

Creative Class Workers

in
Wellington County
September 2011



Workforce Planning Board
of Waterloo Wellington Dufferin



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Executive Summary

The creative class is a socio-economic class identified as the key driving force for economic development of post-industrial cities. It is comprised of knowledge workers, intellectuals and various types of artists. This class is slightly less prominent in Wellington County as it represents 29% of total employment locally compared to 34% of total employment in Ontario. The employment growth rate of the creative class has been higher in Wellington County than Ontario, and in both geographies it has grown faster than the average of all occupations.

Collectively, there is a net surplus of creative class workers commuting out of Wellington County for work. Wellington County is highly concentrated with 32 creative class occupations, of which the most fall within Natural and applied sciences. Four industries in the region each employ over 1,000 creative class workers: Educational services, Professional, scientific and technical services, Hospitals and Ambulatory health care services. Creative class occupations are particularly low in Accommodation and food services, Agriculture, Transportation and warehousing, Construction and Manufacturing.

Methodology

Based on the framework of Dr. Richard Florida, employment data for Wellington County was disseminated into classes of occupations. Creative class employment was examined in terms of location of work, local representation, and concentration by industry. Opportunities in growth industries for creative class workers in declining industries were also identified.

Data was sourced from the Census (2001-2006) and Canadian Business Patterns (2003-2010). Similar data for Ontario was sourced as a benchmark when useful. Industries were examined at the 3-digit level of the North American Industry Classification System (NAICS).

1 Overview of Workers by Class

Dr. Richard Florida's framework examines labour markets by classes: Working, Service, and Creative (and its super-creative core). Together with the primary industries of fishing, farming, and forestry, all working people in a given economy are represented.

On a North-American scale, the working class has steadily declined over the past 60 years, while fishing, farming, and forestry have declined greatly for over a century. The service class has been the largest class for 50 years and continues to be nearly 15% larger than any other class. The creative class and its super-creative core each grew gently until 1970 when their employment growth accelerated.

Employment growth both provincially and in Wellington County continues to be led by the large service class. However, the growth rate of the creative class has been above average and examined on its own, the super-creative core of the creative class had a higher growth rate than any class both provincially and locally. The creative class represents 29% of total employment in Wellington County and 34% of total employment in Ontario.

WORKERS BY CLASS, 2006

| | Workers in Wellington County | Share of Workforce | | Growth Rate 2001 to 2006 | |
|------------------------------|---------------------------------|----------------------|---------|--------------------------|-----------|
| | | Wellington County | Ontario | Wellington County | Ontario |
| Total All Occupations | 97,400 | | | 8% | 6% |
| Creative Class | 28,255 | 29% | 34% | 10% | 8% |
| Super Creative Core | 15,140 | 16% | 17% | 12% | 12% |
| Service Class | 37,135 | 38% | 45% | 11% | 9% |
| Working Class | 27,630 | 28% | 18% | 5% | -2% |
| Fishing / Farming / Forestry | 4,380 | 4% | 2% | -7% | -5% |

2 Defining the Creative Class

The Creative Class* is comprised of:

Creative Professionals

These professionals are classic knowledge-based workers. They draw on complex bodies of knowledge to solve specific problems, using high degrees of education to do so. They include:

- Management occupations
- Business and financial operations occupations
- Legal occupations
- Healthcare practitioners and technical occupations
- High-end sales and sales management

Super-Creative Core

Those belonging to this group fully engage in creative and innovative processes. Along with problem solving, their work may entail problem finding. They include:

- Computer and mathematical occupations
- Architecture and engineering occupations
- Life, physical, and social science occupations
- Education, training, and library occupations
- Arts, design, entertainment, sports, and media occupations

*See Appendix for a complete list of creative class occupations.

3 Workforce by Place of Work Compared to Place of Residence

A large majority of Wellington County’s workforce both lives and works within the region. However, as daily commuting in and out of the region occurs, two subtly different workforces can be recognized by an imbalance of which occupations these commuters work in. The composition of the workforce by place of work compared to the workforce by place of residence reveals different concentrations of certain occupational groups. The following table examines these differences within the creative class occupations.

For example, there are more people who work in Management occupations commuting *out* of the region to work than there are commuting *in*. Within this occupational group, there is an especially high net number of outward commuters who work as Financial managers. Conversely there are more people who work as Post-secondary teaching and research assistants commuting *in* to the region to work than there are commuting *out*.

RELATIVELY CONCENTRATED CREATIVE CLASS OCCUPATIONS BY WORKFORCE Wellington County

| Place of Residence (net surplus of outward commuters) |
|--|
| <p>Management Occupations</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Financial Managers • Senior Managers - Financial, communications and other business services • Senior Managers - Trade, broadcasting and other services • Computer and Information Systems Managers • Facility Operation and Maintenance Managers |
| <p>Healthcare Practitioners and Technical Occupations</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Registered Nurses |
| <p>Education, Training, and Library Occupations</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Elementary School and Kindergarten Teachers • Secondary School Teachers • College and other Vocational Instructors |
| <p>Business and Financial Operations Occupations</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Financial Auditors and Accountants |
| <p>Computer and Mathematical Occupations</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Information Systems Analysts and Consultants • Computer Programmers and Interactive Media Developers |
| <p>High-end Sales and Sales Management</p> <p><i>led by...</i></p> <ul style="list-style-type: none"> • Sales, Marketing and Advertising Managers |

| Place of Work (net surplus of inward commuters) |
|---|
| <p>There are no major occupational groups that collectively have a net surplus of inward commuters to Wellington County. There are however individual occupations that have a small net surplus of inward commuters and they are:</p> <ul style="list-style-type: none"> • Post-secondary Teaching and Research Assistants • Industrial Engineering and Manufacturing Technologists and Technicians • Industrial and Manufacturing Engineers • Mechanical Engineers |

4 Concentration of Local Creative Class Workers

Measuring the concentration level of an occupation in Wellington County compared to the concentration level in Ontario produces a location quotient. This quotient indicates the local areas of specialization, as well as possible shortages.

$$\text{Location Quotient} = \frac{\% \text{ of local employment in an occupation}}{\% \text{ of provincial employment in an occupation}}$$

A location quotient of 1.00 would mean that the occupation is equally concentrated in this County as it is at the provincial level.

