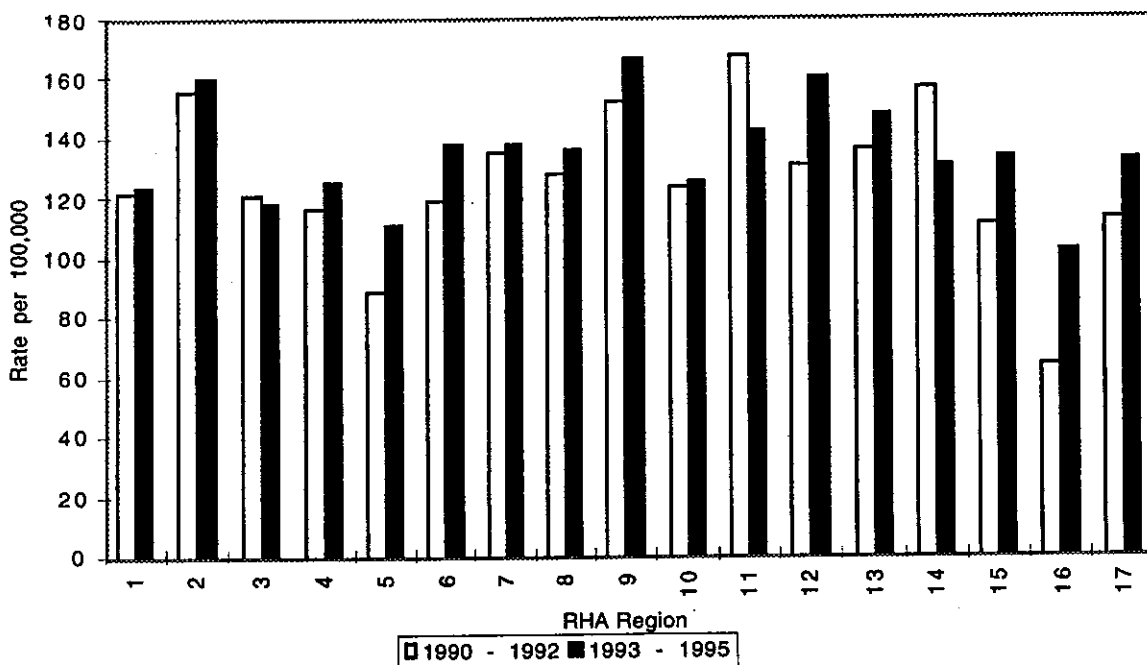
Rationale

Although heart disease may be congenital in certain cases, social circumstances play a vital role in the health of the individual. Poverty can attribute to increased stress levels which are correlated to higher levels of smoking, poor dietary intake and lack of physical activity. As a result, higher levels of systolic blood pressure make the individual vulnerable to coronary disease. (Wadsworthx, 1997)

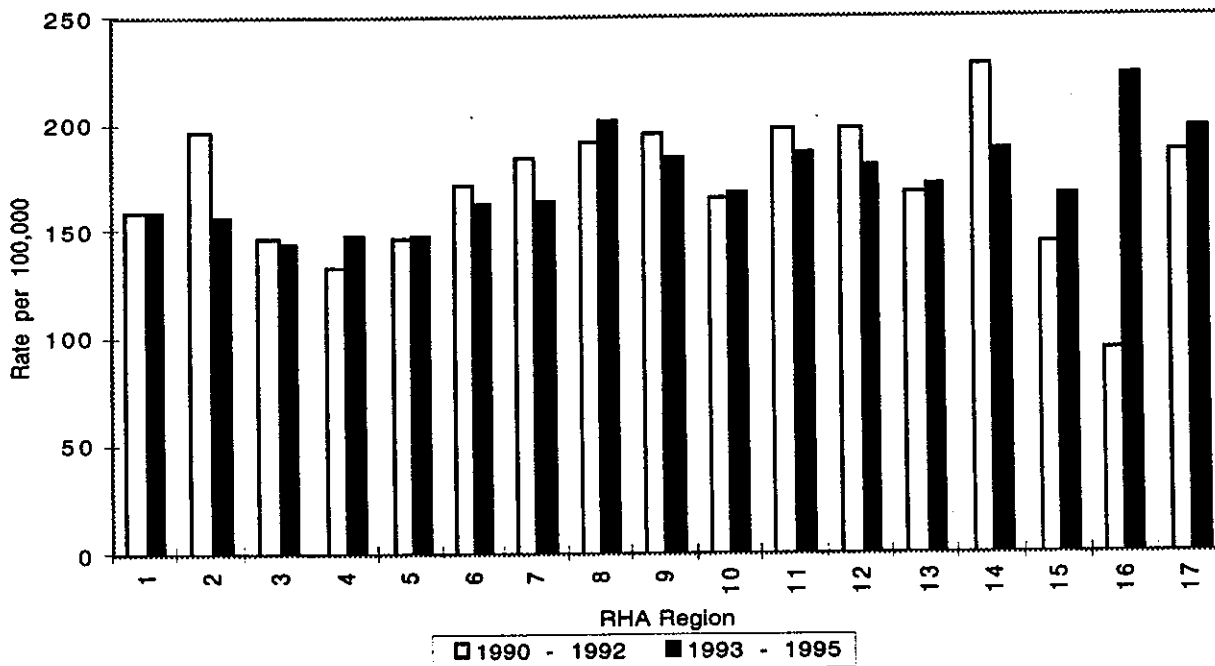


Source: Alberta Health. Information To Support The Health Authority. Business Plans and Annual Reports. November, 1997.

Heart Disease Females per 100,000 Population



Heart Disease Rates Males per 100,000 Population



Source: Alberta Health. Information To Support The Health Authority. Business Plans and Annual Reports. November, 1997.

REGIONAL COMPARISON Age Standardized Mortality for Heart Disease (Appendix Table 8)		
	1990 - 1992	1993 - 1995
Highest	14 - Peace	9 - Crossroads
Lowest	16 - Northern Lights	5 - Health Authority 5

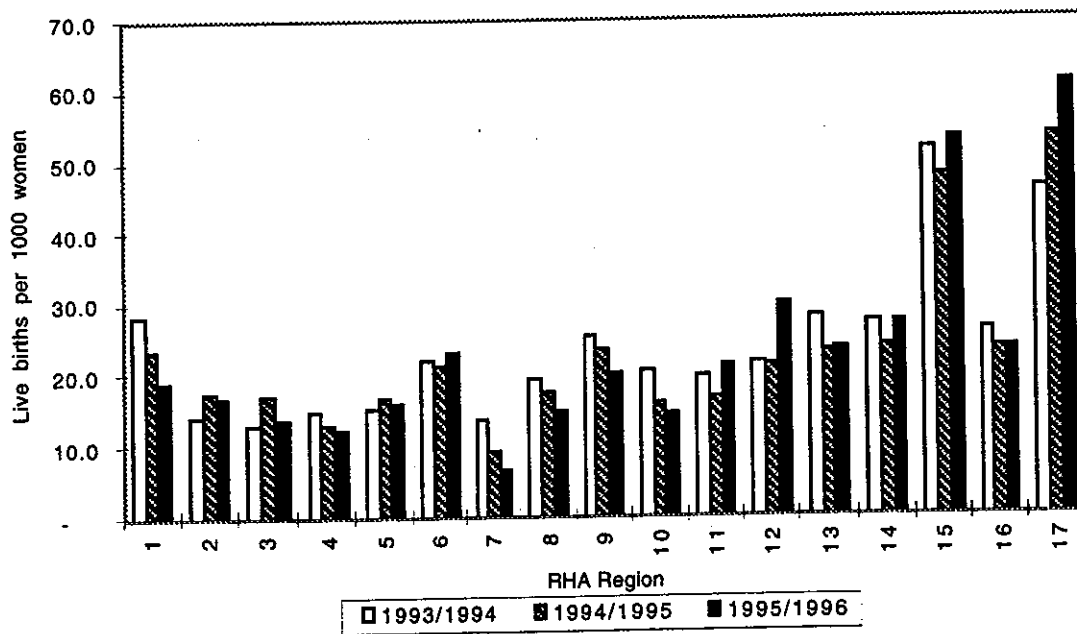
REGIONAL COMPARISON Age Standardized Mortality for Heart Disease - Male/Female (Appendix Tables 9 and 10)				
	1990-1992 (M)	1993-1995 (M)	1990-1992 (F)	1993-1995 (F)
Highest	14 Peace	16 Northern Lights	11 Aspen	9 Crossroads
Lowest	16 Northern Lights	3 Headwaters	16 Northern Lights	16 Northern Lights

Teen Birth Rate

Rationale

Adolescent parents are prone to numerous physical (e.g. low birth weight babies), emotional (lack of social support) and financial problems (poor education, low paying jobs). (Headwaters Health Authority, 1997)

Teen Birth Rates
(number of births per 1,000 women aged 15-19)



AGE SPECIFIC FERTILITY RATES			
(number of live births per 1,000 women aged 15 - 19)			
Region	1993/1994	1994/1995	1995/1996
1 - Chinook	28.5	23.5	19.1
2 - Palliser	14.3	17.4	16.7
3 - Headwaters	*13.3	17.2	13.6
4 - Calgary	14.9	13.0	12.3
5 - Health Authority 5	15.3	17.1	16.1
6 - David Thompson	22.3	21.2	23.1
7 - East Central	13.9	*9.4	*6.6
8 - WestView	19.4	17.5	15.2
9 - Crossroads	25.6	23.4	20.1
10 - Capital	20.6	16.0	14.7
11 - Aspen	19.9	16.9	21.5
12 - Lakeland	21.8	21.2	30.0
13 - Mistahia	28.1	23.2	23.3
14 - Peace	27.3	24.0	27.5
15 - Keeweenok	†51.8	47.7	53.1
16 - Northern Lights	26.3	23.4	23.6
17 - Northwestern	46.0	†53.6	†60.9

*Region with lowest teen fertility rate with respect to corresponding years.

†Region with highest teen fertility rate with respect to corresponding years.

