2020

IN-DEMAND SKILLED TRADES IN YORK REGION







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IN-DEMAND SKILLED TRADES IN YORK REGION

EXECUTIVE SUMMARY

This report has been written in response to a Ministry of Labour, Training and Skills Development requirement that all Local Employment Planning Councils and Workforce Development Boards consult with their local employers regarding in-demand skilled trades and their views on the apprenticeship system.

The findings of this report are based on data analysis, employer interviews, key informant interviews, employer focus groups and an employer survey.

While employers like the concept of apprenticeships, with the combination of on-the-job training supported by classroom instruction, they have concerns. By far their biggest is the combined impact of the retirement of the baby-boom generation and the declining number of youth choosing to enter the trades. The consequence of declining enrollment in apprenticeships over the years means that there are fewer experienced journeypersons to replace those who will be retiring and new apprentices cannot fill this gap.

Employers also voiced concern about the cost to their business of training apprentices, the financial challenges that apprentices face, and the complexity of navigating the apprenticeship process. Employers strongly feel that much more needs to be done to inform high school students about the attractions of the trades.

More than half of employers feel that technological change is increasing the skill requirements for skilled trade occupations, with the advent of more sophisticated machines and tools, the need for a range of digital skills. In some cases, completely new technology is emerging (for example, robotics in manufacturing or the growing market share of electric cars or the rapid change in the IT sector).

Despite the fact that there are 144 skilled trades in Ontario, the following five trades account for three-quarters of the registered journeypersons in York Region: Electrician (Construction and Maintenance); Automotive Service Technician; Hairstylist; Plumber; and Truck and Coach Technician.

Skilled trades categories where employers find difficulty hiring or where the data suggests the potential for a future shortage include:

- Auto Body and Collision Damage Repairer
- General Machinist
- Hairstylist
- Hoisting Engineer Tower Crane Operator
- Industrial Electrician
- Industrial Mechanic Millwright
- Tool and Die Maker
- Truck and Coach Technician

Employers identified that:

- 75% of employers find it very difficult to hire a journeyperson,
- A much lower 44% say it is very difficult to hire an apprentice,
- A considerable proportion of employers feel that the mismatch between the supply and demand of workers will get worse in the next two to three years,
- Two-thirds of employers report that only a few or no apprentices drop out of their training programs.

A little more than one-third (36%) or employers gave the apprenticeship system a positive rating (extremely effective or effective), a similar proportion (35%) gave it a lukewarm rating (somewhat effective), and 30% (slightly less than a third) gave it a negative rating (not so effective or not effective at all).

Introduction

The Government of Ontario has made a clear commitment to attract more people to the skilled trades and to encourage more employers to hire apprentices. As part of this goal, in the late spring of 2019, the Ministry of Labour, Training and Skills Development directed all Local Employment Planning Councils and Workforce Planning Boards to undertake an In-Demand Skilled Trades Project to provide local insights on labour market conditions for skilled trades and to obtain employer perspectives on the operations of the apprenticeship system.

To carry out this project, the Workforce Planning Board of York Region (WPBoard) undertook a literature review, analyzed local labour market data, interviewed employers and key informants, conducted employer focus groups and an employer survey, all for the purpose of gathering as much evidence as possible on which to base its findings. This report provides a summary of what we learned and includes data analysis, an overview of responses to the specific questions for which the Ministry sought answers, as well as additional insights we gained from our research project.

Through the latter half of 2019, WPBoard undertook 38 employer interviews, 10 interviews with key informants, and held five employer focus groups with a total of 38 participants. The employer survey attracted 115 employers who hire skilled tradespersons. In short, the project reflects approximately 200 engagements with employers and other stakeholders.

The result of this work has been communicated to the Ministry of Labour, Training and Skills Development. This report is intended to provide our local community with the benefits of this research, so that all stakeholders can better understand and engage with the apprenticeship system and the skilled trades labour market.

Insights from the data analysis¹

<u>Context</u>. Currently, there are 144 skilled trades in Ontario (12 trades were de-prescribed or removed from the list on July 1, 2019). There are 23 compulsory trades, meaning that a person cannot work in such a trade without being a journeyperson and without being registered with the Ontario College of Trades. No certificate is required to work in a voluntary trade, but employers may prefer someone who can demonstrate skills proficiency obtained by way of an apprenticeship and that person may earn a higher salary because of their certification.

An *apprentice* is someone who enters into a Registered Training Agreement with the Ministry of Labour, Training and Skills Development and who then registers with the Ontario College of Trades. Most apprentices spend 80-90% of their time learning their skill in the workplace and around 10-20% of their time learning in a classroom. Depending on the program, an apprenticeship program can last one to five years.

¹ There is a fuller data appendix available for York Region in this report

A *Certificate of Apprenticeship* is issued when the apprenticeship training is completed. There are 75 trades that also require passing an exam, which results in a *Certificate of Qualification*. Some trades have a *Red Seal* exam, which provides certification for every province in Canada.

An *occupation* is defined by the National Occupational Classification and does not distinguish between whether a job is a skilled trade or not.

<u>Limitations of the data</u>. Data analysis of skilled trades occupations is made more challenging because of how the data is reported. The Ontario College of Trades and the Ministry of Labour, Training and Skills Development collects registration data for journeypersons and apprentices by skilled trades program, while labour market data such as is collected through the Census by Statistics Canada is categorized by occupation. One can match skilled trades programs to occupations, however, there is not always a perfect match. For example, registrants in the Hairstylist skilled trades program are found in the occupation of Hairstylists and Barbers, yet barbers are not a skilled trade. As well, while all apprentices are registered, only journeypersons in compulsory trades are required to be registered and so occupations representing voluntary trades will number far more employed residents than there are registrations in the corresponding skilled trade program.

Indeed, for certain occupations, skilled trades workers can make up a very small percentage of all persons employed in that occupation, because that broad occupation may represent a wide range of sub-occupations, and because the skilled trade may be a voluntary trade, so that it is not necessary to obtain a certificate to work in that occupation.

<u>Numbers for apprentices, journeypersons, occupations</u>. This section illustrates the size of the skilled trades labour market in York Region.

Table 1: Top Five Trades by Registered Journeypersons, York, October 2019³

	York
Electrician — Construction and Maintenance	4292
Automotive Service Technician	3295
Hairstylist	2413
Plumber	1632
Truck and Coach Technician	1589

Bolded entries are compulsory trades

It is noteworthy that these five trades alone account for 80% of all registered journeypersons locally.

There is some difference when one lists the top five trades by apprentices (Table 2). It is also the case that registered apprentices are less concentrated in fewer trades, as these top five programs account for 59% of all local apprenticeships.

² A good example is the occupation of Transport Truck Driver, which includes anyone who drives a heavy truck, such as a tractor-trailer truck, a dump truck, a moving van, and so on. There exists an apprentice program for a Tractor-Trailer Commercial Driver. Tractor-trailer trucks make up just one portion of the Transport Truck Driver occupation, and there are very few registered journeypersons for this trade.

³ This data was made available through the helpful assistance of Ontario College of Trades staff.

Table 2: Top Five Trades by Registered Apprentices, York Region, October 2019

	York
Electrician — Construction and Maintenance	824
Plumber	554
AutoMotive Power Service Technician	493
General Carpenter	314
Child Development Practitioner	258

Bolded entries are compulsory trades

Over the last six years, new apprentice registrations in York Region increased from around 2,600 in 2013-14 to settle within the range of 3,000 and 3,200 for the next four years, increasing again to around 3,400 in 2018-19. Taking the top six trades by new apprentice registrations, the trend line has shown an increase in registrations, except for the Drywall, Acoustic and Lathing Applicator program, which has experienced some decrease (Table 3).

Table 3: Apprentice registrations, top six new registrations for York Region, 2013-2014 to 2018-2019

	13-14	14-15	15-16	16-17	17-18	18-19
Electrician - Construction and Maintenance	461	616	661	594	601	682
General Carpenter	368	700	583	602	605	593
Automotive Service Technician	210	314	351	304	352	344
Child Development Practitioner	114	200	222	137	146	170
Drywall, Acoustic and Lathing Applicator	200	123	137	137	149	149
Sprinkler and Fire Protection Installer	194	76	123	117	127	226

Bolded entries are compulsory trades

<u>Occupations</u>. When it comes to providing data relating to the actual occupations, the presentation can become more complicated. For one, as noted earlier, some broad occupations include more sub-occupations than what is represented by a single skilled trades program. In addition, in the case of voluntary trades, there can be far more individuals working in that occupation as skilled tradespersons than would be registered with the Ontario College of Trades.

There is a further challenge because the occupation data does not quite reflect the actual jobs in a given locality. Most labour market data is expressed in terms of residents. However, the number of employed residents in an area does not mean they all work in that area. Some commute to other locations for work, just as residents from outside commute into the local area for work. Some data is available which counts the actual jobs present in an area, but here a different challenge arises. Jobs can only be counted for a local area if they have a fixed location for work. A number of skilled trades occupations move from job site to job site, such as when a carpenter or plumber travels to different construction sites or residences.

To see how these issues play out, Table 4 presents the number of registered apprentices and journeypersons by occupation in York Region in October 2019, as well as the number of employed residents in that same occupation. However, the employed resident occupation data is from the 2016 Census. To see how these figures compare, we express the comparison in terms of a percentage of registered tradespersons to employed residents. Given the time lag, we would expect the ratio to be greater than 100%, as there should be more workers in these occupations after three years, given the growth in employment generally.

On the other hand, where an occupation involves a voluntary trade, we would expect the ratio to be less than 100%, because fewer journeypersons may go to the trouble and expense of being registered.

In order to capture these differences, Table 4 presents three types of examples:⁴ (i) compulsory trades; (ii) voluntary trades which have a higher number of registrations; and (iii) voluntary trades with a small number of registrations.

Table 4: Comparison of registered tradespersons (2019) and employed residents (2016) figures, select trades, York Region

Occupation	Registered tradespersons	Employed residents	Registered trades as % of employed residents				
COMPULSORY TRADES							
6341 Hairstylists and barbers	2,546	3,275	78%				
7241 Electricians (except industrial & power system)	5,207	3,230	161%				
7251 Plumbers	2,186	1,850	118%				
7321 Automotive service technicians and others	5,595	4,285	131%				
VOLUNTARY TRADES WITH HIGHER I	REGISTRATION N	IUMBERS					
7242 Industrial electricians	161	450	36%				
7271 Carpenters	362	2,500	15%				
7311 Construction millwrights and industrial mechanics	184	1,000	18%				
VOLUNTARY TRADES WITH LOWER REGISTRATION NUMBERS							
6322 Cooks	78	4,145	1.9%				
7232 Tool and die makers	46	805	5.7%				
7237 Welders and related machine operators	41	1,135	3.6%				

Bolded entries are compulsory trades

The number preceding each occupation refers to the National Occupational Classification code (NOC)

Essentially, among compulsory trades, the figures for registered tradespersons and employed residents are roughly in the same range, between 70% and 160%. Among voluntary trades with higher registration numbers, the registered tradespersons are roughly 10%-20% of employed residents in that occupation, except in the case of Industrial Electricians, where the proportion is 36%. But among voluntary trades with low registration numbers, the proportion of registered tradespersons to the entire occupation can be very low, under 6% and often under 2%.

⁴ There are more examples in the data appendix to this report.

Some preliminary observations regarding these comparisons:

- 1) It may be, among those voluntary trades with higher registration numbers, that some employers do place a higher value on a Certificate of Apprenticeship or a Certificate of Qualification, either in terms of who they hire or what wage they offer, which then provides a reason for more workers to acquire a certificate and to become registered;
- 2) In the case of those voluntary trades with lower registration numbers, it would require deeper research to understand if journeypersons are simply not registering or if completion of an apprenticeship does not typically result in better employment or wage outcomes for these occupations.

<u>Evidence from the data for shortages or impending shortages among specific skilled trades categories</u>. There are several ways in which one can analyze the data to produce some insights regarding where one might expect to see some skills shortages in the near future.

Firstly, based on the registration numbers for journeypersons and apprentices in compulsory trades, one can produce a figure of how many journeypersons there are for each apprentice. A high number of journeypersons would suggest that not enough apprentices are filling the training pipeline, and this could be a sign that there could be a looming shortage in the future. Table 5 lists those skilled trades in York Region where there is sufficient data to make a comparison.

Table 5: Ratio of One Apprentice per Journeypersons, Select Compulsory Trades, York Region, October 2019

	Ratio
Hairstylist	18.1
Residential Air Conditioning Systems Mechanic	14.0
Truck and Coach Technician	13.7
Hoisting Engineer — Tower Crane Operator	8.2
Automotive Service Technician	6.7
Electrician — Construction and Maintenance	5.2
Auto Body and Collision Damage Repairer	5.0
Refrigeration and Air Conditioning Systems Mechanic	4.5
Hoisting Engineer — Mobile Crane Operator 1	3.9
Plumber	3.0
Steamfitter	3.0
Sheet Metal Worker	2.7
Sprinkler and Fire Protection Installer	2.3

On the basis of the data in Table 5, one could suggest that a number of these skilled trades could be facing a future shortage. Certainly, the ratio is quite poor for Hairstylists, Residential Air Conditioning Systems Mechanics, and Truck and Coach Technicians (although in the case of Residential Air Conditioning Systems Mechanics, there may be less cause for concern because of the apprentice numbers in a related program, that of Refrigeration and Air Conditioning Systems Mechanic, where there is a ratio of one apprentice for every 4.5 journeypersons). Two other programs also have poor ratios and warrant concern: Hoisting Engineer – Tower Crane Operators and Automotive Service Technicians.

A second method for identifying skilled trades at risk of shortages is to look at the medium age of registered journeypersons. A median age of 50 years old means that half of the registered journeypersons in that trade are 50 years of age or older. Table 6 lists those skilled trades with a larger number of registered journeypersons which have a median age of 50 years old or older.

Table 6: Skilled Trades where Median Age of Registered Journeypersons is 50 Years Old or More, York Region, October 2019

	MEDIAN AGE
Truck and Coach Technician	56
Auto Body and Collision Damage Repairer	56
Industrial Electrician	53
Sheet Metal Worker	52
Refrigeration and Air Conditioning Systems Mechanic	52
Hairstylist	51

Ontario College of Trades, registration data for York Region, October 2, 2019 **Bolded entries** are compulsory trades

In the case of both Truck and Coach Technicians as well Auto Body and Collision Damage Repairers, half of the registered journeypersons in York Region in these two trades are 56 years of age or older. That is a large proportion of workers who are near retirement age and the loss of such a considerable share of this workforce will not only create a shortage of experienced workers, but it will also reduce the number of experienced workplace trainers for apprentices.

