MASTER FACILITY

AND

CAPITAL PLAN

Board of Trustees Approved:

February 22, 2017

Fort McMurray Public School District #2833

Facility Master Plan

Submitted:

Issues/Trends

The current down turn has impacted capital expenditures but growth in operations continues. Families continue to have record number of babies with 1460 in 2015 up 9% from 2014. Reduced benefits to employees is causing families to make decisions as commuting is no longer affordable, with decline in housing prices families are consolidating and relocating to Fort McMurray. The Government of Alberta's Oil Sands Sustainable Development Secretariat has initiated a project to develop a Comprehensive Regional Infrastructure Sustainability Plan (CRISP) for the Athabasca Oil Sands Area (AOSA). This project is a key implementation step for Strategy Two of *Responsible Actions: A Plan for Alberta's Oil Sands* which is to "promote healthy communities and a quality of life that attracts and retains individuals, families and business" (Appendix A, Page 11). CRISP's long range plans project the city of Fort McMurray doubling. The economic growth has sustained and continues to support numerous new residential developments under construction within the City (Map on Growth Areas Appendix B and Forecasted Population and Enrollment Growth Appendix C are attached).

The Regional Municipality of Wood Buffalo Municipal Development Plan for the next 20 years projects 125,000 additional residents, or 121% increase. Funding projects will now take advantage of reduced construction costs in the economic downturn. The District greatly appreciates the three (3) new schools announced for construction - Christina Gordon Elementary, Dave McNeilly Elementary and Ecole McTavish High School. These schools will serve the ~~growing~~ student population in the City of Fort McMurray, especially the large cohort of preschool children advancing towards kindergarten. 2015 municipal census shows 7.7% of the urban population in Fort McMurray is ages 0 to 4 years old, 5 to 9 ages is 6.4%, 10 to 14 ages is 5% and 15 to 19 ages is 4.8%, municipal census page 17.

Other factors affecting the Fort McMurray Public School District, which need to be considered, include the following:

- ✓ The future growth will see an additional 14,600 new residents (Appendix C), which will generate approximately 928 new students, 444 of these will reside north of the river. Currently, the majority of single-family development is north of the Athabasca. However, Saline Creek has two show homes and 30 lots for sale beginning the growth south of the river. The Province's most economical and cost effective plan is to fund now as cost escalation in Fort McMurray can double project budgets. The Radke Report titled "Responding

to the Rapid Growth of Oil Sands Development" on page 97 states, "Some schools in Fort McMurray are currently at or near capacity. Although school districts are managing to "make do" with modulars, capital funding for modernizations and new schools will be needed within the next five years" (Appendix G).

- ✓ District facilities are "wearing out". It is unfortunate, but true that the current growth and expansion coincides with the need to renew or modernize seven of eleven operating facilities. This represents a double problem for the District. The District cannot cope with these challenges without significant support from Alberta Education. Attached is FMPSD's 7 year Infrastructure Maintenance Renewal (IMR) totaling $23.9 million or $3.4 million per year. (Appendix "D").

- ✓ Plant Operations and Maintenance funding has been insufficient since the introduction of the Funding Framework for School Districts in 1995. The District is faced with a struggle to attract and retain staff. The COLA introduced and funded by Alberta Education in 2006 has helped mitigate but not eliminate the disparity between living and working in Fort McMurray versus most other regions of the province. The elimination of RCPA grant in 2011-2012 and the Special Education factor removed in 2013-2014 have exacerbated the deficit in Operations and Maintenance budget.

- ✓ Non-instructional building operating and maintenance costs are beyond the district's ability to support without using reserves and instructional dollars.

In summary, the Fort McMurray Public School District needs government understanding, support, flexibility and a proactive approach to capital funding (modernizations and IMR) within this unique and challenging community.

Current Challenges:

There are a number of areas, which need to be addressed regarding School District facilities. These are summarized below:

North of the River continues to be the area of greatest expansion in Fort McMurray with an estimated 5,550 new residents expected. Timberlea and Parsons Creek have grown an average 23% per year for the past three (RMWB 2015 Census Page 28).

1. **Ecole Dickinsfield Modernization**
The District has been requesting funding for modernization of this 40 year old facility since January 1, 2010. The existing portables are patched together attachments of the main school and are the same age or older than the core building. The infrastructure is wearing out at this site and requires modernizing. Not modernizing this facility will impact our highly successful French Immersion and English Language programming in Ecole Dickinsfield and will cost more in the long term due to extensive maintenance and repair costs.

2. **Westwood Modernization**
Westwood High School is 32 years old. A modernization will be required to ensure adequate and appropriate space is available, including decommissioning the YMCA space in 2020.

3. **Thickwood Heights School Modernization**
Thickwood Heights School's 4 older portables are in very poor condition. The modernization would replace these and revitalize a tired core which is 43 years old.

4. **Westview School Modernization**
The District has been requesting funding for this project since January 1, 2010. Westview School, though having had its portables upgraded to modular classrooms, requires a modernization that would revive the aging 38 year old core and infrastructure

5. **Beacon Hill Modernization**
Beacon Hill School is 42 years old and requires modernization. Development is expected to start on the south side of the Athabasca River in the very near future. Infrastructure in this school is aging and in need of repair and upgrading.

6. **Greely Road Modernization**
The 36 year old infrastructure is at the end of its lifecycle and in need of revitalizing and is home to the highly successful Islamic Alternative Program.

7. **New Saline Creek K-6**
Saline Creek development for 20,000 residents was noted in the Radke Report titled "Responding to the Rapid Growth of Oil Sands Development" as a top priority to help meet the demand for housing in Fort McMurray. FMPSD is requesting a Core School. This community is isolated from other areas and the nearest school is Greely Road over capacity with 77% utilization and housing the highly successful Islamic Alternative Program.

8. **New Parsons Creek Timberlea K-6 II Construction**

Parsons Creek is a top priority by the Regional Municipality of Wood Buffalo. It is planned to have up to 24,000 residents when completed. The land is cleared and Phase One for 8,000 residents is under construction with 2500 residents and the first choice for those looking for new homes.

9. **New Saline Creek 7-12**
Saline Creek development for 20,000 residents is now underway with deep services being installed. It was noted in the Radke Report titled, "Responding to the Rapid Growth of Oil Sands Development" as a top priority to help meet the demand for housing in Fort McMurray. Additional junior/senior high school space south of the river will be required to accommodate the new students and residents of Saline Creek Plateau. Residential construction has started. New school capacity will be needed in order to accommodate the families and students

10. **New Parsons Creek Timberlea 7-12 Construction**
Parsons Creek is a top priority by the Regional Municipality of Wood Buffalo. It is planned to have up to 24,000 residents when completed and existing high schools in Timberlea do not have the capacity to accommodate. The land is cleared and Phase One for 8,000 residents and is 30% occupied

11. **New Saline Creek K-6 II**
The continued expansion and growth of the Saline Creek Plateau development for 20,000 residents will require another core elementary school to provide the local capacity and programming needed

12. **Timberlea School Modernization in 2011.**
Timberlea School is 31 years old with 5 additions of modulars. Modernization will ensure that this school continues to meet the needs of future generations.

13. **New Stone Creek K – 6 - Construction (Core 420-600)**
The continued growth and expansion in Timberlea Parcel F will require a community school. Fort McMurray Public School District has added modulars and is changing grade configuration.

14. **Dr. Clark Modernization in 2023**
It will be 20 years since the last modernization and it is expected that the building's core will need to be updated in order to prolong the life of the facility

15. **Ecole McTavish Modernization in 2035.**
It will be 25 years since the school opened and it is expected that the building's core will need to be updated

16. **New West Growth Area K-6 Construction**
West Growth is a top priority by the Regional Municipality of Wood Buffalo after New Parsons Creek. It is planned to have up to 29,000 residents when completed

17. **New Horse River K-6**
Horse River is a future development for 14,000 residents; existing schools do not have the capacity to absorb the new students.

18. **New K-6 Hangingstone River**
Hangingstone is a new development for 29,000 residents, where existing schools do not have the capacity to absorb the expected increase in residents and students

19. **Urban High School**
Regional Municipality of Wood Buffalo has Bylaw No. 12/003 City Centre Area Redevelopment Plan a portion of which is attached in Appendix F. The Regional Municipality of Wood Buffalo Plan on page 21 of the bylaw plans to increase the City Centre to 67,600 from 13,000. Discussions with Senior Managers and the District have confirmed a desire, not only to increase the population, but to increase the percentage of families from 11% to 18% in the City Centre. The Regional Municipality of Wood Buffalo is proposing an Urban High School as part of the City Centre Plan. The District will need this facility and Composite High School to accommodate this tremendous growth in City Centre. The combined impact of the growth and increased family dwellings results in an 880% increase in the number of family homes in City Centre

Appendix "A"

Responsible ACTIONS

A Plan for Alberta's Oil Sands

Alberta

Message from the President of Treasury Board

In a world where demand for oil is expected to continue to rise, Alberta's oil sands provide a significant source of secure energy. In addition to supplying the energy that consumers need, development of this resource offers great potential for the prosperity of Alberta and all of Canada.

Responsible Actions: A Plan for Alberta's Oil Sands is the Alberta government's strategic plan for responsible development of this vast resource. It balances future energy development with respect for the environment, and it outlines how we will foster a high quality of life for Alberta families, while developing the economy.

This plan looks at a wide variety of aspects relating to management of the oil sands regions, from supporting community infrastructure to keeping our water and air clean. It sets a new direction that will guide our decision-making for oil sands development, and contains ambitious strategies to help us identify and address the economic, social, and environmental challenges and opportunities in the oil sands regions.

Guided by the *Provincial Energy Strategy* and closely connected to the *Land-use Framework*, it identifies strategies to meet the needs of today, and it looks ahead to 2029.

The government will work with stakeholders, including municipalities, Aboriginal communities, industry, researchers, and organizations to implement and achieve the strategies outlined in the plan. Alberta's technological knowledge and expertise will ensure the oil sands are developed in a way that allows Alberta and its people to prosper and succeed for future generations.

By acting responsibly and working together, we can ensure Alberta's oil sands remain a benefit for all Albertans for years to come.

HONOURABLE LLOYD SNELGROVE
President of Treasury Board

Our Guiding Principles

The following principles provided the foundation for the development of this strategic plan and will form the basis for implementation.

Healthy environment and communities

- Promote responsible stewardship of natural resources and the environment.
- Foster healthy communities by managing social impacts and improving the quality of life for present and future generations.

Balanced growth

- Maximize long-term value and benefits from Alberta's oil sands while considering the economic, environmental, and social factors of development.
- Build on our strengths in developing our energy resources, and further increase our competitiveness within integrated North American and global markets.

Collaboration

- Collaborate and encourage co-operation, participation, and partnership with key stakeholders.
- Honour the constitutionally protected rights of Aboriginal people and their communities.
- Seek intergovernmental co-operation that respects the constitutional division of powers when addressing issues of mutual concern.