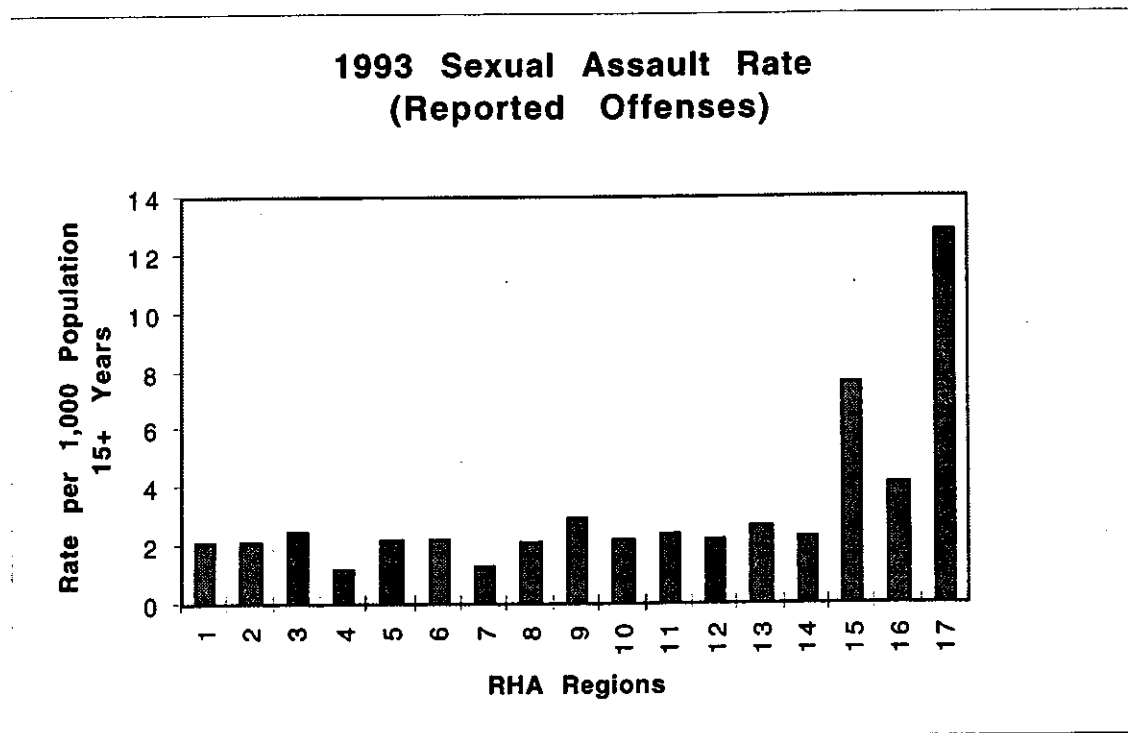
Source: Alberta Health, Health Surveillance: Reproductive Health: Pregnancy Outcomes 1985/86-1995/96

Sexual and Physical Assault

Rationale

Abuse is the result of a multitude of circumstances such as an individual's characteristics, poor family relationships and societal stressors (poverty, unemployment). (Ward, 1994, p 290)

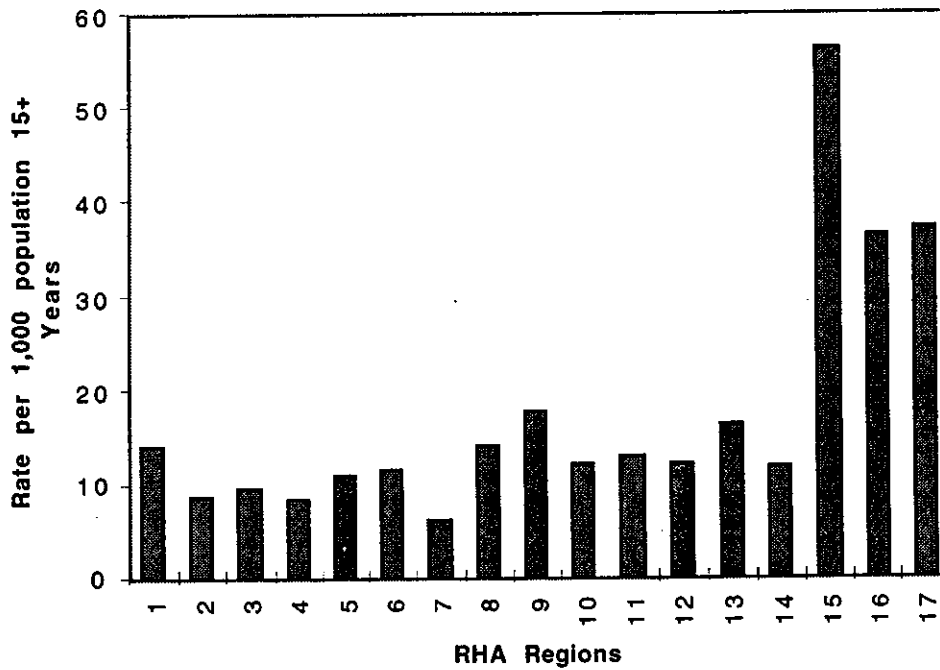
(These are reported cases and are usually the most extreme cases.)



AADAC. Social and Health Indicators of Alcohol and Drug Abuse. *Fourth Edition. April, 1996.*

REGIONAL COMPARISON Sexual Assault (Appendix Table 11)	
	1993
Highest	17 - Northwestern
Lowest	4 - Calgary

1993 Physical Assault Rate (Reported Offenses)



AADAC. Social and Health Indicators of Alcohol and Drug Abuse. *Fourth Edition. April, 1996.*

REGIONAL COMPARISON Physical Assault (Appendix Table 12)	
	1993
Highest	15 - Keeweenaw
Lowest	7 - East Central

Social Indicators

In the near future it is projected that information regarding Child Welfare will be collected on a regional basis. Data presented in this report are based on six district offices:

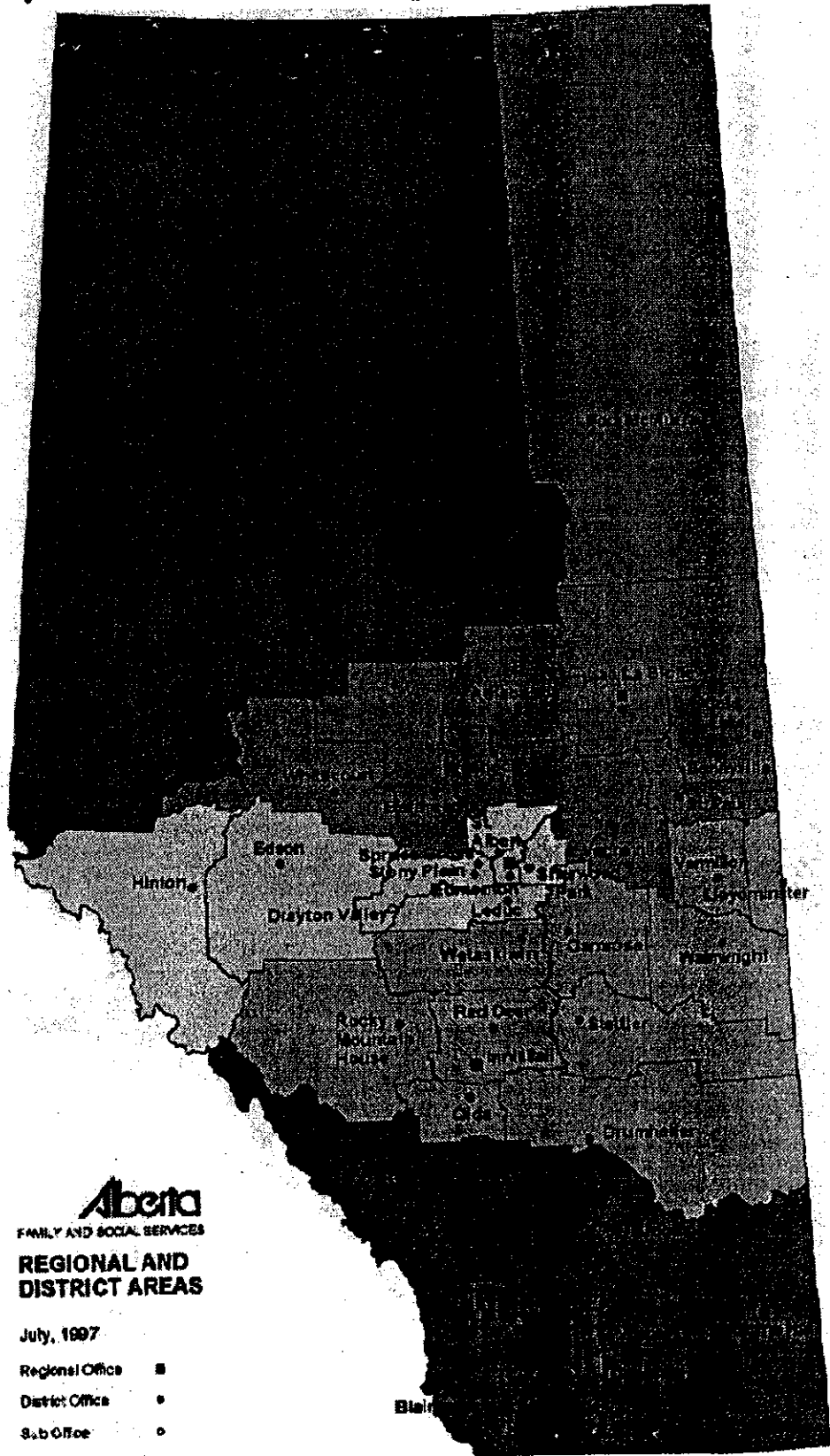
North West
North East
Edmonton
Central
Calgary
South

Data for the Housing, Crime Rate and Enrollment rates are based on provincial figures.

All social indicators are chosen based upon their frequency in literature and their data availability.

- ◆ Child Protection Caseloads
- ◆ Reports of Allegations of Abuse or Neglect
- ◆ Child Protection Investigations Completed
- ◆ Supports for Independence (SFI) Caseloads
- ◆ Public Housing Shelters
- ◆ Crime Rate
- ◆ Enrollment Rates

Alberta Family and Social Services Map



A Note on Child Welfare Indicators

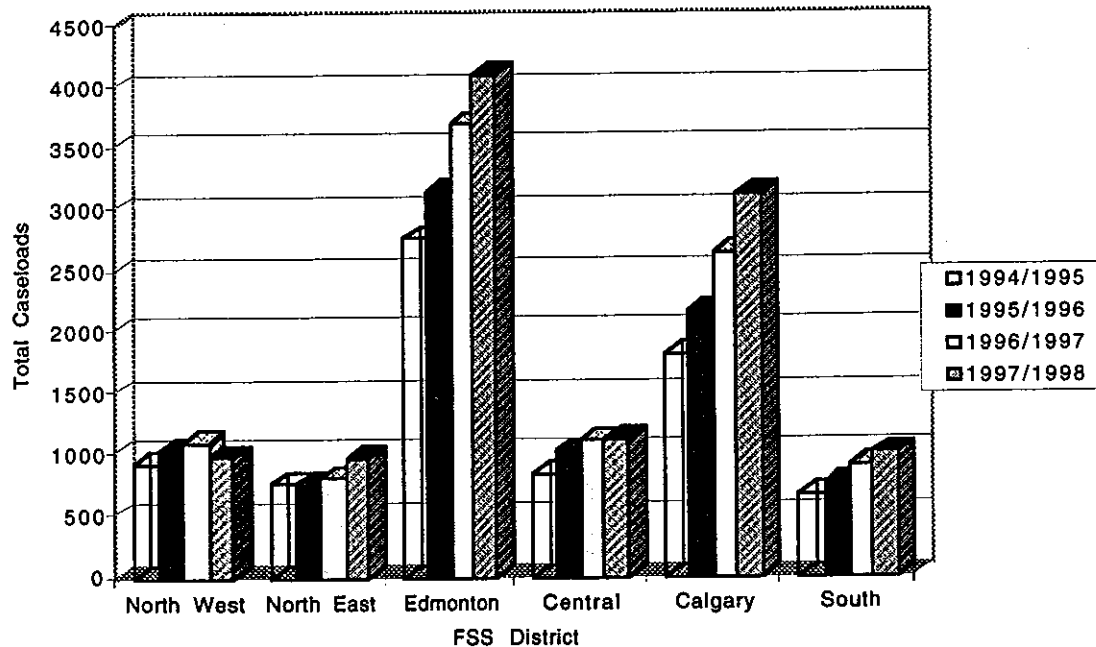
Children are brought into protective care for numerous reasons, all of which threaten the “survival, security and development of the child” (Child Welfare Act). Children are a vulnerable sector of the population and a determinant of a community’s future well-being.

