

Alberta's short-term employment forecast

2018-2020

Alberta Labour, Government of Alberta

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Alberta's Short-Term Employment Forecast, 2018-2020

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Overview

The *Alberta Short-Term Employment Forecast (STEF)* provides an overview of the demand prospects of over 450 occupations over the next three years. The STEF results, in conjunction with other economic and labour market information, can help inform decisions to be made by various stakeholders such as: the Government of Alberta in the design of effective labour market and education policies and programs; employers and industry in the development of strategic workforce plans; educational institutions and training providers in the design and development of programs that are more responsive to labour market needs; and youth or students in their education, training and career choices. It is also a tool used by career counsellors who develop and coordinate career and labour market information that enables all Albertans to make labour market decisions. It also provides awareness to newcomers and prospective immigrants on the short-term employment outlook in Alberta.

This three-year forecast helps bridge the information gap between the current labour market conditions and the long-term outlook; the long term as indicated by the government's 10-year forecast, *Alberta's Occupational Demand and Supply Outlook 2015-2025*. The long-term forecast examines which occupations are expected to grow in demand and by how much over the forecast horizon. It also estimates the expected growth in the supply of labour. The current 10-year outlook forecasts that Alberta's labour market will grow by approximately 401,000 workers and a net increase of 352,000 workers is expected to join the labour force. For the coming decade, Alberta could experience a labour shortage of around 49,000 workers. In contrast, the STEF only examines the demand outlook for various occupations in the next three years. It does not estimate potential labour shortages by occupation; rather, it examines which occupations are expected to be in high, moderately high, medium or low demand. This is the eighth consecutive year that the Government of Alberta has released this short-term forecast.

The production of this report reflects the Government of Alberta's commitment to supplying relevant labour market information to various levels of government, industry, professional organizations, educational institutions and the general public. This also reflects the Government of Alberta's undertaking to improve labour forecasts to help inform the development of workforce strategies, by both the public and private sectors, that will help promote efficiency in the labour market.

The *Alberta STEF 2018-2020* examines 454 occupations and ranks them into the following four demand categories: High; Moderately High; Medium; and Low. Each of the 454 occupations were analyzed using a total of eight quantitative and qualitative indicators. The threshold for each of the eight indicators used is calculated through a scientific methodology. All 454 occupations were

evaluated against these thresholds; the more thresholds an occupation meets, the higher its demand category is.

Objectives

- To develop evidence-based methodology to produce forecasts that will support short-term planning and development of program strategies by the Government of Alberta and other stakeholders.
- To deliver objective, accurate, and reliable information to help Albertans make informed employment and career-related decisions.
- To identify occupations that will be in high or low demand in the labour market in the near future, and allow decision-makers to take action to avert or ease any potential imbalances.
- To ensure consistency in data utilization and interpretation within the Government of Alberta.

