

AN IN DEPTH LOOK AT ...

TRADES

IN NIPISSING & PARRY SOUND DISTRICTS IN 2016



The Labour Market Group
Guiding partners to workforce solutions.



Ontario

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WORKFORCE DEVELOPMENT

The Labour Market Group (LMG) is your source for workforce and labour market information in Nipissing and Parry Sound Districts. LMG works with employers and job seekers to find solutions to workforce development needs and challenges.

LABOUR MARKET INFORMATION

LMG provides communities with current labour market information that is required to make informed decisions regarding planning, training, and development.

- ✓ Statistical Information
- ✓ Community, Industry, and Occupational Profiles
- ✓ Monthly Job Vacancy Study
- ✓ Monthly Labour Focus Publications



LOCAL LABOUR MARKET PLANNING

LMG leads the development of local labour market strategies by:

- Providing evidence based research & analysis;
- Identifying employment trends;
- Targeting workforce opportunities;
- Initiating workforce development strategies;
- Collaborating with community partners & agencies;
- Assisting employers with human resources planning; and
- Bridging the gap between employers looking to hire and job seekers looking to become employed.



LMG is one of 26 workforce planning boards across Ontario funded by the Ministry of Colleges, Training & Universities. Servicing Nipissing and Parry Sound Districts, we engage various community stakeholders in a consultative and inclusive local labour market planning process.

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INTRODUCTION

The Labour Market Group (LMG), a local Workforce Planning Board (funded by the former Ministry of Training Colleges and Universities - MTCU)¹ requested geographically-specific data on the skilled trades workforce for its catchment area. It was expected that this data could help shine an important light on the current state of the local skilled trades workforce, what trades might be most vulnerable to skills shortages, and provide an additional context for workforce planning.

In Ontario, while MAESD, the new Ministry of Advanced Education and Skills Development (replacing MTCU) collects some data on apprentices, much of the responsibility for data collection has shifted over to the Ontario College of Trades (OCoT). For example, the MAESD Apprenticeship Office continues to manage Registered Training Agreements (RTA) between employers and apprentices. Once a RTA is in place, information is then directly uploaded to the OCoT database. The daily transfer of this data is important since the apprentice can't work until they register with OCoT, and they can't register with OCoT unless they have a RTA number.

OCoT collects data on both apprentices and journeypersons who register with them. However, while OCoT data for all apprentices is accurate (as mandatory registration is required regardless of trade), mandatory registration for journeypersons in Ontario is only required for the compulsory trades. As a result, this becomes a significant limitation of the data as not all journeypersons in all trades are registered or required to register with OCoT, unlike apprentices. This severely limits the ability to identify where skilled trades shortages may exist in the future, particularly in the voluntary trades.

As noted, much of the data collected on skilled trades workers has now transitioned to OCoT. In early 2016, OCoT agreed to allow their researchers to provide LMG with data on journeypersons and apprentices registered with their college. OCoT mined its data and tailored it for the following two regions: Nipissing District and Parry Sound District², both of which are in the LMG catchment area.

For the purposes of this report, Statistics Canada census divisions (which can be linked to postal codes) were used³. Data collected as of March 2016 was mapped onto an Excel spreadsheet to create a Trades Map. This Trades Map provides a "snapshot" of the skilled trades workforce in the Nipissing & Parry Sound districts. It creates a high-level picture of trades that are most active in the area and a general demographic profile of the people working in these trades⁴. Again, keep in mind, not all journeypersons are required to register with OCoT. The Trades Map data was synthesized for this report.

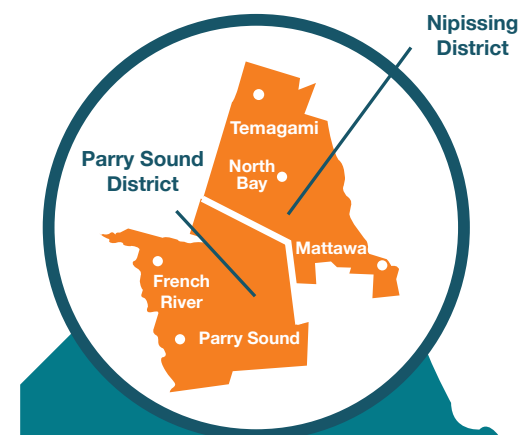
¹ A recent Ontario government shuffle resulted in new ministry names/portfolio realignments. Workforce planning boards are now governed by the Ministry of Advanced Education and Skills Development (MAESD) however MTCU (Ministry of Training Colleges and Universities) was the lead ministry responsible for collecting apprenticeship data at the time of this report.

² Map of Ontario's 50 census divisions including counties, districts, regions and others. https://www.google.com/maps/d/viewer?mid=zqKmUR0yZG5w.kh_6fydtlpbY&hl=en

³ Map of Ontario's 50 census divisions including counties, districts, regions and others. https://www.google.com/maps/d/viewer?mid=zqKmUR0yZG5w.kh_6fydtlpbY&hl=en

⁴ Readers are invited to contact: info@thelabourmarketgroup.ca for more information on the Trades Map.

EXECUTIVE SUMMARY



NIPISSING & PARRY SOUND DISTRICTS HAVE:
2,660
 JOURNEYPersons
& 657
 APPRENTICES

Most of the trades workforce is located in Nipissing District

1,539
 JOURNEYPersons
& 427
 APPRENTICES

Overall, these 2 trade sectors represent the highest level of activity:



Motive Power



Construction

THE ONTARIO COLLEGE OF TRADES (OCOT) LISTS 156 TRADES

Trades represented by journeypersons and apprentices in Nipissing & Parry Sound Districts are as follows:

NIPISSING DISTRICT

51 TRADES
with journeypersons

47 TRADES
with apprentices

PARRY SOUND DISTRICT

44 TRADES
with journeypersons

38 TRADES
with apprentices

**OVERALL
AVERAGE AGE
IN NIPISSING
DISTRICT**
44.0 YEARS
JOURNEYPersonS
28.9 YEARS
APPRENTICES

**OVERALL
AVERAGE AGE
IN PARRY SOUND
DISTRICT**
44.4 YEARS
JOURNEYPersonS
28.9 YEARS
APPRENTICES

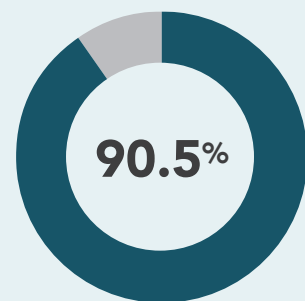


The average age of journeypersons and apprentices in the top 10 trades represents:

90.5% of all journeypersons
70.3% of all apprentices

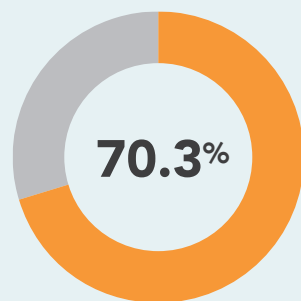
This presents a "truer" picture of the trade population.

% OF ALL JOURNEYPersonS



50.5 YEARS

% OF ALL APPRENTICES



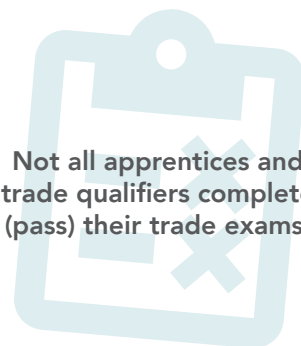
28.0 YEARS



Nipissing and Parry Sound Districts trades are heavily oriented to males.



With some exceptions (Hairstylist, Child Development Practitioner) female journeyperson and apprentice activity is very small and clustered in the Service and Construction trades identified within the Nipissing District.



Not all apprentices and trade qualifiers complete (pass) their trade exams.

DATA GAPS

We cannot be sure the number of journeypersons in voluntary trades is accurate because many journeypersons do not register⁵. Membership in OCoT is only mandatory for journeypersons in compulsory trades. For example, the data in Illustration 5 shows 20 journeyperson carpenters for 68 apprentices, clearly inconsistent with the number needed to meet ratio requirements.

Journeyperson numbers in compulsory trades may not be accurate because journeypersons who need to register with OCoT believe their prior registration with MTCU (now MAESD) carried over in the apprenticeship program's transition from MAESD to OCoT. The number of journeypersons in this scenario is substantial, but it is slowly being identified as a result of OCoT's enforcement and MAESD employer consultations⁶.

Journeyperson numbers can include multiple entries because the data reflect the number of certificates issued, not individual tradespersons. Journeypersons in 2 or 3 trades are counted accordingly in each trade (i.e., counted twice for two certificate holders, three times for three certificate holders, and so on).

Some businesses in the voluntary trades sector do not register apprentices. Employers in these businesses "apprentice" new employees to more senior employees, some of whom may be journeypersons. The "apprentice" learns the trade in-house, developing increasing trade competence and income. These "apprentices" and "journeypersons" are not identified in the OCoT data⁷. The numbers could be substantial. Efforts should be made to identify this population.

