



TORQ Analysis of Plumbers to Electricians

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Plumbers	47-2152.02	Abilities:	Importance Level: 50	Weight: 1
To Title:	Electricians	47-2111.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS	
Grand TORQ:	87

Ability TORQ		Skills TORQ		Knowledge TORQ	
Level	91	Level	87	Level	84

Gaps To Narrow if Possible			
Ability	Level	Gap	Imp
Gross Body Equilibrium	59	18	68
Problem Sensitivity	69	14	81
Stamina	53	14	65
Finger Dexterity	62	11	75
Dynamic Strength	59	13	59
Near Vision	64	9	75
Manual Dexterity	55	9	72
Arm-Hand Steadiness	60	7	81
Oral Expression	66	7	68
Inductive Reasoning	62	7	68
Visual Color Discrimination	55	7	65
Depth Perception	46	9	50
Perceptual Speed	50	8	53
Information Ordering	64	5	68
Static Strength	62	5	68
Flexibility of Closure	55	5	59
Selective Attention	46	5	59
Trunk Strength	55	4	72
Memorization	46	5	50
Multilimb Coordination	48	4	56
Control Precision	55	4	53
Speech Recognition	50	2	65

Upgrade These Skills			
Skill	Level	Gap	Imp
No Skills Upgrade Required!			

Knowledge to Add			
Knowledge	Level	Gap	Imp
No Knowledge Upgrades Required!			

Visualization	62	2	62
Fluency of Ideas	51	1	53

LEVEL and IMPT (IMPORTANCE) refer to the Target Electricians. GAP refers to level difference between Plumbers and Electricians.

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Plumbers	Electricians	Importance
Problem Sensitivity	55	69	81
Arm-Hand Steadiness	53	60	81
Finger Dexterity	51	62	75
Near Vision	55	64	75
Deductive Reasoning	64	59	72
Manual Dexterity	46	55	72
Trunk Strength	51	55	72
Extent Flexibility	85	76	72
Oral Comprehension	59	57	68
Oral Expression	59	66	68
Inductive Reasoning	55	62	68
Information Ordering	59	64	68
Static Strength	57	62	68
Gross Body Equilibrium	41	59	68
Stamina	39	53	65
Visual Color Discrimination	48	55	65
Speech Recognition	48	50	65
Speech Clarity	42	41	65
Visualization	60	62	62
Flexibility of Closure	50	55	59
Selective Attention	41	46	59
Dynamic Strength	46	59	59
Written Comprehension	60	59	56
Multilimb Coordination	44	48	56
Gross Body Coordination	41	41	56
Fluency of Ideas	50	51	53
Category Flexibility	51	51	53
Perceptual Speed	42	50	53
Control Precision	51	55	53
Written Expression	51	50	50
Memorization	41	46	50
Far Vision	48	46	50
Depth Perception	37	46	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Plumbers	Electricians	Importance
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Plumbers	Electricians	Importance

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Plumbers	Electricians	Description	Plumbers	Electricians
10+ years	3%	15%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	7%	Master's Degree	0%	0%
2-4 years	49%	13%	Post-Bachelor Cert	0%	0%
1-2 years	31%	30%	Bachelors	0%	0%
6-12 months	0%	13%	AA or Equiv	0%	1%
3-6 months	0%	0%	Some College	0%	3%
1-3 months	0%	0%	Post-Secondary Certificate	34%	40%
0-1 month	1%	3%	High School Diploma or GED	60%	30%
None	13%	14%	No HSD or GED	5%	23%

Plumbers Electricians

Most Common Educational/Training Requirement:

Long-term on-the-job training Long-term on-the-job training

Job Zone Comparison

<p>3 - Job Zone Three: Medium Preparation Needed</p> <p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>	<p>3 - Job Zone Three: Medium Preparation Needed</p> <p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>
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Tasks

Plumbers	Electricians
Core Tasks	Core Tasks
<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources. Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects. Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems. 	<p>Generalized Work Activities:</p> <ul style="list-style-type: none"> Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems. Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person. Performing General Physical Activities - Performing physical activities that require



- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Analyzing Data or Information - Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Specific Tasks

Occupation Specific Tasks:

- Assemble and secure pipes, tubes, fittings, and related equipment, according to specifications, by welding, brazing, cementing, soldering, and threading joints.
- Attach pipes to walls, structures and fixtures, such as radiators or tanks, using brackets, clamps, tools or welding equipment.
- Cut and bore holes in structures, such as bulkheads, decks, walls, and mains, prior to pipe installation, using hand and power tools.
- Cut, thread, and hammer pipe to specifications, using tools such as saws, cutting torches, and pipe threaders and benders.
- Dip nonferrous piping materials in a mixture of molten tin and lead to obtain a coating that prevents erosion or galvanic and electrolytic action.
- Inspect work sites for obstructions and to ensure that holes will not cause structural weakness.
- Inspect, examine, and test installed systems and pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods.
- Install automatic controls used to regulate pipe systems.
- Lay out full scale drawings of pipe systems, supports, and related equipment, following blueprints.
- Measure and mark pipes for cutting and threading.
- Modify, clean, and maintain pipe systems, units, fittings, and related machines and equipment, following specifications and using hand and power tools.
- Operate motorized pumps to remove water from flooded manholes, basements, or facility floors.
- Plan pipe system layout, installation, or repair according to specifications.
- Prepare cost estimates for clients.
- Remove and replace worn components.
- Select pipe sizes and types and related materials, such as supports, hangers, and hydraulic cylinders, according to specifications.
- Turn valves to shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches.

considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power cables to equipment, such as motors.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving and lifting heavy objects.
- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes.
- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.



Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- braze metal parts or components together
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- inspect project operations, or site to determine specification compliance
- install or replace meters, regulators, or related measuring or control devices
- lay out piping systems
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- operate power driven pumps
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- solder metal parts or components together
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use braze-welding equipment
- use building or land use regulations

- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and fixtures, using hand tools and power tools.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble manufactured products by hand
- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and other components
- install or replace meters, regulators, or related measuring or control devices
- install/connect electrical equipment to power circuit
- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or



- use combination welding procedures
- use hand or power tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use pressure gauges
- use soldering equipment
- weld together metal parts, components, or structures

Technology - Examples

Accounting software

- Bookkeeping software
- Intuit QuickBooks
- Intuit Quicken software
- Job costing software
- KRS Enterprises Service First!

