

# WORKFORCE DATA - TRADES

as of MARCH 2016



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*The views expressed in this document do not necessarily reflect those of the Government of Ontario. The material contained in this report is drawn from data provided by the Ontario College of Trades (OCOT).*

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## INTRODUCTION

Workforce Planning for Sudbury & Manitoulin (WPSM), a local Workforce Planning Board (funded by the former Ministry of Training Colleges and Universities - MTCU)<sup>1</sup> 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 WPSM with data on journeypersons and apprentices registered with their college. OCOT mined its data and tailored it for the following three regions: City of Greater Sudbury; District of Sudbury; and District of Manitoulin<sup>2</sup> all of which are in the WPSM catchment area.

For the purposes of this report, Statistics Canada census divisions (which can be linked to postal codes) were used<sup>3</sup>. 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 Districts of Sudbury and Manitoulin. 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 trades<sup>4</sup>. Again, keep in mind, not all journeypersons are required to register with OCOT. The **Trades Map** data was synthesized for this report.



<sup>1</sup> 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.

<sup>2</sup> 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](https://www.google.com/maps/d/viewer?mid=zqKmUR0yZG5w.kh_6fydtlpbY&hl=en)

<sup>3</sup> Trades data include postal code information.

<sup>4</sup> Readers are invited to contact: [info@planningouroworkfoce.ca](mailto:info@planningouroworkfoce.ca) for more information on the **Trades Map**.

## SUPPLY AND DEMAND – A COMPLEX PICTURE

### Skilled trades labour supply:

Collecting supply and demand data for the trades is a complex picture. Statistics Canada and RAIS (Registered Apprenticeship Information System) data are not particularly helpful because they don't provide enough local detail. For example:

- Aggregated data from Statistics Canada only shows demographic trends across particular age groups in specific geographic regions. Also, Statistics Canada data doesn't identify how soon the trades' workforce in the Sudbury and Manitoulin Districts is likely to retire.
- RAIS shows five-year longitudinal information (2008 to 2012) about the number of certificates issued as well as registrations by province and gender. RAIS also aggregates apprenticeship activity into more than 400 trades and 22 trade groups. This makes it particularly challenging to identify discreet data about Ontario which only has 156 trades.

Additionally, data that was collected by the former MTCU on Ontario trades presented some challenges and as a result, a review was undertaken post April 2013 (at the inception of OCoT) to remove inactive apprentices from the system (completion January 2015<sup>5</sup>). This would suggest that OCoT's current apprenticeship numbers (as of March 2016) should be reasonably accurate because the datasets have been cleaned to include only registered and active apprentices.

While OCoT data is key to our understanding, there are some additional limitations as follows:

1. OCoT only collects information about the number of members registered with their College. As noted, not all individuals working in Ontario in the trades are required to register with OCoT as many trades do not require mandatory registration with the College.
2. Although all apprentices must register with OCoT, many employers in the voluntary trades sector do not register their apprentices. These employers provide apprenticeship training (to help the apprentice learn the trade within the confines of that business) and opportunities for advancement to the journeyman level but they are not identified in the OCoT data<sup>6</sup>. These numbers could be substantial and efforts should be made to identify this population.
3. Prior to the transition date from MTCU to OCoT, many journeymen in compulsory trades would have routinely renewed their certification with MTCU. As a result, they would have continued to work, post OCoT, believing they were legitimately certified to work and not required to formally register as a member of OCoT. According to MTCU, the number of journeymen in this scenario is substantial. These journeymen are slowly being identified as a result of OCoT's enforcement strategy and MTCU employer consultations<sup>7</sup>.

### Skilled trades labour demand:

The local economy drives labour demand. When the economy is doing well, companies ramp up their hiring efforts and local education and training programs, including those targeting apprentices, rush in to fill the demand. But, the cycle of demand and supply is often out of sync with the economy resulting

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<sup>5</sup> Apprentices had until to January 2015 to confirm their "active" status or they were dropped from the records.

<sup>6</sup> Permanent employees of industrial plants are exempt from section 2 of OCTAA, and are therefore not required to be members of OCoT in order to work in a compulsory trade so long as they are working within the plant and its premises.

<sup>7</sup> Enforcement officers review compliance in compulsory trades where journeymen are required to be members of OCoT and Employment Training Consultants from MAESD confirm with employers that qualified staff is in place to train apprentices.

in tradespersons without jobs and jobs without tradespersons. As a result, sometimes, tradespersons without jobs opt to seek work out-of-town or out-of-province. Additionally, it is becoming increasingly difficult for apprentices to find an employer who will hire them.

WPSM and other northern Ontario Workforce Planning Boards are in their third year of surveying employers to better understand their workforce challenges and the demand for skilled workers, including those in the trades. Employer data from the *employrone* survey for the Sudbury and Manitoulin Districts continues to show high demand for those working in the trades, but unfortunately also shows that local employers provide limited opportunities for apprenticeship training. This in turn underscores how difficult it is for apprentices to find employers who will hire them, often causing them to become disillusioned, give up and move to another career.

