

Fort St. John and Area Seniors' Needs Project
Population Background and Trends Report

prepared by:

Joanne Doddridge, Laurel Van De Keere, Chelan Hoffman, Greg Halseth, and Neil Hanlon

Community Development Institute
University of Northern British Columbia

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Joanne Doddridge, Laurel Van De Keere, Chelan Hoffman, Greg Halseth, and Neil Hanlon
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Availability

Copies of all reports associated with the Fort St. John and Area Seniors' Needs Study are available in a number of locations. In Fort St. John, copies have been deposited with the City and with the public library. Copies have also been deposited with the District of Taylor and the Peace River Regional District. At the University of Northern British Columbia, copies have been deposited at the Weller Library or can be accessed on the Community Development Institute website:

<http://www.unbc.ca/cdi/research.html>

Project Reports

- Methodology Report
- Population Background and Trends
- Survey Report
- Theme Report

Contact Information

For further information about this topic and the project, feel free to contact Greg Halseth, Acting Director of UNBC's Community Development Institute:

Greg Halseth
Geography Program
University of Northern BC
Prince George, BC
V2N 4Z9

tel: 250-960-5826
fax: 250-960-6533
email: halseth@unbc.ca
<http://web.unbc.ca/geography/faculty/greg>

Fort St. John and Area Seniors' Needs Project Population Background and Trends Report

1.0 Project Description

Since the 1980s, Canada's population has been aging. In small towns, the provision of housing, services, and facilities influence the decisions of individuals when choosing to retire in a community. In the City of Fort St. John, there were about 775 people over the age of 65 in 1991, but by 2001 there were about 1005 people over age 65 (Census, 2001). The increase in the number of older residents, and the increase in the number of residents who wish to remain in the area when they retire, have raised the level of interest in how the community, local services, and available housing options will meet the needs of a growing seniors' population. As a result, UNBC, together with the City of Fort St. John, the District of Taylor, and the Peace River Regional District, are working together to assess the needs of older residents.

The purpose of the Fort St. John and Area Seniors' Needs Project is to examine housing and support service needs for seniors in the greater Fort St. John area. The work was carried out by a research team from UNBC with the goal of providing local leaders with information relevant to decision-making over community planning and infrastructure investments. The project was carried out in the spring and summer of 2006.

Table 1.1 Timeline

May 2006	<ul style="list-style-type: none"> • Project application developed • Funding confirmed • Project Contribution Agreement confirmed • UNBC Research Ethics Board process completed • Local meeting with research team
June 2005	<ul style="list-style-type: none"> • Review with Community Advisory Group • Initiate review of local population data and preparation of population change report • Organize interviews and focus groups for assessment of seniors' needs • Conduct key informant interviews • Conduct focus groups • Mail out household survey
July – August 2006	<ul style="list-style-type: none"> • Complete population change report • Analysis of interview and focus group data • Analysis of household survey
September 2006	<ul style="list-style-type: none"> • Complete interview and focus group analysis • Complete survey analysis
October – November 2006	<ul style="list-style-type: none"> • Complete draft project reports • Review of draft project reports with Community Advisory Group
December 2006	<ul style="list-style-type: none"> • Final reports completed and distributed

2.0 Methodology

The data for this section of the project was collected through a review of Statistics Canada's Census population data. The Census is undertaken every five years and provides information on the age distribution of local populations. While the age groupings at which population information is reported does vary between Census periods, it is possible to reconstruct the recent population history of the communities. Analysis of this population data assessed the following issues:

- 1) the rates of population growth in the pre and post retirement age groups,
- 2) the rates of seniors' retention, as estimated by the age structure of the population over time and the number of seniors remaining in the community, and
- 3) an estimate of potential growth in the seniors' population based on the current age distribution of the population.

In the tables and figures below, data for the City of Fort St. John and the District of Taylor are derived from Statistics Canada's 'Census Subdivision' (CSD) category. In BC, CSDs correspond with the boundaries of our incorporated municipalities. For the Electoral Area 'C' of the Peace

River Regional District (the Charlie Lake area), however, it must be noted that population information is not as straightforward to obtain or compare. It is not collected at a geographic scale that would allow it to be simply added to the Fort St. John and Taylor data. Instead, it is grouped with a larger area comprising part of the unorganized territory of the Peace River Regional District.

Therefore, in some parts of this report, data are reported for the City of Fort St. John, the District of Taylor, the Peace River Regional District, and the province of BC. The goal is to provide a range of contexts against which the local population changes can be compared.

A final caution concerns the Census recording of First Nations and aboriginal population data. Such has proved to be a challenge for Statistics Canada, and the data should be treated as ‘undercounting’ First Nations and aboriginal population data.

3.0 Population Change

Table 3.1 shows the population counts from 1971 to 2001. In Fort St. John, there was modest growth between 1971 and 1976, a large increase between 1976 and 1981, a small decline between 1981 and 1986, and then steady growth from 1986 to the present. Since 1971, Fort St. John’s population has increased by 7,774 residents. The population growth recorded between 1996 and 2001 stands in contrast to a more general pattern of population losses over this same time period for towns across northern BC. Fort St. John has grown by about 94% from 1971 to 2001, and by about 15% from 1981 to 2001.

