



**Strategic Human Resources Management:**

**A Demographic Analysis of the Work Force  
Of the City of Grande Prairie, Alberta**

**A Report Prepared by RAL Consulting Limited**

**Hamilton, Ontario, Canada**

**[www.ralconsulting.ca](http://www.ralconsulting.ca)**

**January 2003**

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# Work Force Analysis: City of Grande Prairie

## **Part I: Introduction**

### Project Objective

This project has been carried out by RAL Consulting Limited, a Canadian company with its head office in Hamilton, Ontario. The objective of the project is:

*To analyse the demographic characteristics of the work force of the City of Grande Prairie as a basis for devising human resource management strategies that foster cost-effective recruitment, retention, and development of the city's employees at all organizational levels.*

### Project Outcomes

There are two principal project outcomes: research and consultation.

The research component analyses:

1. Past, current, and projected demographic profiles of the city's work force.
2. Linkages between the city's work force demographic profiles and past, current, and projected demographic profiles of Alberta's labour force and the local labour force.
3. Strategic implications of demographic trends for the city's work force, with particular emphasis on the succession planning process.

The consultation component included a plenary presentation to selected project stakeholders and six meetings with senior department staff (including the Corporate Leadership Team) during the week of November 12 - 15, 2002.

The findings of the research and consultation processes, including recommendations for implementation, are incorporated into this final report to the client.

The main focus of the report is to analyse the extent to which Grande Prairie's city work force is characterized by *demographic imbalance*. Demographic imbalance may or may not be problematic. To document a situation of demographic imbalance does not imply poor work performance or ineffectiveness in human resource management processes such as recruitment or promotion. Demographic imbalance has the potential to create strategic challenges (for example, the loss of key employees through retirement and insufficient recruitment to fill the gaps) in the effective management of the city's most important organizational resource – its people.

### Data Sources

The report is based on both municipal and other public data sources. Grande Prairie furnished the municipal data on a confidential basis. The Grande Prairie "work force data base" covers most of the variables required to conduct demographic analysis including the age, sex, employment status, department, and occupation of the city's 439 current employees as of August, 2002.

Most of the public data are available from Statistics Canada. RAL Consulting Limited acknowledges the strategic role of Canada's national statistical agency in the collection of

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demographic, economic, and social data that is important for planning and decision-making in both the public and private sectors.

### Organization of the Report

The remainder of the report is organized in terms of three parts:

- **Part II** looks at *Alberta's population and labour force*. The province's population and labour force are analysed from the perspective of past, current, and projected demographic trends. This part sets the stage for the analysis in Part III.
- **Part III** examines the *internal demographic trends of Grande Prairie's city work force*. It sketches out the local demographic context and provides profiles of Grande Prairie's work force with respect to age, sex, occupation, employment status, and length of service. It also examines recruitment and attrition patterns. Projections of Grande Prairie's work force at both the "corporate" and departmental levels to 2022 are made on a "steady state" basis, i.e., it is assumed that there will be no change in work force size, occupational structure, service levels, and the use of technology in service delivery.
- **Part IV** identifies the major *Conclusions and Recommendations* emanating from the analysis. The emphasis is on merging the external and internal streams of analysis and setting out practical courses of action.

Both Part II and Part III of the report have a *Key Points* section at the end. Part I, the *Key Points*, and Part IV constitute an *Executive Summary* of the report. For a complete and in-depth understanding of the labour market research undertaken by RAL Consulting Limited on behalf of the City of Grande Prairie, please consult this final report.

### Project Team

RAL Consulting Limited has carried out this project under contract to the City of Grande Prairie. The members of the RAL project team are:

*Richard Loreto (project manager)*  
*Gerald Bierling (researcher)*

Biographies for the project team and information on RAL Consulting Limited can be found at the company's web site ([www.ralconsulting.ca](http://www.ralconsulting.ca)).

RAL Consulting Limited gratefully acknowledges the assistance of the project steering committee chaired by Bill Walker, Director of Protective Services and also including:

Fay Lovell  
Pay & Benefits Technician

Yvonne Whittaker  
Human Resources Consultant

Arlie Peterson  
Human Resources Consultant

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Kim Clayton  
Administrative Assistant  
Grande Prairie Fire Department

Responsibility for the analysis and recommendations of the report rests solely with RAL Consulting Limited.

## Part II: Demographic Analysis of the Alberta Labour Force

### Introduction

From an economic perspective, a municipal government can be analysed in terms of both *demand* and *supply* factors. The notion of *demand*, at its simplest, involves an understanding of the socio-economic characteristics of a municipality's residents and the related need for public services. The *supply* side of the municipality's business activities focuses on its capacity to deliver the demanded services. Although a number of factors affect *supply*, the key one is labour. To ensure sustainability not only must there be residents exerting *demand* but there must also be a work force of trained individuals available to deliver the services.

This part of the report examines the macro labour *supply* factors attributable to demographics. Demographic profiles are developed for Alberta's labour force with emphasis on the factors of age, gender, and migration. An analysis of *demand* factors is beyond the scope of this report.

### Demographic Analysis

#### Overview

Demographics is the study of human populations. In short, its focus is people. Demographers are interested in understanding the trends and market or public policy implications associated with:

- the natural increase in the population (i.e., the difference between births and deaths);
- the migration of people from one city or region to another or between countries;
- and the distribution in the population of characteristics such as age, gender, ethnicity, and race.

In the economy, people can generate demands for private or public goods and services and they can be involved in the production and supply of these goods and services. In other words, people can be customers and clients as well as employers and workers. David K. Foot has demonstrated the strategic value of conducting economic analysis on the foundation of demographics.<sup>1</sup> Foot's "life cycle" approach places primary emphasis on the explanatory power of two variables, age and population size. According to Foot, the utility of demographic analysis for decision-makers in business and government is that it explains "about two-thirds of everything".

#### Canada's "Generations"

Population aging is now a well-established trend in Canada and the United States that is expected to continue in the 21<sup>st</sup> century. The aging of the *baby boomers* born in Canada between 1947 and 1966 drives this trend:

- In 2002 the *boomers* range in age from 36 to 55 and form 32 percent of Canada's population. They constitute the core of the labour force and are consuming a mix of

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<sup>1</sup> David K. Foot with Daniel Stoffman, *Boom, Bust & Echo: Profiting From the Demographic Shift in the 21<sup>st</sup> Century* (Toronto: Stoddart, 2000).

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public and private goods and services reflective of their position in the economic life cycle.

- Since "every year they will (hopefully) get a year older", over the next decade the *boomers* will age into the 46 to 65 range. They will be the *45-plus generation* and will represent an unprecedented force in the marketplace as they consume a changing mix of goods and services.<sup>2</sup>
- Looking forward to the second decade of the century, the first members of the "big generation"<sup>3</sup> will reach the retirement age of 65. Given the indelible stamp that the *boomers* have placed on all prior stages of the life cycle, there is concern about Canada's ability to sustain the pension and health care expenditures that will accompany this "seniors' boom". This concern is valid. However, from the vantage point of 2002, there is time to prepare for the implications of the *boomers'* retirement.
- The *baby bust* generation, born between 1967 and 1979, is the group that followed the boom and its members now range in age from 23 to 35. It is considerably smaller than the *boomer* generation (18 percent of Canada's population) but its significance is where the members of the *bust* generation are currently positioned and will be positioned over the next ten years in the life cycle. At present, some members of this generation are in the post-secondary educational system while others are attempting to establish themselves in their careers or purchase their first houses. During the next ten years, the *bust* generation will age into the 33 to 45 range. Among other needs, they will want more day care and housing but, given their relative size in Canada's population structure, the volume of their demands is substantially less than that generated earlier by the *boomers*.
- The *baby boom echo* essentially represents the children of the *boomers*. The members of this generation were born between 1980 and 1995, with births across Canada reaching a peak in 1990. *Echo kids* currently represent the bulk of Canada's youth, ranging in age from 7 to 22. As the front end of this generation prepares to enter college and university or the labour market, the back end is moving into the primary level of the educational system. The *echo* generation is 21 percent of Canada's population. Therefore, as it ages over the next ten years, there will be a discernible impact on the educational system and the market for young workers who understand the latest technology.

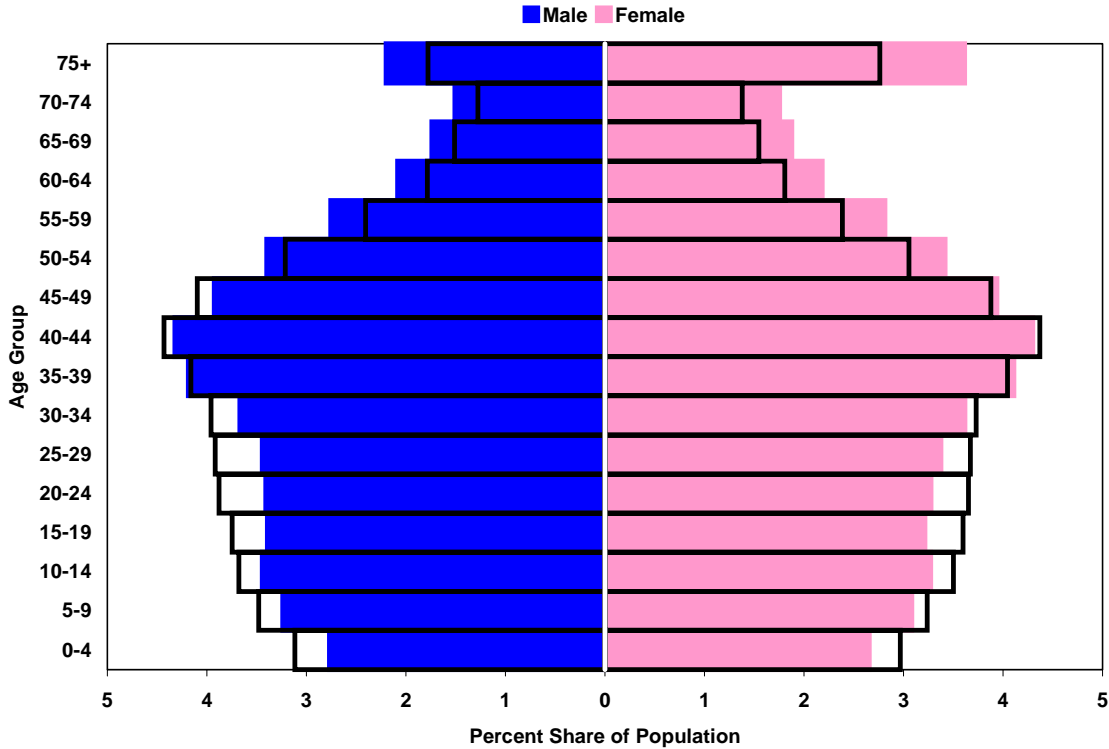
The *boom, bust & echo* template applies to Alberta, Canada's youngest province, but there are some differences. Although Alberta's *boomers* also account for about 32 percent of the population, the share for the *bust* (62 percent) and *echo* (74 percent) generations relative to the *boom* is larger than is the case across Canada. In addition, births peaked in Alberta in 1983, well before they did so at the national level. Chart II-1 shows that, compared to its country, Alberta has proportionately more persons under the age of 50 and fewer over that age.

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<sup>2</sup> David K. Foot, Richard A. Loreto, and Thomas W. McCormack, *A Competitive Analysis of Niagara's Business Opportunities Associated with Adult Lifestyle: A Demographic Perspective*, A study prepared for the Niagara Economic and Tourism Corporation by the Madison Avenue Demographics Group, 1999.

<sup>3</sup> John Kettle, *The Big Generation* (Toronto: McClelland and Stewart, 1980).

**Chart II-1  
Population Pyramid, 2002 (%)  
Alberta (outline) versus Canada (solid)**



Source: Statistics Canada

The Labour Market in Alberta

Defining the Labour Force

The central data source for the labour market in Canada is the *Labour Force Survey* conducted monthly by Statistics Canada. This survey, first instituted in 1945, encompasses a sample of approximately 54,000 households across Canada’s ten provinces. Before proceeding further it is useful to explain a number of concepts employed to describe and analyse the labour market in Canada.

People choosing to participate in labour market activities represent only about one-half of the total population. For analytical purposes the group from which the economy can draw workers -- the labour force source population -- is defined to include everyone 15 years of age and over not living on an Indian Reservation or not institutionalized (in a penal or mental facility) and who are of legal age to work and physically able to do so. The labour force source population consists of two key groups: those who participate in labour market activity and those who do not. The latter group includes primarily the elderly, students not working part-time, the disabled, and stay-at-home spouses.

$Source\ Population = Labour\ Force + Not\ In\ Labour\ Force$
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Those participating in labour market activity are said to form the labour force. The participation rate -- the share of the source population choosing to participate in labour market activity -- is calculated as the labour force divided by the source population expressed as a percent. The participation rate in Canada is currently about 66 percent.

$$\text{Participation Rate} = (\text{Labour Force} / \text{Source Population}) \times 100$$

Labour market participants, in turn, can be broken into two groups: those with jobs (whether full-time or part-time), and those without jobs but looking for work. The latter are designated as unemployed.

$$\text{Labour Force} = \text{Employed} + \text{Unemployed}$$

An employed person is anyone who during the labour force survey reference week did any work at all or who had a job but was not at work due to illness, family responsibilities, bad weather, labour dispute, vacation, etc. A person is considered to be employed if he or she works for pay or profit or is self-employed. Employment also includes unpaid family work that contributes directly to the operation of a farm, business, or professional practice owned by a related member of the household.

The unemployment rate -- an indicator known to most -- is calculated as the number of unemployed expressed as a percentage share of the total labour force. The unemployment rate rises and falls with the business cycle and is considered a key indicator of overall economic performance.

$$\text{Unemployment Rate} = (\text{Unemployed} / \text{Labour Force}) \times 100$$

Unemployed persons are those who, during the reference week, were without work, had actively looked for work in the past four weeks and were available for work, who had not actively looked for work but had been on layoff and were available for work, or who had not actively looked for work but had a new job to start in four weeks or less and were available for work.

### Profile of Alberta's Labour Force<sup>4</sup>

In 2001 the size of the labour force in Alberta was estimated to be 1,710,700 persons or 72 percent of the province's adult population.<sup>5</sup> Males accounted for 55 percent of the labour force and females, 45 percent. The size of the labour force in 2001 was 39 percent larger than it was in 1981, the year in which the last of the *boomers* entered the labour market. A dynamic element in the growth of the labour force over that period was the increasing involvement of females. Females accounted for 59 percent of the increase between 1981 and 2001.

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<sup>4</sup> The data used to compile this profile are taken from *Labour Force Historical Review Revised* (Ottawa: Statistics Canada, February 2002). In most instances data are rounded to the nearest whole number. Percentage shares may not add up to 100 percent due to rounding.

<sup>5</sup> Alberta's population 15 years or older is estimated at 2,366,700.

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Research on the labour force at both the national and provincial levels has demonstrated a number of findings that are relevant to an analysis of municipal government workers in Alberta:

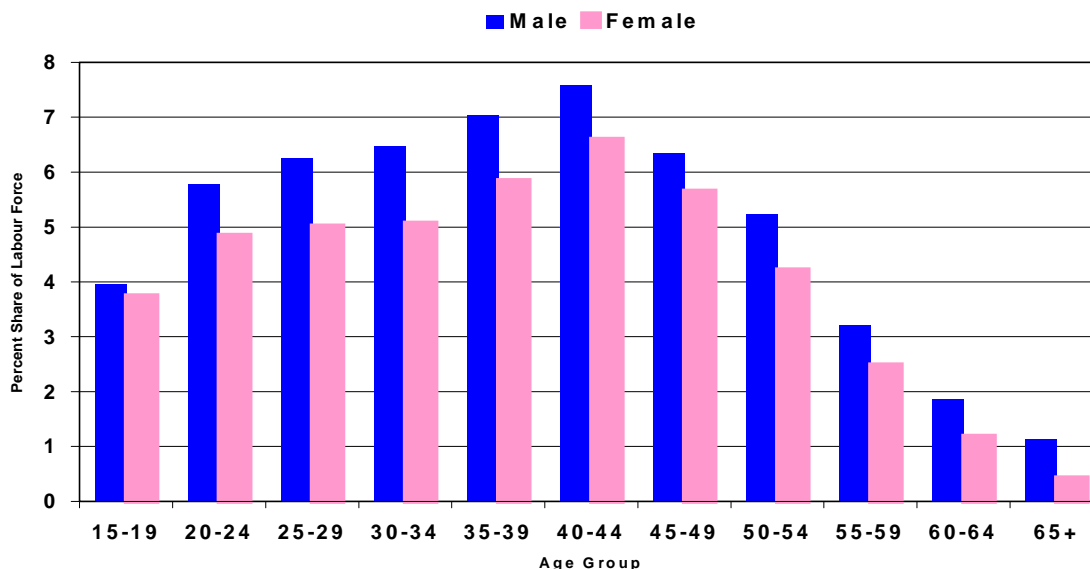
- Labour force participation varies by age and by sex.
- Since the 1950's male participation has declined and female participation has increased. However, female participation stabilized during the 1990's.
- The *boomers* have driven labour market growth since the 1960's. Since 1981 when the last of this generation entered the labour force, Canada's labour force has been slowly aging.
- During the past 20 years or so, there has been a dramatic decline in the share of the "feeder group" to the labour market (workers under 25) and a modest increase in the share of workers 55 and older, the "feeder group" to retirement.
- Between 1976 and 2000 the average age of retirement in Canada declined from 65.2 to 61.4 for males and from 64.4 to 60.7 for females.
- During the next ten years and beyond, workers 45 and older are projected to dominate labour force growth. The number and labour force share of workers under 25 are projected to be lower than the number and labour force share of workers 55 and older.

These and related findings will now be illustrated for Alberta.

### LABOUR FORCE PARTICIPATION

The finding that labour force participation varies by age and by sex is clear in both Chart II-2 and Chart II-3. Chart II-2 shows the distribution of the province's labour force by age and sex in 2001. In every five-year age group, the share of males is higher than the share of females. The "gender gap" is greatest in the 30 – 34 group (1.4 percent) and lowest in the 15 - 19 group (0.3 percent). Chart II-2 also demonstrates the dominance of *boomers* in Alberta's labour force. In 2001, *boomers* (i.e., 35 - 54) were 48.5 percent of the labour force (a decline from their 60.5 percent share in 1981).

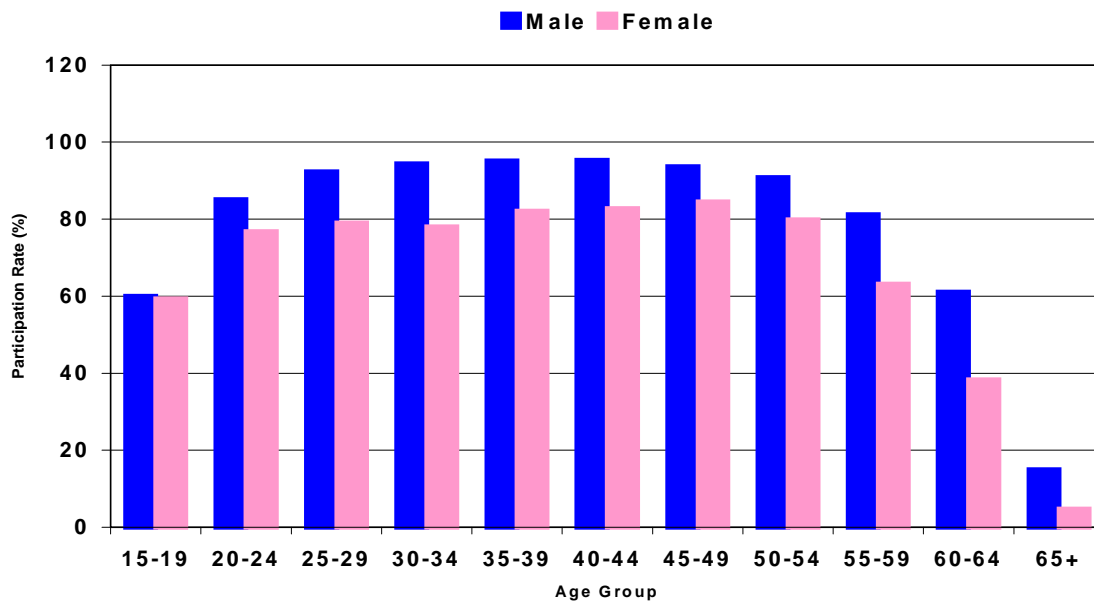
**Chart II-2**  
**Distribution of Alberta's Labour Force by Age and Sex, 2001 (%)**



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In Chart II-3 age and sex differences are depicted in terms of the labour force participation rate. The male rate is higher than the female rate in all groups.

**Chart II-3  
Labour Force Participation Rates by Age and Sex, Alberta, 2001 (%)**



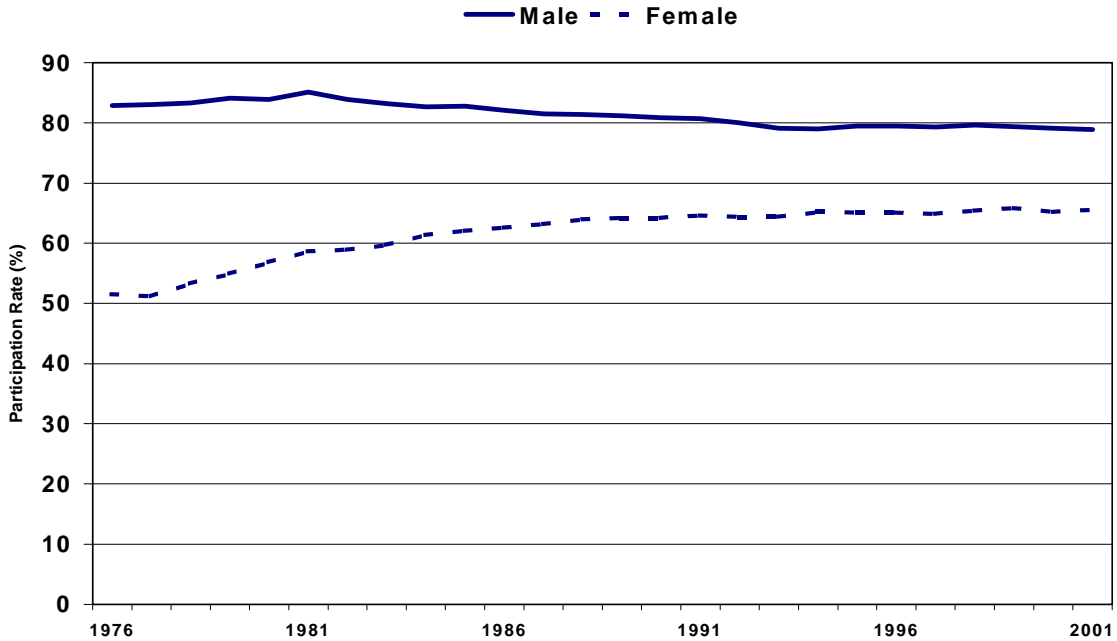
The overall participation rate for males in Alberta is 78.9 percent and for females, 65.6 percent (a gap of 13.3 percentage points). The gap is greatest for the 60 – 64, 55 – 59, and 30 – 34 age groups, respectively. It is also evident from Chart II-3 that the highest levels of participation for both males and females are between the ages of 25 – 54.

Table II-1 and Chart II-4 illustrate the trends towards decreasing male participation and increasing female participation. Between 1976 and 2001 the male rate declined by almost five percent. For females the rate increased by 27 percent. The female participation rate stabilized during the 1990's (the greatest gains were between 1976 and 1986). The female rate has remained around 65 percent from 1994 on.

**Table II-1: Change in Labour Force Participation Rate by Sex, Alberta, 1976 – 2001 (%)**

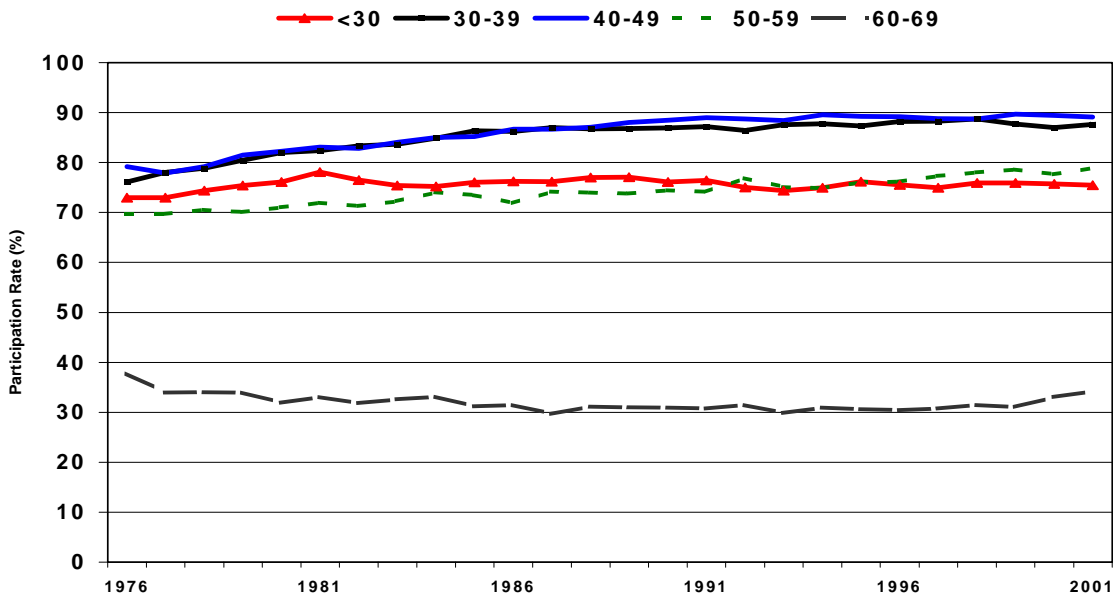
	Total	Males	Females
1976-81	7.1	2.7	14.0
1981-86	0.3	-3.5	6.6
1986-91	0.3	-1.7	3.2
1991-96	-0.4	-1.5	0.8
1996-01	0.0	-0.8	0.8
<b>1976-01</b>	<b>7.3</b>	<b>-4.8</b>	<b>27.4</b>

**Chart II-4  
Labour Force Participation Rates by Sex, Alberta, 1976 – 2001**



It is interesting to expand the analysis of labour force participation by examining the rate variation by age group over time (Chart II-5). The participation rate for the youngest workers (under 30) increased only four percent between 1976 and 2001. For workers in the other age groups, the change was more substantial. The rate for workers in their thirties increased 15 percent; for workers in their forties, 13 percent; and for workers in their fifties, 13 percent. The 60 – 69 group experienced a decline of 10 percent.