This is further exacerbated by a negative perception of the trades and public perception that the skilled trades are a poor career choice. This continues to shrink the number of students who even consider pursuing a career in the trades. Unlike Europe, where students interested in the trades are encouraged to sign with an employer to begin an apprenticeship right after high school, many Canadian parents, students and educators still don't encourage direct entry to training, work and a career in the trades (although according to OCoT, there are some indications that this may be changing<sup>8</sup>). Instead, some high school graduates pursue traditional postsecondary programs, discover it's not what they want, and re-entertain a career in the trades later in life. This may be one of the reasons why the average age of an apprentice in Ontario is approximately 29 years.

## DEVELOPMENT OF A TRADES MAP

All apprentices in compulsory and voluntary trades and all journeypersons (including journeyperson candidates) in compulsory trades must register and pay an annual fee to be a member of OCoT in order to practice/work in their trade. To support our understanding of local trade-related issues and projected skills shortages, aggregate membership data (as of March 2016) provided by OCoT and their research staff was plotted onto an Excel spreadsheet to create a **Trades Map**.

The **Trades Map** provides summary data on the following four trade sectors in Ontario: *construction*; *industrial*; *motive power*; and *service*. Each trade sector was further broken down to include information on level of activity by trade sector and by specific trade for the Districts of Sudbury & Manitoulin. Each trade sector (on the **Trades Map** and in this report) was colour-coded: Construction-yellow; Industrial-grey; Motive Power-green; and Service-red. All compulsory trades appear in red print (in this report).

Age demographics for each trade were also explored to better understand the number of journeypersons, their ages, and what trades they are currently working in. This included the average age of current journeypersons given concerns about an aging skilled workforce, projected retirements and potential shortages. It was felt that this information might also be helpful to communities to identify where training capacity could increase and where future employment opportunities might exist.

Again, it is important to note that only journeypersons who work in the compulsory trades are required to register as an OCoT member, though some journeypersons in the voluntary trades have chosen to

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<sup>8</sup> Majority of Parents Support a Career in the Trades for Their Children (OCoT, March 2016)  
<http://www.collegeoftrades.ca/latest-news/majority-of-parents-support-a-career-in-trades-for-their-children>

register as well although it is not mandatory. This has undoubtedly created an undercounting of the true picture of all journeypersons working in the Sudbury and Manitoulin Districts. On the other hand, since all apprentices (with the exception of those working in industrial plants) are required to enter into a Registered Training Agreement (RTA) with a sponsor and to register as a member with OCoT, the apprenticeship data from OCoT will be far more complete and accurate.

## TRADES MAP – DATA HIGHLIGHTS

Here are some highlights from the *Trades Map* data (March 2016):

- There are 4,305 registered journeypersons and 1,670 registered apprentices in the Sudbury and Manitoulin Districts;
- Most of the skilled trades workforce is located in Greater Sudbury:
  - Journeypersons (N= 3,628 or 84%)
  - Apprentices (N=1,428 or 86%);
- Ontario has 156 trades in four trade sectors (*construction, industrial, motive power and service*). The Sudbury and Manitoulin Districts do not have journeypersons or apprentices in all of these trades. Here are the trades that are represented by journeypersons and apprentices:
  - Greater Sudbury: trades with journeypersons (N=51); trades with apprentices (N=67)
  - District of Sudbury: trades with journeypersons (N=28); trades with apprentices (N=33)
  - District of Manitoulin: trades with journeypersons (N=20); trades with apprentices (N=24);
- Overall, the *construction* and *motive power* trades sectors represent the highest level of activity, mostly concentrated in Greater Sudbury;
- The overall average age for journeypersons and apprentices is as follows:
  - Greater Sudbury: age 41.8 (journeypersons); age 31.1 (apprentices)
  - District of Sudbury: age 42.3 (journeypersons); age 27.3 (apprentices)
  - District of Manitoulin: age 49.6 (journeypersons); age 30.1 (apprentices);
- The average age of journeypersons and apprentices in the top 10 most active trades are:
  - Journeypersons (51.6)
  - Apprentices (27.1);
- Trades in the Sudbury and Manitoulin Districts are overly represented by males;
- With the exception of: Hairstylist; Information Technology; Child Development Practitioner; and Electrician - Construction and Maintenance; female journeypersons and apprentices are very low; and
- Female journeypersons tend to be clustered in *service* sector trades and are primarily located in Greater Sudbury.

## TRADES MAP – SUMMARY TABLES

The following tables provide more detail and highlight key findings.