Child Protection Caseloads

Rationale

Child Welfare caseloads (with the exception of North West District) are going up, reflecting a negative trend for society.

Child Protection Caseloads



District	1994/1995	1995/1996	1996/1997	1997/1998
North West	920	1026	1094	980
North East	759	740	801	970
Edmonton	2769	3135	3700	4094
Central	832	1017	1102	1111
Calgary	1827	2166	2645	3113
South	667	755	894	990

Source: Alberta Family and Social Services.

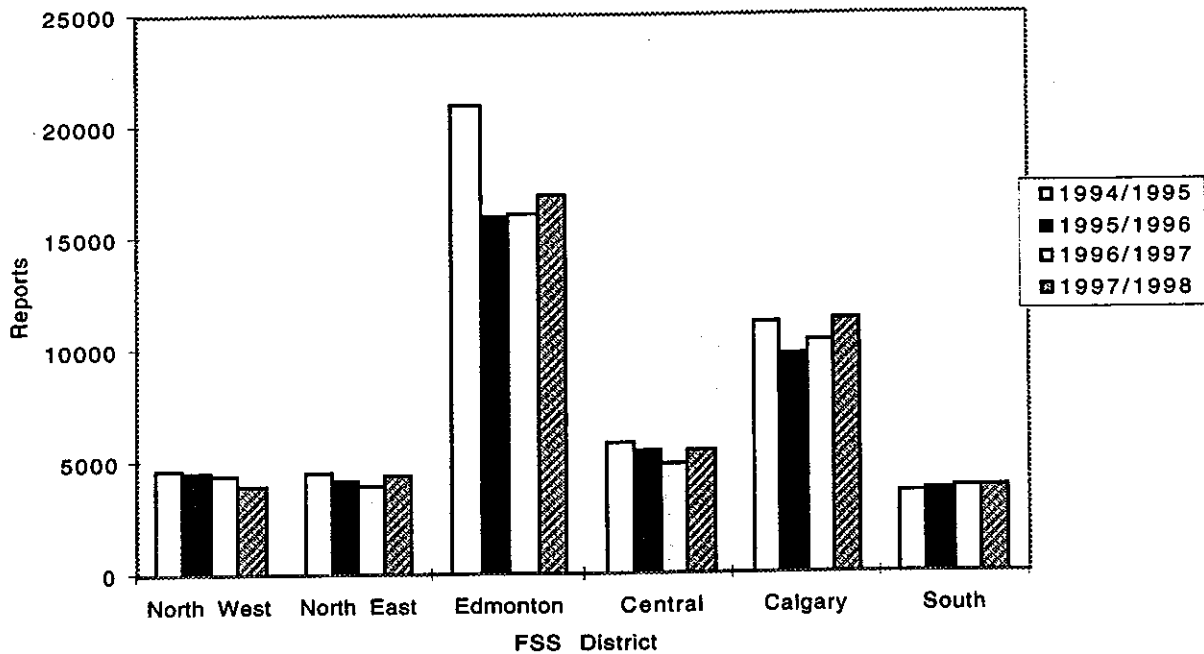
Note: Lloydminster and Vermilion moved from North East to Central in December 1995.
 Grande Cache moved from Edmonton to North West in April 1996.
 Barrhead and Whitecourt moved from North West to North East in June 1997.

Reports of Allegations of Abuse or Neglect

Rationale

Regional Reports of Allegations of Abuse or Neglect are more common in Urban Centres versus the rest of the province. This can be an indication of several factors such as a greater sense of privacy and acceptance in reporting potential cases and a greater awareness of support networks.

Abuse or Neglect - Reports of Allegations



Years	North West	North East	Edmonton	Central	Calgary	South
1994/95	4635	4590	20961	5934	11251	3626
1995/96	4589	4223	15976	5521	9791	3751
1996/97	4418	3976	16076	4949	10406	3910
1997/98	3969	4477	16865	5491	11305	3919

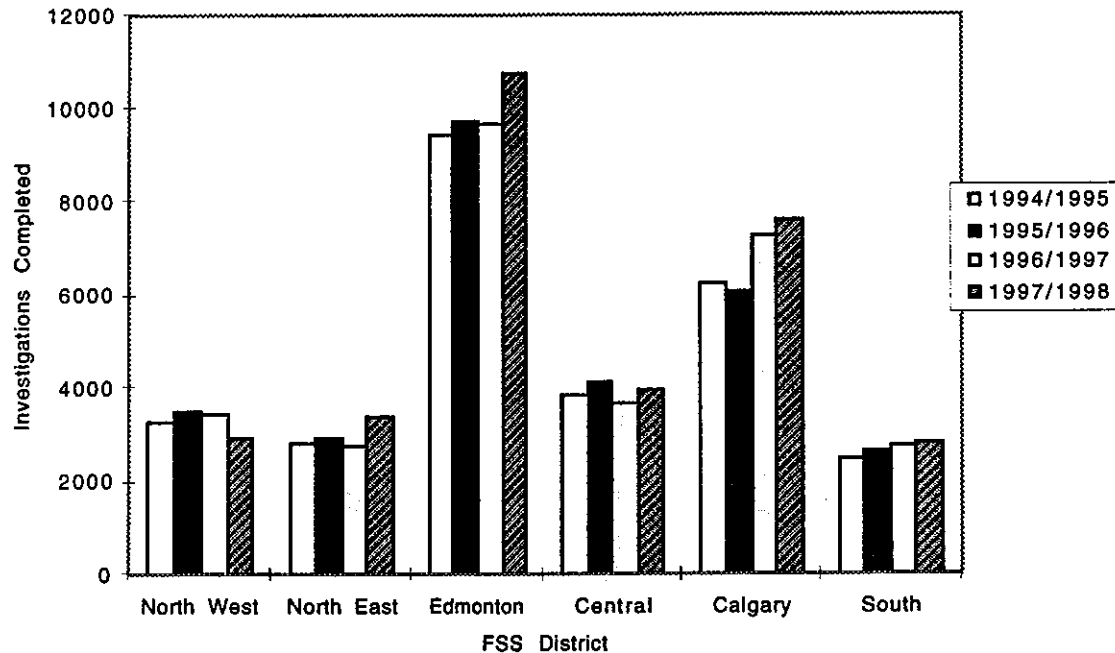
Source: Alberta Family and Social Services.

Child Protection Investigations Completed

Rationale

Earlier years indicate fewer cases being completed. In urban centres there are higher numbers of investigations being completed which can indicate more accessibility and availability of assistance in these areas.

Child Protection Investigations Completed



Years	North West	North East	Edmonton	Central	Calgary	South	HQ
1994/95	3263	2838	9439	3839	6253	2492	21
1995/96	3528	2945	9731	4140	6092	2657	0
1996/97	3457	2781	9665	3687	7282	2762	0
1997/98	2935	3370	10744	3946	7652	2817	0

Source: Alberta Family and Social Services.

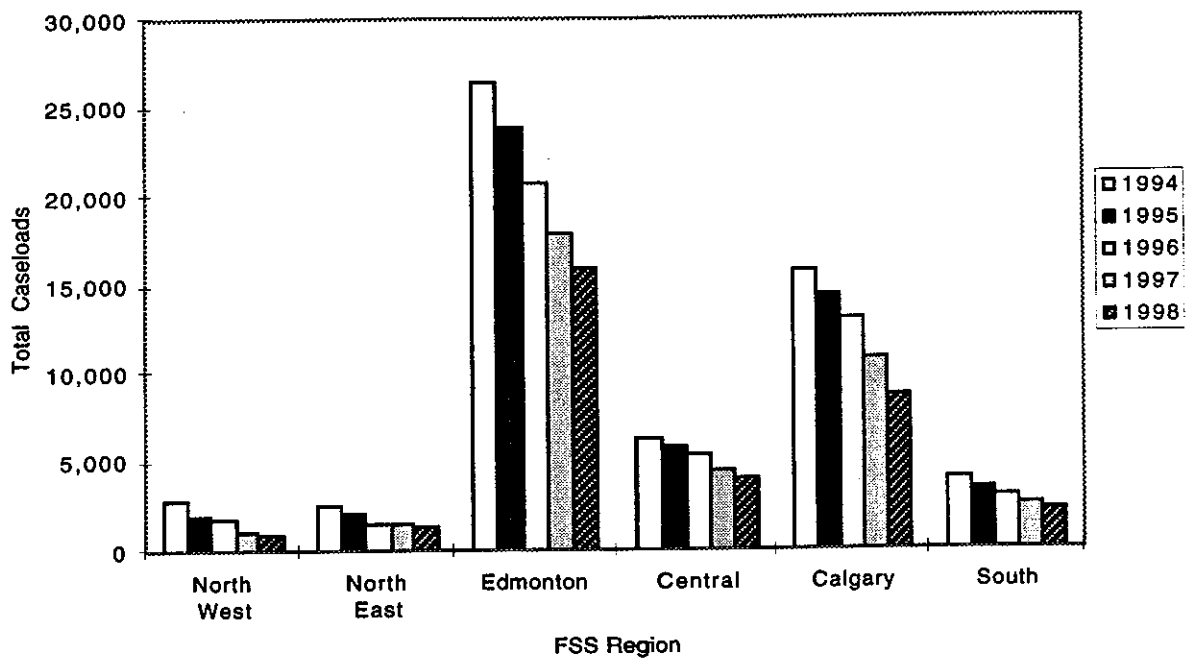
Note: Child investigations are determined by a Child Welfare caseworker after receiving any evidence that a child may be in need of protective care. A case commences if there is a need for protective care and ends when child is no longer in need of protective services.