**Chart II-5  
Labour Force Participation Rates by Age Group, Alberta, 1976 – 2001 (%)**



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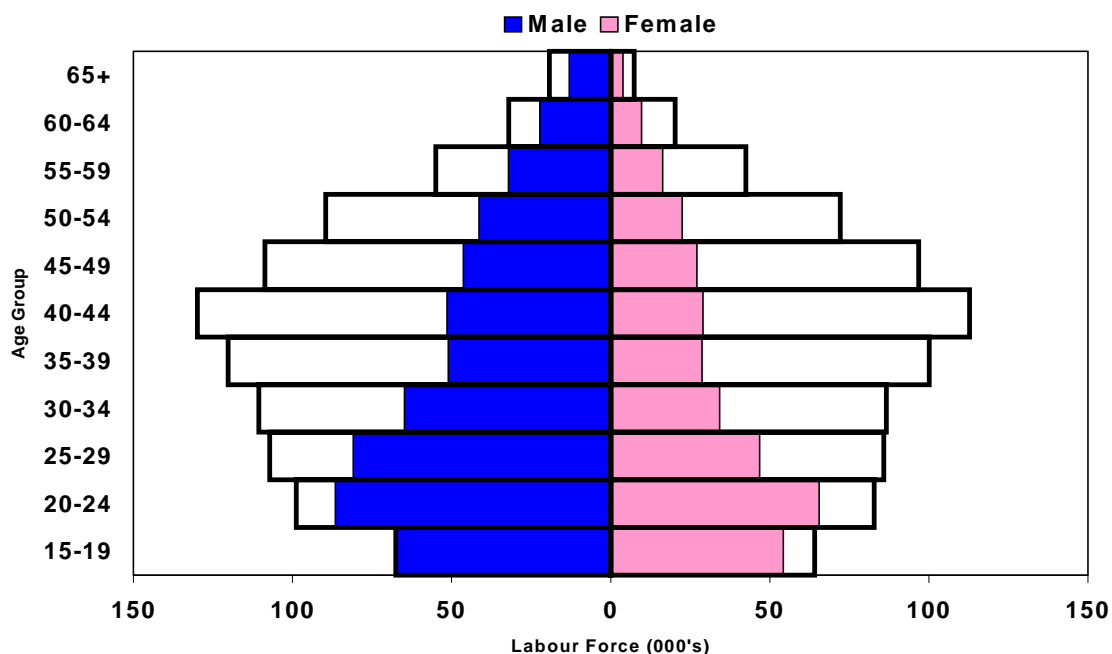
### LABOUR FORCE AGING

If population aging is a well-established trend in Canada, it is not surprising that the labour force is aging in lock step. The extent of this phenomenon in Alberta can be portrayed in a number of ways.

Chart II-6 presents labour force pyramids for Alberta in 1976 and 2001, respectively, in absolute terms (i.e., the number of workers). A labour force “pyramid” portrays the distribution of workers by age and sex. An analysis of the data used to build the pyramids reveals that:

- The size of Alberta’s labour force grew by 91 percent between 1976 and 2001.
- Females accounted for 53 percent of the growth.
- The ranks of workers between the ages of 25 and 54 increased substantially.
- There were only 15 percent more labour force participants under the age of 25 in 2001 than in 1976 (see Chart II-8).
- There were 81 percent more labour force participants 55 and older in 2001 compared to 1976 (see Chart II-8).
- The gap, in absolute terms, between the youngest workers (under 25) and the oldest (55-plus) decreased from 1981 until the latter half of the 1990’s (see Chart II-8).

**Chart II-6**  
**Labour Force Pyramid, Alberta (000's)**  
**1976 (solid) versus 2001 (outline)**



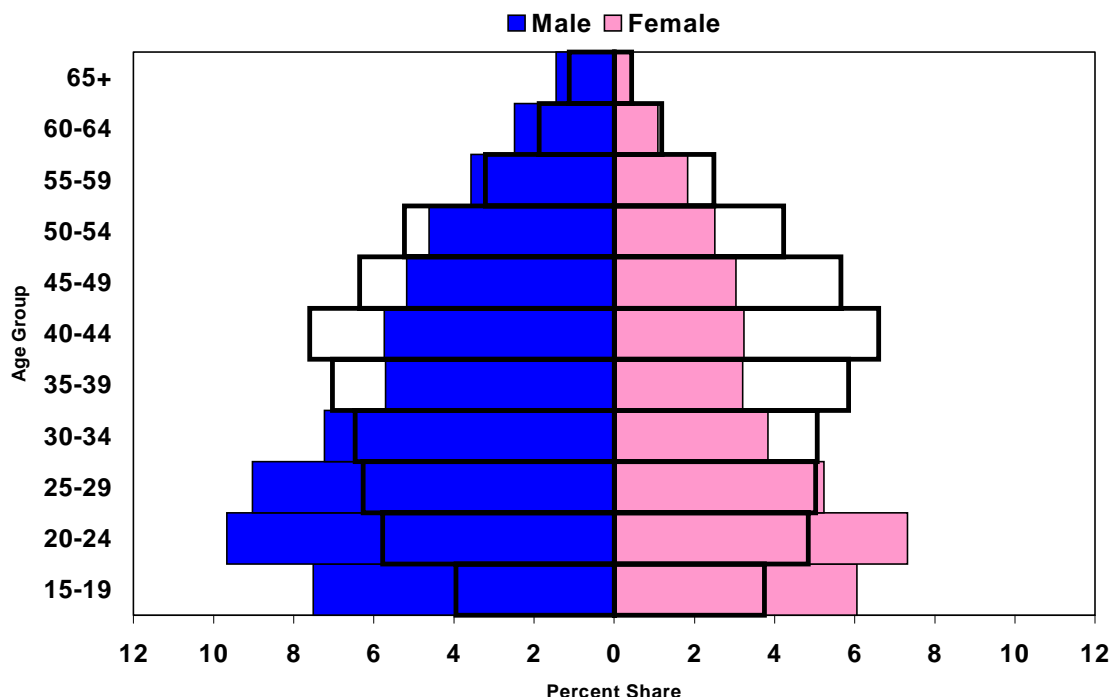
## Work Force Analysis: City of Grande Prairie

Chart II-7 presents labour force pyramids for Alberta in 1976 and 2001, respectively, in relative terms (i.e., percentage share of the labour force). An analysis of these data reveals that:

- The male share of the labour force declined from 62 percent in 1976 to 55 percent in 2001 or a drop of 11 percent.
- The female share increased from 38 percent to 45 percent (an 18 percent increase).
- The labour force shares of the 35 – 54 age groups increased noticeably. The *boomers* are encompassed within these groups.
- The share of workers under 25 fell from 30 percent to 18 percent or a decline of 40 percent (see Chart II-9).
- The share of workers 55 and older remained in the range of 9 - 10 percent of the labour force (see Chart II-9).

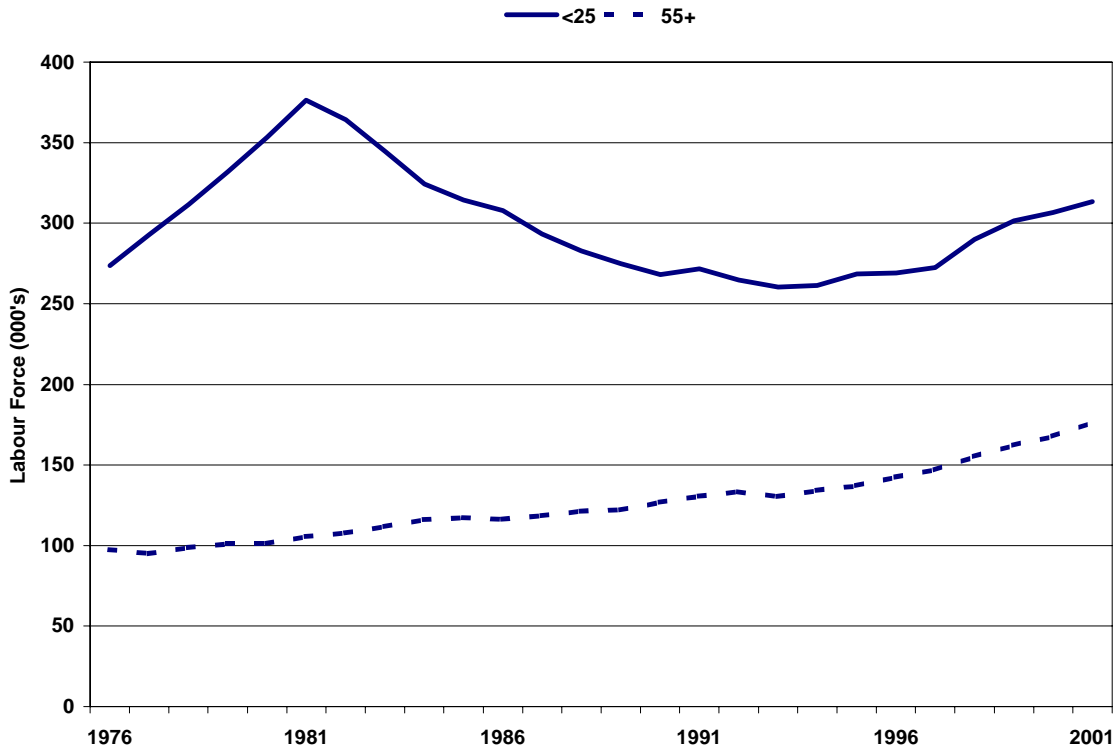
The “pictures” of Alberta’s labour force portrayed in Charts II-6 through II-9 are pictures of an aging labour force. On the one hand, only one in ten workers are in the “feeder group” to retirement (i.e., 55 and older), a share that has been stable over the past quarter century. On the other hand, only two in ten workers are under 25 compared to three in ten 25 years ago. The majority of workers are *boomers* (35 – 54) in their prime labour force participation years. Therefore, at present the manifestations of labour force aging are limited to specific industry sectors, businesses, or occupations and are not widespread.

**Chart II-7**  
**Labour Force Pyramid, Alberta (%)**  
**1976 (solid) versus 2001 (outline)**

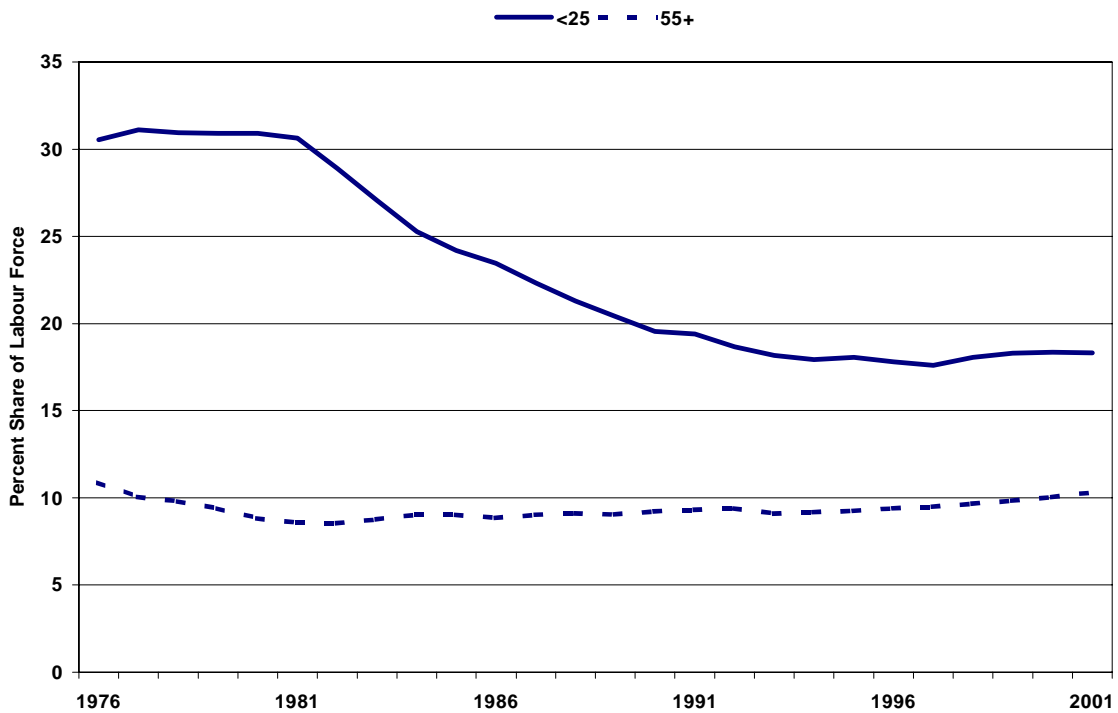


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**Chart II-8**  
**Labour Force by Age Group, Alberta, 1976 – 2001 (000's)**



**Chart II-9**  
**Labour Force by Age Group, Alberta, 1976 – 2001 (%)**



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## Labour Force Projections

An important aspect of labour market analysis is to use past and current trends as a basis of identifying what might happen in the future. A labour force is a population of workers. To project the size of any population group it is necessary to make assumptions about how many people will enter and exit the population over a given time period.

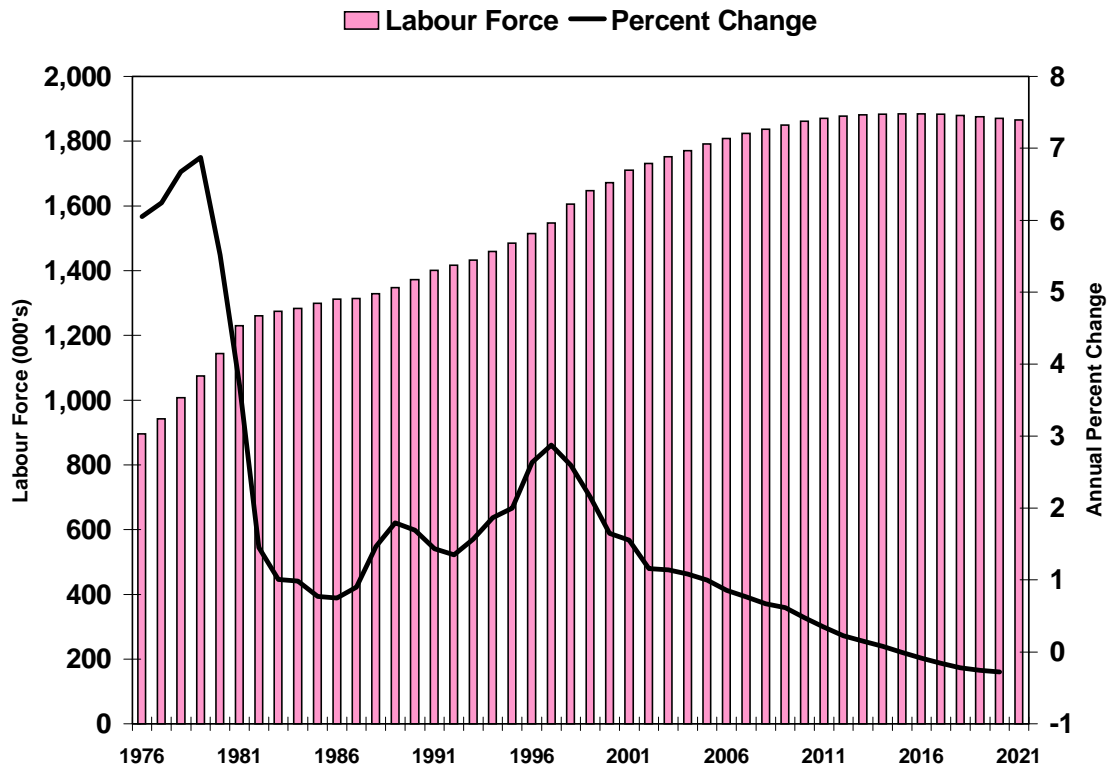
The projections that follow utilize data from the 2001 *Labour Force Survey* and the general population projections developed by Statistics Canada. It is assumed that:

1. Workers can enter Alberta's labour force at the age of 15.
2. There is no labour force participation by persons 70 and older (the 65-plus age group is actually the 65 – 69 age group).
3. The labour force participation rates evident in 2001 remain the same for males and females in all age groups.

The projections are based on assumptions about fertility, mortality, and migration inherent in the population projections for the province. In addition, the projections assume no major decline in the overall demand for labour as a result of technological or economic factors.

Given these assumptions Alberta's labour force is projected to expand to 1,865,300 workers by 2021 or an increase of 9 percent from 2001 (see Chart II-10). This increase is roughly one-fifth (19 percent) of the increase between 1981 and 2001.

**Chart II-10**  
**Alberta's Labour Force, 1976 – 2021 (projected)**  
**Size (000's) and Annual Percentage Change**



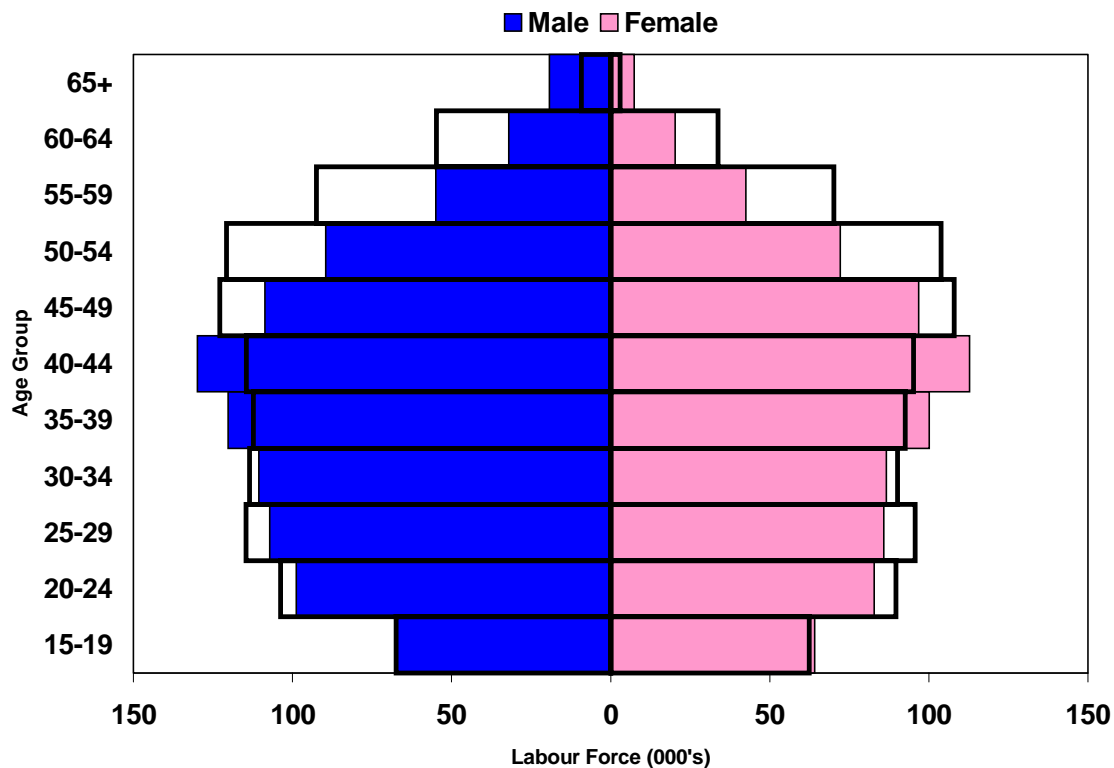
## Work Force Analysis: City of Grande Prairie

Chart II-10 also depicts the actual and projected growth of the province's labour force in terms of the annual rate of growth. From an annual rate of 1.6 percent in 2001, the rate descends steadily throughout the period reaching negative growth by 2017 (although the decrease is minimal).

Declining labour force growth is an indicator of the most important trend over the 2001 – 2021 period -- the accelerated aging of the province's labour force. This trend is well illustrated by Charts II-11 to II-14. The charts compare the labour force pyramids, both in absolute and relative terms, for two time periods: 2001 versus 2011 and 2011 versus 2021. Using the *boom*, *bust* & *echo* template it is clear that:

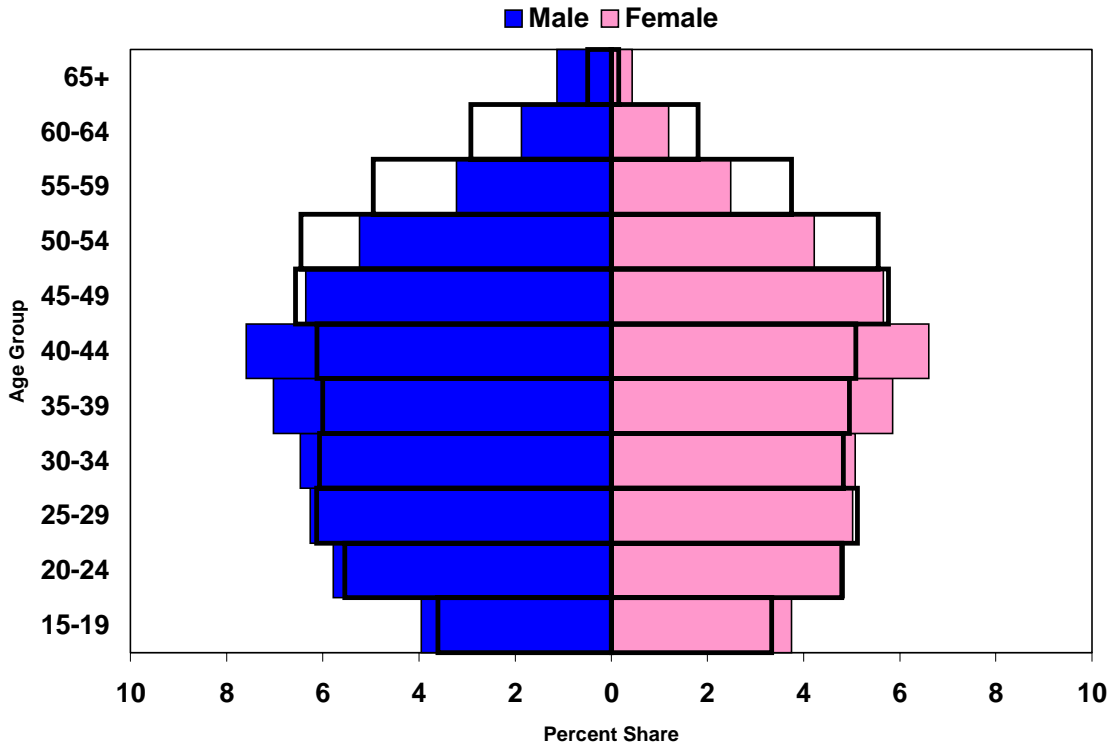
- Between 2001 and 2011 the *boomers* swell the ranks and shares of workers in the 45 – 64 age groups. The number and share of workers 35 – 44 falls as the *bust* generation enters these age groups. The *echo* increases the number of workers who are under 35 but the shares of the groups under 45 decrease.
- Between 2011 and 2021 the impact of the aging of the *boomers* is most evident in the 55-plus age group. The entrance of the *bust* brings both absolute and relative decline to the 45 – 54 age group. The impact of the *echo* is discernible in the prime age groups of the 30 – 44 range. However, there are both absolute and relative declines in the under 30 group – the base of the pyramid continues to collapse.

**Chart II-11**  
**Labour Force Pyramid (Projected), Alberta (000's)**  
**2001 (solid) versus 2011 (outline)**

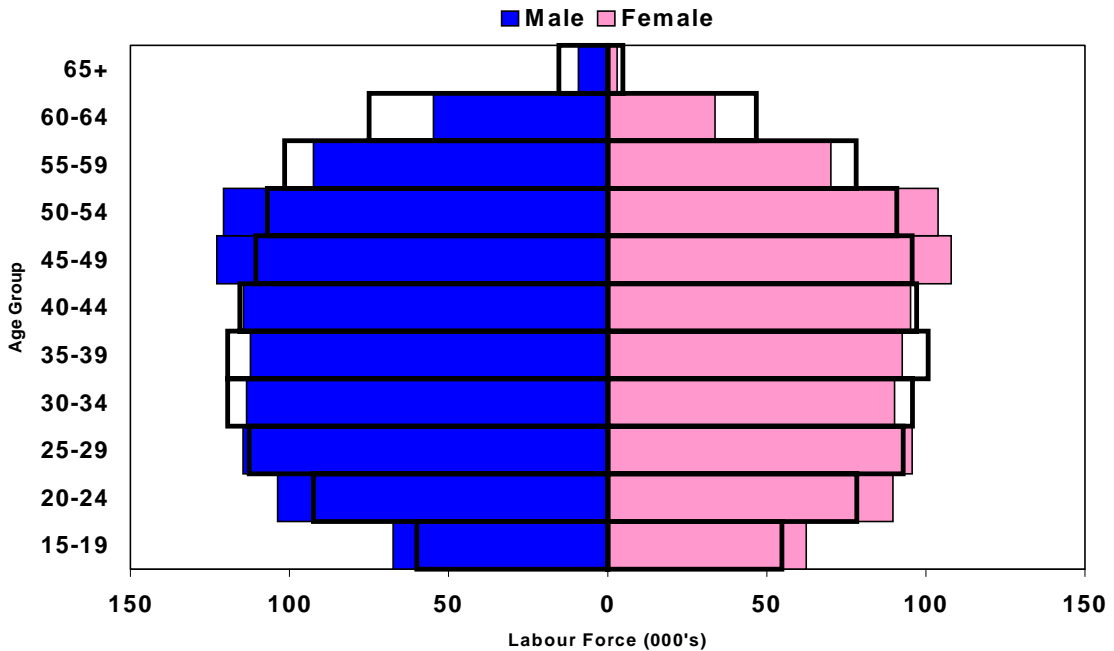


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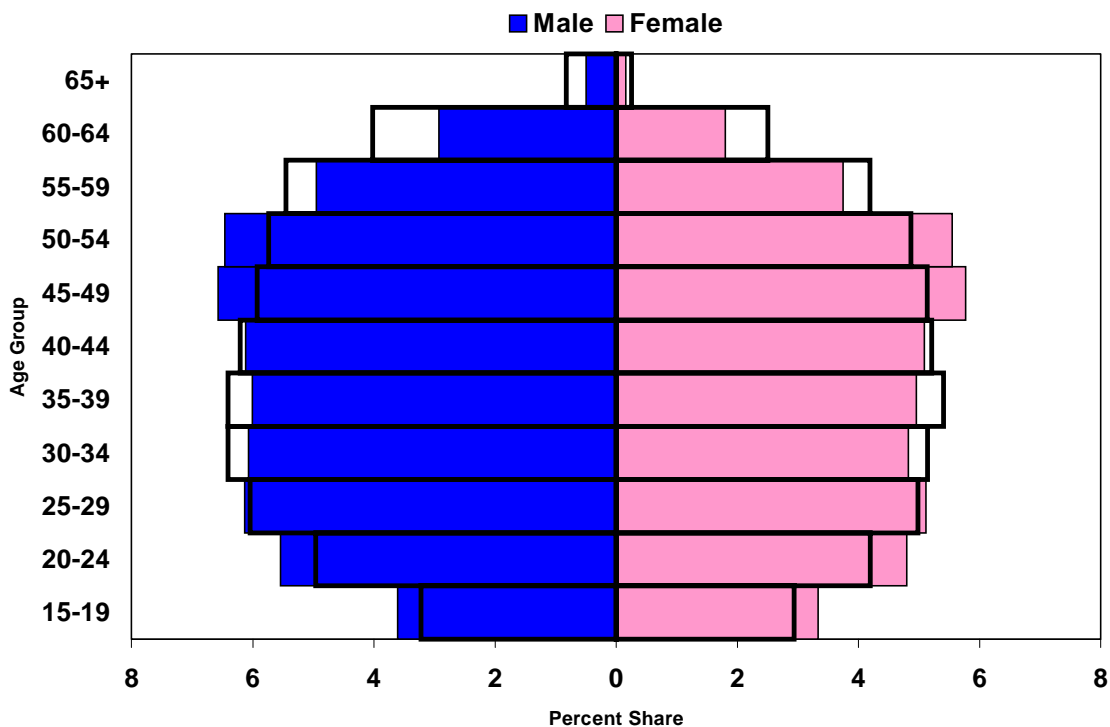
**Chart II-12**  
**Labour Force Pyramid (Projected), Alberta (%)**  
**2001 (solid) versus 2011 (outline)**