### Number of journeypersons and apprentices:

As of March 2016, the workforce in the Sudbury and Manitoulin Districts had 4,305 registered journeypersons and 1,670 registered apprentices. Most of the trades workforce in the three census divisions covered by WPSM is located in Greater Sudbury (journeypersons = 84%; apprentices = 86%) as illustrated in **Table 1**.

**TABLE 1**  
**Summary of Trades Activity**  
**Greater Sudbury, District of Sudbury and District of Manitoulin**  
**March 2016**

	Journeypersons	% of total	Apprentices	% of total
Greater Sudbury	3,628	84%	1,428	86%
District of Sudbury	444	10%	165	10%
District of Manitoulin	233	5%	77	5%
Total	4,305		1,670	

OCOT lists 156 trades in Ontario. Journeypersons in the Districts of Sudbury and Manitoulin are identified with 57 trades, apprentices with 67. The number of trades linked to journeypersons and apprentices shrinks outside Greater Sudbury as illustrated below in **Table 2**.

**TABLE 2**  
**Summary of Trades Identified by Journeypersons and Apprentices**  
**Greater Sudbury, District of Sudbury and District of Manitoulin**  
**March 2016**

	Trades with Journeypersons	Trades with Apprentices
Greater Sudbury	51	67
District of Sudbury	28	33
District of Manitoulin	20	24

### Average age:

**Table 3** shows the average age by trade sector for journeypersons and apprentices.

Apprentice ages are in line with the Ontario average of 29 years. Census data tell us that the “boomer” workforce is aging and facing retirement, yet journeyperson ages in Sudbury and Manitoulin Districts appear to be lower than expected.

Manitoulin District data are skewed by a significant number of older workers in small populations. Again it is important to note however that although the data appears to show that compulsory trades<sup>9</sup> have the oldest journeypersons, little is known about journeypersons in the voluntary trades as they are not required to register. Additionally, several newer trends are surfacing: many older workers, including journeypersons, are choosing not to retire, and some employers are beginning to hire older workers due to their work experience, work ethic, etc.

**TABLE 3**  
**Average Age by Trade Sector Journeyperson (JP) and Apprentice (App)**  
**Greater Sudbury, District of Sudbury and District of Manitoulin**  
**March 2016**

Average Age	Greater Sudbury		District of Sudbury		Manitoulin District	
	JP	App	JP	App	JP	App
Construction	40.7	29.6	43.6	27.8	50.3	28.8
Industrial	41.3	30.5	34.0	27.8	74.0	25.8
Motive Power	47.5	30.9	43.6	25.6	48.1	32.9
Service	38.6	34.7	41.6	25.9	38.7	30.8
<b>Overall</b>	<b>41.8</b>	<b>31.1</b>	<b>42.3</b>	<b>27.3</b>	<b>49.6</b>	<b>30.0</b>

**10 most active trades:**

Trades data summaries in **Table 4** for the 10 most active trades in Greater Sudbury, Sudbury District and Manitoulin District are revealing. Data shows that the number of journeypersons and apprentices in the top ten trades as a percentage of all journeypersons and apprentices in Sudbury and Manitoulin Districts is a large population.

For example, 88% (n=3,809) of all registered journeypersons and 69% (n=1,146) of all registered apprentices are in the top 10 trades. In these top 10 trades, the average age for journeypersons increases to 51.6 years<sup>10</sup> and decreases to 27.1 years for apprentices. This represents a more useful picture of the workforce. It confirms that most of the journeyperson workforce is aging (consistent with demographic projections) and shows that many of the apprentices are younger.

**Note:** this trend (older journeypersons, younger apprentices) warrants further research. How is the analysis skewed by incomplete journeyperson data? Where is the future supply of tradespersons most threatened by a retiring workforce?



<sup>9</sup> A list of compulsory trades appears in Appendix 1

<sup>10</sup> Impact of missing journeyperson numbers for voluntary trades on the level of activity by trade or by their average age is not available.



**TABLE 4**  
**Summary of Top 10 Most Active Trades**  
**Journeypersons and Apprentices – Average Age and Gender**  
**Greater Sudbury, District of Sudbury and District of Manitoulin**  
**March 2016**