Apprentices pay an annual fee of \$67.80 (HST included) to remain OCoT members. But, if training involves lay-offs and no other workplace can be secured to continue training, apprentices in good standing may let their membership dues lapse in the absence of secure work and ongoing training opportunities. OCoT does not collect information on employment status. The number of apprentices in the local workforce may be underestimated.

⁵Annual membership fee is \$136.60 including HST.

⁶Enforcement officers review compliance in compulsory trades where journeypersons are required to be members of OCoT. MAESD Employment Training Consultants confirm with employers that qualified staff are in place to train apprentices.

⁷Permanent employees of industrial plants are exempt from section 2 of OCTAA, and are therefore not required to be members of the College to work in a compulsory trade if they are working within the plant and its premises.



THE TRADES MAP

DISCUSSION OF THE TRADES MAP

The Trades Map is an Excel document sorted by trade sector and alphabetical listing of trades by name. The list of trades was 'extracted' from the OCoT website. The Excel "sort" feature can be used to explore the data for answers to specific workforce queries. The Trades Map is attached as a separate document.

The December 2016 Map is a single picture, but like a movie composed of many frames, the Trades Map could be used to create regular "snapshots" that together, become a living document of trade activity over time.

The data is organized from the general to the specific. Trades are color-coded by sector:

Construction – Yellow
Industrial – Grey
Motive Power – Green
Service – Pink

Key summary data are identified in blue columns. Color-coding helps with reading the data, especially as it is sorted.

Scanning from left to right, the first section describes trade information including Trade Code, Sector, Classification (compulsory/voluntary), C of Q Exam, Red Seal, and Ratios⁸.

The second section shows aggregated information by trade for the entire Nipissing and Parry Sound Districts. Total journeypersons (JP), apprentices (Appr) and trade qualifiers (TQ) are noted. Apprentice and trade qualifier examination data are presented.

The next sections have the same headings and show demographic information for journeypersons and apprentices in the two geographic areas – District of Nipissing and District of Parry Sound. Both 'mean' and 'median' ages are shown⁹. The mean, or average, is used in all the data tables in this report.

⁸The ratio heading is hyperlinked to the OCoT Ratio Calculator.

⁹Mean (or average) and median are statistical terms that have a somewhat similar role in terms of understanding the central tendency of a set of statistical scores. While an average has traditionally been a popular measure of a mid-point in a sample, it has the disadvantage of being affected by any single value being too high or too low compared to the rest of the sample. This is why a median is sometimes taken as a better measure of a mid-point.

HOW IS THE TRADES MAP DATA HELPFUL?

The Trades Map is a dynamic document. It is a framework for collecting information that changes over time. Small changes might include reclassification of a trade (compulsory/voluntary) or noting where training capacity is available locally. More significant changes will require tracking real time numbers of journeypersons and apprentices working in the trades. Currently, the Trades Map information is collected from various sources and entered manually. Ideally, the information should be updated automatically by on-line linking to the OCoT and MAESD databases.

It is not useful to simply collect and present information without asking good questions about what it is, what it means or what it suggests about the workforce. Community stakeholders should use the information for planning. Ideally, the Trades Map should be actively maintained as an accessible community resource¹⁰.

WORKFORCE PLANNING BOARDS

Workforce Planning Boards across Ontario gather intelligence about labour supply and demand. They consult with employers to identify current and emerging workforce employment needs. The primary role of Workforce Planning Boards is to improve understanding of the workforce and coordinate community responses to labour market issues. Workforce Planning Boards prepare annual labour market plans using various sources of information.

Workforce Planning Boards draw on a wide variety of pre-existing data sources to describe their local labour market and analyse what it means for the workforce (e.g., National Household Survey, Labour Force Survey, National Occupational Classification, Employment Ontario service data, etc.).

The Trades Map provides an additional tool to inform the Boards' analysis about current and future workforce needs.

LITERACY NETWORKS

Literacy Networks provide service coordination for Employment Ontario (EO) service providers and support to programs delivering Literacy and Basic Skills (LBS). The Networks work together to respond to the unique challenges and training needs of the North. Apprenticeship is one of the five goal paths in the Ontario Adult Literacy Curriculum Framework (OALCF).

LBS service providers help adults transition to further education, training, or work.

¹⁰ The Trades Map may be a useful tool for the Local Employment Planning Council pilot projects currently underway by the Ministry of Advanced Education and Skills Development in 8 communities.

The Trade Map documents examination attempts and pass rates for apprentices and trade qualifiers. Some trades attract workers whose literacy issues present challenges to passing the exam. The data can 'flag' areas of possible concern and help literacy providers implement targeted interventions.

The Trades Map can be an important tool for annual service delivery planning. It provides LBS service providers with a sharper picture of the local trades labour market as they assist learners transition into apprenticeship opportunities.

EMPLOYMENT SERVICES

Employment Ontario helps Ontarians find work. It provides resources – such as information about who's hiring in your community — as well as personalized advice and services to help people assess their skills and experience, find work, and start on the path to skills training. It also helps place workers with skills with employers who need those skills.

The Trades Map will be a crucial tool for local employment service providers who place clients with employers. The Trades Map identifies which trades are most active in Nipissing and Parry Sound Districts, and it gives a profile of the journeyperson and apprenticeship workforce in those trades.

EMPLOYERS

Employers hire tradespersons. Many employers collaborate with unions and labour associations who recruit, train and place apprentices in employers' workplaces. Small and medium-size employers, which represent the vast majority of Ontario employers and workers, also employ journeypersons and apprentices.

Employers need a credible supply of tradespersons to meet present and future workplace demands. Employers staff their workplaces by hiring certified journeypersons (required in compulsory trades). They develop additional tradespersons through the apprenticeship process. Having access to data about the local and regional "picture" of the labour supply helps employers plan. Real-time data is useful to employers who are considering a move to the Nipissing and Parry Sound Districts and need to identify a qualified labour supply.

Employer associations (i.e., Northeastern Ontario Construction Association) provide a collective voice for businesses with a shared interest in particular employment sectors. Associations collect and distribute industry-specific information and assist members with human resources issues including collective agreements. Business associations (i.e., Chamber of Commerce) also provide a collective voice for their members. Employer and business associations benefit from access to information about the labour supply. The Trade Map can be a resource and reference as employers assess their capacity to respond effectively to business opportunities. Employer and business associations that are linked to broader provincial networks often lobby on behalf of their members. Having access to meaningful data helps support their case with policymakers.

UNIONS

Unions have a strong voice in the trades. They often act as Training Delivery Agents (TDA), and they provide a unionized workforce for employers. Unions have a strong investment in developing their workforce (membership), including apprenticeship training. Good data about the workforce supply informs the unions' business practices as they compete in the broader workforce to establish a qualified and sustainable trade workforce.

EDUCATORS

Secondary school Co-Op programs and the Ontario Youth Apprenticeship Program (OYAP) offer experiential learning opportunities for students in Grade 11 and 12. OYAP gives students workplace experience in a trade and helps them accrue hours and/or competencies which may be applied to an apprenticeship after graduation.

The Ontario colleges provide in-school training in selected trades. Colleges also provide Pre-Apprenticeship and Apprenticeship Co-Op programs. Pre-Apprenticeship helps learners prepare for entry to an apprenticeship program; Apprenticeship Co-Op provides a college diploma and credits toward completion of an apprenticeship program.

OYAP Coordinators recruit employers for student placements. It is helpful to know which trades are active locally and regionally so employers can be contacted to accept students. The Trades Map identifies the demographics for apprentices or journeypersons by trade. Knowing that some trades attract particular demographics (male/female; older/younger) can facilitate more targeted, effective marketing and promotion.

Colleges attempt to respond to community demand, so enrollment planning is a crucial component of their business. Colleges that develop capital-intensive projects (i.e., new trades facilities) need credible data to support their business case. The Trades Map is a useful tool to show activity trends over time (Is the demand for some trades decreasing? Increasing? Where's the heaviest demand for in school-training?)

The Trades Map won't be a sole source of trades information for educational planning, but it can bring an additional level of detail to current planning.



KEY TRADE DATA SUMMARY TABLES

KEY TRADE DATA SUMMARY TABLES

TRADES ACTIVITY

The summary tables highlight key findings in the trades data. Please refer to page 24 of the Trades Map for further analysis.¹¹

As of December 2016, the overall Nipissing and Parry Sound Districts' workforce has 2,660 journeypersons and 657 apprentices (Illustration 1). The District of Nipissing has more journeypersons and apprentices as a percentage of the total workforce (journeypersons = 57.9%; apprentices = 65.0%).