If a location quotient is **greater** than 1.25, the occupation is highly concentrated in the local workforce.

If a location quotient is **less** than .75, the occupation may be under-represented in the local workforce.

In Wellington County, the most heavily concentrated creative class occupation compared to the provincial average is Agricultural and fish products inspectors. They are over eight times as heavily concentrated in this area as they are in Ontario. There are ten other occupations with workforces that are each over twice as heavily concentrated in this County as they are in Ontario.

In total there are 32 creative class occupations that are of high local concentration compared to Ontario and have at least 20 local workers. Grouped by their wider occupational groups, the breakdown is as follows:

- 17 Natural and Applied Science Occupations
- 5 Health Occupations
- 4 Social Science, Education, Government Service and Religion Occupations
- 3 Management Occupations
- 2 Business, Finance and Administrative Occupations
- 1 Arts, Culture, Recreation and Sport Occupations

There are many more creative class occupations that are of low local concentration compared to Ontario. Most are of expectably low concentration because the area's industrial composition doesn't support their employment, however certain occupations may be essential to any workforce and may be under-represented.

HIGH LOCATION QUOTIENTS
Creative Class Occupations-Wellington County
(*Super-Creative Core)

| Creative Class Occupation (with NOC ¹ Code) | Location Quotient |
|---|-------------------|
| * 2222 Agricultural and fish products inspectors | 8.96 |
| * 2123 Agricultural representatives, consultants and specialists | 5.92 |
| * 4122 Post-secondary teaching and research assistants | 3.99 |
| 3114 Veterinarians | 3.87 |
| * 2121 Biologists and related scientists | 3.26 |
| * 2221 Biological technologists and technicians | 3.06 |
| * 4121 University professors | 2.88 |
| * 2152 Landscape architects | 2.79 |
| * 2141 Industrial and manufacturing engineers | 2.37 |
| * 2115 Other professional occupations in physical sciences | 2.07 |
| 3213 Veterinary and animal health technologists and technicians | 2.03 |
| * 2263 Inspectors in public and environmental health and occupational health and safety | 1.91 |
| * 2233 Industrial engineering and manufacturing technologists and technicians | 1.85 |
| * 2154 Land surveyors | 1.83 |
| 0212 Architecture and science managers | 1.81 |
| * 2251 Architectural technologists and technicians | 1.81 |
| * 4143 Educational counsellors | 1.75 |
| * 2262 Engineering inspectors and regulatory officers | 1.75 |
| 3123 Other professional occupations in health diagnosing and treating | 1.64 |
| 0113 Purchasing managers | 1.63 |
| 3232 Midwives and practitioners of natural healing | 1.58 |
| * 2243 Industrial instrument technicians and mechanics | 1.56 |
| 1234 Insurance underwriters | 1.53 |
| * 5244 Artisans and craftspersons | 1.45 |
| * 4161 Natural and applied science policy researchers, consultants and program officers | 1.41 |
| * 2225 Landscape and horticultural technicians and specialists | 1.35 |
| * 2211 Chemical technologists and technicians | 1.32 |
| 3122 Chiropractors | 1.31 |
| 1231 Bookkeepers | 1.30 |
| 0312 Administrators, post-secondary education and vocational training | 1.28 |
| * 2132 Mechanical engineers | 1.25 |
| * 2153 Urban and land use planners | 1.25 |

Interpretation example:

- For every one Agricultural and fish products inspector per capita in Ontario, there are 8.96 Agricultural and fish products inspectors per capita in Wellington County.

*Each occupation listed has a minimum of 20 local workers

¹ National Occupation Classification

LOW LOCATION QUOTIENTS
Creative Class Occupations-Wellington County
(*Super-Creative Core)

| Creative Class Occupation (with NOC Code) | Location Quotient |
|--|-------------------|
| * 2147 Computer engineers (except software engineers) | 0.18 |
| * 4112 Lawyers and Québec notaries | 0.23 |
| 3215 Medical radiation technologists | 0.25 |
| * 5125 Translators, terminologists and interpreters | 0.27 |
| * 2283 Systems testing technicians | 0.28 |
| 1113 Securities agents, investment dealers and brokers | 0.29 |
| * 2133 Electrical and electronics engineers | 0.31 |
| * 4165 Health policy researchers, consultants and program officers | 0.31 |
| * 4164 Social policy researchers, consultants and program officers | 0.32 |
| 3234 Ambulance attendants and other paramedical occupations | 0.34 |
| * 5131 Producers, directors, choreographers and related occupations | 0.36 |
| 1235 Assessors, valuers and appraisers | 0.36 |
| 1112 Financial and investment analysts | 0.38 |
| 0012 Senior government managers and officials | 0.39 |
| * 5243 Theatre, fashion, exhibit and other creative designers | 0.39 |
| * 2281 Computer network technicians | 0.40 |
| 0213 Computer and information systems managers | 0.42 |
| * 2171 Information systems analysts and consultants | 0.44 |
| 0131 Telecommunication carriers managers | 0.44 |
| * 5225 Audio and video recording technicians | 0.44 |
| * 2242 Electronic service technicians (household and business equipment) | 0.46 |
| * 2172 Database analysts and data administrators | 0.46 |
| * 2173 Software engineers and designers | 0.47 |
| * 4152 Social workers | 0.49 |
| * 4131 College and other vocational instructors | 0.50 |
| 1233 Insurance adjusters and claims examiners | 0.50 |
| 1121 Specialists in human resources | 0.51 |
| 0122 Banking, credit and other investment managers | 0.53 |
| * 2151 Architects | 0.53 |
| 1114 Other financial officers | 0.55 |
| * 2174 Computer programmers and interactive media developers | 0.57 |
| 1122 Professional occupations in business services to management | 0.57 |
| * 2282 User support technicians | 0.58 |
| 0013 Senior managers - financial, communications and other business services | 0.58 |