Thirdly, one can also examine the data for specific occupations, comparing the proportion of workers aged 55 years and older (likely to retire soon), the proportion of workers aged 15-34 years of age (what does the supply pipeline look like), and how these proportions have changed between 2006 and 2016 (two Census periods), in comparison to averages for all occupations. The following occupations appear most at risk of a future shortage based on these calculations:

- Machinists and machining and tooling inspectors
- Tool and die makers
- Construction millwrights and industrial mechanics

Finally, we also undertook an analysis of job board aggregator data. This data reflects on-line job postings across various platforms (e.g. Indeed, Job Bank and so on), collected into one database (eliminating duplications), to show a cumulative count of job postings by occupation for York Region. Our analysis looked at job postings for occupations which included skilled trades and we sought to draw out any trends in terms of these job postings, comparing monthly job postings from December 2015 to August 2019. Of the nearly 30 occupations which were analyzed, almost each occupation showed either a declining number of job postings or a flat-line trend in job postings over a period of more than three and a half years. Given that the economy has been growing during this time, with a tighter labour market and employers increasingly voicing concerns regarding their ability to recruit skilled workers, we can only conclude that employers had relied less on these on-line job boards for recruitment purposes, and sought other strategies for finding job candidates in times of skills shortages.

Other insights from the data. There are several other features of the skilled trades which emerge from an analysis of the relevant data for York Region:

 Based on the registration data, it is evident that skilled trades in the Construction, Industrial and Motive Power sectors are almost exclusively comprised of males, at the very least 94% and usually 98% or more of all tradespersons, both among journeypersons and apprentices; only among the Service sector trades are there a number of skilled trades where there are more females present, certainly among Childhood Development Practitioners and also among Hairstylists (males make up 35% of Hairstylist journeypersons and only 13% of Hairstylist apprentices);

- Especially among the Construction trades, a large proportion of skilled tradespersons (often 50% or more) are working at no fixed workplace, that is, they constantly change where they carry out their function (for example, moving from one construction site to another);
- Certain skilled trades occupations have higher proportions of self-employed workers, notably: painters & decorators (except interior decorators); carpenters; hairstylists and barbers; and motor vehicle body repairers; (for these occupations, one third or more of the workers are self-employed);
- Certain skilled trades occupations have higher proportions of workers who work mainly part-time weeks, notably: elementary and secondary school teacher assistants; cooks; bakers; early childhood educators and assistants; and hairstylists and barbers.

The labour force data is largely based on where employed residents live. The commuting data reveals different commuting patterns for different occupations. Some highlights:

- Destinations for York residents employed in skilled trades: somewhat more Auto Service Technicians, travel
 to York for their work, while a larger proportion of Welders, Electricians and Construction Millwrights &
 Industrial Mechanics, commute to Peel Region;
- Commuters travelling to skilled trades jobs in York: almost three-quarters (73%) of Hairstylists & Barbers working in York Region live in York Region, whereas several of the skilled trades occupations profiled have one third (33%) or less of their workforce coming from York Region: Welders (29%), Construction Trades Helpers (32%) and Construction Millwrights & Industrial Mechanics (33%). Indeed, in the case of Welders and Construction Trades Helpers, more workers travel from Toronto to York jobs than do York residents. That raises the question whether York Region employers looking for workers in these occupations should join job fairs in Toronto to find such workers.

The most important issues expected to impact the skilled trades over the next five years

The predominant issue that employers are concerned about is the shortage of skilled workers, brought about by two factors:

- (1) the retirement of the baby-boom generation; and
- (2) fewer youth going into the trades.

The In-Demand survey asked employers to select from a list which issues they felt most concerned about. The following represents their responses (they could select more than one):

- 82% felt that the declining number of youth choosing skilled trades was a major concern;
- 78% felt that the retirement of the baby boom generation was creating a gap in the skilled trades labour market supply;
- 44% feeling that youth were less inclined to commit to a longer training program;
- 34% felt that apprenticeship programs needed to be made more flexible;
- 34% thought that increasing opportunities in emerging industries were drawing youth from the trades;
- 28% said that more attention needed to be placed on soft skills

By far, the demographic squeeze was their biggest concern, with more than three-quarters of employers citing this challenge. No other issue was chosen by even half of the employers.

Employers are also concerned that youth are not drawn to or not interested in working in the trades as had been the case in the past. As one employer stated:

"There is a decline in interest on the part of youth to get involved in the trades, and the messier and dirtier, the less likely youth are interested. They have it in their minds that employment is about sitting in an office behind a computer."

The combination of these two trends raises an alarm for employers. As one put it:

"In three to five years, there will be no one to fill the trades."

Employers are making it clear that even with the increase in the number of apprentices going the trades, it will be quite a few years before they can acquire the skills and experience of the retiring workforce. There is a significant gap of competent journeypersons in the age range between the apprentices coming in and the retiring tradespersons.

Moreover, the retirement of these journeypersons and the shortage of experienced journeypersons to replace them means that there will be fewer journeypersons who can be relied upon to train, supervise and mentor the incoming generation of apprentices.

Another significant concern that employers have relates to the training that apprentices are receiving. The comments include that the quality of the training has declined, that youth are not being trained for the technological changes that are taking place and will continue to take place, and that that more emphasis needs to be placed on enhancing their soft skills.

The impact of technological change on skilled trades occupations

By far, the biggest impact which employers see is how technological change is affecting the skill requirements for workers.

In the survey, employers agreed with the statements which were provided in the following proportions:

Table 7: Percent of employers agreeing with the following statements on the impact of technological change

Technological change is re-shaping the skill requirements of the job	59%
Technological change is advancing at a rapid pace and training programs are not keeping up	23%
Don't know what the impact will be or it is hard to predict	18%
Technological change is increasing the demand for jobs in this occupation	18%
Technological change is reducing the demand for jobs in this occupation	11%

It bears emphasizing that the fewest proportion of employers felt that technological change was going to result in fewer jobs in the skilled trades professions.

In the interviews, employers elaborated on how technological change increases the skill level requirements of the job. From a manufacturer:

"It is increasing the demand for skilled workers, because the sophistication of the machinery is increasing and we need to have workers who are that much more skilled."

From another manufacturer:

"We have begun to utilize robotics to complete routine functions, such as the assembly part of the process and inspection of the finished products. We use robotics to free up personnel so they can better be utilized in more effective and efficient jobs. What it means is that the skill levels of our workers have to increase, because now they have to know how to operate and adjust these automated and robotic machines."

From a car dealership:

"The car repair business has been changing. Cars are better built, resulting in more work going towards regular maintenance rather than repairs. This creates a divergent trend in terms of skilled trades: our auto services technicians may not require as many skills for doing mechanical repair work, but we will require highly trained workers for the initial diagnostic work."

From a contractor:

"It means that our workers need to have digital skills. More and more our work is coordinated via cell phones and tablets, not by paper – for example, work orders or closing a work order. So digital skills become a necessity."

However, because the technology is changing, there is a period of transition, where old skills and new skills are needed, and this becomes reflected in a skill gap defined by different generations. Meanwhile, the newer technology is not always being reflected in the apprenticeship training.

As one employer explained:

"There is a skills gap looming, because the retirement of the baby boom generation represents older millwright skills, such as the ability to make parts to fix older machines, whereas the new generation have fewer skills in that regard, although they have much better skills dealing with robotics and computer-related functions."

The consequence of that gap does worry another employer:

"Older journeypersons need to train apprentices in the old technology for older machines or else there will not be anyone who can make the parts for the older machines that are still operating."

Some employers feel the apprenticeship curriculum is not keeping up:

"We are now seeing two-year college programs, such as electro-mechanical technician, which is filling this gap in the apprenticeship curriculum." Or this comment from another manufacturer: "The six engineers currently on staff are now utilizing software in a greater capacity rather than doing routine tasks. But there have been no new apprenticeship programs in several years and therefore the current ones are almost considered antiquated."

And, finally, from a car dealership:

"The percentage of electric cars that are sold will continue to increase and currently there is a lack of training on these vehicles. Electric vehicles require different training."

What journeyperson skilled trades occupations are most difficult for employers to fill and why

As a general view, employers felt it was difficult to hire journeypersons and only slightly less difficult to hire apprentices.

In the survey, three-quarters (75%) of all employers felt it was "very difficult" to hire a journeyperson and a further 15% said it was "difficult." Firms hiring journeypersons in the Industrial sector expressed the greatest difficulty, with 98% saying it was either very difficult or difficult. Employers in the other categories had the following scores: Construction -92%; Motive Power -84%; Service -79%. Firms with over 100 employees were slightly less likely to express this difficulty (at 83%), compared to all other sized categories of firms, all of which had figures over 90%.

Employers were further asked their opinion about the demand and supply of their skilled trades occupations in the coming two to three years. 68% of employers felt demand for these occupations would increase, while only 11% felt demand would decrease. Yet only 26% felt the supply would increase, while 39% felt it would decrease. These figures show that employers felt the skilled trades labour squeeze will worsen over the next few years.

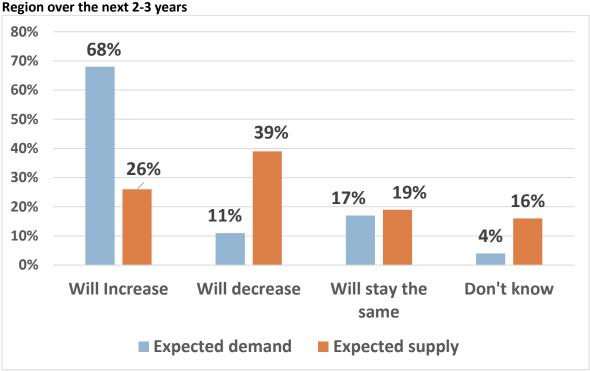


Chart 1: Expectations of employers regarding the supply of and demand for skilled trade workers in York
Region over the next 2-3 years

In terms of specific occupations for which it was hard to recruit journeypersons, Industrial sector trades were frequently mentioned: General Machinists; Industrial Mechanic Millwrights; Industrial Electricians; CNC operators. Other trades frequently mentioned were: Auto Service Technicians; Hairstylists; Carpenters; Electricians; Steamfitters; Truck and Coach Technicians; Retail Meat Cutters.

Part of the problem is that even among mature journeypersons, there arises a desire to find less physically demanding work. As one auto dealer explained: "It is very hard to find a journeyperson who is an auto service technician or auto body repair. These people are older, their bodies start giving out, and they wish to go into an office position, so the existing labour pool gets smaller."

Several employers volunteered that when it came to recruiting for a journeyperson position, they had to resort to poaching from another employer, because there simply were not sufficient journeypersons available in the York Region labour market for the skilled trade they required.

What apprentice skilled trades occupations are most difficult for employers to fill and why

While 75% of employers in the survey said it was very difficult to hire a journeyperson, a significantly lower proportion of employers (44%) said it was very difficult to hire an apprentice. In total, 72% of employers said it was either very difficult or difficult to hire an apprentice (compared to 90% saying the same about hiring a journeyperson). There was virtually no difference among employers by trade sector, which the four categories reporting figures between 71% and 73%. There were, however, notable differences by the size of firm: 85% of firms with 1-4 employees said it was very difficult or difficult to hire an apprentice: 67% of firms with 5-19 employees; 86% of firms with 20-99 employees; and a considerably lower 33% of firms with 100 or more employees.

One employer noted that even with fewer youth going into the skilled trades as a whole, some trades are affected more than others:

"It is very hard to find an auto service technician apprentice, whereas no one wants to go into auto body repair. The dirtier the work, the less youth are interested in doing it."

Employers are also concerned about apprentices leaving soon after their training is completed and they have received their certificate:

"If the apprentice stay a few years after completion, we can recoup our investment. Otherwise, we are losing money for the training we invested."

In the survey, 62% of respondents indicated that they had sponsored or are currently sponsoring apprentices. This was far more likely among firms in the Motive Power sector (96% affirmative). The figure for the Service sector was close to the average (64%), whereas both Industrial (53%) and Construction (50%) had lower figures. The likelihood of having or having had an apprentice varied by size of firm: 72% of firms with 1-4 employees have or had an apprentice. The corresponding figure for other sized firms were: 5-19 employees (57%); 20-99 employees (61%); 100 or more employees (75%).

Over the course of the last six years, the following seven trades represent both the highest as well as regularly consistent number of apprentice registrations in York Region: Electrician - Construction and Maintenance; General Carpenter; Automotive Service Technician; Child Development Practitioner; Drywall, Acoustic and Lathing Applicator; Sprinkler and Fire Protection Installer; and Hairstylist.

Recruitment methods for hard-to-fill skilled trades positions

Employers were asked what methods they used to recruit candidates for hard-to-fill skilled trades positions. This question solicited an open-ended response, and so the answers below represent the actual responses which employers provided (they were able to provide more than one answer). The table lists the top twelve responses, including the number of employers who mentioned this option.

Table 8: Top ten methods employer survey respondents cited for recruiting tradespersons

RECRUITMENT METHOD	NUMBER OF MENTIONS
On-line job boards in general	23
Indeed	22
Word-of-mouth	18
Advertisement, job ads (newspaper, Job Hunter, radio)	15
Recruitment services	11
Kijiji	7
Colleges	6
Employment agencies	5
Hire and train, or get current employee to switch to new occupation	5
Job Bank	4
Social media	4
Signage	4

The issue of apprentices dropping out of their apprenticeship

Slightly more than half of York employers report that few apprentices drop out of their apprenticeship. According to the survey, the following represented the incidence of dropping out:

Table 9: Incidence of apprentices dropping out, according to employer survey

	Majority drop out	Less than half drop out	Very few drop-out	No apprentices drop out
ALL	23%	24%	38%	15%
1-4 employees	36%	36%	18%	9%
5-19 employees	26%	16%	42%	16%
20-99 employees	11%	28%	44%	17%
100+ employees	0%	22%	56%	22%
Construction sector	31%	27%	23%	19%
Industrial sector	23%	5%	59%	14%
Motive Power sector	23%	32%	27%	18%
Service sector	8%	42%	50%	0%

Almost a quarter of employers (23%) said that the majority of apprentices drop out, 24% said less than half drop out, 38% said a very small proportion drop out, and 15% said none drop out. There were considerable variations by the size of the company: over one-third (36%) of firms with 1-4 employees said the majority of apprentices dropped out, yet of the nine firms with 100 or more employees who answered this question, not one firm said

that the majority dropped out. By sector, combining the figures for very few or none dropping out results in the following: 42% of Construction sector firms; 46% of Motive Power sector firms; 50% of Service sector firms; and 73% of Industrial sector firms. Thus, Industrial sector firms had considerably more success in retaining apprentices, as did firms with over 100 employees.