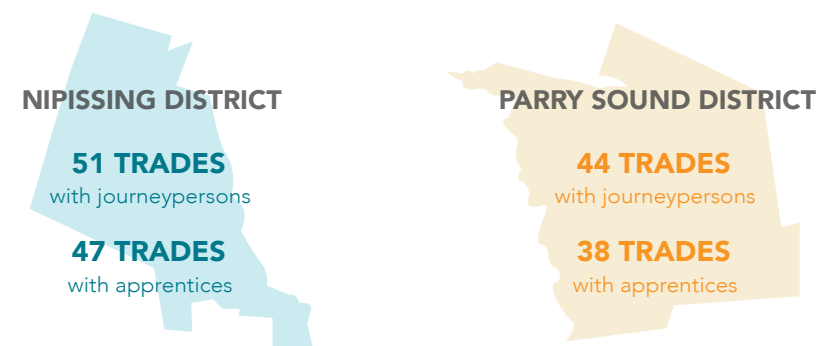
ILLUSTRATION 1: SUMMARY OF TRADES ACTIVITY NIPISSING & PARRY SOUND DISTRICTS, DECEMBER 2016

	NIPISSING DISTRICT	PARRY SOUND DISTRICT	TOTAL
Journeypersons	1,539	1,121	2,660
% of total	57.9%	42.1%	100%
Apprentices	427	230	657
% of total	65%	35%	100%

IDENTIFICATION OF TRADES

The Ontario College of Trades (OCoT) lists 156 Ontario trades. Nipissing and Parry Sound Districts journeypersons are identified with 51 trades, apprentices with 47. The number of trades with journeypersons and apprentices is a little higher in the District of Nipissing (Illustration 2).

ILLUSTRATION 2: SUMMARY OF TRADES IDENTIFIED BY JOURNEYPEOPLE AND APPRENTICES NIPISSING AND PARRY SOUND DISTRICTS, DECEMBER 2016



¹¹The Trades Map is included as a separate document to this report.

AVERAGE AGE

Illustration 3 shows the overall average age by trade sector for journeypersons and apprentices. Census data tell us the "boomer" workforce is aging and facing retirement, but the average journeyperson ages in Nipissing and Parry Sound Districts is still under 50. Data was collected for 'oldest' and 'youngest' in each trade. A closer look at individual trades show many workers over 70 years old (e.g., Industrial Electrician, **Electrician - Domestic and Rural (residential), Plumber, Refrigeration and Air Conditioning Systems Mechanic, Steamfitter, Powerline Technician**).

Some trades have workers over 80 (e.g., **Electrician - Construction and Maintenance, Hoisting Engineer - Mobile Crane Operator 1, Hoisting Engineer - Tower Crane Operator, Automotive Service Technician, Truck and Coach Technician**). The ages need to be viewed with caution because they may not represent older working journeypersons but older non-working journeypersons who have maintained their certification with OCoT.

Apprentice ages are in line with the Ontario average of 29 years.

ILLUSTRATION 3: AVERAGE AGE BY TRADE SECTOR JOURNEYPEOPLE AND APPRENTICE NIPISSING AND PARRY SOUND DISTRICTS, DECEMBER 2016

	NIPISSING DISTRICT		PARRY SOUND DISTRICT	
	Journeypersons	Apprentices	Journeypersons	Apprentices
Construction	42.1	27.7	43.4	26.0
Industrial	43.8	31.1	38.9	35.8
Motive Power	50.2	29.1	51.3	30.8
Service	41.2	29.2	39.3	29.4
Overall	44.0	28.9	44.4	28.9

TOP 10 MOST ACTIVE TRADES

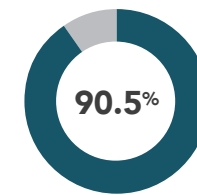
The Nipissing & Parry Sound Districts trades data summary of 10 most active trades (Illustration 4) reveals a truer picture of the aging trades population. The data present the number of journeypersons and apprentices in the top ten trades as a percentage of all journeypersons and apprentices in the Nipissing and Parry Sound Districts workforce. Most of the trade population is identified with the top 10 trades.

Journeypersons represent 90.5% (N=2,408), apprentices represent 70.3% (N=462). The average age of this workforce subset increases from 44.2 years to 50.5 for journeypersons and decreases slightly from 28.9 years to 28.0 years for apprentices¹². This represents a more useful picture of the workforce. It suggests the journeyperson workforce is aging (consistent with demographic trends).

¹²The impact of missing journeyperson data is unknown. (i.e., low membership counts for voluntary trades) regarding the level of activity by trade, or the overall average age.

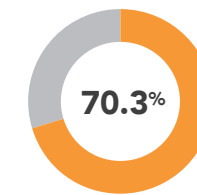
ILLUSTRATION 4: SUMMARY OF TOP 10 MOST ACTIVE TRADES JOURNEYPersons & APPRENTICES, AVERAGE AGE, MALE, FEMALE NIPISSING AND PARRY SOUND DISTRICTS, DECEMBER 2016

JOURNEYPersons					APPRENTICES					
	#	Age	Male	Female		#	Age	Male	Female	
1	Automotive Service Technician	656	51.7	654	2	Electrician - Construction and Maintenance	94	27.3	92	2
2	Truck and Coach Technician	508	53.1	508	0	Automotive Service Technician	90	26.1	87	3
3	Electrician - Construction and Maintenance	475	49.7	471	4	General Carpenter	68	27.3	66	2
4	Hairstylist	364	46.1	75	289	Truck and Coach Technician	44	25.1	44	0
5	Plumber	168	48.9	168	0	Hairstylist	40	28.3	2	38
6	Sheet Metal Worker	62	48.9	62	0	Child Development Practitioner	34	34.4	3	31
7	Auto Body and Collision Damage Repairer	61	50.5	61	0	Powerline Technician	31	24.4	31	0
8	Refrigeration and Air Conditioning Systems Mechanic	51	49.8	50	1	Plumber	26	30.1	25	1
9	Hoisting Engineer - Mobile Crane Operator 1	39	52.2	39	0	Industrial Mechanic Millwright	21	30.6	21	0
10	Hoisting Engineer - Mobile Crane Operator 2	24	54.6	24	0	General Machinist	14	27.1	14	0
	Total	2,408	—	2,112	296	Total	462	—	385	77



Average Age of Journeypersons:
50.5 YEARS

% of all Trades Nipissing & Parry Sound Districts
Journeypersons



Average Age of Apprentices:
28 YEARS

% of all Trades Nipissing & Parry Sound Districts
Apprentices

MOST ACTIVE TRADES

Illustrations 5 through 8 show the most active trades in Nipissing & Parry Sound as of December 2016 sorted by sector, average age, male and female. A total of 10 trades are presented for the construction sector because it has more activity across a wider range of trades.

Compulsory trades in all the tables are bolded.

The data is organized from the general to the specific. Trades are color-coded by sector:

- Construction – Yellow**
- Industrial – Grey**
- Motive Power – Green**
- Service – Pink**

Key summary data are identified in blue columns. Color-coding helps with reading the data, especially as it is sorted.

The data for some trades (i.e., voluntary trades) will show logical inconsistencies between the number of apprentices and the number of qualified journeypersons needed to train them (i.e., Carpenter has 68 apprentices and 24 journeypersons).

Journeypersons in voluntary trades are not required to register as members of OCoT. This highlights one of the gaps in the journeyperson data.

BOTH DISTRICTS (NIPISSING & PARRY SOUND DISTRICTS)

TOP 10 TRADES

ILLUSTRATION 5: OVERALL MOST ACTIVE TRADES IN NIPISSING & PARRY SOUND DISTRICTS SORTED BY TRADE SECTOR, AVERAGE AGE, MALE & FEMALE, DECEMBER 2016

CONSTRUCTION

		JOURNEYPersons				Apprentices				
		#	Age	Male	Female		#	Age	Male	Female
1	Electrician - Construction and Maintenance	475	49.7	471	4	Electrician - Construction and Maintenance	94	27.3	92	2
2	Plumber	168	48.9	168	0	General Carpenter	68	27.3	66	2
3	Sheet Metal Worker	62	48.9	62	0	Powerline Technician	31	24.4	31	0
4	Refrigeration and Air Conditioning Systems Mechanic	51	49.8	50	1	Plumber	26	30.1	25	1
5	Hoisting Engineer - Mobile Crane Operator 1	39	52.2	39	0	Sheet Metal Worker	11	32.3	11	0
6	Hoisting Engineer - Mobile Crane Operator 2	24	54.6	24	0	Refrigeration and Air Conditioning Systems Mechanic	11	32.9	10	1
7	Electrician - Domestic and Rural (residential)	20	55.9	20	0	Heavy Equipment Operator -Excavator	8	22.5	8	0
8	General Carpenter	20	31.6	20	0	Construction Craft Worker	7	31.0	6	1
9	Steamfitter	20	53.9	20	0	Heavy Equipment Operator -Tractor Loader Backhoe	7	22.8	7	0
10	Residential Air Conditioning Systems Mechanic	15	45.9	15	0	Heavy Equipment Operator -Dozer	6	21.8	6	0

TOP 5 TRADES

INDUSTRIAL

		JOURNEYPersons				Apprentices				
		#	Age	Male	Female		#	Age	Male	Female
1	Industrial Mechanic Millwright	8	43.8	8	0	Industrial Mechanic Millwright	21	30.6	21	0
2	Industrial Electrician	5	41.5	5	0	General Machinist	14	27.1	14	0
3	Tractor-Trailer Commercial Driver	4	43.2	4	0	Metal Fabricator (Fitter)	12	26.9	12	0
4	General Machinist	3	29.8	2	1	Industrial Electrician	7	34.1	7	0
5	Metal Fabricator (Fitter)	3	41.3	3	0	Tractor-Trailer Commercial Driver	5	56.4	4	1

