

## Health<sup>3</sup>

- Chronic conditions (e.g. arthritis, diabetes, asthma, high blood pressure) are similar to provincial averages
- Leisure-time physical activity rates, perceived mental health, and self-reported life stress are similar to provincial averages
- Higher incidence of smoking, drinking, poor diets; access to adequate care a challenge

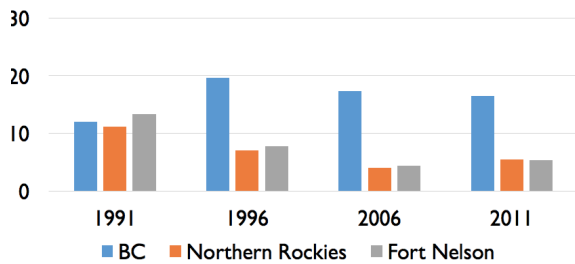


Very good/excellent perceived health (%)  
 Overweight or obese (%)  
 Current daily smoker (%)  
 Heavy drinking (%)  
 Consuming fruit/veg > 5 times daily (%)  
 Has Regular Doctor (%)

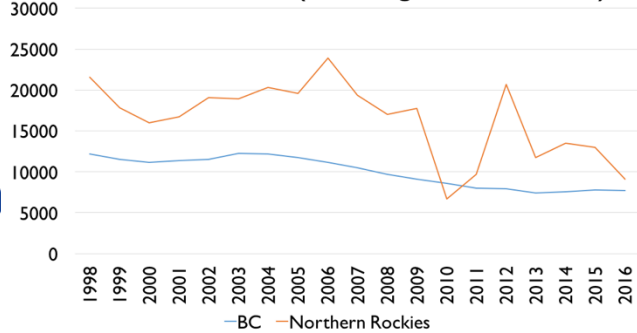
	2001		2009		2013	
	Northeast	BC	Northeast	BC	Northeast	BC
Very good/excellent perceived health (%)	55.4	57.2	49	56.9	55.6	59.9
Overweight or obese (%)	59.6	47.6	60.9	45.1	60.8	46.6
Current daily smoker (%)	23.5	18.3	28.3	18.6	21.3	11.1
Heavy drinking (%)	24	19.7	17	15.5	22.6	16.3
Consuming fruit/veg > 5 times daily (%)	35.1	39.1	34.6	42.4	34.6	41.3
Has Regular Doctor (%)	87.6	89.1	88	86.8	83.6	86

## Social Services<sup>1,2</sup> and Crime<sup>17</sup>

### % Prevalence of Before Tax Low Income Individuals, 1991-2011



### Crime Rate per 1,000,000 for all Criminal Code Violations (excluding traffic violations)



“In the past, especially when industry was really active, we were able to see some of these corporations and companies step-up and really help the non-profit sector. We are not seeing this anymore. What we’re seeing is an increase in vulnerable populations in Fort Nelson and a higher demand for services, and shrinking opportunities for funding” (Roper 2017).<sup>18</sup>

### About this project

CIRC—with funding from the Real Estate Foundation of BC—is focused on broad and inclusive public engagement. This project seeks to build new tools to support regional cumulative impacts assessment and enhance natural resource decision-making.

### Contact

Chris Buse, PhD

E: [chris.buse@unbc.ca](mailto:chris.buse@unbc.ca)  
 W: [www.unbc.ca/cumulative-impacts](http://www.unbc.ca/cumulative-impacts)

P: +1.250.960.5778

Add a project to our living library of resources:

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### About the CIRC

The CIRC is a pan-UNBC initiative and a platform for original research and community dialogue on the cumulative environmental, community and health impacts of resource development. We are located in Prince George.