**Chart II-13**  
**Labour Force Pyramid (Projected), Alberta (000's)**  
**2011 (solid) versus 2021 (outline)**



**Chart II-14**  
**Labour Force Pyramid (Projected), Alberta (%)**  
**2011 (solid) versus 2021 (outline)**

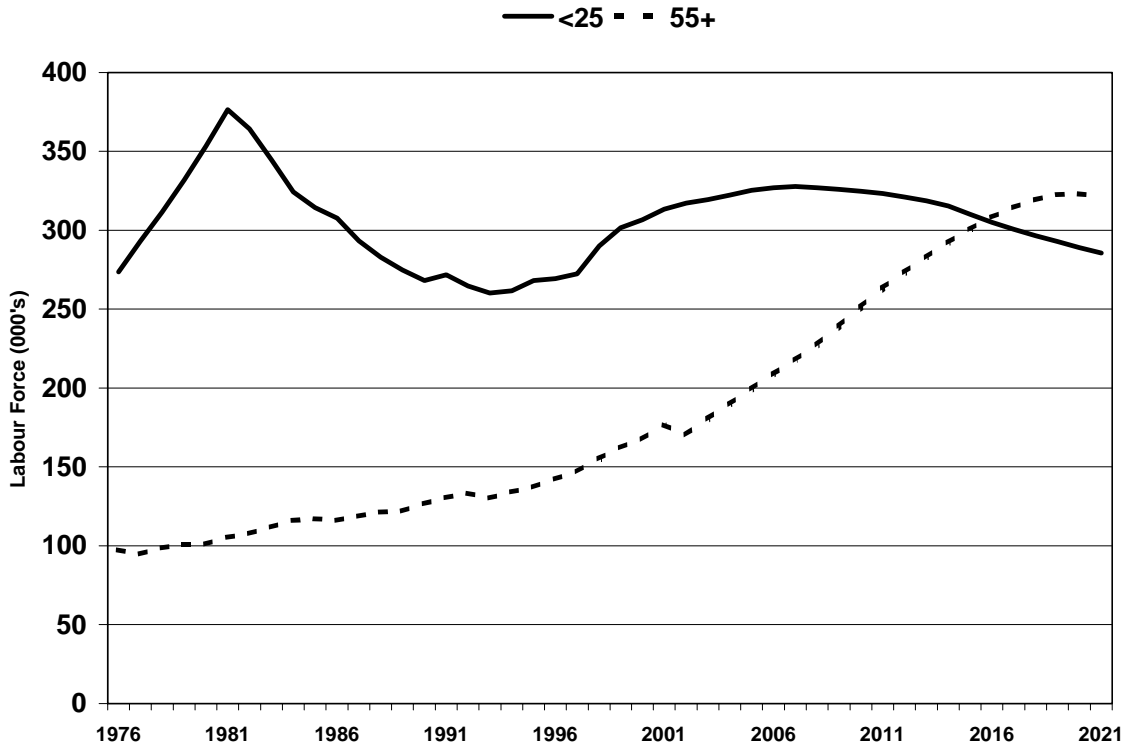


The analysis of labour force aging requires further refinement. What are the trends for two key groups of workers – those most likely to enter and to exit the labour force over the next twenty years? Charts II-15 and II-16 show that the year 2016 is projected to be a historic one for the province’s labour market. In 2016 the labour market is projected to experience an unprecedented event – both the number and share of the oldest workers will be greater than the number and share of youngest workers. In this *generational crossover* the “feeder group” to retirement will exceed the “feeder group” to the labour force. The charts also indicate that:

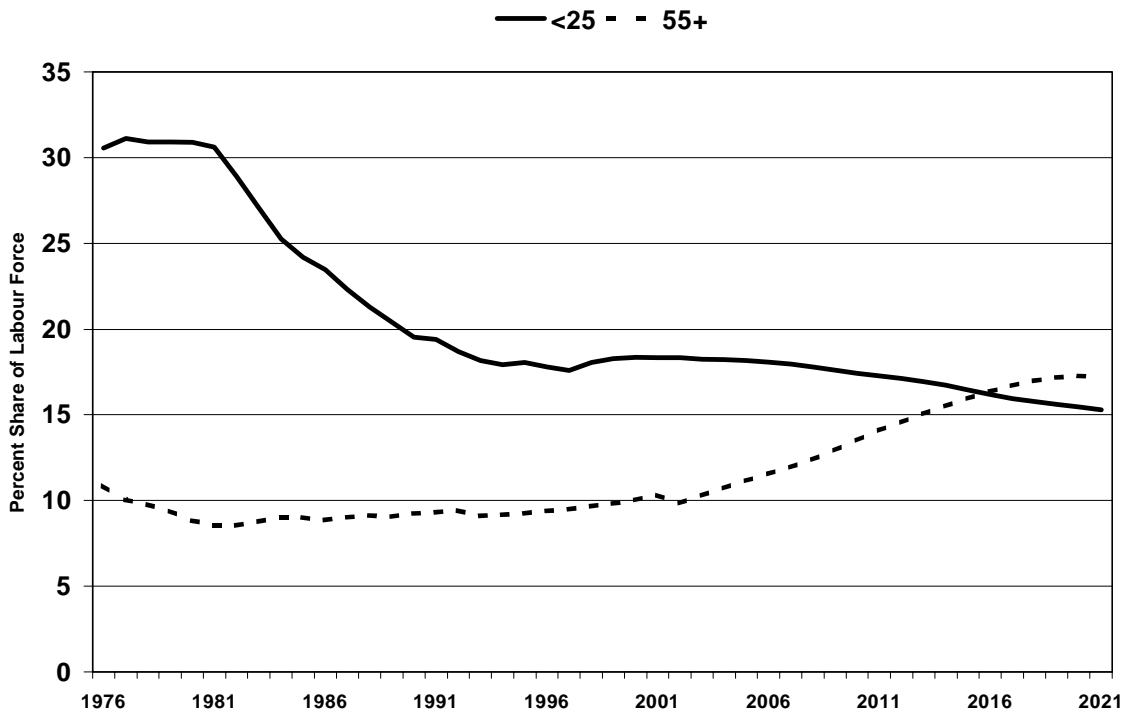
- The number of workers under 25 peaks in 2007 (at about the same level as 1984). The share of this age group falls gradually from 2001 to 2021 (from 18.3 to 15.3 percent or a decline of 16 percent).
- Between 2001 and 2021, both the size and share of the 55-plus group increases steadily throughout the period. The share increases from 10.3 to 17.2 percent or an increase of 67 percent.

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**Chart II-15**  
**Alberta's Labour Force by Age Group, Projected 2001 – 2021 (000's)**



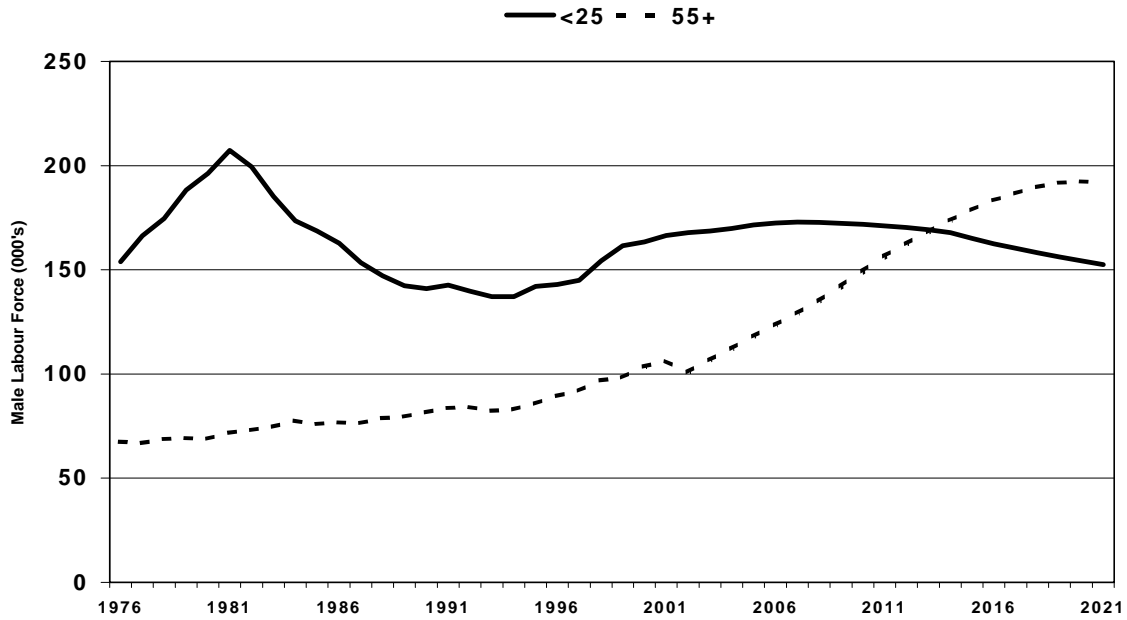
**Chart II-16**  
**Alberta's Labour Force by Age Group, Projected 2001 – 2021 (%)**



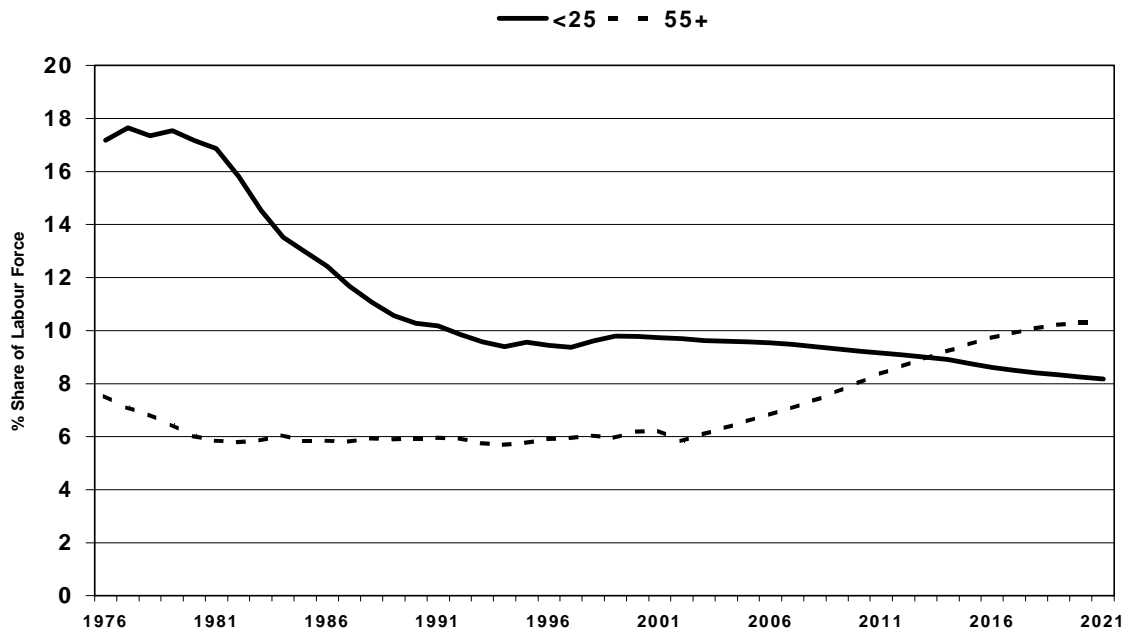
## Work Force Analysis: City of Grande Prairie

In the *generational crossover* there are important differences between the aging of the male and female sides of the labour force. For males the year 2016 is not the historic marker. The number and share of 55-plus workers exceeds the number and share of under 25 workers by 2014 (see Chart II-17 and II-18). However, the number of males under 25 peaks in 2007. For females the *crossover* does not occur during the projection period but the general trend is the same (see Charts II-19 and II-20).

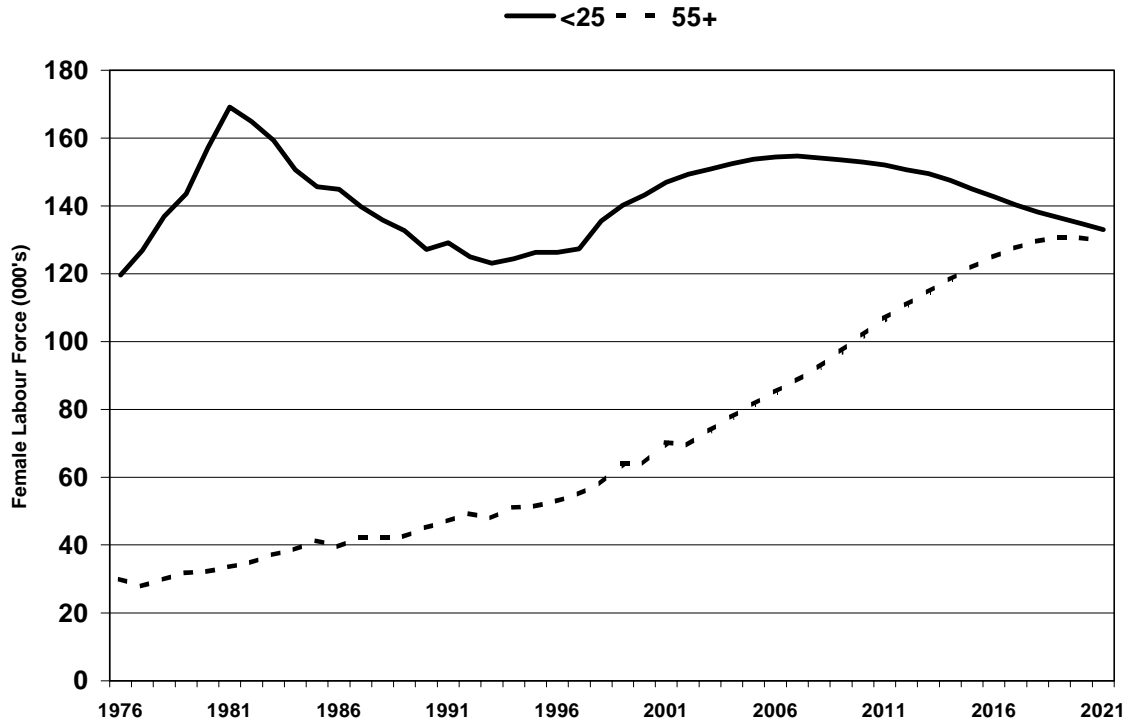
**Chart II-17**  
**Alberta's Male Labour Force by Age Group, Projected 2001 – 2021 (000's)**



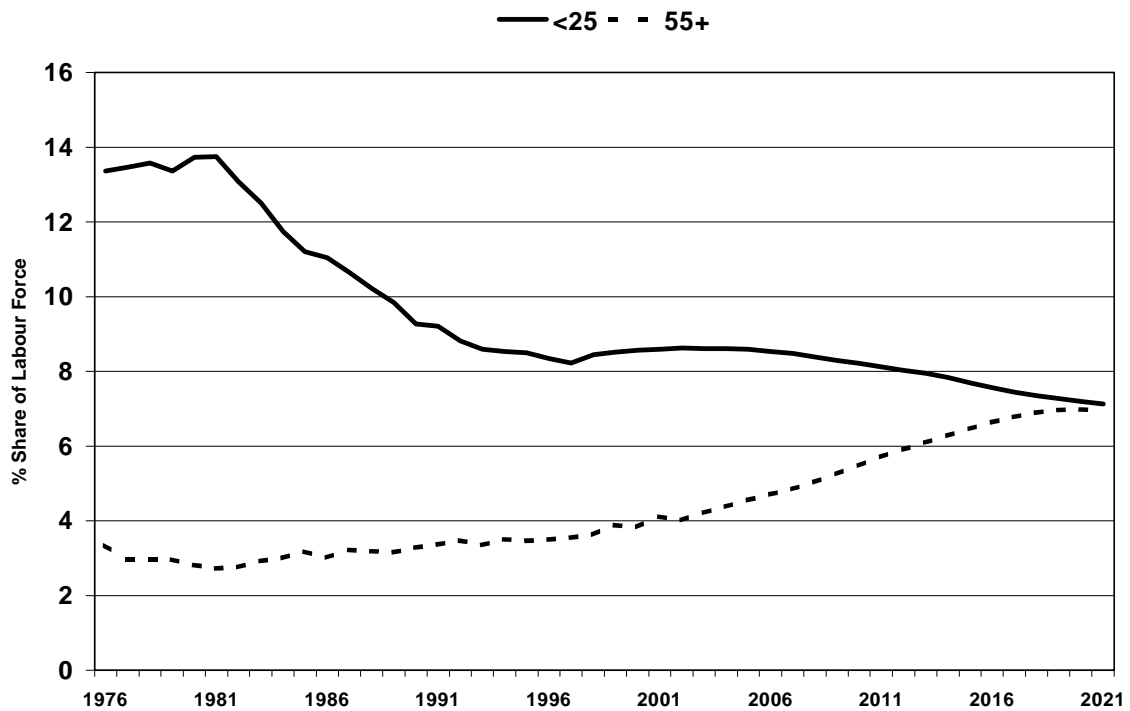
**Chart II-18**  
**Alberta's Male Labour Force by Age Group, Projected 2001 – 2021 (%)**



**Chart II-19**  
**Alberta's Female Labour Force by Age Group, Projected 2001 – 2021 (000's)**



**Chart II-20**  
**Alberta's Female Labour Force by Age Group, Projected 2001 – 2021 (%)**



## Work Force Analysis: City of Grande Prairie

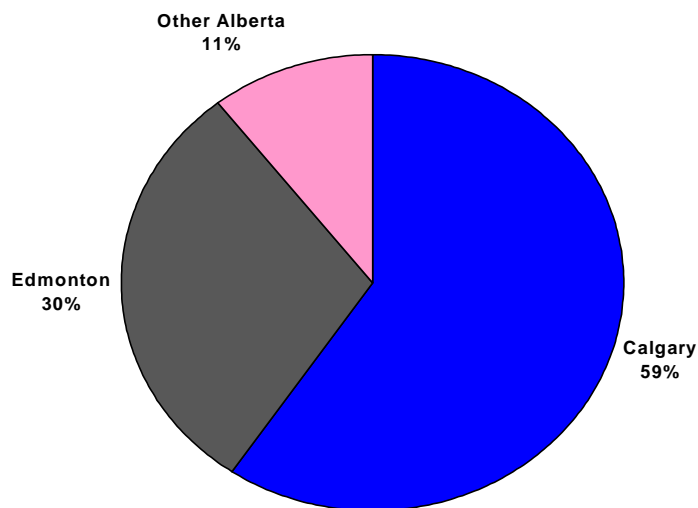
### Migration

When its economy is strong (for example, from the mid-1970's until the early 1980's or during the last half of the 1990's), Alberta's population growth has been more influenced by migration than net natural increase (i.e., the difference between births and deaths).<sup>6</sup> From a provincial growth perspective, migration can be broken down into two population flows: international migration and inter-provincial migration.

#### International

The impact of international migration on the labour force can be determined by an analysis of data published by Citizenship and Immigration Canada.<sup>7</sup> Between 1999 and 2001, Alberta received an average of 14,250 immigrants a year representing only 6.4 percent of all immigrants to Canada. The bulk of the immigrants settled in the province's two largest urban centers, Calgary and Edmonton. Six in ten immigrants chose Calgary; three in ten, Edmonton; and one in ten, the rest of Alberta (see Chart II-21):

**Chart II-21**  
**Distribution of Alberta's Immigrants by Area of Residence**  
**1999 – 2001 (average percent share)**



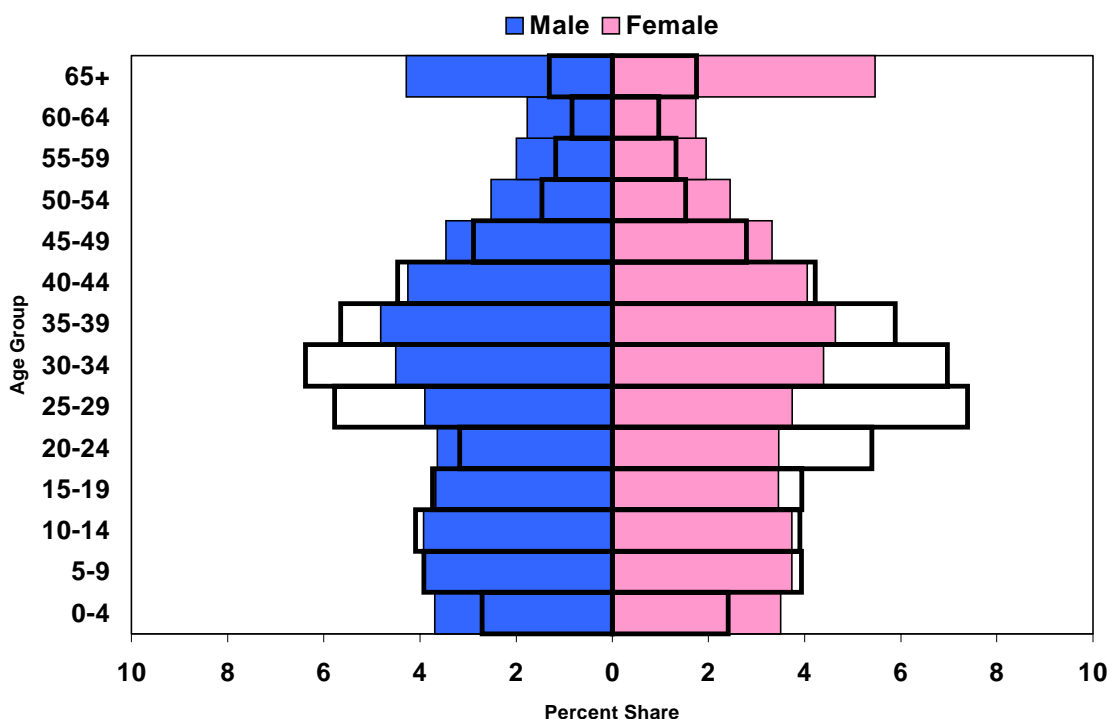
<sup>6</sup> See Statistics Canada, *Report on the Demographic Situation in Canada 2001: Current Demographic Analysis* (Ottawa: Ministry of Industry, 2002), Table A1, pages 74-75.

<sup>7</sup> Unless noted otherwise, the analysis of labour force immigrants in this section is based on two documents published by Citizenship and Immigration Canada: *Citizenship and Immigration Statistics 1996* (Ottawa: Minister of Public Works and Government Services Canada, 1999) and *Facts and Figures 2001: Immigration Overview*.

## Work Force Analysis: City of Grande Prairie

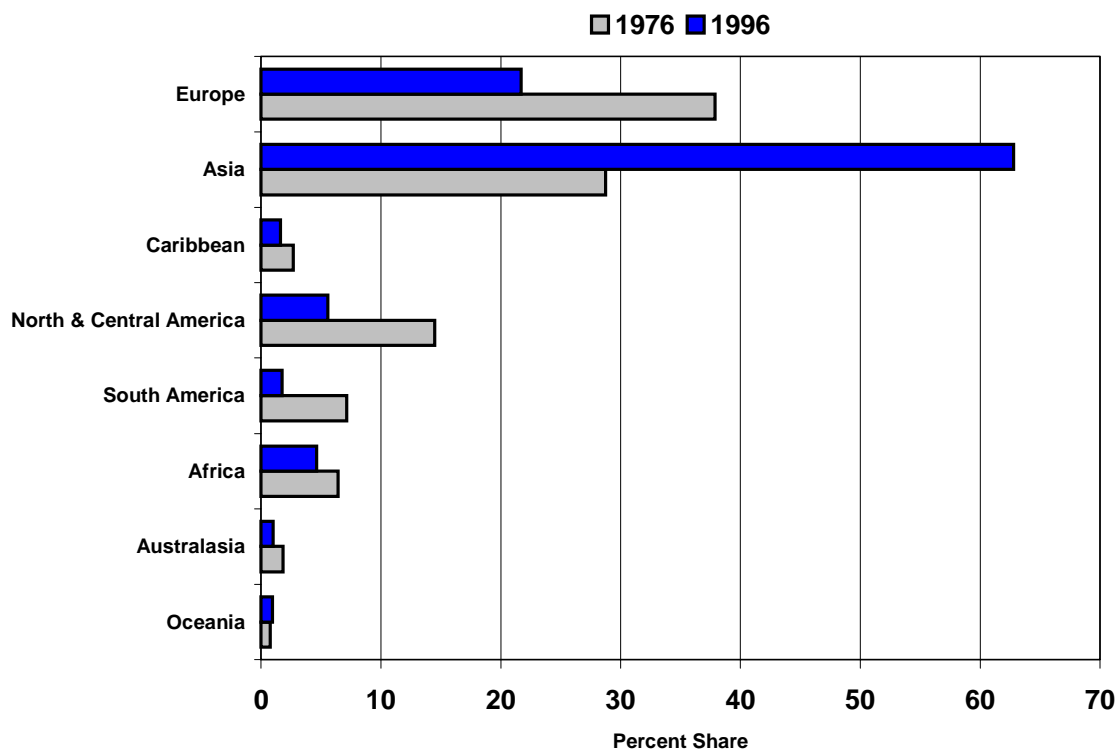
The age structure of the immigrant flow suggests its importance to the growth of the labour force. In Chart II-22 it is evident that immigrants are over-represented in the 25 – 39 age groups. In particular, the share of immigrants who are in their thirties is noticeably larger than the share of the province’s population in their thirties (25 versus 18 percent). Moreover, female immigrants account for 59 percent of immigrants in their twenties. Therefore, on balance, the influx of immigrants provides the labour force with a cohort of young workers.

**Chart II-22**  
**Population Pyramids, Alberta, 1996**  
**Immigrants (outline) versus Province (solid)**



Immigration also diversifies Alberta’s labour force in ethnic and racial terms. Chart II-23 demonstrates that in 1976 and 1996 (both periods of economic expansion), most of Alberta’s immigrants came from either Asia or Europe. In 1976, 67 percent came from the two continents; in 1996, 84 percent. However, the relative importance of each source area has changed over time. In 1976, Europe’s share of immigrants was 38 percent compared to 29 percent for Asia. Twenty years later, the European share had shrunk by almost one-half (22 percent of Alberta’s immigrants) and Asia’s share had more than doubled (63 percent). These trends mirror what has occurred nationally in terms of the global source areas for Canada’s immigrants.

