

# UPSTREAM AND DOWNSTREAM CHEMICAL PRODUCT MANUFACTURING

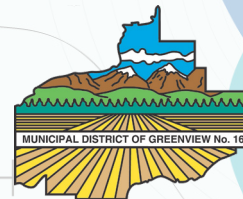
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## SECTOR PROFILES



**Chamber of  
Commerce**

GRANDE PRAIRIE & DISTRICT



The Province of Alberta is working in partnership with the Government of Canada to provide employment support programs and services.

The Sector Profile project was led by the Grande Prairie & District Chamber of Commerce in partnership with the City of Grande Prairie, County of Grande Prairie, MD of Greenview, Northwestern Polytechnic, and Alberta Labour and Immigration.

We would like to thank everyone who contributed their feedback, ideas and expertise to the study.

Please note that every effort has been made to use the most current data available. There are four major sources of information for this part of the research.

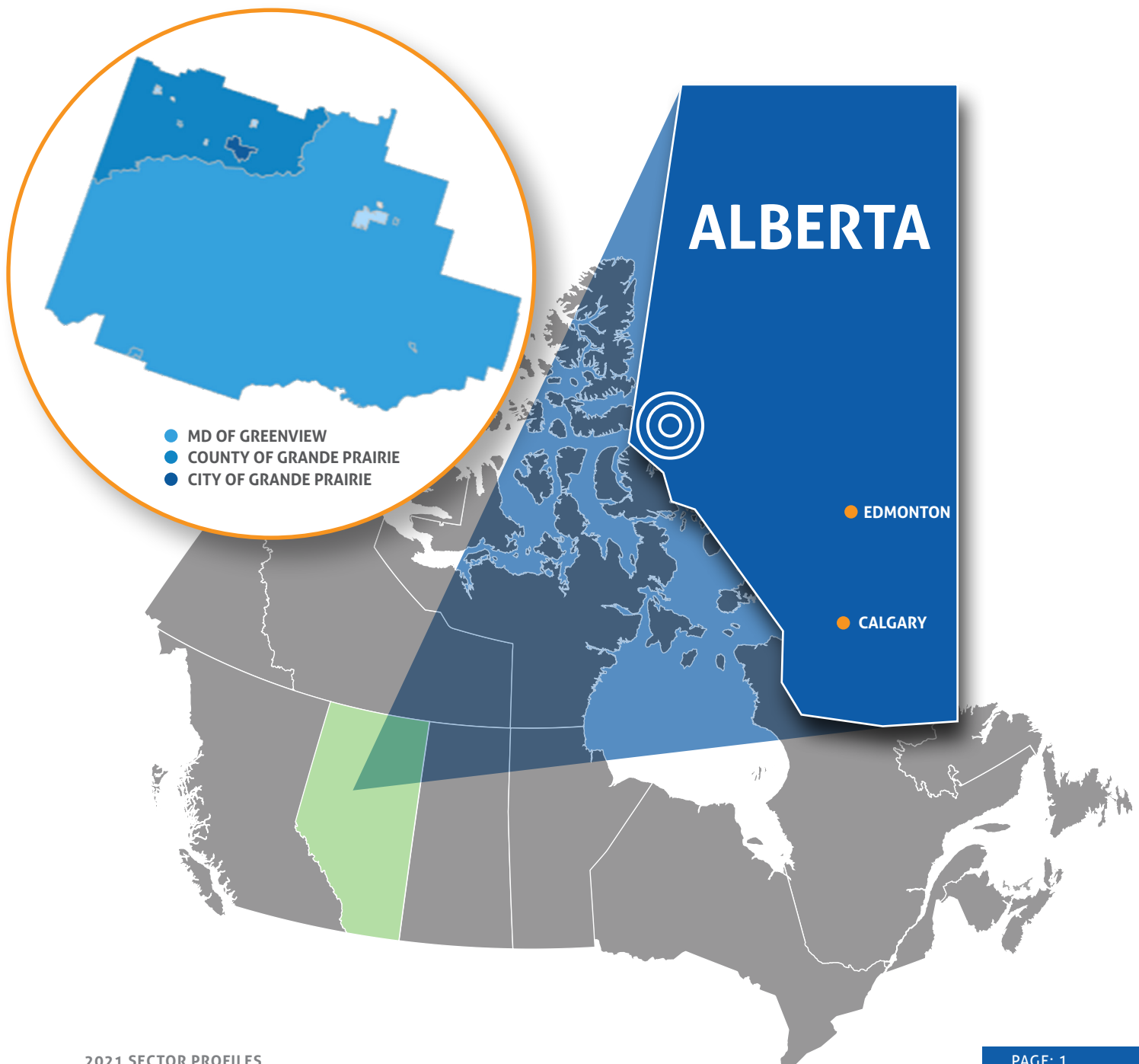
- SuperDemographics 2020 from Manifold Data Mining Inc.
- EMSI Analyst 2021.Q1
- Statistics Canada - 2001 to 2016 Census Profiles
- IBIS World 2020 and 2021 Industry Profiles



# INTRODUCTION

This sector profile focuses on the Region consisting of the City of Grande Prairie, County of Grande Prairie, Municipal District (MD) of Greenview, Town of Beaverlodge, Town of Sexsmith, Town of Wembley, Town of Fox Creek, Town of Valleyview, Greenview Co-ops and Enterprises, Sturgeon Lake Cree Nation, and Horse Lake First Nation. Any references to "Region" within this document refer to the custom region above.