In Taylor, the population has nearly doubled between 1971 and 1976. In general, the pattern of population growth follows that of Fort St. John, with a notable decline between 1981 and 1986 and recent growth to about 1,200 people in 2001.

The Peace River Regional District has grown by about 11,000 from 1971 to 2001. There was modest growth from 1971 and 1976, a large increase between 1976 and 1981, a modest increase again between 1981 and 1986, and then a decline between 1986 and 1991. In 1996 the population again recorded an increase, but by 2001 it recorded a small decrease. The Regional District population has grown by about 25% from 1971 to 2001, but has remained almost at the same level in 2001 as it was in 1981.

Fort St. John is the largest regional centre in northeastern BC. The City and surrounding areas, however, still have a strong reliance on resource industries such as oil, natural gas, forestry, and agriculture. Difficulties in the forest industry over the late 1990s and early 2000s have had a limiting influence on population growth. To balance this, increased oil and gas activity has contributed to population growth in Fort St. John area.

Table 3.1 Population Counts

Year	Fort St. John	Taylor	Peace River RD	BC
1971	8,260	605	43,995	2,184,621
1976	8,950	649	44,840	2,392,790
1981	13,890	965	55,463	2,744,467
1986	13,355	711	57,278	2,883,367
1991	14,156	821	53,317	3,282,061
1996	15,021	1031	56,477	3,724,500
2001	16,034	1143	55,080	3,907,738

Source: Statistics Canada

As shown in Table 3.2, the percent population change in Fort St. John has fluctuated between 1971 and 2001. The dramatic increase between 1976 and 1981 was followed by a population decline in the next 5 year period. Other than these Census periods, the population has experienced growth ranging from approximately 6% to 8%. Over most of the time periods in question, the percent population change in BC exceed that for Fort St. John. An exception is the latest 1996 to 2001 period.

As with Fort St. John, the percent population change in Taylor has fluctuated over time. The dramatic increase between 1976 and 1981 was followed by a population decline in the next period. Since that time, however, Taylor has been growing at rates above the provincial average.

In contrast to provincial growth rates, the Peace River Regional District generally experienced slower growth rates. The one exception was between 1976 and 1981 where the Regional District grew by almost 24% compared to about 15% for BC. Regional District population growth is evident in most Census periods with two exceptions: the 1986 to 1991 and 1996 to 2001 periods.

Table 3.2 Percent Population Change, 1971-2001

Year	Fort St. John	Taylor	Peace River RD	BC
1971-1976	8.4	7.3	1.9	9.5
1976-1981	55.2	48.7	23.7	14.7
1981-1986	-3.9	-26.3	3.3	5.1
1986-1991	5.9	14.8	-6.9	13.8
1991-1996	6.1	25.6	5.9	13.5
1996-2001	6.7	10.9	-2.5	4.9

Source: Statistics Canada

As described for many places across northern BC, population aging is affecting the types of services and housing needed in our communities. In places that have experienced population loss

at times, this population aging can be accelerated by the out-migration of young households in search of work. The following section takes up this theme and looks at the changing age structure of populations in the greater Fort St. John area.

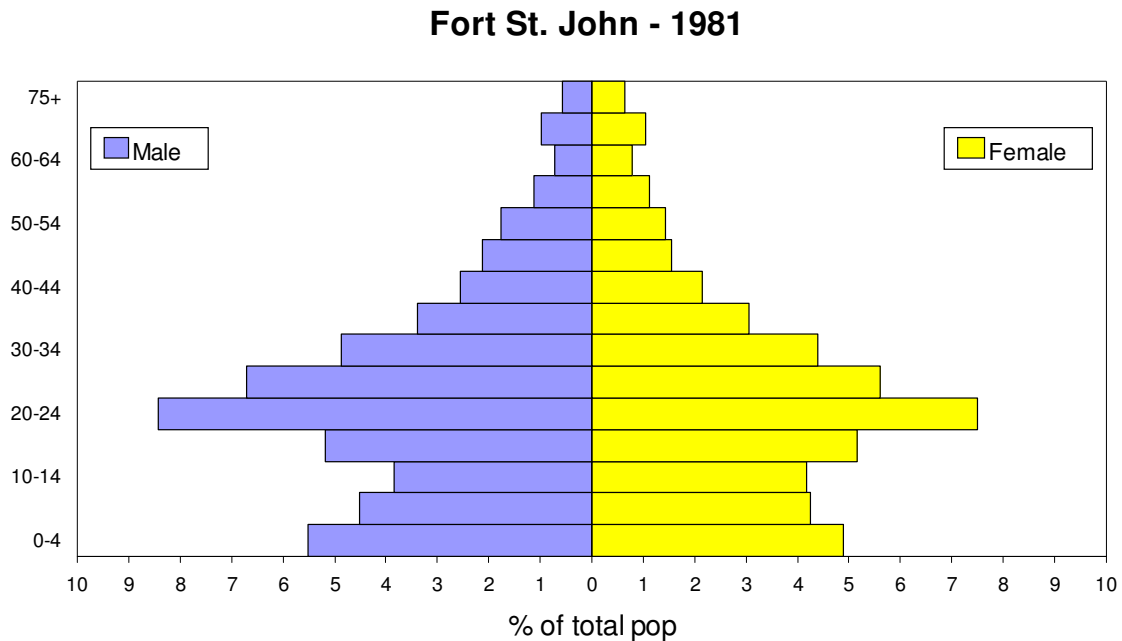
4.0 Population Pyramids

Against this backdrop of population growth and decline are associated changes in the age structure of the local population. These changes in age structure reflect the preceding discussion with respect to population aging and its constituent elements: youth out-migration and aging-in-place. Population pyramids provide a ‘picture’ of the local population at any given point of time. Broken down by males and females, the pyramids identify the proportion of the population within particular age groups. As a result, pyramids can provide a useful tool for illustrating how a local population is changing over time.