Supports for Independence (SFI) Caseloads

Rationale

An increase in SFI can mean that greater numbers of individuals are living in a state of poverty and in need of assistance. Since 1994, the number of individuals receiving SFI has dropped. However, lower levels of SFI do not necessarily mean that fewer individuals are living in poverty, but may reflect a change in who is eligible for receiving assistance.

Supports for Independence (SFI) Caseloads



NUMBER OF SFI CASES IN ALBERTA

	1998	1997	1996	1995	1994
North West	984	1,136	1,807	2,021	2,820
North East	1,464	1,641	1,545	2,150	2,697
Edmonton	15,915	17,863	20,720	23,924	26,397
Central	4,107	4,534	5,361	5,836	6,370
Calgary	8,800	10,788	13,049	14,500	15,831
South	2,373	2,654	3,068	3,469	4,174
Province	33,642	38,616	45,550	51,990	58,289

Source: Alberta Family and Social Services.

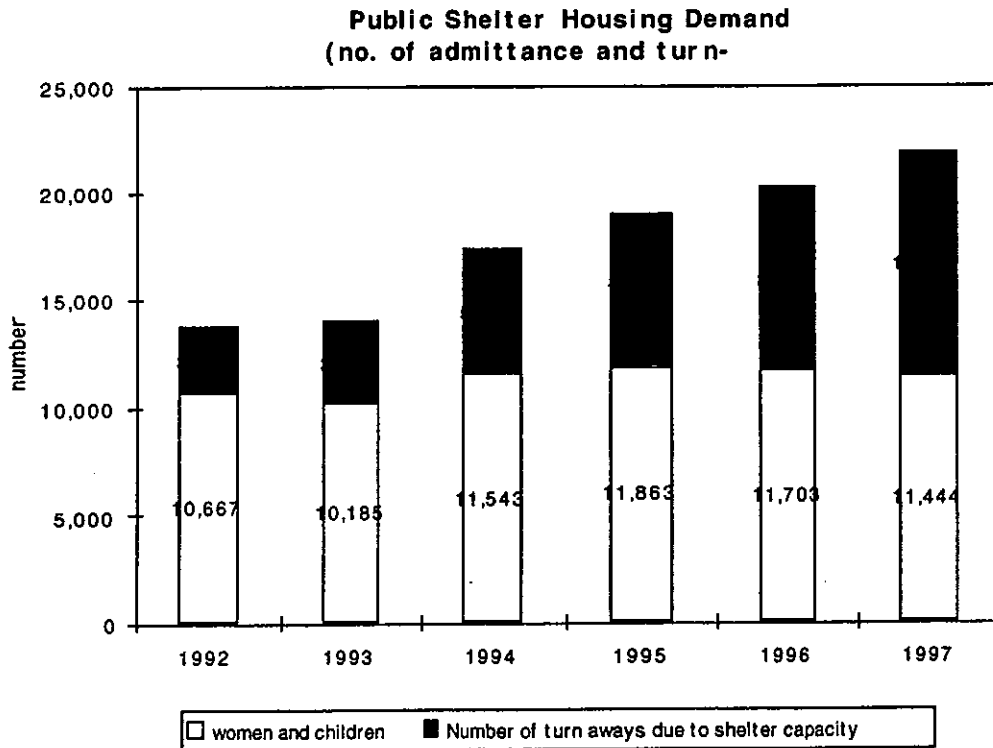
Note: Figures are from July of each year.

Public Shelter Housing

Rationale

Adequate housing can depend upon various factors such as affordable housing options, accommodation levels for individuals dealing with crisis or in need of psychological or physical assistance. A community supportive network can be a valuable source in trying to ensure its members are meeting basic necessities.

(Figures are provided on a provincial level.)



ALBERTA ACCOMMODATION RATES

	1992	1993	1994	1995	1996	1997
Admittance in shelters: women and children	10,667	10,185	11,543	11,863	11,703	11,444
Number of turn aways due to shelter capacity	3,084	3,802	5,797	N/A	8,436 (12.8%)	N/A

Source: Alberta Council of Women's Shelters.

Note: This information is from women receiving services from women's shelters. The data was collected from 19 women's shelters, eight rural family violence prevention centres and two second stage housing programs. The reporting was done on an anonymous basis.

Crime Rate

Rationale

An individual's sense of personal security stems from a perception of crime and not the actual rate of crime. The feeling of personal safety is perceived differently between men and women (e.g. women feel less safe walking alone after dark) and between different age groups (e.g. elderly versus 15- 24 year olds): "Two socio-demographic characteristics which have consistently been linked to the fear of crime are gender and age. Most research has shown that the fear of crime is higher for women and for the elderly than it is for men or for younger segments of the population." (Statistics Canada - Cat. No. 85-002, Vol. 15, No. 9) Although crime rates do not give an overall indication of an individual's perception of crime, higher levels of crime are correlated with lower levels of personal safety.

There are 14 Royal Canadian Mounted Police (RCMP.) divisions which parallel provincial borders with a headquarters in Ottawa. These divisions are each represented by a letter. The following statistics are from the K Division (Alberta).

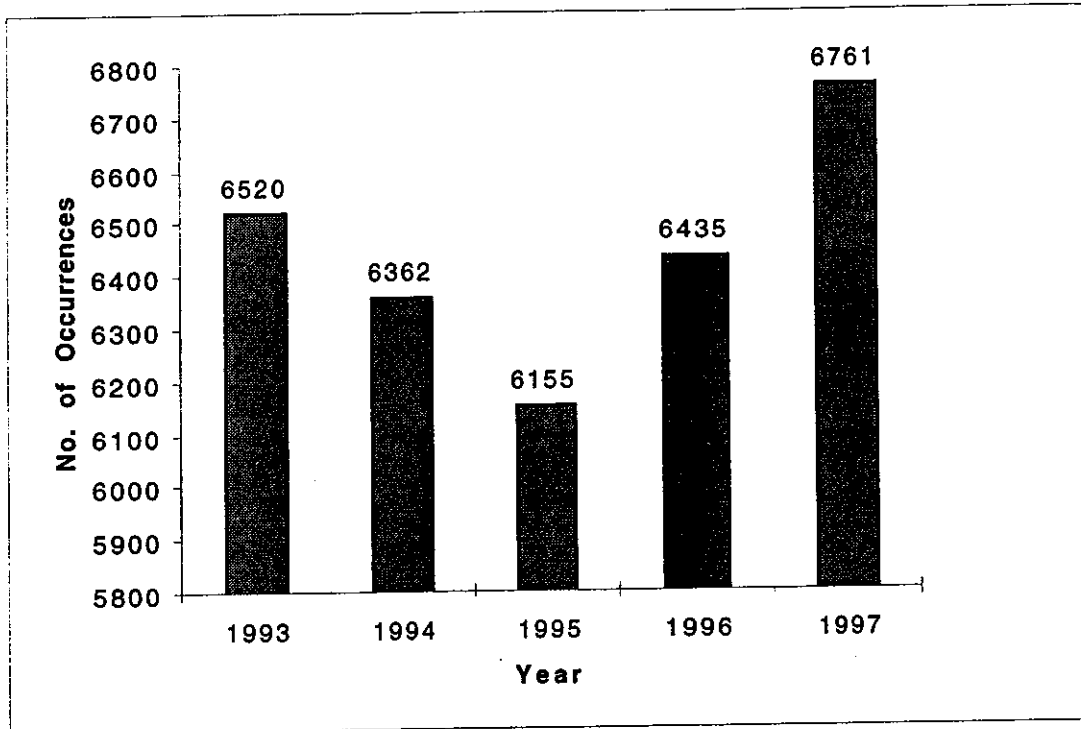
In 1996, the federal police service began a process of regionalization. Alberta is part of the North West region. K Division has proposed a three-year business plan from 1998/1999 to 2000/2001. In the plan, objectives with accompanying performances will be addressed.

The RCMP provides police services under terms of policing agreements to all provinces (except Quebec, Ontario, Yukon and NWT) and under separate municipal policing agreements to 198 municipalities, 63 of which are in the K Division.

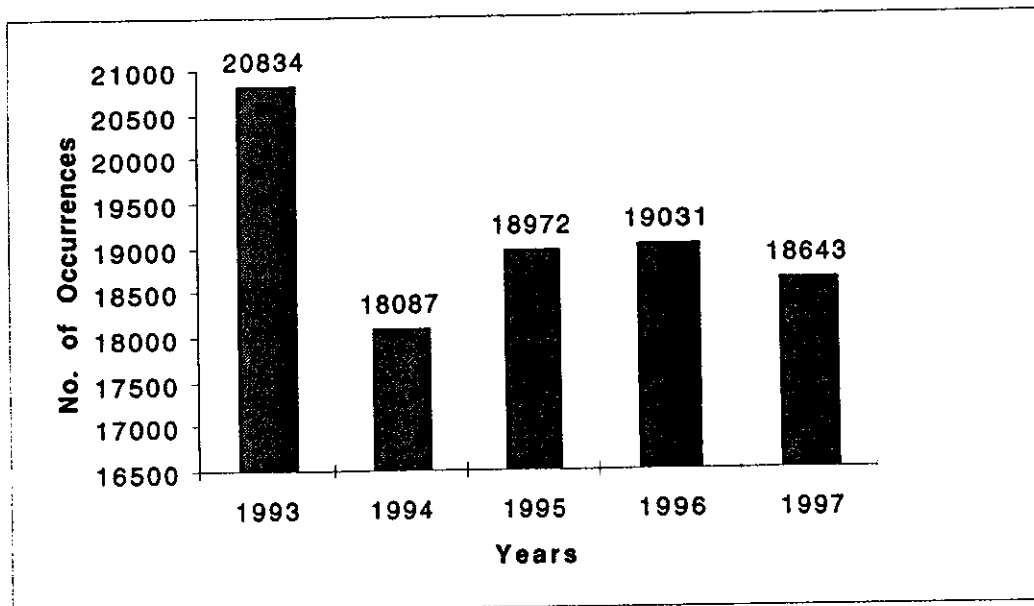
(Figures are provided on a provincial level.)