In the survey, employers were provided with a list of reasons and asked to indicate which ones explained why in their experience apprentices dropped out of the program. Employers were able to choose more than one reason, yet no one reason got more than around a quarter of employers agreeing, meaning that the reasons vary considerably. The survey scores were:

- 1) Other personal difficulties arose for the apprentice: 27%
- 2) Ample job opportunities are available without completing the apprenticeship: 25%
- 3) Not much difference in wages with an apprenticeship certificate versus without one: 19%
- 4) Length and complexity of the program is a disincentive: 18%
- 5) Employer may not always be able to maintain the sponsorship and the apprentice cannot find a replacement: 12%

In the employer interviews and focus groups, the responses provide more elaboration. One employer noted:

"Our apprentices don't drop out because we recruit them from our existing pool of production workers. So there already has been a period of assessing each other (we know how they work and they know us as a company), and so that reduces the possibility of a mismatch. Also, the workers see we are prepared to invest in them."

This theme of a period of familiarization is also expressed by other employers:

"There is not enough front-end pre-screening of candidates, and so many do not know what the work entails."

Adds another employer:

"Youth need to have some exposure to the trade before signing as an apprentice as often they have no idea what they are getting into and, when their expectations are not met, they leave. We need more pre-apprenticeship programs so they can have that first feel for the trade."

Some employers mention the low pay for first-year apprentices:

"The entry level pay is slightly over minimum wage and some will not hang in for increase at the next level."

As another employer noted:

"They can make the same or more money working at the Walmart, with no spending on tools."

This issue of low wage leads to a different concern on the part of another employer:

"Some employers manipulate the system and only pay the minimum wage part of the apprenticeship then let apprentice go claiming there is no work. This need to be monitored more closely by the Ministry."

Employers suggested several ways for reducing the apprenticeship dropout rate. Two themes were volunteered a number of times by employers:

- (1) re-instating the one-on-one connection between the Ministry counsellor and the apprentice and their employer; and
- (2) putting more assessment of hands-on abilities in the testing process, as opposed to only the written exam, which employers felt makes the exam unnecessarily harder for candidates to complete.

As one employer explained:

"The government should reinstate the counsellor function, a person who was personally assigned to track a certain number of apprentices and be available to respond to their issues or concerns or questions. This is an extremely important function for these youth who often may be those youth who require a little more direction and support."

From another employer:

"In years past, there used to be a Ministry person assigned to an apprentice, who would come out and meet with the apprentice and the employer and be available to answer questions. It is a great shame that this is no longer the case. Now it is very difficult for an apprentice looking to get answers to questions they may have about their apprenticeship."

While there were a number of employers who expressed regret that this one-to-one connection no longer existed, one employer had a different experience:

"The Ontario College of Trades has been making it better. We appreciate that we get assigned one person for contact who then handles all our issues."

Regarding the written test issue:

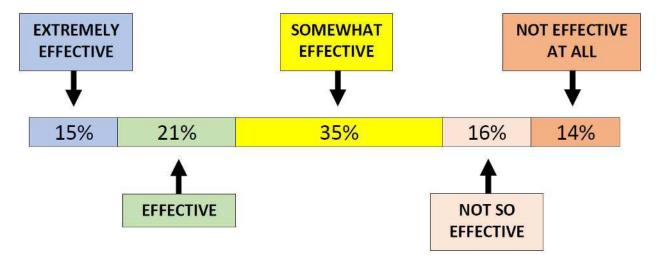
"They need to find alternative ways to take the exam - verbally, or through more demonstration or hands-on evaluation. A written exam can be very daunting for many apprentices even though they have thorough knowledge of their trades. They also need to develop mock exams to help these youth prepare."

Many employers noted that the written exam can be challenging for those for whom English is a second language.

Other suggestions to raise completions included ensuring there are sufficient number of seats for the classroom training and providing financial support to apprentices while they are enrolled in the classroom training sessions, as well as the apprenticeship system responding to questions and inquiries from apprentices and employers more promptly and effectively.

Rating how well apprenticeship is addressing the skill requirements of employers

Diagram 1: How well has apprenticeship served employers' skill requirements?



In short, 36% (a little more than a third) gave the apprenticeship system a positive rating (extremely effective or effective), 35% (a little more than a third) gave it a lukewarm rating (somewhat effective), and 30% (slightly less than a third) gave it a negative rating (not so effective or not effective at all).

There were variations by categories of firms:

- Large firms (100 or more employees) were more likely to give the apprenticeship system positive ratings (50% of these firms said it was either "extremely effective" or "effective") and only a small proportion gave it a negative rating (10% said it was either "not so effective" or "not effective at all).
- Service sector firms also had higher positive ratings (55%) and lower negative ratings (9%).
- Motive Power sector firms gave the highest lukewarm ratings (58%).
- Construction sector firms had both higher positive ratings (39%) as well as higher negative ratings (36%).
- Industrial sector firms had higher negative ratings (42%) than positive ratings (35%), as did firms with 20-99 employees (30% positive and 35% negative).

Overall, employers feel the apprenticeship model is a good approach. However, there are issues in how it operates in practice which creates problems for employers. The following quotes provide an illustration of employers' views:

"We feel apprenticeships are a very good way for developing skills. We really value the mix of workplace training and classroom learning. We feel this model should be expanded to other occupations. In the case of industrial apprenticeships, we do feel it requires around three to four years for someone to acquire the knowledge and experience to work in that occupation."

"In principle, the apprenticeship model is a good model and we think it is an effective way of developing skills, by having the learning tied to the workplace experience. So, we like the model but there have been difficulties."

Employers did complain that apprentices can leave soon after receiving their certification and go to a firm that has not put any effort or financial commitment into training them.

"Overall, it is a good system. However, we provide apprenticeship, but some of our apprentices get poached by other companies who do not take or train apprentices. That is not fair. They don't invest in the apprentices, but they lure them with higher pay and benefit packages."

Barriers to apprenticeship faced by employers

The three biggest challenges that employers mentioned were:

- The difficulty of finding apprentices,
- The challenge of navigating the apprenticeship system,
- The financial burden shouldered by employers in carrying out the training, notably on the part of small businesses.

The issue of finding apprentice candidates has been discussed earlier in this report. Regarding the complexity of the apprenticeship process, the following quotes illustrate the views of employers:

"It is too frustrating to navigate the system or even get educated about the system. We find it very difficult to sign an apprentice and we feel there is no support from Ministry."

"The process is not easy to understand and one has to really talk to a lot of people to learn how it works. There seem to be some unnecessary paper burdens."

"Often an employer cannot register a newcomer in an apprenticeship program because they cannot meet the qualifications specifically proving their GED status here in Canada.

This comment combines both issues:

"We just want to find people who are willing and able to learn. That's the first barrier. The second barrier is getting the apprenticeship set up." "An example of this is that they often cannot put a newcomer on the program because they cannot meet the qualifications specifically proving their GED status here in Canada."

Employers appreciated that training represented an investment in their future workforce but felt that they could use some help when it came to absorbing the cost. As one employer stated:

"We feel the government should enhance the financial support to employers for doing this training. It is a cost and a risk to the employer to do this training, not knowing whether the person will stay with the firm."

Other issues that get mentioned:

Ability to find apprentices:

"It would be good if there was one site a person could go to for an apprenticeship match, where apprentices looking for a placement could go to and where employers looking for an apprentice could go to."

Backlog for classroom seats:

"Our biggest barrier is the waiting list for classroom training. It puts an apprentice behind when they acquire the workplace training and then they have to wait in order for a seat to become available for the classroom training. They cannot move forward until that happens."

This means the apprentice cannot receive an increase in pay for reaching the next level and the employer is stuck with a worker who is stuck at a skill level lower than where they could be.

The risk of losing the apprentice at the end:

"It is a huge financial outlay for the employer. For us it represents a \$17,000 to \$18,000 commitment to train an apprentice, yet there is no commitment required on the part of the apprentice to stay with the employer upon completion of their training."

Recommendations by employer to improve the apprenticeship system to better meet their needs:

Employers had many suggestions for how the apprenticeship system could be improved. In order of frequency of mention, these were as follows:

<u>Financial support to apprentices</u>, including better wages for apprentices, financial support when attending classroom training, financing assistance to acquire tools

Financial incentives for employers, especially small businesses, to cover the cost of training apprentices

<u>Promote trades more in high school</u>, by introducing more youth to the trades and by re-instating tech classes related to the basic trades for high school students, and place as much emphasis on promoting the apprenticeship pathway as they do college and university education options

<u>Enhance the image of the trades</u>, by illustrating its hi-tech appeal, the attractive wages and future career options for skilled tradespersons, including becoming an entrepreneur

<u>Make more use of pre-apprenticeship programs</u> as a way to generate exposure to the trades and give potential apprentices a way to test out the occupation without yet making a longer-term commitment

"Increase pre-apprentice programs and tie them to the labour market as we prefer people with one year of training before we sign them as an apprentice."

"The Ministry needs to pay better attention to pre-apprenticeship programs after high school as they provide hands-on training for young people trying to get into a trade, especially if they did not take a coop program while in high school."

<u>Provide more personalized support</u> during the apprenticeship and exercising more flexibility when personal or financial issues arise

Reduce the complexity of the apprenticeship process, reduce the red tape and the paperwork

"It is not easy knowing whom to call, where to get information. As employers, we do not have time to chase down information. If these programs are supposed to help us, you have the make the programs reach out to us and provide easy ways for us to access the programs."

<u>Make sure the curriculum is relevant</u>, as some of it is out-of-date or out-of-touch with changing technology and changing workplace practices; some suggest lengthening the classroom training to accommodate the changing technology

"Colleges are not keeping up with the changing manufacturing workplaces. A portion of their curriculum is out-dated. In order to stay abreast of new technology will require that they specialize, because not every college can have the most up-to-date equipment in each field. If each college specialized in a certain aspect of manufacturing, then collectively they could stay current in terms of the new techniques and new equipment."

<u>Fix the classroom waiting list issue</u> and ensure that apprentices can get their classroom training in a timely fashion

"We feel that there needs to be a better job done in identifying how many classroom seats are going to be required and making them available. It does not make sense to promote apprenticeships and then have those apprentices be stalled in their training because the classroom portion is not available, especially when the government knows the number of apprentices who are out there and what level they are at."

"Don't require apprentices to go on a waiting list to get their classroom training. It forces them to stay at the level they are at and they cannot receive the pay increase for the next level. That is a penalty and it could cause them to drop out."

<u>Do a better job of regulating employers</u>, to ensure that all sponsoring employers are providing the full spectrum of training that they are supposed to provide and that they are moving the apprentices through the different levels, as well as investigating companies which pay under the table, as these companies undermine the ecosystem of employers who provide training for workers

"We have seen that some firms take on an apprentice but do not release them for classroom training, on the grounds that there is too much work, with the result that the apprentices do not progress in their apprenticeship. It feels at times that these firms are simply making use of a cheaper labourer pool for their staffing, and that is unfair. There needs to be better policing of where these apprentices are in the apprenticeship. We have had these apprentices come to us to complete their apprenticeships."

<u>Provide a clearinghouse whereby employers and apprentices can be matched</u>, for those employers who cannot find apprentices and those apprentices who cannot find an employer to sponsor them

<u>Do more to promote skilled trades as a viable career for women</u>, as a number of employers feel there should be much which can be done to draw women into the traditional skilled trades

<u>Ensure that high school co-op programs are sufficiently flexible</u>; when students can only attend a workplace for a few hours a day, it can sometimes be too disruptive to the work process to host them

<u>Make better use of immigration as another source of skilled tradespersons</u>, by targeting more skilled workers and providing more programs to help them transition into the Ontario labour market

"The government should make it easier for someone with a skilled trade acquired outside of Canada to qualify as a skilled tradesperson in Ontario. We are going to have to rely more and more on immigrants and we need to find ways to transition them into our labour force faster and easier, as well as support English-as-second-language programs in the workplace."

Further observations regarding primary and high school:

Because many employers felt that high schools should do a better job of introducing youth to the skilled trades, we felt it was important to investigate to what extend high schools are currently carrying out this role and what more could be done.

Many high school teachers and guidance counsellors are completely unfamiliar with the skilled trades, having themselves experienced only a university education. Consequently, they are far less able to explain, let alone advocate for, the opportunities which the trades offer. They will default to recommending to their students a college or university educational pathway, using the trades as a fallback for students who "cannot make it" in post-secondary, and sometimes even trying to talk capable students out of pursing a trades career because they claim they would be limiting themselves.

There needs to be a lot of work done to educate these teachers and guidance counsellors, as well as parents, about the attractions of skilled trades, from interesting and challenging work that involves one's brain as well as one's hands, to plentiful jobs with attractive wages and many career advancement and self-employment opportunities. This would require an overhaul of the curriculum in teacher's college, as well as ensuring that the primary and high school curriculum gives equal prominence to the trades.

It also means much more needs to be done to have youth receive a true exposure to trades, including starting in the late primary grades (grades 6, 7 and 8). It requires overcoming some practical challenges. Tech programs tend to have smaller classes due to the number of machines or tools that are available. This increases class sizes in other courses in order to maintain the target average class size across a school. Some principals are less inclined to offer more tech programs for this reason alone.

When tech teachers have a Certificate of Qualification in a trade, it can still happen, based on demand and enrolment, that this teacher would be assigned to a teach a tech course in a trade other than their specialty, such as an auto service technician would be required to teach a culinary class.

In short, in order to address a systemic problem, namely the decline in enrolments in the trades over a couple of decades, one requires a major change in approach from the Ministry of Education, not just initiatives which can be undertaken by the Ministry of Labour, Training and Skills Development.

Other issues emerging from the consultations

In the course of the research and consultations with employers, other issues emerged which provided further insight regarding how employers used or viewed the apprenticeship system.