Public interest and accountability

- Respectfully consider input from all interested parties and communicate actions clearly to stakeholders and the public.
- Support the effectiveness of the free market through clear and sound government policy and economically efficient regulatory structures that are within the public interest.

Our Outcomes

This strategic plan is aligned with the three broad outcomes of the *Provincial Energy Strategy*: clean energy production, wise energy use, and sustained economic prosperity.

This plan also embarks on a path that will further increase economic revenue from the oil sands, while addressing environmental and social impacts. It outlines steps related to investment in infrastructure, people, innovation, and environmental protection, and identifies ways to improve planning and coordination. Through leadership, resourcefulness, innovation, and responsibility, the plan aims to achieve the following outcomes related to Alberta's oil sands:

- optimized economic growth;
- reduced environmental footprint; and
- increased quality of life for Albertans today and in the future.

Our Strategies

To achieve these specific outcomes, we will undertake a number of strategies:

1

We will develop Alberta's oil sands in an environmentally responsible way.

2

We will promote healthy communities and a quality of life that attracts and retains individuals, families, and businesses.

3

We will maximize long-term value for all Albertans through economic growth, stability, and resource optimization.

4

We will strengthen our proactive approach to Aboriginal consultation with a view to reconciling interests.

5

We will maximize research and innovation to support sustainable development and unlock the potential of Alberta's oil sands.

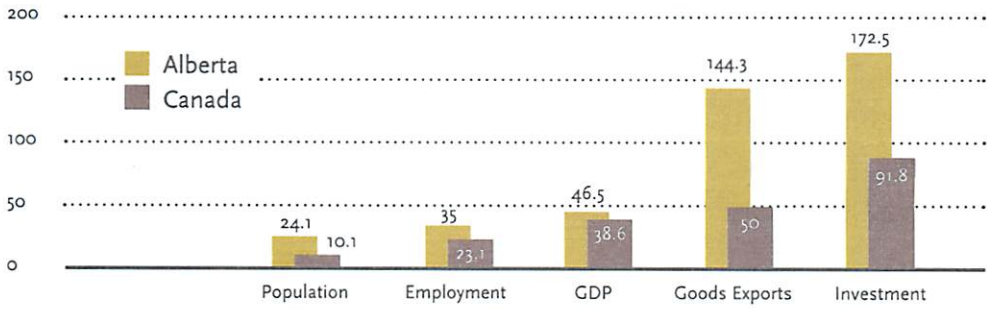
6

We will increase available information, develop measurement systems, and enhance accountability in the management of the oil sands.

A Context for Alberta's Oil Sands

The energy sector is a pillar of Alberta's economic strength, although it is not immune to the effects of fluctuating market conditions or other changes in the economy. Royalty revenues have helped build Alberta's strong infrastructure, health, and education systems. These revenues and spinoff economic activities continue to have a significant impact across the country (see Figure 4: Economic Highlights). In 2007, energy export revenue totalled $90 billion, which accounted for about 20 percent of all Canadian exports. "More than $86 billion has been invested in Alberta's oil sands since 2000, and another $10 billion is forecasted for 2009."[8] Industry also anticipates up to $15 billion annually for maintenance and operations. This underlines the growing importance of Alberta's oil sands, not just to the provincial economy, but to Canada's economic growth as well.

FIGURE 4
Economic Highlights
Growth in Selected Indicators: 1997–2007
Percent Change
Source: Statistics Canada and Alberta Finance and Enterprise



Of course, growth on this scale puts a strain on physical and social infrastructure. To address these pressures, the Government of Alberta has invested heavily in infrastructure and taken steps to address the environmental impacts through policies on climate change and cumulative effects management. Much has been done, and we will do even more. To develop actions for the future, we must begin with a careful and comprehensive assessment of Alberta's oil sands stewardship today, including a review of our strengths, challenges, and opportunities.

[8] http://alberta.ca/home/NewsFrame.cfm?ReleaseID=/acn/200902/252314718B52B-901E-D692-C102BFDF66336756.html

2.2 Improve public safety and security in the oil sands regions.

2.2.1 Increase emergency preparedness in the oil sands regions through enhancing opportunities for industry and community involvement and providing additional transportation routes.

2.2.2 Establish partnerships to support the development of regional or local strategies that focus on law enforcement, traffic safety, and prevention and treatment initiatives to reduce crime at the community level.

2.2.3 Build on the provincial Occupational Health and Safety Program to help industry implement workplace safety training targeted at foreign labour, workers who are inexperienced, and workers with low literacy.

2.3 Enhance timely investment in physical infrastructure in the oil sands regions.

2.3.1 Work with industry in the oil sands regions to develop contribution strategies for public infrastructure.

2.3.2 Support communities in managing immediate growth pressures through expediting the release of Crown lands, promoting affordable housing options and utilizing alternative financing approaches where appropriate.

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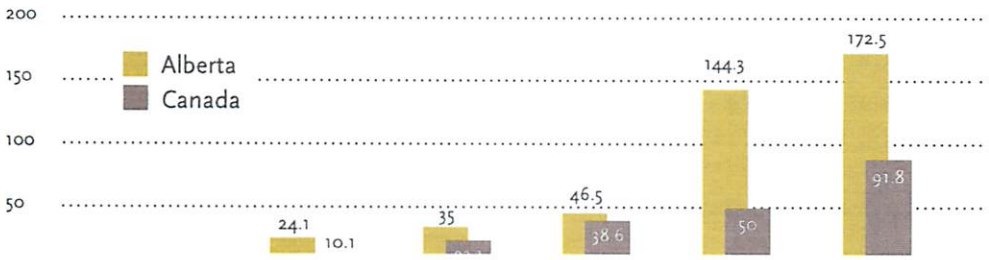

Strategy Three

Maximize long-term value for all Albertans through economic growth, stability, and resource optimization.

APPENDIX "B"

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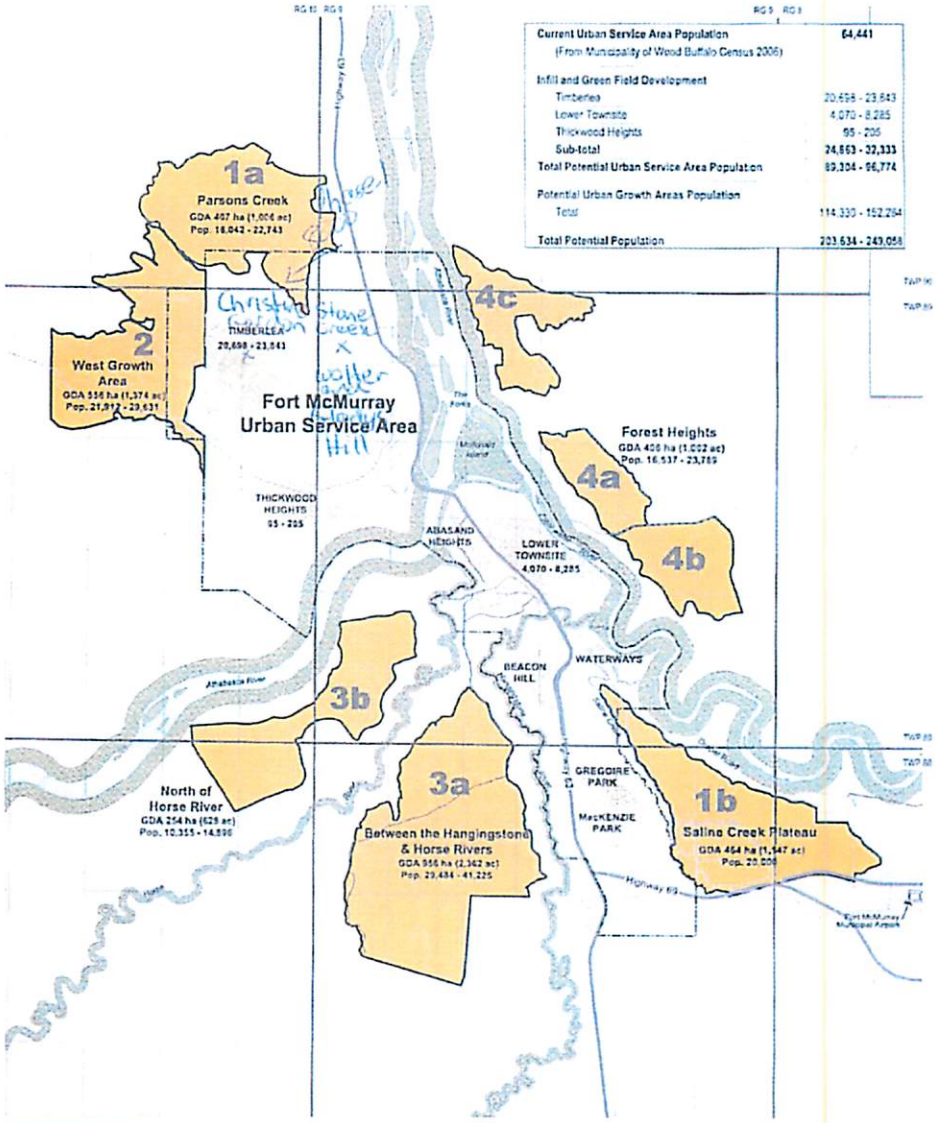


APPENDIX "C"

Forecasted Population and Enrollment Growth

Current residential developments under construction and estimated population remaining to move in.

	Residents	Enrollment
Timberlea Consortium Lands	400	32
Timberlea Eagle Ridge (Parcel D)	450	36
Timberlea Stone Creek (Parcel F)	200	16
Lower Townsite Long Boat Landing	1000	80
Lower Townsite Densification Redevelopment	8000	400
Saline Creek Phase 1	50	4
Parsons Creek Phase 1	4500	360
Total Under Construction Developments Updated February, 2016	14600	928

Residential Development Potential for the Urban Growth Areas				FMPSD Anticipated Increase in		
Potential Urban Growth Areas	65pph	80pph	95pph	Enrollment at 65 pph	Enrollment at 80 pph	Enrollment at 95 pph
Parsons Creek	16042	19440	22743	1166	1413	1653
Saline Creek Plateau	16218	19656	20000	1179	1429	1455
West Growth Area	21912	25504	29631	1593	1854	2154
Between Hangingstone & Horse Rivers	29484	35480	41225	2143	2579	2997
North of Horse River	10355	12640	14896	753	919	1083
Forest Heights	16537	20192	23789	1202	1468	1729
Total Future Developments	110548	132912	152284	8036	9662	11070

The Steering Committee has adopted a population density of 95 persons per hectare(pph) as the basis to increase the serviceable population in each Urban Growth Area, reduce servicing cost and create a more sustainable development.

Fringe Area Development Assessment – Urban Service Area March 22, 2007, appendix A map.