Overall - Top 10 Trades by Journeypersons (JP)						Overall -Top 10 Trades by Apprentices (App)				
		JP	Age	M	F		App	Age	M	F
1	Automotive Service Technician	910	51.0	909	1	Electrician - Construction and Maintenance	172	29.9	166	6
2	Electrician - Construction and Maintenance	851	51.9	838	13	Heavy Duty Equipment Technician	162	26.1	156	6
3	Truck and Coach Technician	758	53.0	758	0	Automotive Service Technician	160	26.9	155	5
4	Hairstylist	555	47.5	109	446	Truck and Coach Technician	134	26.4	134	0
5	Plumber	274	49.5	274	0	General Carpenter	110	30.9	104	6
6	Sheet Metal Worker	107	52.4	106	1	Industrial Mechanic Millwright	109	27.7	103	6
7	Heavy Duty Equipment Technician	92	49.4	91	1	Industrial Electrician	106	25.7	98	8
8	Refrigeration and Air Conditioning Systems Mechanic	91	51.5	91	0	Plumber	69	27.0	68	1
9	Auto Body and Collision Damage Repairer	89	51.6	89	0	Hairstylist	65	24.8	6	59
10	Steamfitter	82	58.3	82	0	Powerline Technician	59	25.8	59	0
	<b>TOTAL</b>	<b>3,809</b>		<b>3,347</b>	<b>462</b>	<b>TOTAL</b>	<b>1,146</b>		<b>1049</b>	<b>97</b>
	Top 10 Trades as a % of all Sudbury and Manitoulin Journeypersons	88%				Top 10 Trades as a % of all Sudbury and Manitoulin Apprentices	69%			
	<b>Average Age Journeypersons</b>		<b>51.6</b>			<b>Average Age Apprentices</b>		<b>27.1</b>		

\*those marked in red are compulsory trades

**Most active trades by sector, average age and gender:**

Information in **Table 5**, **Table 6**, **Table 7** and **Table 8** shows the most active trades sorted by sector, average age, gender and location as of March 2016. A total of 10 trades were selected in the construction sector because it shows more activity across a wider range of trades. Voluntary trades that offer the Certificate of Qualification (C of Q) are **bolded**. The data for some trades will show logical inconsistencies between the number of apprentices and the number of qualified journeypersons needed to train them (as they are not required to register with OCoT).

Interestingly, the data for the compulsory trades suggests that meeting ratio requirements in these trades may not be as significant a problem. However, in some voluntary trades that have ratios and Certificate of Qualification (C of Q) requirements, there appears to be a potential shortfall of journeypersons to the number of apprentices registered with OCoT. General Carpenter is a good example: in Greater Sudbury, there are: 15 registered journeypersons for 85 apprentices; in the District of Sudbury, there are 3 registered journeypersons for 19 apprentices; and in the Manitoulin District, there are only 2 journeypersons for 6 apprentices. Continue to keep in mind that journeypersons in the voluntary trades are not required to register with OCoT, though some do. Thus the low number of journeypersons registered in these trades in all likelihood, undercounts how many are actually qualified to work in their trade. Other voluntary trades with ratios and C of Q certification such as: Heavy Equipment Operator; Powerline Technician; Ironworker Structural and Ornamental; Reinforcing Rodworker; Drywall, Acoustic and Lathing Applicator; Roofer; Construction Millwright; and Construction Boilermaker show similar discrepancies.

**TABLE 5**  
**Most Active Trades in Greater Sudbury, District of Sudbury and District of Manitoulin**  
**Sorted by Trade Sector, Average Age, Male & Female**  
**March 2016**

Overall - Top 10 Trades by Journeypersons (JP)					Overall -Top 10 Trades by Apprentices (App)						
Construction		JP	Age	M	F	Construction		App	Age	M	F
1	Electrician - Construction and Maintenance	851	51.9	838	13	Electrician - Construction and Maintenance	172	29.9	166	6	
2	Plumber	274	49.5	274	0	General Carpenter	110	30.8	104	6	
3	Sheet Metal Worker	107	52.4	106	1	Plumber	69	27.0	68	1	
4	Refrigeration and Air Conditioning Systems Mechanic	91	51.5	91	0	Powerline Technician	59	25.8	59	0	
5	Steamfitter	82	58.3	82	0	Sheet Metal Worker	36	33.7	36	0	
6	Hoisting Engineer - Mobile Crane Operator 1	74	53.3	74	0	Ironworker - Structural and Ornamental	30	24.7	28	2	
7	Hoisting Engineer - Mobile Crane Operator 2	38	51.9	38	0	Refrigeration and Air Conditioning Systems Mechanic	25	23.4	24	1	
8	Residential Air Conditioning Systems Mechanic	31	34.7	31	0	Steamfitter	21	31.2	21	0	
9	General Carpenter	20	29.3	20	0	Construction Craft Worker	20	28.5	15	5	
10	Powerline Technician	14	30.6	14	0	Reinforcing Rodworker	15	29.1	15	0	

Top 5 Trades by Journeypersons					Top 5 Trades by Apprentices						
Industrial		JP	Age	M	F	Industrial		App	Age	M	F
1	Industrial Mechanic Millwright	51	45.4	49	2	Industrial Mechanic Millwright	109	27.7	103	6	
2	Industrial Electrician	41	38.6	39	2	Industrial Electrician	106	25.7	98	8	
3	General Machinist	13	32.7	12	1	Welder	34	22.0	31	3	
4	Instrumentation and Control Technician	5	40.5	5	0	General Machinist	22	30.3	22	0	
5	Metal Fabricator (Fitter)	4	33.8	4	0	Instrumentation and Control Technician	19	31.9	18	1	