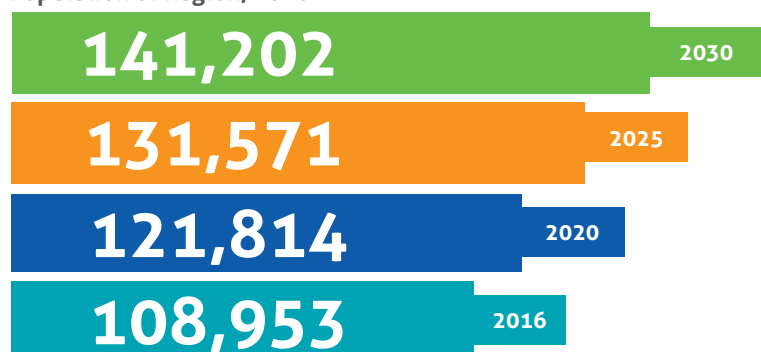
The Region spans nearly 40,000 square kilometres and acts as a gateway and resource hub for northwestern Alberta. Its largest centre, the City of Grande Prairie, is located approximately 450 kilometres northwest of Edmonton. With a strong postsecondary institution, new hospital, skilled labour force, and significant business supports, opportunities abound within the Region.



# REGIONAL DEMOGRAPHIC BREAKDOWN

All data sourced from Manifold SuperDemographics unless otherwise specified.

## Population of Region, 2020

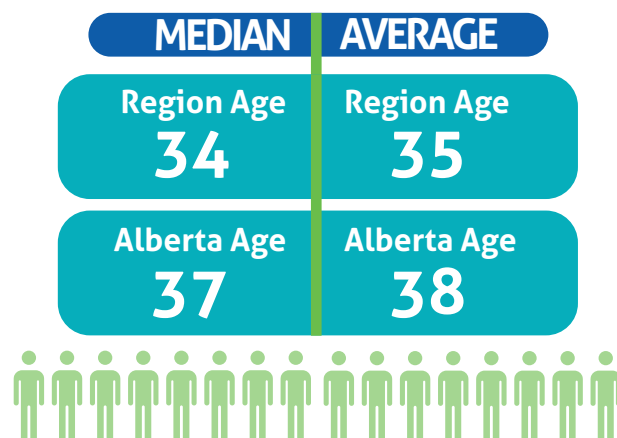


## PERCENTILE INCREASE

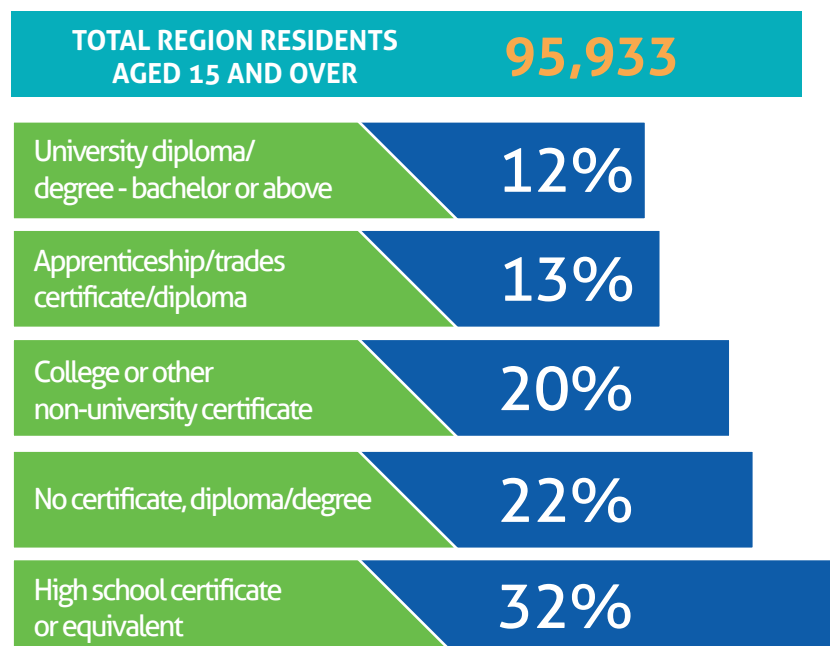
The 2020 population estimate relies on a different source (Manifold Data Mining) than the 2016 population estimate (Statistics Canada Census) and the numbers are therefore not directly comparable.

