The Conference Board of Canada Le Conference Board du Canada

OUTLOOK AUGUST 2017

# Moving Forward.

## The Economic Impact of Rebuilding the Wood Buffalo Region's Economy

**Moving Forward: The Economic Impact of Rebuilding the Wood Buffalo Region's Economy**

Jane McIntyre

## Preface

This report provides two sets of numbers: 1) it examines the net economic impact of the May 2016 Horse River Wildfire and the subsequent rebuild of the Region's economy, and 2) it gives an economic outlook for the Wood Buffalo Region for the period 2017 to 2021. The economic outlook is the sum of the net economic impact and all non-wildfire-related activity.

To cite this report: McIntyre, Jane. *Moving Forward: The Economic Impact of Rebuilding the Wood Buffalo Region's Economy*. Ottawa: The Conference Board of Canada, 2017.



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Accessibility Officer, The Conference Board of Canada
Tel.: 613-526-3280 or 1-866-711-2262  E-mail: accessibility@conferenceboard.ca

# CONTENTS

## Acknowledgements

This study was made possible by funding provided by the Regional Municipality of Wood Buffalo, the Wood Buffalo Region's local government authority. In keeping with The Conference Board of Canada guidelines for financed research, the research design and content were determined by the Conference Board. The findings and opinions expressed herein are those of the authors. The research was conducted by Alan Arcand, Director; Jane McIntyre, Senior Economist; and Constantinos Bougas, Economist with the Conference Board's Centre for Municipal Studies. The authors thank Andrea Haley, Amanda Haitas and Natasha Hartson of the Municipality's Economic Development Branch for their helpful insights. The authors also acknowledge the feedback given by Pedro Antunes, Executive Director and Deputy Chief Economist at the Conference Board.

EXECUTIVE SUMMARY

# Moving Forward: The Economic Impact of Rebuilding the Wood Buffalo Region's Economy


## At a Glance

- The May 2016 Horse River Wildfire forced the evacuation of 88,000 people, destroyed 2,579 dwelling units (1,595 structures), and resulted in a brief shutdown of much of the Wood Buffalo Region's oil sands production.
- An already weak economy was temporarily halted by the Wildfire—real (inflation-adjusted) gross domestic product (GDP) in the Wood Buffalo Region is estimated to have declined by 14.6 per cent in 2016.
- The cleanup and rebuild will boost the Region's economy in 2017 and beyond, as $5.4 billion pours in from insurance claims and government spending.
- A rebound in oil production coupled with the rebuilding effort and a return to more normal economic activity will boost the Wood Buffalo Region's economy by 18.6 per cent in 2017—lifting employment by 5.8 per cent this year.
- On average, growth in the Wood Buffalo Region's economy will strongly outpace that of Calgary, Edmonton, and Red Deer through 2017 and 2018.

The Wildfire and evacuation had an initial significant negative impact on the regional economy.

**In May 2016, the Horse River Wildfire (the Wildfire) destroyed close to 590,000 hectares, the majority of which were within the Wood Buffalo Region (the Region). This event was the costliest natural disaster in Canadian history. Although no lives were lost as a direct result of the Wildfire, two young residents were killed in a head-on collision while fleeing the area during the mass evacuation of 88,000 residents. The Wildfire also destroyed 2,579 dwelling units (1,595 structures) along with countless valuables and possessions, and severely disrupted residents' lives. By the time the Wildfire was contained, a land area nearly the size of Prince Edward Island was burned.**

The Wildfire and evacuation had an immediate and significant negative impact on the regional economy. Economic activity in and around the Fort McMurray Urban Service Area ground to a halt, including nearby oil sands operations that shut down in May and part of June, and the Fort McMurray International Airport that closed for a month. At its peak, oil production dropped by more than 1 million barrels per day, resulting in a total loss of 47 million barrels through May and June, representing $1.4 billion in lost revenues. However, oil sands operations were not damaged by the fires and oil production returned to normal in July and August of 2016.

Nearly 2,900 firefighters came to fight the 2016 Horse River Wildfire, leading to an extra $369 million in wildfire-fighting costs for the Alberta Government. There were also immediate financial transfers to displaced residents from the Alberta Government and the Canadian Red Cross, and some local oil sands companies offered measures to help households cope with living expenses during the evacuation.

The Regional Municipality of Wood Buffalo (the Municipality) is now left with the monumental task of rebuilding neighbourhoods within the

Wood Buffalo Region, and specifically the Fort McMurray Urban Service Area. Billions of dollars will pour into the Region to fund the restoration and rebuilding of homes, businesses, and infrastructure; the purchase of vehicles, furniture, and other household items; and the restocking of business inventories. The Insurance Bureau of Canada (IBC) estimates that household and business claims resulting from the May 2016 Horse River Wildfire will reach $3.7 billion. In addition to the money spent in 2016 for fighting the wildfires and helping residents with immediate costs, we estimate that another $1.2 billion will be spent by federal, provincial, and municipal governments over the next few years to help with the cleanup and rebuilding. An extra $500 million will be spent by the private sector or by the Region's residents themselves. The total direct cost of this disaster, including private expenditures, is estimated at $5.4 billion; most of the spending will take place in the Fort McMurray Urban Service Area and surrounding areas.

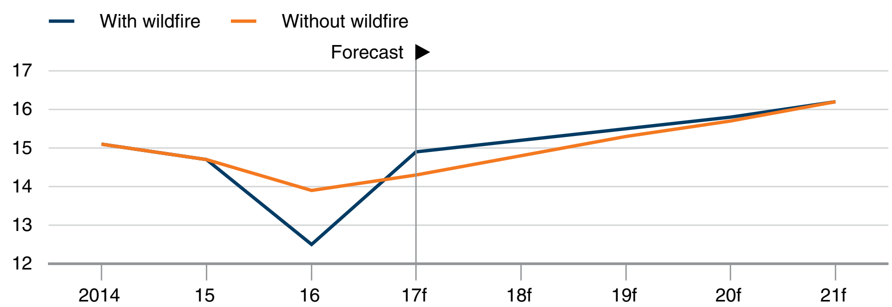
## 2016 Horse River Wildfire Had Immediate Negative Economic Impact

At the start of 2016, the Wood Buffalo Region's economy was still feeling the effects of the sharp drop in oil prices that began in late 2014. The Conference Board of Canada's economic outlook for the Region at the time—which was completed just prior to the May 2016 Horse River Wildfire—predicted that the Wood Buffalo Region's economy would be in recession in 2016 for a second consecutive year. But the Wildfire and accompanying temporary shutdown in oil sands production added dramatically to the Region's economic woes—taking nearly 10 percentage points off the projected 2016 economic growth rate.

In total, the Wood Buffalo Region's real GDP declined by an estimated 14.6 per cent in 2016—a loss of nearly $1.4 billion. The economic impact of this change can be seen in Chart 1, which shows the level of real GDP in the Wood Buffalo Region, with and without the economic impact of the May 2016 Horse River Wildfire. The economic impact of the Wildfire significantly reduced real GDP in 2016. Over the rest of the forecast horizon, real GDP is lifted above the "without wildfires" scenario and, by

2021, the economic impacts associated with the Wildfire are expected to have dissipated.

Chart 1
**Real GDP for the Wood Buffalo Region, Impact of Wildfires**
(real GDP, with/without impact of the May 2016 Horse River wildfire, 2007 $ billions)




f = forecast
Source: The Conference Board of Canada.

## Rebuilding Efforts to Boost the Economy

Oil sands production fully resumed in July 2016, and economic activity is now increasing as the cleanup is complete and the rebuild slowly gains traction. These factors on their own will produce a positive economic impact for the Region in 2017, providing a boost to real GDP and employment, especially in 2017 and 2018. In addition to the rebuilding, rising oil prices and production from new oil sands developments will add to the Wood Buffalo Region's economy over the forecast horizon.[1] Oil prices are projected to rise slowly, with the West Texas Intermediate (WTI) benchmark expected to reach US$60 by the end of 2018 and to climb to US$70 by 2021, up from an average of US$43 in 2016. At the same time, several new oil sands developments are nearing completion and will add to the Region's oil production once they come online. Combined with the rebuild, real GDP in the Wood Buffalo Region is

1 The forecast data presented in this report are based on and consistent with The Conference Board of Canada's oil industry outlook, which itself is based on analysis and projections from leading organizations such as the Canadian Association of Petroleum Producers, the National Energy Board, the Alberta Energy Regulator, and the International Energy Agency.

The boost to economic activity will drive solid job creation in the Wood Buffalo Region.

expected to increase by 18.6 per cent in 2017, before averaging more moderate growth of 2.2 per cent annually from 2018 to 2021.

The boost to economic activity will drive solid job creation in the Wood Buffalo Region. Employment growth is expected to be 5.8 per cent in 2017 and 2.1 per cent in 2018 as workers are hired to help in the rebuild. Employment growth will then average 2.9 per cent for the rest of the forecast. The unemployment rate is expected to drop from a high of 8.8 per cent in 2016 to 4.1 per cent by 2021. Many jobs will be created in the construction sector, particularly on the residential side of the market. A total of just over 3,700 housing starts are projected for the Region from 2017 to 2021, with 2,579 of these slated to replace residences destroyed during the 2016 Horse River Wildfire.

## Wood Buffalo Region's Economy to Outpace Other Alberta Regions

Other metropolitan areas in Alberta have also suffered due to low oil and natural gas prices. For instance, Calgary, Edmonton, and Red Deer were in recession in 2015 and 2016. The Wood Buffalo Region suffered by far the sharpest contraction, with real GDP declining by an annual average of 8.9 per cent over 2015 to 2016. By comparison, Red Deer's real GDP fell by an average of 2.9 per cent per year, Calgary's economy shrank by an average of 2.4 per cent per year, and Edmonton's economy declined by 2.8 per cent. Looking ahead, the Wood Buffalo regional economy will strongly outpace the economies of these comparator cities and will post average real GDP growth of 10.4 per cent per year over 2017–18. Economic growth is expected to average 2.3 per cent in both Calgary and Edmonton, and 2.0 per cent in Red Deer over 2017–18.

CHAPTER 1
# Introduction

## Chapter Summary

- This report describes the economy of the Wood Buffalo Region, including its past and future growth.
- There are two main parts to this report: the isolation of the net economic impact of the May 2016 Horse River Wildfire, and the economic outlook for the Region, which is the sum of the Wildfire's net economic impact and all non-wildfire-related activity from 2017 to 2021.

The Wildfire led to a significant decline in real GDP in 2016.

**This research report examines the economy of the Wood Buffalo Region and estimates the impact of the May 2016 Horse River Wildfire as well as the subsequent evacuation of the Fort McMurray Urban Service Area and the Rural Service Areas within the Wood Buffalo Region. Given that the Wildfire will have long-lasting economic repercussions for the Region, it is important to first determine the extent to which the Wildfire cut into economic growth in 2016, and then to forecast how much the resulting rebuild will boost future economic growth. Our forecast extends to 2021; by then, the economic impact of the Wildfire will have mostly dissipated.**

Economic activity in the Wood Buffalo Region had already been dampened by falling oil prices since 2015, but the Wildfire destroyed 2,579 homes, significantly damaged many other homes and businesses, and reduced production at some oil sands operations in the Region. This led to a significant decline in real GDP in 2016. Looking ahead, the forecast is positive, based on (1) spending on cleanup and rebuilding; (2) a rebound in oil production; and (3) increased production from the start-up of new oil sands developments in an environment of rising oil prices. This economic outlook incorporates The Conference Board of Canada's latest oil price and production projections. It also compares the Wood Buffalo regional economic outlook to that of Calgary, Edmonton, and Red Deer—municipalities that are also heavily dependent on the energy industry. The report is organized as follows:

- Chapter 2 discusses the Region's recent economic history to provide context for the current conditions and the economic outlook. We assess key variables that affected the Region's economy between 2010 and 2015, including real GDP, employment, population, income, and housing starts.
- Chapter 3 provides information on the Wildfire.