APPENDIX "D"

Fort McMurray Public School District						Updated: Mar. 2/17
7 Year IMR						
Descrition	**BH**	**CHS**	**DR. C**	**EDF**	**McT**	**GR**
HVAC Equipment	$ 875,000		$ 200,000	$ 845,000	$ 100,000	$ 950,000
HVAC Distribution Systems	$ 200,000		$ -	$ 350,000	$ -	$ 200,000
Plumbing Equipment	$ 80,000			$ 75,000	$ -	$ 75,000
Plumbing Distribution Systems	$ 265,000		$ 50,000	$ 375,000	$ -	$ 265,000
Electrical Equipment	$ 200,000		$ 15,000	$ 325,000	$ -	$ 320,000
Electrical Distribution Systems	$ 95,000		$ 7,500	$ 77,500	$ 200,000	$ 87,500
Roofing	$ 403,000		$ 180,000	$ 290,000	$ -	$ 500,000
Envelope, Ext. Doors & windows	$ 205,000		$ 230,000	$ 700,000	$ -	$ 330,000
Interior doors, ceilings, floors & finishes	$ 185,000		$ 50,000	$ 575,000	$ -	$ 450,000
Site	$ 395,000			$ 595,000		$ 395,000
Totals	**$ 2,903,000**	**$ -**	**$ 732,500**	**$ 4,207,500**	**$ 300,000**	**$ 3,572,500**

Description	**FS**	**THW**	**TL**	**WV**	**WWHS**	**Totals:**
HVAC Equipment		$ 925,000	$ 915,000	$ 935,000	$ 3,300,000	$ 5,745,000
HVAC Distribution Systems		$ 200,000	$ 200,000	$ 200,000	$ 545,000	$ 1,350,000
Plumbing Equipment		$ 75,000	$ 75,000	$ 75,000	$ 300,000	$ 455,000
Plumbing Distribution Systems		$ 265,000	$ 265,000	$ 265,000	$ 170,000	$ 1,750,000
Electrical Equipment		$ 365,000	$ 375,000	$ 390,000	$ 635,000	$ 1,990,000
Electrical Distribution Systems	$ 30,000	$ 87,500	$ 77,500	$ 77,500	$ 220,000	$ 740,000
Roofing		$ 140,000	$ 420,000	$ 385,000	$ 1,908,000	$ 2,318,000
Envelope, Ext. Doors & windows		$ 805,000	$ 525,000	$ 650,000	$ 625,000	$ 3,445,000
Interior doors, ceilings, floors & finishes	$ 50,000	$ 850,000	$ 525,000	$ 515,000	$ 380,000	$ 3,200,000
Site	$ 20,000	$ 125,000	$ 695,000	$ 645,000		$ 2,870,000
Totals	**$ 100,000**	**$ 3,837,500**	**$ 4,072,500**	**$ 4,137,500**	**$ 8,083,000**	**$ 23,863,000**
			7 year average		**$ 3,409,000**	

Appendix "E"

MUNICIPAL DEVELOPMENT PLAN

BIG SPIRIT, BIG IDEAS, BIG PLAN

REGIONAL MUNICIPALITY OF WOOD BUFFALO

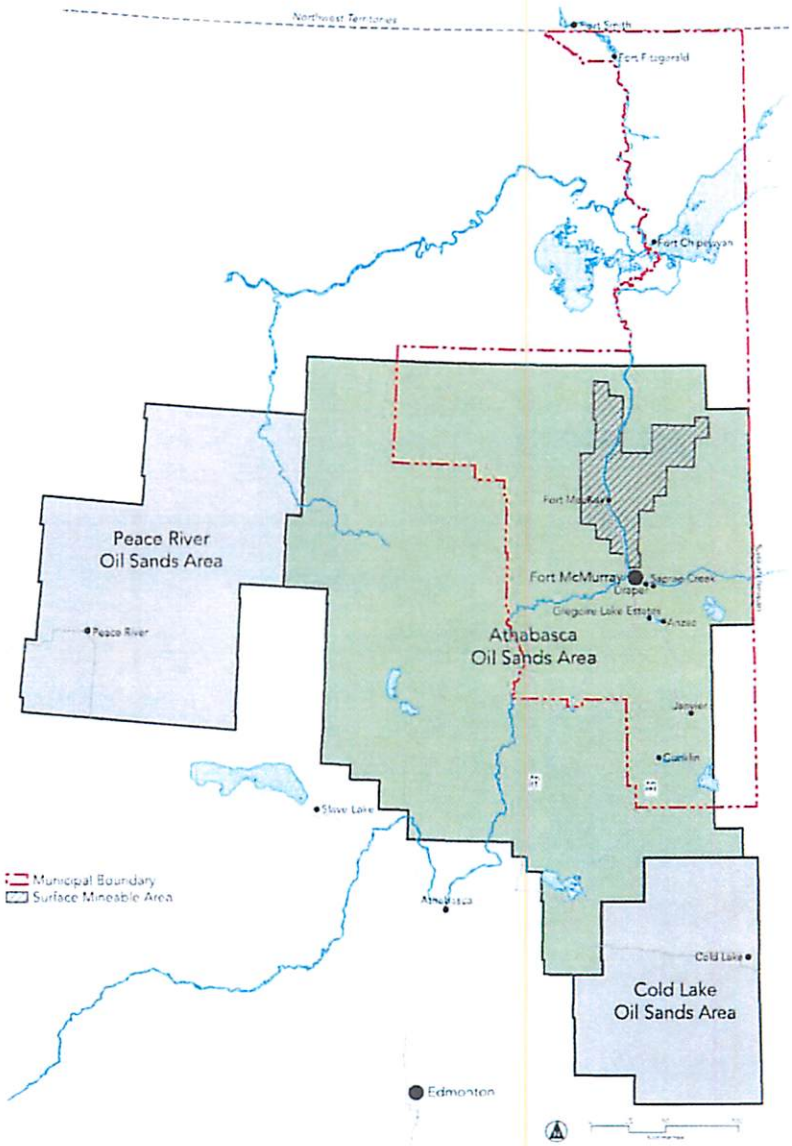
Bylaw No. 11/027, October 2011

About the Athabasca Oil Sands Area (AOSA)...

The Athabasca deposit is the largest reserve of crude bitumen in the world and the largest of three major oil sands deposits in Alberta, along with the nearby Peace River and Cold Lake deposits. Together, these oil sands deposits lie beneath 141,000 square kilometres of sparsely populated boreal forest and muskeg, and consist of an estimated 1.7 trillion barrels.

With modern oil production technology, at least 10 percent of these deposits, or about 170 billion barrels, are considered to be economically recoverable. This is enough oil to satisfy the total Canadian oil demand for over 200 years. This makes Canada's total oil reserves the second largest in the world after Saudi Arabia. The Athabasca deposit is the only large oil sands reservoir in the world that is suitable for large-scale surface mining; however, most of the reservoir can only be extracted using more recently developed *in situ* technology called Steam Assisted Gravity Drainage (SAGD), which allows extraction of deeper oil sands deposits. Future developments of in situ technology may expand access to the resource.

ATHABASCA OIL SANDS AREA
and the Regional Municipality of Wood Buffalo



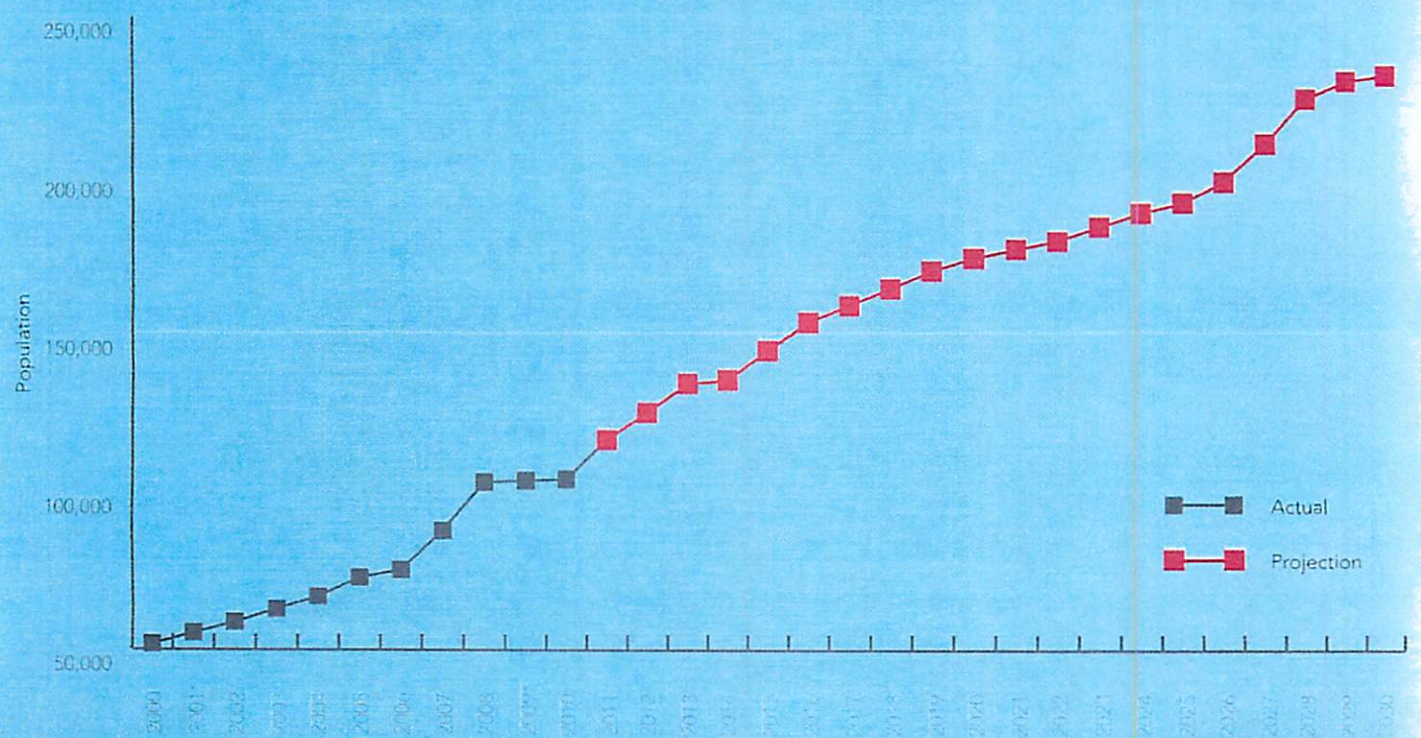
BY-LAW NO 11/027, OCTOBER, 2011

WE ARE GROWING

The region is expected to continue its pattern of rapid growth into the foreseeable future. Oil production is projected to rise from the current 1.6 million bpd to as much as 6.9 million bpd over the next two decades, which will stimulate a corresponding demand for employment and an increase in population. Current and projected oil sands employment could amount to as many as 50,000 permanent operational jobs in the region, generating an increase in population of more than 125,000 people over the next 20 years. Population growth, in turn, will trigger a rise in demand for support and institutional services, as well as increased levels of retail and employment opportunities.