Reliance on certified workers among voluntary trades. Employers who employed workers in voluntary trades were asked what percentage of these workers were in possession of a Certificate of Apprenticeship (CA) or a Certificate of Qualification (CQ). Around half (48%) of employers said that one quarter or less of these workers were in possession of a CA or CQ – indeed, around a quarter (24%) said that 1% or less of these workers were so certified. Table 10 lists the percentage distribution of employers by the different levels of concentration of workers with a certificate.

Table 10: Percentage of workers in voluntary trades occupations who have a CA or CQ

	0%-25%	26-50%	51-75%	76-100%
All employers	48%	19%	14%	19%

The sample size of employers answering this question was small (21 respondents), but these results suggests a lesser reliance on certification for verifying skills qualification. This result corresponds with the smaller proportion of registered tradespersons among those occupations representing voluntary trades (Table 4).

Knowledge about whether a trade is compulsory or voluntary. In the survey, employers were asked to identify a specific trade for which there then followed a series of questions. As a result, it was possible to test their knowledge about whether the trade for which they hired was compulsory or voluntary. Table 11 shows the percentage of accurate and inaccurate results, based on whether the trade was compulsory or voluntary.

Table 11: Knowledge of whether a trade is compulsory or voluntary

Table 11. Knowledge of whether a tra	iac is com	paisory or voluntary	
EMPLOYERS HIRING		EMPLOYERS HIRING	
COMPULSORY TRADES		VOLUNTARY TRADES	
Correctly identified that it was	76%	Correctly identified that it was	37%
a compulsory trade	70%	a voluntary trade	3/70
Incorrectly identified that it was	11%	Incorrectly identified that it was	45%
a voluntary trade	11%	a compulsory trade	45%
Don't know	13%	Don't know	18%
DOILCKHOW	13/6	Don't know	10/0

Slightly more than three-quarters of employers (76%) who hire workers in a compulsory trade knew that the trade was compulsory. This was a higher percentage with an accurate response than that for employers who hire workers in a voluntary trade, where only 37% knew that the trade was voluntary. However, it does pose a greater problem if even a quarter of employers hiring workers in a compulsory trade do not know that these workers are not allowed to work unless they are certified and have registered with the Ontario College of Trades.

Relevance of certification to occupations which are not skilled trades occupations. In carrying out the data research, it became apparent that there were certain occupations which, although not technically skilled trades, often had higher proportions of workers who were in possession of a Certificate of Apprenticeship or a Certificate of Qualification. As a consequence, employers were asked in the survey what importance they placed on a job candidate having certification when hiring for these occupations. Table 14 presents the results, both the percentage distribution of responses for those employers which provided a ranking, as well as a composite score, which is based on the following formula:

"3" for "It makes a great deal of difference"

"2" for "It makes some difference"

"1" for "It makes a little difference"
"0" for "It has no impact at all"

Table 12: Rating the relevance of certification when hiring for select occupations

	PERCENT DISTRIBUTION OF RESPONSES				ш
OCCUPATION	It makes a great deal of difference	It makes some difference	It makes a little difference	It has no impact at all	COMPOSITE SCORE
Gas fitter	60%	18%	2%	20%	2.18
Contractor and supervisor, other construction trades and servicers	35%	28%	7%	30%	1.68
Construction manager	38%	26%	0%	36%	1.66
Contractor and supervisor, carpentry trade	33%	24%	8%	35%	1.55
Public works maintenance equipment operator	29%	29%	8%	33%	1.54
Facility operation and maintenance manager	22%	37%	7%	33%	1.48
Home building and renovation manager	27%	27%	6%	41%	1.39
Janitors, caretakers and building superintendent	15%	17%	23%	46%	1.00

The occupation of gas fitter stands out from this list as one where employers prefer that the candidate have skilled trades certification. 60% said that a certificate made a great deal of difference when it came to the hiring decision. Then, there are four occupations where the score leans slightly towards "it makes some difference," namely: contractors and supervisors, other construction trades and servicers; construction managers; contractors and supervisors, carpentry trade; and public works maintenance equipment operators. Next are two occupations where the view leans towards "it makes a little difference:" facility operation and maintenance managers; and home building and renovation managers. Finally, in the case of janitors, caretakers and building superintendents, the average score ranks as "it makes a little difference," and almost half (46%) of respondents said it has no impact at all in their decision.

<u>Comments about specific skilled trades programs</u>. Employers provided useful insights regarding certain specific skilled trades categories.

The IT trades: There are a number of trades associated with the Information Technology sector, as follows:

- o IT Contact Centre Technical Support Agent (Trade Code 634A)
- IT Hardware Technician (634B)
- IT Network Technician (634C)

- IT Contact Centre Sales Agent (634D)
- o IT Contact Centre Customer Service Agent (634E)

It is apparent that few employers and key informants in the IT sector are at all familiar with these IT apprentice programs. Apprenticeship registrations in York Region for these programs has dropped off considerably. In 2013-14, there were 39 apprentices for the Sales Agent program (634D) and 163 apprentices for the Customer Service Agent program (634E). Within two years there were none. In 2014-15, there were 71 new apprentice registrations for Network Technician (634C). The following year, this number dropped off to 17 and by 2017-18 it was zero. Key informants noted that these occupations are served by industry training programs which do not require as many hours as the apprenticeship programs and which are rapidly updated, unlike the apprenticeship curriculum which is considered antiquated. There are no new programs to match the new/evolving positions created by an industry that is in a continuous state of change. The general opinion questioned the value of these programs.

The child education/development trades: There are two programs, in particular, that attracted comment:

- Child Development Practitioner (620C)
- Educational Assistant (620E)

The Child Development Practitioner program qualifies an individual to work as an Early Childhood Education Assistant. It is equivalent to a similar college-based diploma, and the advantage of this program is that it allows a person to earn their certificate while working and getting paid. In the parallel college program, practicum experience ends up usually being not remunerated. In order to qualify to become an Early Childhood Educator, a graduate of the Child Development Practitioner program would still need to complete 12 more college credits. The value of the Child Development Practitioner program is that it provides a certificate for an ECE Assistant and a stepping-stone toward an ECE designation, all while an individual is working. For a day care centre, there is a requirement that one registered ECE be present with the children, and then the number of children in the program can increase with the number of ECE assistants.

The Educational Assistant program is designed to support an individual to become an Educational Assistant in primary or secondary school, however, it does not appear to be either used by or even known by school boards, who more likely hire individuals for the Educational Assistant position from relevant college and university programs. At the college level this would include Developmental Support Work or Intervention Support Worker programs, and at the university it would include degrees in psychology or social work. The concern expressed by HR professionals was that these educational assistants work with a vulnerable population and so there is a prior need for any worker to have prior preparation for entering a classroom with such students. Perhaps the apprenticeship curriculum should be compared to workplace requirements and be adjusted to include necessary criteria allowing apprentices to work in this field.

Tractor-trailer commercial driver (638A): Transport truck drivers include a number of sub-occupations which involve driving heavy trucks (for example, moving vans and dump trucks) and it includes drivers of tractor-trailer commercial trucks. In York Region, in 2016, there were approximately 5,300 residents employed as transport truck drivers. In comparison, in 2019, there were five registered apprentices and two registered journeypersons in the tractor-trailer commercial driver program. The discrepancy is so stark that it brings into question the relevance of a trade for this occupation. Yet among industry stakeholders there is a strong sentiment to raise the skill qualifications of truck drivers as well as to set minimum standards for truck driving training programs. An apprenticeship program could, in this view ensure a higher level of training and a process for ensuring that trainers meet these higher standards.

Retail meat cutter (245R): In an interview with the HR department of a major food chain, it was apparent that they were not aware of the existence of an apprenticeship program in relation to retail meat cutters, an occupation for which they had great difficulty finding experienced workers. In their view, many workers in this field are approaching retirement age and there was no clear skills pipeline to develop their replacements. Currently, there no apprentices or journeypersons registered as retail meat cutters in York Region.

Roofer (449A): A major roofing company which employs hundreds of roofers was unaware of the existence of a roofer apprenticeship program. They felt that the government needs to do more to publicize the existence of these various programs. They felt such an apprenticeship program was important because it would raise the qualifications of roofers, it would validate for customers the quality of the work and it would drive out businesses offering a lower quality of service.

Hairstylists (332A): Several employers in this field felt that there were several trends in the industry which could have a negative impact on the supply of certified hairstylists in the future. The spread of low-charging chains, the presence of individuals working out of their homes for cash, and with the emergence of salon suites (a large space subdivided into one-person hair salons), there were reduced opportunities for an apprentice to gain work experience with a journeyperson.

Several larger size employers participated in skilled trade interviews and it became obvious that they were not aware that some of the occupations in their company were actually skilled trades with training programs. It is clear that there is more work needed to inform employers about skilled trades in Ontario.

Conclusion

This study was the result of a direction from the Ontario Ministry of Labour, Training and Skills Development to all Local Employment Planning Councils and Workforce Planning Boards that they canvass employers regarding the local skilled trades labour market and their views on the apprenticeship process. The purpose of this assignment was to collect information, which has been done through a variety of means and which has been conveyed to the Ministry. This document is intended to inform our wider community about what we heard.

There was a clear consistency in the messages that came from employers, from concerns about the impacts of pending retirements and fewer youth entering the trades, the financial burden to employers of training apprentices, the complexity of the apprenticeship process acting as a disincentive to both employers and apprentices, and the impact of technological change on the skill sets for tradespersons. These messages also concur with what has been heard in previous consultations with employers. For example, the WPBoard convened employer forums as part of its *Apprenticeships at Work* project in 2010, where employer concerns were raised regarding the paperwork associated with the apprenticeship process and their frustration with apprentices dropping out of the program. WPBoard's *Local Labour Market Planning Report (2017-18)* noted that the skill bar was being raised for industrial sector tradespersons in manufacturing, who increasingly had to apply digital skills and knowledge to operate and maintain new production equipment.

The Ministry has recently announced initiatives to promote skilled trades more with youth. Hopefully, this report can provide an up-to-date picture to our various stakeholders concerned with the local labour market, so that they can better understand and move forward with actions that can support local employers find the skilled trades workers that they so clearly need.

Appendix

Skilled Trades Demand Reports

Historical data and trends on the demand of certain skilled trades in York Region, skills and educational level required, market salaries as well as common job titles

bakers

Q Search Definition: Bakers in York County, ON



SKILLS AND CERTIFICATIONS JOB TITLES **Skills** Baker Cake Decorator Food preparation **Bread slicers** Sanitation systems Standard operating procedures Certifications **Baker Assistant** Food safety programs (HACCP) **Baker Decorator** Bread Production Baker MAP

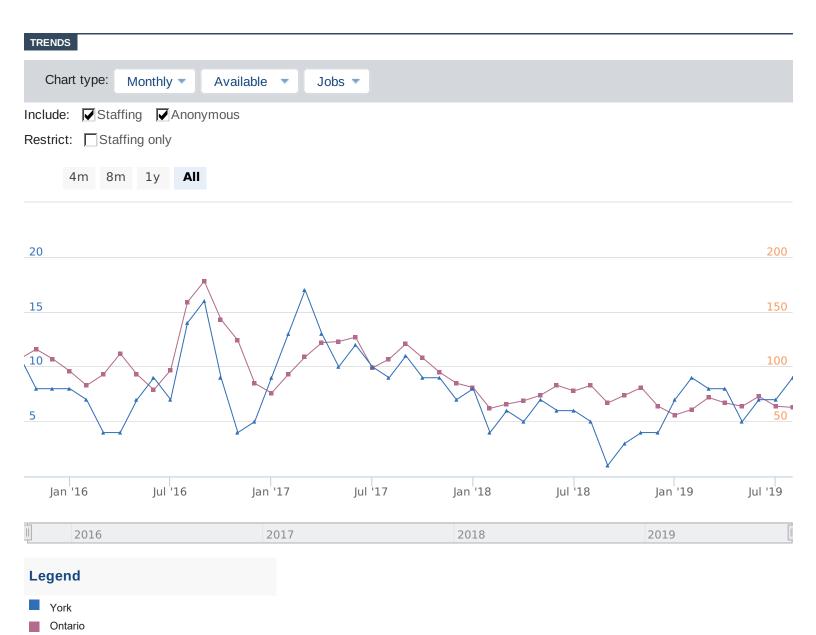
Bread Baker Production Pastry Chef Cake Decorator Baker Cake Decorator Baker Cookie Decorator Baker Shipping Receiver Cake De...