- Chapter 4 isolates and discusses the net economic impacts of the Wildfire and the rebuild efforts between 2016 and 2021.
- Chapter 5 presents the economic outlook for 2017 to 2021 and discusses forecast risks.
- Chapter 6 compares growth in the Wood Buffalo Region's key economic indicators with those of three cities in the province of Alberta: Calgary, Edmonton, and Red Deer. This comparison provides an overview of how the Region is faring relative to these cities, which were chosen because they are also largely driven by the oil and gas sector.
- Chapter 7 contains concluding comments.
- This report includes two appendices: Appendix A (Data Sources and Methodology) and Appendix B (Bibliography).

CHAPTER 2

# Historical Context

Chapter Summary

- Real GDP in the Wood Buffalo Region grew by an average of 8.5 per cent between 2010 and 2014, as strong oil prices led to significant investment in the oil sands.
- Falling oil prices led to a 3.1 per cent decline in the Region's real GDP in 2015 and a 1.7 per cent drop in employment.
- The Region's construction industry was one of the hardest-hit industries in 2015. Several oil sands construction projects were completed during that year, and low oil prices resulted in the delay or cancellation of new developments.

New oil sands developments fostered vigorous employment and population increases.

## 2010 to 2014: Boom Times

**The Wood Buffalo Region's economy grew rapidly between 2010 and 2014. Oil prices hovered around US$95 per barrel during this period, fuelling vigorous expansion and investment in the oil sands. Real GDP[1] rose at an annual average rate of 8.5 per cent between 2010 and 2014, the strongest growth among the 59 Canadian municipalities that The Conference Board of Canada covers in its Metropolitan Outlook database. Over the same period, Canada's economy grew 2.5 per cent per year on average.**

The high oil prices in the period from 2010 to 2014 encouraged significant new development in the Region's oil sands, including increased exploration, expansion of existing sites, and construction of several new ones. As a result, output in the primary and utilities industry[2]—which includes oil extraction activities and is the Region's largest economic sector—surged by an average of 9.1 per cent per year. Manufacturing output grew at an even faster pace, averaging 12.8 per cent annually over the five-year period. New oil sands developments spurred 11.5 per cent average annual growth in the Region's construction output between 2010 and 2013, although construction slipped 2.7 per cent in 2014 as some projects passed peak spending. This explosive activity fostered vigorous employment and population increases, supporting solid housing demand. Builders broke ground on more than 3,660 homes between 2010 and 2014, although the Fort McMurray

1 Gross domestic product (GDP) refers to a measure of the overall economic activity (value of goods and services produced) within a region or country. It measures economic activity that generates income through wages, profits, or the use of capital. Real GDP in this report is presented in 2007 dollars. Prices in each year are based on their 2007 levels, so the effects of inflation are eliminated. As a result, changes in real GDP reflect only changes in quantities produced.

2 The primary sector includes agriculture, mining, forestry, fishing, and trapping, whereas utilities includes firms providing electricity, gas, water services, etc. Because of the lack of more detailed information, historical and forecast data are available only for the primary and utilities sectors combined.

Boom times ended abruptly in the fourth quarter of 2014 when oil prices plummeted.

Urban Service Area's resale market[3] peaked in 2011 with 2,100 houses sold. Despite the significant addition to the stock of new homes, demand continued to outpace supply, driving up sales and prices through to 2014. The average resale price of an existing home was nearly $600,000 in 2014, compared with the Canadian average of just over $400,000 that same year.

Employment increased by 4.2 per cent per year on average from 2010 to 2014—adding nearly 14,000 new jobs to payrolls. Such gains attracted healthy migrant inflows, lifting the total population of the Region, including the shadow population,[4] to an estimated 123,700 by 2014 from just under 90,000 in 2009. With a growing labour force, the unemployment rate fell from 5.8 per cent in 2011 to 3.8 per cent in 2014.

A growing consumer goods sector and brisk population gains prompted a greater demand for services. The wholesale and retail trade sector led the way with average annual gains of 9.1 per cent over the 2011 to 2014 period. Retail spending was driven by rapid employment and wage gains. Wage growth averaged 6.1 per cent annually, lifting 2014 per capita personal income levels well above provincial and national averages. Personal income per capita in that year for the Wood Buffalo Region was $90,213, compared with an Alberta average of $56,656 and a national figure of $36,352.

## Economic Trends Post-2015: Oil Prices Falter

Boom times ended abruptly in the fourth quarter of 2014 when oil prices plummeted, undermined by a slowing world economy and a glut of new production. Over the past 15 years, and especially from 2010 to 2014, high oil prices had encouraged the development of new sources of supply. Deep offshore wells, oil sands mining, and shale oil are just a few examples. These oil extraction methods have been so successful that oil production was outpacing demand, especially in the United States

3 Resale market data from the Canadian Real Estate Association cover just the Fort McMurray Urban Service Area, not the whole Wood Buffalo Region.

4 The shadow population refers to those people who work in the Wood Buffalo Region but do not reside there permanently. They are often fly-in fly-out workers who work in the oil sands and live in work camps, hotels, motels, or shelters. It also includes any other residential shadow population.

where production increased by more than 30 per cent from 2010 to 2014. This new production cut into the market share of the Organization of Petroleum Exporting Countries (OPEC). During past periods of slumping prices, Saudi Arabia (the world's largest producer) and other OPEC members had taken steps to cut back production and stabilize prices.[5] However, in 2014, OPEC refused to reduce production, raising it instead to try to regain market share. This led to a sudden, sharp drop in the West Texas Intermediate (WTI) oil price, which fell from US$107 per barrel in mid-2014 to below US$30 per barrel in early 2016.

Oil sands production continued to climb despite the price downturn. Oil sands developments are capital intensive, featuring long lead times and high start-up costs. Projects with large sunk fixed costs such as these will continue to produce as long as the cash flow is greater than current operating expenses.[6] In addition, both Suncor[7] and Horizon[8] had higher production in 2015 because of increased reliability and efficiency gains. Still, the Region's economy was affected by layoffs at major oil companies and by significant cuts to new investment and drilling. Real GDP in the Wood Buffalo Region fell by 3.1 per cent in 2015. Output decreased by 1.9 per cent in the manufacturing sector, the primary and utilities sector contracted by 0.6 per cent, and the business services sector dropped by 3.4 per cent.

Construction took the biggest hit in 2015, with this sector contracting 20.1 per cent. Many new projects expected to take the place of those wrapping up were delayed or cancelled. These included the already delayed Shell Pierre River project (an application for this project was first filed in 2007),[9] along with a new phase of Suncor's MacKay River project.[10] In addition, the resulting weakness in residential demand unnerved the Region's builders, and housing starts dropped to 193 units in 2015, less than half of the 2014 level.

5 Kemp, "Saudi Arabia Cannot Escape Destiny as Swing Producer."

6 Hamilton, "Low Oil Prices Not Enough to Kill Off Oil Sands, Yet."

7 Suncor Energy Inc., *Fourth Quarter 2015, Report to Shareholders for the Period Ended December 31, 2015*.

8 Canadian Natural Resources Limited, *Canadian Natural Resources Limited Announces 2015 Fourth Quarter and Year End Results and 2016 Budget*.

9 Shell Canada, *Shell Canada Withdraws Regulatory Application for Pierre River Mine*.

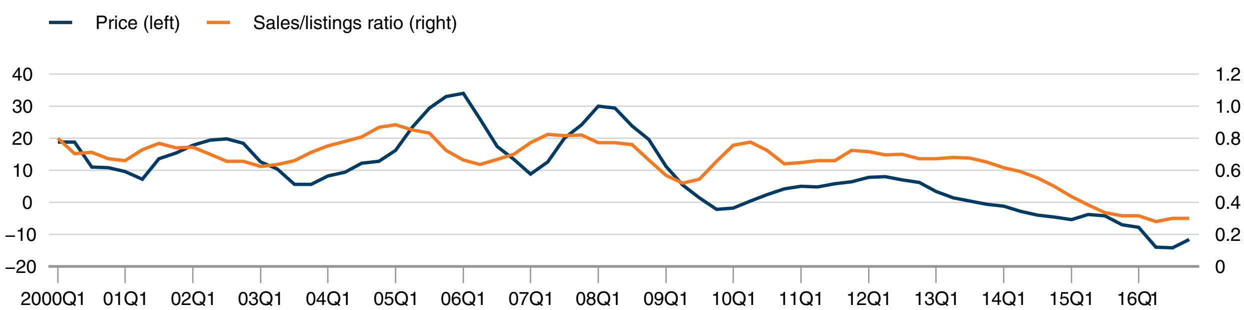
10 Tait, "Suncor Cuts 1,000 Jobs, Takes $1-Billion Out of 2015 Budget."

The Fort McMurray Urban Service Area's resale home market also felt the effects of the oil price drop and subsequent economic downturn. Sales dropped significantly in the second half of 2014, although listings, always slower to react, continued to advance. By 2015, however, the market was in full retreat. Sales fell more than 40 per cent and listings tumbled 11 per cent in 2015. This cut the sales-to-new-listings ratio to roughly 0.32, well below the 0.47 that The Conference Board of Canada estimates as marking the boundary between a balanced market and a buyers' market.[11] (See Chart 2.) As a result, the average resale price in the Fort McMurray Urban Service Area fell 6.5 per cent in 2015.

Chart 2

**Resale Housing Data, Fort McMurray Urban Service Area**

(four-quarter average, seasonally adjusted; sales/listings, ratio; price, percentage change)




Source: Canadian Real Estate Association.

Sliding oil sands activity trimmed employment in the Wood Buffalo Region by 1.7 per cent in 2015 and lowered consumer confidence. Wary consumers decreased spending; this resulted in an output decline of 3.6 per cent for the wholesale and retail trade sector and a 0.8 per cent drop in the personal services sector. The Region's unemployment rate spiked to 7.6 per cent in 2015, up from 3.8 per cent in 2014—a level previously unseen in the 2000s. Population growth also slowed to 1.1 per cent in 2015, the smallest increase since 2009.

11 The sales-to-new-listings ratio is the ratio between the number of homes sold and the number of new listings entering the market. In general terms, this ratio frequently averages around 50 per cent in a balanced market. A higher ratio signals a seller's market, while a lower ratio implies a buyer's market.

CHAPTER 3

# 2016 Horse River Wildfire

## Chapter Summary

- The May 2016 Horse River Wildfire resulted in the evacuation of 88,000 residents, halting economic activity in the Wood Buffalo Region through the month of May.
- Production was temporarily interrupted at several oil sands operations because of the Wildfire, resulting in total lost production of 47 million barrels of oil through May and June 2016, and lowering the oil companies' revenues by $1.4 billion.
- 2,579 dwelling units and an additional 23 commercial and industrial buildings were destroyed during the Wildfire.
- It is estimated that $5.4 billion will be spent province-wide on cleanup and rebuilding following the Wildfire, with most of the funds to be spent in the Wood Buffalo Region.

The 2016 Horse River Wildfire is considered Canada's costliest natural disaster.