There is a projected **8%** increase in population from 2020 to 2025, and **7%** increase from 2025 to 2030.

## Median and Average Age, 2020

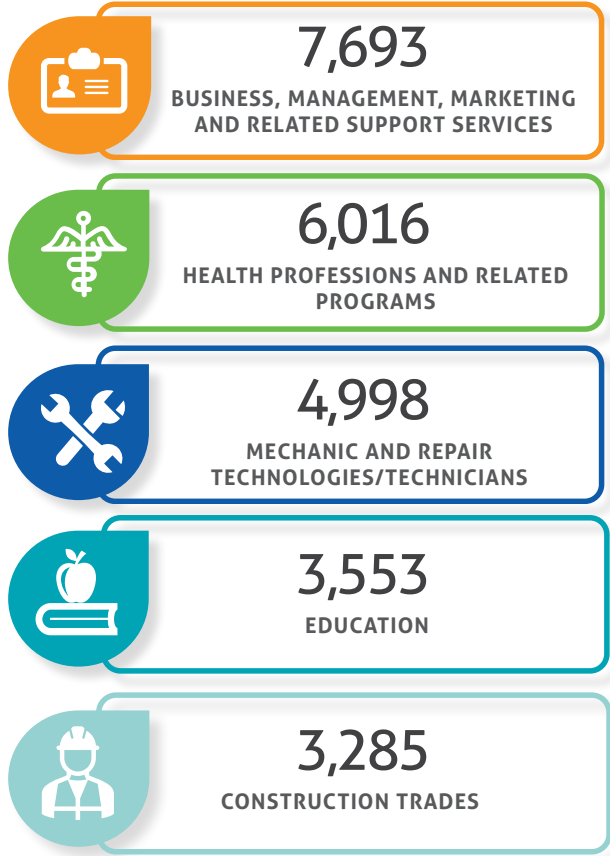


## Highest Educational Attainment for Region Residents, aged 15 and over, 2020





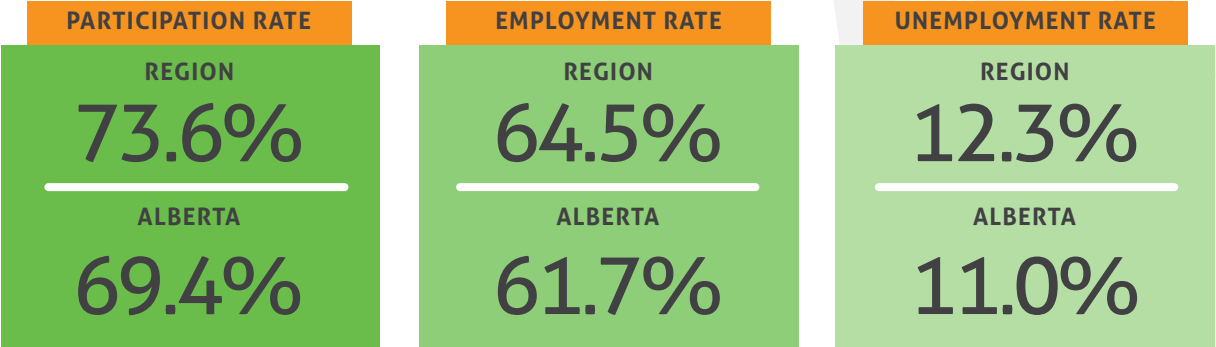
Top 5 Fields of Study for Region Residents, aged 15 and over, 2020



Labour Force Status for Region Residents, 2020

Labour Force Status	Region
Total Population, Residents aged 15 and over	95,933
In the labour force	70,682
Employed	61,956
Unemployed	8,726
Not in the labour force	25,251

Average Labour Force Participation Rates, 2020



# ABOUT THE SECTOR

Upstream and downstream chemical product manufacturers (hereafter referred to as chemical product manufacturers) add value to naturally extracted goods and help diversify the economic opportunities for those extracted natural resources. As an industry that supports and cushions the natural resource extraction sector from international shocks, this sector has been identified as a target sector by the Region.

Upstream chemical product manufacturers are those who process goods earlier in the manufacturing cycle, closer to the original natural good. These manufacturers include producers of organic and inorganic chemicals; agricultural chemicals; and industrial gases. Downstream chemical manufacturers are those who process goods later in the manufacturing stages, as a product gets closer to the end of the production process and the final consumer. These businesses include producers of personal care and cleaning products; dyes, pigments and coating; lubricating oils and greases; and processed chemical products and explosives.