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

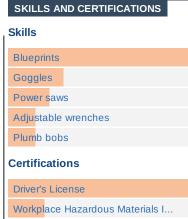
baker

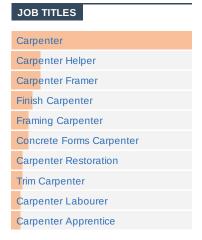
Q Search Definition: Baker in York County, ON



Q Search Definition: carpenter in York County, ON



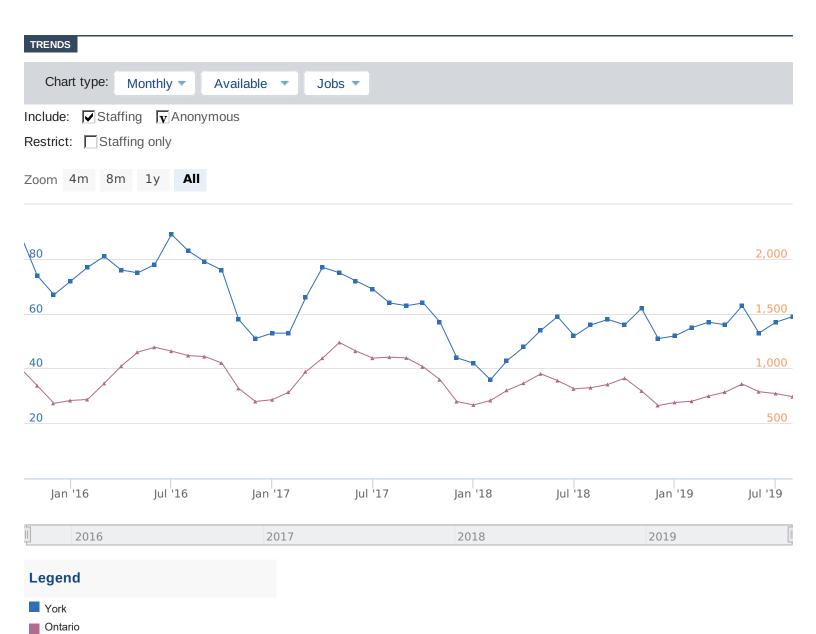




EDUCATIONAL ATTAINMENT

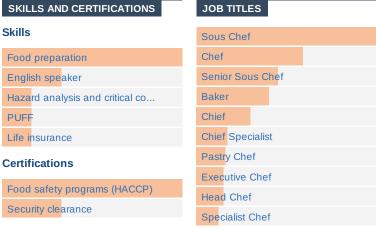
Current Openings: 28

Q Search Definition: carpenter in York County, ON



Q Search Definition: Chefs in York County, ON

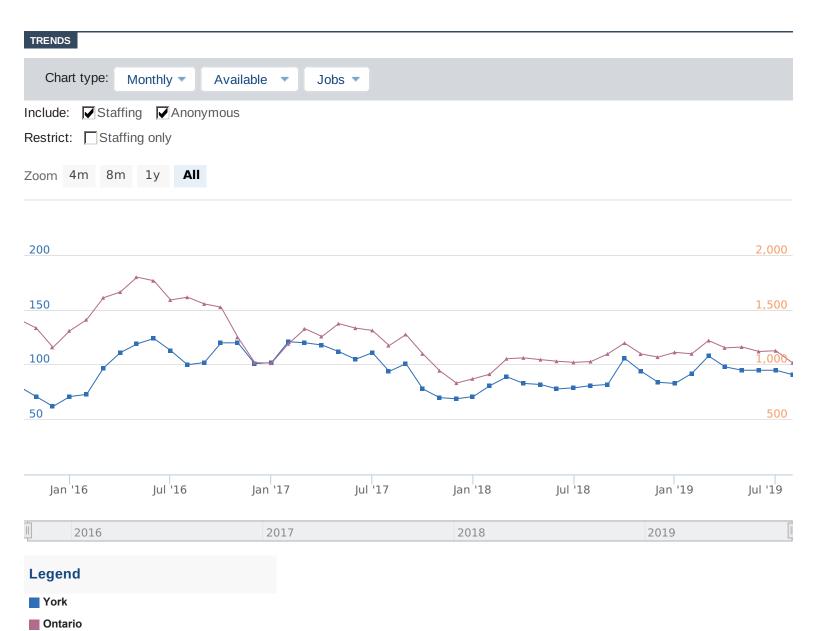




EDUCATIONAL ATTAINMENT



Q Search Definition: Chefs in York County, ON



CNC Machinist

Q Search Definition: (CNC) AND NOT (tool OR die) in York County, ON





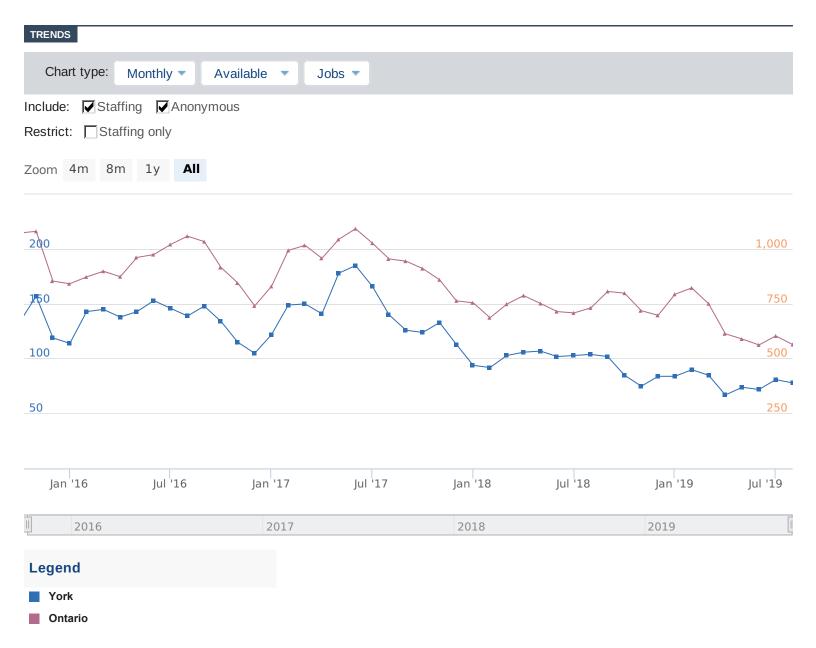


EDUCATIONAL ATTAINMENT



CNC Machinist

Q Search Definition: (CNC) AND NOT (tool OR die) in York County, ON

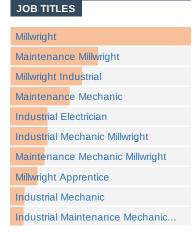


Construction millwrights and industrial mechanics

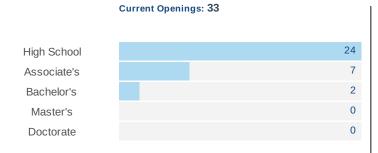
Q Search Definition: Construction millwrights and industrial mechanics in York County, ON



SKILLS AND CERTIFICATIONS Skills Preventive maintenance Blueprints Injection molding Computerized numerical control ... Forklifts Certifications Workplace Hazardous Materials I... Driver's License Security clearance Class A Commercial Drivers Lice... Forklift certification

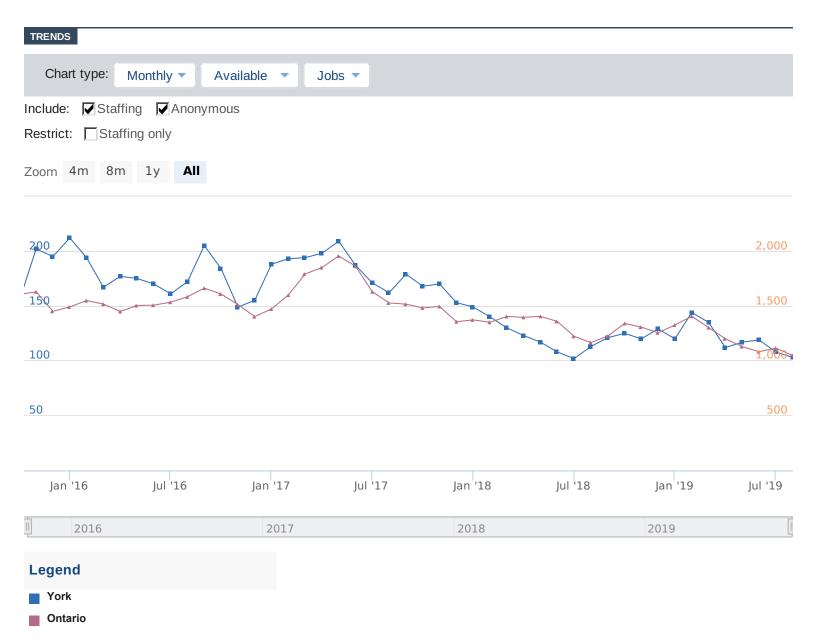


EDUCATIONAL ATTAINMENT



Construction millwrights and industrial mechanics

Q Search Definition: Construction millwrights and industrial mechanics in York County, ON



Construction trades helpers and labourers

Search Definition: Construction trades helpers and labourers in York County, ON

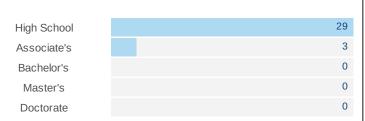






EDUCATIONAL ATTAINMENT

Current Openings: 32



Construction trades helpers and labourers

Q Search Definition: Construction trades helpers and labourers in York County, ON

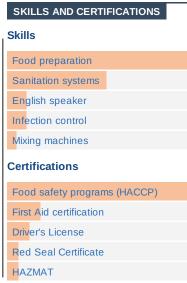


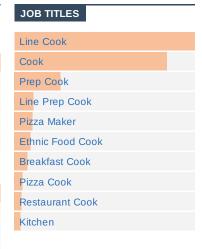
Cooks



Q Search Definition: Cooks in York County, ON







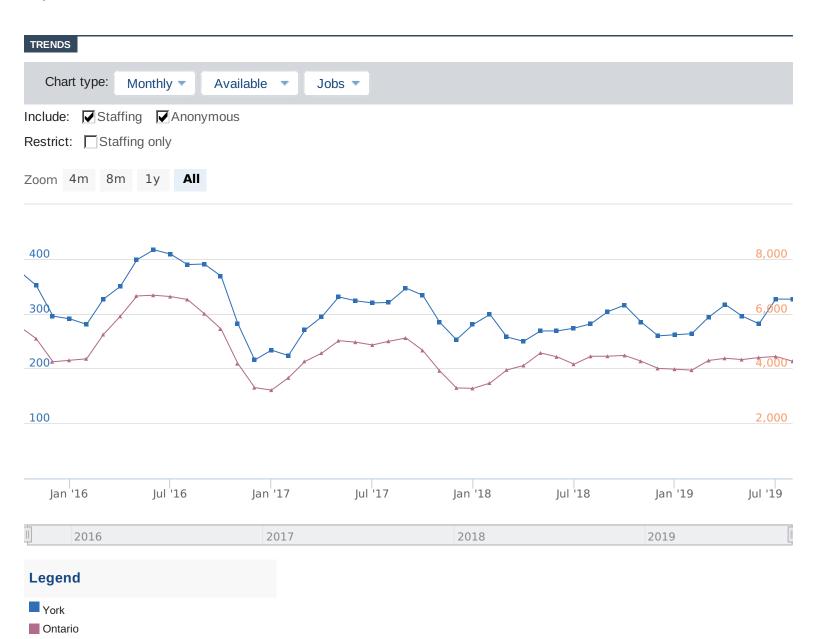
EDUCATIONAL ATTAINMENT

Current Openings: 138

High School	126
Associate's	11
Bachelor's	1
Master's	0
Doctorate	0

Cooks

Q Search Definition: Cooks in York County, ON

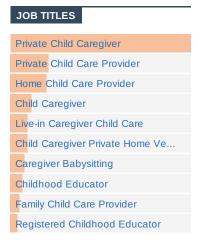


Early childhood educators and assistants

Q Search Definition: Early childhood educators and assistants in York County, ON







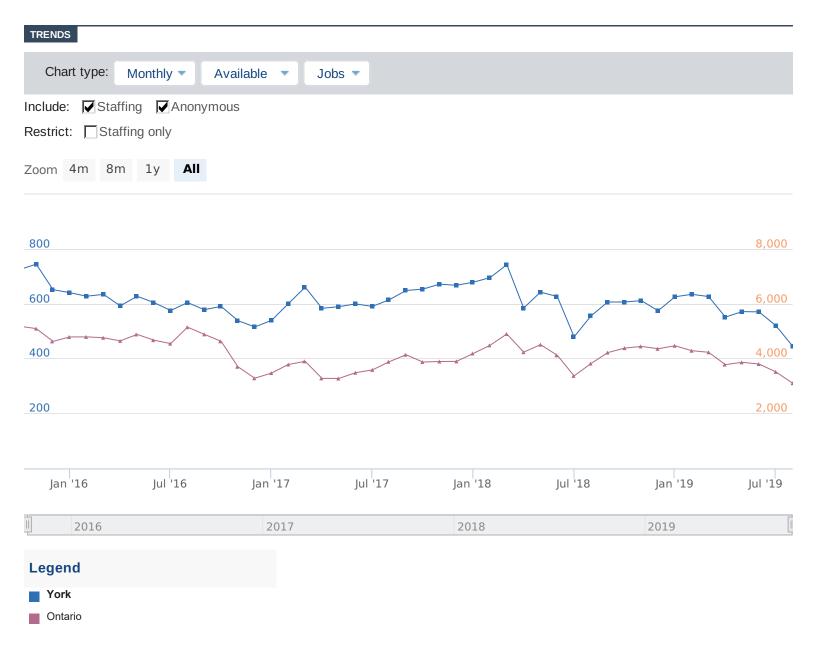
EDUCATIONAL ATTAINMENT

Current Openings: 131

High School	103
Associate's	25
Bachelor's	3
Master's	0
Doctorate	0

Early childhood educators and assistants

Search Definition: Early childhood educators and assistants in York County, ON



Electricians (except industrial and power system)

Q Search Definition: Electricians (except industrial and power system) in York County, ON



SKILLS AND CERTIFICATIONS	
Skills	
Blueprints	
Electrical systems	
Preventive maintenance	
Multimeters	
Switches	
Certifications	
Driver's License	
Workplace Hazardous Materials I	

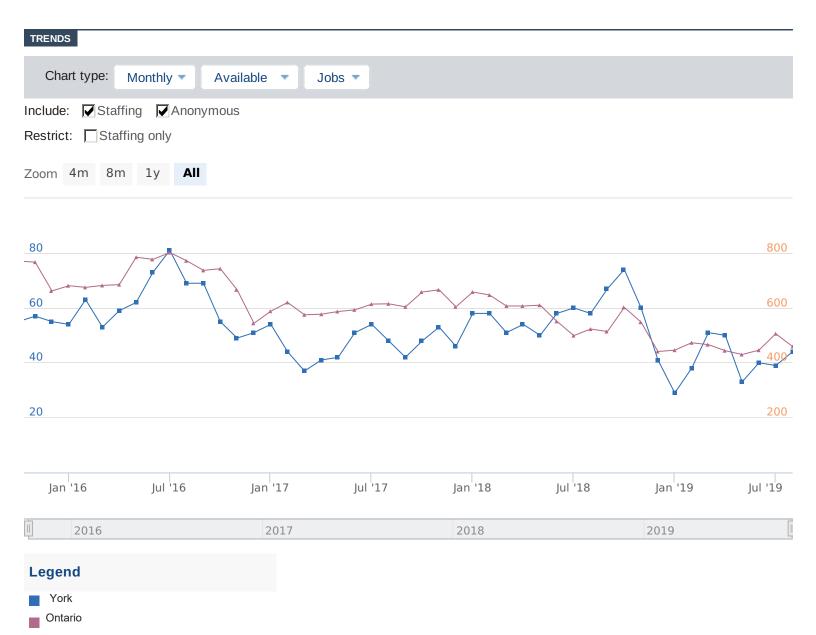


EDUCATIONAL ATTAINMENT



Electricians (except industrial and power system)

Q Search Definition: Electricians (except industrial and power system) in York County, ON



Electronic service technicians (household and business equipment)

Q Search Definition: Electronic service technicians (household and business equipment) in York County, ON



SKILLS AND CERTIFICATIONS	
Skills	
Electrical systems	
Inkjet printers	
VHSIC hardware description lang	
Supply system	
Device drivers	
Certifications	
No data available.	