**Chart II-23**  
**Distribution of Alberta's Immigrants by Source Area**  
**1976 versus 1996 (%)**



It is also important to understand how many immigrants are destined for the labour market and what occupations they bring to the labour market. An analysis of the data in Table II-2 reveals that:

- Between 1991 and 1996, an average of 17,417 immigrants came to Alberta each year, with about one half (9,184 or 52.7 percent) available to the labour force.
- The largest occupational shares in 1996 were: *Education, Farming & Horticulture, Forestry & Logging, Managerial & Administrative, Religion, and Material Handling.*

## Work Force Analysis: City of Grande Prairie

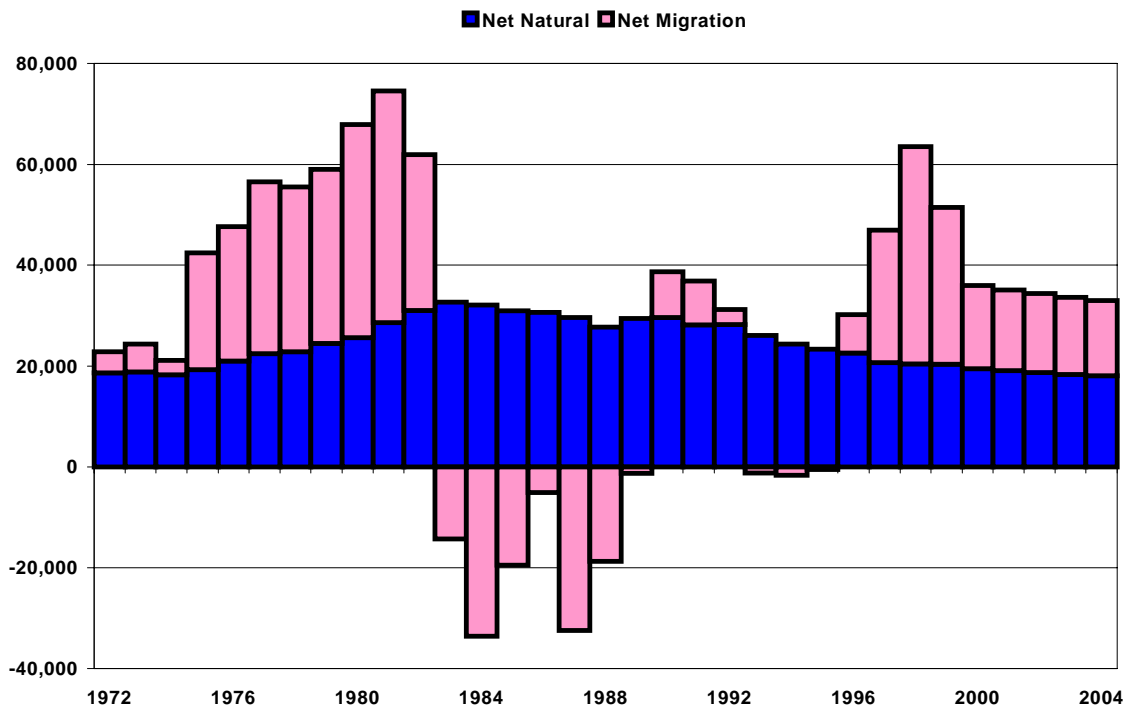
**Table II-2: Labour Force Immigrants by Intended Occupation (percent share of total immigrants), Alberta, 1991 -1996**

<b>Occupation</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Entrepreneurs	0.6	0.5	0.7	0.8	0.9	0.8
Investors	0.2	0.2	0.4	0.5	0.5	0.2
Managerial & Administrative	3.5	2.1	1.7	1.7	2.4	2.9
Natural Science & Engineering	0.8	0.7	1.7	1.9	1.9	1.7
Social Science	0.2	0.3	0.6	0.7	0.6	0.4
Religion	2.3	1.5	1.5	1.6	2.1	2.6
Education	3.4	2.8	2.2	2.5	4.7	7.5
Medicine & Health	0.6	0.4	0.4	0.4	0.7	1.0
Literary & Performing Arts	0.2	0.3	0.4	0.3	0.2	0.2
Sports & Recreation	1.4	1.3	1.2	1.1	0.7	0.9
Clerical	2.3	2.3	1.8	1.6	1.4	1.4
Sales	0.5	0.5	0.4	0.5	0.6	0.7
Services	0.1	0.1	0.1	0.0	0.1	0.1
Farming & Horticultural	4.1	3.1	2.8	2.4	2.9	3.4
Fishing, Hunting & Trapping	1.7	1.3	1.2	1.1	1.1	1.2
Forestry & Logging	4.2	4.0	4.6	5.3	4.5	3.1
Resource Extraction	1.5	1.1	1.1	1.4	0.8	0.7
Resource Processing	0.0	0.0	0.0	0.0	0.0	0.0
Machining	0.0	0.0	0.0	0.0	0.0	0.0
Product Fabrication & Repair	0.1	0.0	0.0	0.0	0.0	0.0
Construction	0.5	0.4	0.4	0.4	0.2	0.2
Transport & Equipment Operating	1.1	0.7	0.7	0.6	0.5	0.6
Material Handling	5.4	4.5	3.6	3.1	2.3	2.5
Other Crafts & Equip. Operating	2.0	1.6	1.1	0.9	0.6	0.9
Unknown	0.6	0.4	0.4	0.3	0.3	0.3
<i>Workers as % of Total Immigrants</i>	<i>53.8</i>	<i>53.9</i>	<i>54.8</i>	<i>52.3</i>	<i>50.0</i>	<i>51.4</i>
<b>Workers</b>	<b>10,188</b>	<b>9,152</b>	<b>9,688</b>	<b>9,716</b>	<b>8,991</b>	<b>7,368</b>
<b>Total Immigrants</b>	<b>18,944</b>	<b>16,985</b>	<b>17,689</b>	<b>18,567</b>	<b>17,986</b>	<b>14,328</b>

Inter-provincial

Migration is a dynamic factor in Alberta's population growth over the past twenty-five years or so. The contribution made by international migration to the growth of Alberta's population (and labour force) is relatively modest but consistent. By comparison, inter-provincial migration makes a more substantial contribution but only during good economic times. In poor economic times, inter-provincial migration exerts a negative influence on the province's population and labour force growth.<sup>8</sup> These observations are well supported by the data portrayed in Charts II-24 and II-25.<sup>9</sup>

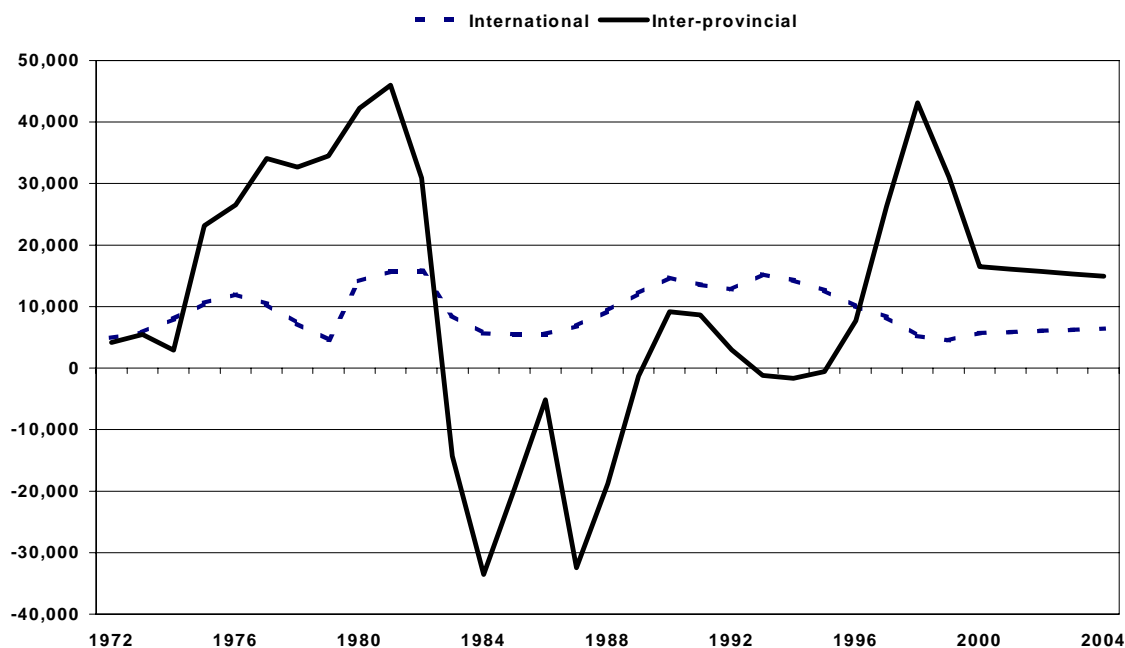
**Chart II-24**  
**Sources of Population Change: Net Natural versus Net Migration (N)**  
**Alberta, 1972 – 2004 (projected)**



<sup>8</sup> On balance, Alberta gains population from inter-provincial migration. From 1972 – 2000, Alberta attracted 311,220 migrants from other provinces, second only to British Columbia's 469,877 migrants. See Statistics Canada, *Report on the Demographic Situation in Canada 2001*, page 51.

<sup>9</sup> Data source is Statistics Canada, *Annual Demographic Statistics 2001*.

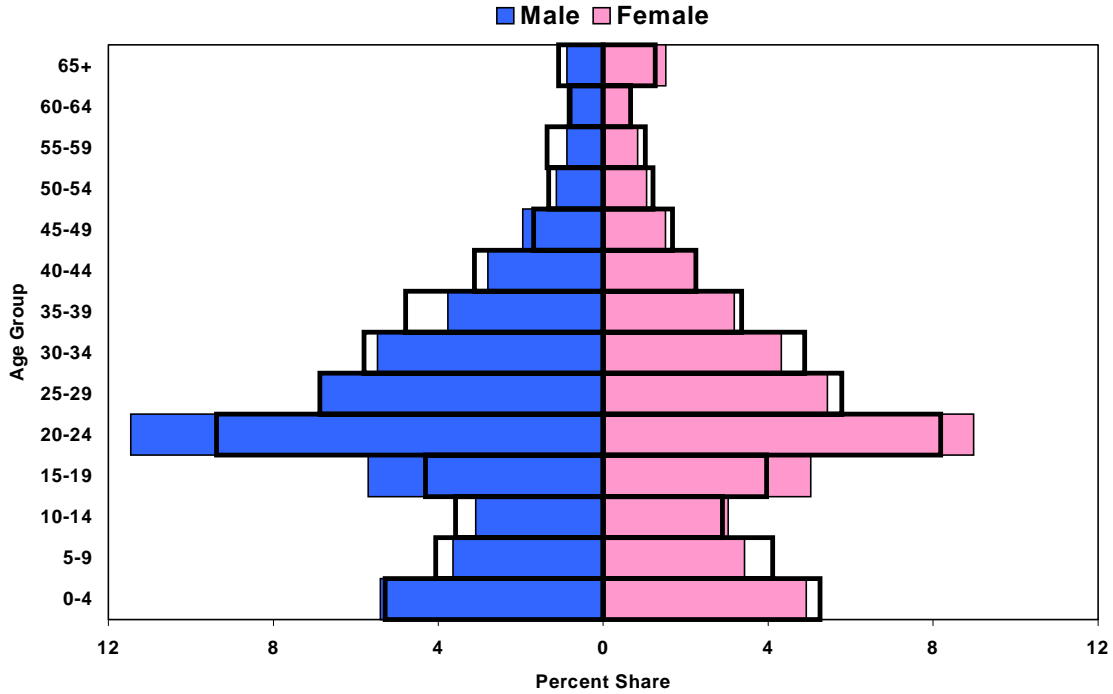
**Chart II-25**  
**Sources of Population Change: International versus Inter-provincial Migration (N)**  
**Alberta, 1972 – 2004 (projected)**



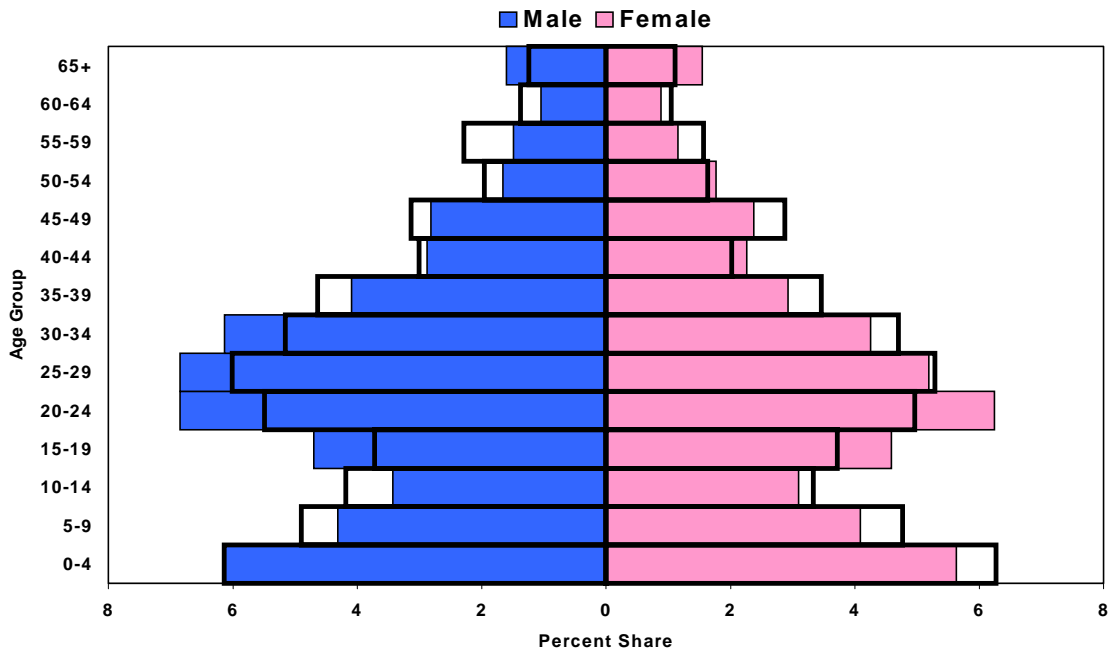
Like international migrants, inter-provincial migrants are relatively young and, therefore, represent an important source of growth for the labour force. Charts II-26 and II-27 show the distribution by age and sex of inter-provincial migrants moving in and out of two census divisions in northern Alberta.<sup>10</sup> Census division (CD)19 contains, among other communities, the City of Grande Prairie. Census division (CD)18 includes the Municipal District of Greenview and several other communities. In both cases, inter-provincial migrants, whether they are coming to Alberta or leaving, are predominately persons in their twenties and thirties. This is true for both men and women.

<sup>10</sup> Data source is Statistics Canada, *Annual Demographic Statistics 2001*.

**Chart II-26**  
**Population Pyramid, 1996 – 2001 (average percent share)**  
**Inter-provincial In-migrants (solid) versus Out-migrants (outline)**  
**Alberta Census Division 19**



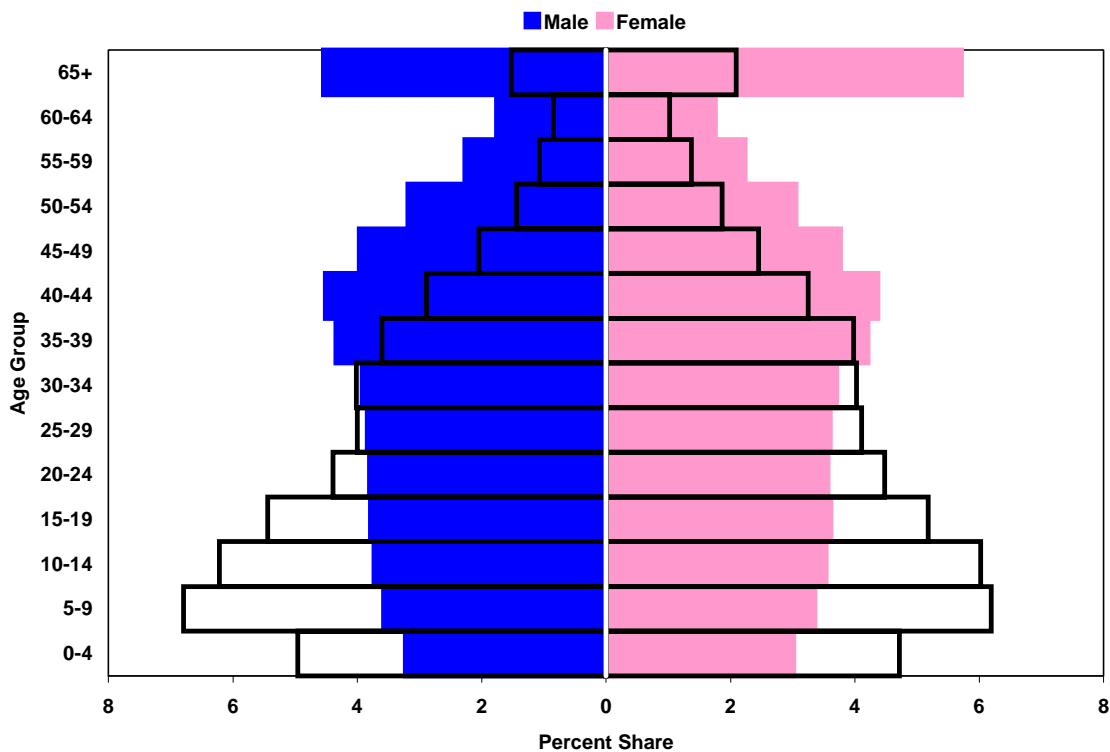
**Chart II-27**  
**Population Pyramid, 1996 – 2001 (average percent share)**  
**Inter-provincial In-migrants (solid) versus Out-migrants (outline)**  
**Alberta Census Division 18**



Alberta's Registered Aboriginal Population

In an aging society, there is one group in the population that represents an oasis of youth – Canada's aboriginal peoples. Data available for Alberta's registered Aboriginal population identify this fact clearly. Chart II-28 compares the age and sex structure of the registered Aboriginal population with that of the province as a whole. Six in ten registered Aboriginals (62 percent) are under the age of 30. Four in ten Albertans (43 percent) are under the age of 30. Registered Aboriginals and other aboriginal peoples are potentially a source of young workers in Alberta's aging labour market.

**Chart II-28**  
**Population Pyramid, 2001 (%)**  
**Registered Aboriginals (outline) versus Alberta (solid)**



**Key Points**

Reviewing trends during the last 25 years, it is clear that:

- Since 1990, overall labour force participation rates for both men and women have stabilized in Alberta. The rate for the youngest (under 30) age group was fairly stable throughout the period. The rate for the oldest (60 - 69) age group actually declined.
- The province's labour force has become balanced in terms of gender.
- Although their share of Alberta's labour force has declined from its peak in 1981, boomers (i.e., workers 35 – 54 in 2001) currently account for about one in two workers.

## Work Force Analysis: City of Grande Prairie

- The annual immigrant flow is a dynamic element in labour force growth in that immigrants are disproportionately represented in the 25 – 39 age groups (compared to the provincial population).
- Immigrants have brought greater ethnic and racial diversity to Alberta's labour force.
- Recently arrived immigrants are a relatively small component of the provincial labour force.
- Inter-provincial migrants have a greater impact on labour force growth than international migrants but the flow is correlated with the economic cycle in Alberta.

Looking ahead 20 years, it is projected that:

- The absolute growth of the province's labour force will be modest and the annual rate of growth will decline slowly but consistently.
- If current levels are maintained or augmented, the annual flow of immigrants will increasingly be a strategic element in labour force growth, especially in the second decade of the century.
- Although the entrance of the *echo* generation will signal an increase in the number of workers under 35 (but not the share) between 2001 and 2011, the aging of the *boomers* will mean a larger number of workers over the age of 45. Therefore, labour force aging will accelerate.
- During the second decade of this century, the supply of the oldest (55-plus) workers will exceed that of the youngest workers (under 25). This *generational crossover* will occur later for female workers.

### **Part III – Demographic Analysis of Grande Prairie’s Municipal Work Force**

#### Introduction

Demographics is the study of human populations. The population under scrutiny can be that of a nation or city or that of an organization. The geographic or organizational boundaries of the population do not fundamentally alter the type of analysis required.

Demographic analysis focuses on a variety of population characteristics -- principally age, sex, growth, and mobility. In the particular case of an organization's work force, the key questions that must be answered are:

- What is the general age and sex profile of the members of the work force?
- What is the age and sex profile by organizational division, occupational group, and employment status?
- How do these profiles compare with those of the broader labour force?
- What are the trends regarding attrition? What is the age and sex profile of the members entering and exiting the organization's work force?
- Given certain assumptions, what is the future profile of the work force?

In this part of the report, the demographic trends characterizing the City of Grande Prairie's municipal workers are identified and analysed.

#### Local Demographic Context

##### Current Picture

In Part II, the demographic context of Alberta's labour market was examined in detail. Before proceeding with an analysis of Grande Prairie's municipal workers, it is necessary look at the local demographic context. The question to be answered is simply: *How similar, in demographic terms, is the City of Grande Prairie and adjacent communities to the province of Alberta?*

A comparison of the age and sex structure of the populations of Alberta and Grande Prairie, respectively, is contained in Chart III-1.<sup>11</sup> Several observations can be made:

- 68.0 percent of Grande Prairie's population is under the age of 40 compared to 58.5 percent in Alberta;
- Grande Prairie has a higher share of persons in their twenties (19.6 percent) than Alberta (14.3 percent);
- Grande Prairie's share of persons (5.4 percent) in the "retirement feeder group" (55 – 64) is lower than Alberta's (8.1 percent); and
- Grande Prairie's share of population in the under 20 age group (31.0 percent) exceeds that of Alberta (28.3 percent).

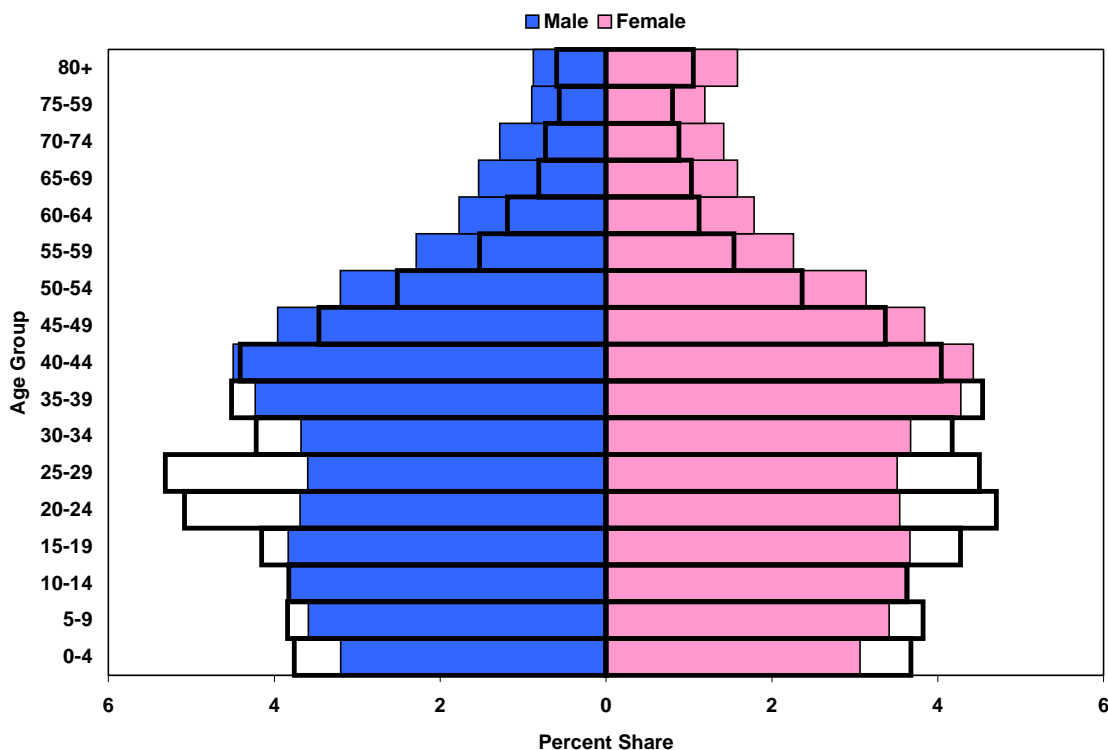
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<sup>11</sup> Data on local demographic factors are taken from various Statistics Canada publications, especially the *2001 Census*.

## Work Force Analysis: City of Grande Prairie

The comparison suggests that Grande Prairie's demographic profile skews somewhat younger than the profile of its province. Its higher share of persons in their twenties and lower share of persons over the age of 40 are particularly striking.

**Chart III-1  
Population Pyramid, 2001 (%)  
Grande Prairie (outline) versus Alberta (solid)**

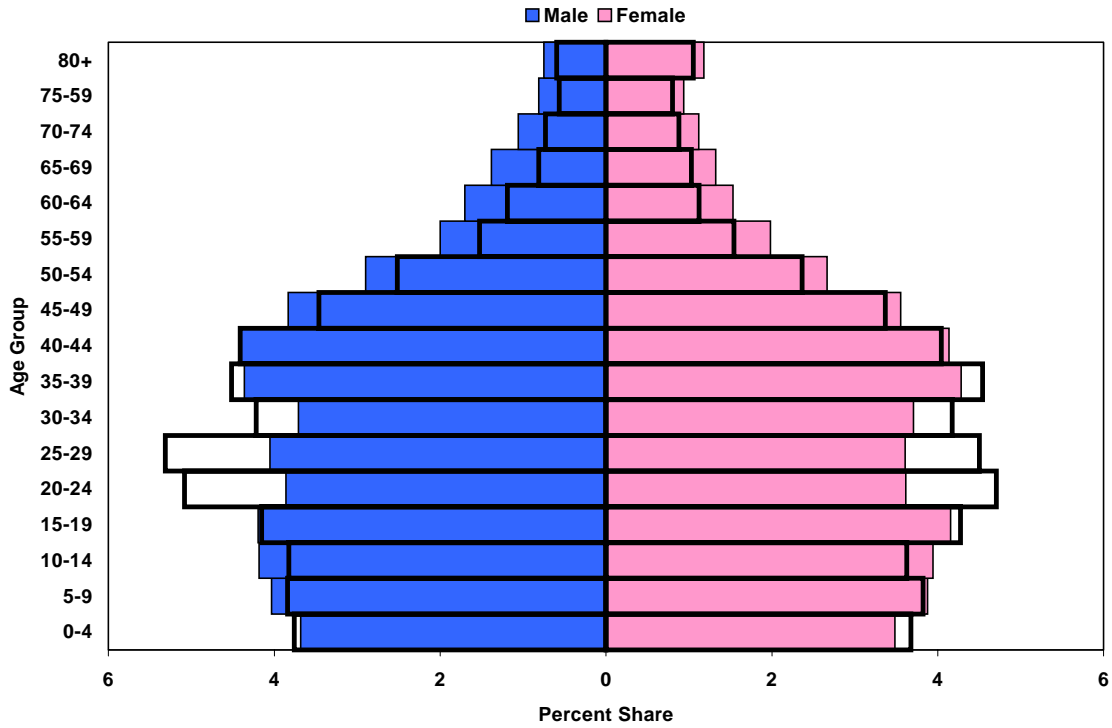


It is also instructive to compare Grande Prairie with its neighbouring communities. This is done in Chart III-2 by comparing Grande Prairie with the age and sex structure of the population in census division (CD) 19, one of the administrative areas used by Statistics Canada to conduct the national census (see Table III-1). Analysing the data in this chart shows that:

- 68.0 percent of Grande Prairie's population is under 40 compared to 62.7 percent in CD 19;
- Grande Prairie has a higher share of persons in their twenties (19.6 percent) than CD 19 (15.1 percent);
- Grande Prairie's share (5.4 percent) of persons in the "retirement feeder group" (55-64) is lower than the share in CD 19 (7.2 percent); and
- Grande Prairie's share of population in the under 20 age group (31.0 percent) is slightly smaller than that of CD 19 (31.6 percent).