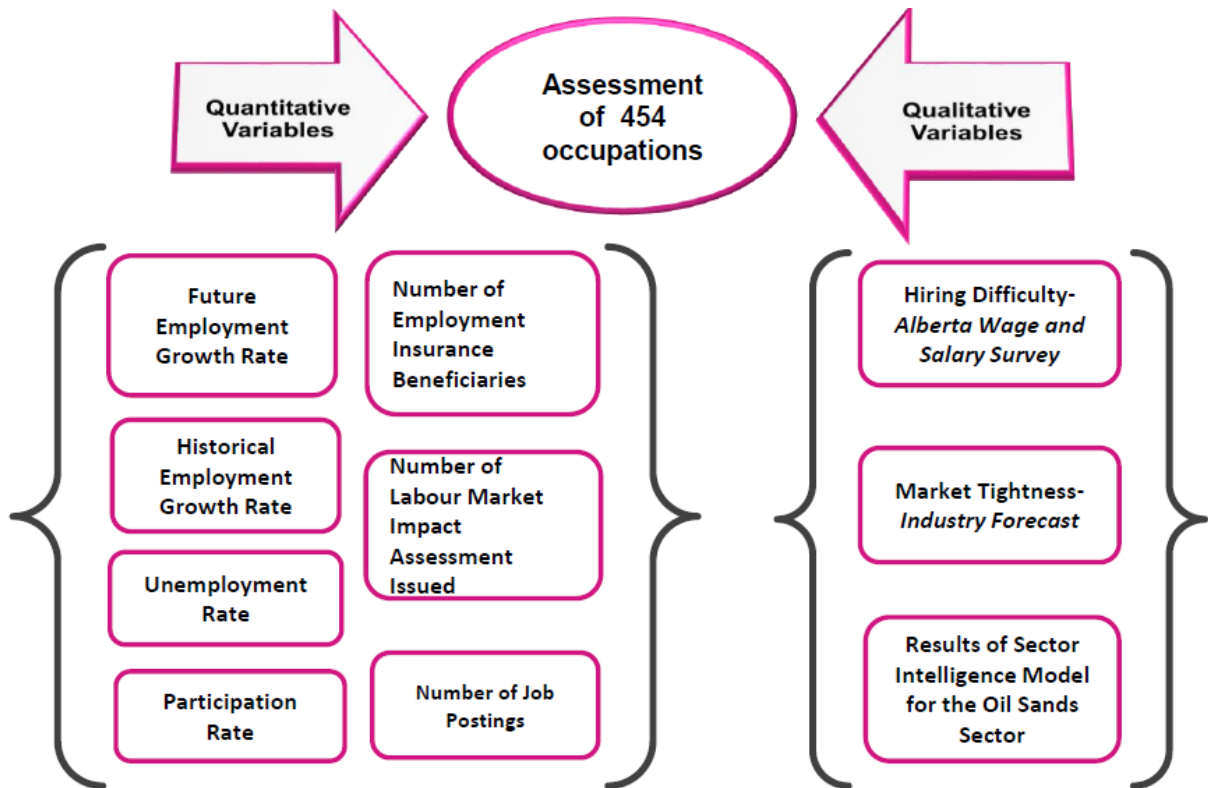
Methodology

The STEF methodology is based on robust assessment of occupations at the four-digit National Occupational Classification (NOC) Code based on a number of quantitative indicators and qualitative information such as:

- Occupational forecasts by the Government of Alberta;
- Key labour market indicators from the Labour Force Survey;
- Labour market information from administrative datasets of the Federal Government and the private sector;
- Industry forecasts;
- Hiring difficulties by employers based on the Alberta Wage and Salary Survey; and
- Results of the Government of Alberta's Sector Intelligence Model for the Oil Sands Sector.

The STEF analyzes eight variables for each occupation: seven quantitative and one qualitative measure. The single qualitative indicator is an amalgamation of three pieces of information. Please refer to the following chart.

STEF Methodology



There are 454 occupation titles identified at the four-digit level of the NOC 2011 for which information is available. Information for all 454 occupations is collected, organized, calculated, analyzed, and summarised.

Information for all 454 occupations is assessed against the threshold value for each of the eight indicators. Depending on the number of thresholds met, an occupation is either ranked as High Demand; Moderately High Demand; Medium Demand; or Low Demand. The more thresholds an occupation meet, the higher its demand ranking is.

Results

The following is a summary of the results for the 454 occupations analyzed and assessed:

- six occupations met the threshold for seven or more variables, meaning there is a significant likelihood that these occupations will be in high demand in the next three years;
- 34 occupations met the threshold for six variables, meaning there is a significant likelihood these occupations will be in moderately high demand in the next three years;
- 164 occupations met the thresholds for five variables, meaning there is a likelihood these occupations will be in medium demand in the next three years; and
- 250 occupations met the threshold for four variables or less, meaning it is likely these occupations are going to be in low demand in the next three years.

The attached Appendix shows the *Alberta STEF 2018-2020* results. Note that the 2011 National Occupational Classification is used in this report.