**With oil prices continuing to fall in early 2016, it was expected that the Wood Buffalo Region's economy would contract for the second year in a row. Then, in May 2016, tragedy struck as the Horse River Wildfire engulfed the Region, forcing the evacuation of 88,000 people. No one died as a direct result of the Wildfire; two people, however, lost their lives in a car accident as residents were evacuating the Region. Close to 590,000 hectares of land were burned (an area roughly the size of Prince Edward Island), and forests, homes, personal property, and businesses were destroyed. In the end, the May 2016 Horse River Wildfire took two months to contain and is considered Canada's costliest natural disaster.**

The Wildfire and evacuation had an immediate and significant economic impact on the Wood Buffalo Region. Economic activity in and around the Fort McMurray Urban Service Area ground to a halt, residents were evacuated for weeks,[1] and the Fort McMurray International Airport was shut down for a month. The Wildfire also stopped production at several oil sands operations in the Region through May and part of June. Peak production losses, including crude bitumen and synthetic crude oil, topped more than 1 million barrels per day in May.[2] While some oil sands companies restarted production in June 2016, many of the major facilities did not resume full operations until July. Overall, oil production fell by 47 million barrels, and producers lost nearly $1.4 billion in revenues in 2016 due to the Wildfire.

At the beginning of June 2016, residents started returning to the Region, and an assessment of the damage began. The re-entry was phased

1 Evacuees began returning on June 1, 2016.

2 Antunes, Bernard, and Owusu, *The Economic Impacts of the 2016 Alberta Wildfires*.

and depended largely on the extent of damage to each neighbourhood. Table 1 details specific neighbourhood losses.

In total, 2,579 dwelling units were either destroyed or deemed unsafe—about 8 per cent of the Region's housing stock.[3] One of the hardest-hit neighbourhoods, Waterways, lost almost all its homes. Several other neighbourhoods were also heavily damaged, including the Beacon Hill neighbourhood where 70 per cent of homes were affected, and the Abasand neighbourhood where half of all homes were affected. The neighbourhoods of Waterways, Beacon Hill, and Abasand remained restricted following the re-entry of residents and businesses to the Fort McMurray Urban Service Area, thus delaying the return to standing homes and businesses in these neighbourhoods.

Table 1

**Loss of Residential and Commercial Structures and Dwelling Units in the Wood Buffalo Region**

(due to the May 2016 Horse River wildfire)

| | Dwelling units | Structures |
|---|---:|---:|
| Abasand | 1,168 | 347 |
| Beacon Hill | 476 | 447 |
| Timberlea | 379 | 273 |
| Thickwood | 187 | 150 |
| Gregoire | 4 | 4 |
| Lower Townsite | 1 | 1 |
| Waterways | 238 | 239 |
| Anzac | 12 | 19 |
| Draper | 13 | 13 |
| Parsons Creek | 10 | 10 |
| Parsons Creek Industrial | 1 | 1 |
| Saprae Creek | 86 | 86 |
| Fort McMurray International Airport | 4 | 5 |
| **Total loss** | **2,579** | **1,595** |

Source: Regional Municipality of Wood Buffalo Planning and Development Recovery Committee Task Force Dashboard.

3 Estimates at the end of April 2016 indicate that the existing housing stock within the Wood Buffalo Region was 31,240. (Canadian Home Builders Association – Alberta, *Special Report: Wood Buffalo Housing*).

Within six months of the Wildfire, the Red Cross had spent $176 million to aid those affected.

Statistics Canada's Business Registry recorded a total of 6,968 registered businesses in the Wood Buffalo Region in 2015—4,503 without employees and 2,465 with employees.[4] In 2016, this number dropped to 6,415 (4,121 without employees and 2,294 with employees), a decline of 7.9 per cent. The Business Licence List of the Regional Municipality of Wood Buffalo showed 3,900 registered businesses in April 2016. After the Wildfire, a Master Business Licence list prepared by the Municipality (as part of the Wildfire Rapid Damage Assessment) showed that 277 business properties had been affected by the Wildfire. Of these 277 businesses, 185 were deemed destroyed while the remainder were labelled restricted or unsafe.[5]

The Government of Alberta quickly stepped up to help residents who had evacuated the Region or were forced to temporarily relocate to cover their living expenses, offering $1,250 per adult and $500 per dependent. The Canadian Red Cross also announced $50 million in immediate assistance in early May, allocating $30 million within one day. By early June, the Red Cross had allocated a further $40 million to support residents as they moved back home, as well as $50 million to help meet increased demand for community services. In addition, the Canadian Red Cross also earmarked $30 million for small business financial relief, while the Regional Municipality of Wood Buffalo allocated $15 million to support small businesses. Within six months of the Wildfire, the Red Cross had spent $176 million to aid those affected.[6] Some of the oils sands operations in the Region also provided emergency funding to help with household costs. For instance, ConocoPhillips Canada offered its displaced workers $5,000 each for emergency housing and food, plus a $10,000 interest-free loan; Royal Dutch Shell PCL gave a $6,000 lump sum payment; Suncor offered interest-free loans; and Syncrude Canada Ltd. offered an advance on an existing incentive plan.[7] The Government

4 Statistics Canada's Business Registry says that businesses without employees include the self-employed, i.e., those who do not maintain an employee payroll but who may have a workforce that consists of contracted workers, family members who work in the business, or business owners. These also include employers who did not have employees in the last 12 months.

5 This list included businesses that hold municipal licences and included everything from home-based businesses to contractors, stores, hotels, and a ski hill. The businesses that were labelled restricted and unsafe could not resume full operations right away as they may have suffered some damage (for example, smoke damage) that prevented them from immediately reoccupying their space.

6 Canadian Red Cross, *One Year Donor Update, 2016 Alberta Fires.*

7 Tait and Cryderman, "Oil Sands Producers Helping Workers Affected by Fort McMurray Wildfire."

of Alberta also spent $369 million in 2016 to cover the cost of the firefighting effort—at its peak, nearly 2,900 firefighters were deployed to fight the Wildfire.[8] This included 2,197 wildland firefighters and 700 structural and wildland-urban interface firefighters.

In addition to the funds already spent, much more will be needed to pay for restoration and reconstruction of homes, businesses, and infrastructure; purchase of vehicles, furniture, and other household items; and the restocking of business inventories. In total, we estimate that $5.4 billion will be spent province-wide on the cleanup and rebuilding, with most of this being spent in the Wood Buffalo Region and, specifically, the Fort McMurray Urban Service Area. Most of this cost will be covered by the insurance industry. Estimates from the Insurance Bureau of Canada (IBC) initially expected wildfire claims of approximately $3.58 billion, or nearly 45,000 claims averaging just under $80,000 each;[9] however, IBC recently updated this amount to $3.7 billion.[10]

Just over 65 per cent of the claims will be for loss of personal property, including vehicles, at a cost of more than $2.4 billion. This will include $1.2 billion to rebuild and repair affected homes, $600 million to refurbish and buy vehicles, and $651 million to purchase services like temporary housing for displaced households and for cleaning and other services to make their homes safe.[11]

The provincial government has allocated an extra $195 million for the Wood Buffalo Region Wildfire Disaster Recovery Program.[12] In addition to what has already been spent, it is expected that governments from all levels will spend a further $1.2 billion on goods, services, and public infrastructure between 2017 and 2021 to help with the cleanup and rebuilding effort. Most of this funding is expected over 2017 and 2018. The remaining $500 million—of the $5.4 billion total cost—will be borne by homeowners and private businesses.

8 KPMG, *May 2016 Wood Buffalo Wildfire Post-Incident Assessment Report.*

9 Morgan, "A Whopping $3.58 Billion: Fort McMurray Fires the Costliest Event Ever for Canadian Insurers."

10 Insurance Bureau of Canada, *Severe Weather, Natural Disasters Cause Record Year for Insurable Damage in Canada.*

11 Antunes, Bernard, and Owusu, *The Economic Impacts of the 2016 Alberta Wildfires.*

12 Alberta Government, *2016–17 First Quarter Fiscal Update and Economic Statement.*

CHAPTER 4

# Isolating the Economic Impact of the 2016 Horse River Wildfire on the Wood Buffalo Region


Chapter Summary

- This chapter isolates the net economic impact of the Wildfire on the Wood Buffalo Region's economy.
- The Wildfire shaved nearly $1.4 billion from the Wood Buffalo Region's real GDP in 2016, equivalent to 9.9 per cent of the Region's economy, with the decline due largely to the forced shutdown of oil sands operations.
- The rebuild will add 3.8 per cent to the Region's real GDP in 2017 and 2.5 per cent in 2018.
- The economic activity generated by the rebuild will raise employment by 1,200 jobs annually over 2017 to 2021, with peak increases of 2,600 jobs in 2017 and 1,700 jobs in 2018.

The Wildfire cost the Wood Buffalo Region close to $1.4 billion in foregone real GDP in 2016.

**To assess the impact of the Wildfire on the economy of the Wood Buffalo Region, The Conference Board of Canada produced two forecasts for the period from 2016 to 2021—one that includes the costs of the Wildfire outlined in Chapter 3 and another that projects economic growth under the assumption that the Wildfire did not occur. Comparing these scenarios allows us to estimate the net economic impacts[1] of the Wildfire. In this chapter, we present the economic impacts of the Wildfire in isolation. Then, in Chapter 5, we present the economic outlook, which includes the sum of the Wildfire economic impacts and all non-wildfire-related activity over the 2017 to 2021 period.**

## Initial Economic Impact Is Negative

The impact of the shutdown of activity in the Region's Fort McMurray Urban Service Area, the Rural Service Areas, and the surrounding oil sands facilities led to a major negative hit to the regional economy in the short term. Table 2 isolates the net economic impact—associated solely with the Wildfires—on real GDP, broken out by sector.

1 The net economic impact measures the effects of the Wildfire in isolation on various economic indicators. For example, we measure the incremental economic impact associated with private investment directed to renovating or rebuilding structures damaged by the Wildfire. The sum of all incremental spending and lost oil sands production provides the total net economic impact of the Wildfire on the Wood Buffalo Region.

Table 2

**Net Economic Impact of the May 2016 Horse River Wildfire on the Wood Buffalo Region: Real GDP by Industry**

(2007 $ millions)

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Total GDP | –1,375.9<br>*–9.9* | 547.4<br>*3.8* | 375.3<br>*2.5* | 214.4<br>*1.4* | 87.7<br>*0.6* | 38.1<br>*0.2* |
| Goods sector | –1,495.0<br>*–13.4* | 539.4<br>*4.7* | 369.8<br>*3.1* | 211.6<br>*1.7* | 87.2<br>*0.7* | 38<br>*0.3* |
| Manufacturing | 25.2<br>*6.3* | 21.6<br>*5.2* | 6.3<br>*1.5* | 2.7<br>*0.6* | 0.2<br>*0* | 0<br>*0* |
| Construction | 117<br>*9.5* | 500<br>*39.6* | 356<br>*27.3* | 206<br>*15.7* | 87<br>*6.5* | 38<br>*2.8* |
| Primary industries and utilities | –1,637.2<br>*–17.1* | 17.8<br>*0.2* | 7.5<br>*0.1* | 2.9<br>*0* | 0<br>*0* | 0<br>*0* |
| Services sector | 119.1<br>*4.4* | 8<br>*0.3* | 5.5<br>*0.2* | 2.9<br>*0.1* | 0.5<br>*0* | 0.1<br>*0* |
| Transportation and warehousing | 0.6<br>*0.3* | 0.5<br>*0.2* | 0.3<br>*0.1* | 0.2<br>*0.1* | 0.1<br>*0.1* | 0.1<br>*0* |
| Information and cultural industries | 0.2<br>*0.3* | 0.2<br>*0.3* | 0.1<br>*0.1* | 0<br>*0.1* | 0<br>*0* | 0<br>*0* |
| Wholesale and retail trade | 1.0<br>*0.2* | 1.7<br>*0.3* | 0.7<br>*0.1* | 0.3<br>*0.1* | 0.2<br>*0* | 0<br>*0* |
| Finance, insurance, and real estate | 6.1<br>*1.0* | 1.8<br>*0.3* | 0.9<br>*0.1* | 0.4<br>*0.1* | 0.2<br>*0* | 0<br>*0* |
| Business and personal services | 19.5<br>*2.8* | 2.5<br>*0.4* | 1.1<br>*0.2* | 0.1<br>*0* | 0.1<br>*0* | 0<br>*0* |
| Public sector | 91.9<br>*15.4* | 1.2<br>*0.2* | 2.5<br>*0.4* | 1.8<br>*0.3* | 0<br>*0* | 0<br>*0* |

Shaded area represents forecast data; *italics indicate percentage change from previous year.*
Source: The Conference Board of Canada.