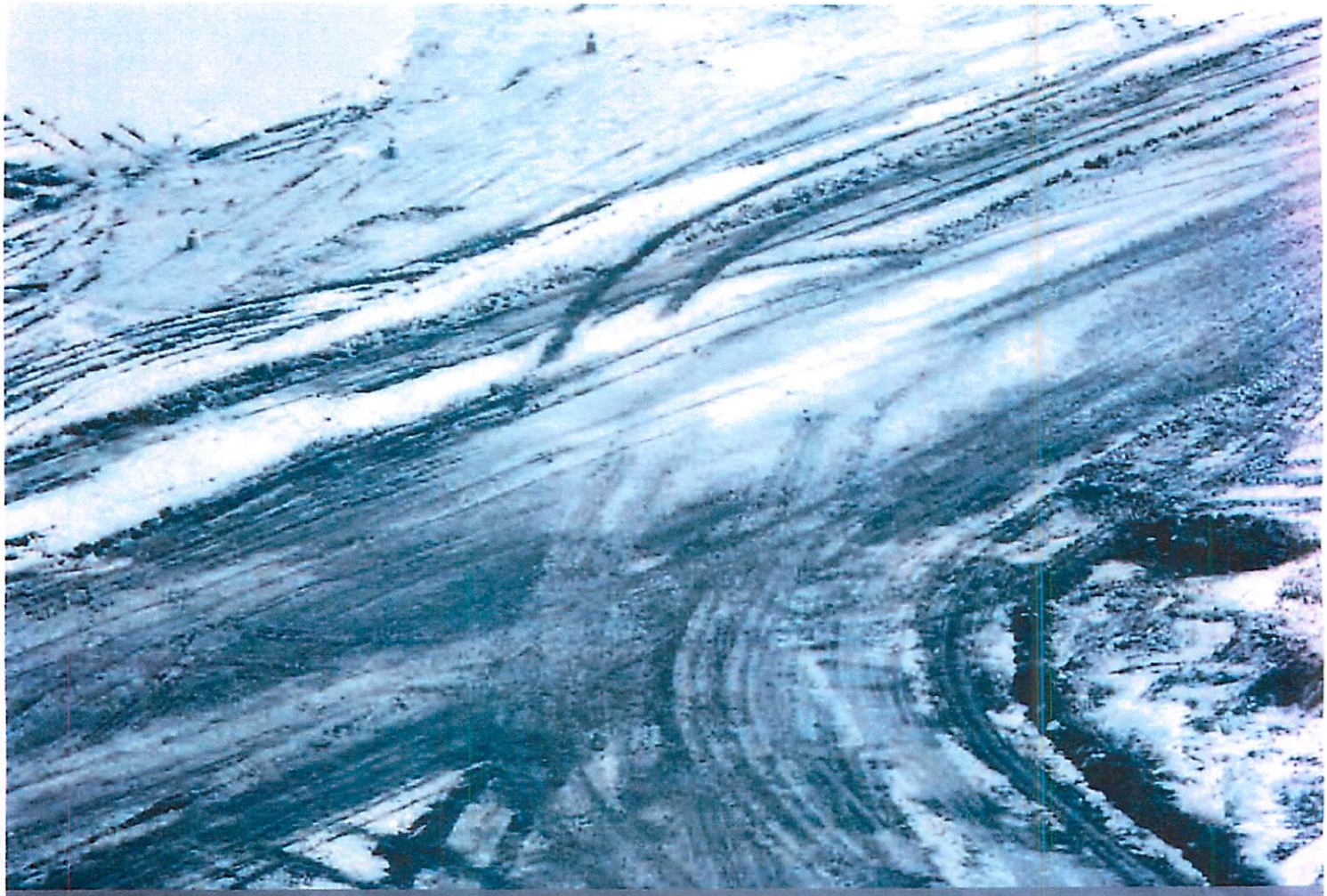
INCREASE IN POPULATION OF 125,000

Historic and Projected Regional Population (2000 – 2030)



Source: Regional Municipality of Wood Buffalo, 2011

*No Municipal Census was conducted during these years, the average from the two adjacent years was used to estimate the population



GROWTHanalysis

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12% GROWTH 20 YEARS

Wood Buffalo is one of the fastest growing municipalities in Canada and projections indicate that this rapid rate of growth will not only continue, it will accelerate. This is especially true in the near- to mid-term, that is, within the next decade. The region's oil sands industry will continue to be the primary driver of growth, generating employment opportunities that are expected to attract workers from across the country and around the world.

Recent population and employment projections indicate that the region could grow from 104,338 in 2010 to over 231,000 people by the year 2030, an increase of 121 percent. Population growth will bring with it economic growth through the development of the service industry and private sector-driven small-scale businesses and retail.

Already, the average annual population growth rate is above 7 percent. With a number of new oil sands projects proposed to start between now and 2020, employment is projected to grow by as much as 53 percent and the population by 66 percent over the next decade.

Growing social services and new economic opportunities will continue to attract migrant workers to the region and new induced and indirect employment will develop as the region's economy diversifies beyond oil and gas. Employment in the financial, social services (including health and education), entertainment, and retail sectors could collectively increase by more than 200 percent over the next 20 years.

GROWTH
analysis

OIL INDUSTRY PRODUCTION

Oil sands activity is the engine for growth in the region. Currently, oil sands operations in Wood Buffalo produce 1.6 million barrels of oil equivalents per day (bpd). If projects that are under construction, approved, in application, or announced for the next 20 years are considered, production levels could approach 6.9 million bpd (reaching a total of 7.5 million bpd in production capacity), assuming all projects proceed. While the timing and scope of longer-term oil sands development is difficult to predict, it is assumed, for the purpose of the Plan, that the bulk of this capacity will be realized by 2030.

Oil sands production includes both surface mining and *in situ* extraction for deeper deposits. Surface mining operations account for approximately 80 percent of current production while Steam Assisted Gravity Drainage (SAGD) operations, a form of *in situ* extraction, account for the remaining 20 percent. SAGD and other *in situ* operations are expected to comprise a larger share of operations in the future to the point where SAGD operations will overtake mining operations in terms of capacity.

New technologies could contribute to future extraction if and when increasing world demand and rising commodity prices justify such investment. Carbonates, a different form of bitumen, are an emerging resource within the region. If a commercially viable method of extraction is found, carbonates could significantly increase the recoverable oil resources within the region in coming years.

In the long-term, if the 6.9 million bpd level of production is realized, it would represent an increase of 5.4 million bpd from current production rates. It is projected that *in situ* operations would account for approximately 60 percent of this increase in production with approximately 40 percent derived from surface mining. A very small percentage of future production is expected to be generated through new technologies.

In the near-term, projects that are approved or currently under construction are expected to increase production by 2.1 million bpd, up to 3.7 million bpd from the current 1.6 million bpd. It is projected that *in situ* operations and surface mining operations would each account for approximately 50 percent of the increase in production.

131% Increase

EMPLOYMENT DEMAND

The oil production industry requires two forms of labour: construction and ongoing operations. Mining operations generally have three times the number of operational employees compared to SAGD extraction and also require a greater number of construction workers to get a new facility into operation. While SAGD operations have fewer operation and construction workers per barrel of production, they tend to have multiple phases and ongoing drilling that result in continuous construction.

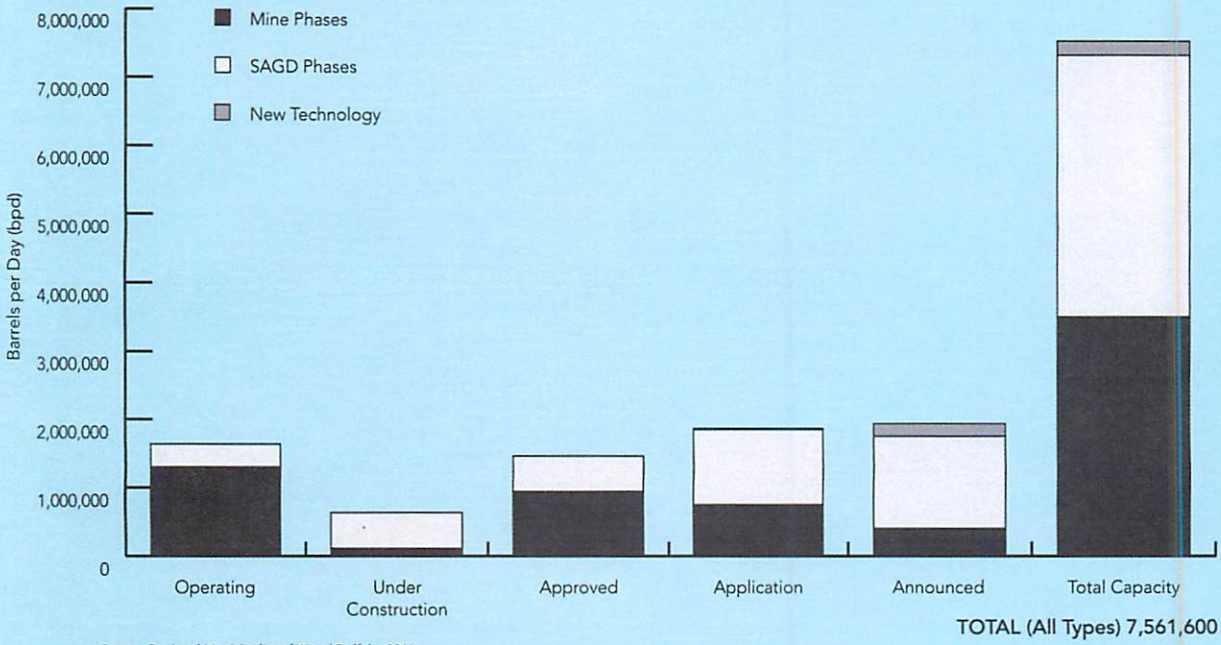
Over the long-term, production levels of 6.9 million bpd could translate into approximately 50,000 direct operational jobs in the region by 2030. This assumes an increase of approximately 2.2 million bpd in mining production and 3.2 million bpd related to *in situ* production.

Construction jobs are generally considered to represent non-permanent employment; however, if the region sustains growth in the oil industry to 2030, there will be a steady pace of construction jobs bringing greater stability to construction employment. This steady employment will provide the opportunity for the construction-related workforce to settle long-term, supported by the implementation of a large number of industrial projects.

In addition, indirect and induced jobs from oil sands operations will contribute to the overall labour force demand for the region in sectors such as real estate services, temporary accommodations, manufacturing and business services, among others. These sectors are expected to grow as oil production increases, leading to an even more diversified economy over time as financial, educational, social service and other sectors expand. There is the potential for an increase of more than 200 percent in employment in sectors outside of the oil and gas industry over the next two decades.