The Grande Prairie versus CD 19 comparison is similar to that between Grande Prairie and Alberta. The only notable difference is that the respective shares of persons under 20 are almost the same (a difference of less than one percent).

**Chart III-2  
Population Pyramid, 2001 (%)  
Grande Prairie (outline) versus Census Division 19 (solid)**



Between 1996 and 2001, the population of CD 19 grew by 8.3 percent. It is clear from the data in Table III-1 that not all of the communities within the census division contributed to the growth trend. The largest municipalities, Grande Prairie and Grande Prairie County, had the largest absolute and relative gains. Between the two census years, Grande Prairie's population increased by 5,630 persons or 18.0 percent. Overall, 15 communities lost population and nine communities gained.

**Table III-1: Population Change by Community, Census Division 19, 1996 to 2001**

	Population		Change, 1996 to 2001	
	1996	2001	N	%
Grande Prairie County No. 1	13,537	15,638	2,101	15.5
Hythe	712	582	-130	-18.3
Beaverlodge	1,997	2,110	113	5.7
Wembley	1441	1497	56	3.9
Grande Prairie	31,353	36,983	5,630	18.0
Sexsmith	1,481	1,653	172	11.6
Peace River	6,536	6,240	-296	-4.5
Smoky River No. 130	2,491	2,379	-112	-4.5
McLennan	867	804	-63	-7.3
Donnelly	375	377	2	0.5
Falher	1,149	1,109	-40	-3.5
Girouxville	332	306	-26	-7.8
Birch Hills County	1,682	1,644	-38	-2.3
Spirit River No. 133	809	824	15	1.9
Rycroft	667	609	-58	-8.7
Spirit River	1,112	1,100	-12	-1.1
Saddle Hills County	2,724	2,566	-158	-5.8
Fairview No. 136	1,829	1,806	-23	-1.3
Fairview	3,316	3,150	-166	-5.0
Peace No. 135	1,562	1,496	-66	-4.2
Berwyn	606	546	-60	-9.9
Grimshaw	2,661	2,435	-226	-8.5
Horse Lakes 152B	322	324	2	0.6
Duncan's 151A	104	121	17	16.3
<b>Division No. 19</b>	<b>79,665</b>	<b>86,299</b>	<b>6,634</b>	<b>8.3</b>

The data in Table III-2 provide more explanation of population trends in CD19. Over the 1986 – 2001 period, CD 19 experienced a population gain of 13,783 persons. Two demographic components – net natural increase and inter-provincial migration -- contributed to an increase in the population. Conversely, two other demographic components –

## Work Force Analysis: City of Grande Prairie

international migration and intra-provincial migration<sup>12</sup> – contributed to population loss. Other observations about the demographic basis of population change in CD 19 include:

- Net natural increase is the greatest contributor to population growth but it has declined 23 percent over the whole period;
- The negative impact of international migration on growth has declined substantially during the past ten years or so;
- Over time inter-provincial migration has become an important contributor to population growth (it accounted for 87 percent of the population increase between 1996 and 2001); and
- With the exception of 1991 – 1996, intra-provincial migration has been a source of population loss, especially during the 1996 – 2001 sub-period.

**Table III-2: Components of Population Change, Census Division 19, 1986 to 2001**

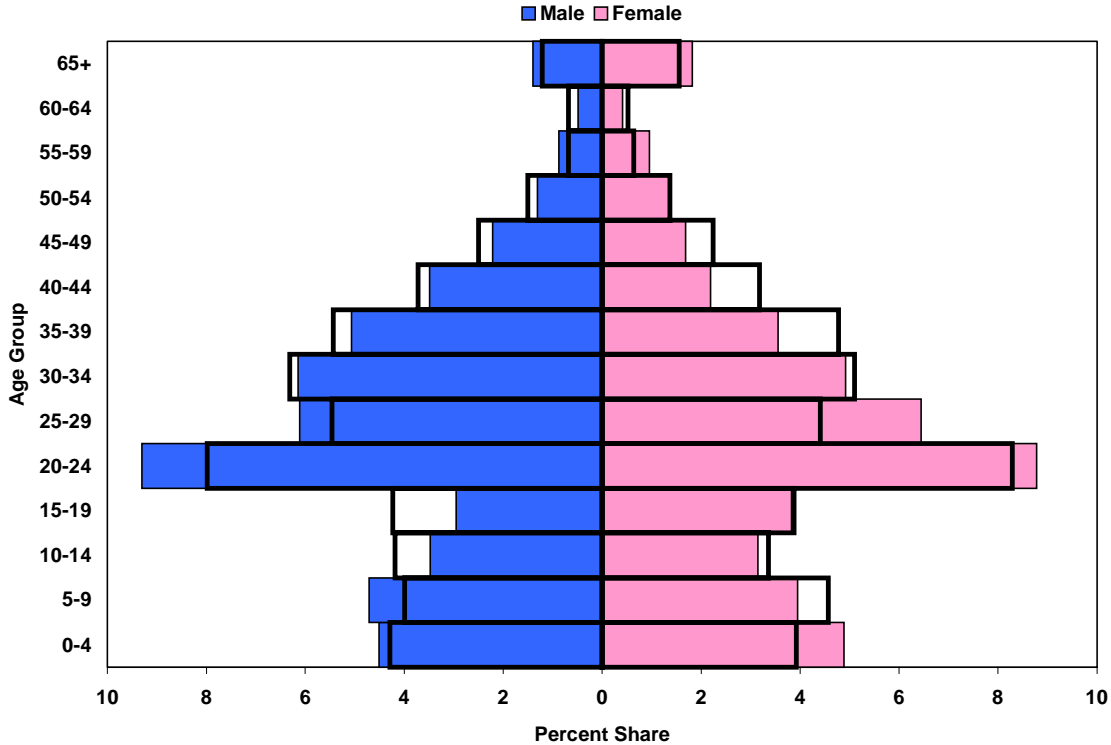
	<b>1986-91</b>	<b>1991-96</b>	<b>1996-01</b>	<b>1986-01</b>
Net natural increase	4,777	4,192	3,678	12,647
International migration	-1,329	-206	78	-1,457
Inter-provincial migration	-1,249	1,712	5,450	5,913
Intra-provincial migration	-698	296	-2,918	-3,320
<b>Total</b>	<b>1,501</b>	<b>5,994</b>	<b>6,288<sup>13</sup></b>	<b>13,783</b>

In Part II, the age and sex profile of inter-provincial migrants was illustrated (see Chart II-27). Inter-provincial migrants are mostly people in their twenties and thirties. Chart III-3 depicts the age and sex profile of intra-provincial migrants. Overall, the age and sex profile of intra-provincial migrants is similar to that of inter-provincial migrants. Most movement is by persons in their twenties and thirties, especially persons in the 20 – 24 age group.

<sup>12</sup> Intra-provincial migrants are persons who leave CD 19 for other parts of Alberta or who come to CD 19 from elsewhere in Alberta.

<sup>13</sup> The population gain of 6,288 between 1996 and 2001 in Table III-2 is less than the gain of 6,634 in Table III-1. The discrepancy is explained by the use of different data sources. The data in Table III-1 are taken from the *2001 Census*. The data in Table III-2 are from the *Annual Demographic Statistics 2001*. Data on the selected demographic components is not yet available from the *2001 Census*. The latter source uses an estimate for the 1996 – 2001 period. The difference between the two values is equivalent to 0.4 percent of CD 19's *2001 Census* population total.

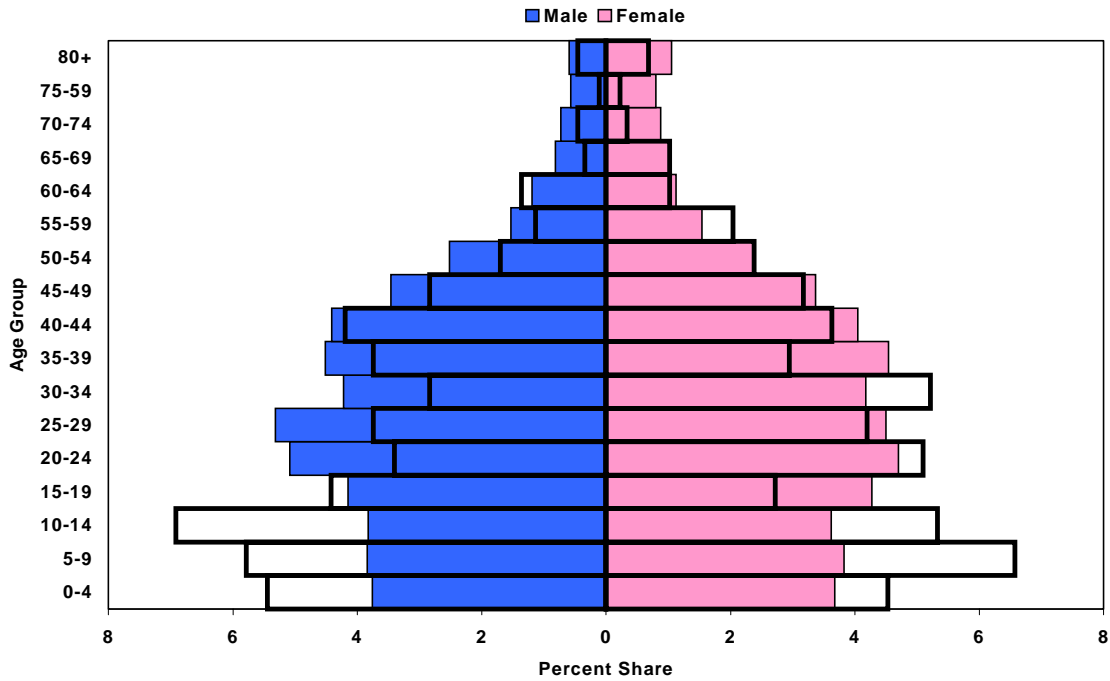
**Chart III-3**  
**Population Pyramid, 1996 – 2001 (average percent share)**  
**Intra-provincial In-migrants (solid) versus Out-migrants (outline)**  
**Alberta Census Division 19**



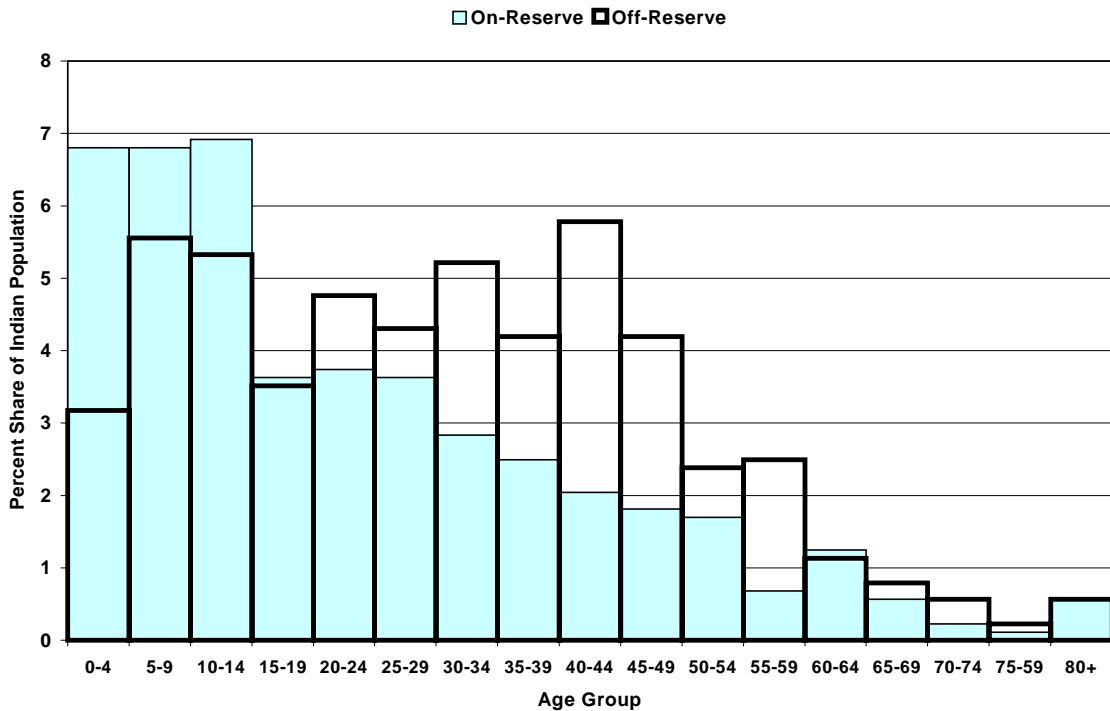
A final element of the local demographic context is the age profile of registered Aboriginals living in CD 19. Within CD 19, there are two small communities – Duncan’s and Horse Lakes. Demographic data on these communities are available from the provincial Department of Aboriginal Affairs and Northern Development.<sup>14</sup> Using these data, it is possible to depict the age and sex structure of the registered Aboriginal “community” in CD 19 (see Chart III-4). Compared to the population of Grande Prairie, the registered Aboriginal population has a much higher share of persons under the age of 15 (35 versus 23 percent). Conversely, the shares of persons 20 and older are generally smaller for the registered Aboriginal population. Chart III-5 indicates that the on-reserve population is younger than the off-reserve population. The share of persons under 15 is higher for those living on reserve. The off-reserve population has a higher share of persons 20 and older, particularly those between the ages of 30 and 49.

<sup>14</sup> Aboriginal Affairs and Northern Development, *First Nations of Alberta: Indian Register Population - December 31, 2000* (Edmonton: Research and Analysis Branch, May 2001).

**Chart III-4**  
**Population Pyramid, 2001 (%)**  
**Registered Aboriginals (outline) versus Grande Prairie (solid)**



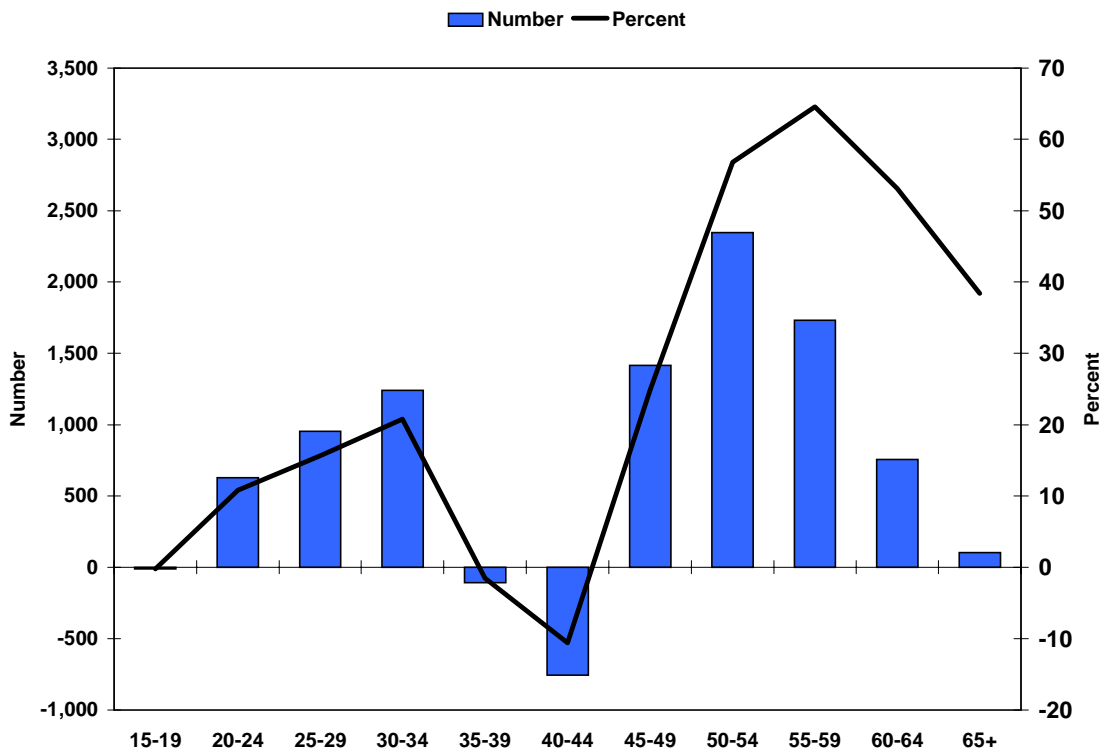
**Chart III-5**  
**Registered Aboriginal Population, Census Division 19**  
**On-reserve (solid) versus Off-reserve Population by Age, 2001 (%)**



Labour Force Projection

Projecting the labour force of either Grande Prairie or CD 19 is beyond the resources allocated to this report. However, a glimpse of the probable future profile of the area's labour force can be obtained by using the projections developed by Alberta Health and Wellness for the province's health regions<sup>15</sup> and assuming that labour force participation rates by age and sex are the same as they are in Alberta as a whole. Grande Prairie is part of the Mistahia Health Region. Mistahia covers the communities in CD 18 and CD 19 (including the City of Grande Prairie). The health region's boundaries can be viewed as the regional labour market for Grande Prairie. Chart III-6 shows both the absolute and relative change in Mistahia's labour force by five-year age group for the 2000 – 2010 period. The projection indicates that the greatest growth will occur in the 20-34 and 45-64 age groups, respectively. This trend corresponds to the labour force projection for Alberta developed by RAL Consulting Limited.

**Chart III-6**  
**Change in the Population by Age (N and %), 2000 - 2010**  
**Mistahia Health Region**



<sup>15</sup> Alberta Health and Wellness, *Population Projections for Alberta and its Health Regions, 2000-2030: Report* (Edmonton: Health Surveillance, January 2002).

## Work Force Analysis: City of Grande Prairie

### Demographic Profiles of Grande Prairie's Municipal Work Force

#### Age and Sex: All Employees

In August of 2002, the City of Grande Prairie had 439 employees. A quick way to portray the age of these workers is to calculate the arithmetic *mean* and the *median*. The *mean* age is the *average* age. The *mean* is sensitive to the *range* of the data or the distance between the highest and lowest values in the set. Therefore, when the *range* of the data is skewed, the *mean* is a less accurate determination of the centre. A better indicator of centrality is the *median*. The *median* is the mid-point of the data in that one half of the values lie above the median and one half are below it.

Table III-3 presents data on the mean and median ages of employees cross-referenced to other variables. It can be observed that one-half of all employees are over the age of 40 (median = 39.7) and that male employees are older than female employees (40.8 versus 38.2).

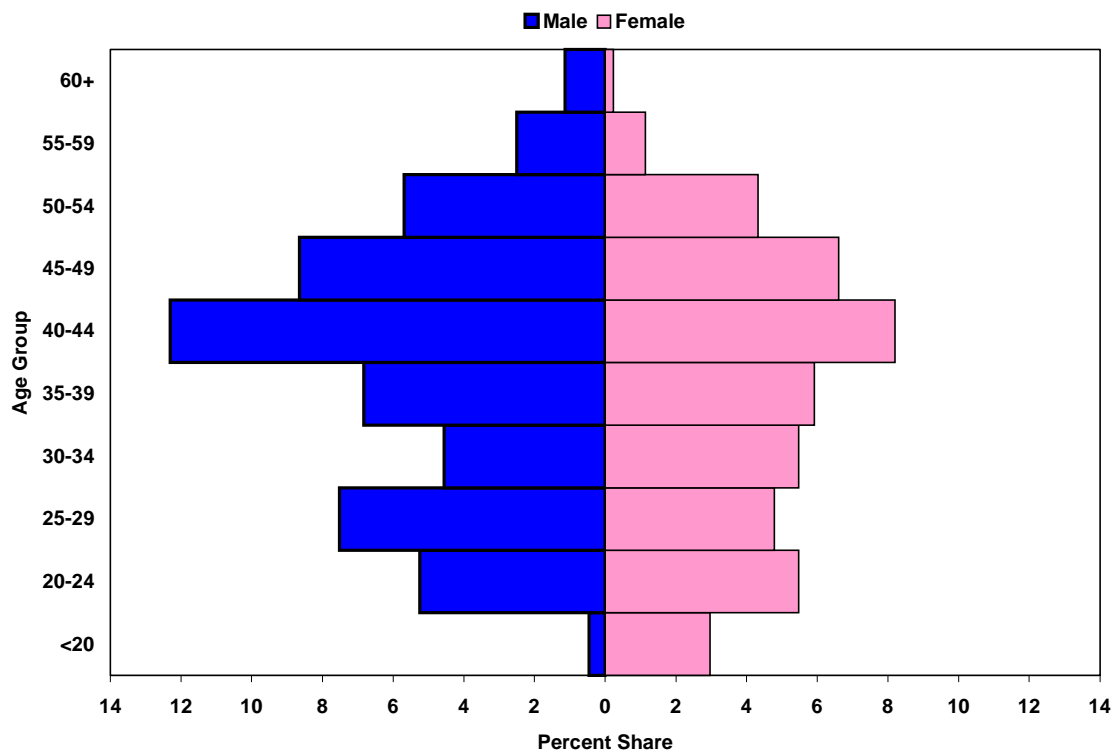
**Table III-3: All Employees by Age, Sex, Union Status, Occupation, and Department, 2002**

	Men		Women		Both	
	Mean	Median	Mean	Median	Mean	Median
	<i>Union Status</i>					
CUPE	38.4	40.1	31.9	29.4	36.2	37.0
GPFA	38.0	40.5	40.0	41.8	38.3	40.5
Out of scope	45.0	47.9	40.3	41.5	41.5	42.3
	<i>Occupational Category</i>					
Senior management	49.3	49.7	NA	NA	49.3	49.7
Other management	50.2	50.3	44.7	45.6	47.4	47.7
Administrative & clerical	--	--	39.3	39.9	39.4	40.0
Technical & skilled trades	39.9	40.4	40.8	41.4	40.2	41.0
Operational	37.9	39.7	32.5	30.1	36.1	37.0
	<i>Department</i>					
City Manager	49.2	49.2	43.8	47.6	44.6	47.6
Financial	40.8	42.7	37.9	39.4	39.4	41.0
Protective Services	39.1	42.0	38.2	37.2	38.8	39.7
Community Services	33.1	30.0	33.4	31.8	33.3	31.1
Public Works	41.7	42.2	40.1	42.8	41.2	42.2
Utilities	38.6	38.3	37.4	39.4	38.3	38.3
<b>All employees</b>	<b>39.4</b>	<b>40.8</b>	<b>36.8</b>	<b>38.2</b>	<b>38.2</b>	<b>39.7</b>

## Work Force Analysis: City of Grande Prairie

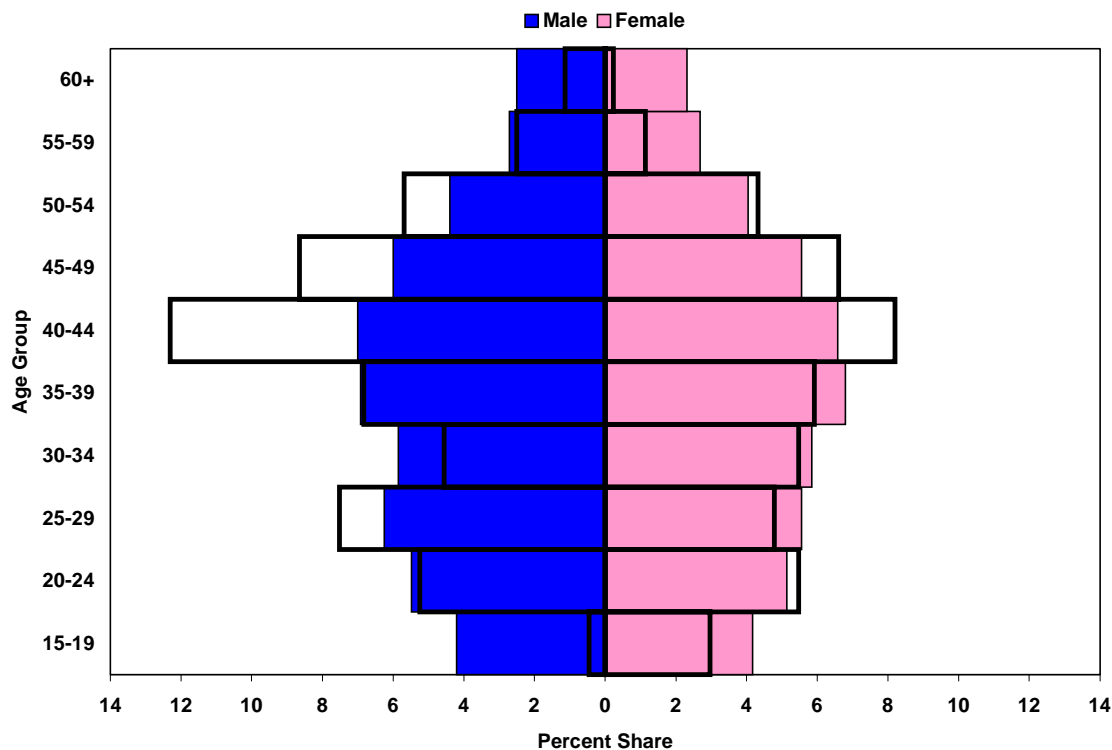
The factors of age and sex can also be portrayed in terms of a work force pyramid. This is done in Chart III-7. The chart illustrates that 36 percent of all employees are in their forties, however, given the median age, one-half are under the age of 40. In addition, the under 40 group is evenly divided between males and females. Fifty-eight (58) percent of all employees are *boomers* (i.e., the 36 – 55 in 2002) compared to 48.5 percent in Alberta's labour force. Male boomers account for a larger share of all employees (33 percent) than female boomers (24 percent).

**Chart III-7**  
**Work Force Pyramid, 2002**  
**All Employees (%)**



The age and sex structure of the Grande Prairie city work force can be compared to that of the local labour market. Assuming that labour force participation rates by age and sex are the same locally as they are in Alberta, it is possible to construct a labour market pyramid for CD 19. In Chart III-8, the age and sex structure of Grande Prairie's workers is overlaid on that of the adult population of CD 19 (i.e., the population from 15 to 74). It is evident that there is an over-representation of city workers in the 40 – 54 age range. The City of Grande Prairie's share of workers 40 – 54 (46 percent) is substantially larger than the share in the CD 19 labour market (34 percent). This is particularly the case with males. On the female side of the labour market, the aggregate shares across all age groups for the city (45 percent) and CD 19 (49 percent), respectively, are close. The comparison with the age and sex structure of the local labour market indicates that Grande Prairie's city work force is somewhat older (and more dependent on boomers) than the area's overall work force. This latter observation implies nothing about the capability and performance of the city's workers.