For more information on this forecast tool, please contact LFS.Analyst@gov.ab.ca

Appendix

High Demand

Occupation Title
0621 Retail and wholesale trade managers
1224 Property administrators
6211 Retail sales supervisors
6311 Food service supervisors
6411 Sales and account representatives - wholesale trade (non-technical)
9411 Machine operators, mineral and metal processing

Moderately High Demand

Occupation Title
0731 Managers in transportation
0811 Managers in natural resources production and fishing
1215 Supervisors, supply chain, tracking and scheduling co-ordination occupations
2143 Mining engineers
2175 Web designers and developers
2262 Engineering inspectors and regulatory officers
2271 Air pilots, flight engineers and flying instructors
4011 University professors and lecturers
6232 Real estate agents and salespersons
6235 Financial sales representatives
6321 Chefs
6332 Bakers
6341 Hairstylists and barbers
6523 Airline ticket and service agents
7231 Machinists and machining and tooling inspectors
7272 Cabinetmakers
7283 Tilesetters

Note: The 2011 National Occupational Classification is used in this report.

Appendix (continued)

Moderately High Demand (continued)

Occupation Title
7292 Glaziers
7301 Contractors and supervisors, mechanic trades
7304 Supervisors, railway transport operations
7311 Construction millwrights and industrial mechanics
7314 Railway carmen/women
7315 Aircraft mechanics and aircraft inspectors
7332 Appliance servicers and repairers
7511 Transport truck drivers
7534 Air transport ramp attendants
9213 Supervisors, food, beverage and associated products processing
9224 Supervisors, furniture and fixtures manufacturing
9227 Supervisors, other products manufacturing and assembly
9232 Petroleum, gas and chemical process operators
9432 Pulp mill machine operators
9436 Lumber graders and other wood processing inspectors and graders
9462 Industrial butchers and meat cutters, poultry preparers and related workers
9617 Labourers in food, beverage and associated products processing

Appendix (continued)

Medium Demand

Occupation Title
0016 Senior managers - construction, transportation, production and utilities
0111 Financial managers
0112 Human resources managers
0121 Insurance, real estate and financial brokerage managers
0124 Advertising, marketing and public relations managers
0125 Other business services managers
0132 Postal and courier services managers
0213 Computer and information systems managers
0311 Managers in health care
0414 Other managers in public administration
0511 Library, archive, museum and art gallery managers
0513 Recreation, sports and fitness program and service directors
0601 Corporate sales managers
0631 Restaurant and food service managers
0714 Facility operation and maintenance managers
0822 Managers in horticulture
0911 Manufacturing managers
1111 Financial auditors and accountants
1113 Securities agents, investment dealers and brokers
1114 Other financial officers
1122 Professional occupations in business management consulting
1211 Supervisors, general office and administrative support workers
1212 Supervisors, finance and insurance office workers
1214 Supervisors, mail and message distribution occupations
1222 Executive assistants
1228 Employment insurance, immigration, border services and revenue officers
1241 Administrative assistants
1243 Medical administrative assistants
1253 Records management technicians
1311 Accounting technicians and bookkeepers

Appendix (continued)

Medium Demand (continued)

Occupation Title
1312 Insurance adjusters and claims examiners
1314 Assessors, valuers and appraisers
1315 Customs, ship and other brokers
1411 General office support workers
1414 Receptionists
1434 Banking, insurance and other financial clerks
1511 Mail, postal and related workers
1512 Letter carriers
1513 Couriers, messengers and door-to-door distributors
1522 Storekeepers and partspersons
1524 Purchasing and inventory control workers
1526 Transportation route and crew schedulers
2112 Chemists
2123 Agricultural representatives, consultants and specialists
2131 Civil engineers
2132 Mechanical engineers
2141 Industrial and manufacturing engineers
2145 Petroleum engineers
2147 Computer engineers (except software engineers and designers)
2151 Architects
2171 Information systems analysts and consultants
2174 Computer programmers and interactive media developers
2212 Geological and mineral technologists and technicians
2225 Landscape and horticulture technicians and specialists
2232 Mechanical engineering technologists and technicians
2243 Industrial instrument technicians and mechanics
2263 Inspectors in public and environmental health and occupational health and safety
2272 Air traffic controllers and related occupations
2275 Railway traffic controllers and marine traffic regulators
2281 Computer network technicians