## REGION SPECIFIC

The chemical product manufacturing sector is a relatively new sector that is growing within the Region. Currently, four subsectors have five or more businesses located within the Region, with the largest subsector housing 15 local establishments (chemical – except agricultural – and allied product merchant wholesalers).

The majority of local businesses within this sector are small businesses – 63.3% of businesses with known employee counts have between 1 and 9 employees. In total, the Region is home to 48 businesses within the chemical product manufacturing sector.

**Chemical Product Manufacturing Businesses, 2021**

Industries	Businesses
Chemical (except agricultural) and allied product merchant wholesalers	15
Petroleum and petroleum products merchant wholesalers	12
Petroleum and coal product manufacturing	5
Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers	5
Plastic product manufacturing	4
Basic chemical manufacturing	3
Other chemical product manufacturing	2
Paint, coating and adhesive manufacturing	1
Rubber product manufacturing	1
Pesticide, fertilizer and other agricultural chemical manufacturing	0
Soap, cleaning compound and toilet preparation manufacturing	0
<b>Total</b>	<b>48</b>

Source: McSweeney and Associates using data from EMSI Analyst - 2021.Q1

Chemical product manufacturing businesses in the Region employed 606 people in 2021, a slight decline of 79 positions since 2019. From 2021 to 2028 this sector is poised to see a slight rebound resulting in growth of approximately 14 jobs, up to 620 positions in the Region. The subsector with the largest projected growth is basic chemical manufacturing, with a projected increase of 19 jobs. Please note, these projections are based on current and historic industry trends, and do not account for any potential large-scale projects currently proposed for the Region.

**Chemical Product Manufacturing Employed and Self-Employed Positions, 2019, 2021 and 2028**


Subsector	2019 Positions	2021 Positions	2028 Positions	Change '21-'28	% Change
Petroleum and coal product manufacturing	73	70	65	-5	-7%
Basic chemical manufacturing	113	110	128	19	17%
Pesticide, fertilizer and other agricultural chemical manufacturing	<10	<10	<10	N/A	N/A
Paint, coating and adhesive manufacturing	15	12	12	0	0%
Soap, cleaning compound and toilet preparation manufacturing	11	<10	<10	N/A	N/A
Other chemical product manufacturing	42	39	46	7	18%
Plastic product manufacturing	20	19	19	0	0%
Rubber product manufacturing	12	12	13	1	10%
Petroleum and petroleum products merchant wholesalers	167	144	140	-4	-3%
Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers	35	<10	<10	N/A	N/A
Chemical (except agricultural) and allied product merchant wholesalers	188	182	185	3	2%
<b>Total</b>	<b>685</b>	<b>606</b>	<b>620</b>	<b>14</b>	<b>2%</b>

Source: McSweeney and Associates using data from EMSI Analyst - 2021.Q1

Note: Job totals per subsector may not add up to the total to number of positions within the broader sector due to methodological rounding.

Photo Credit: County of Grande Prairie





Of those occupations with wage data within the Region's chemical product manufacturing sector, the average wages were \$84,664.54.

**Chemical Product Manufacturing Average Wages Per Subsector, 2021**

Subsector	Average Wages
Central control and process operators, petroleum, gas and chemical processing	\$101,505.17
Chemical plant machine operators	\$89,124.06
Transport truck drivers	\$63,542.50
Technical sales specialists - wholesale trade	\$56,758.96
Sales and account representatives - wholesale trade (non-technical)	\$62,188.30
Supervisors, petroleum, gas and chemical processing and utilities	\$97,636.32
Plastics processing machine operators	\$68,693.63
Power engineers and power systems operators	\$97,053.89
Oil and gas well drillers, servicers, testers and related workers	\$82,432.00
Contractors and supervisors, oil and gas drilling and services	\$81,682.51
<b>Average Salary (all positions)</b>	<b>\$84,664.54</b>