**Chart III-8**  
**Workers by Age and Sex, 2002<sup>16</sup>**  
**Grande Prairie (outline) versus CD 19 (solid)**



Occupation

City workers in Grande Prairie hold a variety of specific occupations (e.g., fire fighter or tax clerk) that reflect the business of the municipality. Given the large number of occupations, it is more useful for purposes of this analysis to group the employee's occupations in terms of broader *occupational categories*. A member of the project Steering Committee completed this task. Five categories are employed:

- *Senior Management*: City Manager and the departmental directors.
- *Other Management*: positions where incumbents exercise supervisory responsibility ranging from more senior officials such as the City Clerk to front line supervisors (e.g., platoon captain in the Fire Department).
- *Administrative and Clerical*: positions where employees carry out internal administrative tasks or provide support to line operations (e.g., Data Entry or Administrative Assistant).
- *Operational*: positions where employees are involved directly in service delivery to the public (e.g., Life Guard or Waterworks Operator).

<sup>16</sup> Population data are for 2001.

## Work Force Analysis: City of Grande Prairie

- *Technical and Skilled Trades*: positions that involve specialized expertise in a variety of areas from engineering and skilled trades to human resources planning and financial analysis.

Table III-3 (see page 38) and Table III-4 below draw the connection between the age and sex of employees and their occupational category. A number of observations can be made:

- The Operational category has the lowest median age, and it is almost three years lower than the median age of all employees (i.e., 37.0 versus 39.7). Both males and females in the Operational category are younger than workers of the same sex in the other categories. However, female workers in the Operational category (one-third of the workers in this category) are the youngest occupational cohort overall with a median age of 30.1 (almost ten years younger than male workers in the Operational category).
- The Senior Management and Other Management categories have the highest median ages; the median ages of the Administrative and Clerical and Technical and Skilled Trades categories are closer to the all employee median of around 40 years. This observation does not change when the sex of the employee is taken into account.
- With the exception of the Technical and Skilled Trades category where female workers have a median age that is one year higher than their male counterparts, female employees are younger than male employees. In the Other Management category, this “gender gap” is almost five years.
- Although about one-half of all employees are 40 years of age or older (40+), only 15 percent are 50 or older (50+).
- The Senior Management (83.3 percent) and Other Management (85.7 percent) categories are substantially above the all employee 40+ share of 50.8 percent. The Administrative and Clerical category (53.4 percent) is just above the all employee share, and the remaining categories are below it with the Operational category having the lowest 40+ share (44.3 percent).
- The pattern evident for the share of 40+ employees by occupational category generally holds for the 50+ group. The Senior Management (50.0 percent) and Other Management (40.0 percent) categories are substantially above the all employee 50+ share of 15.0 percent. The Administrative and Clerical category (16.4 percent) and Technical and Skilled Trades (16.1 percent) categories are just above the all employee share, and the Operational category has the lowest 50+ share (10.3 percent).

The analysis of the relationship between employee age, sex, and occupational category further refines the contention made earlier about the aging of the City of Grande Prairie's work force. The two management categories are the oldest, and males tend to be older than females in all categories. The front line remains the youngest part of the city's work force.

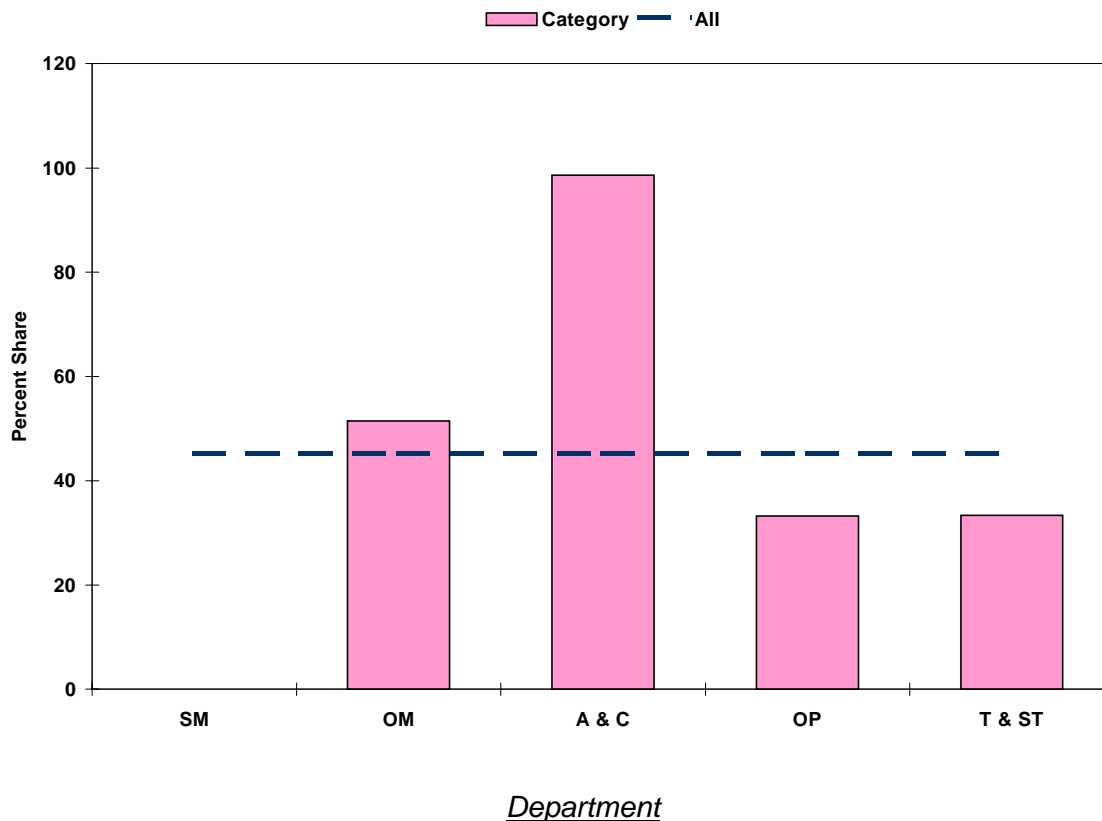
## Work Force Analysis: City of Grande Prairie

**Table III- 4: Employees Aged 40+ and 50+ by Department, Employment Status, Union Status, and Occupational Category, 2002**

	2002	
	40+	50+
<i>Department:</i>		
City Manager	79.6	38.5
Financial	58.3	11.7
Protective Services	51.7	12.6
Community Services	34.2	9.9
Public Works	61.9	23.9
Utilities	45.5	9.1
<i>Employee Status:</i>		
Full-time	64.4	19.6
Part-time	52.6	15.8
Temporary	24.8	6.2
<i>Union Status:</i>		
CUPE	44.1	11.3
GPFA	55.6	11.1
Out of Scope	59.9	22.4
<i>Occupational Category:</i>		
Senior management	83.3	50.0
Other management	85.7	40.0
Administrative & clerical	53.4	16.4
Operational	44.3	10.3
Technical & skilled trades	48.4	16.1
<b>Total</b>	<b>50.8</b>	<b>15.0</b>

The distribution of all employees by occupational category and sex is depicted in Chart III-9. Forty-five (45) percent of the city's employees are female. Female representation ranges from a high of 99 percent in the Administrative and Clerical category to a low of 0 percent in the Senior Management category. Female employees account for an above average share in the Other Management category (51 percent) but only one in three workers in the remaining two categories.

**Chart III-9**  
**All Employees by Occupational Category and Sex, 2002**  
**Occupational Share (bar) versus All Employee Share (line)**



The 439 employees of the City of Grande Prairie are distributed across six departments (see Table III-5). Departments range in size from Public Works (113 employees) to the City Manager (13 employees). The female share of employees (45.1 percent across the city's work force) varies by department. Female representation is highest in the City Manager's department (84.6 percent) and lowest in Utilities (27.3 percent). With the exception of Community Services, female representation is lowest in the larger operational departments. It is highest in the administrative departments.

**Table III-5: Distribution of Employees (N and %) by Department and by Sex, 2002**

Department	Total	Female	Female
	N	N	%
Utilities	55	15	27.3
Public Works	113	32	28.3
Protective Services	87	32	36.8
Financial	60	30	50.0
Community Services	111	78	70.3
City Manager	13	11	84.6
<b>Total</b>	<b>439</b>	<b>198</b>	<b>45.1</b>

## Work Force Analysis: City of Grande Prairie

The data in Table III-3 (see page 38) and Table III-4 (see page 42) draw the connection between the age and sex of employees and the city department that they work in. The following observations are put forward:

- Community Services is the department with the lowest median age (31.1 or 8.6 years below the all employee median age). Both males and females in Community Services are younger than workers of the same sex in the other departments. Male workers in Community Services (30 percent of the workers in this department) are the youngest occupational cohort overall with a median age of 30.0 years (almost eleven years younger than median age for all male employees and just over eight years younger than the median for all female employees).
- The City Manager's department has the highest median age (47.6), and there is less than a two-year gap between males (49.2) and females (47.6) working in this department. Excluding Community Services, the other departments have median ages close to the all employee median (for example, Public Works has the second highest median age at 42.2). This observation does not change when the sex of the employee is taken into account.
- Female employees are slightly older than male employees in three departments: Community Services (a difference of 1.8 years), Public Works (0.6 years), and Utilities (1.1 years). In the remaining three departments male workers are noticeably older than their female counterparts. The largest differential (4.8 years) is in Protective Services.
- Only Community Services (34.2 percent) and Utilities (45.5 percent) have shares of 40+ employees below the all employee share (50.8 percent). The highest department share for the 40+ group is held by the City Manager (79.6 percent), with Public Works the next highest (61.9 percent).
- Utilities (9.1 percent), Community Services (9.9 percent), Financial Services (11.7 percent), and Protective Services (12.6 percent) have 50+ shares below the all employee share. The highest share is the City Manager's department (38.5 percent) followed by Public Works (23.9 percent).

The analysis of the relationship between employee age, sex, and departmental affiliation takes the work force aging observation another step further. Two departments – City Manager and Public Works – stand out as the oldest organizations. The former is small and female-dominated; the latter, large and male-dominated. In general, service delivery departments are younger than administrative departments.

### Employment Status

Not all of City of Grande Prairie's workers are full-time. In 2002, Grande Prairie employed 439 employees on either a full-time, temporary, or part-time basis.

In an aging work force situation, it is crucial to understand the demographic characteristics of both full-time workers and temporary and part-time workers. Temporary and part-time workers have experience with the municipality and are often younger, thereby making them a potential recruitment pool for openings among the full-time ranks.

## Work Force Analysis: City of Grande Prairie

Table III-6 illustrates the distribution of the city's employees by department, sex, and employment status. Across Grande Prairie's work force, a majority (63 percent) of employees work in full-time positions, and 60 percent of the full-time employees are male. About one-third of employees are temporary, and the shares by sex in this group are fairly even. Part-time employees, three-quarters of whom are female, account for a small share of the city's work force.

The reliance on full-time employees is evident in four departments – City Manager, Financial Services, Protective Services, and Public Works. In Public Works and Protective Services, the bulk of full-time employees are male; in Financial Services, the shares of males and females are equal; and in the City Manager's department, three-quarters of the employees are full-time. Community Services relies heavily on temporary employees and, to a lesser extent, part-time employees, most of whom are female. Utilities also relies heavily on temporary and part-time employees, the majority of whom are male.

**Table III-6: Employees by Department, Sex, and Employment Status, 2002 (%)**

Department	Full-time		Temporary		Part-time	
	Male	Female	Male	Female	Male	Female
City Manager	15.4	76.9	0.0	7.7	0.0	0.0
Financial Services	40.0	40.0	10.0	6.7	0.0	3.3
Protective Services	62.1	27.6	1.1	6.9	0.0	2.3
Community Services	9.0	22.5	18.9	39.6	1.8	8.1
Public Works	56.6	18.6	0.9	0.0	0.9	0.0
Utilities	20.0	10.9	49.1	14.5	3.6	1.8
<b>All Departments</b>	<b>37.6</b>	<b>25.1</b>	<b>16.2</b>	<b>16.9</b>	<b>1.1</b>	<b>3.2</b>

Table III-4 (see page 42) contains data on the age of full-time, temporary, and part-time employees. Employing the yardstick of the share of employees 40 or older, full-time and part-time workers are substantially older than temporary workers. Almost two-thirds (64.4 percent) of full-time workers and just over one-half (52.6 percent) of part-time workers are 40+. By comparison, only one in four (24.8 percent) temporary workers are 40+. The observation also holds for the 50+ share. For example, one in five (19.6 percent) of full-time employees are 50+ compared to around one in twenty (6.2 percent) temporary employees.

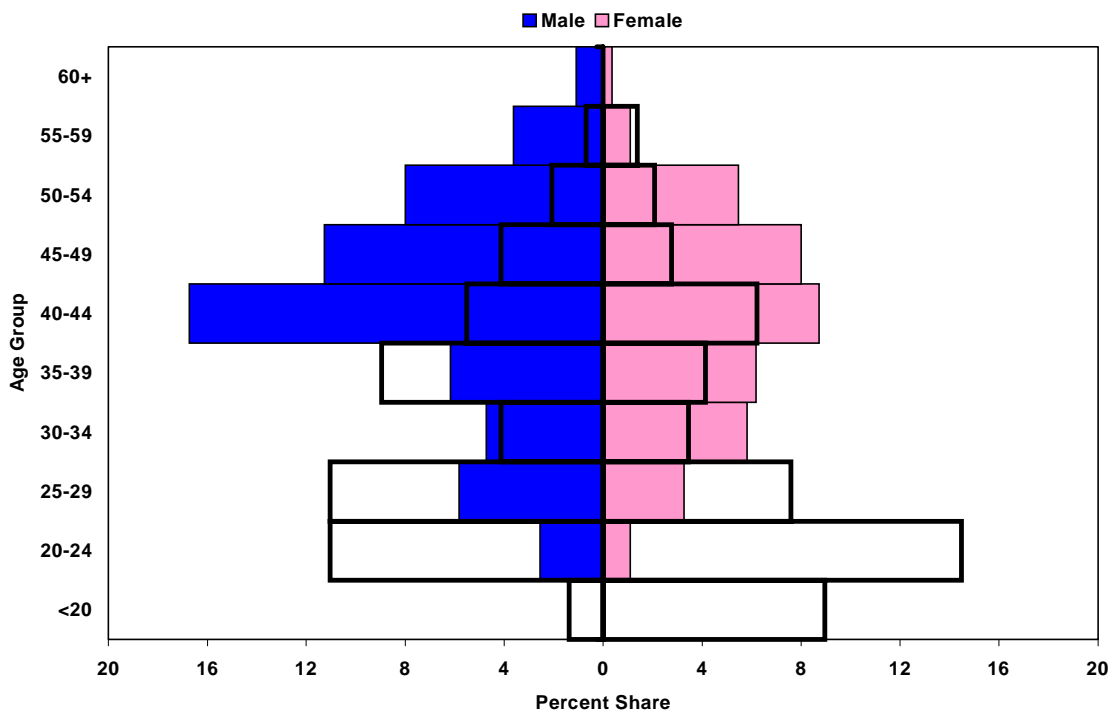
Table III-7 links employee age and employment status using the mean and median. These data confirm the basic trend illustrated by the data in Table III-4: full-time and part-time employees are markedly older than temporary employees. In addition, within each employment status, female employees are younger than male employees. The "gender gap" is smallest for full-time employees and greatest for part-time employees.

**Table III-7: Mean and Median Age by Sex and Employment Status, 2002**

Employment Status	Male		Female		Both	
	Mean	Median	Mean	Median	Mean	Median
Full-time	42.0	42.7	41.2	42.2	41.7	42.6
Temporary	32.7	30.7	29.9	25.2	31.3	28.2
Part-time	45.7	48.8	39.1	38.8	40.9	39.6

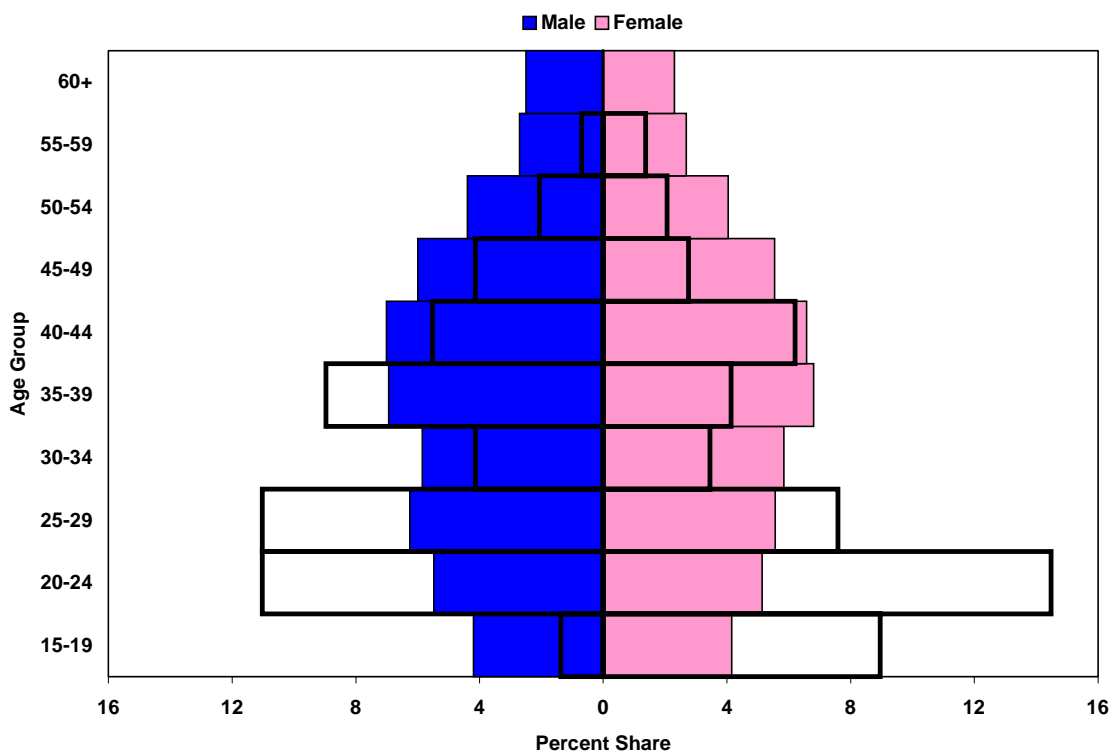
Comparing the work force pyramids for full-time and temporary employees, respectively, illustrates more clearly the different age profiles of these two groups of city employees. Full-time employees are decidedly skewed to the over 40 age range; temporary, to the under 30 age range.

**Chart III-10  
Workers by Age and Sex, 2002 (%)  
Full-time Municipal Workers (solid) versus Temporary (outline)**



In Chart III-11 the work force pyramid for the city's temporary employees is compared to that for the labour force in CD 19. The city's temporary workers are disproportionately drawn from the ranks of labour force participants under the age of 30.

**Chart III-11**  
**Workers by Age and Sex, 2002 (%)**  
**Temporary City Workers (outline) versus CD 19 (solid)**



Union Status

Two-thirds of the City of Grand Prairie's employees are unionized. The largest group (54% of all employees) is represented by the Canadian Union of Public Employees (CUPE). The Grande Prairie Firefighters' Association (GPFA) represents 12 percent of all employees. The remaining third of employees is out-of-scope. Thirty-four (34) percent of CUPE members are female; 15 per cent of GPFA members are female; and 74 percent of the out-of-scope employees are female.

Data on the age, sex, and union status of city employees is contained in Table III-3 (see page 38) and Table III-4 (see page 42). Based on these data, it is evident that:

- The median age of out-of-scope employees (42.3) is higher than the median ages of both GPFA members (40.5) and CUPE members (37.0). CUPE members are the only group below the median age of all employees (39.7).
- In the respective cases of CUPE and out-of-scope employees, the median age of males is substantially higher than that for females. For example, the "gender gap" for CUPE is 10.7 years. Female members of the GPFA are somewhat older than male members (a difference of 1.3 years).

## Work Force Analysis: City of Grande Prairie

- The data in Table III-4 support the trends identified above. For example, out-of-scope employees have higher shares of both 40+ and 50+ employees than the other two groups and the shares are above the all employee averages. Furthermore, both the CUPE (11.3 percent) and GPFA (11.1 percent) shares of 50+ employees are below the all employee share (15.0 percent).

### Service

The data set for Grande Prairie's city workers includes the date on which an employee was hired. These data were used to calculate summary statistics on the length of service of full-time employees with the city (not necessarily career service). Partial results are presented in Table III-8.

The median length of service for all employees is 4.2 years, with males (5.2 years) serving longer than females (3.3 years). GPFA members have much more service (median = 11.9) than either CUPE members or out-of-scope employees. From a union status perspective, males have greater length of service than females.

In terms of occupation, Other Management has the most service (12.7 years); Operational, the least (3.4 years). With the exception of the Technical and Skilled Trades, males have more service than females in each of the occupational categories. For example, males in the Other Management category have a median value of 18.0 compared to a value of 12.7 for females.

From a departmental perspective, only Community Services (median = 2.3) and Utilities (median = 2.4) have values below the median of 4.2 years for all employees. These two departments are also the most reliant on temporary and part-time workers. Females have longer service in the City Manager's department and Community Services; males lead in the other departments with the widest gap in Public Works (8.3 versus 2.8 years).

**Table III-8: Years of Service by Sex, Union Status, Occupational Category, and Department, 2002**

	Men		Women		Both	
	Mean	Median	Mean	Median	Mean	Median
	<i>Union Status</i>					
CUPE	7.5	5.0	3.2	2.2	6.1	3.3
GPFA	12.7	12.8	6.2	5.0	11.7	11.9
Out of scope	8.6	6.3	7.5	5.2	7.8	5.3
	<i>Occupational Category</i>					
Senior management	10.9	9.5	NA	NA	10.9	9.5
Other management	15.2	18.0	11.2	12.2	13.1	12.7
Administrative & clerical	--	--	5.4	4.0	5.6	4.1
Technical & skilled trades	7.9	5.8	10.4	9.6	8.8	7.0
Operational	8.1	4.3	3.9	2.2	6.7	3.4

## Work Force Analysis: City of Grande Prairie

	Men		Women		Both	
	Mean	Median	Mean	Median	Mean	Median
	<i>Department</i>					
City Manager	13.4	13.4	13.9	13.8	13.8	13.8
Financial	8.3	6.5	7.0	4.1	7.7	5.3
Protective Services	11.6	9.1	7.4	5.4	10.1	7.1
Community Services	4.2	1.9	3.8	2.3	3.9	2.3
Public Works	10.0	8.3	5.2	2.8	8.6	6.1
Utilities	5.8	2.8	4.7	2.0	5.5	2.4
<b>All employees</b>	<b>8.7</b>	<b>5.2</b>	<b>5.7</b>	<b>3.3</b>	<b>7.4</b>	<b>4.2</b>

In Table III-8 the values for the mean years of service are consistently higher than the median values, an indication that the data are skewed. Table A-1 in Appendix A portrays the distribution of data in greater detail. Overall, 54 percent of employees have less than five years of service, and 17 percent have fifteen years or more. For females, the distribution is more skewed (62 versus 10 percent). Forty-six (46) percent of males have less than five years' service and 23 percent, 15+ years.

### Hiring

From the beginning of 1997 until August 2002, the City of Grande Prairie hired 262 employees. During the period, the hiring rate is 10.5 percent (i.e., an average of 46.2 hires annually against the August 2002 complement of 439).

Data on the entry age of all employees as of August 2002 cross-referenced to the variables of sex, union status, occupational category, and department are set out in Table III-9. With reference to the median values, it can be observed that:

- About one-half of the employees entered the civic service before the age of 30.
- Females entered at a slightly higher age than males (30.1 versus 28.9 years).
- Out-of-scope employees have a higher entry age than union members. With the exception of the GPFA, males enter at a higher age than females.
- In terms of occupation, Senior Management (42.3) and Other Management (35.4) have the highest entry ages and Operational (27.4), the lowest. Females have higher entry ages in two categories – Other Management and Administrative and Clerical. Males have higher entry ages in the Technical and Skilled Trades and Operational categories, respectively.
- Only Protective Services and Community Services have median values below the median age of entry for all employees. Utilities is the department with the highest entry age (33.0). Females have higher entry ages than males in the administrative departments – City Manager and Financial Services.

## Work Force Analysis: City of Grande Prairie

**Table III-9: Entry Age by Sex, Union Status, Occupational Category, and Department, 2002**

	Men		Women		Both	
	Mean	Median	Mean	Median	Mean	Median
	<i>Union Status</i>					
CUPE	30.8	30.3	28.6	25.5	30.1	27.9
GPFA	25.3	24.3	33.8	32.5	26.6	24.9
Out of scope	36.4	36.4	32.8	32.0	33.7	32.9
	<i>Occupational Category</i>					
Senior management	38.4	42.3	NA	NA	38.4	42.3
Other management	35.1	35.1	33.5	36.3	34.3	35.4
Clerical	30.2	30.2	33.8	33.5	33.8	33.2
Technical & skilled trades	31.9	29.7	30.4	28.6	31.4	29.5
Operational	29.8	28.0	28.6	25.8	29.4	27.4
	<i>Department</i>					
City Manager	35.8	35.8	29.9	31.1	30.8	31.1
Financial	32.5	32.1	30.9	29.0	31.7	30.6
Protective Services	27.5	24.8	30.8	29.8	28.7	26.6
Community Services	28.9	26.5	29.6	27.4	29.4	27.3
Public Works	31.7	30.6	34.9	34.6	32.6	30.9
Utilities	32.8	32.9	32.7	36.3	32.8	33.0
<b>All employees</b>	<b>30.7</b>	<b>28.9</b>	<b>31.1</b>	<b>30.1</b>	<b>30.9</b>	<b>29.4</b>

It is interesting to identify where new recruits for the city's work force come from geographically. Data on the home communities of recent recruits was provided by the Fire department. The data indicate that:

- Twenty-four (24) firefighters were hired from 1999 to 2002.
- One-half of the hires were in 2001.
- Two-thirds of the hires were from Alberta. Only four of the eighteen Alberta recruits were from Grande Prairie, and only four were from either Edmonton or Calgary.
- Three of the hires were from British Columbia, with one each from the Northwest Territories, Saskatchewan, and Manitoba.

### Exits

Between 1997 and 2002 (up to August), 382 employees left the employment of the City of Grande Prairie, 57 percent of whom were female. Although this activity varied somewhat by year, on average about 64 employees exited annually (see Chart III-12). From 1997 – 2002,

## Work Force Analysis: City of Grande Prairie

the exit rate is 14.5 percent (i.e., an average of 63.7 exits annually against the August 2002 complement of 439).

**Chart III-12**  
**Annual Exits by All Employees (N), 1997 – 2002**  
 (mean = 63.7; median = 68.5)



From Table III-10, it is clear that overall temporary employees account for 70 percent of the exits; full-time, 26 percent; and part-time, 4 percent. On average, 44 temporary employees, 17 full-time employees, and 3 part-time employees left annually. The percentage shares were fairly typical of the distribution in each year during the period.