Population Pyramids – Fort St. John

Figures 4.1 through 4.3 are the population pyramids for Fort St. John from 1981, 1991, and 2001.

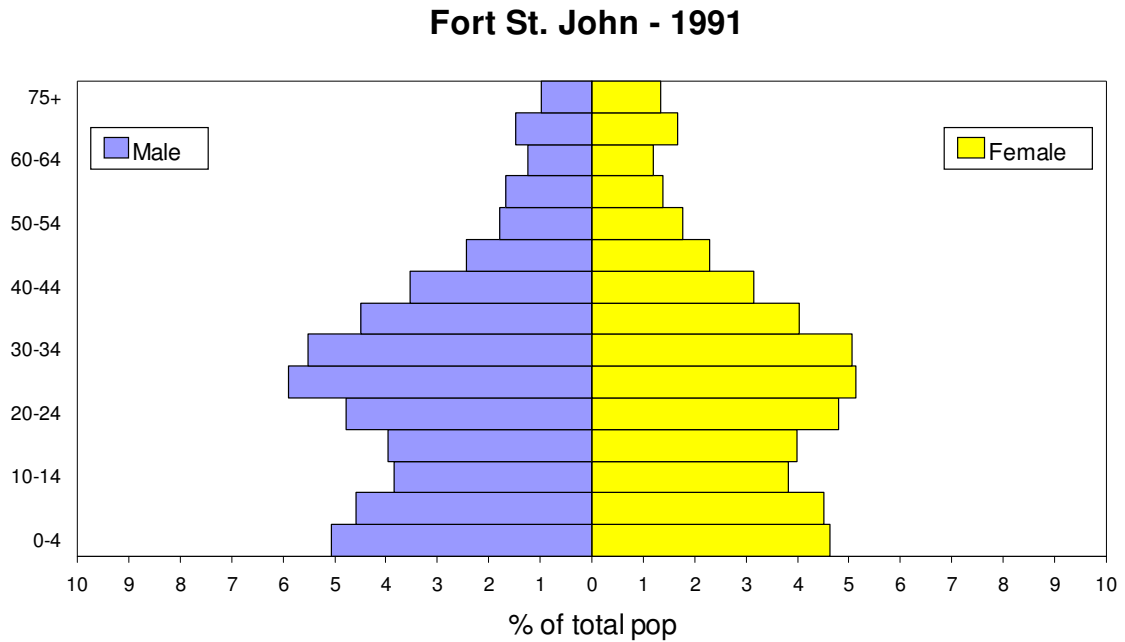
Figure 4.1 City of Fort St. John Population – 1981



The population pyramids for Fort St. John show a pattern typical of most resource towns in northern BC. In 1981, the population is dominated by young adults and families (Figure 4.1). This is shown by the large proportion of the local population in the 20 to 34 year age groups and the corresponding 0 to 10 year age groups. In places like Fort St. John, young families are drawn by the work opportunities of an expanding resource sector (in this case it is the oil and gas

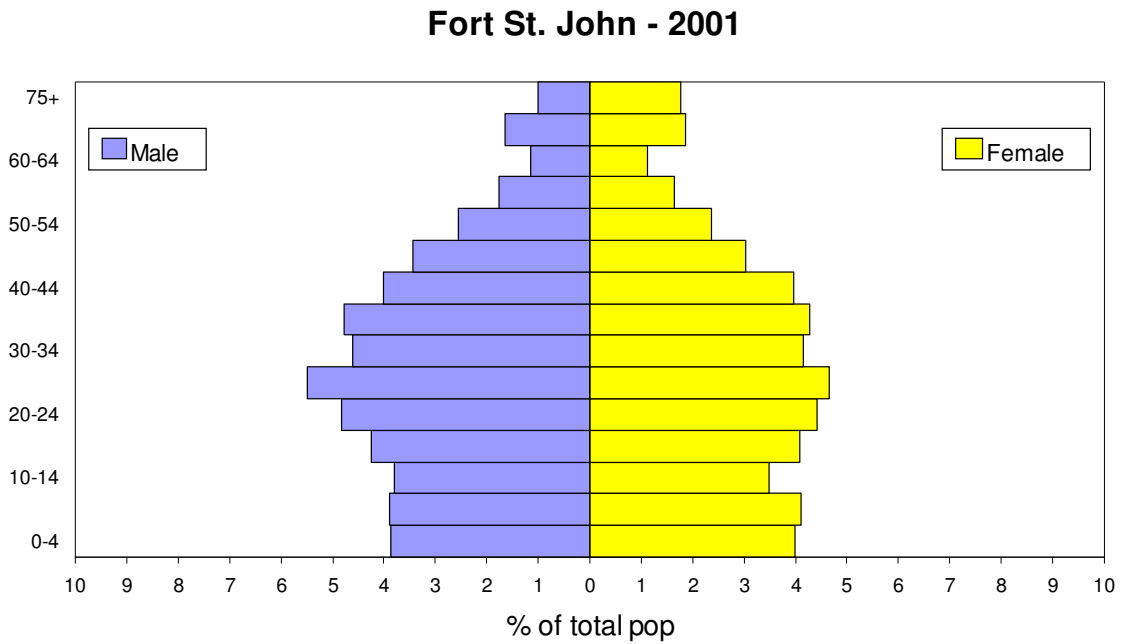
industry). The 20 to 30 year age group is also notable as it shows a larger share of males in the community than females.