We estimate that the Wildfire cost the Wood Buffalo Region close to $1.4 billion in foregone real GDP in 2016, shaving 9.9 per cent from total real GDP. A boost to economic activity in many sectors was not enough to outweigh the negative hit to oil production.

The negative economic impact from the Wildfire was concentrated in the primary and utilities sector due to the forced shutdown of oil sands operations. Output in the primary and utilities sector dropped by $1.6 billion in 2016, a decline of 17.1 per cent. However, the start of cleanup operations, while much smaller, fostered additional growth in other sectors. Manufacturing and especially construction were both positively affected in 2016. By the third week of May 2016, Wood Buffalo Region stakeholders (the Government of Alberta and the Regional

The net economic impact of the Wildfire was to bolster public sector output by $91.9 million.

Municipality of Wood Buffalo) had already signed 532 contracts to repair or rebuild infrastructure, and 80 per cent of the contracts signed were with local employers from the Region.[2] Table 2 shows that the net economic impact of the Wildfire was to bolster construction sector output by $117 million in 2016.

The Wildfire added roughly $1 million in real GDP to wholesale and retail trade output in 2016 as consumers began to refurbish homes and replace vehicles. Finance, insurance, and real estate output was $6.1 million higher, while business and personal services output was boosted by $19.5 million. Some of the increases in business and personal services output were the result of spending on such personal services as hotels and restaurants by residents forced from their homes, although a much larger portion of this type of spending took place outside the Wood Buffalo Region during the evacuation.

The public sector, which includes health care, education, and public administration, saw the biggest positive economic impact among services-producing industries in 2016. While most public infrastructure (including hospitals and water treatment plants) was not destroyed, it did undergo needed restoration due to smoke damage. Governments helped remove debris and clean up as well. All told, the net economic impact of the Wildfire was to bolster public sector output by $91.9 million in 2016.

2 Alberta Government, *Fort McMurray Employers Have Received Four Out of Every Five Recovery Contracts*.

Table 3

**Key Economic Indicators With Net Economic Impacts of the May 2016 Horse River Wildfire on the Wood Buffalo Region**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total over period |
|---|---|---|---|---|---|---|---|
| Real GDP at basic prices (2007 $ millions) | –1,376 | 547 | 375 | 214 | 88 | 38 | –113 |
| | *–9.9* | *3.8* | *2.5* | *1.4* | *0.6* | *0.2* | |
| Total employment | –347 | 2,614 | 1,690 | 882 | 479 | 417 | |
| | *–0.5* | *4.0* | *2.5* | *1.3* | *0.7* | *0.6* | |
| Full-time employment | –300 | 2,326 | 1,506 | 786 | 428 | 373 | |
| | *–0.5* | *4.0* | *2.5* | *1.3* | *0.7* | *0.6* | |
| Part-time employment | –47 | 288 | 185 | 95 | 51 | 44 | |
| | *–0.5* | *4.0* | *2.5* | *1.3* | *0.7* | *0.6* | |
| Unemployment rate (percentage point difference) | –0.1 | –0.6 | –0.6 | –0.3 | –0.2 | –0.1 | |
| Average weekly wages ($ millions) | 5 | 54 | 65 | 21 | 9 | 0 | |
| | *0.2* | *2.4* | *2.7* | *0.9* | *0.3* | *0.0* | |
| Personal income per capita ($) | 16 | 2,302 | 2,068 | 2,138 | 2,111 | 2,058 | |
| | *0.0* | *2.8* | *2.4* | *2.4* | *2.4* | *2.3* | |
| Retail sales ($ millions) | 19 | 261 | 228 | 115 | 50 | 19 | 691 |
| | *0.2* | *2.8* | *2.4* | *1.2* | *0.5* | *0.2* | |
| Population | –3,960 | –2,960 | –2,260 | –960 | –310 | –30 | |
| | *–3.7* | *–2.7* | *–2.0* | *–0.8* | *–0.3* | *0.0* | |

Shaded area represents forecast data; *italics indicate percentage change from previous year.*
Source: The Conference Board of Canada.

## Rebuilding After the 2016 Horse River Wildfire to Boost the Bottom Line

From 2017 to 2021, the impact of the Wildfire on the Wood Buffalo Region's economy will be positive. Cleanup and rebuilding efforts will support the recovery. We expect that these factors will add $547 million to real GDP in 2017 and $375 million in 2018; stated differently, they will add 3.8 per cent to real GDP in 2017 and 2.5 per cent in 2018. (See Table 3.)

Table 2 showed that the biggest economic impact will be felt in the construction sector, especially in 2017 and 2018 when reconstruction is expected to peak. New home construction will increase as residents replace the 2,579 dwelling units lost in the fire. In Table 4 we see that rebuilding efforts will add an expected 793 housing starts to construction activity in 2017 and 802 in 2018. Renovations and repairs will further boost construction. In total, construction output is expected to be an average of $428 million higher over 2017 and 2018 than it would have been had the Wildfire not happened.

Table 4
**Housing Indicators in the Wood Buffalo Region, Impact of the May 2016 Horse River Wildfire**

| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | Total over period |
|---|---|---|---|---|---|---|---|
| **New-home market** | | | | | | | |
| Housing starts (units) | | | | | | | |
| Single | 32 | 553 | 654 | 461 | 107 | 76 | 1,883 |
| Multiple | 16 | 240 | 148 | 125 | 107 | 60 | 696 |
| Total | 48 | 793 | 802 | 586 | 214 | 136 | 2,579 |
| Housing completions (units) | 10 | 640 | 823 | 629 | 260 | 199 | 2,561 |
| Under construction (units) | 10 | 48 | 43 | 32 | 20 | 3 | |
| **Resale market*** | | | | | | | |
| Sales of existing homes (units) | 18 | 67 | 71 | 53 | 42 | 34 | 285 |
| New listings (units) | 17 | 113 | 165 | 99 | 54 | 17 | 464 |
| Average resale home prices ($) | 5,303 | 8,754 | 7,709 | 4,699 | 2,975 | 1,842 | |
| Vacancy rates, apartments (%) | –10.5 | –13.8 | –8.4 | –0.1 | 3.4 | 7.7 | |
| Average rent, 2-bdr. units ($) | –257.0 | –225.4 | –204.7 | –191.7 | –195.8 | –211.0 | |

*includes: single-family detached homes, duplexes, townhouses, apartment/condominiums, and mobile homes with land
Shaded area represents forecast data.
Source: The Conference Board of Canada.

The resale housing market should also receive a boost as it is anticipated that some residents whose homes were destroyed in the fire may purchase a resale unit rather than rebuilding. Increased activity in the Region may also raise resale demand. Existing home sales are projected to be 69 units higher on average in 2017 to 2018. Meanwhile, the vacancy rate for apartments will be lower in 2017 and 2018 as displaced homeowners seek temporary housing.

On the services side, the wholesale and retail trade sector is estimated to be $1.7 million higher in 2017 and $0.7 million higher in 2018 because of the Wildfire. (See Table 2.) This is due to the incremental increase in spending to replace fire-damaged household items including furniture, cars, and other goods. It also reflects Wildfire-spurred gains in employment and population growth as well.

The rebuild will have a positive impact on the regional job market. The rebuild should create an additional 2,600 jobs in 2017 and 1,700 positions in 2018. Over the entire five-year forecast from 2017 to 2021, employment is expected to be higher by an average of 1,200 jobs annually. (See Table 3.)

## What Does GDP Measure?

GDP measures economic activity that generates income through wages, profits, or the use of capital. It does not directly measure the losses in wealth or in assets such as homes and vehicles. Nor does it measure the direct hit to infrastructure or private capital. If, for example, a Wood Buffalo retail store was destroyed in the fire, the loss in value of that store would not be directly captured in the GDP numbers. However, going forward, the loss of the store's business operations, wages paid, and profits earned would be captured in the data and would subtract from GDP. On the other hand, if the store is rebuilt, the construction effort would add to economic activity.

While rebuilding and replacing lost assets will generate economic activity, this does not suggest that residents of the Wood Buffalo Region or Canadians generally will be better off economically. The funds put toward replacing lost capital will leave many households with financial and other losses. Provincial and federal governments will also accumulate more debt and the insurance industry will be left with the challenge of absorbing the costliest natural disaster in Canadian history.

CHAPTER 5

# Economic Outlook for Wood Buffalo

## Chapter Summary

- This chapter presents the economic outlook for the Wood Buffalo Region that includes the net economic impact of the Wildfire and all non-wildfire-related activity over 2017 to 2021.
- The rebuild following the 2016 Horse River Wildfire plus rising oil prices and the start of new oil sands operations will help raise real GDP by 18.6 per cent in the Wood Buffalo Region in 2017.
- Total housing starts, including the average annual 800 housing starts expected from the rebuild, will average 959 units per year over 2017 and 2018.
- Increased activity in the construction sector will contribute to a 5.8 per cent rise in employment in 2017.
- By 2021, the economic impacts associated with the Wildfire are expected to have dissipated.

Growth in the primary and utilities sector reflects optimism that oil prices have troughed.

## Renewed Growth Moving Forward

**This chapter presents the economic outlook for the Wood Buffalo Region. The outlook includes the sum of the Wildfire net economic impacts and all non-wildfire-related activity over the 2017 to 2021 period.**

Following two years of recession, we expect the Wood Buffalo Region's economy to rebound in 2017. Oil sands producers affected by the wildfires are back at full production, additional capacity has come online, and oil prices have posted a modest rebound from last year.[1] Moreover, the Region is benefiting from billions in additional spending for household durables and rebuilding. Low oil prices and production losses associated with the Wildfire led to a cumulative drop in real GDP of nearly 18 per cent over 2015–16. The current outlook is for real GDP to increase 18.6 per cent in 2017 and 2.1 per cent in 2018. Table 5 provides forecast details for real GDP by industry through to 2021.

The primary and utilities sector is forecast to post one of the biggest output increases, 24.6 per cent, in 2017. While much of this growth is the result of the return to previous levels of production following the temporary shutdowns during the Wildfire, it also reflects optimism that oil prices have troughed. Indeed, oil prices have recovered somewhat from their February 2016 lows, trading above US$50 per barrel during the first quarter of 2017. The increase followed OPEC meetings last November and December, which resulted in an agreement by 24 OPEC and non-OPEC countries to cut overall production by 1.8 million barrels per day. The Conference Board of Canada expects the West Texas Intermediate (WTI) oil price to average US$54 in 2017—an increase of US$11 over 2016. Energy sector strengthening is projected to continue thereafter, helping the WTI price to edge up slowly over the forecast horizon, averaging above US$70 by 2021.

1 The forecast data presented in this report are based on, and consistent with, The Conference Board of Canada's oil industry outlook, which is itself based on analysis and projections from leading organizations such as the Canadian Association of Petroleum Producers, the National Energy Board, the Alberta Energy Regulator, and the International Energy Agency.