Motive Power		JP	Age	M	F	Motive Power		App	Age	M	F
1	Automotive Service Technician	910	51.0	909	1	Heavy Duty Equipment Technician	162	26.1	156	6	
2	Truck and Coach Technician	758	53.0	758	0	Automotive Service Technician	160	26.9	155	5	
3	Heavy Duty Equipment Technician	92	49.4	91	1	Truck and Coach Technician	134	26.4	134	0	
4	Auto Body and Collision Damage Repairer	89	51.6	89	0	Auto Body and Collision Damage Repairer	27	30.3	25	2	
5	Motorcycle Technician	23	43.3	23	0	Recreation Vehicle Technician	9	41.6	9	0	

Service		JP	Age	M	F	Service		App	Age	M	F
1	Hairstylist	555	47.5	109	446	Hairstylist	65	24.8	6	59	
2	Information Technology - Contact Centre Technical Support Agent	21	55.0	1	20	Child Development Practitioner	35	27.2	1	34	
3	Information Technology - Contact Centre Sales Agent	20	52.5	2	18	Information Technology - Network Technician	22	49.8	2	20	
4	Information Technology - Contact Centre Customer Service Agent	12	52.5	0	12	Cook	18	28.2	13	5	
5	Child Development Practitioner	9	45.0	0	9	Parts Technician	17	39.6	10	7	

\*those marked in red are compulsory trades

**TABLE 6**  
**Most Active Trades in Greater Sudbury**  
**Sorted by Trade Sector, Average Age, Male & Female**  
**March 2016**

Greater Sudbury - Top 10 Trades by Journeypersons (JP)					Greater Sudbury - Top 10 Trades by Apprentices (App)				
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Construction		JP	Age	M	F	Construction		App	Age	M	F
1	Electrician - Construction and Maintenance	738	48.3	727	11	Electrician - Construction and Maintenance	149	26.5	143	6	
2	Plumber	233	45.5	233	0	General Carpenter	85	27.3	81	4	
3	Sheet Metal Worker	96	45.5	95	1	Plumber	61	27.6	60	1	
4	Refrigeration and Air Conditioning Systems Mechanic	84	46.4	84	0	Powerline Technician	44	25.0	44	0	
5	Steamfitter	67	51.6	67	0	Sheet Metal Worker	33	30.0	33	0	
6	Hoisting Engineer - Mobile Crane Operator 1	61	51.9	61	0	Ironworker - Structural and Ornamental	24	28.4	23	1	
7	Hoisting Engineer - Mobile Crane Operator 2	34	53.3	34	0	Refrigeration and Air Conditioning Systems Mechanic	23	26.7	22	1	
8	Residential Air Conditioning Systems Mechanic	29	40.4	29	0	Steamfitter	20	29.4	20	0	
9	General Carpenter	15	33.2	15	0	Construction Craft Worker	18	28.4	14	4	
10	Powerline Technician	13	29.1	13	0	Reinforcing Rodworker	12	27.7	12	0	

**Top 5 Trades by Journeypersons**

**Top 5 Trades by Apprentices**

Industrial		JP	Age	M	F	Industrial		App	Age	M	F
1	Industrial Mechanic Millwright	43	32.1	42	1	Industrial Electrician	94	25.5	87	7	
2	Industrial Electrician	36	39.1	34	2	Industrial Mechanic Millwright	89	26.9	84	5	
3	General Machinist	13	32.7	12	1	Welder	30	26.9	28	2	
4	Metal Fabricator (Fitter)	4	33.8	4	0	General Machinist	22	30.3	22	0	
5	Instrumentation and Control Technician	3	47.0	3	0	Instrumentation and Control Technician	18	24.8	17	1	

Motive Power		JP	Age	M	F	Motive Power		App	Age	M	F
1	Automotive Service Technician	742	49.6	741	1	Heavy Duty Equipment Technician	143	26.1	138	5	
2	Truck and Coach Technician	618	50.8	618	0	Automotive Service Technician	137	27.1	133	4	
3	Heavy Duty Equipment Technician	82	34.5	81	1	Truck and Coach Technician	117	27.6	117	0	
4	Auto Body and Collision Damage Repairer	68	51.0	68	0	Auto Body and Collision Damage Repairer	21	28.0	19	2	
5	Motorcycle Technician	18	52.0	18	0	Recreation Vehicle Technician	9	41.6	9	0	

Service		JP	Age	M	F	Service		App	Age	M	F
1	Hairstylist	474	46.3	89	385	Hairstylist	58	26.6	6	52	
2	Information Technology - Contact Centre Technical Support Agent	21	50.4	1	20	Child Development Practitioner	25	30.3	0	25	
3	Information Technology - Contact Centre Sales Agent	20	50.4	2	18	Information Technology - Network Technician	22	49.8	2	20	
4	Information Technology - Contact Centre Customer Service Agent	12	48.8	0	12	Cook	13	31.5	11	2	
5	Child Development Practitioner	8	40.3	0	8	Parts Technician	12	36.7	7	5	