Figure 4.2 City of Fort St. John Population – 1991



By 1991, the shape of the population pyramid is starting to change as the population is getting a little older and there is some more balance across the age groupings (Figure 4.2). While Fort St. John is still a community of young families, the share of the local population in the 20 to 30 year age group has declined. There are also greater shares of the population in the older age cohorts. Overall, the share of males to females has equalized somewhat, although there are more females than males in the +65 year age groups.

Figure 4.3 City of Fort St. John Population – 2001

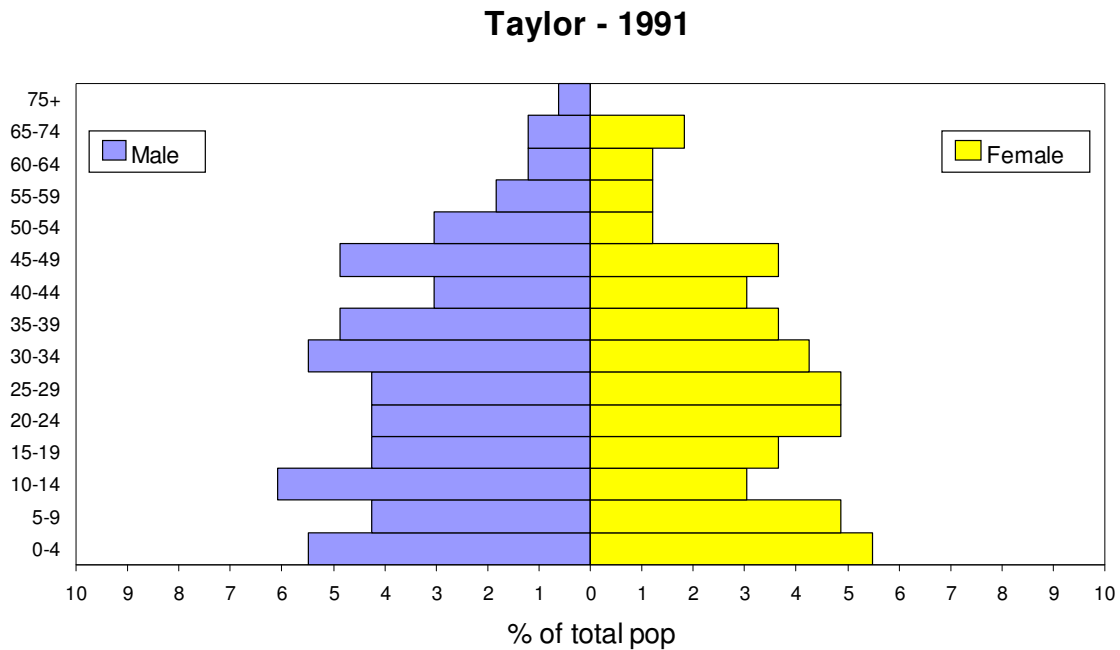


By 2001, the trend towards population aging is seen again. There are proportionally fewer children in the 0 to 9 year age groups and fewer households in the 30 to 39 year age groups (Figure 4.3). In contrast, the shares of the local population over the age of 40 continue to increase. The share of working-age males remains higher than working-age females, although this pattern is reversed in the +65 age groups, where there are more females than males.

Population Pyramids – Taylor

Figures 4.4 and 4.5 are the population pyramids for Taylor for 1991 and 2001. One caution with the Taylor pyramids concerns the Census procedure of ‘rounding’ small numbers to either ‘5’ or ‘0’. Since Taylor’s population is small (1,200 in 2001), once the total is broken down by males/females, and into each of the 15 age groups, the numbers in each category are quite small. As a result, Census rounding procedures can have a big impact and can make the pyramid look quite distorted.