Table 5

**Real GDP by Industry, Actual and Forecast (2017–21), for the Wood Buffalo Region**

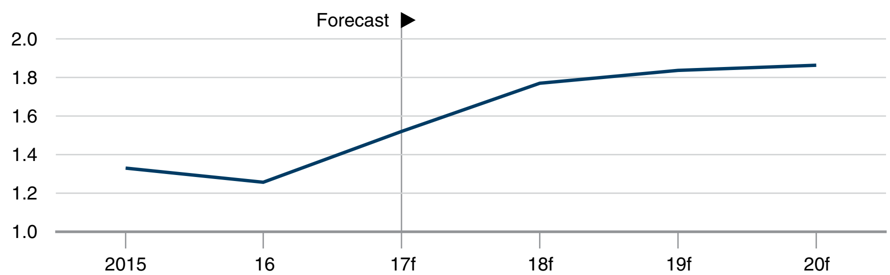
(GDP, 2007 $ millions)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total GDP | 11,106.5 | 12,223.9 | 12,972.0 | 13,984.2 | 15,138.2 | 14,670.2 | 12,528.5 | 14,864.0 | 15,181.8 | 15,492.0 | 15,799.2 | 16,243.1 |
| | *10.1* | *10.1* | *6.1* | *7.8* | *8.3* | *−3.1* | *−14.6* | *18.6* | *2.1* | *2.0* | *2.0* | *2.8* |
| Goods sector | 8,916.6 | 9,852.1 | 10,454.8 | 11,345.8 | 12,372.1 | 11,906.0 | 9,695.2 | 12,069.6 | 12,309.8 | 12,531.5 | 12,747.1 | 13,087.7 |
| | *11.5* | *10.5* | *6.1* | *8.5* | *9.0* | *−3.8* | *−18.6* | *24.5* | *2.0* | *1.8* | *1.7* | *2.7* |
| Manufacturing | 278.8 | 335.5 | 360.4 | 394.3 | 429.8 | 421.7 | 424.6 | 437.6 | 436.3 | 448.8 | 459.8 | 475.9 |
| | *17.6* | *20.3* | *7.4* | *9.4* | *9.0* | *−1.9* | *0.7* | *3.0* | *−0.3* | *2.9* | *2.5* | *3.5* |
| Construction | 1,549.6 | 1,666.8 | 1,839.3 | 2,037.0 | 1,981.0 | 1,583.8 | 1,346.9 | 1,761.7 | 1,658.2 | 1,518.3 | 1,425.5 | 1,415.1 |
| | *17.4* | *7.6* | *10.4* | *10.7* | *−2.7* | *−20.1* | *−15.0* | *30.8* | *−5.9* | *−8.4* | *−6.1* | *−0.7* |
| Primary industries and utilities | 7,088.3 | 7,849.9 | 8,255.2 | 8,914.5 | 9,961.3 | 9,900.4 | 7,923.7 | 9,870.3 | 10,215.3 | 10,564.4 | 10,861.7 | 11,196.7 |
| | *10.0* | *10.7* | *5.2* | *8.0* | *11.7* | *−0.6* | *−20.0* | *24.6* | *3.5* | *3.4* | *2.8* | *3.1* |
| Services sector | 2,189.9 | 2,371.8 | 2,517.2 | 2,638.4 | 2,766.1 | 2,764.2 | 2,833.2 | 2,794.4 | 2,872.0 | 2,960.5 | 3,052.2 | 3,155.4 |
| | *4.8* | *8.3* | *6.1* | *4.8* | *4.8* | *−0.1* | *2.5* | *−1.4* | *2.8* | *3.1* | *3.1* | *3.4* |
| Transportation and warehousing | 184.0 | 197.2 | 205.8 | 210.4 | 220.2 | 221.9 | 220.0 | 224.8 | 231.0 | 238.3 | 244.7 | 252.4 |
| | *5.0* | *7.2* | *4.4* | *2.2* | *4.7* | *0.7* | *−0.8* | *2.2* | *2.7* | *3.2* | *2.7* | *3.1* |
| Information and cultural industries | 59.8 | 60.9 | 61.3 | 62.2 | 63.3 | 63.9 | 67.4 | 67.3 | 68.7 | 70.0 | 71.6 | 73.3 |
| | *3.6* | *1.8* | *0.7* | *1.5* | *1.8* | *1.0* | *5.4* | *−0.2* | *2.2* | *1.9* | *2.2* | *2.5* |
| Wholesale and retail trade | 380.8 | 437.7 | 472.9 | 503.1 | 544.2 | 524.8 | 507.5 | 519.0 | 534.1 | 550.1 | 568.0 | 588.3 |
| | *8.2* | *14.9* | *8.0* | *6.4* | *8.2* | *−3.6* | *−3.3* | *2.3* | *2.9* | *3.0* | *3.3* | *3.6* |
| Finance, insurance, and real estate | 541.7 | 567.0 | 584.7 | 610.1 | 628.4 | 639.1 | 635.9 | 657.2 | 674.9 | 694.3 | 715.4 | 738.0 |
| | *5.0* | *4.7* | *3.1* | *4.3* | *3.0* | *1.7* | *−0.5* | *3.4* | *2.7* | *2.9* | *3.0* | *3.2* |
| Business services | 360.3 | 400.3 | 433.1 | 448.2 | 462.2 | 446.6 | 445.1 | 443.7 | 456.7 | 472.3 | 488.5 | 504.6 |
| | *2.0* | *11.1* | *8.2* | *3.5* | *3.1* | *−3.4* | *−0.3* | *−0.3* | *2.9* | *3.4* | *3.4* | *3.3* |
| Personal services | 210.0 | 226.3 | 242.9 | 255.7 | 268.6 | 266.4 | 267.4 | 267.5 | 272.8 | 280.6 | 289.8 | 300.3 |
| | *1.1* | *7.8* | *7.3* | *5.3* | *5.0* | *−0.8* | *0.4* | *0.0* | *2.0* | *2.9* | *3.3* | *3.6* |
| Non-commercial services | 245.3 | 254.5 | 267.8 | 278.1 | 289.7 | 297.3 | 326.9 | 306.8 | 312.7 | 321.8 | 332.1 | 343.6 |
| | *2.6* | *3.7* | *5.2* | *3.9* | *4.2* | *2.6* | *10.0* | *−6.1* | *1.9* | *2.9* | *3.2* | *3.5* |
| Public administration | 208.0 | 227.9 | 248.8 | 270.6 | 289.4 | 304.3 | 363.1 | 308.1 | 321.0 | 333.2 | 342.1 | 354.8 |
| | *9.6* | *9.6* | *9.1* | *8.8* | *7.0* | *5.1* | *19.3* | *−15.1* | *4.2* | *3.8* | *2.7* | *3.7* |

Shaded area represents forecast data; *italics indicate percentage change from previous year.*
Source: The Conference Board of Canada.

The Wood Buffalo Region will also see new production start at several oil sands developments currently near completion. Chart 3 shows oil production from 2015 to 2021 for oil sands operations in the Wood Buffalo Region. The data from 2015 to 2016 are from the Alberta Energy Regulator, while the data from 2017 to 2021 are projections by The Conference Board of Canada. The projected increase in bitumen production in 2017 will come from several sources including the Fort Hills mine, the Dover Commercial project, and the Cenovus Christina Lake development. These projects will contribute to a 2017 production gain of more than 242,000 b/d (barrels per day). Additional production increases are anticipated over the rest of the medium term. As such, from 2018 onward, output growth in the primary and utilities sector will average 3.2 per cent per year.

Chart 3
**Bitumen Production, Wood Buffalo Region**
(barrels per day, millions*)




f = forecast
*2015 actual, 2016 estimate, 2017–21 forecast
Sources: Alberta Energy Regulator; The Conference Board of Canada.

The construction sector is expecting a record 30.8 per cent growth in 2017—bolstered by strong new home construction. Housing starts should reach 901 units in 2017, which includes the additional 793 starts attributable to the rebuild. Starts will then average 940 units per year over 2018 to 2019, before slowing to 453 units by 2021. (See Table 7.) In total, 3,700 homes will be added to the Region over the next five years, including 2,579 dwelling units to replace those lost in the Wildfire.

The resale housing market, which currently signals a buyers' market, should see some increased activity by residents who choose to buy rather than rebuild in 2017. While sales and listings will both bounce back somewhat from the 2016 downturn, they will likely do so at similar rates. This implies little change in the sales-to-new-listings ratio, thereby maintaining a buyers' market. Accordingly, prices are expected to rebound but only by a modest 2 per cent. We foresee persistently modest sales growth in subsequent years, capped by a 2.4 per cent gain by 2021; as a result, sales volumes will remain, throughout our forecast, lower than their 2011 peak of 2,094 units.

Across the services sector, the biggest gain will be in the finance, insurance, and real estate sector, where output is expected to grow by 3.4 per cent in 2017. Wholesale and retail trade will post the next largest increase at 2.3 per cent. Both sectors are being boosted by the increased activity related to the rebuild.

Table 6

**Population of the Wood Buffalo Region, Actual and Forecast (2017–21)**

(000s)

| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| Population | 125.0 | 103.9 | 105.0 | 110.1 | 113.1 | 119.4 | 123.5 |
| | *1.1* | *–16.9* | *1.1* | *4.9* | *2.7* | *5.6* | *3.4* |
| Permanent population | 84.2 | 77.8 | 78.9 | 82.9 | 83.3 | 87.7 | 88.7 |
| | *3.0* | *–7.6* | *1.5* | *5.1* | *0.5* | *5.3* | *1.1* |
| Urban permanent population | 80.4 | 74.2 | 75.5 | 79.2 | 79.6 | 83.8 | 84.7 |
| | *3.4* | *–7.7* | *1.8* | *4.9* | *0.5* | *5.3* | *1.1* |
| Rural permanent population | 3.8 | 3.6 | 3.4 | 3.7 | 3.7 | 3.9 | 4.0 |
| | *–2.8* | *–5.6* | *–4.5* | *8.7* | *–0.3* | *6.5* | *1.3* |
| Shadow population | 40.8 | 26.1 | 26.1 | 27.2 | 29.8 | 31.7 | 34.8 |
| | *–2.6* | *–36.1* | *0.0* | *4.3* | *9.6* | *6.4* | *9.7* |

Shaded area represents forecast data; *italics indicate percentage change from previous year.*
Sources: Alberta Government; Regional Municipality of Wood Buffalo, Census 2015; The Conference Board of Canada.

Table 6 shows that population growth in the Wood Buffalo Region is forecast to remain modest in 2017 at 1.1 per cent, as the shadow population falls due to the completion of construction of some oils sands projects.[2] The permanent population is expected to grow by 1.5 per cent in 2017, with a slightly higher 1.8 per cent increase in the urban permanent population. However, although population growth is projected to average a much stronger 4.1 per cent annually between 2018 and 2021, it will still remain below its 2015 peak of 125,000 at the end of the forecast (2021). Growth in the permanent population will be moderate over the next four years (2018–21), with the urban service area averaging gains of 3.0 per cent per year and the rural area population increasing by 4.1 per cent on an average annual basis. Growth in the shadow

2 The Regional Municipality of Wood Buffalo includes the residential urban and rural shadow population numbers in its most recent population projections. As a result, the definition of shadow population in this report includes those living in work camps, hotels, motels, shelters, and any other residential shadow population that could have been missed by the urban and rural projections. (See Appendix A: Data Sources and Methodology.)

population is expected to be stronger over the 2018–21 period, as new oil sands projects bring some workers back to the Region. The shadow population is anticipated to reach 34,800 by 2021, suggesting that more than 60 per cent of the loss in the shadow population over the past couple of years will have returned by the end of the forecast period.

Total employment in the Wood Buffalo Region is forecast to rise by 5.8 per cent in 2017 and 2.1 per cent in 2018. (See Table 7.) In total, 11,300 jobs will be created in the Wood Buffalo economy from 2017 to 2021. Employment gains will cut the unemployment rate through the medium term; after reaching 8.8 per cent last year, the rate is expected to slip to 6.3 per cent in 2017 and fall to 4.1 per cent by 2021. Average weekly wages and personal income per capita are projected to post moderate gains in 2017, 2.4 per cent and 2.7 per cent, respectively, thanks to increased demand for workers.