\*those marked in red are compulsory trades

**TABLE 7**  
**Most Active Trades in District of Sudbury**  
**Sorted by Trade Sector, Average Age, Male & Female**  
**March 2016**

District of Sudbury - Top 10 Trades by Journeypersons (JP)						District of Sudbury - Top 10 Trades by Apprentices (App)				
Construction		JP	Age	M	F	Construction	App	Age	M	F
1	Electrician - Construction and Maintenance	81	52.7	79	2	General Carpenter	19	32.8	17	2
2	Plumber	25	50.6	25	0	Electrician - Construction and Maintenance	17	30.8	17	0
3	Steamfitter	14	58.2	14	0	Plumber	5	29.2	5	0
4	Sheet Metal Worker	8	38.8	8	0	Ironworker - Structural and Ornamental	5	25.8	4	1
5	Hoisting Engineer - Mobile Crane Operator 1	7	53.3	7	0	Powerline Technician	4	30.3	4	0
6	Refrigeration and Air Conditioning Systems Mechanic	6	54.2	6	0	Sheet Metal Worker	2	26.0	2	0
7	Hoisting Engineer - Mobile Crane Operator 2	4	50.5	4	0	Refrigeration and Air Conditioning Systems Mechanic	2	20.0	2	0
8	General Carpenter	3	26.3	3	0	Reinforcing Rodworker	2	33.5	2	0
9	Residential Air Conditioning Systems Mechanic	2	29.0	2	0	Steamfitter	1	33.0	1	0
10	Hoisting Engineer - Tower Crane Operator	2	82.5	2	0	Hoisting Engineer - Mobile Crane Operator 1	1	21.0	0	1

Top 5 Trades by Journeypersons					Top 5 Trades by Apprentices					
Industrial		JP	Age	M	F	Industrial	App	Age	M	F
1	Industrial Mechanic Millwright	7	30.1	6	1	Industrial Mechanic Millwright	18	23.8	17	1
2	Industrial Electrician	5	38.0	5	0	Industrial Electrician	12	25.8	11	1
3	Instrumentation and Control Technician	2	34.0	2	0	Welder	3	20.0	2	1
4	N/A					Pressure Systems Welder	2	25.0	2	0
5	N/A					Instrumentation and Control Technician	1	39.0	1	0

Motive Power		JP	Age	M	F	Motive Power	App	Age	M	F
1	Automotive Service Technician	101	50.3	101	0	Heavy Duty Equipment Technician	16	25.9	15	1
2	Truck and Coach Technician	88	51.1	88	0	Truck and Coach Technician	13	29.8	13	0
3	Auto Body and Collision Damage Repairer	11	56.7	11	0	Automotive Service Technician	11	27.5	10	1
4	Heavy Duty Equipment Technician	9	39.8	9	0	Auto Body and Collision Damage Repairer	2	22.0	2	0
5	Motorcycle Technician	4	43.0	4	0	Small Engine Technician	2	23.0	2	0

Service		JP	Age	M	F	Service	App	Age	M	F
1	Hairstylist	52	44.9	11	41	Hairstylist	7	23.0	0	7
2	Child Development Practitioner	1	49.0	0	1	Child Development Practitioner	7	22.7	0	7
3	Parts Technician	1	31.0	1	0	Cook	3	25.7	1	2
4	N/A					Utility Arborist	1	32.0	1	0
5	N/A					N/A				

\*those marked in red are compulsory trades

**TABLE 8**  
**Most Active Trades in District of Manitoulin**  
**Sorted by Trade Sector, Average Age, Male & Female**  
**March 2016**

District of Manitoulin - Top 10 Trades by Journeypersons (JP)						District of Manitoulin - Top 10 Trades by Apprentices (App)					
Construction		JP	Age	M	F	Construction		App	Age	M	F
1	Electrician - Construction and Maintenance	32	54.7	32	0	Powerline Technician	11	22.0	11	0	
2	Plumber	16	52.4	16	0	General Carpenter	6	32.2	6	0	
3	Hoisting Engineer - Mobile Crane Operator 1	6	54.8	6	0	Electrician - Construction and Maintenance	6	32.3	6	0	
4	Electrician - Domestic and Rural (residential)	4	62.3	4	0	Plumber	3	24.3	3	0	
5	Sheet Metal Worker	3	73.0	3	0	Construction Millwright	2	24.5	2	0	
6	General Carpenter	2	28.5	2	0	Ironworker - Structural and Ornamental	1	20.0	1	0	
7	Construction Craft Worker	2	42.5	2	0	Sheet Metal Worker	1	45.0	1	0	
8	Steamfitter	1	65.0	1	0	Reinforcing Rodworker	1	26.0	1	0	
9	Refrigeration and Air Conditioning Systems Mechanic	1	54.0	1	0	Construction Craft Worker	1	36.0	1	0	
10	Powerline Technician	1	32.0	1	0	Residential (Low Rise) Sheet Metal Installer	1	26.0	1	0	