Analytical or scientific software

- Elite Software DPIPE
- Elite Software FIRE
- Elite Software HSYM
- Elite Software Spipe
- Klear Estimator
- Quote Software QuoteExpress

Computer aided design CAD software

- Autodesk Building Systems
- Drawing and drafting software
- Elite Software Plumbing CAD
- Elite Software Sprinkler CAD
- Horizon Engineering Sigma Plumbing Calculator

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- PricePoint software
- Wintac Pro Software

Electronic mail software

- Email software

Facilities management software

- Maintenance management software

resource extraction setting

- perform safety inspections in industrial, manufacturing or repair setting
- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks
- Elite ECOORD
- Elite Software Inpoint
- Elite Software Outpoint
- Elite Software Short
- Elite Software VDROP

- Lighting calculation software

- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software

Project management software

- Estimating software
- FastEST FastPipe
- FastEST software
- Vision InfoSoft Plumbing Bid Manager

Spreadsheet software

- Microsoft Excel
- Spreadsheet software

Word processing software

- Atlas Construction Business Forms
- Contractor City Contractor Forms Pack
- Microsoft Word
- Wilhelm Publishing Threshold
- Word processing software

Tools - Examples

- Water pump pliers
- Adjustable slip lock nut wrenches
- Air compressors
- Augers
- Backhoes
- Bandsaws
- Bench chain vises
- Butane torches
- Bolt cutters
- Ratcheting box wrenches
- Calipers
- Caulking guns
- Deburring tools
- Desktop computers
- Inductive clamps
- Utility pumps
- Diagonal cut pliers
- Video diagnostic tools
- Drain cleaning cables

- One Mile Up Panel Planner

- SmartDraw software

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- Resolve service management software
- Shafer Service Systems software
- Timberline Office

Project management software

- Construction Master Pro software
- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library
- Word processing software

Tools - Examples

- Pump pliers
- Adjustable wrenches
- Air compressors
- Ammeters
- Awls
- Backhoes
- Cable tie guns
- Bandsaws
- Cutting torches
- Insulated bolt cutters
- Bear claw wire threaders
- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks

- Plungers
- Dump trucks
- Explosimeters
- Seat dressers
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Rotary hammers
- Ball peen hammers
- Heat guns
- Allen wrenches
- Hole cutting tools
- Gasket cutters
- Laser alignment tools
- Laser printers
- Lathes
- Trutest smoke detectors
- Levels
- Light pickup trucks
- Ultrasonic leak detectors
- Channel lock pliers
- Magnetic locators
- Moisture meters
- Notebook computers
- Universal nut wrenches
- Hollow core socket wrenches
- Oilers
- Personal computers
- Personal digital assistants PDA

- Circuit testers
- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats
- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters
- Cable labeling machines
- Ladders
- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups



- Tube bending springs
- Pipe extractors
- Copper cutting machines
- Pipe welding vises
- End pipe wrenches
- Plumb bobs
- Impact hammers
- Direct tap machines
- Reciprocating saws
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Manual ratchet threader sets
- Inner/outer reamers
- Hacksaws
- Flat blade screwdrivers
- Sewage pumps
- Shears
- Slip pliers
- Soldering equipment
- Basin wrenches
- Threading machine die heads
- Staple guns
- Rubber strap wrenches
- Sump pumps
- Swaging tools
- Tablet computers
- Measuring tapes
- Pipe taps
- Non-contact infrared thermometers
- Plastic pipe/conduit die heads

- Inspection mirrors
- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs
- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives
- Tapered reamers
- Respirators
- External snap ring pliers
- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears

- Power pipe threading machines
- Tin snips
- Chain tongs
- Four-in-one keys
- Trenchers
- Crimping tools
- Two way radios
- Utility knives
- Vacuum gauges
- Vibration analyzers
- Arc welders
- Welding hoods
- Cable saws

- Insulated socket sets
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives
- Milliameters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools
- Winches
- Electricians' scissors
- Crimping pliers
- Cable butt trimmers

Labor Market Comparison

Maine Department of Labor.

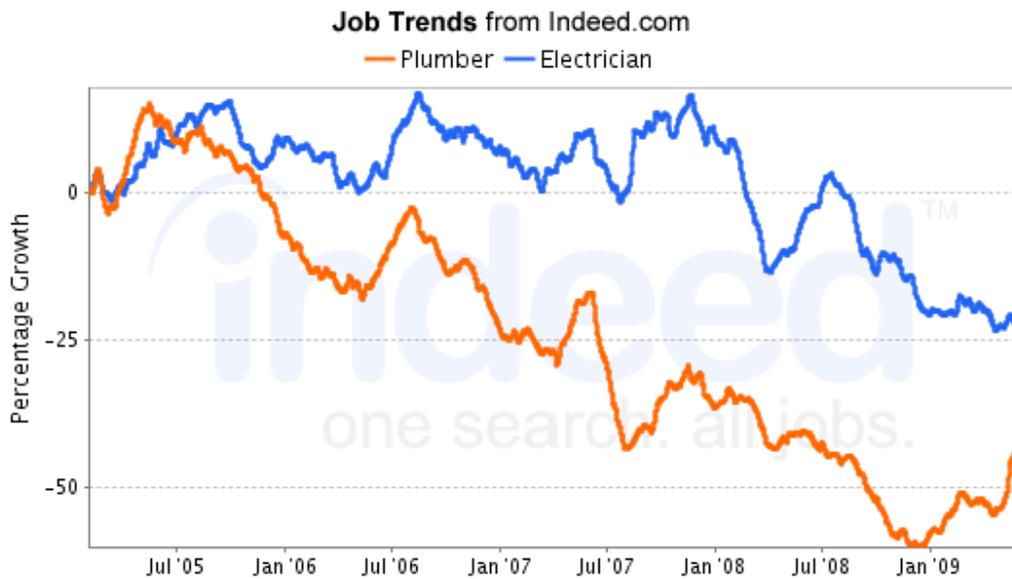
Description	Plumbers	Electricians	Difference
Median Wage	\$ 42,430	\$ 43,650	\$ 1,220

10th Percentile Wage	\$ 28,580	\$ 32,680	\$ 4,100
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 48,200	\$ 49,050	\$ 850
90th Percentile Wage	\$ 52,630	\$ 52,890	\$ 260
Mean Wage	\$ 41,260	\$ 43,700	\$ 2,440
Total Employment - 2468	2,110	2,910	800
Employment Base - 2006	2,905	3,304	399
Projected Employment - 2477	2,973	3,340	367
Projected Job Growth - 2006-2477	2.3 %	1.1 %	-1.3 %
Projected Annual Openings - 2006-2477	67	89	22
Special	★	★	

Special Occupations:

National Job Posting Trends

Trend for Plumbers and Electricians



Data from [Indeed](http://Indeed.com)

Programs

Related Programs

Electrician

Electrician. A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Washington County Community College	One College Drive	Calais	www.wccc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Lineworker

Lineworker. A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain and repair local, long-distance, and rural electric power cables and communication lines; erect and construct pole and tower lines; and install underground lines and cables. Includes instruction in cable installation and repair, fibre-optic technology, trenching, mobile equipment and crane operation, high-voltage installations, maintenance and inspection, safety, remote communications, and applicable codes and standards.