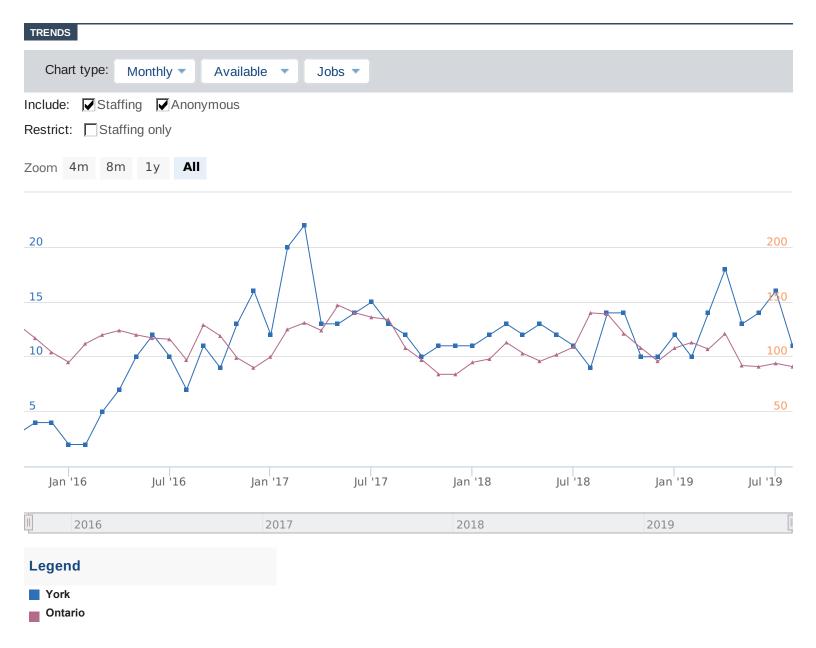
JOB TITLES
Electrical Electronics Design T
Audio Video Repair Technician
Home Entertainment Specialist
Spray Equipment Repairer
Electrical Mechanic
Electronic Test Technologist Ge
Plc Controls Technician
Electrical Engineering Design T
Radio Television Service Techni
Geek Squad Home Installation Ag

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Electronic service technicians (household and business equipment)

Q Search Definition: Electronic service technicians (household and business equipment) in York County, ON



Electronics assemblers, fabricators, inspectors and testers

Q Search Definition: Electronics assemblers, fabricators, inspectors and testers in York County, ON



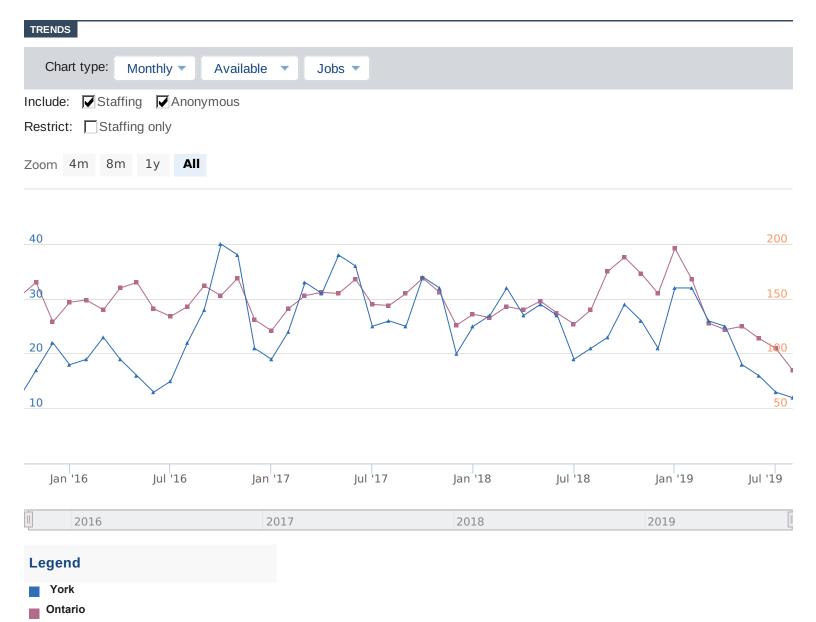
SKILLS AND CERTIFICATIONS	JOB TITLES
Skills	Electronic Assembler
Quality Systems	Assemble Electronics
Blueprints	Smt Operator
Micrometers	Electronic Technician Assembler
Certifications	Surface Mount Technology Operator
No data available.	Electronic Assembler Soldering
No data avallable.	Electronic Inspector
	Assemble Electronic Equipment M
	Electronics Assembler
	Precision Assembler

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Electronics assemblers, fabricators, inspectors and testers

Q Search Definition: Electronics assemblers, fabricators, inspectors and testers in York County, ON



Elementary and secondary school teacher assistants

Q Search Definition: Elementary and secondary school teacher assistants in York County, ON



SKILLS AND CERTIFICATIONS
Skills
Braille
Sign Language
Certifications
First Aid certification
Early Childhood Education (ECE)
Special Education (SPED)

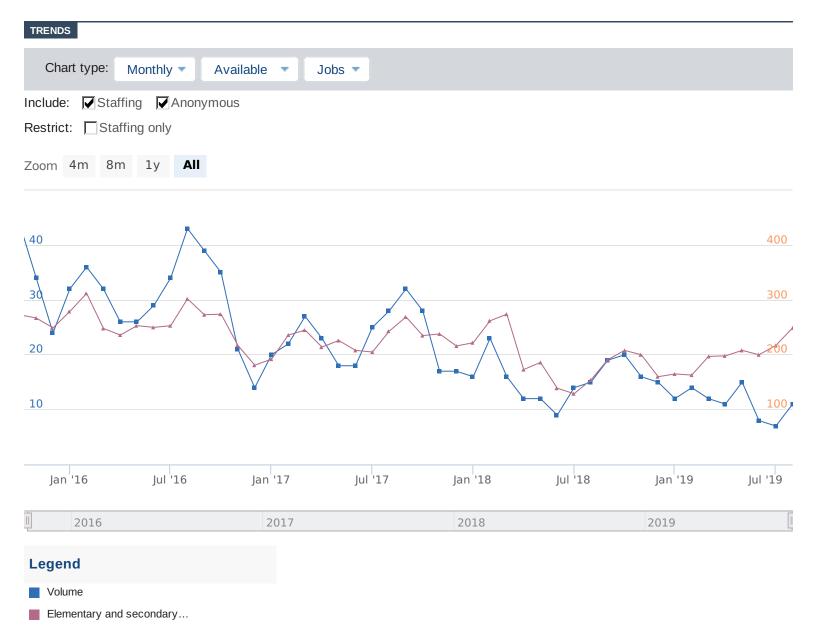
JOB TITLES
Teacher Assistant
Childhood Assistant
Childhood Education Worker
Rece Assistant Teacher
Assisting Childhood Educator
Assisting ECE
Aide Enseignante Aide Enseignant
Labour Students
Assistant
Camp Teacher

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Elementary and secondary school teacher assistants

Q Search Definition: Elementary and secondary school teacher assistants in York County, ON





Hairstylist and Barbers

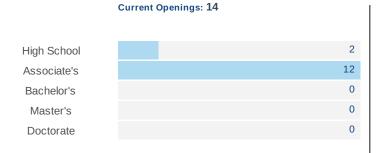
Q Search Definition: Hairstylists and barbers in York County, ON



SKILLS AND CER	TIFICATIONS
Skills	
Hair cutting	
Wigs	
Bilingual	
Certifications	
Esthetician and Co	osmetology Lic

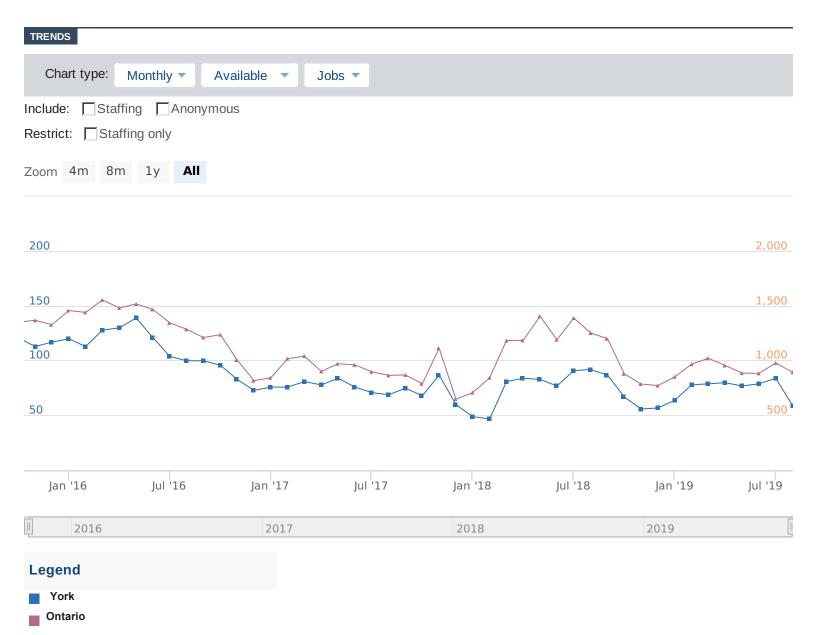


EDUCATIONAL ATTAINMENT



Hairstylist and Barbers

Q Search Definition: Hairstylists and barbers in York County, ON

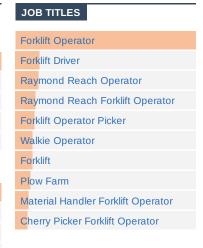


Heavy equipment operators (except crane)

Q Search Definition: Heavy equipment operators (except crane) in York County, ON





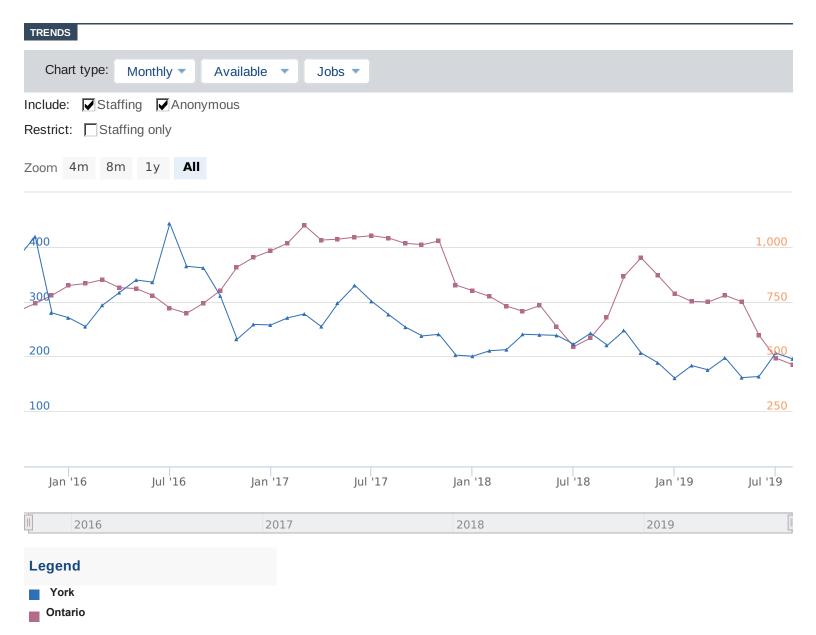


EDUCATIONAL ATTAINMENT

High School Associate's Bachelor's Master's Doctorate Current Openings: 26

Heavy equipment operators (except crane)

Q Search Definition: Heavy equipment operators (except crane) in York County, ON



Refrigeration and air conditioning mechanics

Search Definition: Refrigeration and air conditioning mechanics in York County, ON



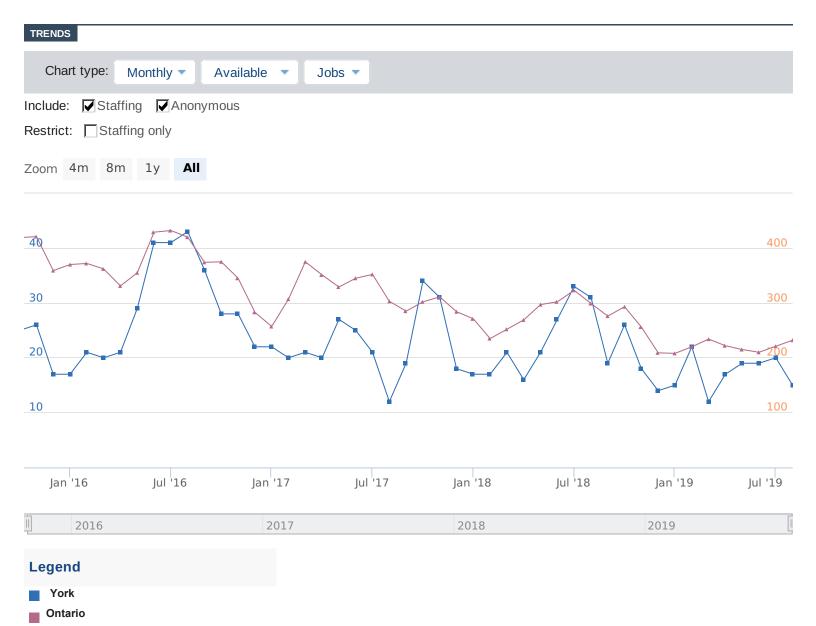
SKILLS AND CERTIFICATIONS	JOB TITLES
Skills	Hvac Technician
Electronic test equipment	Hvac Service Technician
Certifications	Hvac Installer
	Hvac
Driver's License	Air Duct Cleaning Technician
HVAC Certification (HVAC)	Refrigeration Technician
	Refrigeration Mechanic
	Refrigeration Service Technician
	Refrigeration Service Technicia
	Hvac Refrigeration Technician

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Refrigeration and air conditioning mechanics

Q Search Definition: Refrigeration and air conditioning mechanics in York County, ON



Q Search Definition: Information systems testing technicians in York County, ON





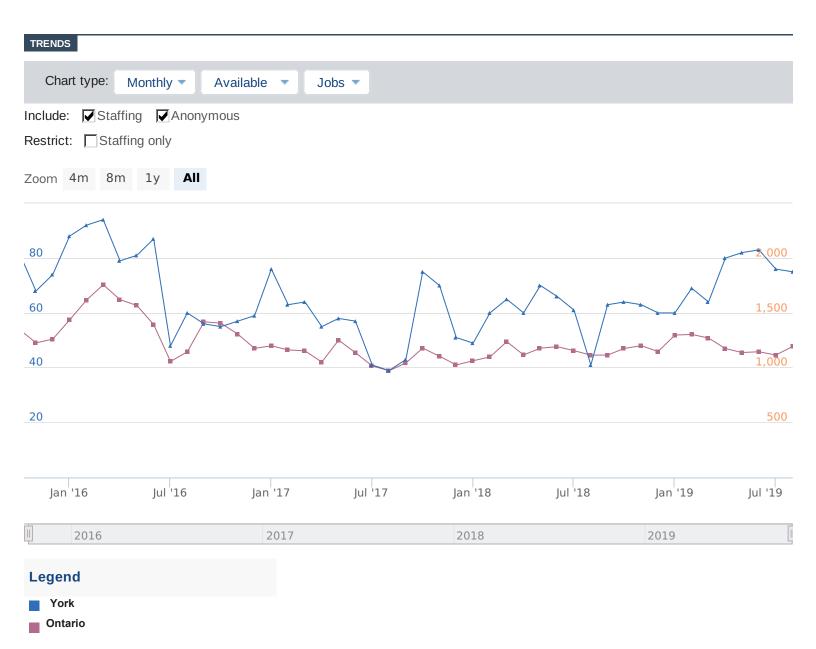


Current Openings: 27 High School

EDUCATIONAL ATTAINMENT

High School	0
Associate's	1
Bachelor's	24
Master's	0
Doctorate	2

Q Search Definition: Information systems testing technicians in York County, ON



Machinists

Q Search Definition: (machinist) AND NOT (tool OR die) in York County, ON



SKILLS AND CERTIFICATIONS **Skills Engineering drawings** Blueprints Computer numerical control soft.. Certifications No data available.