Interpretation example:

- The local share of Computer engineers (except software engineers) per capita is only 18% of the share of Computer engineers (except software engineers) per capita at the provincial level.

*Each occupation listed has a minimum of 20 local workers

LOW LOCATION QUOTIENTS (continued)
Creative Class Occupations-Wellington County
(*Super-Creative Core)

| Creative Class Occupation (with NOC Code) | Location Quotient |
|--|-------------------|
| 3111 Specialist physicians | 0.58 |
| 1236 Customs, ship and other brokers | 0.59 |
| *2241 Electrical and electronics engineering technologists and technicians | 0.60 |
| 0412 Government managers, economic analysis, policy development and program administration | 0.60 |
| *5231 Announcers and other broadcasters | 0.60 |
| *2255 Mapping and related technologists and technicians | 0.60 |
| 0121 Insurance, real estate and financial brokerage managers | 0.61 |
| *5122 Editors | 0.61 |
| *4151 Psychologists | 0.61 |
| *4166 Education policy researchers, consultants and program officers | 0.61 |
| 1111 Financial auditors and accountants | 0.63 |
| *5242 Interior designers | 0.63 |
| 0512 Managers, publishing, motion pictures, broadcasting and performing arts | 0.64 |
| 0111 Financial managers | 0.65 |
| 1232 Loan officers | 0.65 |
| 3131 Pharmacists | 0.66 |
| 3113 Dentists | 0.66 |
| *4163 Business development officers and marketing researchers and consultants | 0.67 |
| 0015 Senior managers - trade, broadcasting and other services, n.e.c. | 0.67 |
| 3231 Opticians | 0.69 |
| 0011 Legislators | 0.71 |
| *5124 Professional occupations in public relations and communications | 0.72 |
| *4162 Economists and economic policy researchers and analysts | 0.73 |
| *5134 Dancers | 0.73 |

*Each occupation listed has a minimum of 20 local workers

5 Creative Class Workers by Industry

In the following tables, a high or low concentration of creative class workers in an industry is any in which the concentration is more than eight percentage points above or below the average of all industries ie. A creative class employment share of more than 37% is considered high and an employment share less than 21% is considered low.

High Concentrations

Four industries in this area employ over 1,000 creative class workers. Education leads all sectors with nearly 7,000 creative class workers, followed by Professional, scientific and technical services which employs nearly 4,000. The top seven industries with the highest volume of creative class workers, each also have at least half of its workforce comprised of creative class workers. Two small manufacturing industries have high creative class concentrations.

Wellington County's Insurance carrier industry has a higher share of creative class workers compared to the provincial level of that industry (53% locally compared to 47% provincially). Local Miscellaneous retailers also enjoy this higher creative class content (39% locally compared to 32% provincially). Local Securities and commodity contract industries have a significantly lower share of creative class workers than the provincial industry (62% locally compared to 73% provincially). A similar situation exists in the Publishing industry (46% locally compared to 61% provincially).

HIGH CREATIVE CLASS CONTENT INDUSTRIES Wellington County

| Industry (with NAICS ² code) | Total Employment | Creative Class Employment | Creative Class Employment Share |
|--|------------------|---------------------------|---------------------------------|
| ALL INDUSTRIES | 97,400 | 28,255 | 29.1% |
| 611 Educational services | 9,175 | 6,920 | 75.4% |
| 541 Professional, scientific and technical services | 5,330 | 3,900 | 73.2% |
| 622 Hospitals | 2,210 | 1,490 | 67.4% |
| 621 Ambulatory health care services | 2,650 | 1,470 | 55.5% |
| 524 Insurance carriers and related activities | 1,560 | 820 | 52.6% |
| 912 Provincial and territorial public administration | 1,045 | 545 | 52.2% |
| 813 Religious, grant-making, civic, professional org's | 1,050 | 540 | 51.4% |
| 522 Credit intermediation and related activities | 1,140 | 530 | 46.5% |
| 711 Performing arts, spectator sports | 565 | 395 | 69.9% |
| 911 Federal government public administration | 615 | 335 | 54.5% |
| 453 Miscellaneous store retailers | 750 | 290 | 38.7% |
| 523 Securities, commodity contracts | 410 | 255 | 62.2% |
| 511 Publishing industries (except Internet) | 525 | 240 | 45.7% |
| 519 Other information services | 335 | 235 | 70.1% |
| 414 Personal and household goods wholesales | 415 | 165 | 39.8% |
| 512 Motion picture and sound recording industries | 150 | 105 | 70.0% |
| 334 Computer and electronic product manufacturing | 160 | 80 | 50.0% |
| 515 Broadcasting (except Internet) | 45 | 55 | 122.2% |
| 412 Petroleum product wholesaler-distributors | 55 | 50 | 90.9% |
| 551 Management of companies and enterprises | 120 | 50 | 41.7% |

² North American Industry Classification System

Low Concentrations

Creative class occupations are particularly low in the broader sectors of Accommodation and food services, Agriculture, Transportation and warehousing, Construction and Manufacturing.