Table 7
**Key Economic Indicators for the Wood Buffalo Region, Actual and Forecast (2017–21)**
(GDP, 2007 $ millions)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Real GDP at basic prices (2007 $ millions) | 11,106.5<br>*10.1* | 12,223.9<br>*10.1* | 12,972.0<br>*6.1* | 13,984.2<br>*7.8* | 15,138.2<br>*8.3* | 14,670.2<br>*–3.1* | 12,528.5<br>*–14.6* | 14,864.0<br>*18.6* | 15,181.8<br>*2.1* | 15,492.0<br>*2.0* | 15,799.2<br>*2.0* | 16,243.1<br>*2.8* |
| Total employment (000s) | 64.5<br>*6.4* | 68.4<br>*6.0* | 69.6<br>*1.8* | 71.9<br>*3.2* | 74.4<br>*3.6* | 73.2<br>*–1.7* | 63.9<br>*–12.7* | 67.6<br>*5.8* | 69.1<br>*2.1* | 71.1<br>*3.0* | 73.0<br>*2.7* | 75.2<br>*2.9* |
| Full-time employment (000s) | 56.9<br>*7.3* | 61.1<br>*7.4* | 61.8<br>*1.1* | 64.5<br>*4.3* | 66.5<br>*3.2* | 65.0<br>*–2.2* | 55.2<br>*–15.1* | 60.2<br>*9.0* | 61.5<br>*2.2* | 63.4<br>*3.1* | 65.2<br>*2.9* | 67.2<br>*3.0* |
| Part-time employment (000s) | 7.6<br>*0.2* | 7.3<br>*–4.2* | 7.8<br>*7.6* | 7.4<br>*–5.1* | 7.9<br>*6.6* | 8.2<br>*3.0* | 8.7<br>*6.4* | 7.5<br>*–14.1* | 7.5<br>*1.1* | 7.7<br>*1.9* | 7.8<br>*1.7* | 8.0<br>*1.9* |
| Unemployment rate | 4.8 | 5.8 | 4.8 | 3.1 | 3.8 | 7.6 | 8.8 | 6.3 | 4.7 | 4.4 | 4.1 | 4.1 |
| Average weekly wages ($) | 1,888<br>*–1.4* | 1,941<br>*2.8* | 2,035<br>*4.9* | 2,101<br>*3.2* | 2,153<br>*2.5* | 2,204<br>*2.4* | 2,302<br>*4.4* | 2,357<br>*2.4* | 2,425<br>*2.9* | 2,434<br>*0.4* | 2,474<br>*1.6* | 2,513<br>*1.5* |
| Personal income per capita ($) | 84,194<br>*7.8* | 91,819<br>*9.1* | 88,259<br>*–3.9* | 89,515<br>*1.4* | 90,213<br>*0.8* | 87,710<br>*–2.8* | 83,687<br>*–4.6* | 85,950<br>*2.7* | 86,983<br>*1.2* | 89,479<br>*2.9* | 89,681<br>*0.2* | 89,969<br>*0.3* |
| Retail sales ($ millions) | 8,647<br>*11.6* | 10,354<br>*19.7* | 11,278<br>*8.9* | 11,936<br>*5.8* | 12,403<br>*3.9* | 11,368<br>*–8.3* | 9,331<br>*–17.9* | 9,554<br>*2.4* | 9,722<br>*1.8* | 10,064<br>*3.5* | 10,228<br>*1.6* | 10,442<br>*2.1* |
| Population (000s) | 91.6<br>*1.8* | 101.2<br>*10.5* | 116.4<br>*15.0* | 121.3<br>*4.2* | 123.7<br>*1.9* | 125.0<br>*1.1* | 103.9<br>*–16.9* | 105.0<br>*1.1* | 109.0<br>*3.8* | 114.1<br>*4.7* | 118.8<br>*4.1* | 123.5<br>*3.9* |
| Housing starts (units)* | | | | | | | | | | | | |
| Single | 567 | 530 | 347 | 363 | 231 | 74 | 91 | 617 | 751 | 596 | 248 | 236 |
| Multiple | 202 | 250 | 290 | 604 | 278 | 119 | 44 | 284 | 266 | 267 | 253 | 216 |
| Total | 769 | 780 | 637 | 967 | 509 | 193 | 135 | 901 | 1017 | 863 | 500 | 453 |

*includes housing starts as part of the rebuild estimated in Table 4
Shaded area represents forecast data; *italics indicate percentage change from previous year.*
Sources: Statistics Canada; Canada Mortgage and Housing Corporation; Alberta Government; Regional Municipality of Wood Buffalo; The Conference Board of Canada.

## Risks to the Economic Outlook

Three main economic risks exist for the Wood Buffalo Region over the medium term.

**Longer Rebuild Time.** First, there is the possibility that the rebuild will drag on longer than anticipated. We have assumed that much of the rebuild will be completed by 2020. But factors such as delays in insurance claims, families' abilities to cover the uninsured portion of their loss, and the speed with which governments and other agencies can provide financial aid can affect the timing of spending. Worker shortages may also become a factor since significant labour resources will be required to facilitate the rebuild. The pace of construction will therefore hinge partially on the Region's ability to attract outside workers.

**Low Oil Prices.** A second, more fundamental risk is that oil prices remain persistently low or fall below our forecast for WTI of an average US$54 per barrel for 2017. Lower-than-forecast oil prices would cut capital investment budgets and delay expected oil sands development as well as hurting future production and exports.

**Oil Pipelines at Capacity.** A third risk surrounds the pace at which pipeline capacity is expanded, an important ingredient in oil sands growth. Even before the price of oil declined, oil sands investment had been expected to level off near the end of our medium-term outlook as pipeline capacity became a constraint. The oil export capability of the Wood Buffalo Region could eventually be boosted by two large crude oil pipeline expansion projects—Enbridge's Line 3 and Kinder Morgan's Trans Mountain pipeline. These have already received conditional federal approval but face public opposition and potential legal challenges. Work on Line 3, projected to cost $4.8 billion for the Canadian portion, will increase the line's capacity by about 370,000 barrels per day (370 kb/d), thus doubling its throughput. The $6.8-billion Trans Mountain project would add about 600 kb/d of capacity—tripling the existing pipeline's volume. A best-case scenario sees both projects operational by late 2019 or early 2020.

CHAPTER 6

# Regional Comparisons

Chapter Summary

- As with the Wood Buffalo Region, the cities of Calgary, Edmonton, and Red Deer all experienced real GDP declines over 2015 and 2016 due to weakness in the energy sector.
- With the added impact of the May 2016 Horse River Wildfire, the Wood Buffalo Region's economy posted the largest decline of the four local governments' economies, with real GDP falling by 14.6 per cent in 2016.
- However, the Wood Buffalo Region is expected to see the largest increase in real GDP among these comparator cities in 2017 as the rebuild gets under way.

## Demographic and Economic Overview

**This section compares economic, demographic, and new housing market trends in Wood Buffalo with those of three other major population centres in Alberta—Calgary, Edmonton, and Red Deer. These cities were chosen because they are also affected in varying degrees by the energy outlook.**

Table 8
**Growth in Key Economic Indicators, Wood Buffalo Region Compared With Other Cities**
(per cent)

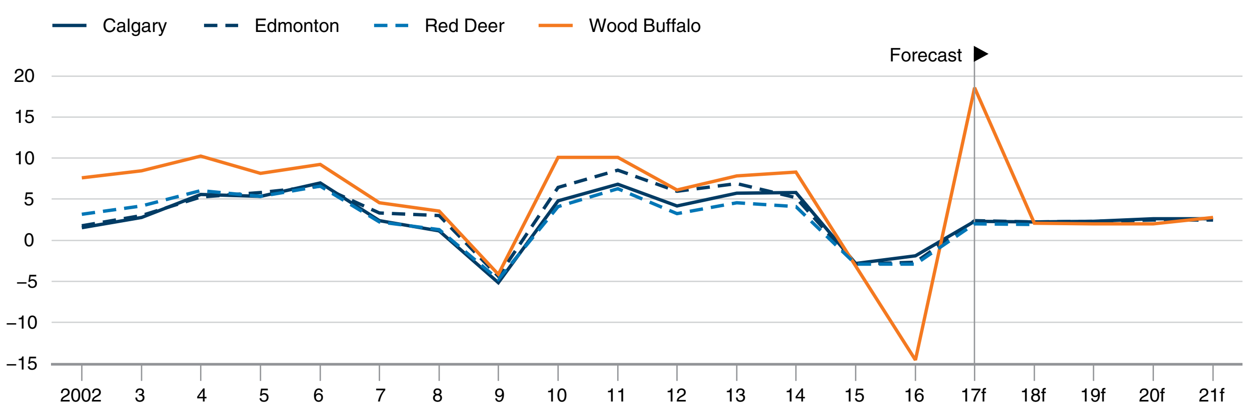
| | Wood Buffalo | | | Calgary | | | Edmonton | | | Red Deer | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pop. | GDP | Employ. | Pop. | GDP | Employ. | Pop. | GDP | Employ. | Pop. | GDP | Employ. |
| 2010 | 1.8 | 10.1 | 6.4 | 1.7 | 4.8 | –1.2 | 1.8 | 6.4 | –0.6 | 1 | 4.1 | 4.2 |
| 2011 | 10.5 | 10.1 | 6 | 2 | 6.8 | 2.7 | 1.9 | 8.5 | 6.2 | 1.3 | 6.3 | 1.5 |
| 2012 | 15 | 6.1 | 1.8 | 3.2 | 4.2 | 5 | 2.7 | 6 | 3.9 | 2.7 | 3.2 | –2.1 |
| 2013 | 4.2 | 7.8 | 3.2 | 3.8 | 5.7 | 3 | 3.5 | 6.9 | 2.9 | 2.7 | 4.5 | –2.3 |
| 2014 | 1.9 | 8.3 | 3.6 | 3.5 | 5.8 | 2.5 | 3.5 | 5.2 | 2.3 | 2.3 | 4.1 | 11.4 |
| 2015 | 1.1 | –3.1 | –1.7 | 2.3 | –2.8 | 2.1 | 2.4 | –2.9 | 2.4 | 1.7 | –2.9 | 3.2 |
| 2016 | –16.9 | –14.6 | –12.7 | 2.5 | –1.9 | –1.5 | 2.5 | –2.7 | 0 | 1.1 | –2.9 | –8.4 |
| 2017 | 1.1 | 18.6 | 5.8 | 2.1 | 2.3 | 1.1 | 2 | 2.4 | 0.8 | 1.8 | 2 | 3.5 |
| 2018 | 4.9 | 2.1 | 2.1 | 1.9 | 2.2 | 1.2 | 1.8 | 2.2 | 1.1 | 1.9 | 1.9 | 2.6 |
| 2019 | 2.7 | 2 | 3 | 2 | 2.3 | 1.7 | 1.9 | 2.3 | 1.7 | n.a. | n.a. | n.a. |
| 2020 | 5.6 | 2 | 2.7 | 2.1 | 2.6 | 1.9 | 1.9 | 2.5 | 1.7 | n.a. | n.a. | n.a. |
| 2021 | 3.4 | 2.8 | 2.9 | 2.1 | 2.6 | 2.3 | 1.9 | 2.5 | 2 | n.a. | n.a. | n.a. |

Shaded area represents forecast data.
Sources: The Conference Board of Canada; Canada Mortgage and Housing Corporation.

Table 8 compares growth in real GDP, employment, and population for the Wood Buffalo Region, Calgary, Edmonton, and Red Deer over the 2010–18 period. Economic activity in all four comparator areas weakened significantly over the last two years because of the decline in oil prices, with the Wildfire adding to the Wood Buffalo Region's economic decline last year.