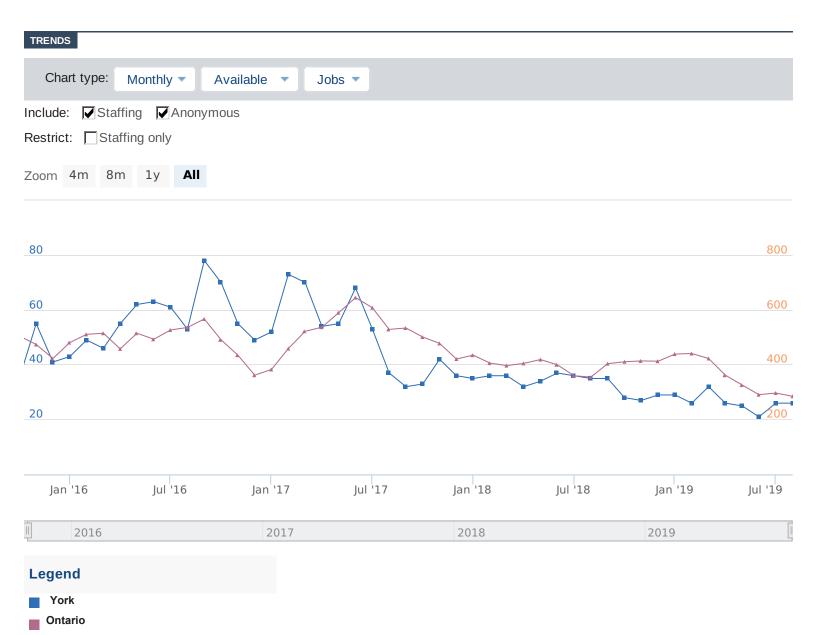


EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Machinists

Q Search Definition: (machinist) AND NOT (tool OR die) in York County, ON



Painters and decorators (except interior decorators) Search Definition: (painter) in York County, ON



SKILLS AND CERTIFICATIONS	
Skills	
T-bars	
Polishers	
Blueprints	
Soldering equipment	
Spray guns	
Certifications	
Driver's License	
Workplace Hazardous Materials I	
First Aid certification	

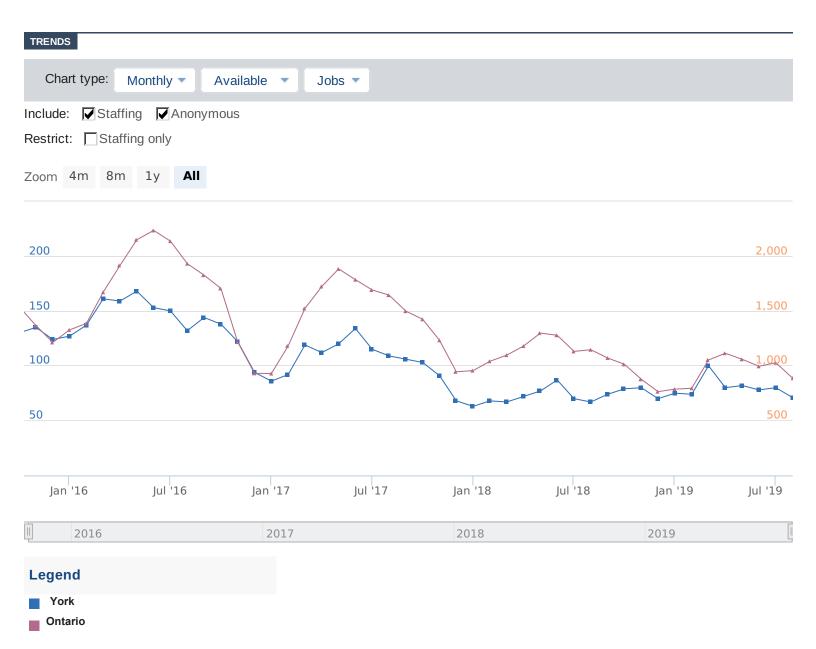
Painter Spray Painter Industrial Spray Painter Industrial Painter Painter Helper Professional Painter Automotive Body Painter Auto Body Painter Painter Labourer Construction Painter

EDUCATIONAL ATTAINMENT



Painters and decorators (except interior decorators)

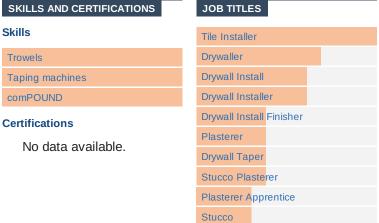
Q Search Definition: (painter) in York County, ON



Plasterers, drywall installers and finishers and lathers

Q Search Definition: Plasterers, drywall installers and finishers and lathers in York County, ON



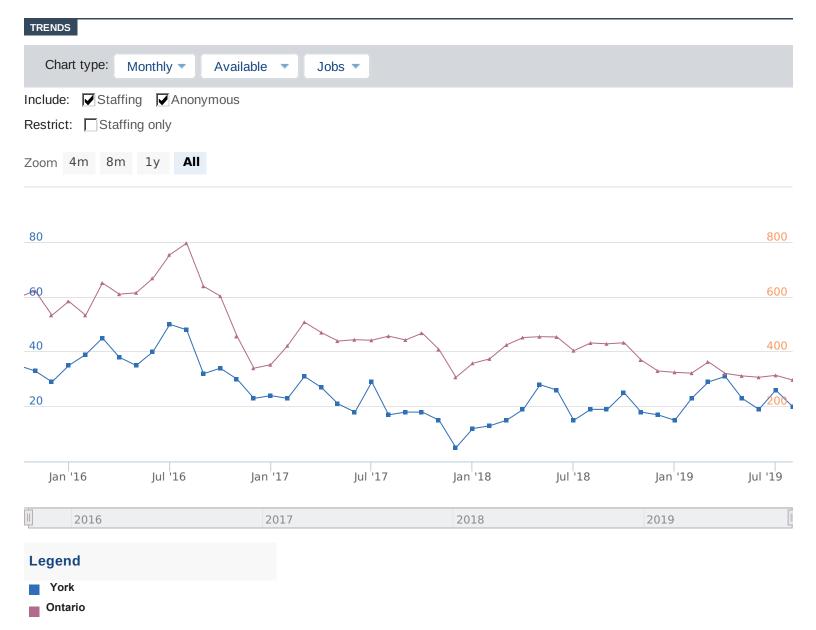


EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Plasterers, drywall installers and finishers and lathers

Q Search Definition: Plasterers, drywall installers and finishers and lathers in York County, ON

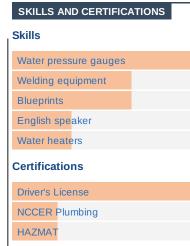


Plumbers



Q Search Definition: plumber in York County, ON

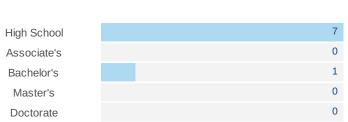






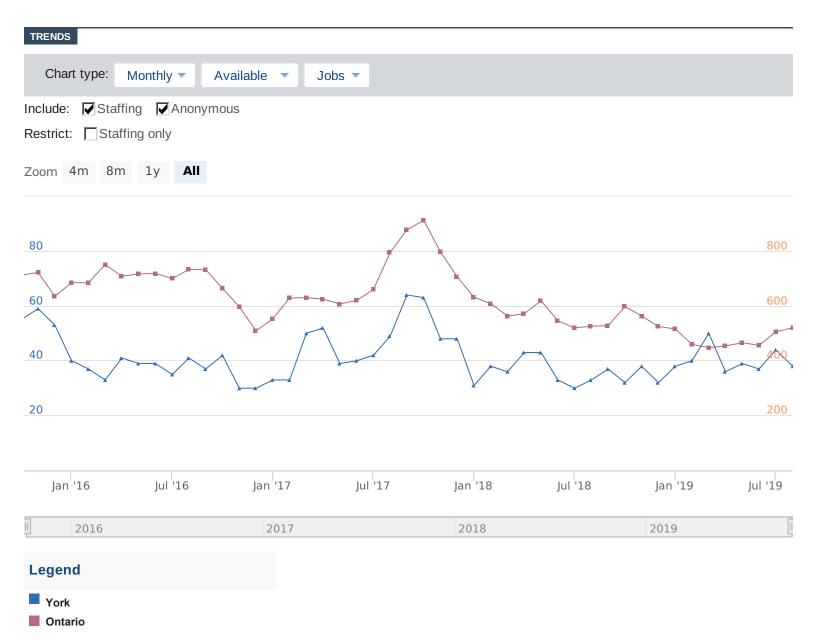
EDUCATIONAL ATTAINMENT





Plumbers

Q Search Definition: plumber in York County, ON



Process control and machine operators, food and beverage processing

Q Search Definition: Process control and machine operators, food, beverage and associated products processing in York County, ON



	SKILLS AND CER	TIFICATIONS	JOB TITI		
Skills					
		IVI	achine		
	Sanitation systems		Fo	ood Pac	
	Chart recorders		Pl	ow Pac	
	Quality Systems		Pa	<mark>ack</mark> agin	
	Quality Assurance	(QA)	Li	ght Pac	
	Blenders		Pa	ackage	
Certifications			Packer M		
	No data available.			ackagin	
ivo uata available.			Pa	ackagin	

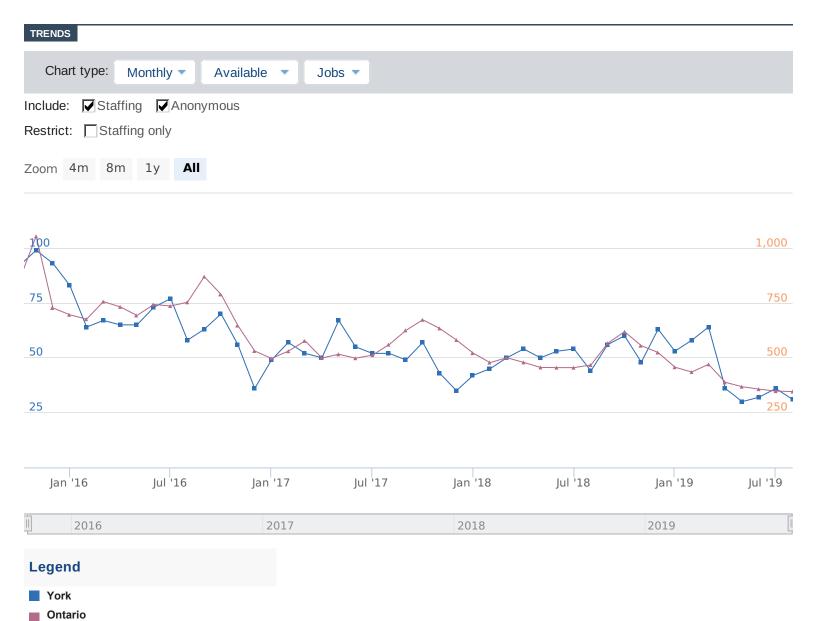
JOB TITLES		
Machine Operator		
Food Packaging		
Plow Packaging		
Packaging		
Light Packaging		
Packager Manufacturing		
Packer Manufacturing		
Packaging Associate		
Packaging Worker		
Batter Dough Mix Food Beverage		

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Process control and machine operators, food and beverage processing

Q Search Definition: Process control and machine operators, food, beverage and associated products processing in York County, ON



Pool Technician

Q Search Definition: Pool AND Technician in York County, ON



SKILLS AND CERTIFICATIONS

Skills

No data available.

Certifications

No data available.