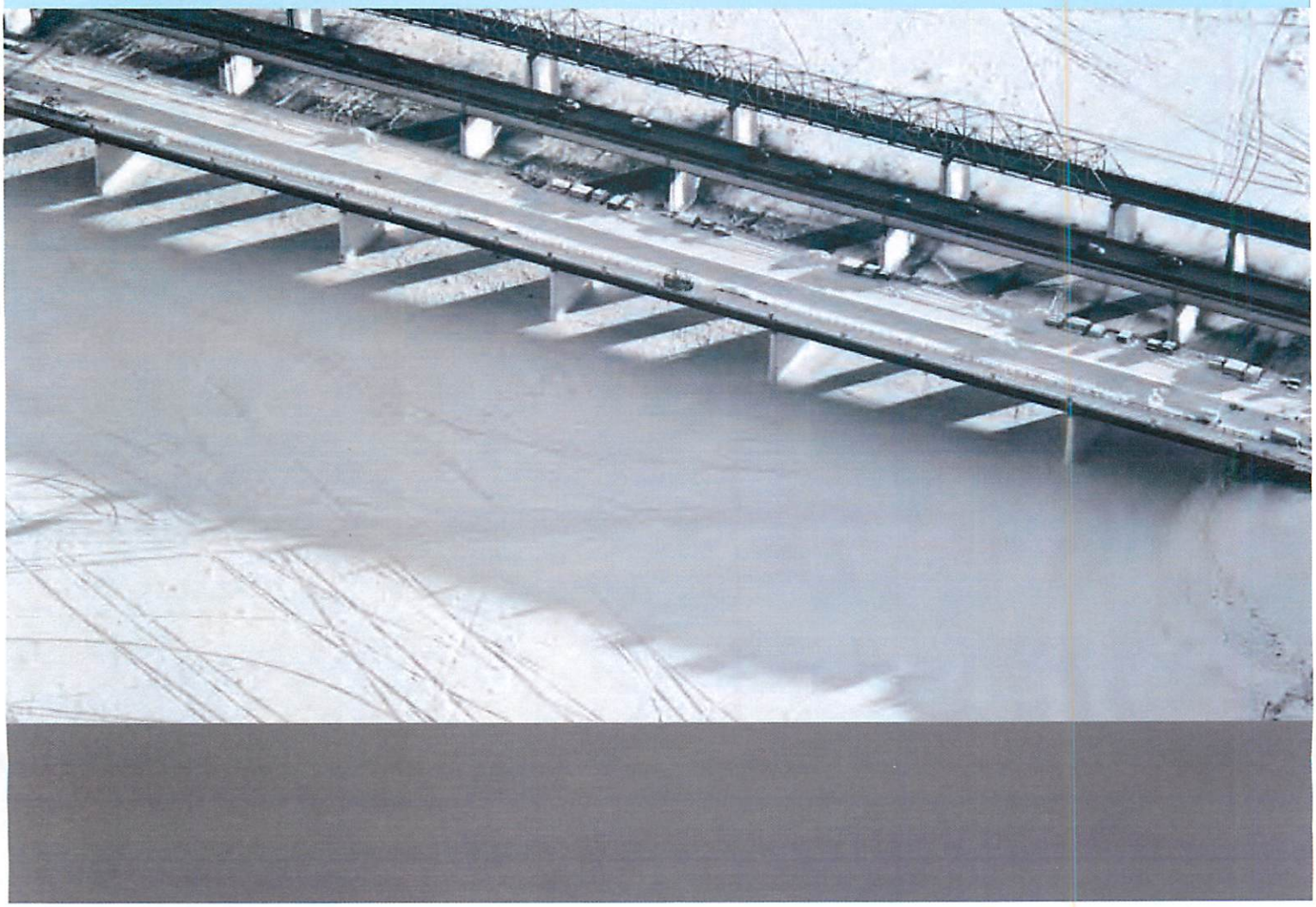
200% INCREASE IN OIL/GAS JOBS over next 20 years.

Oil Sands Capacity (bpd) by Status



TOTAL (All Types) 7,561,600

Source: Regional Municipality of Wood Buffalo, 2011



JOB LOCATIONS

Surface mining operations are mainly located north of Fort McMurray, whereas *in situ* operations are located throughout the region. Mining operations are not usually economically viable if production is less than 100,000 bpd, so they are not only more intensive in labour, they require a higher level of operational input and maintenance. Consequently, the vast majority of new operational jobs will be associated with the northern mining operations.

To the south of the region, development of *in situ* operations will be concentrated near the community of Conklin. Employment growth in this area could result in approximately 5,700 new operational jobs over the next 20 years.

Looking at all future operations, it is estimated that 32,500 jobs or 65 percent of all operational jobs will be within 75 kilometres of Fort McMurray and over 90 percent of all future oil sands employment in the region will be within 100 kilometres of Fort McMurray, primarily to the north.

Employment Proximity to Fort McMurray, Anzac, and Conklin

Projected Operational Workforce Employment near Fort McMurray

Proximity	Operational Jobs	% of Operational Jobs
Within 50km	13,891	27.9%
Within 75km	32,271	64.8%
Within 100km	45,787	92.0%

Projected Operational Workforce Employment near Anzac

Proximity	Operational Jobs	% of Operational Jobs
Within 25km	2,244	4.5%
Within 50km	4,001	8.0%

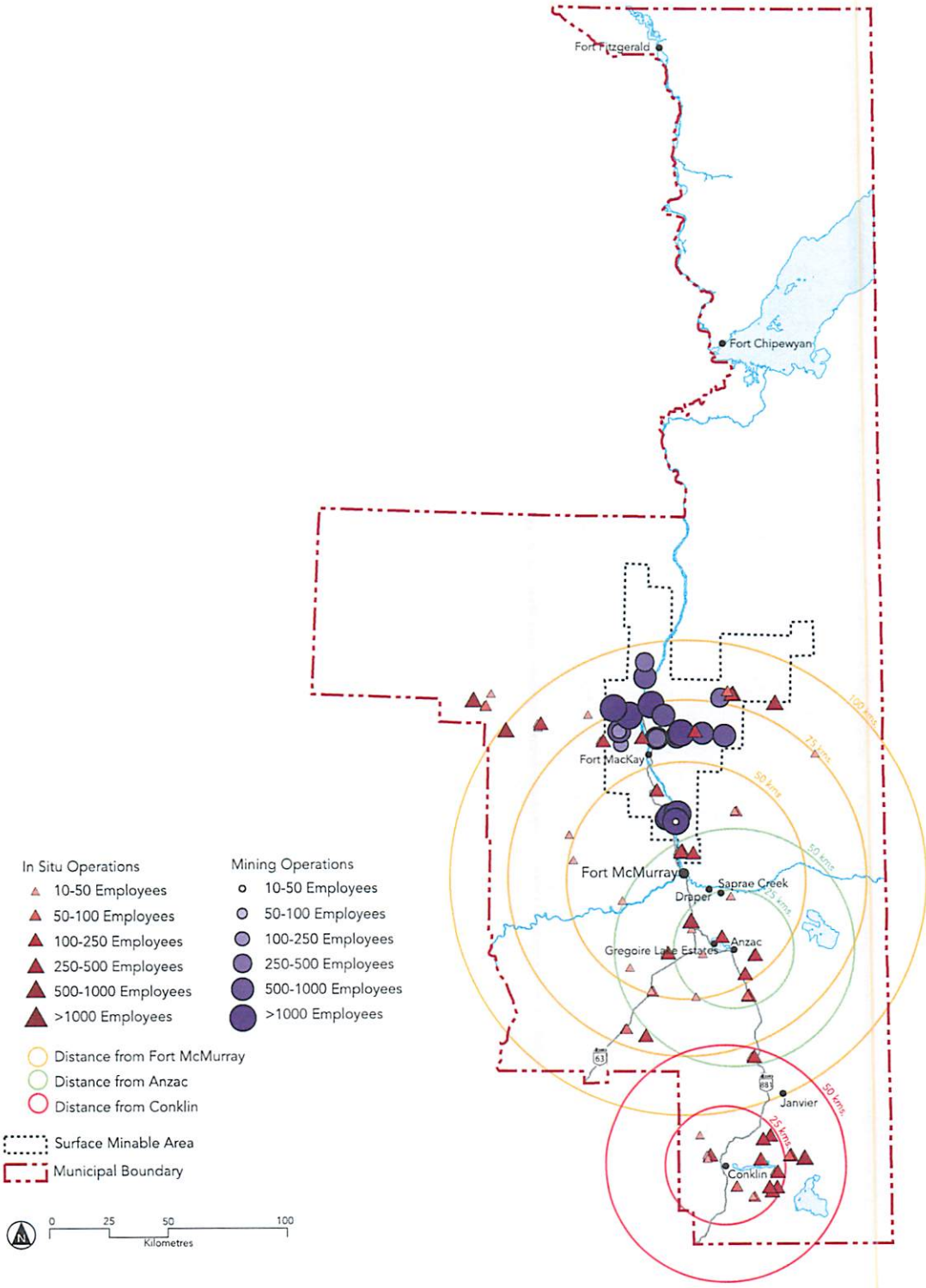
Projected Operational Workforce Employment near Conklin

Proximity	Operational Jobs	% of Operational Jobs
Within 25km	4,840	9.7%
Within 50km	5,741	11.5%

Source: Regional Municipality of Wood Buffalo, 2011

OIL SANDS OPERATIONAL EMPLOYMENT

Location of existing and potential employment



TIMING

The timing of oil sands projects can be affected by the availability of labour and materials, regulatory processes, fluctuations in financial markets, and changing oil prices. Assuming relative stability in these areas, the majority of new oil sands operations are anticipated to begin over the next decade. Significant growth is expected between 2012 and 2019, with spikes in operational jobs forecasted for 2013, 2015 and 2018. In addition, employment growth in the oil and gas industry implies growth in other economic sectors. It is expected that there will be fluctuation in terms of employment increases between 2012 and 2022 due to the number of projects expected to start in this same period.

A slow down in added employment is expected toward the second half of the projection period to 2030. This is explained by the fact that most projects are expected to be complete by that time, with fewer projects starting up. At this time, most of the non-permanent construction employment positions are likely to give way to more stable operational jobs. Furthermore, several projects in operating today will begin to shutdown as the resources are exhausted. The region's population is then expected to stabilize.