Not surprisingly, the Wood Buffalo Region saw the sharpest contraction, with real GDP declining by an annual average of 8.9 per cent over 2015–16. (See Chart 4.) This was a significant change for an economy that had benefited greatly from Alberta's energy boom, with real GDP increases averaging a solid 8 per cent per year from 2011 to 2014. Although the other three metropolitan economies also performed poorly in 2015 and 2016, their downturn was not as sharp as that of the Wood Buffalo Region. Red Deer's real GDP fell by an average of 2.9 per cent per year from 2015 to 2016 following average annual increases of 4.5 per cent in the previous four years (2011–14). Calgary's economy shrank by an average of 2.4 per cent per year in 2015 and 2016 as low oil prices forced energy companies to cut staff at their head offices. This, in turn, led to cutbacks in many other industries including construction and business services, the latter of which includes professional services such as engineering, accounting, and legal services. Edmonton's economy declined by an average of 2.8 per cent per year in 2015 and 2016, after advancing by an average of 6.6 per cent per year from 2011 to 2014. The provincial capital has been partly sheltered by strong growth in the public sector over 2015 and 2016.

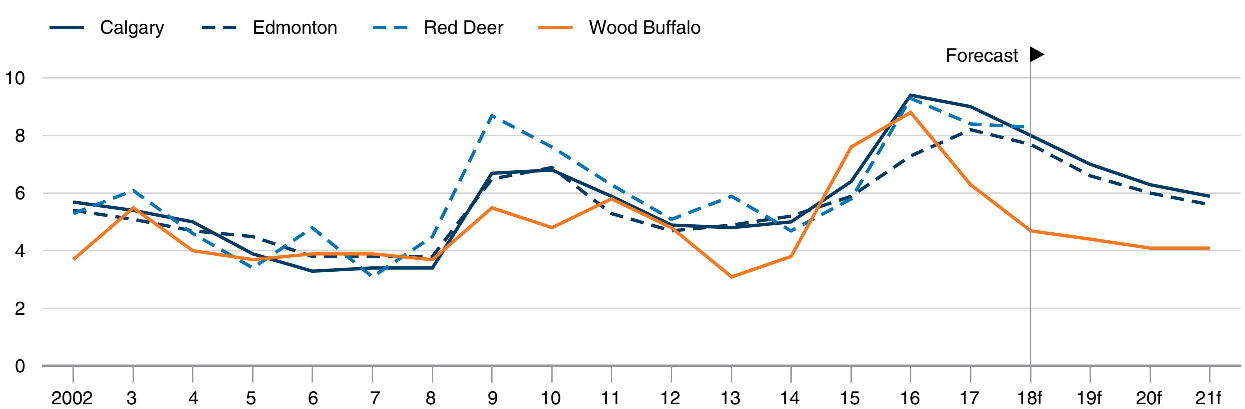
Chart 4
**GDP Growth, Wood Buffalo Region Compared With Other Cities**
(per cent)




f = forecast
Sources: Statistics Canada; The Conference Board of Canada.

Labour markets also had a bumpy ride in 2015 and 2016. On average, Red Deer and the Wood Buffalo Region had the weakest job markets of the four comparator areas considered in this report. Red Deer's employment declined sharply in 2016, down by 8.4 per cent following a 3.2 per cent increase in 2015, while employment in the Wood Buffalo Region declined by 1.7 per cent in 2015 and 12.7 per cent in 2016. As a result, the unemployment rate jumped from 4.7 per cent in 2014 to 9.3 per cent in 2016 in Red Deer, and from 3.8 per cent to 8.8 per cent over the same period in the Wood Buffalo Region. Labour markets in Calgary and Edmonton fared better from 2015 to 2016, as employment rose by an average of 0.3 per cent annually in Calgary and increased by 1.2 per cent per year in Edmonton. This marked a dramatic reversal from the 2011–14 period when annual job growth averaged 3.3 per cent in Calgary and 3.8 per cent in Edmonton. The cooling labour market pushed Calgary's unemployment rate to an estimated 9.4 per cent in 2016, the highest in 22 years. (See Chart 5.) Edmonton's unemployment rate reached 7.3 per cent in 2016, a level not seen since 1997 when it reached 7.1 per cent.

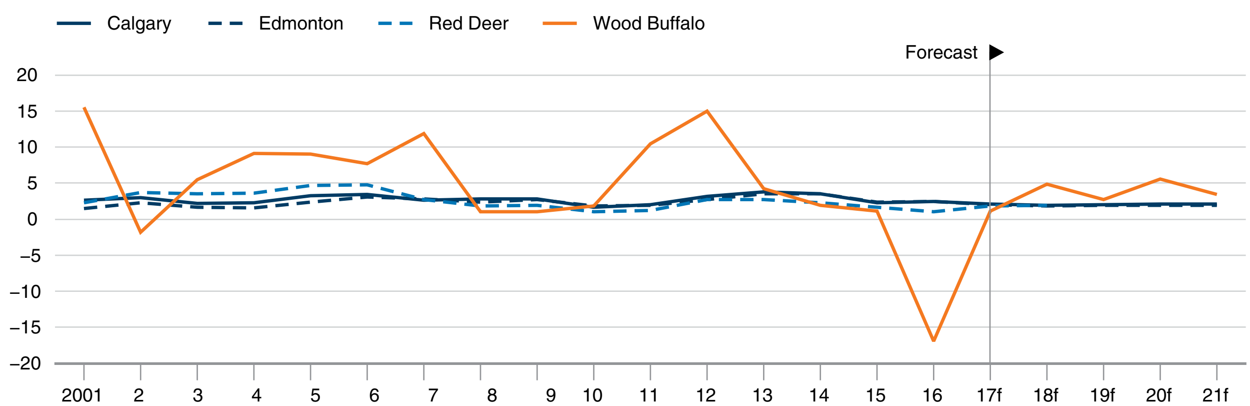
Chart 5
**Unemployment Rate, Wood Buffalo Region Compared With Other Cities**
(per cent)




f = forecast
Sources: Statistics Canada; The Conference Board of Canada.

As shown in Chart 6, decreased job opportunities reduced the four comparator municipalities' attractiveness to newcomers. Calgary's population increased by 2.5 per cent in 2016, a drop from the 3.2 per cent annual average pace recorded between 2011 and 2014. At the same time, the population of Edmonton and Red Deer advanced by 2.5 per cent and 1.1 per cent, respectively, in 2016. In comparison, between 2011 and 2014, population growth in these two areas averaged 3.0 per cent per year and 2.2 per cent per year. The Wood Buffalo Region fared the worst in 2016, as its population declined by 16.9 per cent.

Chart 6
**Population Growth, Wood Buffalo Region Compared With Other Cities**
(per cent)




f = forecast
Sources: Statistics Canada; Alberta Government; Regional Municipality of Wood Buffalo; The Conference Board of Canada.

The worst appears to be over for all four economies. As mentioned, the WTI oil price has held steady between US$45 and US$50 per barrel in recent months after hitting a low of US$26 in February 2016. All four economies are expected to strengthen in 2017 as gradual gains in oil prices continue. Real GDP growth is forecast to be strongest in the Wood Buffalo Region at 18.6 per cent, while real GDP is expected to increase by 2.3 per cent in Calgary, 2.4 per cent in Edmonton, and 2.0 per cent in Red Deer. The outlook for employment is also bright for three of these four economies. Job growth is anticipated to rebound to 5.8 per cent in the Wood Buffalo Region, 3.5 per cent in Red Deer, and

Residential markets were negatively affected by the fall in energy prices.

1.1 per cent in Calgary. The outlook for Edmonton is not as positive, as a modest 0.8 per cent increase in employment will push the unemployment rate to a 20-year high. Calgary's unemployment rate will decline in 2017 but remain elevated at 9 per cent.

## Medium Term Outlook

Our forecast for Red Deer ends in 2018. Our medium-term forecast covers the Wood Buffalo Region, Calgary, and Edmonton. Economic growth in these metropolitan areas will remain on a moderate path over the medium term, in line with gradually rising oil prices.[1] The Wood Buffalo Region is forecast to post annual average real GDP growth of 2.3 per cent from 2019 to 2021, as the rebuilding efforts wind down. The economies of Calgary and Edmonton are expected to post similar rates of growth over the medium term.

Job growth is forecast to average 2.9 per cent per year in the Wood Buffalo Region from 2019 to 2021. This compares with annual average increases of 2 per cent in Calgary and 1.8 per cent in Edmonton over the same period. The stronger job outlook for the Wood Buffalo Region stems from the fact that new oil sands projects will launch over this period, boosting job creation both directly and through spinoff effects. Some of these new workers are expected to reside in work camps, leading to an increase in the Region's shadow population. The Wood Buffalo Region's total population is forecast to increase at a strong rate of 3.9 per cent per year from 2019 to 2021. This compares with average annual growth of 2.1 per cent in Calgary and 1.9 per cent in Edmonton over the same time frame, slower than the Wood Buffalo Region's but still well above the national average of 1.0 per cent.

## Housing Market Overview

Residential markets in the Wood Buffalo Region, Red Deer, Edmonton, and Calgary were negatively affected by the fall in energy prices as demand for homes declined. Home builders reacted to the drop in

1 A medium-term outlook is not available for Red Deer.

demand. In Calgary, for example, housing starts tumbled by nearly 27 per cent over the 2015 to 2016 period, bringing them from a record 17,131 in 2014 to just 9,245 units in 2016. (See Table 9.) Unfortunately, with unemployment rates remaining high in Calgary, demand for new housing is expected to remain low in 2017. As a result, total housing starts are forecast to decrease to just 8,998 units in 2017, before rising to 10,108 units in 2018. Calgary's housing starts will continue to grow from 2019 to 2021 but will remain well below their 2014 peak even by 2021 when 11,333 units are projected to be built.

Table 9

**Housing Starts, Wood Buffalo Region Compared With Other Cities**

(starts in units; percentage change)

| | Wood Buffalo | | Calgary | | Edmonton | | Red Deer | |
|---|---|---|---|---|---|---|---|---|
| | **Level (units)** | **Percentage change** | **Level (units)** | **Percentage change** | **Level (units)** | **Percentage change** | **Level (units)** | **Percentage change** |
| 2011 | 780 | *1.4* | 9,292 | *0.3* | 9,332 | *–6.3* | 555 | *–5.1* |
| 2012 | 637 | *–18.3* | 12,841 | *38.2* | 12,837 | *37.6* | 568 | *2.3* |
| 2013 | 967 | *51.8* | 12,584 | *–2.0* | 14,689 | *14.4* | 784 | *38* |
| 2014 | 509 | *–47.4* | 17,131 | *36.1* | 13,872 | *–5.6* | 867 | *10.6* |
| 2015 | 193 | *–62.1* | 13,033 | *–23.9* | 17,050 | *22.9* | 692 | *–20.2* |
| 2016 | 135 | *–30.1* | 9,245 | *–29.1* | 10,036 | *–41.1* | 375 | *–45.8* |
| 2017 | 901 | *567.7* | 8,998 | *–2.7* | 9,837 | *–2.0* | 452 | *20.6* |
| 2018 | 1,017 | *12.8* | 10,108 | *12.3* | 10,723 | *9.0* | 518 | *14.8* |
| 2019 | 863 | *–15.1* | 10,367 | *2.6* | 11,092 | *3.4* | n.a. | *n.a.* |
| 2020 | 500 | *–42.0* | 10,947 | *5.6* | 11,736 | *5.8* | n.a. | *n.a.* |
| 2021 | 453 | *–9.5* | 11,333 | *3.5* | 12,303 | *4.8* | n.a. | *n.a.* |

Shaded area represents forecast data; *italics indicate percentage change.*
Sources: The Conference Board of Canada; Canada Mortgage and Housing Corporation.