# Exploring the Cumulative Impacts of Resource Development A Regional Profile of the Northern Rockies Regional Municipality (NRRM)

## About this document

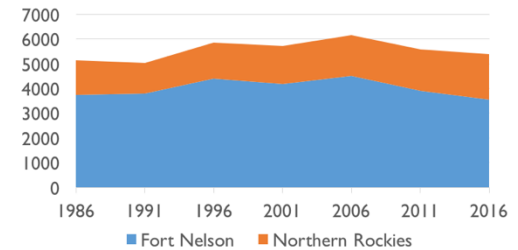
Resource development is a primary driver of local economies and social development in northern communities across British Columbia. However, there is an increasing need to understand the long-term positive and negative impacts of development activities for environments, communities and human health. This regional profile integrates a variety of data sources to provide a ‘snapshot’ of change in the NRRM over time. While this is one tool to understand cumulative impacts of development activities, the perspectives and lived experiences of communities are an equally important source of information. UNBC’s Cumulative Impacts Research Consortium (CIRC) hopes this document, and the stories it elicits, will inform a collective conversation on the following question:

**“How do we make better land-use decisions that account for long-term impacts to environmental, community and health values?”**



## Regional Demographics<sup>1-2</sup>

### NRRM Census Population Grew 4.9% since 1986<sup>1,2</sup>



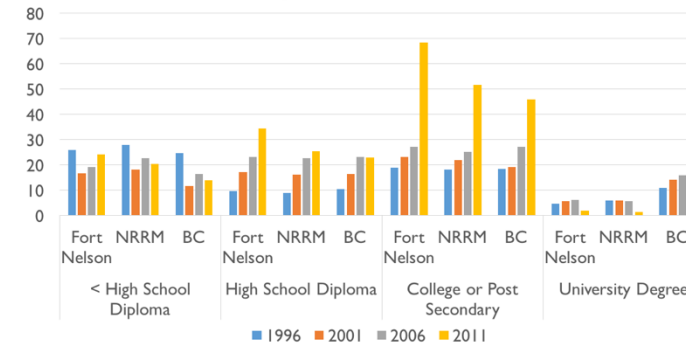
- Fort Nelson experienced an overall increase in population until 2006
- NRRM is the largest of BC’s regions but the least populated with 1.6% of provincial population

### % of Census Population Identifying as Indigenous, Aboriginal, First Nations or Metis<sup>1,2</sup>

Year	Northern Rockies	Fort Nelson	BC
1996	15.2	8.8	3.7
2001	18.4	11.2	4.4
2006	19.4	14.2	4.8
2011	22.2	13.9	5.3

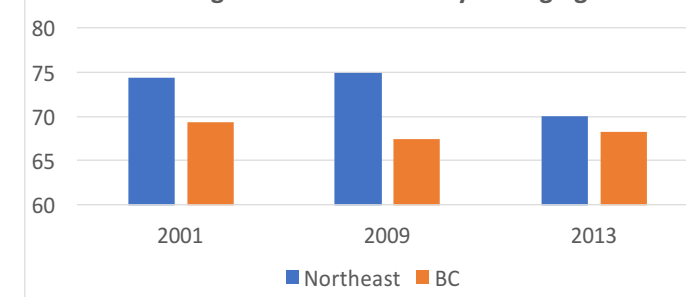
Treaty 8 was signed in 1899, encompasses 840,000 sq. km, and is home to 8 BC First Nations each with a rich cultural heritage.

### Fort Nelson and NRRM Census Populations by Education Compared to BC, 1991-2011



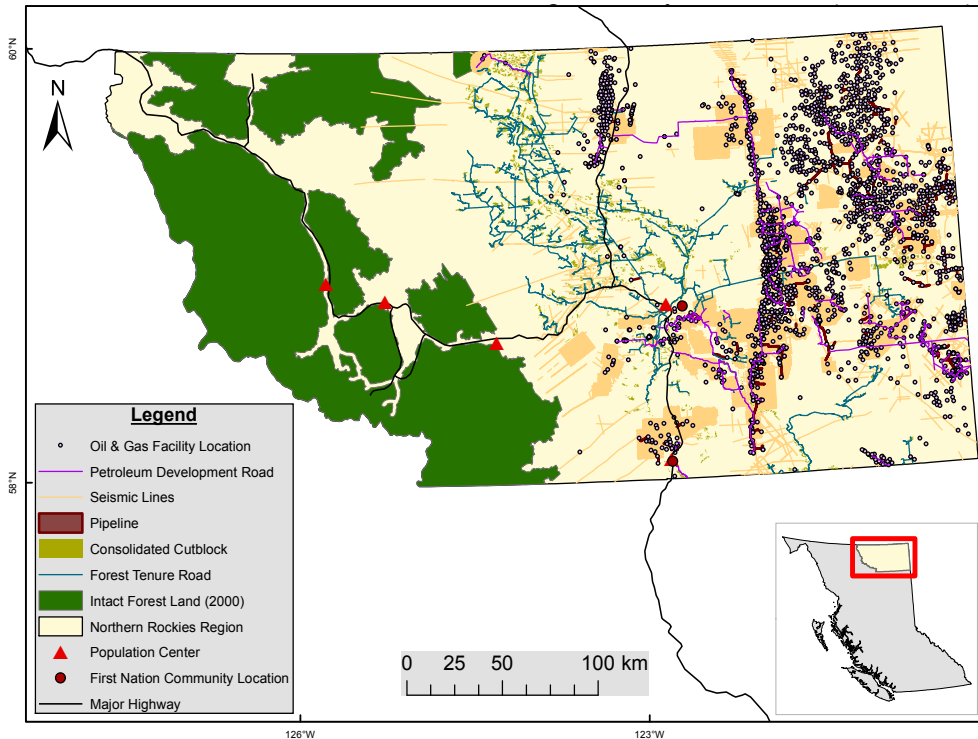
- Fort Nelson and the NRRM have consistently increased the proportion of people with a high school diploma and college or post-secondary education