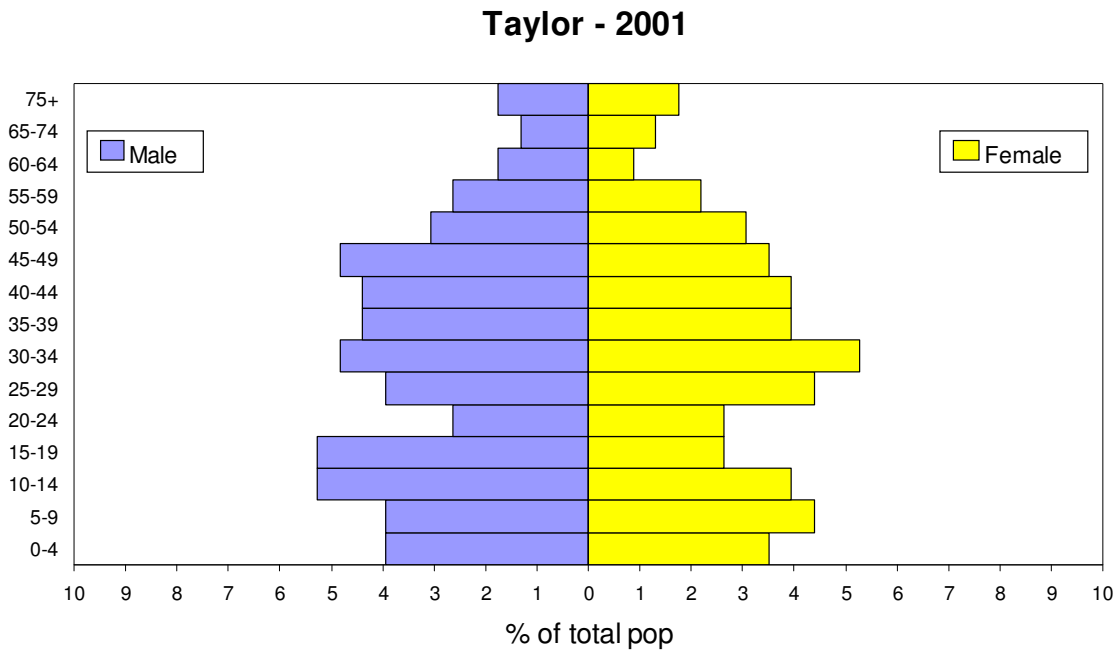
Figure 4.4 District of Taylor Population – 1991



While more difficult to interpret than for larger centres, the population pyramids for Taylor illustrate some of the more general themes seen in northern BC's resource towns. In 1991, the population growth from earlier time periods has seen some out-migration and the workforce is starting to show signs of aging-in-place (Figure 4.4). The family structure is older, focused upon the 30-39 year age groups and there are both young children as well as older teens in the community. Almost 4% of the population is over the age of 65

By 2001, the trend towards population aging is more clearly seen (Figure 4.5). There are relatively fewer young children, relatively more older teens, and family households are concentrated in the 30 to 50 year old age groups. The out-migration of younger households (20-24 years) is also notable. These reflect patterns seen elsewhere where aging-in-place is underway with a workforce fully engaged in a generally stable industrial base.

Figure 4.5 District of Taylor Population – 2001



5.0 Age Dependency Ratios

This section of the report deals with population change in terms of the shift described above between younger and older populations. As shown in Table 5.1, the trend at all scales is of an increasing share since 1971 of the population aged 65 years and older.

In Fort St. John, the percent of the population aged 65 and over form approximately 3% in 1971 to over 6% in 2001. In Taylor, the percent of the population aged 65 and over first declined between 1971 and 1981, but has been growing since then to about 6% in 2001. For the Peace River Regional District, the 65+ population has increased from approximately 4% in 1971 to nearly 8% in 2001. The rate of increase in the seniors' population is higher for the Regional District compared to Fort St. John, but both are lower than for the province.

Table 5.1 Percent of Population 65 Years and Older, 1971-2001

Year	Fort St. John	Taylor	Peace River RD	BC
1971	3.0	2.5	4.1	9.4
1976	3.3	1.5	4.5	9.9
1981	3.2	1.0	4.3	10.9
1986	4.7	2.8	4.9	12.1
1991	5.5	3.6	6.2	12.9
1996	6.1	4.4	6.6	12.8
2001	6.3	6.1	7.9	13.6

Source: Statistics Canada

Many resource industry regions across northern BC are experiencing a process called “resource frontier aging”. In this case, an established workforce faced with limited new employment growth will age-in-place over time. For this table, the ‘workforce’ is defined as those between the ages of 15 and 64 years.

As shown in Table 5.2, the percent of the workforce aged 45 years and older has increased since 1971. In Fort St. John, the share of the workforce between the ages of 45 and 64 years has increased from about 19% (1971) to about 24% (2001). In Taylor, this share of the older workforce has increased more dramatically from about 19% (1971) to about 32% (2001). In the Peace River Regional District, this share of the older workforce has increased from about 23% in 1971 to about 31% in 2001. It is this ‘nearing retirement’ population that will be very important due to its future impacts on services and housing needs for older residents. Compared to the BC pattern, the changes noted for the Fort St. John area are at least as great.

Table 5.2 Percent Workforce Aged 45 Years and Older, 1971-2001

Year	Fort St. John	Taylor	Peace River RD	BC
1971	18.5	18.6	23.3	31.7
1976	19.2	19.7	23.3	30.4
1981	15.2	17.8	20.6	28.9
1986	19.1	23.2	22.8	29.2
1991	20.2	26.5	25.1	29.8
1996	21.5	24.3	24.2	25.0
2001	24.3	31.9	31.4	36.7

Source: Statistics Canada

Dependency Ratios

The transition in age relationships can also be characterized by ‘dependency ratios’. A dependency ratio calculates the proportion of the population of interest against the remainder of the population in a particular place.