Top 5 Trades by Journeypersons						Top 5 Trades by Apprentices					
Industrial		JP	Age	M	F	Industrial		App	Age	M	F
1	Industrial Mechanic Millwright	1	74.0	1	0	Industrial Mechanic Millwright	2	32.5	2	0	
2	N/A					Welder	1	19.0	1	0	
3	N/A					N/A					
4	N/A					N/A					
5	N/A					N/A					

Motive Power		JP	Age	M	F	Motive Power		App	Age	M	F
1	Automotive Service Technician	67	53.1	67	0	Automotive Service Technician	12	26.2	12	0	
2	Truck and Coach Technician	52	57.0	52	0	Truck and Coach Technician	4	21.8	4	0	
3	Auto Body and Collision Damage Repairer	10	47.2	10	0	Auto Body and Collision Damage Repairer	4	40.8	4	0	
4	Heavy Duty Equipment Technician	1	74.0	1	0	Heavy Duty Equipment Technician	3	26.3	3	0	
5	Motorcycle Technician	1	35.0	1	0	Transmission Technician	2	55.0	2	0	

Service		JP	Age	M	F	Service		App	Age	M	F
1	Hairstylist	29	51.3	9	20	Parts Technician	5	42.4	2	2	
2	Arborist	2	26.0	2	0	Child Development Practitioner	3	28.7	2	2	
3	N/A					Developmental Services Worker	3	42.0	3	3	
4	N/A					Cook	2	27.5	1	1	
5	N/A					Utility Arborist	1	21.0	0	0	

\*those marked in red are compulsory trades

### Female journeypersons and apprentices – gender inequity:

Although the literature suggests that more women are being attracted to the trades, as illustrated in the previous tables, trades in the Districts of Sudbury & Manitoulin are heavily oriented to males. More detail on trades where women are represented is illustrated in **Table 9**.

The data appears to suggest the following:

- with some exceptions (Hairstylist, Information Technology trades, Child Development Practitioner and Electrician – Construction and Maintenance) female journeyperson and apprentice activity is very low;
- female representation is clustered in the service sector trades (red); and
- most of the activity is located in Greater Sudbury.

*Note: Further research is warranted to determine why female workers enter some trades and not others. What can we learn from female journeypersons and apprentices about their trade experience and what needs to be done to promote the trades as a credible profession for women? What is the role of unions, employers, parents, teachers and counsellors in promoting the trades to women?*

**TABLE 9**  
**Summary of Female Trades Representation**  
**Greater Sudbury, District of Sudbury and District of Manitoulin**  
**March 2016**

Journeypersons and Apprentices Female	Greater Sudbury		District of Sudbury		District of Manitoulin	
	JP	App	JP	App	JP	App
Hairstylist	385	52	41	7	20	
Information Technology - Contact Centre Technical Support Agent	20	1				
Information Technology - Contact Centre Sales Agent	18	1				
Information Technology - Contact Centre Customer Service Agent	12	1				
Child Development Practitioner	8	25	1	7		2
Information Technology - Network Technician		20				
Baker	1					
Parts Technician	1	5				2
Baker-Patisserie	2	1				
Developmental Services Worker				4		3
Cook	1	2		2		1
Educational Assistant	1	2				
General Machinist	1					
Industrial Mechanic Millwright	1	5	1	1		
Tractor-Trailer Commercial Driver	1					
Industrial Electrician	2	7		1		
Electrician - Construction and Maintenance	11	6	2		0	
Construction Craft Worker	1	4		1		
Sheet Metal Worker	1					
General Carpenter		4		2		
Heavy Equipment Operator -Tractor Loader Backhoe	1					
Heavy Duty Equipment Technician	1	5		1		
Automotive Service Technician	1	4		1		0

## HOW IS THE TRADE MAP DATA HELPFUL?

Trying to get a clear picture of the dynamics of the trades' workforce in the WPSM catchment area is complex. As discussed, the data is not readily available especially for journeypersons in the voluntary trades who are not required to register and become a member of OCoT. This presents a significant challenge as the data is unavailable and as a result, undercounts the number of journeypersons who are actually working in their trade.

The **Trades Map** that was developed attempted to plot all of the data that was provided by OCoT for registered journeypersons and registered apprentices. While there are limitations, it provides a useful framework for assessing and understanding the local trades' workforce and their demographics, particularly in the compulsory trades.

A variety of organizations and employers might benefit from this data. They include:

### **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 needs, improve understanding of the workforce and coordinate responses to labour market issues. Workforce Planning Boards prepare annual labour market plans and draw on a wide variety of pre-existing data sources to better understand the local labour market. The **Trades Map** provides an additional tool to inform the Boards' analysis about current and future workforce needs and projected shortages.