Projected Operational Employment Growth (2011 – 2030)

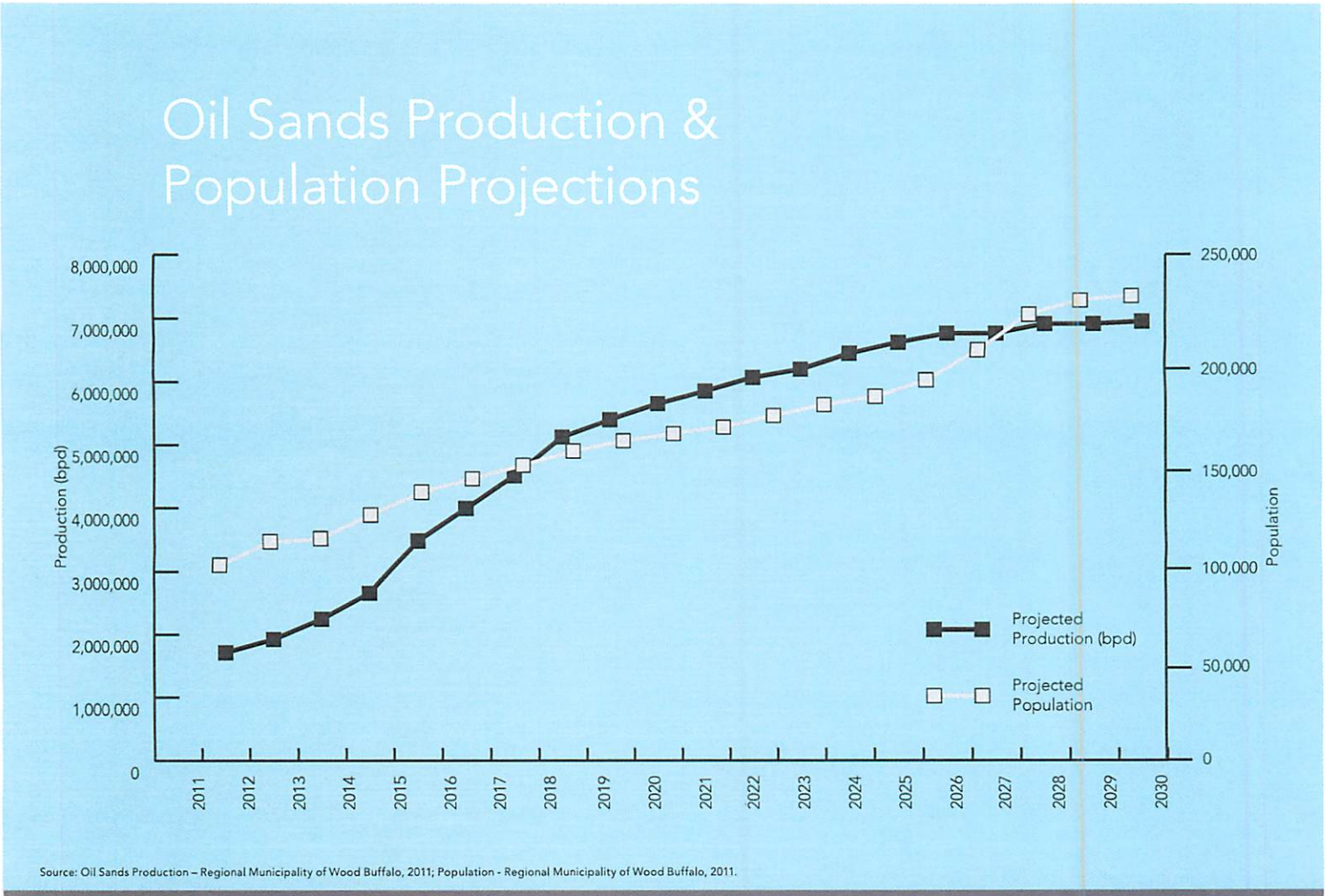
Source: Regional Municipality of Wood Buffalo, 2011.
Amount of projects per year summarizing 138 projects estimated to be built by 2030, leaving 27 projects to be accomplished in the 2030-2035 period, considering a 5 years lapse per construction process. This forecast does not include generic projects to be considered in the 2025-2030 period.

POPULATION PROJECTIONS

Growth estimates in the oil industry, anticipated timing of projects, and the resulting impact on direct and indirect employment growth, combine to provide insight into population growth. Oil sands production is forecasted to be 5.6 million bpd in 2020, continuing to rise to as much as 6.9 million bpd by 2030. As a result, the regional population is projected to reach 174,000 by 2020 and 231,000 by 2030. To put this into perspective, these projections represent a higher growth rate over the next 10 years than that experienced in the decade from 2000 to 2010.

Given the number of projects that are expected to start in the years 2011-2020, employment is likely to grow by as much as 53 percent by 2020, while population is likely to grow by 66 percent in the same period. After 2020, both employment and population growth rates will stabilize and further growth will rely on new projects, as well as indirect and induced employment generated.

Given that the projected employment will continue to grow, the region is going to rely on a continued influx of labour migration into the region.



Source: Oil Sands Production – Regional Municipality of Wood Buffalo, 2011; Population - Regional Municipality of Wood Buffalo, 2011.

LAND REQUIREMENTS

Most of the region's growth will occur in Fort McMurray to the point where it is expected to comprise 85 percent of the region's population by 2030. Estimates for land and housing requirements have been derived based on this distribution model and the overall projected regional population climbing to over 231,000 by that time.

As it currently stands, it is estimated that approximately 2,850 hectares of land will be required for residential housing in the region by 2030. This translates into a density of 45 persons per hectare of land using an average household size of 3.1 people. It is also estimated that the region will require half of its residential land requirement for commercial uses and twice its residential land requirement for industrial uses. This requirement for commercial and industrial land in the region translates into about 1,400 and 5,700 hectares of land, respectively, by 2030.

In addition, about 64 percent of the total estimated land area is required for green space. This high percentage is due in large part to local geographic conditions in which large tracts of land are unsuitable for development because of unstable slopes, muskeg, or flood plains. Green space is required for parks and recreational uses, or may be left as natural lands. About 6,500 hectares will be required for green spaces, which assumes the same proportion of green space per person as in 2010.

In total, about 16,500 hectares of land could be required within the planning period to accommodate future growth and development in the region. Total land demand will be highest in the near-term, up to 2015, after which the demand will decelerate from 2015 to 2025. However, the required amount of space may increase again toward the end of the planning period as construction activities wind down and a more stable population base settles in the region's communities.

Projected Land Requirement by Usage Type (hectares), 2011 - 2030

Year	Residential	Commercial	Industrial	Green	Total
2011-2015	802	401	1,604	1,816	4,623
2016-2020	646	323	1,292	1,463	3,723
2021-2025	465	232	929	1,053	2,679
2026-2030	941	471	1,882	2,132	5,425
TOTAL					16,451

Source: Regional Municipality of Wood Buffalo, 2011

Projected Land Required for Residential Use (hectares), 2011 – 2030

	2011-2015	2016-2020	2021-2025	2026-2030	Total
Fort McMurray	758	609	436	885	2,689
Rural Communities	44	37	28	56	165
Total	802	646	468	941	2,854

Source: Regional Municipality of Wood Buffalo, 2011

Projected Land Required for Commercial Space (hectares), 2011– 2030

	2011-2015	2016-2020	2021-2025	2026-2030	Total
Fort McMurray	379	304	218	443	1,344
Rural Communities	22	19	14	28	82
Total Land Requirement	401	323	232	471	1,426

Source: Regional Municipality of Wood Buffalo, Planning & Development Department, 2011

Projected Land Required for Industrial Use (hectares), 2011– 2030

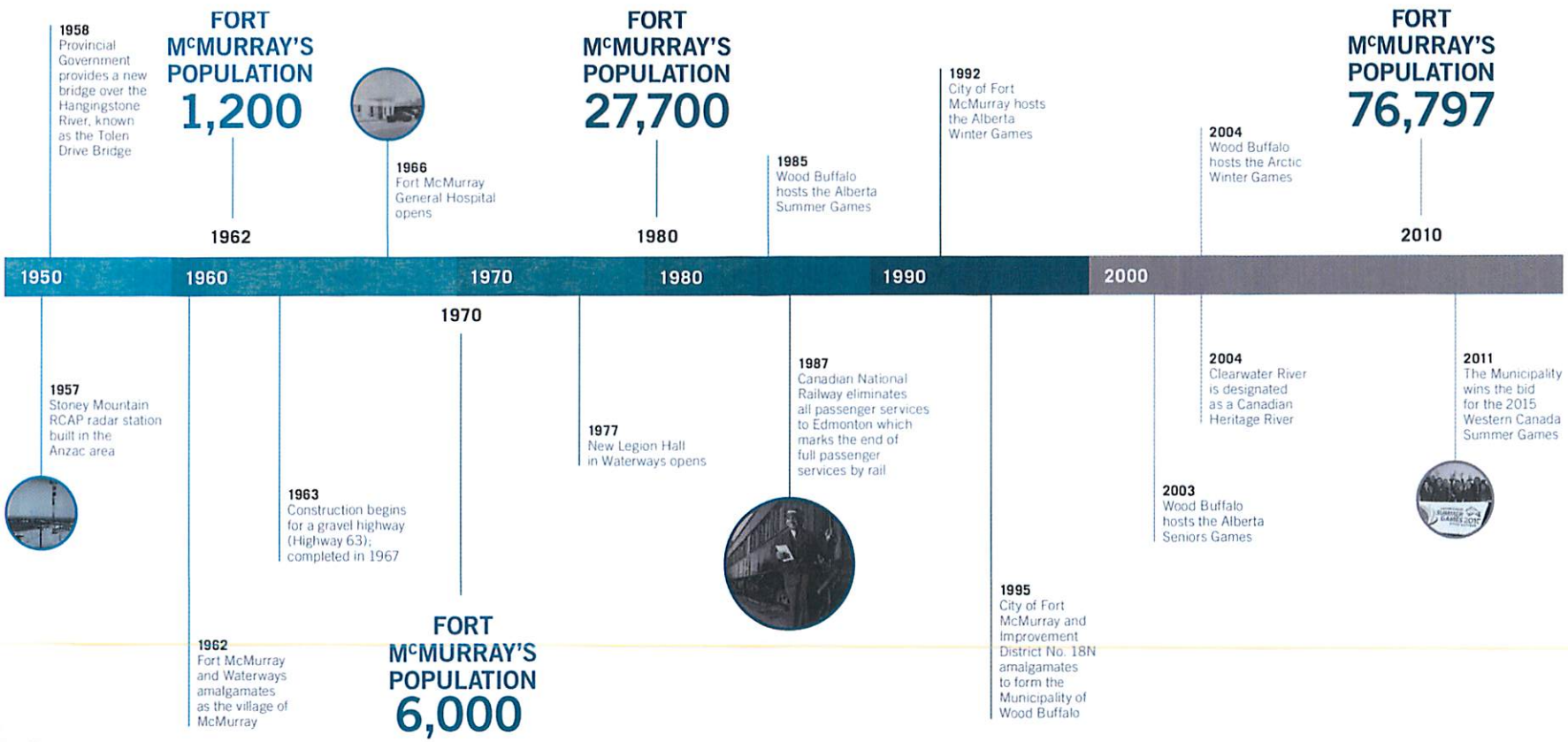
	2011-2015	2016-2020	2021-2025	2026-2030	Total
Fort McMurray	1,516	1,218	873	1,771	5,377
Rural Communities	88	74	57	111	330
Total Land Requirement	1,604	1,292	929	1,882	5,707