Source: McSweeney and Associates using data from EMSI Analyst - 2021.Q1



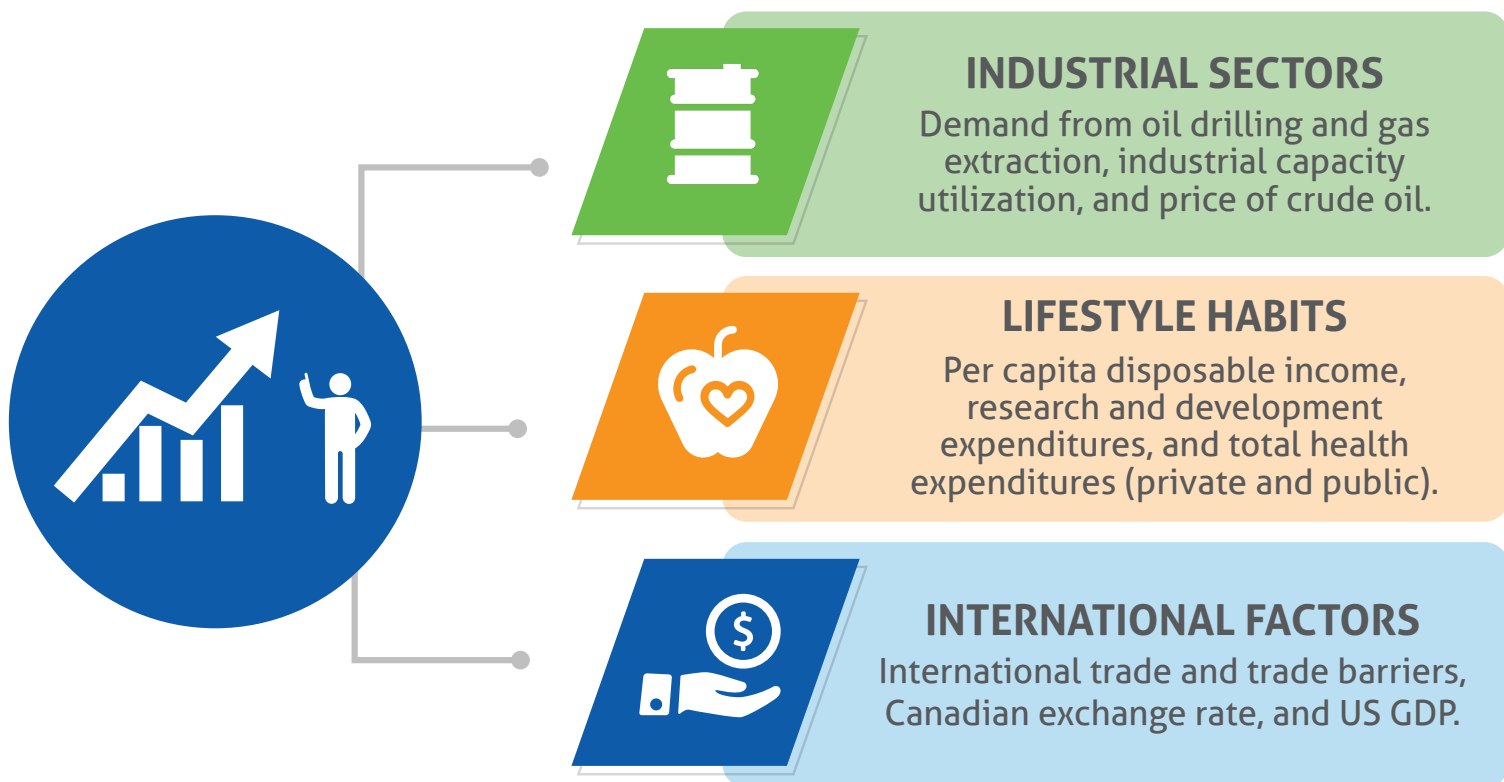
# SECTOR DATA

## FUTURE OUTLOOK OF THE SECTOR

The chemical product manufacturing sector has a positive future outlook. Across the various subsectors, strong industrial outputs are expected to sustain high demand for chemical products. This sector is responsible for producing goods typically sold at high margins, which will also help ease potential concerns and help maintain revenue growth into the future.

## KEY DRIVERS OF DEMAND

Factors determining national demand for the chemical product manufacturing sector can be broken into three categories.



Source: IBISWorld 2021



## KEY SUPPLIERS TO THE CHEMICAL PRODUCT MANUFACTURING SECTOR

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**Natural goods  
extractors**  
(e.g., oil and gas field  
services; mineral and  
phosphate mining; and  
oil and drilling and gas  
extraction)



**Manufacturers  
of upstream,  
raw products**  
(e.g., glass product; plastic  
and resin; and general  
purpose machinery)

## KEY BUYERS TO THE CHEMICAL PRODUCT MANUFACTURING SECTOR

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**Wholesalers and retailers  
of chemical products**  
(e.g., convenience stores;  
warehouses and supercenters;  
health stores, pharmacies  
and drug stores; and beauty,  
cosmetics and fragrance stores)



**Businesses relying  
on petroleum  
products**  
(e.g., gas stations; air  
transportation services;  
and lubricant oil  
manufacturers)



**Canadian  
consumers**



## TOTAL EMPLOYMENT FIGURES

In 2019 there were 525 Region residents working within the chemical product manufacturing sector, with 156 residents working within the petroleum and coal product manufacturing subsector (see table on Pg. 5). This data suggests that there are currently more jobs within the Region than residents working within the sector. As such, this may speak to a current mismatch of local skills to local job opportunities.