MOTIVE POWER

		JOURNEYPersons				Apprentices				
		#	Age	Male	Female		#	Age	Male	Female
1	Automotive Service Technician	656	51.7	654	2	Automotive Service Technician	90	26.1	87	3
2	Truck and Coach Technician	508	53.1	508	0	Truck and Coach Technician	44	25.1	44	0
3	Auto Body and Collision Damage Repairer	61	50.5	61	0	Auto Body and Collision Damage Repairer	12	29.0	11	1
4	Heavy Duty Equipment Technician	20	41.9	20	0	Marine Engine Technician	10	26.9	10	0
5	Motorcycle Technician	15	55.7	15	0	Heavy Duty Equipment Technician	9	28.7	9	0

SERVICE

		JOURNEYPersons				Apprentices				
		#	Age	Male	Female		#	Age	Male	Female
1	Hairstylist	364	46.1	75	289	Hairstylist	40	28.3	2	38
2	Child Development Practitioner	9	35.5	0	9	Child Development Practitioner	34	34.4	3	31
3	Cook	7	30.8	5	2	Utility Arborist	10	30.7	9	1
4	Utility Arborist	4	38.0	4	0	Cook	9	21.3	6	3
5	Educational Assistant	3	42.3	1	2	Information Technology - Contact Centre Customer Service Agent	6	27.1	2	4

NIPISSING DISTRICT



ILLUSTRATION 6: MOST ACTIVE TRADES IN NIPISSING DISTRICT SORTED BY TRADE SECTOR, AVERAGE AGE, MALE & FEMALE, DECEMBER 2016

CONSTRUCTION

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Electrician - Construction and Maintenance	279	48.0	275	4	Electrician - Construction and Maintenance	57	28.3	55	2
2	Plumber	95	45.7	95	0	General Carpenter	35	27.5	33	2
3	Sheet Metal Worker	37	46.1	37	0	Plumber	18	31.2	18	0
4	Refrigeration and Air Conditioning Systems Mechanic	29	53.4	28	1	Powerline Technician	18	25.1	18	0
5	Hoisting Engineer - Mobile Crane Operator 1	21	49.3	21	0	Sheet Metal Worker	8	32.3	8	0
6	Hoisting Engineer - Mobile Crane Operator 2	15	52.2	15	0	Refrigeration and Air Conditioning Systems Mechanic	8	37.4	7	1
7	Residential Air Conditioning Systems Mechanic	10	44.6	10	0	Heavy Equipment Operator -Excavator	7	24.0	7	0
8	Steamfitter	10	54.4	10	0	Hoisting Engineer - Mobile Crane Operator 1	5	31.6	5	0
9	Electrician - Domestic and Rural (residential)	9	63.2	9	0	Construction Craft Worker	5	28.4	4	1
10	Powerline Technician	9	42.3	9	0	Heavy Equipment Operator -Dozer	5	22.6	5	0

TOP 5 TRADES

INDUSTRIAL

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Industrial Mechanic Millwright	7	37.6	7	0	Industrial Mechanic Millwright	13	31.6	13	0
2	Industrial Electrician	4	53.0	4	0	General Machinist	11	26.5	11	0
3	General Machinist	2	26.5	1	1	Metal Fabricator (Fitter)	7	31.9	7	0
4	Metal Fabricator (Fitter)	2	33.5	2	0	Industrial Electrician	6	27.2	6	0
5	Cabinetmaker	1	27.0	1	0	Tractor-Trailer Commercial Driver	3	53.7	3	0

MOTIVE POWER

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Automotive Service Technician	359	50.6	357	2	Automotive Service Technician	59	26.3	56	3
2	Truck and Coach Technician	275	52.4	275	0	Truck and Coach Technician	22	25.2	22	0
3	Auto Body and Collision Damage Repairer	29	49.9	29	0	Auto Body and Collision Damage Repairer	10	26.5	10	0
4	Heavy Duty Equipment Technician	11	47.1	11	0	Heavy Duty Equipment Technician	7	27.3	7	0
5	Motorcycle Technician	9	51.8	9	0	Motorcycle Technician	1	38.0	1	0

SERVICE

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Hairstylist	253	46.0	52	168	Hairstylist	35	26.3	2	33
2	Child Development Practitioner	8	29.0	0	2	Child Development Practitioner	26	32.3	3	23
3	Cook	3	30.0	0	2	Cook	6	22.5	4	2
4	Educational Assistant	3	42.3	1	1	Utility Arborist	5	33.2	4	1
5	Cook - Institutional	2	54.0	1	0	Information Technology - Contact Centre Customer Service Agent	5	33.2	2	3

PARRY SOUND DISTRICT



TOP 10 TRADES

ILLUSTRATION 7: MOST ACTIVE TRADES IN PARRY SOUND DISTRICT SORTED BY TRADE SECTOR, AVERAGE AGE, MALE & FEMALE, DECEMBER 2016

CONSTRUCTION

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Electrician - Construction and Maintenance	196	51.3	196	0	Electrician - Construction and Maintenance	37	26.2	37	0
2	Plumber	73	52.1	73	0	General Carpenter	33	27.0	33	0
3	Sheet Metal Worker	25	51.6	25	0	Powerline Technician	13	23.7	13	0
4	Refrigeration and Air Conditioning Systems Mechanic	22	46.1	22	0	Plumber	8	28.9	7	1
5	Hoisting Engineer - Mobile Crane Operator 1	18	55.0	18	0	Sheet Metal Worker	3	32.3	3	0
6	General Carpenter	13	31.8	13	0	Refrigeration and Air Conditioning Systems Mechanic	3	28.3	3	0
7	Electrician - Domestic and Rural (residential)	11	48.5	11	0	Electrician - Domestic and Rural (residential)	2	23.5	2	0
8	Steamfitter	10	53.4	10	0	Construction Craft Worker	2	33.5	2	0
9	Hoisting Engineer - Mobile Crane Operator 2	9	57.0	9	0	Heavy Equipment Operator -Tractor Loader Backhoe	2	23.0	2	0
10	Hoisting Engineer - Tower Crane Operator	5	64.2	5	0	Hoisting Engineer - Mobile Crane Operator 2	1	29.0	1	0

TOP 5 TRADES

INDUSTRIAL

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Tractor-Trailer Commercial Driver	3	30.3	3	0	Industrial Mechanic Millwright	8	29.5	8	0
2	General Machinist	1	33.0	1	0	Metal Fabricator (Fitter)	5	21.8	5	0
3	Industrial Electrician	1	30.0	1	0	General Machinist	3	27.7	3	0
4	Industrial Mechanic Millwright	1	50.0	1	0	Tractor-Trailer Commercial Driver	2	59.0	1	1
5	Metal Fabricator (Fitter)	1	49.0	1	0	Industrial Electrician	1	41.0	1	0

MOTIVE POWER

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Automotive Service Technician	297	52.7	297	0	Automotive Service Technician	31	25.9	31	0
2	Truck and Coach Technician	233	53.8	233	0	Truck and Coach Technician	22	24.9	22	0
3	Auto Body and Collision Damage Repairer	32	51.0	32	0	Marine Engine Technician	10	26.9	10	0
4	Heavy Duty Equipment Technician	9	36.6	9	0	Small Engine Technician	3	37.7	3	0
5	Motorcycle Technician	6	59.5	1	0	Auto Body and Collision Damage Repairer	2	31.5	1	1

SERVICE

JOURNEYPersons					Apprentices					
	#	Age	Male	Female		#	Age	Male	Female	
1	Hairstylist	111	46.1	25	86	Child Development Practitioner	8	36.4	0	8
2	Cook	4	31.5	2	2	Hairstylist	5	30.2	0	5
3	Utility Arborist	3	37.0	3	0	Utility Arborist	5	28.2	5	0
4	Arborist	1	40.0	1	0	Cook	3	20.0	2	1
5	Child Development Practitioner	1	42.0	0	1	Developmental Services Worker	3	40.7	0	3

The Nipissing and Parry Sound Districts trade data clearly show that the trades are heavily oriented to males. Current apprenticeship research, on the other hand, is suggesting that trades are beginning to attract more female workers.

Illustration 8 is a summary of the Journeyman and apprenticeship activity for female workers in the Nipissing & Parry Sound districts.

With some exceptions (**Hairstylist**, Information Technology – Contact Centre Customer Service Agent, **Automotive Service Technician**, Child Development Practitioner, **Electrician – Construction and Maintenance**) female journeyman and apprentice activity is very small and clustered in the Service and Construction trades.

Trades that have not traditionally attracted women are now starting to do so (e.g., **Electrician - Construction and Maintenance, Plumber, General Carpenter, Automotive Service Technician, Auto Body Repairer, Auto Body and Collision Damage Repairer**).