Of the industries with a low concentration of creative class workers, Transportation equipment manufacturing has the largest volume of creative class workers. 14 of the 21 manufacturing sectors have low creative class concentrations.

Amongst the most prominent local industries with low creative class concentrations, there are none that have significantly higher shares of creative class workers compared to the provincial level of that industry. There are however several industries that have a lower local share of creative class workers than at the provincial level. They include Electrical equipment, appliance and component manufacturing (16% locally compared to 26% provincially), Administrative and support services (12% locally compared to 17% provincially), and Food manufacturing (8% locally compared to 12% provincially). These local industries, with low concentrations of creative class workers compared to other local industries as well as the provincial level of the same industry, could be experiencing shortages of creative class workers.

LOW CREATIVE CLASS CONTENT INDUSTRIES Wellington County

| Industry (with NAICS code) | Total Employment | Creative Class Employment | Creative Class Employment Share |
|---|------------------|---------------------------|---------------------------------|
| ALL INDUSTRIES | 97,400 | 28,255 | 29.1% |
| 336 Transportation equipment manufacturing | 7,975 | 885 | 11.1% |
| 332 Fabricated metal product manufacturing | 3,510 | 350 | 10.0% |
| 335 Electrical equipment, appliance and component manufacturing | 2,085 | 325 | 15.6% |
| 624 Social assistance | 1,740 | 325 | 18.7% |
| 445 Food and beverage stores | 2,490 | 305 | 12.2% |
| 811 Repair and maintenance | 1,615 | 290 | 18.0% |
| 561 Administrative and support services | 2,185 | 260 | 11.9% |
| 326 Plastics and rubber products manufacturing | 1,785 | 210 | 11.8% |
| 311 Food manufacturing | 2,570 | 195 | 7.6% |
| 452 General merchandise stores | 1,145 | 175 | 15.3% |
| 312 Beverage and tobacco product manufacturing | 850 | 155 | 18.2% |
| 111-112 Farms | 3,890 | 150 | 3.9% |
| 484 Truck transportation | 1,585 | 150 | 9.5% |
| 238 Specialty trade contractors | 1,595 | 145 | 9.1% |
| 531 Real estate | 950 | 140 | 14.7% |
| 444 Building material and garden equipment and supplies dealers | 700 | 120 | 17.1% |
| 812 Personal and laundry services | 1,285 | 115 | 8.9% |
| 327 Non-metallic mineral product manufacturing | 730 | 85 | 11.6% |
| 413 Food, beverage and tobacco wholesaler-distributors | 490 | 85 | 17.3% |
| 237 Heavy and civil engineering construction | 470 | 75 | 16.0% |
| 447 Gasoline stations | 320 | 55 | 17.2% |
| 221 Utilities | 330 | 50 | 15.2% |

LOW CREATIVE CLASS CONTENT INDUSTRIES (continued)
Wellington County

| Industry (with NAICS code) | Total Employment | Creative Class Employment | Creative Class Employment Share |
|--|------------------|---------------------------|---------------------------------|
| ALL INDUSTRIES | 97,400 | 28,255 | 29.1% |
| 532 Rental and leasing services | 290 | 50 | 17.2% |
| 722 Food services and drinking places | 5,155 | 45 | 0.9% |
| 339 Miscellaneous manufacturing | 400 | 45 | 11.3% |
| 321 Wood product manufacturing | 460 | 40 | 8.7% |
| 313 Textile mills | 205 | 40 | 19.5% |
| 322 Paper manufacturing | 600 | 35 | 5.8% |
| 562 Waste management and remediation services | 330 | 35 | 10.6% |
| 315 Clothing manufacturing | 275 | 30 | 10.9% |
| 331 Primary metal manufacturing | 220 | 30 | 13.6% |
| 337 Furniture and related product manufacturing | 530 | 25 | 4.7% |
| 485 Transit and ground passenger transportation | 550 | 20 | 3.6% |
| 314 Textile product mills | 115 | 20 | 17.4% |
| 491 Postal service | 310 | 10 | 3.2% |
| 488 Support activities for transportation | 130 | 10 | 7.7% |
| 493 Warehousing and storage | 90 | 10 | 11.1% |
| 113 Forestry and logging | 65 | 0 | 0.0% |
| 212 Mining (except oil and gas) | 145 | 0 | 0.0% |
| 316 Leather and allied product manufacturing | 35 | 0 | 0.0% |
| 481 Air transportation | 10 | 0 | 0.0% |
| 492 Couriers and messengers | 180 | 0 | 0.0% |
| 518 Internet service providers, web search portals, and data processing services | 45 | 0 | 0.0% |
| 814 Private households | 260 | 0 | 0.0% |
| 919 International and other extra-territorial public administration | 10 | 0 | 0.0% |

6 Opportunities in Growth Sectors for Creative Class Workers in Declining Industries

Declining industries in Wellington County are those that had both a loss of workers between 2001 and 2006 and a loss (or no gain) of business establishments between 2003 and 2010. Growth industries in Wellington County are those that had both a gain of workers between 2001 and 2006 and a gain (or no loss) of business establishments between 2003 and 2010. Of the ten sectors with significant employment loss, four of these were sectors that had a particularly low creative class content. Computer and electronic product manufacturing was the only sector with a high creative class content that declined in employment during this period.