"K" Division Provincial Jurisdiction
Actual Offences Reported to Operational Statistics Reporting (OSR)

Total Person Related Crime



Total Property Crime

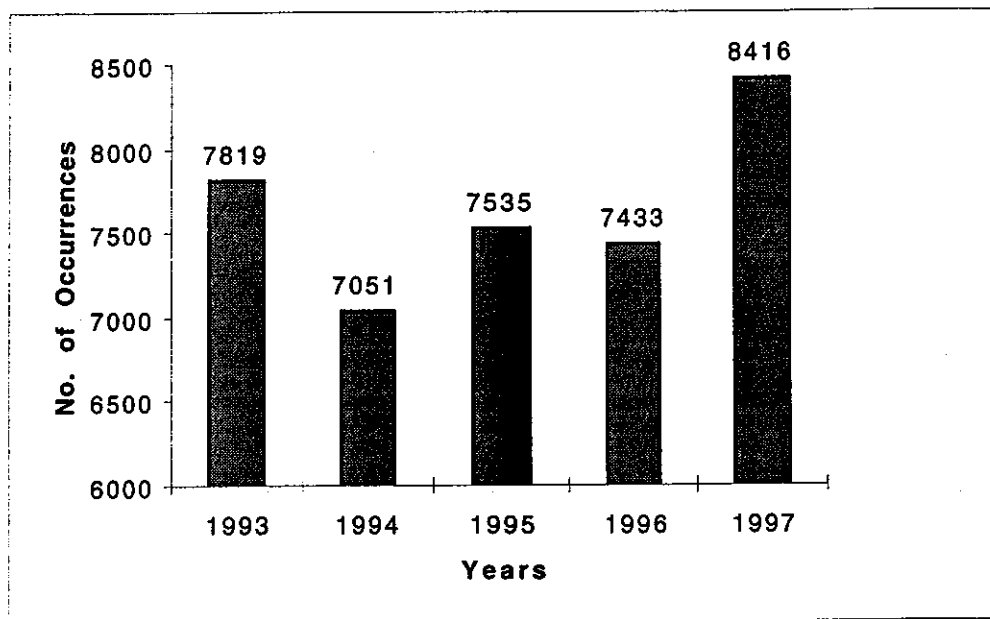


Source: Royal Canadian Mounted Police. 1997 "K" Division Annual Report. On-Line Data

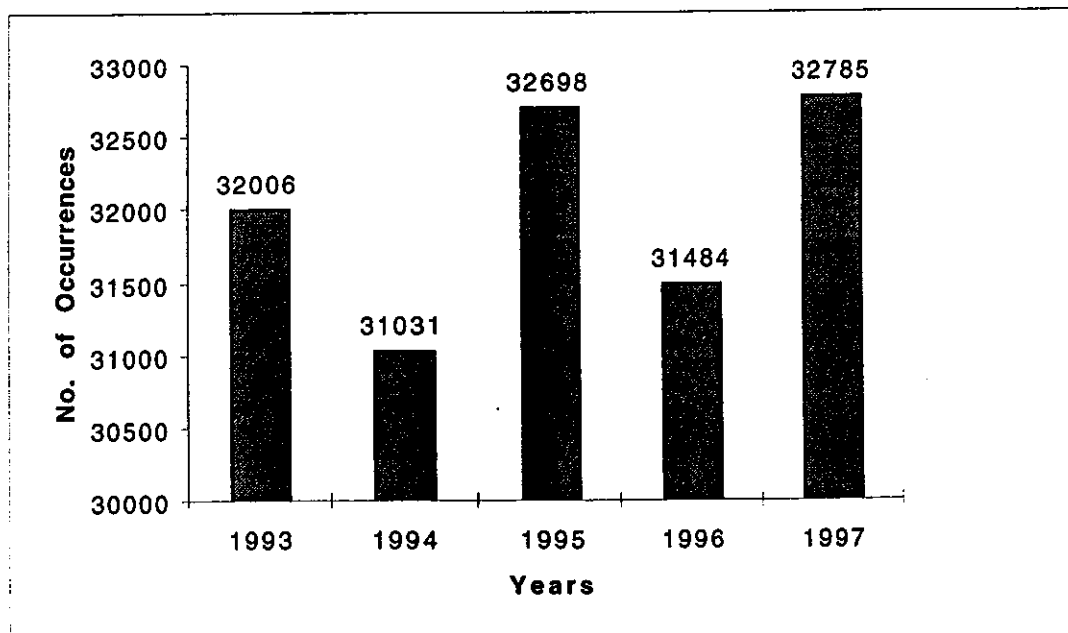
"K" Division Municipal Jurisdiction

Actual Offences Reported to Operational Statistics Reporting (OSR)

Total Person Related Crime



Total Property Crime



Source: Royal Canadian Mounted Police. 1997 "K" Division Annual Report. On-Line Data

Note: Alberta is divided into seven subdivisions and five autonomous detachments. Subdivisions are further broken down into geographic detachments responsible for all their jurisdictional areas. In addition, there are specialist units (e.g. police service dogs, plainclothes investigations for lengthy drug cases, etc.).

Enrollment Rates

Rationale

Enrollment levels can be associated with an individual's desire to improve their present socioeconomic status and increase their knowledge of the community (and various areas of their life). (Edmonton Life Project, 1997) This assists in the physical and mental well-being of the family by lessening the frustration associated with poor adult literacy skills. The following are enrollment rates in post-secondary institutions across the province.

(Figures are provided on a provincial level, but can be broken down according to each school in the province.)

Alberta Enrollment in All Programs by Sector

Year	University	Public College	Technical College	Private College	Hospital School	Vocational School
94/95	59,936.9	27,126.6	16,276.0	2,606.3	366.0	12,271.0
95/96	61,275.2	27,808.9	16,882.7	2,479.6	29.0	11,896.1
96/97	63,928.9	28,800.0	17,200.0	2,270.0	N/A	10,850.0

Source: *Advanced Education and Career Development, Common Information System (CIS) and other reports submitted by institutions.*

Note: These figures only reflect full-load equivalents (FLEs) . Some figures may include estimates in calculations.

Alberta Enrollment in Adult Development Programs 1994 - 1995

Academic Upgrade	Career/ Trade	Job Readiness	Adult Basic Education	Adult Literacy	English as a second language	Pre-Employment	Skill Upgrade	Total FLE	TIF
9,341.74	90.60	665.52	671.81	215.61	215.84	2,434.83	3,886.07	18,735.59	56,587

Source: *Advanced Education and Career Development, Common Information System.*

Note: Data as of April 1997. Apprenticeship and apprenticeship-related programs are not included. Data are for programs that do not require grade 12 level education.

Economic Indicators

Economic indicators are based upon eight regions that do not follow the boundaries according to the Regional Health Authorities. The regional boundaries used for the economic indicators are:

- 1 Lethbridge - Medicine Hat
- 2 Drumheller - Stettler
- 3 Calgary
- 4 Athabasca - Jasper - Banff
- 5 Red Deer - Rocky Mountain House
- 6 Edmonton
- 7 Grande Prairie - Peace River
- 8 Fort McMurray - Camrose

Information is also available in selected major centres.

The economic indicators are:

- ◆ Labour Force Participation Rate
- ◆ Unemployment Rate
- ◆ Employment Rate
- ◆ Consumer Bankruptcy
- ◆ Business Bankruptcy

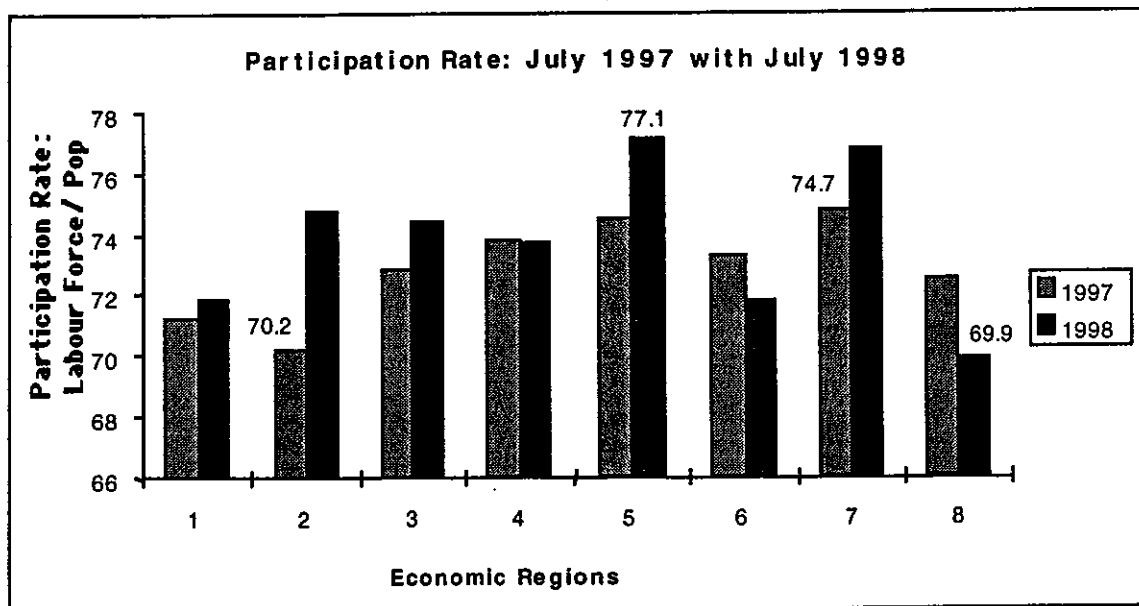
Labour Force Participation Rate

Unemployment Rate

Employment Rate

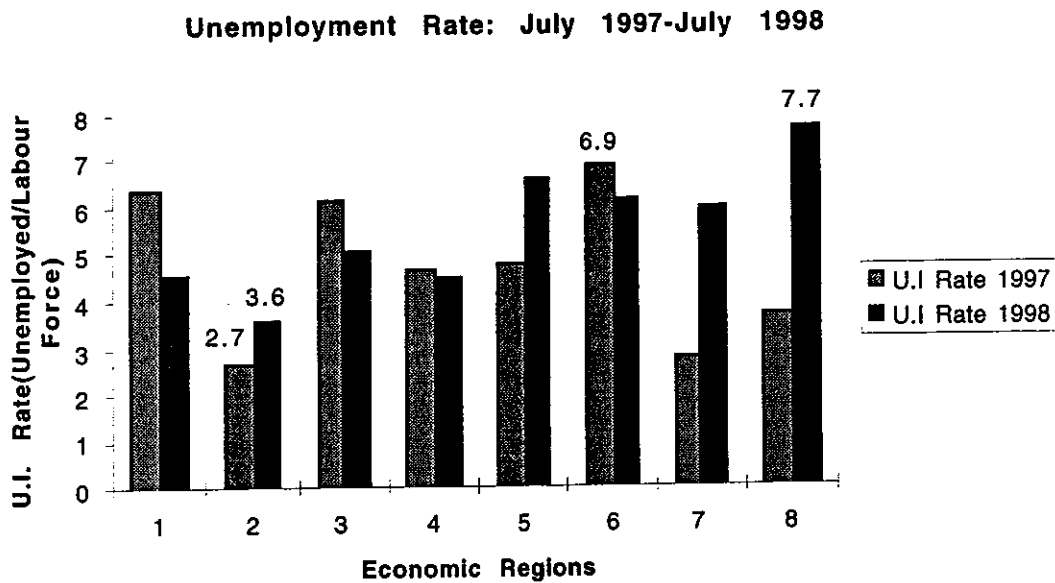
Rationale

These indicators can affect the quality of life for an individual as employment is correlated to financial security, a sense of control over one's environment and provide a social network. Unemployment has been associated with negative behavioural patterns like smoking and alcohol use. (Wadsworth, 1997)



Source: Statistics Canada. Labour Force Survey. On-line data.