Institution	Address	City	URL
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu

Maine Statewide Promotion Opportunities for Plumbers

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2152.02	Plumbers	100	3	2,110	\$42,430.00	\$0.00	2%	67	★
47-2111.00	Electricians	87	3	2,910	\$43,650.00	\$1,220.00	1%	89	★
49-9051.00	Electrical Power-Line Installers and Repairers	82	3	280	\$47,750.00	\$5,320.00	9%	12	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	82	3	170	\$47,860.00	\$5,430.00	-9%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	79	2	180	\$43,870.00	\$1,440.00	-24%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	79	4	2,490	\$46,810.00	\$4,380.00	0%	60	★
49-9052.00	Telecommunications Line Installers and Repairers	79	3	720	\$56,120.00	\$13,690.00	0%	19	

47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$4,200.00	3%	77	★
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	79	5	20	\$60,790.00	\$18,360.00	5%	1	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	79	3	440	\$49,450.00	\$7,020.00	-19%	15	
47-2152.01	Pipe Fitters and Steamfitters	78	3	2,110	\$42,430.00	\$0.00	2%	67	★
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	78	3	60	\$42,890.00	\$460.00	5%	2	
51-4111.00	Tool and Die Makers	77	3	160	\$51,670.00	\$9,240.00	-11%	2	
49-3011.00	Aircraft Mechanics and Service Technicians	76	3	210	\$44,280.00	\$1,850.00	-2%	2	
49-9062.00	Medical Equipment Repairers	76	3	80	\$46,700.00	\$4,270.00	30%	6	★

Special Occupations:

Top Industries for Electricians					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%
Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%

Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%
State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%

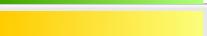
Top Industries for Plumbers					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	60.70%	304,837	344,241	12.93%
Self-employed workers, primary job	000601	11.92%	59,847	63,759	6.54%
Nonresidential building construction	236200	3.01%	15,109	16,929	12.05%
Local government, excluding education and hospitals	939300	2.99%	15,015	16,867	12.34%
Electrical contractors	238210	1.62%	8,138	8,533	4.86%
Natural gas distribution	221200	1.06%	5,343	4,373	-18.16%
Ship and boat building	336600	1.05%	5,290	5,921	11.93%
Residential building construction	236100	1.03%	5,149	5,798	12.61%
Colleges, universities, and professional schools, public and private	611300	0.94%	4,704	5,262	11.87%
Other building equipment contractors	238290	0.80%	3,994	4,329	8.38%
Federal government, excluding postal service	919999	0.74%	3,720	3,516	-5.47%
Employment services	561300	0.69%	3,452	4,368	26.56%
Other specialty trade contractors	238900	0.67%	3,342	3,694	10.52%
Motor vehicle parts manufacturing	336300	0.63%	3,141	2,501	-20.39%
Other heavy and civil engineering construction	237900	0.60%	2,989	3,210	7.41%



TORQ Analysis of Plumbers to Recreational Vehicle Service Technicians

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Plumbers	47-2152.02	Abilities:	Importance Level: 50	Weight: 1
To Title:	Recreational Vehicle Service Technicians	49-3092.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS														
Grand TORQ:												87		
Ability TORQ				Skills TORQ				Knowledge TORQ						
Level				89	Level				86	Level				87
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add						
Ability	Level	Gap	Imp	Skill	Level	Gap	Imp	Knowledge	Level	Gap	Imp			
Manual Dexterity	53	7	68	Troubleshooting	68	8	91	Law and Government	27	3	73			
Control Precision	53	2	65	Repairing	72	8	89							
Multilimb Coordination	46	2	59											
LEVEL and IMPT (IMPORTANCE) refer to the Target Recreational Vehicle Service Technicians. GAP refers to level difference between Plumbers and Recreational Vehicle Service Technicians.														

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Plumbers	Recreational Vehicle Service Technicians	Importance
Oral Comprehension	59 	55 	72 
Oral Expression	59 	53 	68 
Manual Dexterity	46 	53 	68 
Near Vision	55 	53 	68 
Problem Sensitivity	55 	50 	65 
Finger Dexterity	51 	50 	65 
Control Precision	51 	53 	65 
Extent Flexibility	85 	59 	62 
Deductive Reasoning	64 	50 	59 
Inductive Reasoning	55 	50 	59 
Arm-Hand Steadiness	53 	44 	59 
Multilimb Coordination	44 	46 	59 

Speech Recognition	48	44	59
Written Comprehension	60	46	56
Information Ordering	59	51	56
Speech Clarity	42	41	56
Visualization	60	48	50
Static Strength	57	42	50
Visual Color Discrimination	48	48	50
Depth Perception	37	37	50
Hearing Sensitivity	48	46	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Plumbers	Recreational Vehicle Service Technicians	Importance
Troubleshooting	60	68	91
Repairing	64	72	89

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Plumbers	Recreational Vehicle Service Technicians	Importance
Law and Government	24	27	73

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Plumbers	Recreational Vehicle Service Technicians	Description	Plumbers	Recreational Vehicle Service Technicians
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	0%	Master's Degree	0%	0%
2-4 years	49%	34%	Post-Bachelor Cert	0%	0%
1-2 years	31%	34%	Bachelors	0%	0%
6-12 months	0%	17%	AA or Equiv	0%	4%
3-6 months	0%	4%	Some College	0%	0%
1-3 months	0%	0%	Post-Secondary Certificate	34%	39%
0-1 month	1%	0%	High School Diploma or GED	60%	52%
None	13%	8%	No HSD or GED	5%	4%

Plumbers

Recreational Vehicle Service Technicians

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

2 - Job Zone Two: Some Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.



Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Tasks

Plumbers

Core Tasks

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Analyzing Data or Information - Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Specific Tasks

Occupation Specific Tasks:

- Assemble and secure pipes, tubes, fittings, and related equipment, according to specifications, by welding, brazing, cementing, soldering, and threading joints.
- Attach pipes to walls, structures and fixtures, such as radiators or tanks, using brackets, clamps, tools or welding equipment.
- Cut and bore holes in structures, such as bulkheads, decks, walls, and mains, prior to pipe installation, using hand and power tools.
- Cut, thread, and hammer pipe to specifications, using tools such as saws, cutting torches, and pipe threaders and benders.
- Dip nonferrous piping materials in a mixture of molten tin and lead to obtain a coating that prevents erosion or galvanic and electrolytic action.
- Inspect work sites for obstructions and to ensure that holes will not cause structural weakness.
- Inspect, examine, and test installed systems and pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods.

Recreational Vehicle Service Technicians

Core Tasks

Generalized Work Activities:

- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

Specific Tasks

Occupation Specific Tasks:

- Confer with customers, read work orders, and examine vehicles needing repair in order to determine the nature and extent of damage.
- Connect electrical systems to outside power sources, and activate switches to test the operation of appliances and light fixtures.
- Connect water hoses to inlet pipes of plumbing systems, and test operation of toilets and sinks.
- Examine or test operation of parts or systems that have been repaired to ensure completeness of repairs.
- Inspect recreational vehicles to diagnose problems, then perform necessary adjustment, repair, or overhaul.
- List parts needed, estimate costs, and plan work procedures, using parts lists, technical manuals, and diagrams.
- Locate and repair frayed wiring, broken connections, or incorrect wiring, using ohmmeters, soldering irons, tape, and hand tools.
- Open and close doors, windows, and



- Install automatic controls used to regulate pipe systems.
- Lay out full scale drawings of pipe systems, supports, and related equipment, following blueprints.
- Measure and mark pipes for cutting and threading.
- Modify, clean, and maintain pipe systems, units, fittings, and related machines and equipment, following specifications and using hand and power tools.
- Operate motorized pumps to remove water from flooded manholes, basements, or facility floors.
- Plan pipe system layout, installation, or repair according to specifications.
- Prepare cost estimates for clients.
- Remove and replace worn components.
- Select pipe sizes and types and related materials, such as supports, hangers, and hydraulic cylinders, according to specifications.
- Turn valves to shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- braze metal parts or components together
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- inspect project operations, or site to determine specification compliance
- install or replace meters, regulators, or related measuring or control devices
- lay out piping systems
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects

drawers to test their operation, trimming edges to fit as necessary.

- Refinish wood surfaces on cabinets, doors, moldings, and floors, using power sanders, putty, spray equipment, brushes, paints, or varnishes.
- Remove damaged exterior panels, and repair and replace structural frame members.
- Repair leaks with caulking compound, or replace pipes, using pipe wrenches.
- Repair plumbing and propane gas lines, using caulking compounds and plastic or copper pipe.
- Reset hardware, using chisels, mallets, and screwdrivers.
- Seal open sides of modular units to prepare them for shipment, using polyethylene sheets, nails, and hammers.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- adjust or set mechanical controls or components
- align or adjust clearances of vehicle body parts or components
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- assemble, dismantle, or reassemble equipment or machinery
- build or repair structures in construction, repair, or manufacturing setting
- conduct tests to locate mechanical system malfunction
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- diagnose malfunctioning vehicle systems
- diagnose mechanical problems in machinery or equipment
- estimate time or cost for installation, repair, or construction projects
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- identify properties of metals for repair or fabrication activities
- inspect machinery or equipment to determine adjustments or repairs needed
- install carpet, linoleum, tile, or related material onto floors or walls
- install household appliances
- install prefabricated building components



- operate power driven pumps
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- solder metal parts or components together
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use braze-welding equipment
- use building or land use regulations
- use combination welding procedures
- use hand or power tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use pressure gauges
- use soldering equipment
- weld together metal parts, components, or structures

Technology - Examples

Accounting software

- Bookkeeping software
- Intuit QuickBooks
- Intuit Quicken software
- Job costing software
- KRS Enterprises Service First!

Analytical or scientific software

- Elite Software DPIPE
- Elite Software FIRE
- Elite Software HSYM
- Elite Software Spipe
- Klear Estimator

- Quote Software QuoteExpress

Computer aided design CAD software

- install siding or sheathing
- maintain repair records
- move or fit heavy objects
- obtain information from clients, customers, or patients
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prime or paint vehicle or transportation equipment surfaces
- read blueprints
- read schematics
- read specifications
- read tape measure
- read technical drawings
- read vehicle manufacturer's specifications
- read work order, instructions, formulas, or processing charts
- repair or replace electrical wiring, circuits, fixtures, or equipment
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- repair prefabricated wooden building components
- solder electrical or electronic connections or components
- test electrical/electronic wiring, equipment, systems or fixtures
- test mechanical products or equipment
- understand service or repair manuals
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic carpentry techniques
- use basic plumbing techniques
- use hand or power tools
- use hand or power woodworking tools
- use knowledge of metric system
- use knowledge of welding filler rod types
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- use soldering equipment
- use spray paint equipment
- use voltmeter, ammeter, or ohmmeter
- weld together metal parts, components, or structures

Technology - Examples



- Autodesk Building Systems
- Drawing and drafting software
- Elite Software Plumbing CAD
- Elite Software Sprinkler CAD
- Horizon Engineering Sigma Plumbing Calculator

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- PricePoint software
- Wintac Pro Software

Electronic mail software

- Email software

Facilities management software

- Maintenance management software

Project management software

- Estimating software
- FastEST FastPipe
- FastEST software
- Vision InfoSoft Plumbing Bid Manager

Spreadsheet software

- Microsoft Excel
- Spreadsheet software

Word processing software

- Atlas Construction Business Forms
- Contractor City Contractor Forms Pack
- Microsoft Word
- Wilhelm Publishing Threshold
- Word processing software

Tools - Examples

- Water pump pliers
- Adjustable slip lock nut wrenches
- Air compressors
- Augers
- Backhoes
- Bandsaws



- Bench chain vises
- Butane torches
- Bolt cutters
- Ratcheting box wrenches
- Calipers
- Caulking guns
- Deburring tools
- Desktop computers
- Inductive clamps
- Utility pumps
- Diagonal cut pliers
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dump trucks
- Explosimeters
- Seat dressers
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Rotary hammers
- Ball peen hammers
- Heat guns
- Allen wrenches
- Hole cutting tools
- Gasket cutters
- Laser alignment tools
- Laser printers
- Lathes