DECLINING INDUSTRIES Wellington County

| Industry (with NAICS code) | 2001 to 2006 Employment Change | 2003 to 2010 Establishment Change | Creative Class Content |
|---|--------------------------------------|---|---------------------------|
| 335 Electrical equipment, appliance and component manufacturing | -565 | -11 | Low |
| 236 Construction of buildings | -300 | -19 | Average |
| 312 Beverage and tobacco product manufacturing | -250 | -1 | Low |
| 334 Computer and electronic product manufacturing | -225 | 0 | High |
| 333 Machinery manufacturing | -195 | -16 | Low |
| 325 Chemical manufacturing | -170 | -3 | Average |
| 315 Clothing manufacturing | -160 | -2 | Low |
| 451 Sporting goods, hobby, book and music stores | -160 | -2 | Average |
| 415 Motor vehicle and parts wholesaler-distributors | -155 | -5 | Average |
| 323 Printing and related support activities | -145 | -4 | Average |

GROWTH INDUSTRIES
Wellington County

| Industry (with NAICS code) | 2001 to 2006 Employment Change | 2003 to 2010 Establishment Change | |
|----------------------------|---|---|----|
| 336 | Transportation equipment manufacturing | 2070 | 5 |
| 541 | Professional, scientific and technical services | 1245 | 66 |
| 326 | Plastics and rubber products manufacturing | 800 | 3 |
| 561 | Administrative and support services | 640 | 40 |
| 232 | Trade contracting | 515 | 37 |
| 623 | Nursing and residential care facilities | 450 | 25 |
| 445 | Food and beverage stores | 390 | 30 |
| 722 | Food services and drinking places | 355 | 19 |
| 621 | Ambulatory health care services | 340 | 62 |
| 413 | Food, beverage and tobacco wholesaler-distributors | 270 | 10 |
| 913 | Local, municipal and regional public administration | 255 | 0 |
| 812 | Personal and laundry services | 205 | 11 |
| 562 | Waste management and remediation services | 165 | 2 |
| 813 | Religious, grant-making, civic, and professional organizations | 155 | 16 |
| 446 | Health and personal care stores | 150 | 5 |
| 713 | Amusement, gambling and recreation industries | 130 | 1 |
| 522 | Credit intermediation and related activities | 120 | 39 |
| 511 | Publishing industries | 100 | 8 |
| 332 | Fabricated metal product manufacturing | 90 | 3 |
| 115 | Support activities for agriculture and forestry | 90 | 1 |
| 721 | Accommodation services | 80 | 3 |
| 514 | Information services and data processing services | 75 | 0 |
| 513 | Broadcasting and telecommunications | 70 | 10 |
| 441 | Motor vehicle and parts dealers | 70 | 2 |
| 414 | Personal and household goods wholesaler-distributors | 65 | 9 |
| 212 | Mining (except oil and gas) | 65 | 2 |
| 523 | Securities, commodity contracts, and other financial investments | 60 | 12 |
| 911 | Federal government public administration | 60 | 0 |
| 113 | Forestry and logging | 50 | 3 |
| 624 | Social assistance | 30 | 2 |
| 531 | Real estate | 30 | 0 |

GROWTH INDUSTRIES (continued)
Wellington County

| Industry (with NAICS code) | 2001 to 2006 Employment Change | 2003 to 2010 Establishment Change | |
|---|--------------------------------------|---|--|
| 711 Performing arts, spectator sports and related industries | 25 | 1 | |
| 213 Support activities for mining and oil and gas extraction | 20 | 0 | |
| 491 Postal service | 15 | 1 | |
| 324 Petroleum and coal products manufacturing | 15 | 0 | |
| 448 Clothing and clothing accessories stores | 10 | 43 | |
| 919 International and other extra-territorial public administration | 10 | 0 | |

The following tables examine growth industries where creative class workers in the top declining industries could possibly seek work. With each occupation and industry listed is the number of workers in 2006.

Declining Industry: ELECTRICAL EQUIPMENT, APPLIANCE AND COMPONENT MANUFACTURING
Jobs lost 2001 to 2006: 565
Number of Employers lost 2003 to 2010 : 11

| Creative class occupations in Electrical Equipment, Appliance and Component Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|--|
| Industrial and manufacturing engineers (65) | <ul style="list-style-type: none"> • Plastics and rubber products manufacturing (35) • Fabricated metal product manufacturing (25) |
| Industrial engineering and manufacturing technologists and technicians (40) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (35) • Plastics and rubber products manufacturing (20) • Professional, scientific and technical services (20) |
| Senior managers - goods production, utilities, transportation and construction (35) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (40) • Heavy and civil engineering construction (15) • Plastics and rubber products manufacturing (15) |
| Industrial designers (20) | <ul style="list-style-type: none"> • Professional, scientific and technical services (20) |
| Mechanical engineers (15) | <ul style="list-style-type: none"> • Professional, scientific and technical services (90) • Fabricated metal product manufacturing (20) |

Interpretation example:

• As of 2006, there were 65 Industrial and manufacturing engineers in the declining industry of Electrical Equipment, Appliance and Component Manufacturing. The growth industry of Plastics and rubber products manufacturing has 35 Industrial and manufacturing engineers in its workforce, while Fabricated metal product manufacturing has 25 Industrial and manufacturing engineers.

* Professional, scientific and technical services includes: legal, accounting, tax preparation, bookkeeping, advertising, consulting, architecture, engineering, computer system design, scientific research and development.