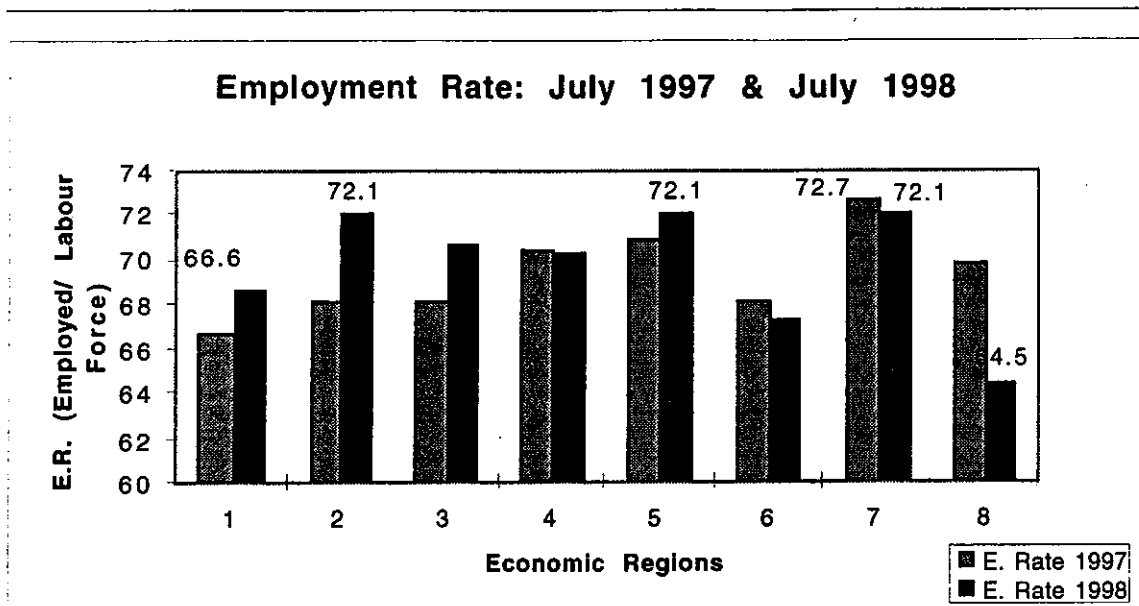
REGIONAL COMPARISON Labour Force Participation Rate		
	July 1997	July 1998
Highest	7 - Grande Prairie - Peace River	5 - Red Deer - Rocky Mountain House
Lowest	2- Drumheller-Stettler	8 - Fort McMurray - Camrose



Source: Statistics Canada. Labour Force Survey. On-line data.

REGIONAL COMPARISON Unemployment Rate		
	July 1997	July 1998
Highest	6 - Edmonton	8 - FortMcMurray-Camrose
Lowest	2 - Drumheller - Stettler	2 - Drumheller - Stettler

The greatest change occurred in the Fort McMurray -Camrose region (increase).
 The least change occurred in the Athabasca-Jasper-Banff region (decrease).



Source: Statistic Canada. Labour Force Survey. On-line data.

REGIONAL COMPARISON Employment Rate		
	July 1997	July 1998
Highest	7 - Grande Prairie Peace River	7 - Grande Prairie Peace River 5 - Red Deer - Rocky Mountain House 2 - Drumheller - Stettler
Lowest	1 - Lethbridge - Medicine Hat	8 - Fort McMurray - Camrose

The greatest change occurred in the Fort McMurray region (decrease).
The least change occurred in the Athabasca-Jasper-Banff (decrease).

Figures encompass an overall figure for both sexes and do not distinguish between part-time and full-time work.

Consumer Bankruptcy

Business Bankruptcy

Rationale

Personal bankruptcy can lead an individual to feel a loss of identity through a change in socioeconomic status, financial security and loss of control over the environment. (Wadsworth, 1997).

(Rates are available for only major centres.)

Consumer Bankruptcy Rate Per 1,000 Population

Region	1991	1992	1993	1994	1995	1996
Calgary	3.2	3.5	3.0	3.3	3.9	4.2
Camrose	1.3	1.3	1.3	1.3	1.9	2.6
Edmonton	2.4	2.4	2.2	2.5	3.9	5.1
Fort McMurray	1.9	2.0	1.4	2.2	2.7	3.4
Grand Centre	1.9	2.0	1.5	1.2	2.0	2.5
Grande Prairie	1.5	1.6	2.3	1.9	3.4	4.1
Lethbridge	3.0	2.9	3.0	3.3	4.5	4.9
Lloydminster	0.8	1.2	1.2	0.8	1.8	1.7
Medicine Hat	3.6	4.3	3.3	3.6	4.5	5.2
Red Deer	2.4	2.5	1.9	2.3	2.9	4.2
Wetaskiwin	1.7	2.6	0.9	1.6	1.9	3.4

Source: Office of The Superintendent of Bankruptcy . The Marketplace: Services, Laws & Regulations. On-line data.

Medicine Hat has the highest rate of consumer bankruptcy for 1991-1996. The only exception is in 1995 where both Medicine Hat and Lethbridge had the same rate.

With the exception of 1993, Lloydminster had the lowest consumer bankruptcy rate amongst the major centres.

Business Bankruptcy Rate Per 1,000 Establishments

Region	1991	1992	1993	1994	1995	1996
Calgary	16	19	18	16	20	16
Camrose	21	6	4	15	12	15
Edmonton	17	19	19	23	30	23
Fort McMurray	20	18	20	18	37	37
Grand Centre	12	19	12	7	19	19
Grande Prairie	8	13	17	12	16	16
Lethbridge	22	14	22	21	18	21
Lloydminster	6	8	9	6	10	10
Medicine Hat	36	34	26	29	26	26
Red Deer	17	19	24	14	23	14
Wetaskiwin	9	12	7	23	23	23

Source: Office of The Superintendent of Bankruptcy . The Marketplace: Services, Laws & Regulations. On-line data.

The highest business bankruptcy rates shifted between Medicine Hat and Fort McMurray.
The lowest business bankruptcy rates shifted between Lloydminster and Camrose.

Environment Indicators

Information is provided according to specific sites or on a provincial level.

The environment indicators are:

- ◆ Air Quality
- ◆ Solid Waste
- ◆ Water Quality

Air Quality

Rationale

Poor air quality can contribute to poor physical health (e.g. respiratory problems) and environmental damage. (Alberta Treasury, Performance Measurement, 1998)

GOOD, FAIR, POOR AND VERY POOR AIR QUALITY DAYS EACH YEAR

	Good	Fair	*Poor	*Very Poor
1987	350	15	0	0
1988	355	11	0	0
1989	356	9	0	0
1990	354	11	0	0
1991	352	13	0	0
1992	361	5	0	0
1993	359	6	0	0
1994	349	16	0	0
1995	358	7	0	0
1996	360	6	0	0
1997	359	6	0	0

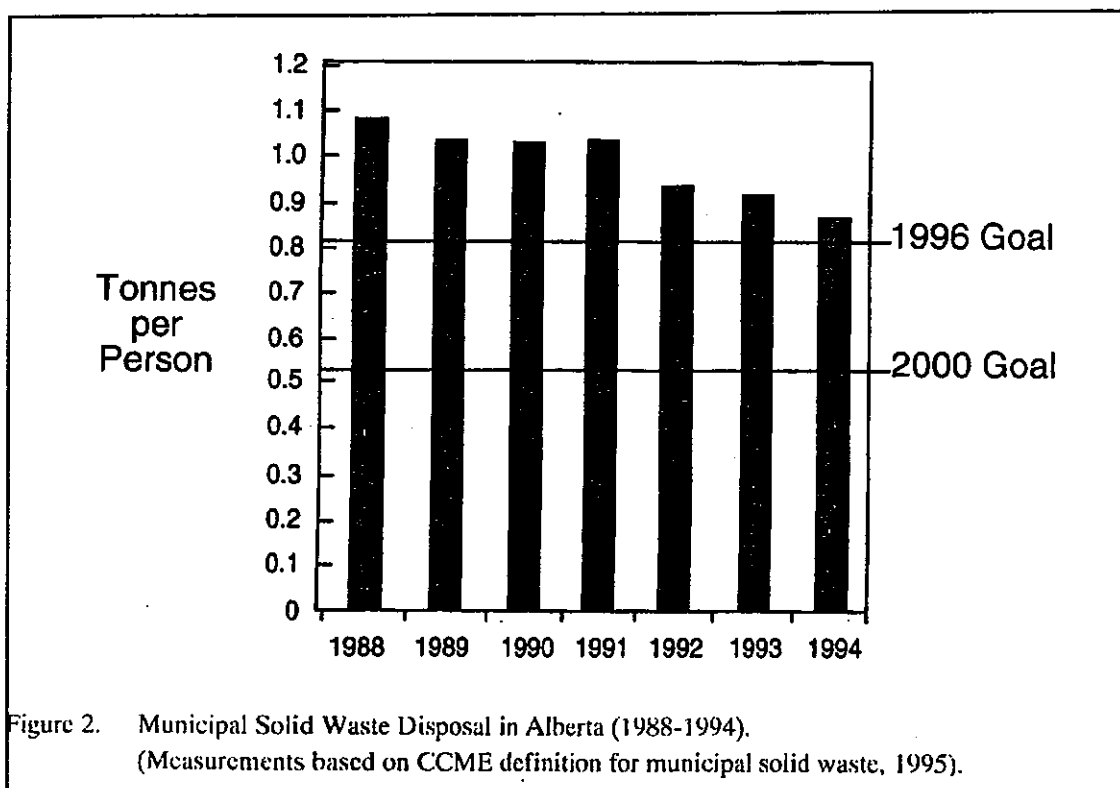
Source: Alberta Treasury. Measuring Up. Fourth Annual Report on the Performance of the Government of Alberta. 1997-1998 Results. June, 1998.

Note: Although no days rated as poor or very poor, selected number of hours were rated as poor/very poor. (Alberta Treasury, Performance Measurement, 1998)

Solid Waste

Rationale

Improper waste disposal can be detrimental to a community's physical health, deplete both economic and natural resources and is not visually aesthetic. (Alberta Environment, 1995)



Source: Alberta Environment. Alberta State of the Environment Annual Report: Waste Management. 1995.