For example, in Table 5.3, ‘total dependency ratios’ are calculated for the period from 1971 to 2001. The total dependency ratio combines all of the individuals over the age of 65 with all those under the age of 15 and compares them to the remainder of the population. That is, those who are children (not in the workforce) and those who are retired (not in the workforce) are combined and compared against the workforce who would be supporting them. This is a statistical measure to try to illustrate changes in the relationship between the working age population and the very young and older populations.

The total dependency ratio combines both young and old populations. As noted in Section 4 via the population pyramids, population transition over time has involved a reduction in the share of younger people and an increase in the share of those over age 65. The following tables identify the scale of this change across the study area.

As shown in Table 5.3, the total dependency ratio for BC from 1971 through to 2001 varied from approximately 60% in 1971 to about 47% in 2001. In Fort St. John, while the pattern has shown some variations, the general trend is of a declining dependency ratio. In 1971, the total dependency ratio in Fort St. John was about 67%, and this has decline to about 42% in 2001. In Taylor, the total dependency ratio was about 74% in 1976 and this has declined to about 44% in 2001. For the Peace River Regional District, the trend has also been generally downward from about 71% in 1971 to about 47% in 2001. In other words, across the study area there is a growing proportion of working age residents relative to very young and very old populations. As noted earlier, this is likely the result of an aging-in-place of the workforce and smaller shares of young households with children.

Table 5.3 Total Dependency Ratio, 1971-2001 (Percent)

Year	Fort St. John	Taylor	Peace River RD	BC
1971	67.3	--	70.8	59.5
1976	56.5	73.7	60.5	51.4
1981	43.7	51.9	48.8	47.7
1986	48.6	49.8	49.6	48.4
1991	46.9	47.8	49.8	49.3
1996	46.4	50.0	44.1	50.1
2001	41.7	44.4	46.6	46.4

Source: Statistics Canada

As shown in Table 5.4, a ‘young dependency ratio’ was calculated for the period 1971 to 2001. This ratio compares the share of the population under age 15 with the working age population. As hinted at by the discussion above, the table shows some remarkable declines.

In BC, the young dependency ratio was approximately 45% in 1971, and this declined to about 27% in 2001. In Fort St. John, the young dependency ratio was about 62% in 1971, declining to about 33% in 2001. In Taylor, the young dependency ratio was about 71% in 1976, and similarly declined sharply to about 36% in 2001. For the Peace River Regional District, the young dependency ratio was 64% in 1971, declining to 35% in 2001. As noted above, dramatic changes in the share of the young population within the region are driving the large dependency ratio shifts.

Table 5.4 Young Dependency Ratio, 1971-2001 (Percent)

Year	Fort St. John	Taylor	Peace River RD	BC
1971	62.3	--	63.9	44.5
1976	51.3	71.1	53.2	36.5
1981	39.1	50.4	42.4	31.7
1986	41.5	45.3	42.2	30.4
1991	38.9	42.5	40.5	30.1
1996	37.5	43.4	35.2	30.4
2001	32.8	35.6	35.0	26.5

Source: Statistics Canada

If changes in the young dependency ratios have been driving the overall dependency ratio changes to this point, the emphasis will soon shift to the ‘old age dependency’ side of the equation. To date, however, the size of these older age groups has not been large in northern BC. With the coming of the ‘baby boom’ retirement years, however, the old age dependency ratio will have more of an impact upon overall dependency ratio changes.

In contrast to the young dependency ratios, there has been some growth in the old age dependency ratios from 1971 to 2001 (Table 5.5). For BC, the old age dependency ratio was 15% in 1971, increasing to 20% in 2001. In Fort St. John, the old age dependency ratio grew from 5% in 1971 to almost 9% in 2001. In Taylor, the old age dependency ratio mirrored that of Fort St. John by growing from about 5% in 1971 to almost 9% in 2001. For the Peace River Regional District, the old age dependency ratio was approximately 7% in 1971, and this increased to almost 12% in 2001. These increases have been modest compared to what will occur over the next 15 years as local aging-in-place means that a large number of ‘baby boom’ workers will soon put increased demands on seniors’ services and housing.

Table 5.5 Old Age Dependency Ratio, 1971-2001 (Percent)

Year	Fort St. John	Taylor	Peace River RD	BC
1971	5.0	5.1	6.9	15.0
1976	5.2	2.6	7.2	14.9
1981	4.6	1.6	6.4	16.0
1986	7.0	4.2	7.3	18.0
1991	8.0	5.3	9.2	19.2
1996	8.9	6.6	8.9	19.7
2001	8.9	8.8	11.6	20.0

Source: Statistics Canada

6.0 Retention Rates

While the preceding sections have included information on how the population has changed, and how there is a ‘bubble’ of older workers approaching retirement, this section deals with an estimate of how the seniors’ population may change in the coming years. To demonstrate this, we have calculated potential retention rates for the population at retirement age and created high, medium, and low estimates for how many of those who retire may stay in the community.