**Employment Totals Within Chemical Product Manufacturing, Region Residents 2019**

Industries	Workforce
Petroleum and coal product manufacturing	156
Petroleum and petroleum products merchant wholesalers	107
Basic chemical manufacturing	87
Plastic product manufacturing	60
Chemical (except agricultural) and allied product merchant wholesalers	49
Other chemical product manufacturing	31
Soap, cleaning compound and toilet preparation manufacturing	15
Pharmaceuticals, toiletries, cosmetics and sundries merchant wholesalers	6
Paint, coating and adhesive manufacturing	5
Rubber product manufacturing	5
Pesticide, fertilizer and other agricultural chemical manufacturing	4
<b>Total</b>	<b>525</b>

Source: Manifold 2020 SuperDemographics

## RELEVANT LEVELS OF EDUCATION

Educational attainment within the chemical product manufacturing sector is varied. Business fundamentals and technical mathematics or science degrees are typically highly valued. The top relevant fields of study for Region residents are presented in the table below, including business, management, marketing and related support services; precision production; and biological and physical sciences.

**Fields of Study Within the Chemical Product Manufacturing Sector for Region Residents**

Field of Study	Total Residents
Business, management, marketing and related support services	7,693
Construction trades	3,285
Engineering technologies and engineering-related fields	2,510
Precision production	1,924
Biological and physical sciences	217
Science technologies/technicians	149
Mathematics and statistics	127
Interdisciplinary mathematics, computer and information science	44
<b>Total residents with degrees in chemical product manufacturing-related fields of study</b>	<b>15,949</b>

Source: Manifold 2020 SuperDemographics

## PERCENTAGE OF OVERALL LABOUR FORCE AND LOCATION QUOTIENT

Location quotient is a calculation that assesses which industries are more likely to be represented locally, compared to benchmark areas. A location quotient above 1.00 suggests that industry is more heavily concentrated as a percentage of the total jobs available locally, while a location quotient below 1.00 suggests it is less heavily concentrated.

The chemical product manufacturing sector has a location quotient of 0.83 relative to Alberta, meaning that jobs within this sector make up a slightly smaller percentage of the local workforce than they do at the provincial level. Specifically, jobs in this sector represent 1.0% of the Region's total jobs, compared to 1.2% of provincial jobs. Given that this sector has been identified as one of the fastest growing local industries, it is likely to see an increase in local representation over the next decade.