### % of people indicating a 'strong' or 'somewhat strong' sense of community belonging



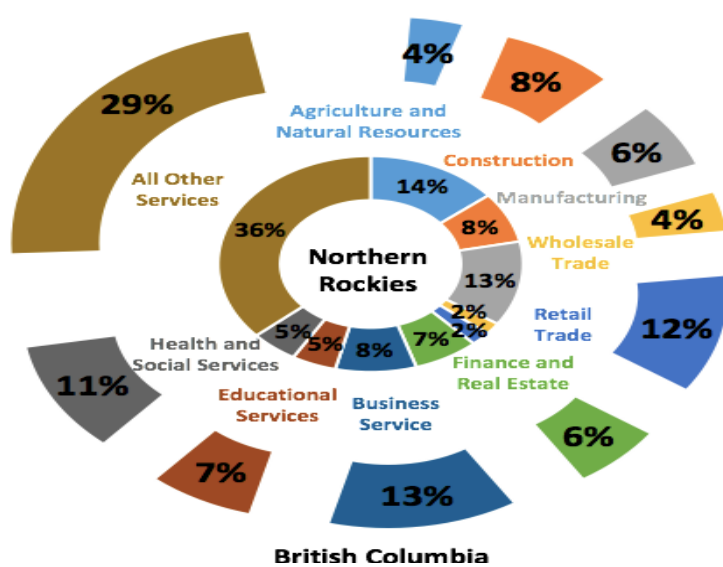
Residents of the Northern Interior have a strong sense of connection and belonging to their communities.<sup>3</sup>

## Industrial Activities in NRRM (1996-2006)<sup>4</sup>



“How government and the ministry will use the Cumulative Effects Framework assessments in the decision-making process for future natural resource development proposals has not yet been determined. This is concerning because if the assessments are to be of value, they must inform and support decisions about if and how development should proceed” (BC Auditor General 2015).<sup>13</sup>

## Workforce Profile (Aged 15+), 2011<sup>1-2</sup>



## Climate Change (2050)<sup>5,6</sup>

- Rate of warming in NRRM expected to be higher than BC and includes: increased precipitation, especially during the winter months; increased snowfall during winter, but overall reduction in spring snowpack
- Per capita GHG emissions grew by 14% between 2007-2010

## Air Quality<sup>7</sup>

- Data is limited on air quality due to lack of provincial air-monitoring stations in the NRRM

## Water Quality<sup>8</sup>

- NRRM has areas with high vulnerability to shallow ground water contamination

## Wildlife<sup>9-11</sup>

- Wildlife living in the NRRM are affected by habitat loss, habitat degradation and habitat fragmentation, largely due to human interaction with the landscape through resource development activity
- 39 blue-listed and 25 red-listed animal species reside in the Muskwa-Kechika Management Area
- A declining minimum population of 728 Boreal Caribou live in northeast BC