Declining Industry: CONSTRUCTION OF BUILDINGS
Jobs lost 2001 to 2006: 300
Number of Employers lost 2003 to 2010 : 19

| Creative class occupations in Construction of Buildings | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|--|
| Bookkeepers (50) | <ul style="list-style-type: none"> • Professional, scientific and technical services (275) • Specialty trade contractors (45) • Motor vehicle and parts dealers (75) • Administrative and support services (55) |
| Construction estimators (35) | <ul style="list-style-type: none"> • Specialty trade contractors (20) |
| Senior managers - goods production, utilities, transportation and construction (20) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (40) • Heavy and civil engineering construction (15) • Plastics and rubber products manufacturing (15) |
| Drafting technologists and technicians (15) | <ul style="list-style-type: none"> • Professional, scientific and technical services (70) • Fabricated metal product manufacturing (40) • Heavy and civil engineering construction (10) • Specialty trade contractors (10) |

Declining Industry: BEVERAGE AND TOBACCO PRODUCT MANUFACTURING
Jobs lost 2001 to 2006: 250
Number of Employers lost 2003 to 2010 : 1

| Creative class occupations in Beverage and Tobacco Product Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|--|--|
| Financial managers (20) | <ul style="list-style-type: none"> • Professional, scientific and technical services (30) • Local, municipal and regional public administration (25) |
| Industrial and manufacturing engineers (15) | <ul style="list-style-type: none"> • Plastics and rubber products manufacturing (35) • Fabricated metal product manufacturing (25) |
| Industrial instrument technicians and mechanics (15) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (15) • Plastics and rubber products manufacturing (10) • Professional, scientific and technical services (10) • Waste management and remediation services (10) |

Declining Industry: COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING
Jobs lost 2001 to 2006: 225
Number of Employers lost 2003 to 2010 : 0

| Creative class occupations in Computer and Electronic Product Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|--|---|
| Sales, marketing and advertising managers (20) | <ul style="list-style-type: none"> • Professional, scientific and technical services (115) • Personal / household goods wholesaler-distributors (40) • Support activities for agriculture and forestry (35) • Food, beverage and tobacco wholesaler-distributors (25) • Furniture and related product manufacturing (30) |
| Computer and information systems managers (10) | <ul style="list-style-type: none"> • Professional, scientific and technical services (40) • Food, beverage and tobacco wholesaler-distributors (10) • Telecommunications (10) |
| Electrical and electronics engineers (10) | <ul style="list-style-type: none"> • Professional, scientific and technical services (20) • Plastics and rubber products manufacturing (10) |
| Industrial and manufacturing engineers (10) | <ul style="list-style-type: none"> • Plastics and rubber products manufacturing (35) • Fabricated metal product manufacturing (25) |
| Electrical and electronics engineering technologists and technicians (10) | <ul style="list-style-type: none"> • Specialty trade contractors (10) |

Declining Industry: MACHINERY MANUFACTURING
Jobs lost 2001 to 2006: 195
Number of Employers lost 2003 to 2010 : 16

| Creative class occupations in Machinery Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|---|
| Mechanical engineers (100) | <ul style="list-style-type: none"> • Professional, scientific and technical services (90) • Fabricated metal product manufacturing (20) |
| Senior managers - goods production, utilities, transportation and construction (75) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (40) • Heavy and civil engineering construction (15) • Plastics and rubber products manufacturing (15) |
| Sales, marketing and advertising managers (55) | <ul style="list-style-type: none"> • Professional, scientific and technical services (115) • Personal / household goods wholesaler-distributors (40) • Support activities for agriculture and forestry (35) • Food, beverage and tobacco wholesaler-distributors (25) |
| Industrial engineering and manufacturing technologists and technicians (50) | <ul style="list-style-type: none"> • Fabricated metal product manufacturing (35) • Plastics and rubber products manufacturing (20) • Professional, scientific and technical services (20) |
| Industrial and manufacturing engineers (40) | <ul style="list-style-type: none"> • Professional, scientific and technical services (220) • Computer and electronic product manufacturing (110) • Plastics and rubber products manufacturing (25) |
| Drafting technologists and technicians (30) | <ul style="list-style-type: none"> • Professional, scientific and technical services (70) • Fabricated metal product manufacturing (40) • Heavy and civil engineering construction (10) • Specialty trade contractors (10) |
| Purchasing managers (30) | <ul style="list-style-type: none"> • Ambulatory health care services (10) |
| Financial managers (30) | <ul style="list-style-type: none"> • Professional, scientific and technical services (30) • Local, municipal and regional public administration (25) |

Declining Industry: CHEMICAL MANUFACTURING
Jobs lost 2001 to 2006: 170
Number of Employers lost 2003 to 2010 : 3

| Creative class occupations in Chemical Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|---|
| Chemists (50) | <ul style="list-style-type: none"> Professional, scientific and technical services (30) |
| Senior managers - goods production, utilities, transportation and construction (40) | <ul style="list-style-type: none"> Fabricated metal product manufacturing (40) Heavy and civil engineering construction (15) Plastics and rubber products manufacturing (15) |
| Chemical technologists and technicians (30) | <ul style="list-style-type: none"> Professional, scientific and technical services (65) |
| Sales, marketing and advertising managers (25) | <ul style="list-style-type: none"> Professional, scientific and technical services (115) Personal / household goods wholesaler-distributors (40) Support activities for agriculture and forestry (35) Food, beverage and tobacco wholesaler-distributors (25) |

Declining Industry: CLOTHING MANUFACTURING
Jobs lost 2001 to 2006: 160
Number of Employers lost 2003 to 2010 : 2

| Creative class occupations in Clothing Manufacturing | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|---|
| Senior managers - goods production, utilities, transportation and construction (10) | <ul style="list-style-type: none"> Fabricated metal product manufacturing (40) Heavy and civil engineering construction (15) Plastics and rubber products manufacturing (15) |
| Facility operation and maintenance managers (10) | <ul style="list-style-type: none"> Local, municipal and regional public administration (20) Plastics and rubber products manufacturing (15) |