Appendix (continued)

Medium Demand (continued)

Occupation Title
2282 User support technicians
2283 Information systems testing technicians
3011 Nursing co-ordinators and supervisors
3012 Registered nurses and registered psychiatric nurses
3111 Specialist physicians
3112 General practitioners and family physicians
3113 Dentists
3131 Pharmacists
3144 Other professional occupations in therapy and assessment
3222 Dental hygienists and dental therapists
3223 Dental technologists, technicians and laboratory assistants
3233 Licensed practical nurses
3411 Dental assistants
3413 Nurse aides, orderlies and patient service associates
3414 Other assisting occupations in support of health services
4031 Secondary school teachers
4032 Elementary school and kindergarten teachers
4152 Social workers
4163 Business development officers and marketing researchers and consultants
4211 Paralegal and related occupations
4212 Social and community service workers
4214 Early childhood educators and assistants
4216 Other instructors
5232 Other performers, n.e.c.
5242 Interior designers and interior decorators
6221 Technical sales specialists - wholesale trade
6314 Customer and information services supervisors
6315 Cleaning supervisors
6322 Cooks
6331 Butchers, meat cutters and fishmongers - retail and wholesale

Appendix (continued)

Medium Demand (continued)

Occupation Title
6421 Retail salespersons
6513 Food and beverage servers
6522 Purser and flight attendants
6525 Hotel front desk clerks
6541 Security guards and related security service occupations
6552 Other customer and information services representatives
6611 Cashiers
6621 Service station attendants
6623 Other sales related occupations
6711 Food counter attendants, kitchen helpers and related support occupations
6731 Light duty cleaners
6742 Other service support occupations, n.e.c.
7202 Contractors and supervisors, electrical trades and telecommunications occupations
7204 Contractors and supervisors, carpentry trades
7232 Tool and die makers
7235 Structural metal and platework fabricators and fitters
7237 Welders and related machine operators
7271 Carpenters
7282 Concrete finishers
7284 Plasterers, drywall installers and finishers and lathers
7303 Supervisors, printing and related occupations
7305 Supervisors, motor transport and other ground transit operators
7321 Automotive service technicians, truck and bus mechanics and mechanical repairers
7322 Motor vehicle body repairers
7331 Oil and solid fuel heating mechanics
7334 Motorcycle, all-terrain vehicle and other related mechanics
7361 Railway and yard locomotive engineers
7362 Railway conductors and brakemen/women
7381 Printing press operators
7445 Other repairers and servicers

Appendix (continued)

Medium Demand (continued)

Occupation Title
7452 Material handlers
7513 Taxi and limousine drivers and chauffeurs
7521 Heavy equipment operators (except crane)
7531 Railway yard and track maintenance workers
7611 Construction trades helpers and labourers
8221 Supervisors, mining and quarrying
8222 Contractors and supervisors, oil and gas drilling and services
8231 Underground production and development miners
8232 Oil and gas well drillers, servicers, testers and related workers
8411 Underground mine service and support workers
8412 Oil and gas well drilling and related workers and services operators
8431 General farm workers
8614 Mine labourers
8615 Oil and gas drilling, servicing and related labourers
9211 Supervisors, mineral and metal processing
9212 Supervisors, petroleum, gas and chemical processing and utilities
9215 Supervisors, forest products processing
9217 Supervisors, textile, fabric, fur and leather products processing and manufacturing
9223 Supervisors, electrical products manufacturing
9226 Supervisors, other mechanical and metal products manufacturing
9241 Power engineers and power systems operators
9414 Concrete, clay and stone forming operators
9416 Metalworking and forging machine operators
9417 Machining tool operators
9418 Other metal products machine operators
9421 Chemical plant machine operators
9422 Plastics processing machine operators
9423 Rubber processing machine operators and related workers
9431 Sawmill machine operators
9434 Other wood processing machine operators