## Agriculture Land Reserve (ALR)<sup>12</sup>

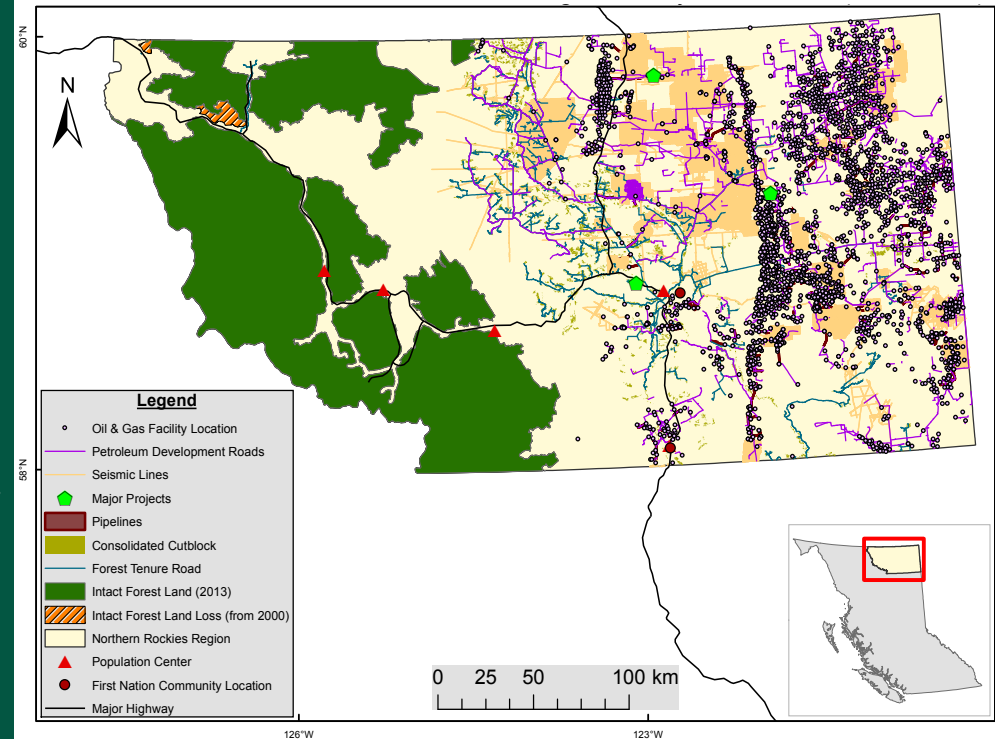
- 0.6% of the Northern Rockies is within the ALR; the Northern Rockies comprises 1.1% of the provincial ALR
- Between 2006-2011, there was an 8.7% increase in total farmland area and a 7% decline in total number of farms

## Employment Profile<sup>1,2</sup>

	Northern Rockies		Fort Nelson		BC	
	1996	2011	1996	2011	1996	2011
Median Income	\$21,481	\$37,908	\$22,717	\$40,002	\$19,982	\$28,765
Unemployment Rate	7.8	6	7.1	9.9	4.6	7.8%
Employment Growth		2.8%		23.5%		20.0%

- Fort Nelson and the NRRM have higher median incomes than provincial averages
- Unemployment rates are highly dependent on resource development throughout NE BC

## Industrial Activities in NRRM (2006-2016)<sup>4</sup>



“If all of the linear disturbance in the Liard, Horn River, and Cordova basins were laid end to end, it would wrap almost two times around the planet. In the most heavily affected areas of the Fort Nelson First Nation’s territory, there are over 9.98 kilometres of linear disturbance per square kilometre” (Garvie et al., 2015).<sup>14</sup>

## Housing<sup>1,2</sup>

- Between 2015-2017 there was an almost 50% decline in median housing prices<sup>15</sup>
- As of 2017, median sale price for homes in Fort Nelson was \$150,000<sup>15</sup>
- As of January 2015, Fort Nelson had a 36.29% vacancy rate<sup>16</sup>

	Northern Rockies		Fort Nelson		BC	
	1991	2011	1991	2011	1991	2011
Average House Value	\$69,340	\$266,864	\$67,430	\$266,864	\$175,559	\$543,635
Average Rent	\$413	\$950	\$412	\$950	\$658	\$989
Median Owner Major Payments on Housing	\$605	\$1,153	\$650	\$1,153	\$666	\$1,023
% of owners spending 30% or more of household income on shelter costs	11.1%	7.5%	13.8%	7.5%	13%	23.8%
% of tenants spending 30% or more of household income on shelter costs	20%	19.2%	21.9%	19.2%	32.9%	45.3%