- Trutest smoke detectors
- Levels
- Light pickup trucks
- Ultrasonic leak detectors
- Channel lock pliers
- Magnetic locators
- Moisture meters
- Notebook computers
- Universal nut wrenches
- Hollow core socket wrenches
- Oilers
- Personal computers
- Personal digital assistants PDA
- Tube bending springs
- Pipe extractors
- Copper cutting machines
- Pipe welding vises
- End pipe wrenches
- Plumb bobs
- Impact hammers
- Direct tap machines
- Reciprocating saws
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Manual ratchet threader sets
- Inner/outer reamers
- Hacksaws
- Flat blade screwdrivers
- Sewage pumps
- Shears



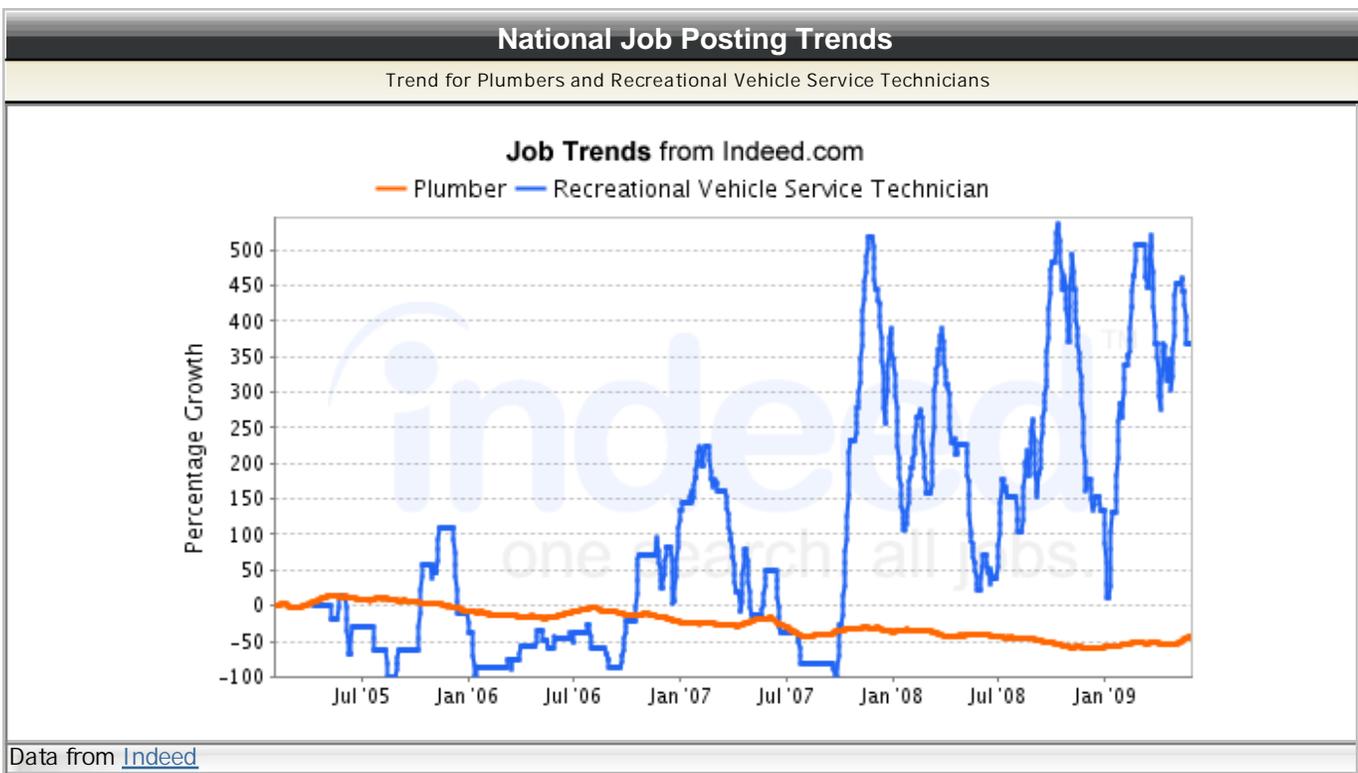
- Slip pliers
- Soldering equipment
- Basin wrenches
- Threading machine die heads
- Staple guns
- Rubber strap wrenches
- Sump pumps
- Swaging tools
- Tablet computers
- Measuring tapes
- Pipe taps
- Non-contact infrared thermometers
- Plastic pipe/conduit die heads
- Power pipe threading machines
- Tin snips
- Chain tongs
- Four-in-one keys
- Trenchers
- Crimping tools
- Two way radios
- Utility knives
- Vacuum gauges
- Vibration analyzers
- Arc welders
- Welding hoods
- Cable saws

Labor Market Comparison

Maine Department of Labor.

Description	Plumbers	Recreational Vehicle Service Technicians	Difference
Median Wage	\$ 42,430	\$ 29,640	\$(12,790)
10th Percentile Wage	\$ 28,580	\$ 22,130	\$(6,450)
25th Percentile Wage	N/A	N/A	N/A

75th Percentile Wage	\$ 48,200	\$ 34,510	\$(13,690)
90th Percentile Wage	\$ 52,630	\$ 38,290	\$(14,340)
Mean Wage	\$ 41,260	\$ 29,710	\$(11,550)
Total Employment - 2468	2,110	70	-2,040
Employment Base - 2006	2,905	67	-2,838
Projected Employment - 2477	2,973	71	-2,902
Projected Job Growth - 2006-2477	2.3 %	6.0 %	3.6 %
Projected Annual Openings - 2006-2477	67	1	-66
Special	★		
Special Occupations:			



Programs

Related Programs

Building/Property Main. and Manager			
Heavy Equipment Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.			
Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu

Wasington County Community College	One College Drive	Calais	www.wccc.me.edu
Vehicle Maintenance and Repair Technologies, Other.			
Vehicle Maintenance and Repair Technologies, Other. Any instructional program in vehicle and mobile equipment mechanics and repairers not listed above.			
Institution	Address	City	URL
Landing School of Boat Building and Design	286 River Rd	Arundel	www.landingschool.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu

Maine Statewide Promotion Opportunities for Plumbers									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2152.02	Plumbers	100	3	2,110	\$42,430.00	\$0.00	2%	67	★
47-2111.00	Electricians	87	3	2,910	\$43,650.00	\$1,220.00	1%	89	★
49-9051.00	Electrical Power-Line Installers and Repairers	82	3	280	\$47,750.00	\$5,320.00	9%	12	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	82	3	170	\$47,860.00	\$5,430.00	-9%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	79	2	180	\$43,870.00	\$1,440.00	-24%	3	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$4,200.00	3%	77	★
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	79	5	20	\$60,790.00	\$18,360.00	5%	1	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	79	4	2,490	\$46,810.00	\$4,380.00	0%	60	★
49-9052.00	Telecommunications Line Installers and Repairers	79	3	720	\$56,120.00	\$13,690.00	0%	19	