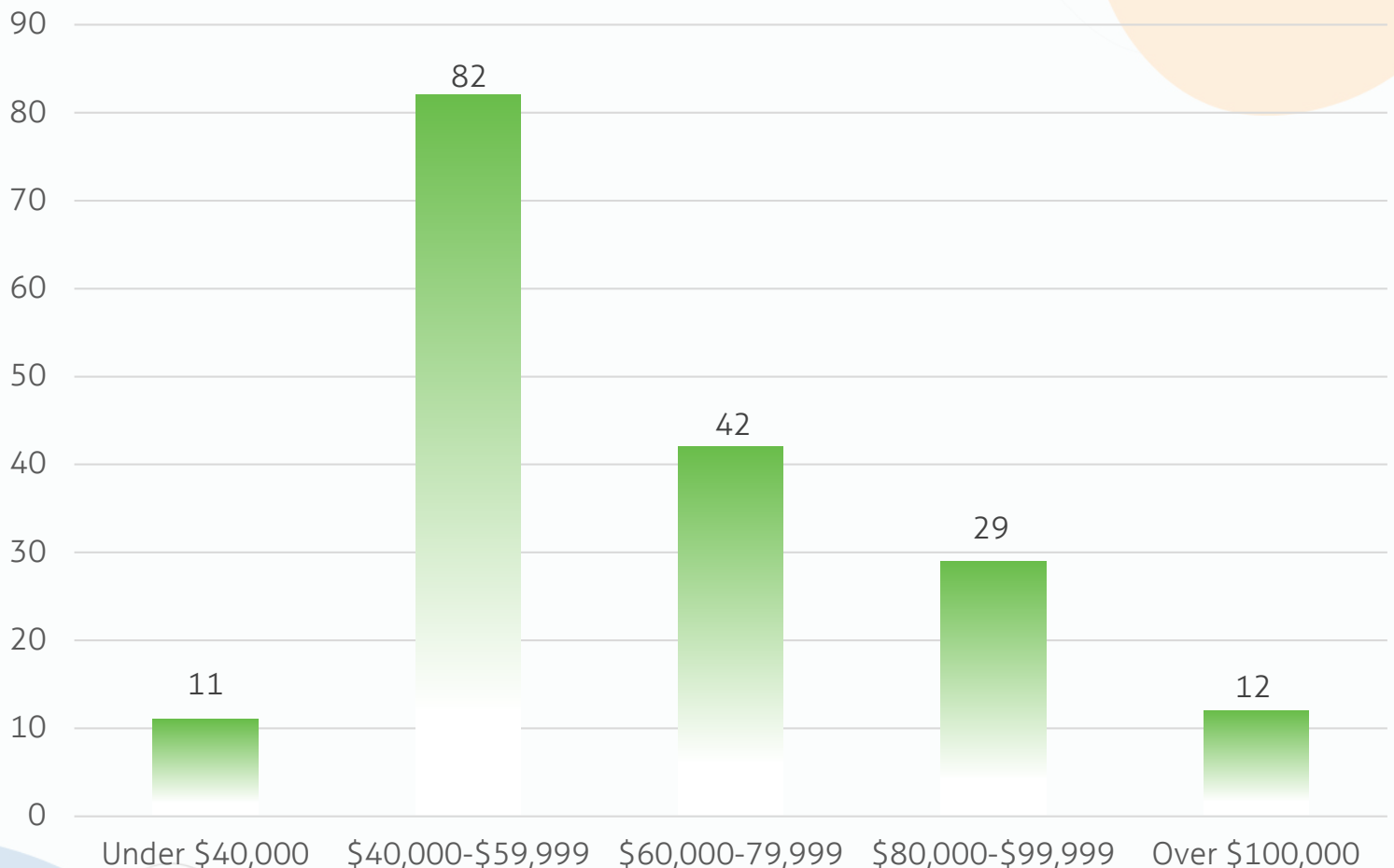


## JOB POSTING DATA

Between March 2019 and March 2020, the Region saw 1,441 unique job postings within the chemical manufacturing sector. Of the jobs posted during this period, 176 had advertised salaries. Those 176 postings had a median advertised salary of \$67,968, with 23.3% offering a salary above \$95,000.

The median posting duration (i.e., how long each job was posted before being taken down) for job postings in this sector was 31 days, the same as the regional average of 31 days for all job postings.

Job Postings by Salary, March 2019-March 2020, Region



Source: EMSI Analyst



**MEDIAN SECTOR  
JOB POSTING  
DURATION**

**31 days**

**REGIONAL  
AVERAGE  
FOR ALL JOB POSTINGS**

**31 days**

# COMMUNITY ASSETS SUPPORTING THE SECTOR/CLUSTER

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**Northwestern Polytechnic (NWP)** offers a variety of educational options and has developed local partnerships to provide programming that rapidly and effectively meets the needs of their learners and the broader community.

[nwpolytech.ca](http://nwpolytech.ca)

**Grande Prairie Regional Innovation Network (GPRIN)** helps innovators, entrepreneurs and companies move their ideas forward by offering access to a variety of services and professionals throughout the Alberta innovation ecosystem.

[gprin.ca](http://gprin.ca)

**Community Futures Grande Prairie and Region** offers businesses support from first steps through to growth stages. This includes information on how to start a business, developing business plans, financing loans, marketing and feasibility studies.

[grandeprairie.albertacf.com](http://grandeprairie.albertacf.com)

**ATB Entrepreneur Centre** supports businesses through business-to-business networking, connections and workshops.

[atbentrepreneurcentre.com](http://atbentrepreneurcentre.com)

**Women Building Futures** offers programs and support services to help unemployed and underemployed women explore and connect to careers that pay above a living wage. Employment training programs provide the introductory skills to begin a new career in areas where women have historically been underrepresented.

[womenbuildingfutures.ca](http://womenbuildingfutures.ca)

For information on other Community and Training Assets, please contact the project partners.

## CONSULTATION RESPONSES

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Employers rated **communication** and **literacy** as the two strongest skills among the Region's workforce.



**30%** of businesses saw a growth in employment in the last two years, including during COVID-19.

Note: Based on a 2020 survey of over 700 regional stakeholders.

## REGIONAL SPOTLIGHT

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**The Greenview Industrial Gateway**, situated directly on the Montney Gas formation, is located within the Municipal District of Greenview, approximately 40 kilometres south of the City of Grande Prairie.

This unique 2000-acre development will encompass world-class heavy industrial facilities focused on value-added petrochemical development linked to the Montney's abundant natural gas deposit. The area offers low-cost natural gas feedstock utilized in the processing and development of petrochemicals.

Ease of access to both the Canamex Heavy Load Corridor and full rail capacity (CN Rail) allows for efficient transportation routes to the deep-water ports of Kitimat and Prince Rupert, with quicker access to Asian markets than other west coast seaports.

The Greenview Industrial Gateway will bolster the growth of Alberta and the Greater Northwest Alberta Region, resulting in long term economic sustainability for the Region.

Photo Credit: MD of Greenview



# TRAINING ASSETS AND INSTITUTIONS THAT SUPPORT THE SECTOR/CLUSTER

## CONSULTATION RESPONSES



The Region's workforce is invested in skills development, with 85% of survey respondents indicating they would like to gain new skills or re-train.