ILLUSTRATION 8: SUMMARY OF FEMALE TRADES REPRESENTATION IN NIPISSING AND PARRY SOUND DISTRICTS, DECEMBER 2016

JOURNEYPERSONS & APPRENTICES - FEMALE	NIPISSING DISTRICT		PARRY SOUND DISTRICT	
	JP	APP	JP	APP
Hairstylist	203	33	86	5
Electrician - Construction and Maintenance	4	2	—	—
Child Development Practitioner	8	23	1	8
Cook	0	2	2	1
Cook (Institutional)	2	3	—	—
Information Technology - Contact Centre Customer Service Agent	0	3	—	—
Cook (Assistant)	1	0	—	—
Educational Assistant	2	1	—	—
Automotive Service Technician	2	3	—	—
Refrigeration and Air Conditioning Systems Mechanic	1	1	—	—
General Carpenter	0	2	—	—
Construction Craft Worker	—	1	—	—
Reinforcing Rodworker	—	1	—	—
Plumber	—	—	0	1
Auto Body Repairer	0	1	1	0
Auto Body and Collision Damage Repairer	—	—	—	1
General Machinist	1	0	—	—
Tractor-Trailer Commercial Driver	—	—	0	1








TRADE QUALIFIER EXAM SUCCESS RATES

Trade Qualifiers have work experience and training in a skilled trade from Ontario or another province, territory or country. They can have their experience and skills compared to an apprenticeship program in Ontario. The Trade Equivalency Assessment (TEA) process assesses skills based on one of the over 150 Ontario apprenticeship programs. If all the training requirements of that apprenticeship are met, the candidate qualifies to apply for certification in the trade. Illustration 9 presents exam results for the Districts of Nipissing and Parry Sound.

Data is presented for the most active trades sorted by trade sector. The data shows the percentage of examinees who are successful on their first attempt and the percentage of examinees who pass the exam. Failure to complete the compulsory trade exam and receive formal certification will exclude tradespersons from working legally in Ontario¹³.

¹³Data for 2nd and 3rd attempts are available on the Trades Map. It is an Excel file containing the original OCoT data.

A 2013 report, Supporting Apprenticeship Completions: A Model of Service Provision¹⁴, asked and answered a simple question: “How can LBS programs leverage the EO network to support tradespersons who need to pass the C of Q or complete Grade 12 or its equivalent to improve their employability?” It suggests that examinees can have difficulty passing exams if they:

-  Have been licensed from another country;
-  Have been working in the trades for many years, but have never written the exam;
-  Have been laid-off and need additional certification to find or retain employment;
-  Are older;
-  Speak English as a second language;
-  Have been out of school or training for many years; and
-  Have weak essential skills, particularly English and technical math skills.

The data in Illustration 9 suggests that trade exams present challenges for Trade Qualifiers. Examination results for some trades show poor results on first attempts and less than a 100% pass rate (e.g., **Electrician - Construction and Maintenance**, **Plumber**, General Carpenter, **Residential Air Conditioning Systems Mechanic**, **Hoisting Engineer - Mobile Crane Operator 2**, Welder, **Automotive Service Technician**, Heavy Duty Equipment Technician).

Other trades show good pass rates despite poor results on the first attempt (**Sheet Metal Worker**, **Truck and Coach Technician**, **Automotive Electronic Accessory Technician**, **Hairstylist**).

There would be merit in identifying factors contributing to 100% pass rates on the first attempt (Powerline Technician, **Residential (Low Rise) Sheet Metal Installer**, **Steamfitter**, Railway Car Technician, Industrial Mechanic Millwright, **Auto Body and Collision Damage Repairer**, Parts Technician, Utility Arborist).

¹⁴ Kallio, S. (2013). Supporting Apprenticeship Completions: A Model of Service Provision

TOP TRADES OVERALL BY TRADE QUALIFIERS AND EXAMINATION ATTEMPTS

ILLUSTRATION 9: SUMMARY OF TRADE QUALIFIER SUCCESS RATES FOR MOST ACTIVE TRADES SORTED BY SECTOR OVERALL IN NIPISSING & PARRY SOUND DISTRICTS, DECEMBER 2016

CONSTRUCTION

#	TRADES	TQ EXAMINEES	TQ ATTEMPTS	TQ PASSED	% PASSED FIRST ATTEMPT	% PASSED TQ EXAM
1	Electrician - Construction and Maintenance	23	39	22	60.9%	95.7%
2	Plumber	13	26	12	23.1%	92.3%
3	Powerline Technician	6	6	6	100.0%	100.0%
4	General Carpenter	5	6	4	80.0%	80.0%
5	Residential Air Conditioning Systems Mechanic	4	5	3	75.0%	75.0%
6	Residential (Low Rise) Sheet Metal Installer	3	3	3	100.0%	100.0%
7	Hoisting Engineer - Mobile Crane Operator 2	2	3	1	50.0%	50.0%
8	Sheet Metal Worker	2	8	2	0.0%	100.0%
9	Steamfitter	2	2	2	100.0%	100.0%
10	Drywall, Acoustic and Lathing Applicator	1	1	1	100.0%	100.0%

INDUSTRIAL

#	TRADES	TQ EXAMINEES	TQ ATTEMPTS	TQ PASSED	% PASSED FIRST ATTEMPT	% PASSED TQ EXAM
1	Railway Car Technician	9	9	9	100.0%	100.0%
2	Welder	5	6	3	40.0%	60.0%
3	Industrial Mechanic Millwright	3	3	3	100.0%	100.0%

MOTIVE

#	TRADES	TQ EXAMINEES	TQ ATTEMPTS	TQ PASSED	% PASSED FIRST ATTEMPT	% PASSED TQ EXAM
1	Automotive Service Technician	29	33	28	82.8%	96.6%
2	Truck and Coach Technician	23	29	23	73.9%	100.0%
3	Heavy Duty Equipment Technician	8	28	7	50.0%	87.5%
4	Auto Body and Collision Damage Repairer	3	3	3	100.0%	100.0%
5	Automotive Electronic Accessory Technician	2	2	2	0.0%	100.0%

SERVICE

#	TRADES	TQ EXAMINEES	TQ ATTEMPTS	TQ PASSED	% PASSED FIRST ATTEMPT	% PASSED TQ EXAM
1	Hairstylist	11	15	11	63.6%	100.0%
2	Cook	10	11	9	80.0%	90.0%
3	Parts Technician	3	3	3	100.0%	100.0%
4	Utility Arborist	1	1	1	100.0%	100.0%

APPRENTICESHIP EXAM SUCCESS RATES

Illustration 10 shows the examination history for apprentices. The results should be better as apprentices are generally younger, have recent experience with school, and have had practice writing exams. Examination results for some trades show poor results on the first attempts and less than a 100% pass rate (e.g., **Electrician - Construction and Maintenance**, General Carpenter, **Plumber**, Ironworker - Structural and Ornamental, Reinforcing Rod Worker Reinforcing Rod Worker, Construction Craft Worker, **Sheet Metal Worker**, Industrial Mechanic Millwright, Metal Fabricator (Fitter), Cabinetmaker, **Automotive Service Technician**, **Truck and Coach Technician**, Heavy Duty Equipment Technician, Small Engine Technician, **Hairstylist**).

Other trades showed good pass rates despite poor results on the first attempt (**Hoisting Engineer - Mobile Crane Operator 1**, General Machinist, Industrial Electrician, Utility Arborist).

There would be merit in identifying factors contributing to 100% pass rates on the first attempt (Powerline Technician, **Refrigeration and Air Conditioning Systems Mechanic**, **Auto Body and Collision Damage Repairer**, Arborist, Cook, Parts Technician).

TOP TRADES BY APPRENTICES AND EXAMINATION ATTEMPTS

ILLUSTRATION 10: SUMMARY OF APPRENTICES' SUCCESS RATES FOR MOST ACTIVE TRADES SORTED BY SECTOR OVERALL NIPISSING & PARRY SOUND DISTRICTS, DECEMBER 2016

CONSTRUCTION

#	TRADES	APP EXAMINEES	APP ATTEMPTS	EXAMS PASSED	% PASSED FIRST ATTEMPT	% PASSED EXAM
1	Electrician - Construction and Maintenance	177	275	158	63.3%	89.3%
2	General Carpenter	82	120	58	45.1%	70.7%
3	Plumber	75	109	68	70.7%	90.7%
4	Powerline Technician	41	41	41	100.0%	100.0%
5	Ironworker - Structural and Ornamental	21	38	18	38.1%	85.7%
6	Reinforcing Rodworker	19	32	13	31.6%	68.4%
7	Construction Craft Worker	18	21	15	83.3%	83.3%
8	Hoisting Engineer - Mobile Crane Operator 1	14	20	14	78.6%	100.0%
9	Sheet Metal Worker	13	16	11	61.5%	84.6%
10	Refrigeration and Air Conditioning Systems Mechanic	12	12	12	100.0%	100.0%

INDUSTRIAL

#	TRADES	APP EXAMINEES	APP ATTEMPTS	EXAMS PASSED	% PASSED FIRST ATTEMPT	% PASSED EXAM
1	Industrial Mechanic Millwright	17	18	16	94.1%	94.1%
2	General Machinist	13	16	13	76.9%	100.0%
3	Metal Fabricator (Fitter)	13	20	10	23.1%	76.9%
4	Cabinetmaker	9	24	3	33.3%	33.3%
5	Industrial Electrician	9	18	9	66.7%	100.0%