49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	79	3	440	\$49,450.00	\$7,020.00	-19%	15	
47-2152.01	Pipe Fitters and Steamfitters	78	3	2,110	\$42,430.00	\$0.00	2%	67	★
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	78	3	60	\$42,890.00	\$460.00	5%	2	
51-4111.00	Tool and Die Makers	77	3	160	\$51,670.00	\$9,240.00	-11%	2	
49-9062.00	Medical Equipment Repairers	76	3	80	\$46,700.00	\$4,270.00	30%	6	★
49-3011.00	Aircraft Mechanics and Service Technicians	76	3	210	\$44,280.00	\$1,850.00	-2%	2	

Special Occupations:

Top Industries for Recreational Vehicle Service Technicians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Other motor vehicle dealers	441200	69.59%	9,741	11,854	21.69%
Automotive mechanical and electrical repair and maintenance	811110	4.13%	578	686	18.73%
Automobile dealers	441100	3.93%	550	623	13.44%
Self-employed workers, primary job	000601	3.55%	497	529	6.54%
Automotive body, paint, interior, and glass repair	811120	3.37%	471	550	16.76%
Motor vehicle body and trailer manufacturing	336200	2.82%	395	387	-2.15%
Other miscellaneous store retailers	453900	1.85%	259	278	7.20%
Automotive parts, accessories, and tire stores	441300	1.81%	253	247	-2.44%
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	423100	1.78%	249	284	14.14%
Automotive equipment rental and leasing	532100	1.20%	168	191	13.46%
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	811300	0.92%	129	137	5.82%

Top Industries for Plumbers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	60.70%	304,837	344,241	12.93%
Self-employed workers, primary job	000601	11.92%	59,847	63,759	6.54%
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Other heavy and civil engineering construction	237900	0.60%	2,989	3,210	7.41%



TORQ Analysis of Plumbers to Helpers--Electricians

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Plumbers	47-2152.02	Abilities:	Importance Level: 50	Weight: 1
To Title:	Helpers--Electricians	47-3013.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					87		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	87	Level	86	Level	87		
Gaps To Narrow if Possible				Upgrade These Skills		Knowledge to Add	
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt
Manual Dexterity	53	7	75	No Skills Upgrade Required!			
Gross Body Equilibrium	46	5	53	No Knowledge Upgrades Required!			
Visual Color Discrimination	51	3	53				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Helpers--Electricians. GAP refers to level difference between Plumbers and Helpers--Electricians.</p>							

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Plumbers	Helpers--Electricians	Importance
Manual Dexterity	46	53	75
Near Vision	55	55	72
Problem Sensitivity	55	42	62
Information Ordering	59	50	62
Extent Flexibility	85	59	62
Arm-Hand Steadiness	53	48	59
Finger Dexterity	51	46	59
Trunk Strength	51	46	59
Oral Comprehension	59	51	56
Control Precision	51	48	56
Multilimb Coordination	44	42	56
Static Strength	57	44	56
Visualization	60	50	53
Gross Body Equilibrium	41	46	53

Visual Color Discrimination	48 	51 	53 
Deductive Reasoning	64 	39 	50 
Gross Body Coordination	41 	39 	50 
Skill Level Comparison - Abilities with importance scores over 69			
Description	Plumbers	Helpers--Electricians	Importance
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Plumbers	Helpers--Electricians	Importance

Experience & Education Comparison					
Related Work Experience Comparison			Required Education Level Comparison		
Description	Plumbers	Helpers--Electricians	Description	Plumbers	Helpers--Electricians
10+ years	3% 	0%	Doctoral	0%	0%
8-10 years	0%	2% 	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	2% 	Master's Degree	0%	0%
2-4 years	49% 	10% 	Post-Bachelor Cert	0%	0%
1-2 years	31% 	14% 	Bachelors	0%	0%
6-12 months	0%	18% 	AA or Equiv	0%	0%
3-6 months	0%	19% 	Some College	0%	2% 
1-3 months	0%	0%	Post-Secondary Certificate	34% 	20% 
0-1 month	1% 	0%	High School Diploma or GED	60% 	50% 
None	13% 	32% 	No HSD or GED	5% 	27% 
Plumbers			Helpers--Electricians		
Most Common Educational/Training Requirement:					
Long-term on-the-job training			Short-term on-the-job training		
Job Zone Comparison					
3 - Job Zone Three: Medium Preparation Needed			2 - Job Zone Two: Some Preparation Needed		
<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>			<p>Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.</p> <p>These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.</p> <p>Employees in these occupations need anywhere from a few months to one year of working with experienced employees.</p>		

Tasks	
Plumbers	Helpers--Electricians
Core Tasks	Core Tasks

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Analyzing Data or Information - Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Specific Tasks

Occupation Specific Tasks:

- Assemble and secure pipes, tubes, fittings, and related equipment, according to specifications, by welding, brazing, cementing, soldering, and threading joints.
- Attach pipes to walls, structures and fixtures, such as radiators or tanks, using brackets, clamps, tools or welding equipment.
- Cut and bore holes in structures, such as bulkheads, decks, walls, and mains, prior to pipe installation, using hand and power tools.
- Cut, thread, and hammer pipe to specifications, using tools such as saws, cutting torches, and pipe threaders and benders.
- Dip nonferrous piping materials in a mixture of molten tin and lead to obtain a coating that prevents erosion or galvanic and electrolytic action.
- Inspect work sites for obstructions and to ensure that holes will not cause structural weakness.
- Inspect, examine, and test installed systems and pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods.
- Install automatic controls used to regulate pipe systems.
- Lay out full scale drawings of pipe systems, supports, and related equipment, following blueprints.
- Measure and mark pipes for cutting and threading.
- Modify, clean, and maintain pipe systems, units, fittings, and related machines and equipment, following specifications and using hand and power tools.
- Operate motorized pumps to remove water from flooded manholes, basements, or facility floors.

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.