Retention Rates

In all of these estimates, we have used 10 year time periods. These are from 1971 to 1981, 1981 to 1991, and 1991 to 2001. We are concerned with the change in the size of specific population age groups over each of these three time periods. Our focus is around the critical retirement age of 65. The basic calculation involves comparing the size of the population that was aged 55 to 64 years of age in the first time period against the population that is aged 65 to 74 years ten years later in time period two. From this we can estimate the percent of this age group that was ‘retained’ in the community after they retired.

Three issues impact population change around the age 65 retirement marker. The first is in-migration, the second is out-migration, and the third is death. In this study we are assuming that rates of mortality have not, and will not, change significantly between 1971 and 2011. We are also, based on the information noted above, suggesting that in-migration of a large number of seniors to the area is not yet a significant issue. As a result, we have labelled this change in the size of the population from the first time period to a period ten years later as the ‘retention rate’. That is, how much of the pre-retirement age group are we able to keep, or retain, in the community 10 years hence.

Table 6.1 shows the population retention rates as calculated for the Peace River Regional District. Approximately 65% of those who were aged 55 to 64 years in 1971 were retained in the community as people aged 65-74 years in 1981. Between 1981 and 1991, 69% of those people

who were 55 to 64 years of age in 1981 were retained in the community in 1991. Between 1991 and 2001, the retention rate was about 73%.

**Table 6.1 Population Retention Rates
Peace River Regional District
1971-2001 (Percent)**

	55-64 years to 65-74 years
1971-1981	65.1
1981-1991	69.0
1991-2001	72.6

Source: Statistics Canada

Table 6.2 shows the population retention rates for Fort St. John from 1971 to 2001. Between 1971 and 1981, 80% of the people aged 55 to 64 years in 1971 were retained in the community in 1981. The retention rate for the 1981 and 1991 period was approximately 86%, and the retention rate for the 1991 to 2001 period was approximately 72%. In other words, fewer seniors were retained in Fort St. John between 1991 and 2001 compared to previous periods.

**Table 6.2 Population Retention Rates
Fort St. John
1971-2001 (Percent)**

	55-64 years to 65-74 years
1971-1981	80.0
1981-1991	85.6
1991-2001	71.6

Source: Statistics Canada

Table 6.3 shows the population retention rates for Taylor from 1971 to 2001. Because the numbers of people involved are quite small, there is naturally a greater degree of fluctuation. Retention rates in Taylor have ranged from 50 to 100% of people transitioning from their immediate pre-retirement years to their immediate post-retirement years over any of the given ten year time spans.

**Table 6.3 Population Retention Rates
Taylor
1971-2001 (Percent)**

	55-64 years to 65-74 years
1971-1981	50.0
1981-1991	71.4
1991-2001	100.0

Source: Statistics Canada

Estimates

To estimate the potential impact of retirement populations as we move towards the year 2011, we will use three scenarios. The low range scenario is the nearly 65.1% retention rate experienced in the Peace River Regional District between 1971 and 1981. The mid range estimate uses the 68.9% average retention rate experienced by the Peace River Regional District over the 1971 to 2001 period. The high estimate is derived from the 85.6% retention rate in Fort St. John from 1981 to 1991.

In 2001, there were 925 people in Fort St. John who were aged 55 to 64 years. Multiplying this by each of the retention estimates yields potential numbers of ‘new’ seniors in the 65 to 74 year age group who will be retained in the City to the year 2011. The high estimate suggests an addition of approximately 792 seniors while the low estimate suggests an addition of approximately 602 seniors (Table 6.4). We can have a fair level of confidence that the low estimate will be exceeded. If one adds those former residents who might return to make use of family/friend support networks as they age, the number of seniors in the community has the capacity to grow considerably.

In 2001, there were 85 people in Taylor who were aged 55 to 64 years. Multiplying this by each of the retention estimates yields the potential for between 55 and 73 ‘new’ seniors added to the local population by 2011 (Table 6.4).

In 2001, there were about 4385 people in the Peace River Regional District who were aged 55 to 64 years. In this case, the retention scenarios suggest the potential for adding between 2855 and 3754 ‘new’ seniors (Table 6.4).

Table 6.4 Estimate of Potential Growth of Seniors, 2001-2011

Year	Fort St. John	Taylor	Peace River RD
High	792	73	3754
Mid	637	59	3021
Low	602	55	2855

Source: Statistics Canada

High estimate based on 85.6% retention.

Mid-range estimate based on 68.9% retention.

Low estimate based on 65.1% retention.

In 2001, there were already about 1005 seniors (age 65 and over) in Fort St. John. Using the three retention scenarios, we can estimate that the seniors' population in the City has the potential to grow by between 60% and 79% (Table 6.5) between 2001 and 2011.

For the District of Taylor, in 2001 there were about 70 seniors (age 65 and over) in the community. Using the retention scenarios, we can estimate that the local seniors' population has the potential to grow by more than 78% and may even double in the ten years between 2001 and 2011 (Table 6.5).

For the Peace River Regional District, there were about 4345 seniors (age 65 and over) in 2001. Using the retention scenarios, we can estimate that the seniors' population in the Regional District has the potential to grow by between 66% and 87% (Table 6.5) between 2001 and 2011.

The future growth of seniors will be significant not only within Fort St. John, but also may be even more dramatic in the surrounding areas. Many of these rural seniors will travel to use services and facilities within Fort St. John.