MOTIVE

#	TRADES	APP EXAMINEES	APP ATTEMPTS	EXAMS PASSED	% PASSED FIRST ATTEMPT	% PASSED EXAM
1	Automotive Service Technician	134	205	123	70.9%	91.8%
2	Truck and Coach Technician	73	173	57	46.6%	78.1%
3	Heavy Duty Equipment Technician	33	41	28	66.7%	84.8%
4	Auto Body and Collision Damage Repairer	17	17	17	100.0%	100.0%
5	Small Engine Technician	6	6	3	50.0%	50.0%

SERVICE

#	TRADES	APP EXAMINEES	APP ATTEMPTS	EXAMS PASSED	% PASSED FIRST ATTEMPT	% PASSED EXAM
1	Hairstylist	143	195	115	60.1%	80.4%
2	Utility Arborist	26	27	26	96.2%	100.0%
3	Arborist	6	6	6	100.0%	100.0%
4	Cook	4	4	4	100.0%	100.0%
5	Parts Technician	3	3	3	100.0%	100.0%

SUPPLY AND DEMAND - A COMPLEX PICTURE

Collecting supply and demand data for the trades is a complex picture. Statistics Canada and RAIS¹⁵ (Registered Apprenticeship Information System) data is not particularly helpful because they do not provide enough local detail. Aggregated data from Statistics Canada show demographic trends across particular age groups in specific geographic regions. RAIS data groups more than 400 trades into 25 trade groups¹⁶. It shows five-year longitudinal information (2009 to 2013) about the number of certificates issued as well as registrations by province and gender. Statistics Canada data can not tell how soon the trades' workforce in Nipissing and Parry Sound Districts is likely to retire. The aggregated RAIS data (i.e., 25 trade groups) makes it challenging to link data from RAIS to the 156 Ontario trades.

Additional sources of information provide a partial picture. The Ontario College of Trades (OCoT) provides straightforward information about ratios, classification, certification, Red Seal, etc. It collects information about its College members who have registered. It does not, however, represent all individuals working in Ontario trades as many trades do not require mandatory registration with OCoT.

The transition from MAESD to OCoT (April 1, 2013) did not smoothly transition one database into the other. There was not a "magic moment" when the MAESD trade population appeared whole and intact in the OCoT data.

A review and removal of inactive apprentices was carried out post-April 1, 2013 with an effective completion date in January 2015¹⁷. OCoT's current apprenticeship numbers should now be more accurate because the data set have been cleaned to include only currently registered apprentices.

The local economy drives labour demand. When things are going well, companies ramp up hiring and local education and training programs, including apprenticeship, rush to fill the demand. But, the cycle of demand and supply is out of sync with the economy resulting in tradespersons without jobs and jobs without tradespersons. Often, tradespersons without jobs opt to seek work out-of-town or out-of-province. Additionally, it becomes difficult for apprentices to find an employer who will hire them.

¹⁵The purpose of the survey is to gather information on individuals who receive training and those who obtain certification within a trade where apprenticeship training is being offered. Specifically, the survey compiles data on the number of registered apprentices taking in-class and on-the-job training in trades that are either Red Seal or non-Red Seal and where apprenticeship training is either compulsory or voluntary. It also compiles data on the number of provincial and inter-provincial certificates granted to apprentices or trade qualifiers (challengers). In the context of this survey, a trade qualifier (challenger) is an individual who received training within a trade where apprenticeship training is voluntary and did not register for the apprenticeship training but succeeded in obtaining their certification within that trade.

¹⁶The data presented in the RAIS is coded according to the 2011 National Occupation Classification System (NOC). The 25 major trade groups referenced in the table are a special grouping created from the NOC.





¹⁷Apprentices had up to January 2015 to confirm their "active" status or they were dropped from the records.

Unlike Europe, where students interested in the trades are encouraged to sign with an employer to begin an apprenticeship after completing high school, too many Canadian parents, students and educators still do not encourage direct entry to training, work and a career in the trades (although there are indications this perception is changing¹⁸). Instead, some high school graduates pursue traditional postsecondary programs, discover it is not what they want, and reconsider a career in the trades later in life (average age of an apprentice in Ontario is 29 years). Older workers who seek trade qualifications later in life struggle with the literacy and digital skills required to succeed.

CONTEXT

The OCoT membership structure is “class-based”. Classes of membership include: apprentices, tradespersons, journeyperson candidates, journeypersons and employers/sponsors.

OCoT maintains a public register of its members in both compulsory and voluntary trades in Ontario. All professionals in one of the 22 designated compulsory trades¹⁹ are required to be a member of the College and must be one of the following:

-  A licensed journeyperson — a holder of a valid Certificate of Qualification; or
-  A journeyperson candidate; or
-  A registered apprentice with the Ministry of Advanced Education and Skills Development; or
-  A holder of a provisional Certificate of Qualification.

Additional trade information for this report was pulled from the OCoT website (list of trades, classification, C of Q exam, Red Seal designation, and ratios). OCoT was also referenced for specific information about definitions, policies and explanations of trade practice (e.g., ratios).

¹⁸ Majority of Parents Support a Career in the Trades for Their Children (OCoT, December 2016)
<http://www.collegeoftrades.ca/latest-news/majority-of-parents-support-a-career-in-trades-for-their-children>.

¹⁹ See **Appendix A**, List of Compulsory Trades in Ontario.

APPENDICES

APPENDIX A: LIST OF 22 COMPULSORY TRADES IN ONTARIO

TRADE	NUMBER	TRADE SECTOR
Electrician - Construction and Maintenance	309A	Construction
Plumber	306A	Construction
Sheet Metal Worker	308A	Construction
Refrigeration and Air Conditioning Systems Mechanic	313A	Construction
Steamfitter	307A	Construction
Hoisting Engineer - Mobile Crane Operator 1	339A	Construction
Residential Air Conditioning Systems Mechanic	313D	Construction
Hoisting Engineer - Mobile Crane Operator 2	339C	Construction
Hoisting Engineer - Tower Crane Operator	339B	Construction
Electrician - Domestic and Rural	309C	Construction
Residential (Low Rise) Sheet Metal Installer	308R	Construction
Automotive Service Technician	310S	Motive Power
Truck and Coach Technician	310T	Motive Power
Auto Body and Collision Damage Repairer	310B	Motive Power
Motorcycle Technician	310G	Motive Power
Auto Body Repairer	310Q	Motive Power
Transmission Technician	310D	Motive Power
Truck-Trailer Service Technician	310J	Motive Power
Automotive Electronic Accessory Technician	310K	Motive Power
Alignment and Brakes Technician	310E	Motive Power
Fuel and Electrical Systems Technician	310C	Motive Power
Hairstylist	332A	Service

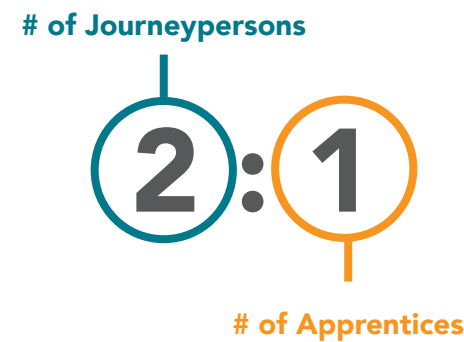
APPENDIX B: TRADES SUBJECT TO JOURNEYPERSON TO APPRENTICESHIP RATIOS IN ONTARIO

#	TRADE	RATIO
1	Architectural Glass & Metal Technician	1:1, 2:1
2	Brick & Stone Mason	1:1, 2:1
3	Cement (Concrete) Finisher	1:1, 1:1, 3:1
4	Construction Boilermaker	1:1, 3:1
5	Construction Millwright	1:1, 3:1
6	Drywall, Acoustic & Lathing Applicator	1:1, 4:1
7	Drywall Finisher & Plasterer	1:1, 3:1
8	Electrician - Construction & Maintenance	1:1, 1:1, 1:1, 1:1, 3:1, 6:1, 3:1
9	Electrician - Domestic & Rural (Residential Sector)	1:1, 1:1, 1:1, 1:1, 3:1, 5:1, 2:1
10	Electrician - Domestic & Rural (Non-residential Sectors)	1:1, 1:1, 1:1, 1:1, 3:1, 6:1, 3:1
11	Floor Covering Installer	2:1
12	General Carpenter	1:1, 3:1
13	Heat & Frost Insulator	1:1, 3:1
14	Hoisting Engineer - Mobile Crane Operator 1	1:1
15	Hoisting Engineer - Mobile Crane Operator 2	1:1
16	Hoisting Engineer - Tower Crane Operator	1:1
17	Ironworker - Generalist	1:1, 2:1
18	Ironworker - Structural & Ornamental	1:1, 2:1
19	Painter & Decorator - Commercial & Residential	1:1, 1:1, 3:1
20	Painter & Decorator - Industrial	1:1, 1:1, 3:1
21	Plumber	1:1, 2:1
22	Powerline Technician	1:1
23	Precast Concrete Erector	1:1, 3:1
24	Precast Concrete Finisher	1:1, 3:1
25	Refrigeration & Air Conditioning Systems Mechanic	1:1, 2:1
26	Reinforcing Rodworker	1:1, 2:1
27	Residential Air Conditioning Systems Mechanic	1:1, 2:1
28	Residential (Low Rise) Sheet Metal Installer	1:1, 3:1
29	Restoration Mason	1:1, 2:1
30	Roofer	1:1, 2:1
31	Sheet Metal Worker	1:1, 3:1, 3:1, 2:1
32	Sprinkler & Fire Protection Installer	1:1
33	Steamfitter	1:1, 2:1
33	Terrazzo, Tile & Marble Setter	1:1, 2:1

APPENDIX C: HOW TO INTERPRET JOURNEYPERSON TO APPRENTICE RATIOS

Ratios are expressed in words in regulation; however, to make it easier to talk about and describe them, they are often referred to by a number-based short form such as 1:1 or 2:1, etc.