Source: Regional Municipality of Wood Buffalo, Planning & Development Department, 2011

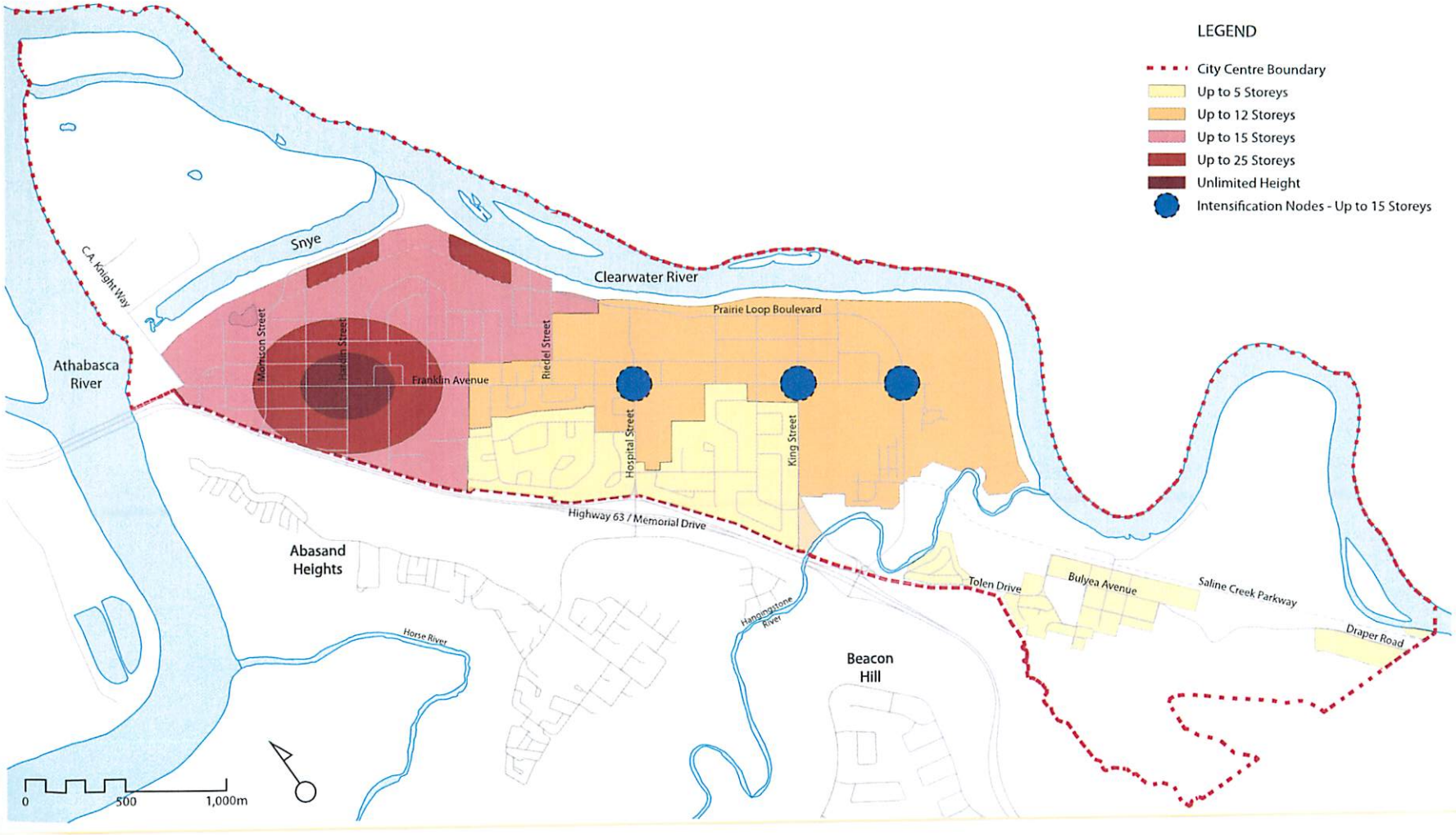
Appendix "F"

Our Sustainable Future
City Centre Area Redevelopment Plan

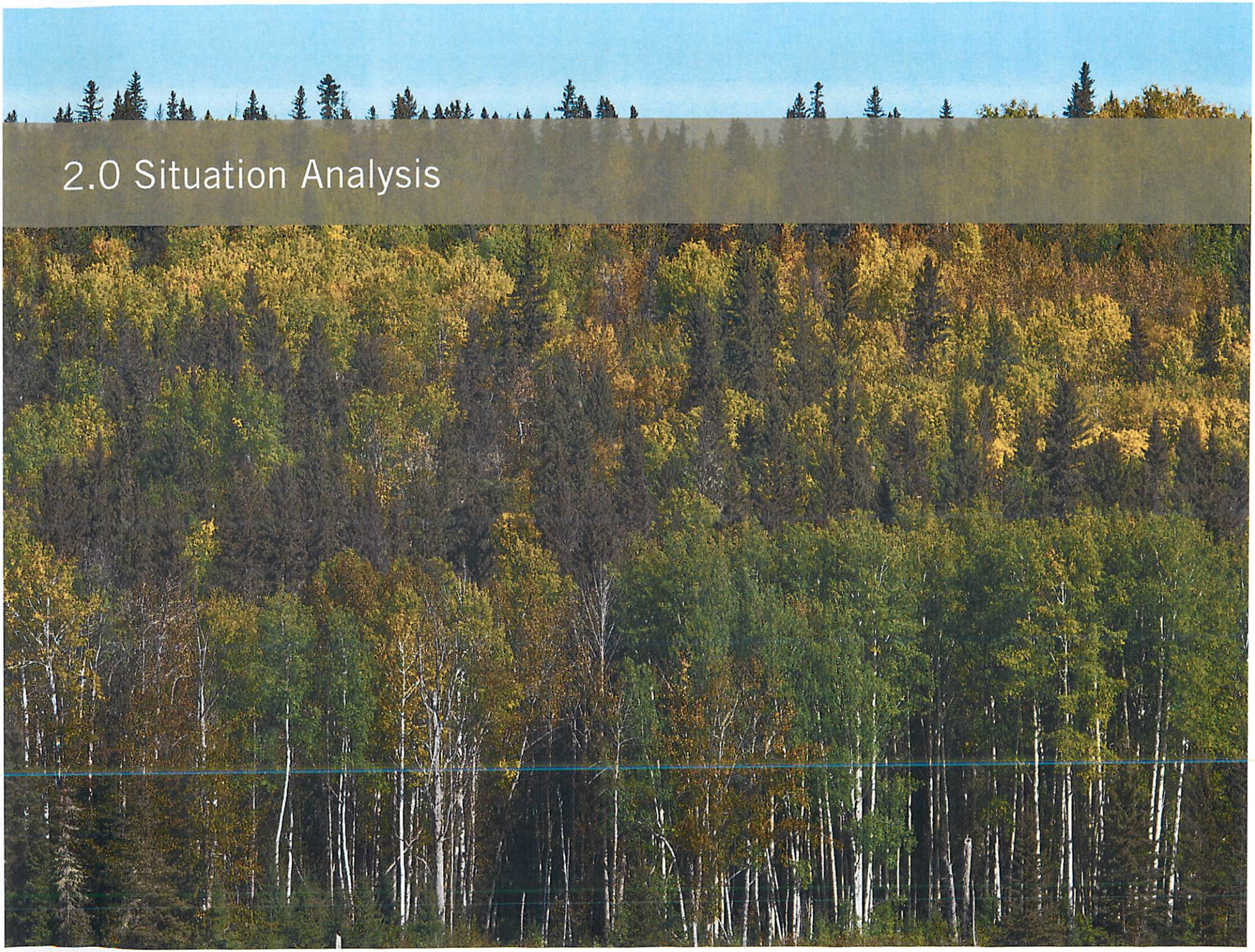
Bylaw No. 12/003 February 2012


1950
1960
1970
1980
1990
2000
1958 Provincial Government provides a new bridge over the Hangingstone River, known as the Tolen Drive Bridge
FORT McMURRAY'S POPULATION 1,200
1962
1966 Fort McMurray General Hospital opens
FORT McMURRAY'S POPULATION 27,700
1980
1985 Wood Buffalo hosts the Alberta Summer Games
1992 City of Fort McMurray hosts the Alberta Winter Games
2004 Wood Buffalo hosts the Arctic Winter Games
FORT McMURRAY'S POPULATION 76,797
2010
1957 Stoney Mountain RCAP radar station built in the Anzac area
1962 Fort McMurray and Waterways amalgamates as the village of McMurray
1963 Construction begins for a gravel highway (Highway 63); completed in 1967
1970
FORT McMURRAY'S POPULATION 6,000
1977 New Legion Hall in Waterways opens
1987 Canadian National Railway eliminates all passenger services to Edmonton which marks the end of full passenger services by rail
1995 City of Fort McMurray and Improvement District No. 18N amalgamates to form the Municipality of Wood Buffalo
2003 Wood Buffalo hosts the Alberta Seniors Games
2004 Clearwater River is designated as a Canadian Heritage River
2011 The Municipality wins the bid for the 2015 Western Canada Summer Games

City Centre Generalized Height Diagram



2.0 Situation Analysis



2.0 Situation Analysis

This section reviews key region-wide factors that influence the development of the City Centre. It also highlights some of the opportunities and challenges that the Plan will address in the subsequent sections that recommend policies and actions. These factors are economy, population, infrastructure, transportation and connectivity.

2.1 Economy

The economy of Fort McMurray and the region is dominated by the natural resource sector: namely, the oil sands and oil sands related activities. Both directly and indirectly, this sector provides more than 67% of all job opportunities. Employment in the oil sands and related industries is concentrated in the following industry sectors:

- Resource-based industries and agriculture sector (including mining and gas);
- Construction (including industrial, commercial and residential construction); and
- Manufacturing and support services.

The increasing demand for labour and materials in the oil sands sector, and the resulting demand for additional accommodations and services for oil sands workers, puts tremendous pressure on the overall economy. This has resulted in increasing construction costs, occupancy costs and wages. At the same time, there has been a decrease in labour availability and materials supply.

The City Centre has been home to the Central Business District (CBD) of Fort McMurray since the early 1900s. It has long been the Municipality's objective to attract investment and development to Fort McMurray's City Centre and initiatives have been advanced to provide a progressive and business friendly environment in which to invest and operate a business.

However, a significant ongoing concern is the limited supply of office, commercial, retail and residential space in Fort McMurray in general and the City Centre in particular. High operating costs, lack of alternative locations and labour shortages also constrain the successful operation of businesses. Furthermore, there is an artificial shortage of land for residential, commercial and industrial expansion in Fort McMurray due to provincial control of surrounding lands. As indicated in the 2011 Municipal Development Plan, in excess of 40,600 acres of additional land will be required by 2030 to meet the anticipated growth in the region.