Appendix (continued)

Medium Demand (continued)

Occupation Title
9435 Paper converting machine operators
9437 Woodworking machine operators
9446 Industrial sewing machine operators
9461 Process control and machine operators, food, beverage and associated products processing
9471 Plateless printing equipment operators
9473 Binding and finishing machine operators
9526 Mechanical assemblers and inspectors
9532 Furniture and fixture assemblers and inspectors
9533 Other wood products assemblers and inspectors
9535 Plastic products assemblers, finishers and inspectors
9536 Industrial painters, coaters and metal finishing process operators
9614 Labourers in wood, pulp and paper processing
9615 Labourers in rubber and plastic products manufacturing
9619 Other labourers in processing, manufacturing and utilities

Appendix (continued)

Low Demand

Occupation Title
0011 Legislators
0012 Senior government managers and officials
0013 Senior managers - financial, communications and other business services
0014 Senior managers - health, education, social and community services and membership organizations
0113 Purchasing managers
0114 Other administrative services managers
0122 Banking, credit and other investment managers
0131 Telecommunication carriers managers
0211 Engineering managers
0212 Architecture and science managers
0411 Government managers - health and social policy development and program administration
0412 Government managers - economic analysis, policy development and program administration
0421 Administrators - post-secondary education and vocational training
0422 School principals and administrators of elementary and secondary education
0423 Managers in social, community and correctional services
0431 Commissioned police officers
0432 Fire chiefs and senior firefighting officers
0512 Managers - publishing, motion pictures, broadcasting and performing arts
0632 Accommodation service managers
0651 Managers in customer and personal services, n.e.c.
0711 Construction managers
0712 Home building and renovation managers
0821 Managers in agriculture
0912 Utilities managers
1112 Financial and investment analysts
1121 Human resources professionals
1123 Professional occupations in advertising, marketing and public relations
1221 Administrative officers
1223 Human resources and recruitment officers

Appendix (continued)

Low Demand (continued)

Occupation Title
1225 Purchasing agents and officers
1226 Conference and event planners
1227 Court officers and justices of the peace
1242 Legal administrative assistants
1251 Court reporters, medical transcriptionists and related occupations
1252 Health information management occupations
1254 Statistical officers and related research support occupations
1313 Insurance underwriters
1415 Personnel clerks
1416 Court clerks
1422 Data entry clerks
1431 Accounting and related clerks
1432 Payroll clerks
1435 Collectors
1451 Library assistants and clerks
1452 Correspondence, publication and regulatory clerks
1454 Survey interviewers and statistical clerks
1521 Shippers and receivers
1523 Production logistics co-ordinators
1525 Dispatchers
2113 Geoscientists and oceanographers
2114 Meteorologists and climatologists
2115 Other professional occupations in physical sciences
2121 Biologists and related scientists
2122 Forestry professionals
2133 Electrical and electronics engineers
2134 Chemical engineers
2142 Metallurgical and materials engineers
2144 Geological engineers
2146 Aerospace engineers
2148 Other professional engineers, n.e.c.