Expressed numerically, the first number in the ratio indicates the number of journeypersons, and the second number indicates the number of apprentices that can be sponsored or employed.



Ratios vary by trade as each trade and sector has particular needs and characteristics. Some trades have a **single ratio**, while others have **changing ratios** that change depending on the number of journeypersons employed.

SINGLE RATIOS

Trades with only one ratio are straightforward to interpret as the ratio stays the same as more journeypersons are employed.

Example: Ratio for Powerline Technician

Ratio in words:

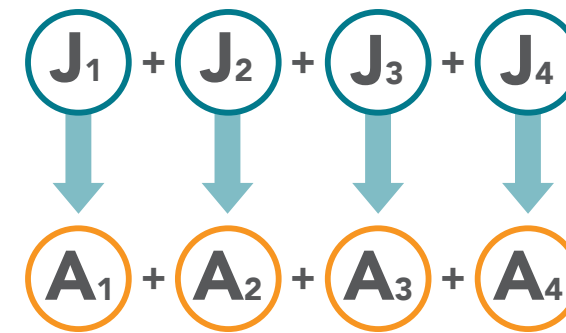
The number of apprentices who may be sponsored or employed by a person in the trade of powerline technician in relation to the number of journeypersons employed by the person in the trade shall not exceed,

- (a) for the first journeyperson, one apprentice; and
- (b) for every additional journeyperson thereafter, an additional apprentice.

Ratio in numerical form:

1:1

Ratio in visual form:



2 journeypersons total are needed to add a 2nd apprentice.

Ratio in table form:

JOURNEYPersons EMPLOYED	APPRENTICES ALLOWED
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

- 1:1 1 journeyperson needs to be employed to hire 1st apprentice
- + 1:1 2 journeypersons (total) need to be employed to hire 2nd Apprentice
- + 1:1 3 journeypersons (total) need to be employed to hire 3rd apprentice
- + 1:1 4 journeypersons (total) need to be employed to hire 4th apprentice
- + 1:1 5 journeypersons (total) need to be employed to hire 5th apprentice
- + 1:1 6 journeypersons (total) need to be employed to hire 6th apprentice
- + 1:1 7 journey persons (total) need to be employed to hire 7th apprentice

(1:1 continues indefinitely)

CHANGING RATIOS

For some trades, the ratio changes as the number of journeypersons employed increases. The number-based form for the ratios of these trades is more like a formula, and can therefore be more difficult to interpret.

Ratio *formulas* describe the *intervals* at which an apprentice can be added in relation to an increase in the number of journeyperson employed. Note that the last ratio in a given formula continues indefinitely but all of the other ratios in that formula have to be met first, in the sequence prescribed, before this happens.

Example: Ratio for Cement (Concrete) Finisher

Ratio in words:

The number of apprentices who may be sponsored or employed by a person in the trade of cement (concrete) finisher in relation to the number of journeypersons employed by the person in the trade shall not exceed,

- (a) for the first journeyperson, one apprentice;
- (b) for the second journeyperson, an additional apprentice; and
- (c) for every three additional journeypersons thereafter, an additional apprentice.

Ratio in numerical form:

1:1, 1:1, 3:1

Ratio in table form:

JOURNEYPEOPLE EMPLOYED	APPRENTICES ALLOWED	
1	1	1:1 1 journeyperson needs to be employed to hire 1st apprentice
2	2	+ 1:1 2 journeypersons (total) need to be employed to hire 2nd Apprentice
3	2	No added apprentices yet, despite added journeyperson
4	2	No added apprentices yet, despite added journeyperson
5	3	+ 3:1 5 journeypersons (total) need to be employed to hire 3rd apprentice
6	3	No added apprentices yet, despite added journeyperson
7	3	No added apprentices yet, despite added journeyperson
8	4	+ 3:1 8 journeypersons (total) need to be employed to hire 4th apprentice
9	4	No added apprentices yet, despite added journeyperson
10	4	No added apprentices yet, despite added journeyperson
11	5	+ 3:1 11 journeypersons (total) need to be employed to hire 5th apprentice
12	5	No added apprentices yet, despite added journeyperson
13	5	No added apprentices yet, despite added journeyperson
14	6	+ 3:1 14 journeypersons (total) need to be employed to hire 6th apprentice
15	6	




(3:1 continues indefinitely)

APPENDIX D: GLOSSARY OF TRADES TERMINOLOGY

APPRENTICES

This describes individuals who enter into a Registered Training Agreement with MAESD and hold membership in the Ontario College of Trades. Apprentices spend 80% to 90% of their time learning on the job and 10% to 20% of their time in trade school (College or union sponsored trainer)

Individuals in this class:




-  Are subject to any ratios and wage rates that have been set out in regulations for their trade(s);
-  Can remain in this class until they receive their Certificate of Apprenticeship; and
-  Can hold themselves out as apprentices.

APPRENTICESHIP AND TRADE QUALIFIER EXAMS

Many of the skilled trades in Ontario have a final certification exam that must be passed to become certified in a trade. Passing the exam allows you to become a member in the Journeypersons' Class at the Ontario College of Trades (the College) and receive a Certificate of Qualification (C of Q) in your trade.

Trade qualifiers have work experience and training in a skilled trade from Ontario or another province, territory or country. They can have their experience and skills compared to an apprenticeship program in Ontario. The Trade Equivalency Assessment (TEA) process assesses skills based on one of the over 150 Ontario apprenticeship programs. If all the training requirements of that apprenticeship are met, the candidate qualifies to apply for certification in the trade.

Total Active Trade Qualifiers, Journeypersons and Apprentices in the Nipissing and Parry Sound Districts (December 2016):

-  Journeypersons/Apprentices: Average, Mean, and Median Ages
-  Journeypersons/Apprentices: Youngest/Oldest
-  Journeypersons/Apprentices: Female/Male

The Ontario College of Trades (OCoT) maintains a registry of its members. Apprentices, journeyperson candidates and journeypersons in compulsory trades must be OCoT members.

OCoT collects up-to-date information about the number of journeypersons registered as members of the College. In compulsory trades, the numbers will be accurate; in voluntary trades the numbers will reflect only those journeypersons who are registered with the College.

The columns in the Trades Map show the number of journeypersons/apprentices across the Nipissing and Parry Sound Districts, then the number of journeypersons/apprentices in the District of Nipissing and District of Parry Sound.

Reviewing the journeyman/apprenticeship representation by trade sector tells us the level of activity by sector and trade. The Trades Map offers Nipissing and Parry Sound employers access to real-time information, particularly the supply of workers.

The age demographic for each trade helps us understand where older journeymen may be closer to retirement, thus helping 1) communities increase training capacity to respond to retirements and 2) workforce planners identify employment opportunities. Compulsory trades tend to have the oldest journeymen.

The data for journeymen and apprentices in compulsory trades suggests that meeting ratios requirements is not a problem. In some of the voluntary trades that have ratios and C of Q certification, however, there appears to be a shortfall of journeymen to the number of apprentices.

General Carpenter is a good example:

- *Districts of Nipissing and Parry Sound - 20 journeymen for 68 apprentices*

At the minimum ratio of 1:1, the number of journeymen supervising apprentices in the Districts of Nipissing and Parry Sound should exceed 68

CERTIFICATE OF APPRENTICESHIP (C OF A)

This is issued upon completion of the apprenticeship training. In trades that have a Certificate of Qualification, C of A holders register as journeyman candidates as they prepare to write the Certificate of Qualification.

Holders of the Ontario Certificate of Apprenticeship (C of A) qualify for membership in the College, and are therefore not eligible for the Trade Equivalency Assessment (TEA) process.

CERTIFICATE OF QUALIFICATION (C OF Q)

Ontario has 75 trades that offer the C of Q designation. Twenty-two (22) of these trades are compulsory meaning the C of Q is required to work legally in Ontario. The C of Q designation is also available for fifty-three (53) voluntary trades. C of Q holders in voluntary trades are not required to be members of OCoT; as a result, the data for journeymen in voluntary trades (C of Q holders) will only be accurate as more C of Q holders become members of OCoT.