**Table III-10: Exits by Employment Status, 1997 - 2002**

Status	1997	1998	1999	2000	2001	2002	1997-02 Average	Median
Full-Time	14	19	17	23	19	8	16.7	18.0
Part-Time	1	4	3	4	3	1	2.7	3.0
Temporary	40	48	52	57	44	25	44.3	46.0
<b>Total</b>	<b>55</b>	<b>71</b>	<b>72</b>	<b>84</b>	<b>66</b>	<b>34</b>	<b>63.7</b>	<b>68.5</b>

The data in Table III-11 demonstrate that temporary employees account for the majority of exits in all departments except City Manager and Protective Services. However, even in these two departments, the share of exits held by temporary employees is substantial (around 40 percent of exits). In Community Services, Public Works, and Utilities, approximately four in five exits are by temporary employees. For part-time employees above average shares are evident in three departments – City Manager, Community Services, and Utilities.

**Table III-11: Exits by Department and Employment Status, 1997 – 2002**

## Work Force Analysis: City of Grande Prairie

Department	Full-Time	Part-Time	Temporary	Total
	%	%	%	%
City Manager	50.0	10.0	40.0	100.0
Financial	44.2	0.0	55.8	100.0
Protective Services	58.3	3.3	38.3	100.0
Community Services	12.1	6.4	81.6	100.0
Public Works	20.9	1.5	77.6	100.0
Utilities	11.8	5.9	82.4	100.0
<b>Total</b>	<b>26.2</b>	<b>4.2</b>	<b>69.6</b>	<b>100.0</b>

From an occupational perspective, exits by full-time employees dominate the Senior Management, Other Management, and Technical categories (see Table III-12). A substantial majority of exits in the Administrative and Clerical and Operational categories, respectively, are by temporary employees. Exits by employees in the Skilled Trades sub-category are evenly split among the three types of employment.

**Table III-12: Exits by Occupational Category and Employment Status, 1997 - 2002**

	Full-Time	Part-Time	Temporary	Total
	%	%	%	%
Administrative & Clerical	36.9	2.9	60.2	100.0
Operational	12.6	5.0	82.4	100.0
Other Management	100.0	0.0	0.0	100.0
Senior Management	100.0	0.0	0.0	100.0
Skilled Trades	33.3	33.3	33.3	100.0
Technical	68.4	0.0	31.6	100.0
<b>Total</b>	<b>26.2</b>	<b>4.2</b>	<b>69.6</b>	<b>100.0</b>

Table III-13 shows that there are different reasons for exiting, however, the overwhelming reason is having temporary employment status (three-quarters of exits). Resignation accounts for about one-fifth of exits. Retirement and other reasons represent minimal shares. The majority of full-time employees who exit resign. Only around one in eight full-time employees who exit either retire or leave for other reasons.

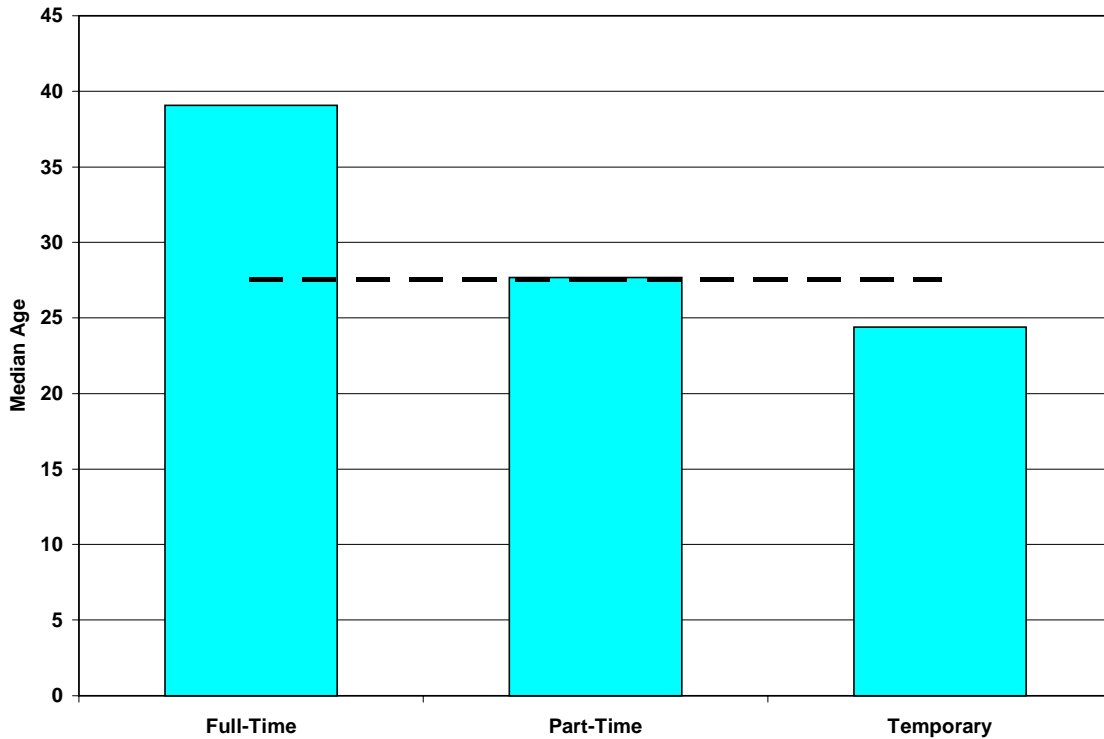
**Table III-13: Exits by Reason and Employment Status, 1997 – 2002 (%)**

All Years	Full-Time	Part-Time	Temporary	Total
Temporary Employee	14.0	75.0	97.7	74.9
DTH	0.0	6.3	0.4	0.5
Resignation	61.0	18.8	1.5	17.8
Retirement	12.0	0.0	0.4	3.4
Terminated without Cause	13.0	0.0	0.0	3.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

## Work Force Analysis: City of Grande Prairie

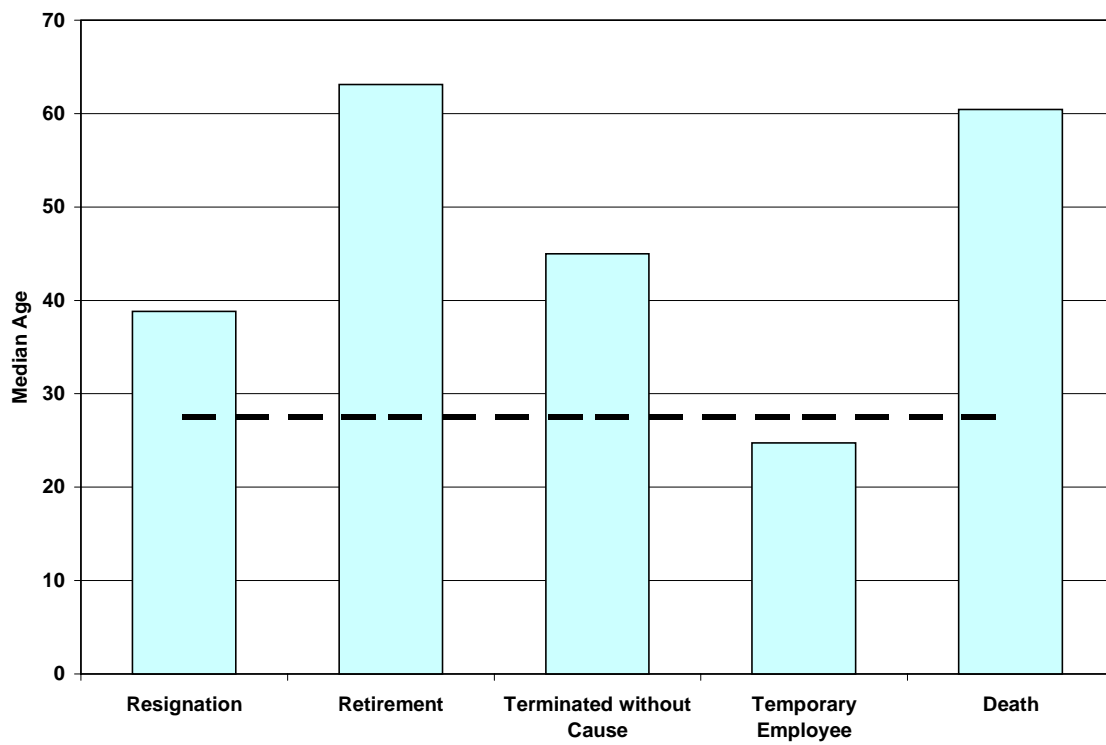
The age profile of exiting employees is depicted in Chart III-13 and Chart III-14. The median age of exiting employees is 27.5 (see Chart III-13), with males having a higher median than females (29.1 versus 26.9). There is also variation depending on the employment status of the departing employee. Full-time employees depart around the age of 39; part-time, age 27; and temporary, age 24.

**Chart III-13**  
**Median Age of Exiting Employees by Employment Status, 1997 – 2002**



The median age of resigning employees is 38.8 years, a value that is expected given that the majority of resignations are by full-time employees (median = 39.1). Employees terminated without cause, all of whom are full-time, are in their mid-forties (median = 45.0). On average, retiring employees (N = 13) leave employment at the age of 61.1 years (median = 63.1).

**Chart III-14**  
**Median Age of Exiting Employees by Reason, 1997 – 2002**



The service profile of departing employees is captured by the data in Table III-14. Several observations are in order:

- Two-thirds of departing full-time employees have 31 or more months of service with the City of Grande Prairie. There is a substantial gap between the mean months of service and the median value, an indication that the data are skewed. One-half of full-time employees who exit have four years of service (median = 47.9 months).
- One-half of part-time employees, a relatively small group, exit with less than 17 months of service (median = 16.8 months). About three in ten part-time employees exit with 12 or fewer months of service. Conversely, an equivalent proportion exit with 25 or months of service.
- The largest share of temporary employees exit with less than six months of service. Almost three in five leave with 12 or fewer months. Only one in seven depart with 31 or more months.

**Table III-14: Exits by Length of Service (months) and Employment Status, 1997 - 2002**

Months	Full-Time		Part-Time		Temporary	
	#	%	#	%	#	%
<6	5	5.0	2	12.5	119	44.7
6-12	8	8.0	3	18.8	36	13.5
13-18	5	5.0	3	18.8	45	16.9
19-24	7	7.0	3	18.8	6	2.3
25-30	10	10.0	2	12.5	24	9.0
31+	65	65.0	3	18.8	36	13.5
<i>Total</i>	<i>100</i>	<i>100.0</i>	<i>16</i>	<i>100.0</i>	<i>266</i>	<i>100.0</i>
<b>Mean</b>		<b>76.3</b>		<b>34.7</b>		<b>16.3</b>
<b>Median</b>		<b>47.9</b>		<b>16.8</b>		<b>6.9</b>

Work Force Projections

The extent to which the age structure of the City of Grande Prairie’s work force poses problems for future recruitment can be determined by projecting forward its likely future age composition. RAL Consulting Limited has developed a projection starting with the detailed age data for the city’s full-time work force as of 2002 and making the following assumptions:

- The city work force faces mortality rates by age equal to those faced by individuals living in CD 19.
- Each city work force member retires at the age of 58.
- No current member leaves the city work force except through retirement or death, and no new recruitment takes place.

RAL's "steady state" projection covers each year from 2002 to 2022. It further assumes that the level of service delivery will remain constant. Therefore, Charts III-15 and III-16 illustrate the future recruitment challenge faced by the City of Grande Prairie stemming from the natural erosion of its existing work force base under the assumption that the retirement age is 58.

A word is in order about how the retirement age was determined. Like other municipal employees in Alberta, Grande Prairie’s full-time employees are members of the Local Authorities Pension Plan (LAPP). LAPP members may retire with an unreduced pension as early as the age of 55 if their age plus years of service equals 85 (“Factor 85”). In determining an appropriate retirement age, RAL has added together the age and years of service for current full-time municipal employees in Grande Prairie to create the Factor 85 variable. The median value for this variable in 2002 is 53. In 16 years the median value for the Factor 85 variable will be 85 (53 + 16 + 16). The mean age of current, full-time employees is approximately 42. In 16 years it will be 58.

In Chart III-15:

- the *dotted line*, the target, represents the total number of full-time city workers in 2002 (275);

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- the *hatched portion* of each bar represents those members as of 2002 who are still under the age of 58 in each year through to 2022;
- the *gray portion* of each bar represents those members as of 2002 who are either 58 years of age or over by the year indicated (these people are retired by that time, but they are still alive);
- the difference between the top of the stacked bars and the dotted line represents those workers as of 2002 who have died by the year indicated; and
- the difference between the dotted line and the top of the hatched portion of each bar represents those workers as of 2002 who have either retired or died in the meantime.

This latter gap represents the natural replacement recruitment challenge faced by the City of Grande Prairie over the next two decades.

**Chart III-15**  
**Work Force Projection by Age**  
**Full-time Employees (N), 2002 – 2022**

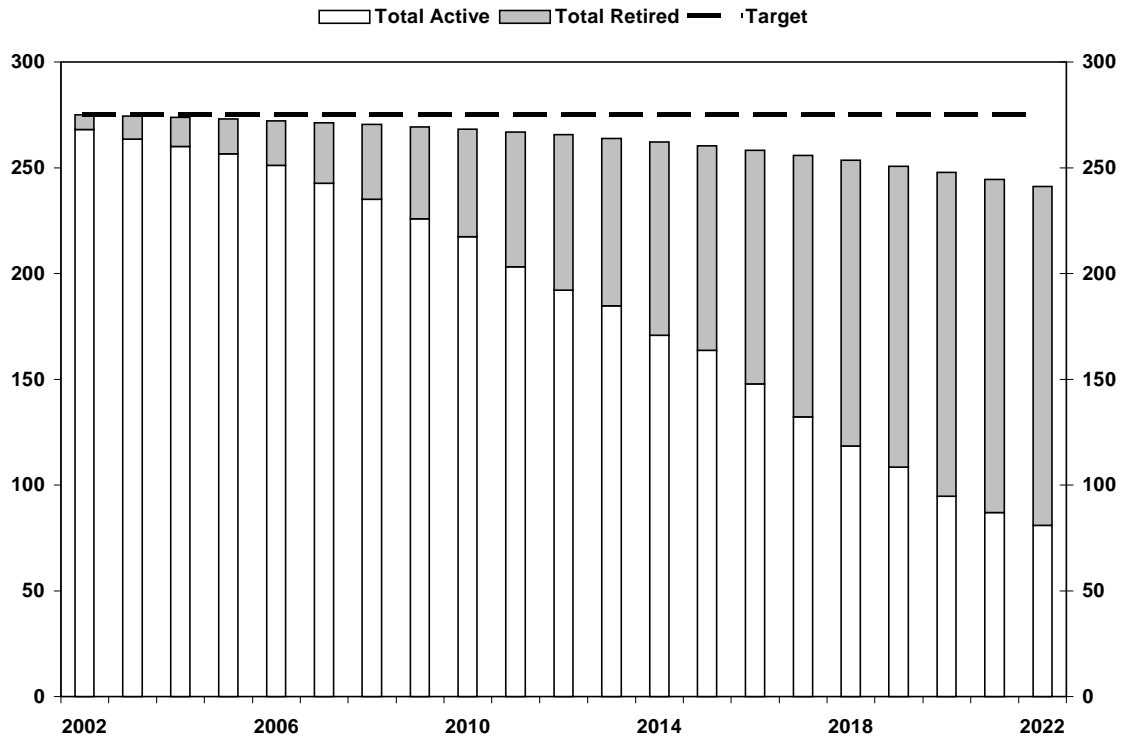
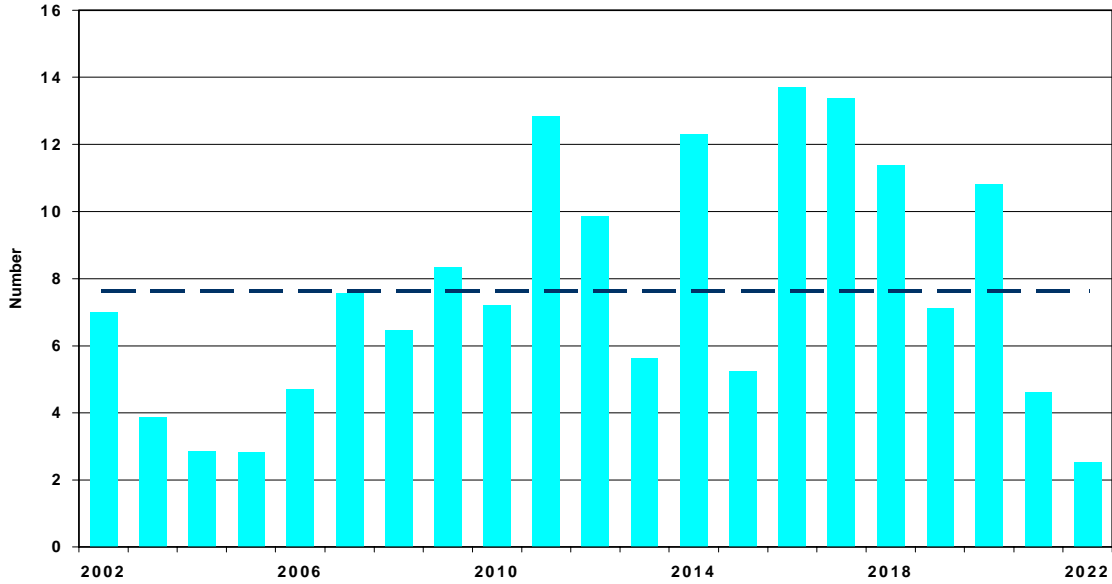


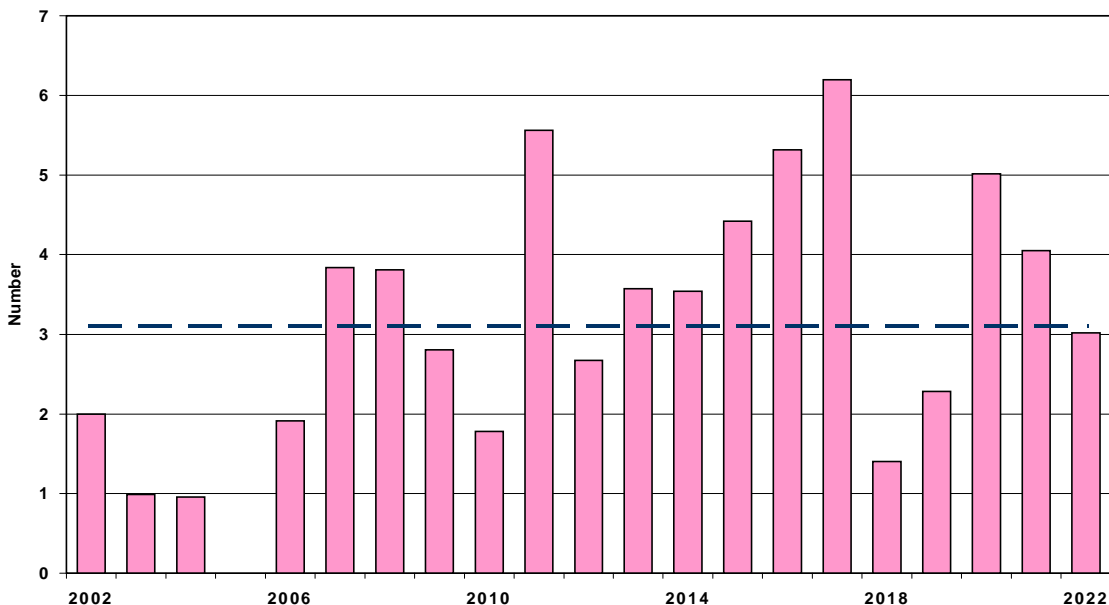
Chart III-16 presents the projection data in another manner. It shows that, on average, Grande Prairie will need to replace eight full-time employee each year over the period to maintain the target complement of 275. This need does not include replacement attributable to resignation or other forms of attrition. It also does not encompass the need for part-time or temporary employees. The pattern of replacement is interesting. During the next few years, replacement need will be below average. However, beginning in 2006 replacement need increases steadily and after 2011 remains above average during most of the remaining years of the projection period.

**Chart III-16**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, 2002 – 2022**  
 (mean = 8.0)

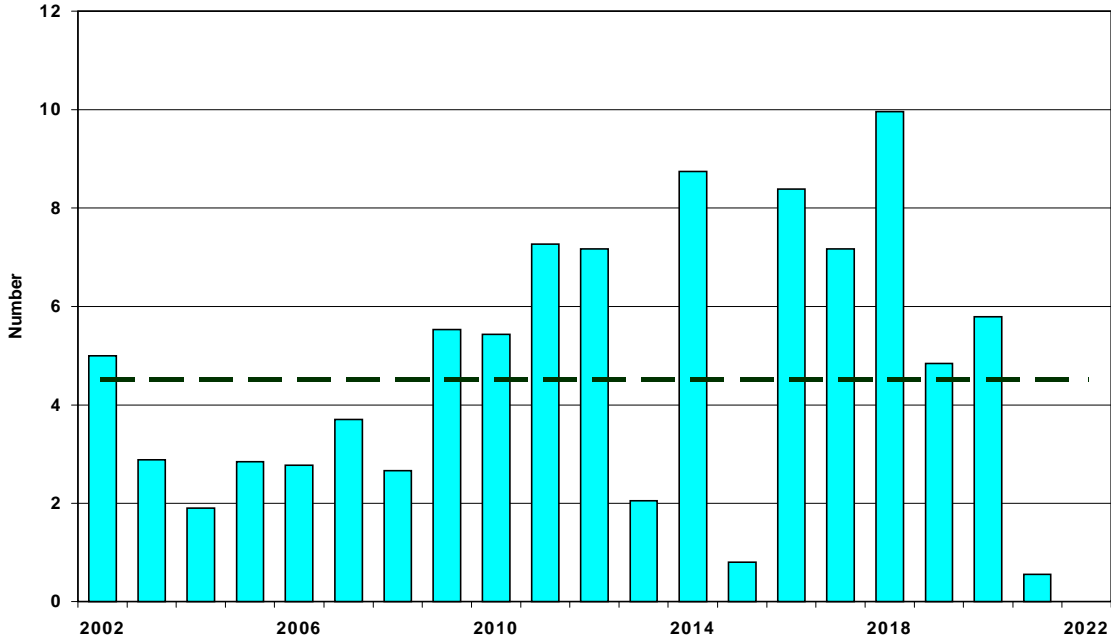


The pattern of replacement varies by sex and by department. Charts III-17 and III-18 show the variation by sex. Above average replacement starts somewhat earlier for females than males (2007 versus 2009) but the male level is higher.

**Chart III-17**  
**Annual Replacement Due to Attrition (N)**  
**Female Full-time Employees, 2002 – 2022**  
 (mean = 3.0)

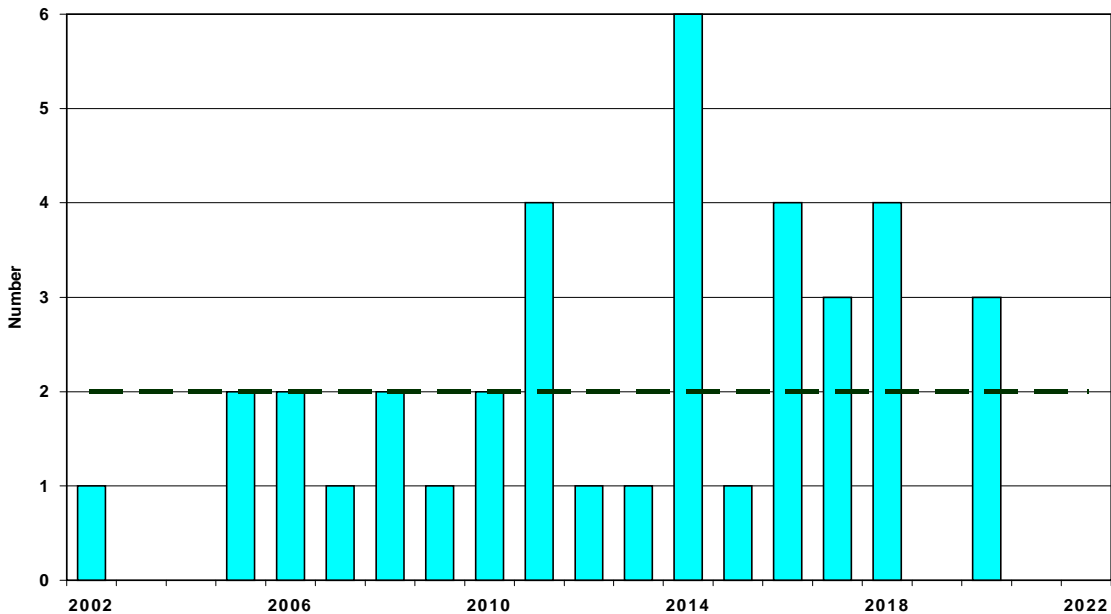


**Chart III-18**  
**Annual Replacement Due to Attrition (N)**  
**Male Full-time Employees, 2002 – 2022**  
 (mean = 5.0)

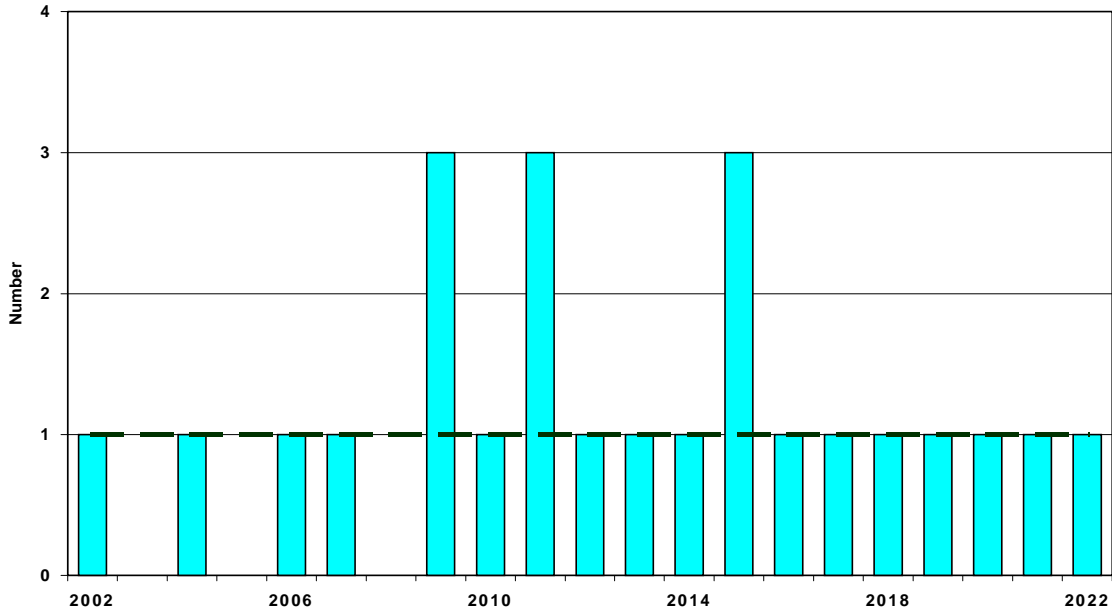


Charts III-19 through III-22 show the replacement pattern by department.