Appendix (continued)

Low Demand (continued)

Occupation Title
2153 Urban and land use planners
2154 Land surveyors
2161 Mathematicians, statisticians and actuaries
2172 Database analysts and data administrators
2173 Software engineers and designers
2211 Chemical technologists and technicians
2221 Biological technologists and technicians
2222 Agricultural and fish products inspectors
2223 Forestry technologists and technicians
2224 Conservation and fishery officers
2231 Civil engineering technologists and technicians
2233 Industrial engineering and manufacturing technologists and technicians
2234 Construction estimators
2241 Electrical and electronics engineering technologists and technicians
2242 Electronic service technicians (household and business equipment)
2251 Architectural technologists and technicians
2252 Industrial designers
2253 Drafting technologists and technicians
2254 Land survey technologists and technicians
2255 Technical occupations in geomatics and meteorology
2261 Non-destructive testers and inspection technicians
2264 Construction inspectors
3114 Veterinarians
3121 Optometrists
3122 Chiropractors
3124 Allied primary health practitioners
3125 Other professional occupations in health diagnosing and treating
3132 Dietitians and nutritionists
3141 Audiologists and speech-language pathologists
3142 Physiotherapists

Appendix (continued)

Low Demand (continued)

Occupation Title
3143 Occupational therapists
3211 Medical laboratory technologists
3212 Medical laboratory technicians and pathologists' assistants
3213 Animal health technologists and veterinary technicians
3214 Respiratory therapists, clinical perfusionists and cardiopulmonary technologists
3215 Medical radiation technologists
3216 Medical sonographers
3217 Cardiology technologists and electrophysiological diagnostic technologists, n.e.c.
3219 Other medical technologists and technicians (except dental health)
3221 Denturists
3231 Opticians
3232 Practitioners of natural healing
3234 Paramedical occupations
3236 Massage therapists
3237 Other technical occupations in therapy and assessment
4012 Post-secondary teaching and research assistants
4021 College and other vocational instructors
4033 Educational counsellors
4112 Lawyers and Quebec notaries
4151 Psychologists
4153 Family, marriage and other related counsellors
4154 Professional occupations in religion
4155 Probation and parole officers and related occupations
4156 Employment counsellors
4161 Natural and applied science policy researchers, consultants and program officers
4162 Economists and economic policy researchers and analysts
4164 Social policy researchers, consultants and program officers
4165 Health policy researchers, consultants and program officers
4166 Education policy researchers, consultants and program officers
4167 Recreation, sports and fitness policy researchers, consultants and program officers

Appendix (continued)

Low Demand (continued)

Occupation Title
4168 Program officers unique to government
4169 Other professional occupations in social science, n.e.c.
4217 Other religious occupations
4311 Police officers (except commissioned)
4312 Firefighters
4411 Home child care providers
4412 Home support workers, housekeepers and related occupations
4413 Elementary and secondary school teacher assistants
4421 Sheriffs and bailiffs
4422 Correctional service officers
4423 By-law enforcement and other regulatory officers, n.e.c.
5111 Librarians
5121 Authors and writers
5122 Editors
5123 Journalists
5125 Translators, terminologists and interpreters
5131 Producers, directors, choreographers and related occupations
5132 Conductors, composers and arrangers
5133 Musicians and singers
5134 Dancers
5135 Actors and comedians
5136 Painters, sculptors and other visual artists
5211 Library and public archive technicians
5212 Technical occupations related to museums and art galleries
5221 Photographers
5224 Broadcast technicians
5225 Audio and video recording technicians
5226 Other technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts
5227 Support occupations in motion pictures, broadcasting, photography and the performing arts
5231 Announcers and other broadcasters

Appendix (continued)

Low Demand (continued)

Occupation Title
5241 Graphic designers and illustrators
5243 Theatre, fashion, exhibit and other creative designers
5244 Artisans and craftspersons
5251 Athletes
5252 Coaches
5253 Sports officials and referees
5254 Program leaders and instructors in recreation, sport and fitness
6222 Retail and wholesale buyers
6231 Insurance agents and brokers
6312 Executive housekeepers
6313 Accommodation, travel, tourism and related services supervisors
6316 Other services supervisors
6342 Tailors, dressmakers, furriers and milliners
6343 Shoe repairers and shoemakers
6345 Upholsterers
6346 Funeral directors and embalmers
6511 Maîtres d'hôtel and hosts/hostesses
6512 Bartenders
6521 Travel counsellors
6531 Tour and travel guides
6532 Outdoor sport and recreational guides
6533 Casino occupations
6551 Customer services representatives - financial institutions
6561 Image, social and other personal consultants
6562 Estheticians, electrologists and related occupations
6563 Pet groomers and animal care workers
6564 Other personal service occupations
6622 Store shelf stockers, clerks and order fillers
6721 Support occupations in accommodation, travel and facilities set-up services
6722 Operators and attendants in amusement, recreation and sport