The C of Q designation is required for all compulsory trades. When apprentices complete the in-school and employer-based training, they qualify for the Certificate of Apprenticeship. They then register as Journeyman Candidates to prepare for the C of Q. Journeyman Candidates have 12 months to successfully pass the C of Q exam.

The Certificate of Qualification is issued upon completion of the C of Q exam in a designated trade. The C of Q holder is designated as a Journeyman.

CLASSIFICATION

Trades are designated as compulsory or voluntary. There are 22 compulsory trades in Ontario: construction sector (11), motive power sector (10) and service sector (1). Journeymen (C of Q holders) working in compulsory trades must be members of OCoT. Other classes working in compulsory trades who must be members of OCoT include apprentices and journeyman candidates.

Most of Ontario's trades are voluntary meaning that tradespersons can work in the trade without formal certification and without being members of the Ontario College of Trades. Many voluntary trades (e.g. General Carpenter, Welder, Heavy Duty Equipment Technician, Cook, etc.) offer certification through the Certificate of Qualification (C of Q) exam which leads to designation as a Journeyman in Ontario.

COMPULSORY TRADE

Ontario has 22 compulsory trades. These are trades in which registration as an apprentice, journeyman candidate or certification as a journeyman is mandatory. Persons working in these trades hold a valid Certificate of Qualification and membership in the Ontario College of Trades.

JOURNEYMAN

A journeyman holds a valid Certificate of Qualification. Journeymen in compulsory trades must hold membership in the Ontario College of Trades to legally work in Ontario. Journeymen in the voluntary trades are not required to hold membership in the Ontario College of Trades and may work in their trade without restriction.

Individuals in this class:

- Have met all of the requirements set out for their trade(s) and hold a valid Certificate of Qualification
- If an individual is not a completed Ontario apprentice (i.e. does not have a Certificate of Apprenticeship), s/he could have met the requirements by having been assessed to have experience and/or qualifications that are equivalent to a Certificate of Apprenticeship in that trade and passed the required Certificate of Qualification exam, if one is available for the trade; or
- Have been assessed to have experience and/or qualifications that are equivalent to a Certificate of Apprenticeship and have been issued a valid Provisional Certificate of Qualification (separate eligibility requirements set out in Ontario Regulation 321/12 and in College operational policy); and
- Can hold themselves out as journeymen.

JOURNEYMAN CANDIDATE

A journeyman candidate is registered with the Ontario College of Trades in preparation for writing the Certificate of Qualification exam.

Journeyman candidates:

- Have completed an Ontario apprenticeship program (hold a Certificate of Apprenticeship) in a trade that has a Certificate of Qualification exam (voluntary or compulsory) and have not passed that Certificate of Qualification exam for their trade(s);
- Are subject to any ratios and/or wage rates that have been set out for their trade(s), if they practice a compulsory trade
- Can remain in this class until they pass the Certificate of Qualification exam and become members of the Journeypersons class or for a maximum of one year (whichever comes first);
- Can continue to work legally in their trade, if they are in a compulsory trade, as they prepare to write their exams (individuals in voluntary trades do not have to be members of the College to work legally); and
- Can hold themselves out as journeyperson candidates (they are neither apprentices nor journeypersons).

RATIO

Ratios are set out for 33 Ontario trades²⁰, all in the construction sector. Ratios describe the number of journeypersons required to supervise apprentices in the workplace²¹. Ratios are expressed in words in regulation; however, to make it easier to talk about and describe them, they are often referred to by a number-based short form such as 1:1 or 2:1, etc. Expressed numerically, the first number in the ratio indicates the number of journeypersons, and the second number indicates the number of apprentices that can be sponsored or employed²². The OCoT has a “Ratio Calculator” on their website²³.

For purposes of ratios and voluntary trades, the following conditions apply to supervision of apprentices:

- Someone who holds a valid C of Q in the trade and who is a member in good standing of the College’s Journeypersons class for the same trade; or
- Someone who holds a valid C of Q in the trade and who is a member in good standing of the College’s Journeypersons class for the same trade; or
- Someone who holds a C of Q in the trade that was issued by the Ministry of Advanced Education and Skills Development (MAESD) prior to April 8, 2013 (membership in the College is not required in this scenario); or
- Someone who practices as a journeyperson in the trade but who does not hold a C of Q in that trade. This can include members of the College’s Journeyperson Candidates Class for the trade. The Ontario College of Trades (OCoT) conducts periodic ratio reviews. It invites employers and trade representatives to make representation for changes to ratios. OCoT’s responsibility is to enforce ratios; employers and trade representatives are responsible for making recommendations to OCoT with respect to ratios.

²⁰ See Appendix 2: Trades Subject to Journeyperson to Apprenticeship Ratios in Ontario.

²¹ The Ontario College of Trades website has a very useful ratio calculator.

²² See **Appendix C: How to Interpret Journeyperson to Apprentice Ratios.**

²³ The Ratio heading on the Trade Map is hyperlinked to the OCoT website.

Ratios have been identified as an issue for small and medium-size employers, particularly employers working in rural and remote Northern Ontario communities. Small and medium-size employers represent, by far, the greatest number of people working in the trades. The requirement to abide by strict journeyperson to apprentice ratios impacts on small and medium-size employers’ ability to hire and/or retain apprentices. Changes to ratios that are more favourable to helping small and medium-size employers train apprentices need to happen through the ratio review process. Small and medium-size employers will need to bring their unique voice to the ratio review deliberations.

RED SEAL

The Red Seal designation is attached to 47 trades in Ontario and 57 trades across Canada²⁴. The Red Seal program allows qualified tradespeople to practise their trade anywhere in Canada where the trade is designated without having to write further examinations. This provides greater mobility for skilled workers across Canada. The 57 Red Seal trades account for almost 90% of all registered apprenticeships in Canada. More than 80% of Canada’s total trades workforce (journeypersons/apprentices) are working in Red Seal trades.

In Canada, trades training and certification are the responsibility of the provinces and territories (known as jurisdictions). Jurisdictions each have their own laws about which trades are designated for apprenticeship training and certification within their borders. The Red Seal Program creates national standards for certain trades that are common to most jurisdictions.

Certification in a Red Seal trade can open opportunities to pursue work across provincial jurisdictions.

REGISTERED TRAINING AGREEMENT (RTA)

This is the agreement between the employer (sponsor) and the apprentice outlining the roles and responsibilities of each party throughout the apprenticeship duration. The Registered Training Agreement is held by the local MAESD office. The apprentice must be registered as a member of the Ontario College of Trades.

SPONSOR

The sponsor is one partner in the Registered Training Agreement (RTA) who provides apprenticeship training in the workplace. Typically, the sponsor is an employer who takes an apprentice into the workplace to train under the supervision of a mentor.

²⁴ The Red Seal website <http://www.red-seal.ca/w.2lc.4m.2@-eng.jsp> and the Ellis Chart <http://www.ellischart.ca/h.4m.2@-eng.jsp> are excellent resources.

TRADE QUALIFIER (TQ)

Trade qualifiers have work experience and training in a skilled trade from Ontario or another province, territory or country. They can have their experience and skills compared to an apprenticeship program in Ontario. The Trade Equivalency Assessment (TEA) process assesses skills based on one of the over 150 Ontario apprenticeship programs. If all the training requirements of that apprenticeship are met, the candidate qualifies to apply for certification in the trade.






TRADE SECTOR/CODE/SECTOR²⁵

Ontario has 156 trades organized in four trades sectors: **construction**, **industrial**, **motive power** and **service**. Not all trade sectors drive equal levels of activity. The Trades Map can be a resource to identify trades that are attracting more activity and which represent opportunities for employment.

TRADESPERSON

This is a term that can be used very generally to describe anybody performing trades work; however, within the regulations of the Ontario College of Trades it has a very specific meaning.

Tradespersons:





-  Practice voluntary trades where there is a Certificate of Qualification exam to become certified as Journeyperson in the trade;
-  Have been members of the Journeyperson Candidates Class or are not eligible for Journeyperson Candidates Class and have been assessed to have experience and/or qualifications that are equivalent to a Certificate of Apprenticeship in that trade;
-  Are preparing to write/have no plans to write/have not passed the available Certificate of Qualification exam for their trade(s);
-  Can remain in this class indefinitely or until they pass the available Certificate of Qualification exam for their trade(s); and
-  Can hold themselves out as tradespersons (they are neither apprentices nor journeypersons).

Individuals in the Tradespersons Class are not subject to any ratios and/or wage rates that may be set out for their (trade(s)).

²⁵ It may be possible to identify many of the trades with a National Occupational Classification (NOC) profile that provides more detailed description.

TRAINING DELIVERY AGENT (TDA)

These are MAESD approved organizations that fall within one of the following categories:

-  a public educational institution recognized as such by the Ministry of Advanced Education and Skills Development (MAESD);
-  a registered non-profit agency or union having demonstrated training experience;
-  a private career College registered under The Private Career College's Act, 2005 with the Private Career College's Compliance Unit of MAESD; or
-  other private training institutions which may be eligible to apply.

VOLUNTARY TRADE

Every trade that is not identified as compulsory is, by default, voluntary. Certification is offered in some voluntary trades, but is not a requirement to practice in the trade.

TRADES



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