- Sought after skills to train that are relevant to the chemical product manufacturing sector include heavy equipment operation, business leadership and mechanics/instrumentation.



The top three reasons residents would look to remain at a job were:

1. A supportive manager
2. Fair pay
3. Career growth, and learning and development opportunities

Note: Based on a 2020 survey of over 700 regional stakeholders.

## TRAINING ASSETS SPECIFIC TO REGION

### NORTHWESTERN POLYTECHNIC

NWP has a wide array of chemical product manufacturing sector-related degrees, diplomas or certificate programs. Students can enhance skills and knowledge through Power Engineering, Computer Systems Technology, and Business Administration offerings.

Sector-related Skilled Trades and Apprenticeships provide hands-on Heavy Equipment Technician, Steamfitter, Power Engineer, and Instrumentation, Plumbing, and Control Technician experience. NWP's Collaborative University Transfer programs enhance Commerce, Business Administration, and Sciences acumen.

[nwpolytech.ca](http://nwpolytech.ca)



Power Engineering



Computer Systems  
Technology



Business  
Administration



## TRAINING ASSETS SPECIFIC TO REGION CONT.

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**CAREERS: The Next Generation** is a non-profit organization that works with schools to connect high school students to employers for paid internships. Youth get the opportunity to test drive in-demand occupations in skilled trades, forestry, information and communications technology, agriculture and healthcare. Companies benefit by attracting local talent and bringing youthful energy to their industry. There are also financial incentives to help employers provide opportunities during tough economic times.

[careersnextgen.ca](https://careersnextgen.ca)

**The Rupertsland Institute** supports the well-being of Métis in Alberta through job matching, training partnerships with NWP, access to technology and internet, online counselling tools, information on local services, employers and careers, and self-employment workshops.

[rupertsland.org](https://rupertsland.org)

### **Western Cree Tribal Council**

The **Indigenous Skills Employment and Training (ISET) Program** is designed to help Indigenous people improve their skills and find employment through training and skills development. The program helps the community members find employment and polish employment skills. Funded through Service Canada, it gives members the skills required to find employment and fill job gaps.

[westerncree.ca](https://westerncree.ca)

**Northern Lakes College (NLC)** provides a supported distance learning environment with two locations in the Region. Programs include Resource Technology, Sustainable Energy Certificate and Diploma (through Lakeland College), Apprenticeship Trades, Pre-Employment Trades, and Business and Administrative Studies. Continuing Education and Corporate Training offers Forest Stewardship, Asset Management Professional, and Maintenance Management Professional.

[northernlakescollege.ca](https://northernlakescollege.ca)

For information on other Community and Training Assets, please contact the project partners.



Photo Credit: Seven Generations

## Alberta Labour and Immigration

Workforce Strategies Division  
3201, 10320 - 99 Street  
Grande Prairie, AB, T8V 6J4  
T: (780) 512-4880  
E: [wfc@gov.ab.ca](mailto:wfc@gov.ab.ca)  
W: [alberta.ca/labour-and-immigration](http://alberta.ca/labour-and-immigration)

## Grande Prairie and District Chamber of Commerce

Centre 2000  
11330 - 106 Street  
Grande Prairie, AB, T8V 7X9  
T: (780) 532-5340  
E: [info@gpchamber.com](mailto:info@gpchamber.com)  
W: [grandeprairiechamber.com](http://grandeprairiechamber.com)

## Northwestern Polytechnic

Grande Prairie Campus  
10726 - 106 Avenue  
Grande Prairie, AB, T8V 4C4  
T: (780) 539-2911  
E: [studentinfo@nwpolytech.ca](mailto:studentinfo@nwpolytech.ca)  
W: [nwpolytech.ca](http://nwpolytech.ca)

## City of Grande Prairie

Centre 2000  
11330 - 106 Street  
Grande Prairie, AB, T8V 7X9  
T: (780) 538-0300  
E: [EcDevinfo@cityofgp.com](mailto:EcDevinfo@cityofgp.com)  
W: [investgrandeprairie.com](http://investgrandeprairie.com)

## Municipal District of Greenview

Valleyview Administration Building  
4806 - 36 Avenue  
PO Box 1079  
Valleyview, AB, T0H 3N0  
T: (780) 524-7600  
E: [invest@mdgreenview.ab.ca](mailto:invest@mdgreenview.ab.ca)  
W: [mdgreenview.ab.ca](http://mdgreenview.ab.ca)

## County of Grande Prairie

Administration Building  
10001 - 84 Avenue  
Clairmont, AB, T8X 5B2  
T: (780) 532-9722  
E: [EcDev@countygyp.ab.ca](mailto:EcDev@countygyp.ab.ca)  
W: [countygyp.ab.ca](http://countygyp.ab.ca)