Declining Industry: SPORTING GOODS, HOBBY, BOOK, AND MUSIC STORES
Jobs lost 2001 to 2006: 160
Number of Employers lost 2003 to 2010 : 2

| Creative class occupations in Sporting Goods, Hobby, Book, and Music Stores | Growth industries where this occupation is prevalent and offers employment opportunities |
|---|---|
| Retail trade managers (80) | <ul style="list-style-type: none"> Food and beverage stores (285) Motor vehicle and parts dealers (185) Health and personal care stores (35) |

Declining Industry: Motor Vehicle and Parts Wholesaler-Distributors
Jobs lost 2001 to 2006: 155
Number of Employers lost 2003 to 2010 : 5

| Creative class occupations in Motor Vehicle and Parts Wholesaler-Distributors | Growth industries where this occupation is prevalent and offers employment opportunities |
|--|---|
| Sales, marketing and advertising managers (30) | <ul style="list-style-type: none"> • Professional, scientific and technical services (115) • Personal / household goods wholesaler-distributors (40) • Support activities for agriculture and forestry (35) • Food, beverage and tobacco wholesaler-distributors (25) |
| Retail trade managers (25) | <ul style="list-style-type: none"> • Food and beverage stores (285) • Motor vehicle and parts dealers (185) • Health and personal care stores (35) |
| Bookkeepers (20) | <ul style="list-style-type: none"> • Professional, scientific and technical services (275) • Specialty trade contractors (45) • Motor vehicle and parts dealers (75) • Administrative and support services (55) |

Declining Industry: Printing and Related Support Activities
Jobs lost 2001 to 2006: 145
Number of Employers lost 2003 to 2010 : 4

| Creative class occupations in Printing and Related Support Activities | Growth industries where this occupation is prevalent and offers employment opportunities |
|--|---|
| Graphic designers and illustrators (25) | <ul style="list-style-type: none"> • Professional, scientific and technical services (165) • Publishing industries (except Internet) (20) |
| Financial managers (10) | <ul style="list-style-type: none"> • Professional, scientific and technical services (30) • Local, municipal and regional public administration (25) |
| Retail trade managers (10) | <ul style="list-style-type: none"> • Food and beverage stores (285) • Motor vehicle and parts dealers (185) • Health and personal care stores (35) |

Appendix

Complete List: CREATIVE CLASS OCCUPATIONS (*Super-Creative Core)

| | |
|--------|---|
| A011 | Legislators |
| A012 | Senior government managers and officials |
| A013 | Senior managers - Financial, communications and other business services |
| A014 | Senior managers - Health, education, social and community services and membership organizations |
| A015 | Senior managers - Trade, broadcasting and other services, n.e.c. |
| A016 | Senior managers - Goods production, utilities, transportation and construction |
| A111 | Financial managers |
| A112 | Human resources managers |
| A113 | Purchasing managers |
| A114 | Other administrative services managers |
| A121 | Engineering managers |
| A122 | Computer and information systems managers |
| A123 | Architecture and science managers |
| A131 | Sales, marketing and advertising managers |
| A141 | Facility operation and maintenance managers |
| A211 | Retail trade managers |
| A301 | Insurance, real estate and financial brokerage managers |
| A302 | Banking, credit and other investment managers |
| A303 | Other business services managers |
| A311 | Telecommunication carriers managers |
| A321 | Managers in health care |
| A322 | Administrators, post-secondary education and vocational training |
| A323 | School principals and administrators of elementary and secondary education |
| A324 | Managers in social, community and correctional services |
| A331 | Government managers, health and social policy development and program administration |
| A332 | Government managers, economic analysis, policy development and program administration |
| A333 | Government managers, education policy development and program administration |
| A334 | Other managers in public administration |
| A341 | Library, archive, museum and art gallery managers |
| A342 | Managers, publishing, motion pictures, broadcasting and performing arts |
| A343 | Recreation and sports program and service directors |
| B011 | Financial auditors and accountants |
| B012 | Financial and investment analysts |
| B013 | Securities agents, investment dealers and brokers |
| B014 | Other financial officers |
| B021 | Specialists in human resources |
| B022 | Professional occupations in business services to management |
| B111 | Bookkeepers |
| B112 | Loan officers |
| B113 | Insurance adjusters and claims examiners |
| B114 | Insurance underwriters |
| B115 | Assessors, valuers and appraisers |
| B116 | Customs, ship and other brokers |
| * C011 | Physicists and astronomers |
| * C012 | Chemists |
| * C013 | Geologists, geochemists and geophysicists |
| * C014 | Meteorologists |
| * C015 | Other professional occupations in physical sciences |
| * C021 | Biologists and related scientists |

Complete List: CREATIVE CLASS OCCUPATIONS (continued) (*Super-Creative Core)