While total housing starts in Edmonton averaged 13,556 units per year from 2011 to 2015, new housing construction advanced strongly in Edmonton in 2015. Thanks to a stable and sizable public service sector, employment growth in Edmonton took a little longer to slow compared with some other areas of the province. As a result, builders recorded a near-record 17,050 housing starts in 2015. Unfortunately, employment and consumer demand weakened in 2016. This, along with high inventories of unsold new homes, resulted in a 41 per cent decrease in housing starts from the 17,000 high in 2015 to 10,036 starts in 2016.[2] Given that employment continued to decrease in the last half of 2016, builders are expected to be cautious in 2017 as well, with housing starts forecast to decrease to 9,837 units in 2017 before heading back up in 2018 as labour market conditions improve. Although housing starts should then continue rising through to the end of the outlook, reaching 12,303 units in 2021, they will remain below the pre-recession peak.

The economic downturn hit Red Deer's housing market especially hard; builders started construction on only 375 units in 2016—a staggering 45.8 per cent decline over 2015. This comes on the heels of a 20.2 per cent drop in 2015. The demand for new homes is expected to improve over the next two years, as construction will begin on 452 new homes in 2017 and on 518 in 2018. Still, activity will remain well below the levels achieved between 2004 and 2014, when housing starts averaged 912 units per year.

Residential construction in the Wood Buffalo Region collapsed in 2015–16, as housing starts came in at only 193 units in 2015 and 135 units in 2016, far below the average 732-unit housing starts recorded from 2010 to 2014. Housing starts are, however, expected to rise to an average of 959 units in both 2017 and 2018, part of efforts to replace the 2,579 residential units that were destroyed during the devastating Wildfire. Housing starts will then begin to fall from 2019 onward as the rebuild begins to wind down. Total housing starts will slip from 863 units in 2019 to 453 units by 2021.

2 Historical housing starts for all cities come from the Canada Mortgage and Housing Corporation (CMHC).

CHAPTER 7

# Conclusion

## Chapter Summary

- The Wood Buffalo Region's economy is expected to post solid growth in 2017 following sizable declines in 2015 and 2016.
- Temporary shutdowns in the oil sands due to the Wildfire led to a $1.4-billion decline in revenue for the oil industry in 2016.
- It is expected that $5.4 billion will be spent in the Wood Buffalo Region for the cleanup and rebuild in the coming years.
- Combining Wildfire and non-wildfire-related activity, real GDP is estimated to have declined 14.6 per cent in 2016, but will rise by more than 20 per cent over 2017 and 2018 as the rebuild gets under way.
- The regional economy will generate roughly 11,300 new jobs over the next five years, helping to cut the unemployment rate from 8.8 per cent in 2016 to 4.1 per cent by 2021.
- The Wood Buffalo Region's economy is projected to post much stronger growth in 2017 and 2018 than that of three of its Alberta counterparts—Calgary, Edmonton, and Red Deer.
- By 2021, the economic impacts associated with the Wildfire are expected to have dissipated.

The Wildfire reinvestment will provide a lift to the Wood Buffalo Region's economy.

**The May 2016 Horse River Wildfire left a deep mark on the residents and businesses of the Wood Buffalo Region. By the time the Wildfire was contained in the Region, an area the size of Prince Edward Island had been burned and 2,579 homes and buildings and countless personal possessions were destroyed. The oil sands were also affected, as temporary shutdowns led to a $1.4-billion loss in revenue for the industry in 2016. Largely because of these shutdowns, the initial impact on the region's economy was negative. In isolation, the Wildfires cut output by nearly 10 per cent in the Wood Buffalo Region in 2016, resulting in a total decline in real GDP of 14.6 per cent.**

The May 2016 Horse River Wildfire is the costliest natural disaster in Canadian history. The region has now begun the process of cleaning up and rebuilding what was lost. It is expected that billions of dollars of reinvestment will take place over the 2017 to 2021 period, as structures are rebuilt, vehicles and household items are replaced, and businesses restock inventories. About $5.4 billion is forecast to be spent in the province, mostly in the Wood Buffalo Region. This includes $3.7 billion in insurance claims, $1.2 billion in government funding from all levels, and an additional $500 million that will be covered privately by residents and businesses.

Although the reinvestment will provide a lift to the Wood Buffalo Region's economy, the legacy of the Wildfire is to add to government and household debt, insurance costs, and business costs. Moreover, estimating the costs of the Wildfire on residents' health or the local environment was outside the scope of this study.

The rebuild will add significantly to economic activity in the Wood Buffalo Region, especially in 2017 and 2018. In addition, oil prices have solidified since 2016 and are expected to rise at a modest pace over the next five years. This, combined with additional production at new and expanded oil sands facilities, will contribute to the Region's strong economic performance. Overall, real GDP is forecast to increase by 18.6 per cent in 2017 and a further 2.1 per cent in 2018.

The rebuild will add significantly to job creation, helping to drive employment up by 5.8 per cent (3,700 jobs) in 2017. Over the 2017 to 2021 period, 11,300 new jobs will be added to the Wood Buffalo Region's economy, resulting in a cut to the unemployment rate from 8.8 per cent in 2016 to 4.1 per cent in 2021. Many of these jobs will be in the construction sector as the rebuild should lead to an extra 2,579 housing starts over the next five years, replacing those lost due to the Wildfire. Replacing lost dwellings will make up the majority of the 3,700 total housing starts forecast for the Region from 2017 to 2021.

The Wood Buffalo Region's bright outlook suggests that its economy will greatly outpace that of three other energy-dependent municipalities in Alberta—Calgary, Edmonton, and Red Deer—over 2017 and 2018. While real GDP in the Region is forecast to increase by an average of 10.4 per cent per year in 2017 and 2018 (18.6 per cent in 2017 and 2.1 per cent in 2018), average annual increases ranging from 2.0 to 2.3 per cent are anticipated in the other three municipalities.

APPENDIX A

# Data Sources and Methodology

This appendix documents the data sources and methodology used in constructing economic data for the Wood Buffalo Region.

The Conference Board of Canada has developed and refined a methodology to estimate economic activity by municipality. For this report, we used this methodology to create a model of and forecast for the Wood Buffalo Region economy. The Wood Buffalo Region model required data and assumptions about the provincial economy, as well as external factors such as oil prices and production, and new residential and non-residential investment intentions. It also required economic indicators that are specific to the Wood Buffalo Region, including real GDP, employment, population, income, and housing. These indicators were constructed using available data; they were employed in combination with the assumptions and external factors to produce a forecast of the Region's economy over the 2017–21 period.

The demographic outlook is an important component of the forecast. The population of the Wood Buffalo Region includes the *shadow population*—those who work but do not reside permanently in the Region. The shadow population is composed of workers from other parts of the country who come to work temporarily but return home during their time off. This population often lives in the work camps, but some workers live in the Fort McMurray Urban Service Area. It is important to include the shadow population in the model as these workers contribute to economic activity, in part, through their contribution to production and from their expenditures on goods and services while they are in the Region.

Total population, including the shadow population, was sourced from Statistics Canada's labour force survey, the Government of Alberta's official population counts, and Wood Buffalo's census numbers. Statistics Canada provides data for the permanent population, while the Government of Alberta's Department of Municipal Affairs provides both the permanent and shadow population in their annual Municipal Affairs Population Lists. Both sources provide data to 2016; however, some years are estimates if they fall in between census years. The Regional Municipality of Wood Buffalo also provides population data, including the permanent and shadow population for certain census years, the latest being 2015. The 2015 population numbers, including the shadow population, are taken from the Municipality's 2015 Census. Estimates were made for inter-census years using an average, or trend, growth pattern. Over the forecast, the Regional Municipality of Wood Buffalo's Planning and Development Department provided its most recent population projections to The Conference Board of Canada; these consisted of high- and low-growth projections for the years 2016 to 2021. The Conference Board of Canada used the Municipality's high-growth projection figures for the urban and rural permanent population projections for 2016 to 2021 in this report. The high-growth scenario was favoured over the low-growth one because it more closely aligned with the Conference Board's own projections.

Like the total population numbers, the Region's labour force and source population (population aged 15 and over)—both of which were available from Statistics Canada over history to the year 2016—were adjusted up to account for the shadow population.

Historical estimates of employment that include the shadow population were also developed. Official statistics from Statistics Canada's Labour Force Survey (LFS) are based on a household survey that asks respondents about their employment and associates that with their place of residence rather than their place of employment. Because large numbers of people commute to the Wood Buffalo Region to work, the LFS tends to significantly undercount total employment in the Region. To overcome this issue, employment was derived by using employment by place of work data (by industry) from Statistics Canada's censuses, available every five years.

While Statistics Canada no longer produces an industrial breakdown of employment for census agglomerations (CA) like the Wood Buffalo Region, total employment by CA is still available. As a result, from 2013 onward, we used data about the industrial breakdown of the wider Wood Buffalo–Cold Lake Economic Region to calculate industry data for the Wood Buffalo Region's CA.

The Conference Board of Canada has developed a methodology to build GDP estimates at the sub-provincial level, given that official time series do not currently exist. This methodology was used to estimate GDP for the Wood Buffalo Region. GDP values are posted in units of millions of 2007 dollars (real GDP, which matches Statistics Canada's base year); therefore, inflation effects are eliminated.

We obtained historical personal income data for the Wood Buffalo Region, up to the year 2014, based on an aggregation of tax returns from Statistics Canada. Labour income growth for 2015 and 2016 is estimated using employment growth by industry multiplied by national wage rates, weighted by each industry's share of total employment. Other income growth for those two same years is estimated using provincial trends. Personal income is the sum of labour income and other income. Once we had a calculation of personal income, personal income per capita was calculated as personal income divided by the population. We had also considered measuring household income as well. However, household income would be defined as housing stock divided by the population. And the residential damage resulting from the Wildfire significantly cut the housing stock last year, so a calculation of household income in 2016 would be overestimated.

The Conference Board of Canada has also developed a methodology to compute retail sales at the sub-provincial level. We employed this methodology, with one important change, to estimate retail sales figures for the Wood Buffalo Region. We adjusted our retail sales figures down to account for the fact that the shadow population resides in the Region on a part-time basis and therefore spends a portion of its wages outside the Region. We assume that half of shadow population spending leaks outside the Wood Buffalo Region.

In the housing market, the Conference Board obtained data for both the new and resale housing markets to 2016. Historical data for the new-home market are produced by the Canada Mortgage and Housing Corporation (CMHC), while resale market data were gathered from the Canadian Real Estate Association. However, while the new-housing market data are available for the entire CA, the resale housing market data cover only the Fort McMurray Urban Service Area. In the new-home market, we collected single and multiple housing starts, total housing completions, and the number of homes under construction. Meanwhile, in the resale market, we collected historical data on unit sales, average prices, and new listings. We also collected historical data on rental vacancy rates and average rents from CMHC.

Oil production data over history were available from the Alberta Energy Regulator. We added to these historical figures the production data for new oil sands projects that are scheduled to begin in the Wood Buffalo Region over the next five years, thus building a forecast production series. These data are based on company and Alberta government projections.

Statistics Canada's Business Registry provided information about the number of businesses in the Wood Buffalo Region for 2015 and 2016, including those with and without employees. The number of businesses affected by the 2016 Horse River Wildfire was provided to us by the Regional Municipality of Wood Buffalo, as presented in their Wildfire Rapid Damage Assessment.

Finally, the data used in the forecast also included historical and forecast information for Canada, Alberta, Edmonton, Calgary, and Red Deer, as well as for the oil and gas industry. For the most part, these data were gathered from The Conference Board of Canada's existing Metropolitan Outlook databases. However, we produced an updated forecast for Red Deer over the course of this study, since this forecast had not been updated recently.

APPENDIX B
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