Specific Tasks

Occupation Specific Tasks:

- Bolt component parts together to form tower assemblies, using hand tools.
- Break up concrete, using airhammer, to facilitate installation, construction, or repair of equipment.
- Clean work area and wash parts.
- Construct controllers and panels, using power drills, drill presses, taps, saws and punches.
- Dig trenches or holes for installation of conduit or supports.
- Disassemble defective electrical equipment, replace defective or worn parts, and reassemble equipment, using hand tools.
- Drill holes and pull or push wiring through openings, using hand and power tools.
- Erect electrical system components and barricades, and rig scaffolds, hoists, and shoring.
- Examine electrical units for loose connections and broken insulation and tighten connections, using hand tools.
- Install copper-clad ground rods, using a manual post driver.
- Maintain tools, vehicles, and equipment and keep parts and supplies in order.
- Measure, cut, and bend wire and conduit, using measuring instruments and hand tools.
- Operate cutting torches and welding equipment, while working with conduit and metal components to construct devices associated with electrical functions.
- Paint a variety of objects related to electrical functions.
- Perform semi-skilled and unskilled laboring duties related to the installation, maintenance and repair of a wide variety of

- Plan pipe system layout, installation, or repair according to specifications.
- Prepare cost estimates for clients.
- Remove and replace worn components.
- Select pipe sizes and types and related materials, such as supports, hangers, and hydraulic cylinders, according to specifications.
- Turn valves to shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- braze metal parts or components together
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- inspect project operations, or site to determine specification compliance
- install or replace meters, regulators, or related measuring or control devices
- lay out piping systems
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- operate power driven pumps
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- repair or replace gas, steam, sewer, or water piping or fixtures

electrical systems and equipment.

- Raise, lower, or position equipment, tools, and materials, using hoist, hand line, or block and tackle.
- Requisition materials, using warehouse requisition or release forms.
- Solder electrical connections, using soldering iron.
- String transmission lines or cables through ducts or conduits, under the ground, through equipment, or to towers.
- Strip insulation from wire ends, using wire stripping pliers, and attach wires to terminals for subsequent soldering.
- Thread conduit ends, connect couplings, and fabricate and secure conduit support brackets, using hand tools.
- Trace out short circuits in wiring, using test meter.
- Transport tools, materials, equipment, and supplies to work site by hand, handtruck, or heavy, motorized truck.
- Trim trees and clear undergrowth along right-of-way.

Detailed Tasks

Detailed Work Activities:

- apply cleaning solvents
- assist mechanic, or extractive or construction trades craft worker
- bend tubing or conduit
- clean equipment or machinery
- clean rooms or work areas
- climb ladders, scaffolding, or utility or telephone poles
- construct or fabricate electrical parts or fixtures
- dig holes or trenches for foundations, posts, poles, or related items
- dismantle or reassemble rigging
- distinguish colors
- drive automobile, van, or light truck
- erect scaffold
- fabricate, assemble, or disassemble manufactured products by hand
- install electrical conduit or tubing
- install/string electrical or electronic cable or wiring
- maintain electrician's tools or equipment
- maintain inventory of supplies
- maintain or repair cargo or passenger vehicle
- measure, weigh, or count products or materials
- move or fit heavy objects
- operate hoist, winch, or hydraulic boom
- paint walls or other structural surfaces
- read blueprints

- repair or replace malfunctioning or worn mechanical components
- solder metal parts or components together
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use braze-welding equipment
- use building or land use regulations
- use combination welding procedures
- use hand or power tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use pressure gauges
- use soldering equipment
- weld together metal parts, components, or structures

- read tape measure
- read technical drawings
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- set up specialized rigging
- solder electrical or electronic connections or components
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- use acetylene welding/cutting torch
- use basic carpentry techniques
- use chain saws
- use electrical or electronic test devices or equipment
- use hand or power tools
- use measuring devices in construction or extraction work
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Bookkeeping software
- Intuit QuickBooks
- Intuit Quicken software
- Job costing software

- KRS Enterprises Service First!

Analytical or scientific software

- Elite Software DPIPE
- Elite Software FIRE
- Elite Software HSYM
- Elite Software Spipe
- Klear Estimator
- Quote Software QuoteExpress

Computer aided design CAD software

- Autodesk Building Systems
- Drawing and drafting software
- Elite Software Plumbing CAD
- Elite Software Sprinkler CAD
- Horizon Engineering Sigma Plumbing Calculator

Data base user interface and query software

- Database software

Technology - Examples

Spreadsheet software

- Recordkeeping software

Word processing software

- Report generation software

Tools - Examples

- Pliers
- Crescent wrenches
- Air compressors
- Ammeters
- Awns
- Backhoes
- Cable tie guns
- Block and tackle equipment
- Cutting torches
- Insulated bolt cutters
- Horizontal boring tools
- Bear claw wire threaders
- Cable reels
- Cable splicing knives
- Inductance testers

- Insight Direct ServiceCEO

- PricePoint software

- Wintac Pro Software

Electronic mail software

- Email software

Facilities management software

- Maintenance management software

Project management software

- Estimating software

- FastEST FastPipe

- FastEST software

- Vision InfoSoft Plumbing Bid Manager

Spreadsheet software

- Microsoft Excel

- Spreadsheet software

Word processing software

- Atlas Construction Business Forms

- Contractor City Contractor Forms Pack

- Microsoft Word

- Wilhelm Publishing Threshold

- Word processing software

Tools - Examples

- Water pump pliers

- Adjustable slip lock nut wrenches

- Air compressors

- Augers

- Backhoes

- Bandsaws

- Bench chain vises

- Butane torches

- Bolt cutters

- Ratcheting box wrenches

- Calipers

- Caulking guns

- Resistance bridges

- Capacitance testers

- Bucket trucks

- Continuity testers

- Circuit test meters

- Current clamps

- Pneumatic compacting equipment

- Hydraulic conduit benders

- Conduit deburring tools

- Desktop computers

- Diagonal cut pliers

- Dump trucks

- Side cutting pliers

- Fish tape pullers

- Fuse pullers

- Gas leak detection devices

- Generators

- Ground fault circuit interrupter GFCI testers

- Hammers

- Handtrucks

- Heat guns

- Hex key sets

- Hoist trucks

- Circle cutters

- Electric impact drivers

- Transfer impedance meters

- Cable labeling machines

- Ladders

- Levels

- Extension lamp extractors

- Insulated pliers

- Conduit locknut and reaming pliers

- Deburring tools
- Desktop computers
- Inductive clamps
- Utility pumps
- Diagonal cut pliers
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dump trucks
- Explosimeters
- Seat dressers
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Rotary hammers
- Ball peen hammers
- Heat guns
- Allen wrenches
- Hole cutting tools
- Gasket cutters
- Laser alignment tools
- Laser printers
- Lathes
- Trutest smoke detectors
- Levels
- Light pickup trucks
- Ultrasonic leak detectors
- Channel lock pliers
- Magnetic locators
- Long nose pliers
- Lighted magnet pickups
- Electric manlifts
- Meggers
- Magnetic locators
- Digital multimeters
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Personal computers
- Phase rotation meters
- Picks
- Polyvinyl chloride PVC cutters
- Plumb bobs
- Airhammers
- Post drivers
- Cordless drills
- Cable gripping gloves
- Punchdown tools
- Tapered reamers
- Respirators
- External snap ring pliers
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Soldering irons
- Insulated wrenches
- Wire wrap guns