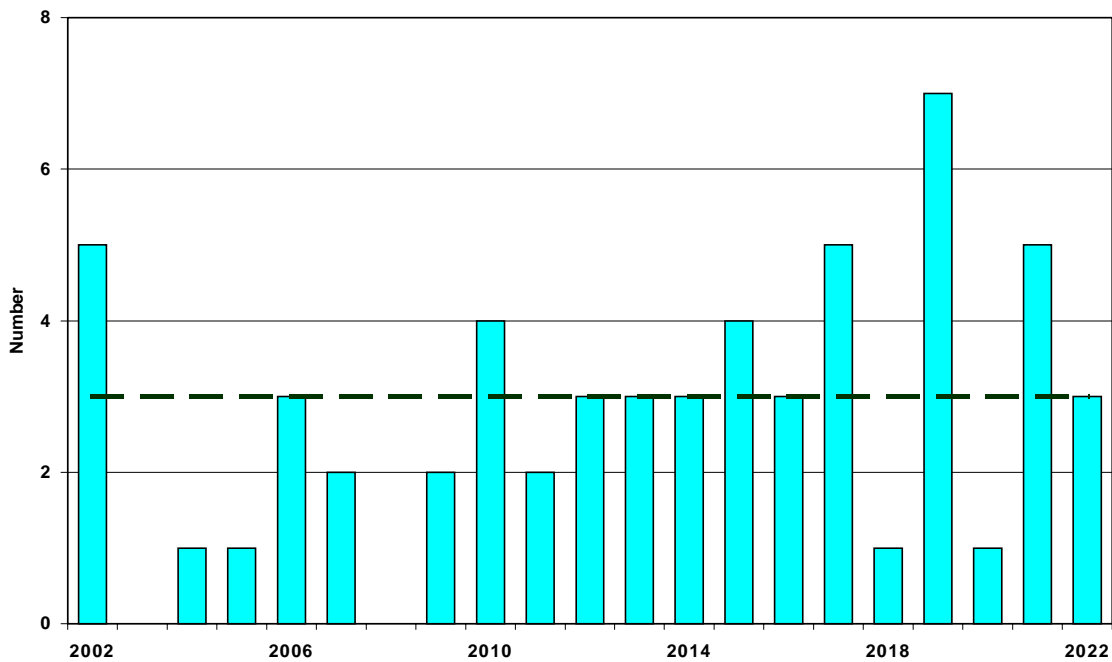
**Chart III-19**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, Protective Services, 2002 – 2022**  
 (mean = 2.0)



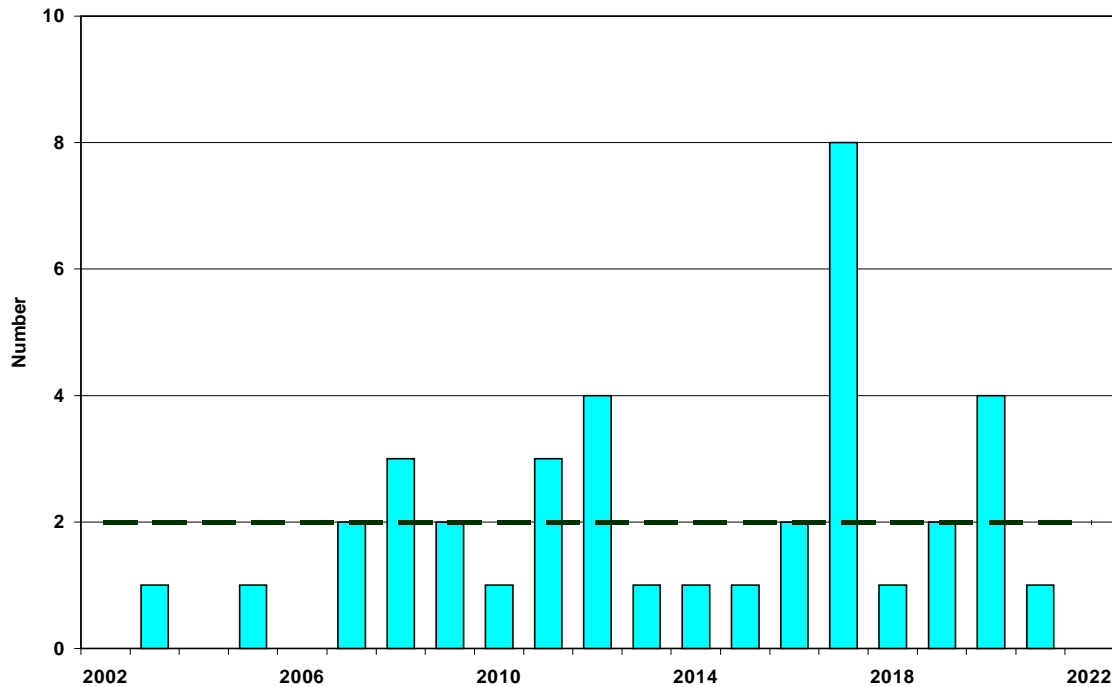
**Chart III-20**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, Community Services, 2002 – 2022**  
**(mean = 1.0)**



**Chart III-21**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, Public Works/Utilities, 2002 – 2022**  
**(mean = 3.0)**



**Chart III-22**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, City Manager/Financial Services, 2002 – 2022**  
 (mean = 2.0)



The variations in the overall pattern at the departmental level are:

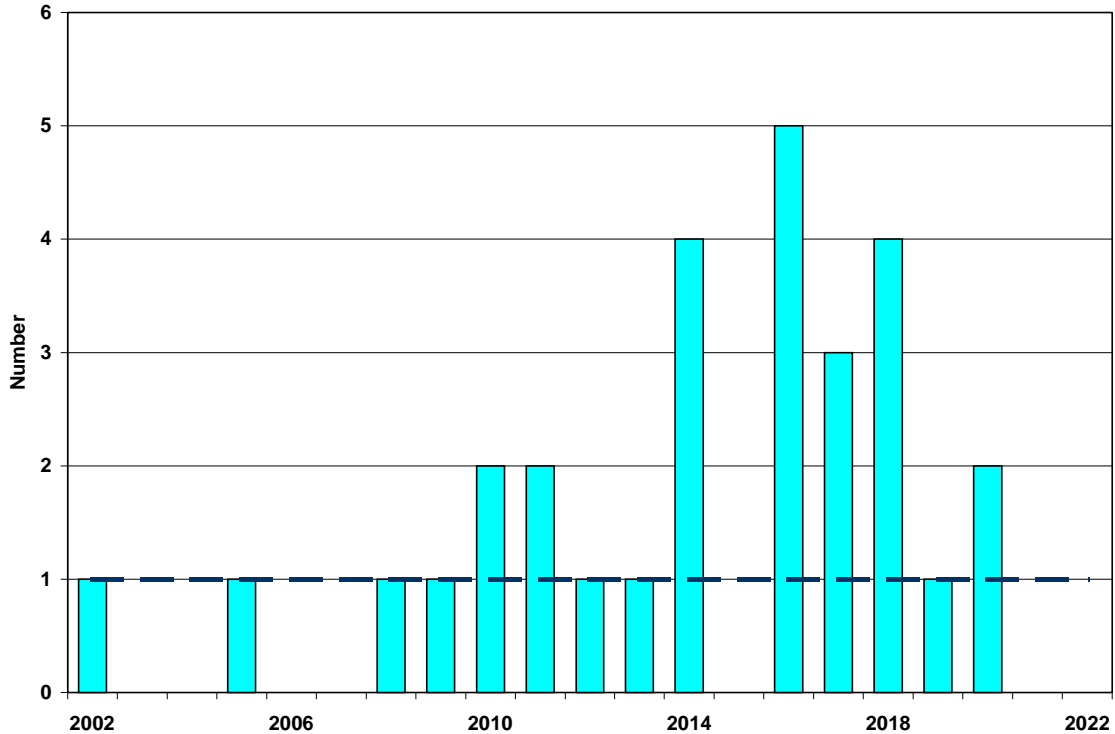
- *Protective Services* (see Chart III-19): This male-dominated department accounts for one-quarter of replacements overall. Before 2011 replacement need is at or below average. From 2011 on, replacement need is above average in most years (see Chart III-23 below for more analysis).
- *Community Services* (see Chart III-20): This female-dominated department accounts for one-eighth of the replacements. Replacement need remains at the average level except in 2009, 2011, and 2015 when it is three times the average.
- *Public Works/Utilities* (see Chart III-21): Only 17 percent of the employees in this departmental grouping work in *Utilities*. Both departments have a majority of male full-time employees in 2002 and together they account for three in eight of the replacements. Before 2015, replacement is generally at or below average (except in 2002 and 2010 when need is above average). From 2015 until 2022, replacement need is above average every other year.
- *City Manager/Financial Services* (see Chart III-22): Only 20 percent of the employees in this departmental grouping work in the *City Manager's* office. The majority of full-time employees in the *City Manager's* office are female; in *Financial Services*, there is an equal number of males and females. Collectively, the departments account for one-

## Work Force Analysis: City of Grande Prairie

quarter of the replacements. Replacement need rises and falls over the period. The above average years are 2008, 2011, 2012, 2017, and 2020.

Analysis can also be done at the sub-departmental level. Firefighters represent the largest occupational group within the ranks of full-time employees. They account for 69 percent of the full-time employees in the *Protective Services* department. Chart III-23 shows that attrition has little impact on this occupational group until 2010. Between 2010 and 2020, replacement need in *Protective Services* is driven by the need to recruit firefighters, particularly during the 2014 – 2018 period. This projection does not take include the recruitment need attributable to service expansion (for example, in response to population growth).

**Chart III-23**  
**Annual Replacement Due to Attrition (N)**  
**Full-time Employees, Firefighters, 2002 – 2022**  
(mean = 1.0)



### **Key Points**

#### Local Demographic Context

- Grande Prairie's demographic profile skews somewhat younger than the profile of its province and adjacent communities in census division (CD) 19. Its higher share of persons in their twenties and lower share of persons over the age of 40 are particularly striking.

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- Between 1996 and 2001, the population of CD 19 grew by 8.3 percent. The largest municipalities, Grande Prairie and Grande Prairie County, had the largest absolute and relative gains. Between the two census years, Grande Prairie's population increased by 5,630 persons or 18.0 percent.
- Over the 1986 – 2001 period, CD 19 experienced a population gain of 13,783 persons. Two demographic components – net natural increase and inter-provincial migration -- contributed to an increase in the population. Conversely, two other demographic components – international migration and intra-provincial migration – contributed to population loss.
- Overall, the age and sex profile of intra-provincial migrants in CD 19 is similar to that of inter-provincial migrants. Most movement is by persons in their twenties and thirties, especially persons in the 20 – 24 age group.
- Compared to the population of Grande Prairie, the registered Aboriginal population in CD 19 has a much higher share of persons under the age of 15 (35 versus 23 percent). Conversely, the shares of persons 20 and older are generally smaller for the registered Aboriginal population. The on-reserve population is younger than the off-reserve population. The share of persons under 15 is higher for those living on reserve. The off-reserve population has a higher share of persons 20 and older, particularly those between the ages of 30 and 49.
- Grande Prairie is part of the Mistahia Health Region. Mistahia covers the communities in CD 18 and CD 19 (including the City of Grande Prairie). The health region's boundaries can be viewed as the local labour market for Grande Prairie. A labour force projection by age for the 2000 – 2010 period indicates that the greatest growth in the number of potential workers will occur in the 20-34 and 45-64 age groups, respectively. This trend corresponds to the labour force projection for Alberta developed by RAL Consulting Limited.

### Demographic Profiles of Grande Prairie's Municipal Work Force

- One-half of Grande Prairie's 439 employees (as of August 2002) are over the age of 40 (median = 39.7), and male employees are older than female employees (40.8 versus 38.2).
- Thirty-six (36) percent of all employees are in their forties, however, given the median age, one-half are under the age of 40. In addition, the under 40 group is evenly divided between males and females. Fifty-eight (58) percent of all employees are *boomers* (i.e., the 36 – 55 in 2002) compared to 48.5 percent in Alberta's labour force. Male boomers account for a larger share of all employees (33 percent) than female boomers (24 percent).
- Compared to the labour force of CD 19, there is an over-representation of city workers in the 40 – 54 age range. The City of Grande Prairie's share of workers 40 – 54 (46 percent) is substantially larger than the share in the CD 19 labour market (34 percent). This is particularly the case with males. On the female side of the labour market, the aggregate shares across all age groups for the city (45 percent) and CD 19 (49 percent), respectively, are close.

## Work Force Analysis: City of Grande Prairie

- In terms of occupation, the Operational category has the lowest median age, and both males and females in the Operational category are younger than workers of the same sex in the other categories. The Senior Management and Other Management categories have the highest median ages; the median ages of the Administrative and Clerical and Technical and Skilled Trades categories are closer to the all employee median of around 40 years. This observation does not change when the sex of the employee is taken into account.
- With the exception of the Technical and Skilled Trades category, where female workers have a median age that is one year higher than their male counterparts, female employees are younger than male employees.
- Although about one-half of all employees are 40 years of age or older (40+), only 15 percent are 50 or older (50+). The Senior Management (83.3 percent) and Other Management (85.7 percent) categories are substantially above the all employee 40+ share of 50.8 percent. The Administrative and Clerical category (53.4 percent) is just above the all employee share, and the remaining categories are below it with the Operational category having the lowest 40+ share (44.3 percent). The pattern evident for the share of 40+ employees by occupational category generally holds for the 50+ group.
- Forty-five (45) percent of the city's employees are female. Female representation ranges from a high of 99 percent in the Administrative and Clerical category to a low of 0 percent in the Senior Management category.
- The female share of employees (45.1 percent across the city's work force) varies by department. Female representation is highest in the City Manager's department (84.6 percent) and lowest in Utilities (27.3 percent). With the exception of Community Services, female representation is lowest in the larger operational departments. It is highest in the administrative departments.
- Community Services is the department with the lowest median age. Both males and females in Community Services are younger than workers of the same sex in the other departments. The City Manager's department has the highest median age (47.6). Excluding Community Services, the other departments have median ages close to the all employee median. This observation does not change when the sex of the employee is taken into account.
- Female employees are slightly older than male employees in Community Services, Public Works, and Utilities. In the remaining three departments male workers are noticeably older than their female counterparts. Only Community Services and Utilities have shares of 40+ employees below the all employee share (50.8 percent). The highest department share for the 40+ group is held by the City Manager's department, with Public Works the next highest. Utilities, Community Services, Financial Services, and Protective Services have 50+ shares below the all employee share. The highest share is the City Manager's department followed by Public Works.
- A majority (63 percent) of the city's employees work in full-time positions, and 60 percent of the full-time employees are male. About one-third of employees are temporary, and

## Work Force Analysis: City of Grande Prairie

the shares by sex in this group are fairly even. Part-time employees, three-quarters of whom are female, account for a small share of the city's work force.

- The reliance on full-time employees is evident in four departments – City Manager, Financial Services, Protective Services, and Public Works. Community Services relies heavily on temporary employees and, to a lesser extent, part-time employees. Utilities also relies heavily on temporary and part-time employees.
- Full-time and part-time workers are substantially older than temporary workers. Almost two-thirds (64.4 percent) of full-time workers and just over one-half (52.6 percent) of part-time workers are 40+. By comparison, only one in four (24.8 percent) temporary workers are 40+. The observation also holds for the 50+ share.
- Compared to both the city's full-time workers and the labour force in CD 19, the city's temporary workers are disproportionately drawn from the ranks of labour force participants under the age of 30.
- Two-thirds of the City of Grand Prairie's employees are unionized. The largest group (54% of all employees) is represented by the Canadian Union of Public Employees (CUPE). The Grande Prairie Firefighters' Association (GPFA) represents 12 percent of all employees. The remaining third of employees is out-of-scope. Thirty-four (34) percent of CUPE members are female; 15 per cent of GPFA members are female; and 74 percent of the out-of-scope employees are female.
- The median age of out-of-scope employees is higher than the median ages of both GPFA members and CUPE members. In the respective cases of CUPE and out-of-scope employees, the median age of males is substantially higher than that for females. Female members of the GPFA are somewhat older than male members. Out-of-scope employees have higher shares of both 40+ and 50+ employees than the other two groups.
- The median length of service for all employees is 4.2 years, with males (5.2 years) serving longer than females (3.3 years). GPFA members have much more service (median = 11.9) than either CUPE members or out-of-scope employees. From a union status perspective, males have greater length of service than females. In terms of occupation, Other Management has the most service (12.7 years); Operational, the least (3.4 years). With the exception of the Technical and Skilled Trades, males have more service than females in each of the occupational categories. From a departmental perspective, only Community Services (median = 2.3) and Utilities (median = 2.4) have values below the median of 4.2 years for all employees. Females have longer service in the City Manager's department and Community Services; males lead in the other departments with the widest gap in Public Works (8.3 versus 2.8 years).
- Overall, 54 percent of employees have less than five years of service, and 17 percent have fifteen years or more. For females, the distribution is more skewed (62 versus 10 percent). Forty-six (46) percent of males have less than five years' service and 23 percent, 15+ years.
- From the beginning of 1997 until August 2002, the City of Grande Prairie hired on average 46 employees. About one-half of the employees entered the civic service

## Work Force Analysis: City of Grande Prairie

before the age of 30. Females entered at a slightly higher age than males. Out-of-scope employees have a higher entry age than union members. In terms of occupation, Senior Management (42.3) and Other Management (35.4) have the highest entry ages and Operational (27.4), the lowest. Only Protective Services and Community Services have median values below the median age of entry for all employees. Utilities is the department with the highest entry age (33.0).

- From the beginning of 1997 until August 2002, an average of 64 employees left the employment of the City of Grande Prairie annually. Females account for 57 percent of the exits. Temporary employees account for 70 percent of the exits; full-time, 26 percent; and part-time, 4 percent. Temporary employees account for the majority of exits in all departments except City Manager and Protective Services. Exits by full-time employees dominate the Senior Management, Other Management, and Technical categories. The overwhelming reason for exiting is temporary employment status (three-quarters of exits). Resignation accounts for about one-fifth of exits. The median age of exiting employees is 27.5, with males having a higher median than females (29.1 versus 26.9). Full-time employees depart around the age of 39; part-time, age 27; and temporary, age 24. The median age of resigning employees is 38.8 years.
- Two-thirds of departing full-time employees have 31 or more months of service with the City of Grande Prairie. One-half of part-time employees, a relatively small group, exit with less than 17 months of service (median = 16.8 months). The largest share of temporary employees exit with less than six months of service.
- A projection of the age profile of the city's full-time workers suggests that, on average, Grande Prairie will need to replace eight full-time employee each year from 2002 to 2022 to maintain the target complement of 275. This need does not include replacement attributable to resignation or other forms of attrition. During the next few years, replacement need will be below average. However, beginning in 2006 replacement need increases steadily and after 2011 remains above average during most of the remaining years of the projection period. The pattern of replacement varies by sex and by department.

## Part IV: Conclusions and Recommendations

### Conclusions

From a demographic perspective, the City of Grande Prairie is a part of Alberta that is currently experiencing population growth, particularly among the younger (20 – 34) age groups. It is also an area that since 1986 has consistently gained population, primarily through net natural increase (at a declining rate) and inter-provincial migration (at an increasing rate). However, it has also lost population consistently through intra-provincial and international migration.

Within this context, a number of conclusions can be reached regarding the degree of demographic imbalance in the municipal work force of the City of Grande Prairie:

- The profile of Grande Prairie's total city work force mirrors the age and sex profile of the local (CD 19) labour force with respect to the groups under the age of 40 but not the groups between the ages of 40 and 54. The over-representation of 40 – 54 age groups is particularly pronounced on the male side of the labour force.
- The registered Aboriginal cohort within the local labour force is youthful but miniscule in absolute terms (the total population of the Aboriginal communities accounts for only 0.5 percent of the population within CD 19).
- Overall, female representation in the city's work force mirrors female participation in Grande Prairie's local labour market. However, certain occupational categories and departments have substantial female under-representation.
- In terms of age, boomers, particularly the segment that is over the age of 40, dominate Grande Prairie's municipal work force. Full-time and part-time employees are squarely within the *boomer* group.
- The city's work force has both older and younger cohorts. Temporary employees are largely persons in their twenties. They are currently in abundant supply in the local labour force but they are also the age group most prone to migrate to another province or part of Alberta.
- Two service delivery departments – Community Services and Utilities – are heavily reliant on temporary workers. Almost 40 percent of the employees in Community Services are temporary, female workers. Just less than 50 percent of the employees in the Utilities department are temporary, male workers.
- In recent years the cycle of entry and exit by the city's employees appears to be a "revolving door" for temporary workers in their twenties and thirties. This is especially true in two occupational categories – Administrative and Clerical and Operational.
- Resignations stand out as the major reason for leaving full-time employment with Grande Prairie. Furthermore, the age of resigning employees is highly correlated with that of inter-provincial and intra-provincial migrants.

## Work Force Analysis: City of Grande Prairie

- Population and labour force projections for Grande Prairie's region (i.e., the Mistahia Health Region) indicate that growth will be concentrated in the 20 – 34 and 45+ age groups, respectively. The increase in the young workers' market presents an opportunity for Grande Prairie to renew its municipal work force, particularly in the operational area.
- The results of the "steady state" projections suggest that after 2007 the City of Grande Prairie will face a substantial but manageable recruitment need due to attrition. The need is different for each department and for male and female employees. There is time to plan for the projected situation. However, several factors not accounted for in the projection methodology require that planning commence soon:
  - Recruitment can be impacted by increased service demand due to continued population growth;
  - The general trend towards early retirement could accelerate; and
  - The resignation rate could increase as other municipalities and private sector companies compete with Grande Prairie in the under 40 labour market.

### Recommendations

Based on the analysis in this report, RAL Consulting Limited makes the following recommendations to the council and senior managers of the City of Grande Prairie. The recommendations are listed in order of priority and should be regarded as an integrated package of actions that will support the development of a productive municipal work force.

The recommendations are:

1. The Corporate Leadership Team (CLT) should take responsibility for instituting a formal process of succession planning for full-time staff. The first priority is staff in the two management categories. The second priority are specific work groups within departments. Departmental directors should identify the priority work groups, and the Human Resources Team (HRT) that supports the work of the CLT, should carry out the required analysis with assistance from departmental staff and, where appropriate, external consultants.
2. As part of the succession planning process, temporary workers should be "re-branded" as a developmental pool and concerted efforts should be made to facilitate the conversion of temporary workers to full-time status where the fit between the individual worker and the corporate need is a good one. The HRT should undertake analysis of the conversion process that has occurred in the recent past.
3. Mentors should be used to manage retirement "hot spots" on a proactive basis. Mentors are a tool for capturing valuable "corporate knowledge" possessed by older employees nearing retirement and for "re-inventing" the job situation of the older worker by pairing him or her with a younger worker (for example, to facilitate the use of new technology).
4. Additional efforts should be made to encourage the participation of "under-represented groups" in Grande Prairie's municipal work force. For example, women, who account for almost one-half of the local labour market, should be targeted for operational positions. A good place to start is with women who have been or currently are temporary workers

## Work Force Analysis: City of Grande Prairie

with the city. In addition, the potential of the youthful aboriginal community should be managed strategically.

5. The HRT should carry out interviews with employees who exit, especially those who resign, to determine the reasons behind the decision to exit and whether the city can take corrective action to manage any retention issues better.
6. The CLT, with support from the HRT, departmental staff, and external consultants, should prepare and present to Grande Prairie's council an annual report on the demographic characteristics of the city's work force incorporating many of the categories of analysis used in this report.
7. The CLT, with assistance from both council and all municipal staff, should develop a marketing initiative that targets all levels of the educational system regarding a career in local government. Among the specific concepts that should be considered are a "Municipal Government Day" for students and post-secondary scholarships that promote a career in municipal government within the region.
8. The marketing initiative proposed above presents an opportunity to work in partnership with local private and public organizations to meet the challenges posed by work force aging, thereby contributing to the development of a "strategic human resources management culture" within the region.

Work Force Analysis: City of Grande Prairie – Appendix A

**Table A-1: Years of Service by Sex, Union Status, Occupational Category, and Department, 2002 (%)**

	<i>Men</i>					<i>Women</i>					<b>Both</b>				
	<1	1-4	5-9	10-14	15+	<1	1-4	5-9	10-14	15+	<1	1-4	5-9	10-14	15+
	<i>Union Status</i>														
CUPE	15.3	34.4	15.9	15.9	18.5	25.9	56.8	8.6	6.2	2.5	18.9	42.0	13.4	12.6	13.0
GPFA	0.0	41.3	2.2	15.2	41.3	0.0	50.0	25.0	25.0	0.0	0.0	42.6	5.6	16.7	35.2
Out of scope	7.9	31.6	23.7	15.8	21.1	12.8	33.9	17.4	20.2	15.6	11.6	33.3	19.0	19.0	17.0
	<i>Occupational Category</i>														
Senior management	0.0	33.3	16.7	33.3	16.7	NA	NA	NA	NA	NA	0.0	33.3	16.7	33.3	16.7
Other management	0.0	29.4	11.8	5.9	52.9	0.0	27.8	11.1	44.4	16.7	0.0	28.6	11.4	25.7	34.3
Clerical	0.0	0.0	0.0	0.0	100	18.1	40.3	19.4	11.1	11.1	17.8	39.7	19.2	11.0	12.3
Technical & skilled trades	13.9	25.0	25.0	22.2	13.9	5.6	27.8	16.7	22.2	27.8	11.1	25.9	22.2	22.2	18.5
Operational	12.2	38.1	12.7	14.9	22.1	23.3	53.3	10.0	10.0	3.3	15.9	43.2	11.8	13.3	15.9
	<i>Department</i>														
<b><u>City Manager</u></b>	0.0	0.0	0.0	100	0.0	0.0	27.3	9.1	18.2	45.5	0.0	23.1	7.7	30.8	38.5
Financial	3.3	33.3	20.0	26.7	16.7	23.3	33.3	6.7	20.0	16.7	13.3	33.3	13.3	23.3	16.7
Protective Services	0.0	41.8	9.1	12.7	36.4	6.3	40.6	18.8	21.9	12.5	2.3	41.4	12.6	16.1	27.6
Community Services	18.2	48.5	18.2	9.1	6.1	21.8	52.6	12.8	11.5	1.3	20.7	51.4	14.4	10.8	2.7
Public Works	14.8	21.0	16.0	21.0	27.2	21.9	37.5	18.8	12.5	9.4	16.8	25.7	16.8	18.6	22.1
Utilities	20.0	47.5	12.5	2.5	17.5	13.3	53.3	20.0	6.7	6.7	18.2	49.1	14.5	3.6	14.5
<b><u>All employees</u></b>	<b>11.2</b>	<b>35.3</b>	<b>14.5</b>	<b>15.8</b>	<b>23.2</b>	<b>17.7</b>	<b>43.9</b>	<b>14.1</b>	<b>14.6</b>	<b>9.6</b>	<b>14.1</b>	<b>39.2</b>	<b>14.4</b>	<b>15.3</b>	<b>17.1</b>