Water Quality




Rationale

Water is essential to the survival of a community. Water is not only used as a drinking source, but for recreation purposes, aesthetic beauty and for sustaining wildlife. Poor water quality can jeopardize the livelihood of various natural habitats and can cause potential health hazards if ingested. (Alberta Treasury, Performance Measurement, 1998)

Results

Overall, the water quality of Alberta's major rivers is good to fair; however, water quality downstream of urban centres on the North Saskatchewan, Bow and Oldman Rivers is unacceptable for recreational use. Water quality tends to be poorer downstream of areas of significant urban, industrial or agricultural development. Fecal coliform bacteria, phosphorous and nitrogen are the variables which most commonly do not meet guidelines.

Water Quality Index (1996): Suitability of Alberta's Major Rivers for Various Uses

Location	 Recreation	 Aquatic Life	 Agriculture	Issues - Concerns
SMOKY/PEACE RIVER				
at Walmo	⊙	⊕	⊙	pulp mill & municipal sources
at Fivemillion	⊕	⊕	⊙	
ATHABASCA RIVER				
at Athabasca	⊕	⊕	⊕	pulp mill & municipal sources
at Old Fort	⊕	⊕	⊕	
NORTH SASKATCHEWAN RIVER				
upstream of Edmonton	⊕	⊙	⊙	municipal, industrial and agricultural pollution sources
downstream of Edmonton	●	⊕	⊙	
RED DEER RIVER				
upstream of Red Deer	⊕	⊙	⊙	municipal, industrial and agricultural pollution sources
downstream of Red Deer	⊙	⊕	⊙	
BOW RIVER				
upstream of Calgary	⊙	⊙	⊙	municipal & agricultural pollution sources; reduced flow due to water withdrawal
downstream of Calgary	●	⊕	⊙	
OLDMAN RIVER				
upstream of Lethbridge	⊕	⊕	⊙	municipal & agricultural pollution sources
downstream of Lethbridge	●	⊕	⊙	

Based on percentage of compliant tests in 1996

- ⊙ water quality is good: (100 - 96% compliance)
- ⊕ water quality is fair: (95 - 86% compliance)
- ⊗ water quality is poor: (85 - 71% compliance)
- water quality is not acceptable (70% compliance and lower)

Source: Alberta Environmental Protection

Note: Municipal sources includes waste water from cities, towns and from storm water run-off.

Source: Alberta Treasury. Measuring Up. Fourth Annual Report on the Performance of the Government of Alberta. 1997-1998 Results. June, 1998.

COROLLARY

A Note on the Low Income Cutoff (LICO)

There is a high correlation between poverty and the quality of life of a community. All the indicators previously mentioned can be positive/negative depending upon the present (and future) socio-economic status of the individual. Although LICO is not an official poverty measure, it is often used as a measure by many government and non-government agencies as a measure of well-being.

Incidence of Low - Income Families			
1996 Census of Alberta Health Regions (20% Sample Data)			
Category	Region		%
Economic Families	1	Chinook Regional Health Authority	13.1
	2	Palliser Health Authority	12.3
	3	Headwaters Health Authority	*8.2
	4	Calgary Regional Health Authority	15.6
	5	Health Authority 5	10.3
	6	David Thompson Regional Health Authority	13.0
	7	East Central Regional Health Authority	10.0
	8	WestView Regional Health Authority	9.1
	9	Crossroads Regional Health Authority	13.2
	10	Capital Health Authority	18.5
	11	Aspen Regional Health Authority	11.4
	12	Lakeland Regional Health Authority	13.3
	13	Mistahia Regional Health Authority	11.0
	14	Peace Regional Health Authority	10.1
	15	Keeweenok Lakes Regional Health Authority	†20.0
	16	Northern Lights Regional Health Authority	11.4
	17	Northwestern Regional Health Authority	12.4

Source: Health Surveillance, Alberta Health.

*Lowest incidence of low-income family situations.

†Highest incidence of low-income family situations.

Incidence of Low - Income Families			
1996 Census of Alberta Health Regions (20% Sample Data)			
Category	Region		%
Unattached Individuals	1	Chinook Regional Health Authority	36.6
	2	Palliser Health Authority	32.2
	3	Headwaters Health Authority	28.9
	4	Calgary Regional Health Authority	41.3
	5	Health Authority 5	25.0
	6	David Thompson Regional Health Authority	33.9
	7	East Central Regional Health Authority	26.8
	8	WestView Regional Health Authority	27.9
	9	Crossroads Regional Health Authority	34.5
	10	Capital Health Authority	†45.2
	11	Aspen Regional Health Authority	29.4
	12	Lakeland Regional Health Authority	30.7
	13	Mistahia Regional Health Authority	32.4
	14	Peace Regional Health Authority	28.6
	15	Keeweenok Lakes Regional Health Authority	30.0
	16	Northern Lights Regional Health Authority	30.0
	17	Northwestern Regional Health Authority	*21.9

Source: Health Surveillance, Alberta Health.

*Lowest incidence of low-income unattached individuals.

†Highest incidence of low-income unattached individuals.

APPENDIX

Tables showing raw data for information presented in this report.

TABLE 1: Low Birth Weight Babies as a percentage of Total Live births

REGIONAL HEALTH AUTHORITY		1991 - 1993	1994 - 1996
Region 1	Chinook Regional Health Authority	5.3	5.7
Region 2	Palliser Health Authority	5.0	5.2
Region 3	Headwaters Health Authority	6.4	5.3
Region 4	Calgary Regional Health Authority	6.1	6.4
Region 5	Health Authority 5	4.9	5.3
Region 6	David Thompson Regional Health Authority	5.7	6.3
Region 7	East Central Regional Health Authority	5.3	5.0
Region 8	WestView Regional Health Authority	5.8	5.4
Region 9	Crossroads Regional Health Authority	5.4	5.8
Region 10	Capital Health Authority	5.9	6.1
Region 11	Aspen Regional Health Authority	5.8	5.3
Region 12	Lakeland Regional Health Authority	5.3	5.1
Region 13	Mistahia Regional Health Authority	5.4	5.0
Region 14	Peace Regional Health Authority	5.0	5.8
Region 15	Keeweenok Lakes Regional Health Authority	5.8	5.9
Region 16	Northern Lights Regional Health Authority	5.1	4.5
Region 17	Northwestern Regional Health Authority	5.0	4.1

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 2: Incidence of STDs Occurring in Males

REGIONAL HEALTH AUTHORITY		1995	1996	1997
Region 1	Chinook Regional Health Authority	113	106	98
Region 2	Palliser Health Authority	86	82	86
Region 3	Headwaters Health Authority	94	65	84
Region 4	Calgary Regional Health Authority	997	1044	1008
Region 5	Health Authority 5	22	11	34
Region 6	David Thompson Regional Health Authority	240	266	233
Region 7	East Central Regional Health Authority	62	54	49
Region 8	WestView Regional Health Authority	46	37	37
Region 9	Crossroads Regional Health Authority	60	77	61
Region 10	Capital Health Authority	1124	1208	1148
Region 11	Aspen Regional Health Authority	32	33	37
Region 12	Lakeland Regional Health Authority	95	76	87
Region 13	Mistahia Regional Health Authority	109	116	102
Region 14	Peace Regional Health Authority	44	25	30
Region 15	Keeweenok Lakes Regional Health Authority	44	47	40
Region 16	Northern Lights Regional Health Authority	86	87	78
Region 17	Northwestern Regional Health Authority	81	92	63

Source: STD Services, Disease Control and Prevention, Alberta Health.

TABLE 3: Incidence of STDs Occurring in Females

REGIONAL HEALTH AUTHORITY		1995	1996	1997
Region 1	Chinook Regional Health Authority	240	199	167
Region 2	Palliser Health Authority	111	119	113
Region 3	Headwaters Health Authority	113	90	114
Region 4	Calgary Regional Health Authority	1349	1328	1255
Region 5	Health Authority 5	33	32	41
Region 6	David Thompson Regional Health Authority	359	388	324
Region 7	East Central Regional Health Authority	91	80	81
Region 8	WestView Regional Health Authority	70	100	84
Region 9	Crossroads Regional Health Authority	137	159	140
Region 10	Capital Health Authority	1316	1386	1373
Region 11	Aspen Regional Health Authority	70	57	57
Region 12	Lakeland Regional Health Authority	127	120	125
Region 13	Mistahia Regional Health Authority	227	228	183
Region 14	Peace Regional Health Authority	72	56	60
Region 15	Keeweenok Lakes Regional Health Authority	93	137	116
Region 16	Northern Lights Regional Health Authority	134	137	184
Region 17	Northwestern Regional Health Authority	123	112	87

Source: STD Services, Disease Control and Prevention, Alberta Health.

TABLE 4: Infant Mortality < one year per 1,000 per Live Births

REGIONAL HEALTH AUTHORITY		1991 - 1993 Total Rate	1994 - 1996 Total Rate
Region 1	Chinook Regional Health Authority	6.9	7.7
Region 2	Palliser Health Authority	5.6	6.5
Region 3	Headwaters Health Authority	8.8	6.2
Region 4	Calgary Regional Health Authority	6.2	5.8
Region 5	Health Authority 5	9.1	9.7
Region 6	David Thompson Regional Health Authority	7.2	7.3
Region 7	East Central Regional Health Authority	6.3	8.4
Region 8	WestView Regional Health Authority	5.7	5.7
Region 9	Crossroads Regional Health Authority	6.4	8.7
Region 10	Capital Health Authority	7.0	7.0
Region 11	Aspen Regional Health Authority	7.5	5.9
Region 12	Lakeland Regional Health Authority	7.8	7.0
Region 13	Mistahia Regional Health Authority	5.9	7.8
Region 14	Peace Regional Health Authority	11.2	8.1
Region 15	Keeweenok Lakes Regional Health Authority	7.4	8.4
Region 16	Northern Lights Regional Health Authority	6.6	5.1
Region 17	Northwestern Regional Health Authority	9.6	10.6

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 5: Age Standardized Mortality Rates for Suicide per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	18.1	17.1
Region 2	Palliser Health Authority	17.5	12.3
Region 3	Headwaters Health Authority	19.0	21.1
Region 4	Calgary Regional Health Authority	13.6	12.7
Region 5	Health Authority 5	14.5	23.7
Region 6	David Thompson Regional Health Authority	21.4	18.7
Region 7	East Central Regional Health Authority	14.0	15.0
Region 8	WestView Regional Health Authority	18.2	18.2
Region 9	Crossroads Regional Health Authority	23.8	20.5
Region 10	Capital Health Authority	17.5	16.5
Region 11	Aspen Regional Health Authority	16.5	20.1
Region 12	Lakeland Regional Health Authority	20.7	17.5
Region 13	Mistahia Regional Health Authority	18.5	17.8
Region 14	Peace Regional Health Authority	15.4	16.8
Region 15	Keeweenok Lakes Regional Health Authority	37.5	25.1
Region 16	Northern Lights Regional Health Authority	10.1	15.4
Region 17	Northwestern Regional Health Authority	24.8	15.1