### **Literacy Networks**

Literacy networks provide service coordination for Employment Ontario (EO) service providers and support to programs delivering Literacy and Basic Skills (LBS). LBS service providers help adults transition to further education, training, or work. Apprenticeship is one of the five goal paths in the Ontario Adult Literacy Curriculum Framework (OALCF) as some apprentices have challenges with literacy when trying to successfully pass their trades exam. Additionally, LBS services help older workers who seek trade qualifications later in life, if they struggle with the literacy and digital skills required to succeed.

### **Employment Services**

Employment Ontario's Employment Services help Ontarians find jobs. They have an employment resource centre and provide job-search assistance and career planning through one-on-one employment consulting and personalized job search support. The **Trades Map** will be a useful tool to better understand what trades might be in demand in future.

### **Employers**

Small and medium-sized employers, which represent the vast majority of employers in the Sudbury and Manitoulin Districts employ journeypersons and apprentices. As such, the **Trades Map** may help employers better understand what trades are in demand, the demographics of the current trades workforce and where shortages may exist in future. Knowing this information may also motivate them to hire apprentices to maintain/grow their workforce once older journeypersons retire.

## Unions

Unions have a strong voice in the trades. They often act as Training Delivery Agents (TDA) and provide a unionized work environment. They are strongly invested in developing their workforce (membership), including apprenticeship training. Workforce data helps inform union business goals and supports efforts to compete by establishing 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 provides students with relevant workplace experiences in trades and helps them accrue hours and/or competencies towards an apprenticeship. It is important for OYAP Coordinators to know what trades are in demand.

Ontario colleges also provide in-school training and Pre-Apprenticeship and Apprenticeship Co-Op programs in selected trades. Pre-Apprenticeship helps learners prepare for entry into an apprenticeship program; Apprenticeship Co-Ops provide a college diploma and credits towards an apprenticeship program. Colleges try to respond to employer/workforce demands, so trades data is a crucial part of their business planning. Additionally, any new capital-intensive projects (i.e., new trades facilities) will require credible data on current and anticipated demand for specific trades.

## APPENDIX 1: LIST OF COMPULSORY TRADES IN ONTARIO

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



## APPENDIX 1: GLOSSARY OF TRADES TERMINOLOGY

### **Apprentices**

Apprentices are individuals who enter into a Registered Training Agreement with MAESD (formerly MTCU) 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. Apprentices are subject to any trade regulation ratios and wage rates; can remain in this class until they receive their Certificate of Apprenticeship; and can hold themselves out as an apprentice.

### **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 journeyperson candidates as they prepare to write the Certificate of Qualification. Holders of the C of A qualify for membership in OCoT and are therefore not eligible for the Trade Equivalency Assessment (TEA) process.

### **Certificate of Qualification (C of Q)**

The Certificate of Qualification is issued upon completion of the exam in a designated trade. A C of Q holder is designated as a Journeyperson. Ontario has 75 trades that offer the C of Q designation. Twenty-two (22) of these trades are compulsory meaning a C of Q is legally required to work.

### **Compulsory Trade**

Ontario has 22 compulsory trades. These are trades in which registration as an apprentice, journeyperson candidate or certification as a journeyperson is mandatory. Persons working in these trades must hold a valid Certificate of Qualification and be registered as a member with OCoT.

### **Journeyperson Candidate**

A journeyperson candidate is registered with OCoT in preparation for writing the Certificate of Qualification (C of Q) exam.

### **Journeyperson**

A journeyperson holds a valid Certificate of Qualification (C of Q). Journeypersons in compulsory trades are also required to register and be a member of OCoT to legally work in Ontario.

### **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 duration of the apprenticeship. The RTA is held by the local ministry office. The apprentice must be registered as a member of OCoT.

### **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.

### **Trade Sector**

Ontario's 156 trades are organized into four sectors: *construction, industrial, motive power and service.*

## **Tradesperson**

This is a term that can be used very generally to describe anybody performing trades work; however, within the regulations of OCoT it has a very specific meaning. Tradespersons are defined by the following criteria:

- Practice voluntary trades where there is a C of Q exam to become certified as Journeyperson in the trade;
- Have been members of the Journeyperson Candidates Class or are not eligible for the Journeyperson Candidates Class and have been assessed to have experience and/or qualifications that are equivalent to a C of A in that trade;
- Are preparing to write/have no plans to write/have not passed the available C of Q exam for their trade(s);
- Can remain a tradesperson indefinitely or until they pass the available C of Q 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)).

## **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.

## **Training Delivery Agent (TDA)**

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

- a public educational institution recognized as such by the former Ministry of Training, Colleges and Universities (MTCU);
- 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 MTCU; 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. Journeypersons in voluntary trades are not required to register and be a member of OCoT.