- * C022 Forestry professionals
- * C023 Agricultural representatives, consultants and specialists
- * C031 Civil engineers
- * C032 Mechanical engineers
- * C033 Electrical and electronics engineers
- * C034 Chemical engineers
- * C041 Industrial and manufacturing engineers
- * C042 Metallurgical and materials engineers
- * C043 Mining engineers
- * C044 Geological engineers
- * C045 Petroleum engineers
- * C046 Aerospace engineers
- * C047 Computer engineers (except software engineers)
- * C048 Other professional engineers, n.e.c.
- * C051 Architects
- * C052 Landscape architects
- * C053 Urban and land use planners
- * C054 Land surveyors
- * C061 Mathematicians, statisticians and actuaries
- * C071 Information systems analysts and consultants
- * C072 Database analysts and data administrators
- * C073 Software engineers
- * C074 Computer programmers and interactive media developers
- * C075 Web designers and developers
- * C111 Chemical technologists and technicians
- * C112 Geological and mineral technologists and technicians
- * C113 Meteorological technicians
- * C121 Biological technologists and technicians
- * C122 Agricultural and fish products inspectors
- * C123 Forestry technologists and technicians
- * C124 Conservation and fishery officers
- * C125 Landscape and horticultural technicians and specialists
- * C131 Civil engineering technologists and technicians
- * C132 Mechanical engineering technologists and technicians
- * C133 Industrial engineering and manufacturing technologists and technicians
- * C134 Construction estimators
- * C141 Electrical and electronics engineering technologists and technicians
- * C142 Electronic service technicians (household and business equipment)
- * C143 Industrial instrument technicians and mechanics
- * C144 Aircraft instrument, electrical and avionics mechanics, technicians and inspectors
- * C151 Architectural technologists and technicians
- * C152 Industrial designers
- * C153 Drafting technologists and technicians
- * C154 Land survey technologists and technicians
- * C155 Mapping and related technologists and technicians
- * C161 Non-destructive testers and inspectors
- * C162 Engineering inspectors and regulatory officers
- * C163 Inspectors in public and environmental health and occupational health and safety
- * C164 Construction inspectors
- * C171 Air pilots, flight engineers and flying instructors
- * C172 Air traffic control and related occupations

Complete List: CREATIVE CLASS OCCUPATIONS (continued) (*Super-Creative Core)

- * C173 Deck officers, water transport
- * C174 Engineer officers, water transport
- * C175 Railway traffic controllers and marine traffic regulators
- * C181 Computer and network operators and web technicians
- * C182 User support technicians
- * C183 Systems testing technicians
- D011 Specialist physicians
- D012 General practitioners and family physicians
- D013 Dentists
- D014 Veterinarians
- D021 Optometrists
- D022 Chiropractors
- D023 Other professional occupations in health diagnosing and treating
- D031 Pharmacists
- D032 Dietitians and nutritionists
- D041 Audiologists and speech-language pathologists
- D042 Physiotherapists
- D043 Occupational therapists
- D044 Other professional occupations in therapy and assessment
- D111 Head nurses and supervisors
- D112 Registered nurses
- D211 Medical laboratory technologists and pathologists' assistants
- D212 Medical laboratory technicians
- D213 Veterinary and animal health technologists and technicians
- D214 Respiratory therapists, clinical perfusionists and cardio-pulmonary technologists
- D215 Medical radiation technologists
- D216 Medical sonographers
- D217 Cardiology technologists
- D218 Electroencephalographic and other diagnostic technologists, n.e.c.
- D219 Other medical technologists and technicians (except dental health)
- D221 Denturists
- D222 Dental hygienists and dental therapists
- D223 Dental technologists, technicians and laboratory bench workers
- D231 Opticians
- D232 Midwives and practitioners of natural healing
- D233 Licensed practical nurses
- D234 Ambulance attendants and other paramedical occupations
- D235 Other technical occupations in therapy and assessment
- * E011 Judges
- * E012 Lawyers and Quebec notaries
- * E021 Psychologists
- * E022 Social workers
- * E023 Family, marriage and other related counsellors
- * E024 Ministers of religion
- * E025 Probation and parole officers and related occupations
- * E031 Natural and applied science policy researchers, consultants and program officers
- * E032 Economists and economic policy researchers and analysts
- * E033 Business development officers and marketing researchers and consultants
- * E034 Social policy researchers, consultants and program officers
- * E035 Education policy researchers, consultants and program officers

Complete List: CREATIVE CLASS OCCUPATIONS (continued) (*Super-Creative Core)

- * E036 Recreation, sports and fitness program supervisors and consultants
- * E037 Program officers unique to government
- * E038 Other professional occupations in social science, n.e.c.
- * E039 Health policy researchers, consultants and program officers
- * E111 University professors
- * E112 Post-secondary teaching and research assistants
- * E121 College and other vocational instructors
- * E131 Secondary school teachers
- * E132 Elementary school and kindergarten teachers
- * E133 Educational counsellors
- * F011 Librarians
- * F012 Conservators and curators
- * F013 Archivists
- * F021 Authors and writers
- * F022 Editors
- * F023 Journalists
- * F024 Professional occupations in public relations and communications
- * F025 Translators, terminologists and interpreters
- * F031 Producers, directors, choreographers and related occupations
- * F032 Conductors, composers and arrangers
- * F033 Musicians and singers
- * F034 Dancers
- * F035 Actors and comedians
- * F036 Painters, sculptors and other visual artists
- * F111 Library and archive technicians and assistants
- * F112 Technical occupations related to museums and art galleries
- * F121 Photographers
- * F122 Film and video camera operators
- * F123 Graphic arts technicians
- * F124 Broadcast technicians
- * F125 Audio and video recording technicians
- * F126 Other technical and co-ordinating occupations in motion pictures, broadcasting and the performing arts
- * F127 Support occupations in motion pictures, broadcasting and the performing arts
- * F131 Announcers and other broadcasters
- * F132 Other performers
- * F141 Graphic designers and illustrators
- * F142 Interior designers
- * F143 Theatre, fashion, exhibit and other creative designers
- * F144 Artisans and craftspersons
- * F145 Patternmakers, textile, leather and fur products
- * F151 Athletes
- * F152 Coaches
- * F153 Sports officials and referees
- * F154 Program leaders and instructors in recreation and sport



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