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 6: Age Standardized Mortality Rates for Suicide for Males per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	29.0	28.0
Region 2	Palliser Health Authority	29.1	19.6
Region 3	Headwaters Health Authority	29.4	37.7
Region 4	Calgary Regional Health Authority	21.6	20.2
Region 5	Health Authority 5	25.4	41.7
Region 6	David Thompson Regional Health Authority	33.8	31.1
Region 7	East Central Regional Health Authority	20.2	28.5
Region 8	WestView Regional Health Authority	26.4	29.9
Region 9	Crossroads Regional Health Authority	39.6	31.7
Region 10	Capital Health Authority	27.3	25.5
Region 11	Aspen Regional Health Authority	28.7	36.1
Region 12	Lakeland Regional Health Authority	33.3	30.9
Region 13	Mistahia Regional Health Authority	32.0	33.1
Region 14	Peace Regional Health Authority	27.3	29.2
Region 15	Keeweenok Lakes Regional Health Authority	62.9	37.1
Region 16	Northern Lights Regional Health Authority	17.5	29.4
Region 17	Northwestern Regional Health Authority	47.7	26.9

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 7: Age Standardized Mortality Rates for Suicide for Females per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	7.0	6.4
Region 2	Palliser Health Authority	5.7	4.9
Region 3	Headwaters Health Authority	7.9	4.4
Region 4	Calgary Regional Health Authority	16.2	5.5
Region 5	Health Authority 5	3.1	5.6
Region 6	David Thompson Regional Health Authority	10.1	6.5
Region 7	East Central Regional Health Authority	7.7	1.4
Region 8	WestView Regional Health Authority	8.8	6.2
Region 9	Crossroads Regional Health Authority	6.9	9.4
Region 10	Capital Health Authority	26.1	9.3
Region 11	Aspen Regional Health Authority	2.9	3.6
Region 12	Lakeland Regional Health Authority	7.4	4.5
Region 13	Mistahia Regional Health Authority	4.0	1.9
Region 14	Peace Regional Health Authority	0.5	3.3
Region 15	Keeweenok Lakes Regional Health Authority	12.6	13.1
Region 16	Northern Lights Regional Health Authority	3.0	1.4
Region 17	Northwestern Regional Health Authority	3.6	2.9

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 8: Age Standardized Mortality Rates for Heart Disease per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	140.3	141.8
Region 2	Palliser Health Authority	176.2	158.7
Region 3	Headwaters Health Authority	134.6	132.4
Region 4	Calgary Regional Health Authority	121.9	131.7
Region 5	Health Authority 5	119.0	131.2
Region 6	David Thompson Regional Health Authority	146.8	151.3
Region 7	East Central Regional Health Authority	162.5	152.9
Region 8	WestView Regional Health Authority	163.6	171.8
Region 9	Crossroads Regional Health Authority	176.0	178.1
Region 10	Capital Health Authority	143.5	144.7
Region 11	Aspen Regional Health Authority	186.1	169.0
Region 12	Lakeland Regional Health Authority	168.8	172.9
Region 13	Mistahia Regional Health Authority	154.7	163.1
Region 14	Peace Regional Health Authority	196.4	163.1
Region 15	Keeweenok Lakes Regional Health Authority	131.1	154.2
Region 16	Northern Lights Regional Health Authority	82.5	165.6
Region 17	Northwestern Regional Health Authority	156.3	169.3

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 9: Age Standardized Mortality Rates for Heart Disease for Females per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	122.1	124.4
Region 2	Palliser Health Authority	155.9	160.2
Region 3	Headwaters Health Authority	120.7	118.7
Region 4	Calgary Regional Health Authority	116.5	125.4
Region 5	Health Authority 5	89.1	111.9
Region 6	David Thompson Regional Health Authority	119.9	138.3
Region 7	East Central Regional Health Authority	135.3	138.5
Region 8	WestView Regional Health Authority	128.7	136.8
Region 9	Crossroads Regional Health Authority	152.2	166.6
Region 10	Capital Health Authority	124.0	126.0
Region 11	Aspen Regional Health Authority	167.6	142.7
Region 12	Lakeland Regional Health Authority	130.8	160.9
Region 13	Mistahia Regional Health Authority	136.2	147.9
Region 14	Peace Regional Health Authority	157.0	130.7
Region 15	Keeweenok Lakes Regional Health Authority	111.8	133.6
Region 16	Northern Lights Regional Health Authority	64.6	102.2
Region 17	Northwestern Regional Health Authority	112.6	132.8

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 10: Age Standardized Mortality Rates for Heart Disease for Males per 100,000

REGIONAL HEALTH AUTHORITY		1990 - 1992	1993 - 1995
Region 1	Chinook Regional Health Authority	158.5	159.4
Region 2	Palliser Health Authority	196.3	156.8
Region 3	Headwaters Health Authority	147.2	144.7
Region 4	Calgary Regional Health Authority	132.7	148.2
Region 5	Health Authority 5	146.5	147.9
Region 6	David Thompson Regional Health Authority	171.8	162.5
Region 7	East Central Regional Health Authority	185.1	164.5
Region 8	WestView Regional Health Authority	191.8	201.0
Region 9	Crossroads Regional Health Authority	195.5	185.1
Region 10	Capital Health Authority	166.1	167.5
Region 11	Aspen Regional Health Authority	198.4	186.2
Region 12	Lakeland Regional Health Authority	198.0	179.9
Region 13	Mistahia Regional Health Authority	167.9	171.5
Region 14	Peace Regional Health Authority	227.0	187.7
Region 15	Keeweenok Lakes Regional Health Authority	144.6	167.0
Region 16	Northern Lights Regional Health Authority	95.2	222.5
Region 17	Northwestern Regional Health Authority	187.0	197.3

Source: Alberta Health. Information to Support the Health Authority. Business Plans and Annual Reports. November, 1997.

TABLE 11: Rate of Sexual Assault: Reported Offences 1993 (rate per 1,000 population 15 years and older)

REGIONAL HEALTH AUTHORITY		Sexual Assault
Region 1	Chinook Regional Health Authority	2.09
Region 2	Palliser Health Authority	2.09
Region 3	Headwaters Health Authority	2.43
Region 4	Calgary Regional Health Authority	1.23
Region 5	Health Authority 5	2.22
Region 6	David Thompson Regional Health Authority	2.19
Region 7	East Central Regional Health Authority	1.24
Region 8	WestView Regional Health Authority	2.14
Region 9	Crossroads Regional Health Authority	2.89
Region 10	Capital Health Authority	2.16
Region 11	Aspen Regional Health Authority	2.36
Region 12	Lakeland Regional Health Authority	2.19
Region 13	Mistahia Regional Health Authority	2.61
Region 14	Peace Regional Health Authority	2.26
Region 15	Keeweenok Lakes Regional Health Authority	7.63
Region 16	Northern Lights Regional Health Authority	4.16
Region 17	Northwestern Regional Health Authority	12.84

Source: AADAC. Social and Health Indicators of Alcohol and Drug Abuse. April, 1996.

TABLE 12: Rate of Physical Assault: Reported Offences 1993 (rate per 1,000 population 15 years and older)

REGIONAL HEALTH AUTHORITY		Physical Assault
Region 1	Chinook Regional Health Authority	13.94
Region 2	Palliser Health Authority	8.63
Region 3	Headwaters Health Authority	9.69
Region 4	Calgary Regional Health Authority	8.24
Region 5	Health Authority 5	11.01
Region 6	David Thompson Regional Health Authority	11.49
Region 7	East Central Regional Health Authority	6.09
Region 8	WestView Regional Health Authority	13.92
Region 9	Crossroads Regional Health Authority	17.68
Region 10	Capital Health Authority	12.09
Region 11	Aspen Regional Health Authority	12.84
Region 12	Lakeland Regional Health Authority	12.23
Region 13	Mistahia Regional Health Authority	16.40
Region 14	Peace Regional Health Authority	11.97
Region 15	Keeweenok Lakes Regional Health Authority	56.18
Region 16	Northern Lights Regional Health Authority	36.67
Region 17	Northwestern Regional Health Authority	37.38

Source: AADAC. Social and Health Indicators of Alcohol and Drug Abuse. April, 1996.

Table 13: Water Quality: Percentage Compliance

1996	Recreation	Aquatic Life	Agriculture
	1996	1996	1996
Bow River			
upstream	0.97	0.98	0.99
downstream	0.56	0.89	0.96
North Sask			
upstream	0.94	0.98	0.99
downstream	0.44	0.89	0.96
Red Deer			
upstream	0.86	0.97	0.99
downstream	0.72	0.91	0.99
Oldman			
upstream	0.72	0.95	0.97
downstream	0.64	0.88	0.98
Smoky/Peace			
at Watino	0.74	0.92	0.96
at Fort Vermilion	0.71	0.91	0.96
Athabasca			
at Athabasca	0.81	0.94	0.95
at Old Fort	0.71	0.91	0.96

Alberta Environment , Water Sciences Branch. Special Run

Table 14: Water Quality: Percentage Compliance

1995			
	Recreation	Aquatic Life	Agriculture
	1995	1995	1995
Bow River			
upstream	100	100	100
downstream	51	89	95
North Sask			
upstream	97	99	99
downstream	43	90	96
Red Deer			
upstream	97	96	97
downstream	82	90	98
Oldman			
upstream	72	95	98
downstream	59	88	96
Smoky/Peace			
at Watino	82	94	96
at Fort Vermilion	77	92	93
Athabasca			
at Athabasca	93	98	98
at Old Fort	87	96	96

Alberta Environment , Water Sciences Branch. Special Run

Table 15: Water Quality: Percentage Compliance

1994	Recreation	Aquatic Life	Agriculture
	1994	1994	1994
Bow River			
upstream	97	98	100
downstream	51	85	96
North Sask			
upstream	100	99	99
downstream	42	86	96
Red Deer			
upstream	86	96	100
downstream	74	89	97
Oldman			
upstream	97	99	100
downstream	85	94	100
Smoky/Peace			
at Watino	72	90	98
at Fort Vermilion	74	92	98
Athabasca			
at Athabasca	83	93	97
at Old Fort	74	93	99

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Table 16: Water Quality: Percentage Compliance

1993			
	Recreation	Aquatic Life	Agriculture
Bow River	1993	1993	1993
upstream	89	97	99
downstream	64	91	99
North Sask			
upstream	97	99	100
downstream	23	87	93
Red Deer			
upstream	94	98	100
downstream	64	90	99
Oldman			
upstream	77	93	99
downstream	63	90	99
Smoky/Peace			
at Watino	82	95	100
at Fort Vermillion	81	93	98
Athabasca			
at Athabasca			
at Old Fort			

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Table 17: Solid Waste % amount per person compared to 1998 base year

1988	1989	1990	1991	1993	1994	1995	1996
0	2.7	4	2.95	14	22.7	28.7	26.8

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