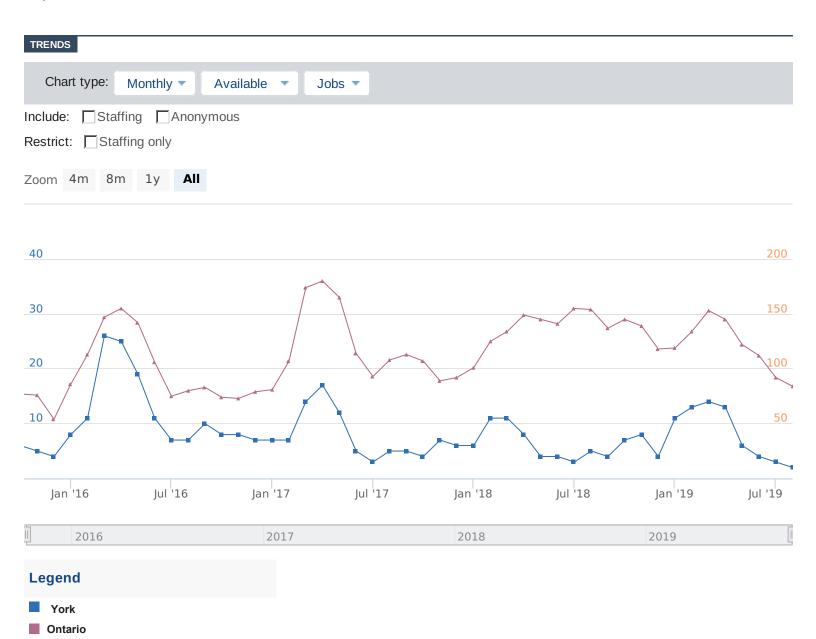
JOB TITLES			
Pool Technician			
Swimming Pool Technician			
Pool Service Technician			
Pool Spa Service Technician			
Facility Technician			
Swimming Pool Service Technician			
Concrete Pool Builder Labourer			
Diesel Lube Technician			
Logistics Attendant			
Blow Mold Set up Technician Pre			

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Pool Technician

Q Search Definition: Pool AND Technician in York County, ON



Q Search Definition: Tool and die makers in Ontario; York County, ON

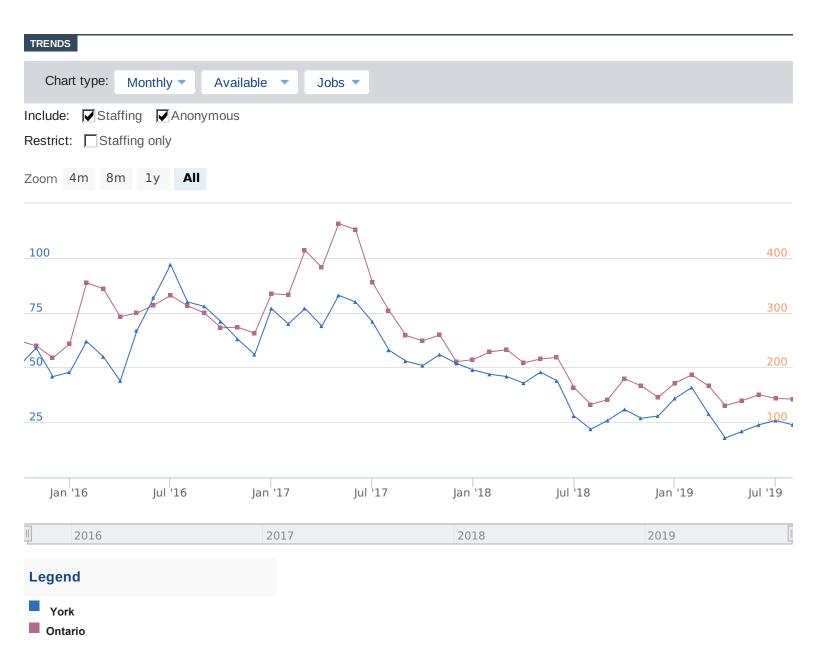




EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Q Search Definition: Tool and die makers in Ontario; York County, ON



Tool & Gauge Inspectors

Q Search Definition: (Tool AND Gauge) AND Inspector in York County, ON



SKILLS AND CERTIFICATIONS

Skills

Micrometers

Goggles

Computer numerical control soft..

Quality control

Certifications

No data available.

JOB TITLES

Quality Engineer

Quality Inspector

Machinist

Inspector Machining Tooling

Inspector Machined Sections

Cmm Programer

Senior Quality Inspector

Cmm Programmer

Quality Control Inspector

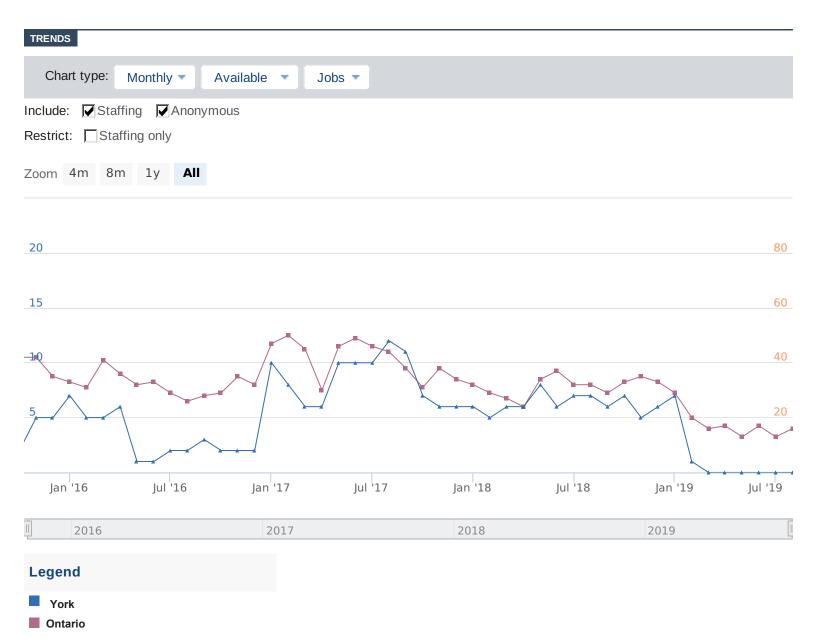
Quality Inspector Administrator

EDUCATIONAL ATTAINMENT

There was not enough data to calculate the Educational Attainment breakdown.

Tool & Gauge Inspectors

Q Search Definition: (Tool AND Gauge) AND Inspector in York County, ON



Transport Truck Drivers

Q Search Definition: Transport truck drivers in York County, ON



SKILLS AND CERTIFICATIONS **Skills** Global Positioning System (GPS) Preventive maintenance Bills of lading Straight trucks Tractor-trailers Certifications Driver's License Security clearance Commercial Driver's License (CDL) Class A Commercial Drivers Lice... Class B Commercial Driver's Lic...

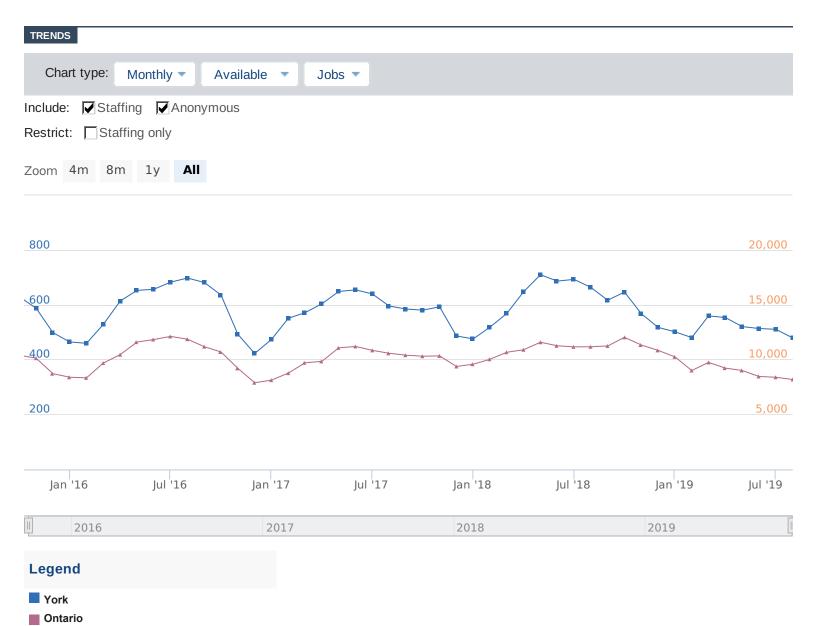




High School	27
Associate's	52
Bachelor's	2
Master's	0
Doctorate	0

Transport Truck Drivers

Q Search Definition: Transport truck drivers in York County, ON



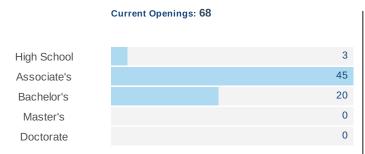
User support technicians

Q Search Definition: User support technicians in York County, ON

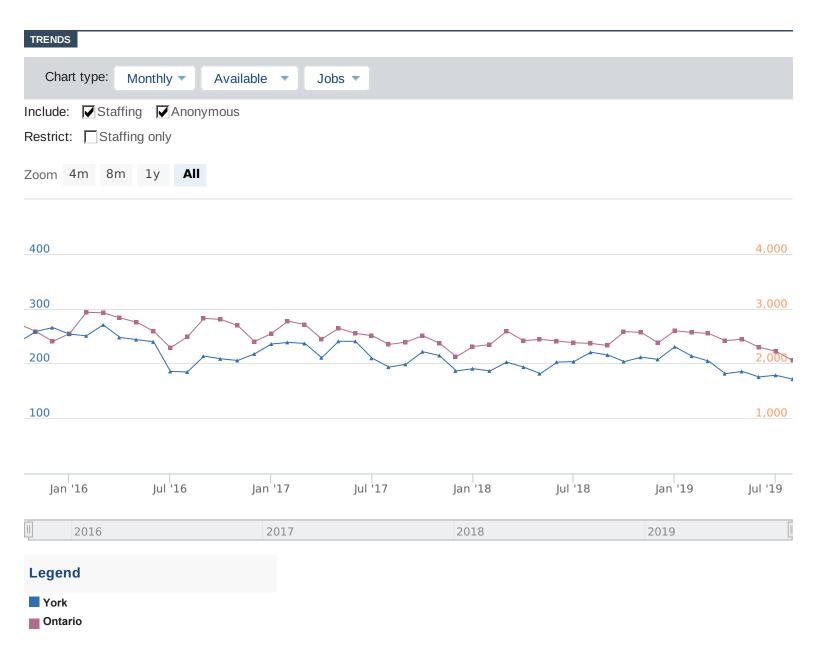








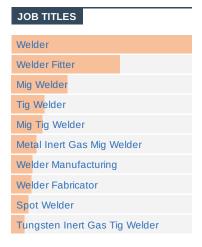
Q Search Definition: User support technicians in York County, ON



Q Search Definition: Welders and related machine operators in York County, ON

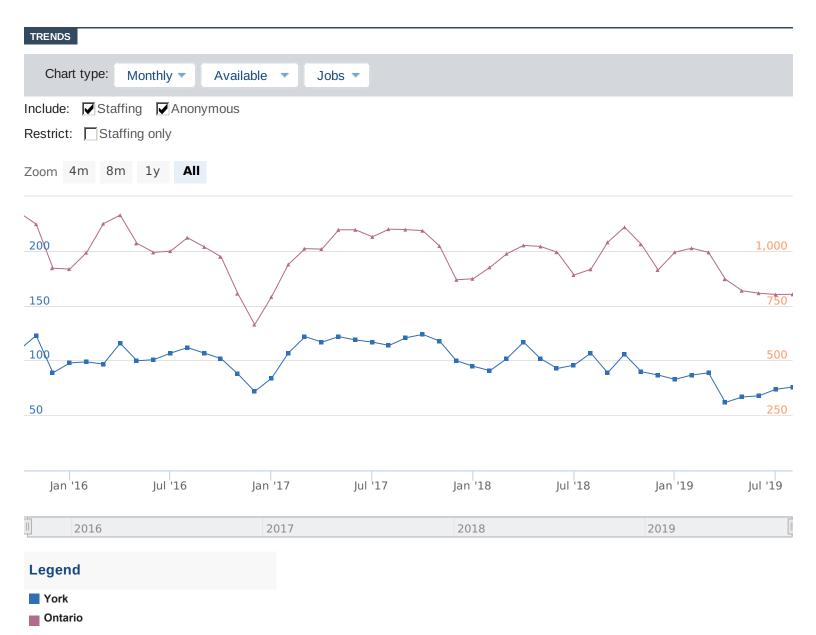


SKILLS AND CERTIFICATIONS		
Skills		
Blueprints		
Welding equipment		
Cutting equipment		
Welding machines		
Soldering machines		
Certifications		
Security clearance		
HAZMAT		
Driver's License		





Q Search Definition: Welders and related machine operators in York County, ON

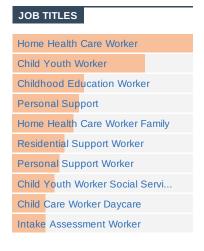


Youth Child Worker

Search Definition: "worker" AND (child OR youth); Optional: Early Childhood Education (ECE) in York County, ON



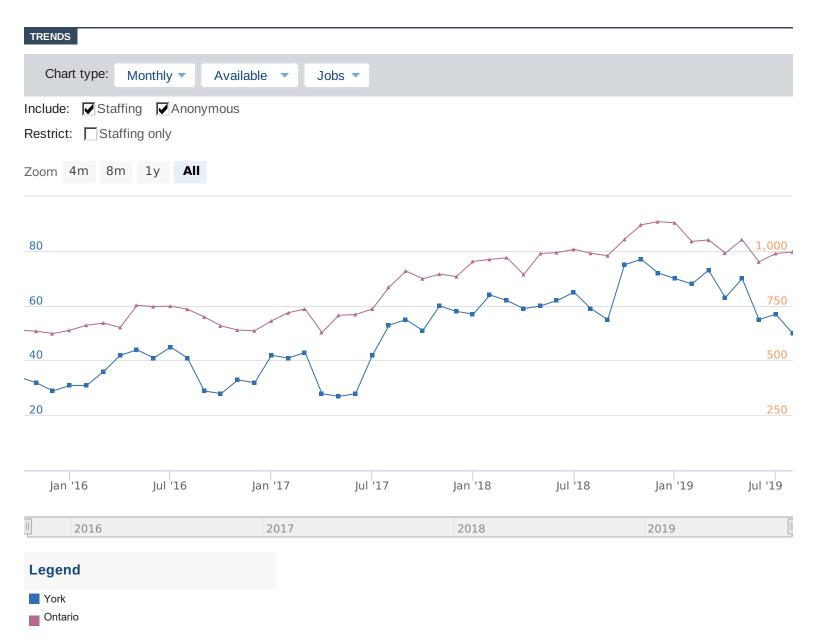






Youth Child Worker

Q Search Definition: "worker" AND (child OR youth); Optional: Early Childhood Education (ECE) in York County, ON





Workforce Planning Board of York Region 238 Wellington St. East Unit 209 Aurora, ON L4G 1J5 Phone: (905) 503-6611 wpboard.ca