Aerial view of an oil sands operation

The lack of new small businesses and the loss of existing businesses is of particular concern to our community. Fort McMurray is already under-supplied with commercial and retail businesses, and the resulting lack of goods and services for residents is impacting quality of life and consequently undermining the region's ability to attract skilled workers and particularly new permanent residents.

A quality urban environment provides residents with the opportunity to carry out all their daily activities in reasonable proximity to their homes. With a planned balance of work and living opportunities, the City Centre has the potential to provide such an environment. If a variety of housing types are available, coupled with a wide range of retail services and other amenities, more people will take advantage of the live-work opportunities the City Centre could offer in the future.

The region's MDP recognizes and supports continued development of the City Centre as the business, entertainment and commercial centre of Fort McMurray. It also recognizes the need to enhance the appearance and viability of the commercial core by undertaking revitalization strategies.

2.2 Population Growth and Projected Trends

Population Growth

Fort McMurray is the largest community in the region, with an estimated resident population of 76,800 (2010), but the proportion of the region's population residing in Fort McMurray has been declining.

The population of Fort McMurray's City Centre area was over 13,000 in 2010. While the population of this area has increased in absolute terms since 1999, its proportion of Fort McMurray's and the region's total population has declined steadily, falling from highs of 25% and 20% in 2002, to approximately 16% and 12%, respectively, by 2010.

Strong population growth in the City Centre and the region as a whole can be attributed to the rapid development of the oil sands industry and the strong job market it has created. Oil production is projected to increase from 1.6 million barrels per day to as much as 6.9 million barrels per day in the next two decades and stimulate a corresponding population boom and demand for employment. The Municipality forecasts that, with significant growth in the oil sands, this pattern of rapid growth will continue into the foreseeable future.

This increased oil production is forecast to generate more than 50,000 permanent oil sands jobs in the region and spur a population increase of more than 125,000 people. Such population growth will spawn increased demand for support and institutional services, and drive demand for increased levels of retail and other employment opportunities within the region.

The Municipality anticipates that 85% of its population, or 196,400 residents, will live in Fort McMurray by 2030. A significant portion of this population will reside and work in the City Centre.

Projected Trends

The MDP projects the region's population to increase from an estimated 104,300 people in 2010 to more than 231,000 by 2030, with Fort McMurray increasing its proportion of the region's population from an estimated 74% in 2010 (76,800 people) to 85% by 2030 (196,400 people).

A recent study of population trends in the city can be summarized as follows:

- If Fort McMurray could grow its population to comprise 85% of the municipality's total population by 2030, then the City Centre area could similarly regrow its portion of Fort McMurray and the region's population.
- If this occurs, a population of up to 48,100 could be accommodated in the City Centre by 2030.
- Through a combination of diversification of local employment, coupled with the development and implementation of this Plan, total employment in the region could approach 88,300 jobs in 2015 and 162,200 by 2030.

- The number of non-oil sands related jobs could increase from approximately 25,400 in 2010 (approximately 40% of total employment) to 35,600 in 2015 and to almost 80,000 by 2030 (almost 50% of total employment).

A similar study on employment projection for the City Centre shows significant increase in the incremental potential from 2010-2030. This study assumes that while total employment will continue to be dominated by the oil and gas sector, the proportion of employment in other industries, including health care and social services, wholesale trade, retail trade, finance and real estate, and business services could increase as the local economy expands and diversifies. Specific employment opportunities associated with such a broadening of the local economy will include finance, real estate, legal, consulting, office services, professional services and health care. The City Centre is ready to immediately accommodate growth, given the recently installed infrastructure and the availability of services.

A portion of this projected increase in total employment would be attracted into the City Centre, resulting in a significant demand for office space. Conservative projections of the total amount of space required in the City Centre indicate a potential demand for new office space, summarized as follows:

- 1 million sq ft (housing 4,400 new workers) by 2015
- 5.3 million sq ft (housing 23,300 new workers) by 2030

More aggressive projections produce a demand for:

- 2.0 million sq ft (housing 8,800 additional office jobs) by 2015
- 10.7 million sq ft (housing 46,600 office jobs) by 2030

As the city is redeveloped, a number of market segments will be attracted to downtown living, including:

- younger individuals and couples with jobs located in or near the downtown core
- individuals and couples, including empty nesters, who are attracted to downtown amenities
- people working in a post-secondary setting and in the arts/culture community

Based on conservative assumptions, the projected demand for multi-family residential units in the City Centre could be between 6,000 and 10,000 additional units. However, under the less conservative scenario quoted above, the number of additional units required could increase up to 27,000. The total population residing in the City Centre could then approach a high of 67,600 people by 2030.

	Region	Fort McMurray	City Centre Base	City Centre Potential
2010	104,338	76,797	12,797	N/A
2015	144,800	110,500	18,800	23,000
2020	174,000	139,200	26,400	36,500
2025	191,500	158,900	35,800	49,800
2030	231,000	196,400	48,100	67,600

Resident Population Projection 2010-2030

	Region Base	Fort McMurray Base	City Centre Incremental Base	City Centre Incremental Potential
2010	64,100	26,500	5,600*	5,600
2015	88,300	41,100	10,000	14,400
2020	111,900	61,600	16,300	27,000
2025	129,000	79,000	21,200	36,800
2030	162,200	103,200	29,000	52,400

Employment Projection 2010-2030
(*assumes no net change in jobs between 2000 and 2010)

APPENDIX G

Investing in our Future:

Responding to the Rapid Growth of Oil Sands Development

Final Report
December 29, 2006

Alberta

funding increased from $1.315 million to $1.757 million and Northland School Division funding increased from $516,000 to $810,000. In 2006-07, government will increase funding in this area by four times. (Source: Alberta Education)

Peace River

The majority of the districts' funding requests were for modernizations and portables. Funding has been provided for three school modernizations and some school repairs. No funding was provided for new schools.

Cold Lake - Bonnyville

Funding was provided for both new schools and modernizations including:

- the new Cold Lake High School for Northern Lights School Division
- a new Francophone school in Bonnyville
- modernization of Assumption Junior/Senior High School in Cold Lake
- replacement of an elementary school in Cold Lake
- new Portage College facilities in Cold Lake
- Portage College facilities in Bonnyville

Funding was not provided for:

- Phase 3 of Assumption Junior/Senior high separate school
- numerous modernizations

(Source: Alberta Infrastructure and Transportation Capital Plan)

Student Issues

There is a concern about high workforce demand and high wages in the oil sands resulting in students leaving to work prior to finishing high school. Some companies have committed not to hire students until they have finished school. As projects move from construction to operation, students who leave school early will need to complete their basic high school education and get some post secondary education in order to compete for these new job opportunities.

A high percentage of students are bussed leading to some safety concerns as students are picked up and dropped off on rural highways that are becoming increasingly busy with oil sands-related traffic.

The lack of resources for specialized programming has been expressed as a concern (example the Métis counselling program). Drug use is also a key issue in northern schools, resulting in an increasing need for counselling services.

The educational attainment and training levels of many Aboriginal people in northern Alberta, particularly those living on reserves, fall below those of other Albertans. Consequently, northern Aboriginal Albertans do not participate in the economy at the same rate as other Albertans. This has significant social costs, both to individuals and to society as a whole. Aboriginal people want to play a role in Alberta's booming economy and help to meet the current labour shortage in the oil sands and throughout the province. Some Aboriginal groups have suggested specific initiatives to assist their

members in acquiring the necessary skills to enable them to participate more fully in oil sands development. These initiatives would need to take into account their individual circumstances and be delivered as close to their communities as possible.

Advanced Education

Keyano College

Twenty million dollars in provincial funding has been provided towards projects at Keyano College including the cost of a sports and wellness centre, computer networking upgrade, and replacement of the cooling water system. An additional $27 million has been provided to operate programs. (AEUB presentation by Government of Alberta Panel at Kearl Lake hearing)

The Keyano Master Plan requested $167 million from 2006-10 of which the following remains unfunded:

- trade and technology expansion
- library expansion
- heart of campus expansion
- student housing
- equipment replacement

Maintenance and upgrading requests by the College were unfunded as the facility condition data collected by Alberta Infrastructure and Transportation showed the College's facilities are in good repair.

In terms of operating funding, in 2006-07, Advanced Education increased the College's general operations grant by $2 million to support a living allowance for college staff. Base operating grants also increased by six percent. Human Resources and Employment also provided $1.4 million for aboriginal training and employment programs. Industry has provided some financial support for programs and plays a role in developing the workforce through projects such as internships, cooperative learning and job shadowing. The College had surplus of $5 million in June 2005.

New facilities approved for Portage College totalled $8 million in capital funding for Cold Lake and $8.7 million for Bonnyville.

Observations

The schools at Fort McMurray are currently at or near capacity. Although school districts are managing to "make do" with portables, capital funding for new schools and modernizations will be needed within the next five years. The four new schools recently announced will address a part of the expected demand; however, more schools may be needed to keep pace with the expected influx of new students as a result of new housing and increased fertility.

Much of the gap relates to future expansion needs. Planning for and allocation of funds need to begin now so that sufficient infrastructure is in place by the time the projected housing is constructed and student enrolment increases. Other options, including those

outlined in the *Schools for Tomorrow* plan, should be considered to help address the potential future infrastructure issue.
Increasing the recruitment and retention of teachers should continue to be a priority for school boards. Initiatives such as increased affordable housing, living allowances and Keyano College's program for preparing elementary school teachers should help address this serious issue.

Consideration should be given to reviewing alternatives to the current approach to providing cost of living premiums. This should be done in a coordinated manner with other service providers (e.g. health care, government employees).

Schools in Cold Lake – Bonnyville and Peace River have not experienced high growth rates and are not likely to have significantly increased student growth in the next five years as a result of proposed oil sands projects.

Efforts by Keyano College to tailor programming to the job market could result in increased enrolment and program demands in the future. However, there does not appear to be a serious gap between current needs and funding for the immediate future.

Social Services

Quality of life and availability of key social services in the community are also important factors to consider in preparing for and addressing growth in the three oil sands regions.

The Federation of Canadian Municipalities published quality of life indicators that municipalities are trying to meet or exceed. These include: affordable housing, civic engagement, community and social infrastructure, education, local economy, natural environment, personal and community health, personal financial security, and personal safety. The following review considers some of these issues as an indication of quality of life issues in the three oil sands regions.

Current Situation

Homelessness

The homeless population has increased by 24 percent since the last survey conducted in 2004 by the Regional Municipality of Wood Buffalo. A following chart shows that Fort McMurray has the highest number of homeless people per 65,000 population compared with five major Alberta cities.

Table 22: Homeless Population of Five Major Alberta Cities

City	Population	Number of homeless	Number of homeless/65,000 population
Calgary	1,000,000 (2006)	3436	223
Edmonton	712,391 (2005)	2618	239
Red Deer	82,971 (2006)	128	100
Fort McMurray	64,441 (2006)	441	441
Grande Prairie	44,631 (2005)	179	259