Appendix (continued)

Low Demand (continued)

Occupation Title
6732 Specialized cleaners
6733 Janitors, caretakers and building superintendents
6741 Dry cleaning, laundry and related occupations
7201 Contractors and supervisors, machining, metal forming, shaping and erecting trades and related occupations
7203 Contractors and supervisors, pipefitting trades
7205 Contractors and supervisors, other construction trades, installers, repairers and servicers
7233 Sheet metal workers
7234 Boilermakers
7236 Ironworkers
7241 Electricians (except industrial and power system)
7242 Industrial electricians
7243 Power system electricians
7244 Electrical power line and cable workers
7245 Telecommunications line and cable workers
7246 Telecommunications installation and repair workers
7247 Cable television service and maintenance technicians
7251 Plumbers
7252 Steamfitters, pipefitters and sprinkler system installers
7253 Gas fitters
7281 Bricklayers
7291 Roofers and shinglers
7293 Insulators
7294 Painters and decorators (except interior decorators)
7295 Floor covering installers
7302 Contractors and supervisors, heavy equipment operator crews
7312 Heavy-duty equipment mechanics
7313 Refrigeration and air conditioning mechanics
7318 Elevator constructors and mechanics
7333 Electrical mechanics
7335 Other small engine and small equipment repairers

Appendix (continued)

Low Demand (continued)

Occupation Title
7371 Crane operators
7372 Drillers and blasters - surface mining, quarrying and construction
7373 Water well drillers
7384 Other trades and related occupations, n.e.c.
7441 Residential and commercial installers and servicers
7442 Waterworks and gas maintenance workers
7444 Pest controllers and fumigators
7512 Bus drivers, subway operators and other transit operators
7514 Delivery and courier service drivers
7522 Public works maintenance equipment operators and related workers
7535 Other automotive mechanical installers and servicers
7612 Other trades helpers and labourers
7621 Public works and maintenance labourers
7622 Railway and motor transport labourers
8211 Supervisors, logging and forestry
8241 Logging machinery operators
8252 Agricultural service contractors, farm supervisors and specialized livestock workers
8255 Contractors and supervisors, landscaping, grounds maintenance and horticulture services
8421 Chain saw and skidder operators
8422 Silviculture and forestry workers
8432 Nursery and greenhouse workers
8611 Harvesting labourers
8612 Landscaping and grounds maintenance labourers
8616 Logging and forestry labourers
9243 Water and waste treatment plant operators
9415 Inspectors and testers, mineral and metal processing
9442 Weavers, knitters and other fabric making occupations
9447 Inspectors and graders, textile, fabric, fur and leather products manufacturing
9465 Testers and graders, food, beverage and associated products processing
9474 Photographic and film processors

Appendix (continued)

Low Demand (continued)

Occupation Title
9521 Aircraft assemblers and aircraft assembly inspectors
9522 Motor vehicle assemblers, inspectors and testers
9523 Electronics assemblers, fabricators, inspectors and testers
9524 Assemblers and inspectors, electrical appliance, apparatus and equipment manufacturing
9525 Assemblers, fabricators and inspectors, industrial electrical motors and transformers
9534 Furniture finishers and refinishers
9537 Other products assemblers, finishers and inspectors
9611 Labourers in mineral and metal processing
9612 Labourers in metal fabrication
9613 Labourers in chemical products processing and utilities