Table 6.5 Estimate of Increase to Seniors Population, 2001-2011 (Percent)

Year	Fort St. John	Taylor	Peace River RD
High	78.8	104.3	86.4
Mid	63.4	84.3	69.5
Low	59.9	78.6	65.7

Source: Statistics Canada

2001 Seniors population in City of Fort St. John = 1005

2001 Seniors population in District of Taylor = 70

2001 Seniors population in Peace River Regional District = 4345

7.0 Conclusion

The purpose of this report has been to provide population background information for the Fort St. John, Taylor, and Electoral Area C (Charlie Lake) area, and use this to estimate the scale of potential growth in the local seniors' population. The data are derived from the Census and are, at times, compared to data from BC.

In many ways, the population patterns are similar to those we might expect for other northern and resource-based communities in BC. However, this population analysis shows somewhat more variable results than are typically seen in other communities. This may be due to the cyclical and sometimes volatile nature of in- and out-migration for work in the oil and gas industry. This is, of course, tempered at the Regional District level by the role of farming in the area's economy.

Since 1971, the population of Fort St. John has risen from about 8,300 to over 16,000 people. At the same time, the population of Taylor has risen from about 600 to almost 1,200 in 2001, and the Peace River Regional District has grown from about 44,000 to over 55,000 people. As is common across northern BC, the addition of new economic activities has occurred along with other workplace changes such as automation that have acted to dampen job growth. One consequence of these changes is workforce aging-in-place.

Population aging-in-place is clearly seen in the population pyramids. The population during the 1970s and 1980s was comprised largely of young families with young children. By 2001, the workforce (buoyed by steady work in the oil and gas sector, agriculture, and service industries) has aged. There are now proportionally fewer children and proportionally more older residents.

Population aging is confirmed through the investigation of dependency ratios. A dependency ratio compares the young and/or old population against the working age population in order to provide benchmarks for assessing change over time. While there has been growth in the population over 65 years of age, the largest share of population aging at this point in time can be attributed to a declining proportion of young people.

While the growing seniors' population may not yet be numerically large, the pending retirement of a large group of older workers will change this. The question is, how many of these workers will remain in Fort St. John after they retire? Past experience suggests that Fort St. John, Taylor, and the Regional District have been successful in retaining a large share of retirees in the community. From 1971 to 2001, the retention rates for retiring workers were estimated to be between 65% and 85%. The recent decline in retention rates within Fort St. John (from 86% to 72%), however, may indicate that stresses already exist in the availability of local services and facilities for older residents.

Using a range of retention rate scenarios, we can estimate that Fort St. John may be adding between 602 (low estimate) and 792 (high estimate) 'new' seniors between 2001 and 2011. For Taylor, these estimates range from 55 to 73 'new' seniors (which could effectively double the local seniors' population). For the Peace River Regional District, the estimates range from adding between 2855 to 3754 'new' seniors between 2001 and 2011.

The coming retirement of the large ‘bubble’ of older workers will put considerable pressure on seniors’ services and facilities. As noted above, the seniors’ population has the potential to grow by between 60% and 87%. While much of this seniors’ population will still be among the ‘young elderly’, others will start to require a greater level of housing, support, and health services.

Appendix A Population Change Calculations

Table 3.1 Population Counts
Simple counts from the Census

Table 3.2 Percent Population Change, 1986-2001
Percent Change in Population =
 $(\text{Population in T2}) - (\text{Population in T1}) / (\text{Population in T1})$

Table 5.1 Percent of Population 65 Years and Older
Percent Population 65 Plus =
 $(\text{Population 65+} / \text{Total Population}) * 100$

Table 5.2 Percent Population of Workforce Aged 45 Years and Older
Composition of Working Aged Population =
 $(\text{Population 45 - 64 years}) / (\text{Population 15 - 64 years}) * 100$

Table 5.3 Total Dependency Ratio
Dependency Ratio =
 $[(\text{Population 65 years \& older}) + (\text{Population 0-14 years}) / \text{Population 15-64 years}] * 100$

Table 5.4 Young Dependency Ratio
Young Age Dependency Ratio =
 $(\text{Population 0-14 years} / \text{Population 15-64 years}) * 100$

Table 5.5 Old Age Dependency Ratio, 1971-2001 (Percent)
Old Age Dependency Ratio =
 $(\text{Population 65 years \& older} / \text{Population 15-64 years}) * 100$

Table 6.1 & Table 6.2 Population Retention Rates
Retention Rates =
Example 1981 to 1991
 $\text{Population in 1991 aged 65-74 years} / \text{Population in 1981 aged 55-64 years}$

Table 6.3 Estimate of Potential Growth of Seniors, 2001-2011
High / Low Growth in Retention Rate
High = $(2001 \text{ population aged 55 - 64 years}) * (\text{highest calculated retention rate})$
Low = $(2001 \text{ population aged 55 - 64 years}) * (\text{lowest calculated retention rate})$

Table 6.4 Estimate of Percent Increase to Seniors Population
For High / Mid / Low Retention Rates
 $(\text{estimated number of new seniors to 2011}) / (2001 \text{ population over age 65}) * 100$