- Moisture meters
- Notebook computers
- Universal nut wrenches
- Hollow core socket wrenches
- Oilers
- Personal computers
- Personal digital assistants PDA
- Tube bending springs
- Pipe extractors
- Copper cutting machines
- Pipe welding vises
- End pipe wrenches
- Plumb bobs
- Impact hammers
- Direct tap machines
- Reciprocating saws
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Manual ratchet threader sets
- Inner/outer reamers
- Hacksaws
- Flat blade screwdrivers
- Sewage pumps
- Shears
- Slip pliers
- Soldering equipment
- Basin wrenches
- Threading machine die heads
- Staple guns
- Rubber strap wrenches

- Punches
- Strap wrenches
- Automatic wire strippers
- Compaction tampers
- Tape measures
- Infrared scanners
- Dies
- Taps
- Tongue and groove pliers
- Excavators
- Air spades
- Two way radios
- Electricians' knives
- Non-contact voltage sensors
- Welders
- Welding hoods
- Bulldozers
- Electricians' snips
- Crimping tools
- Cable cutters
- Drill presses

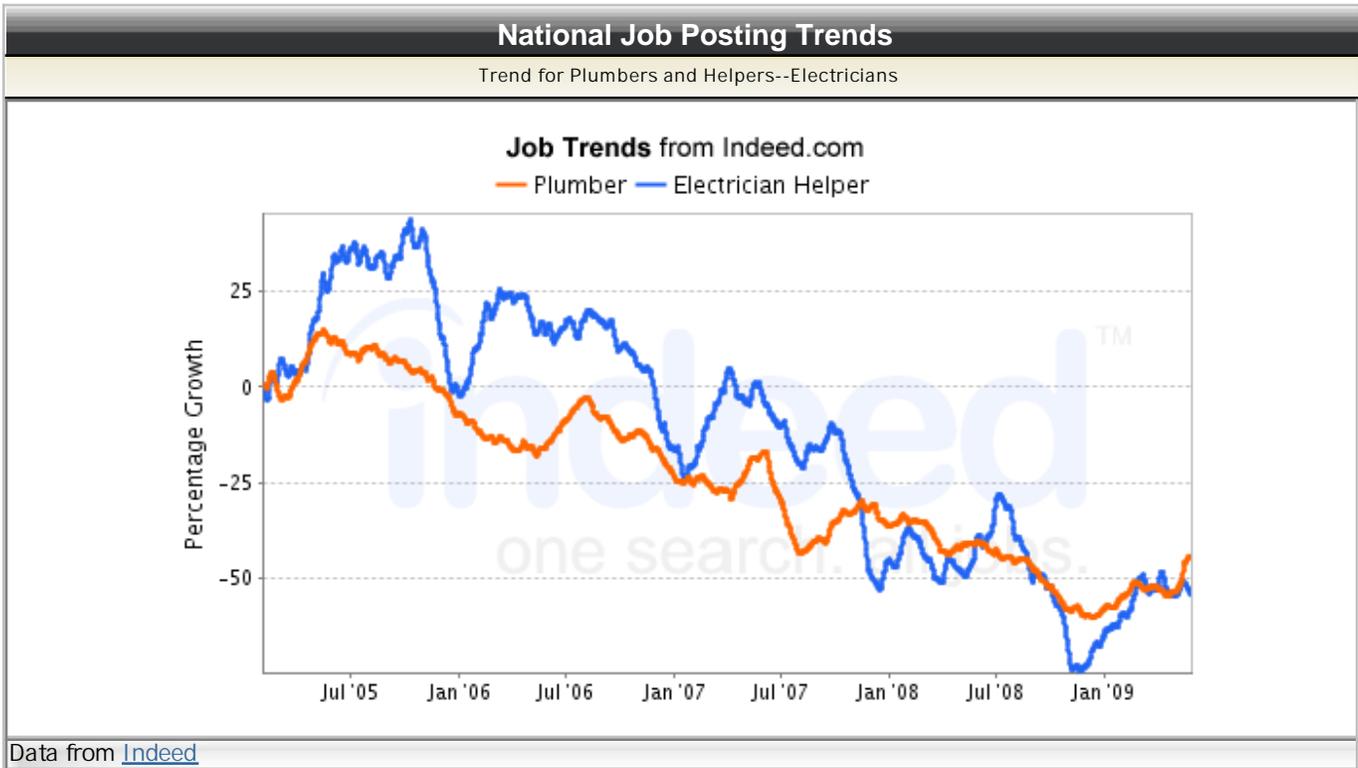
- Sump pumps
- Swaging tools
- Tablet computers
- Measuring tapes
- Pipe taps
- Non-contact infrared thermometers
- Plastic pipe/conduit die heads
- Power pipe threading machines
- Tin snips
- Chain tongs
- Four-in-one keys
- Trenchers
- Crimping tools
- Two way radios
- Utility knives
- Vacuum gauges
- Vibration analyzers
- Arc welders
- Welding hoods
- Cable saws

Labor Market Comparison

Maine Department of Labor.

Description	Plumbers	Helpers--Electricians	Difference
Median Wage	\$ 42,430	\$ 31,250	\$(11,180)
10th Percentile Wage	\$ 28,580	\$ 24,000	\$(4,580)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 48,200	\$ 35,550	\$(12,650)
90th Percentile Wage	\$ 52,630	\$ 38,740	\$(13,890)
Mean Wage	\$ 41,260	\$ 31,020	\$(10,240)
Total Employment - 2468	2,110	560	-1,550
Employment Base - 2006	2,905	564	-2,341
Projected Employment - 2477	2,973	592	-2,381
Projected Job Growth - 2006-2477	2.3 %	5.0 %	2.6 %

Projected Annual Openings - 2006-2477	67	17	-50
Special	★		
Special Occupations:			



Programs

Related Programs

Electrician

Electrician. A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Wasington County Community College	One College Drive	Calais	www.wccc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Maine Statewide Promotion Opportunities for Plumbers

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2152.02	Plumbers	100	3	2,110	\$42,430.00	\$0.00	2%	67	★
47-2111.00	Electricians	87	3	2,910	\$43,650.00	\$1,220.00	1%	89	★
49-9051.00	Electrical Power-Line Installers and Repairers	82	3	280	\$47,750.00	\$5,320.00	9%	12	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	82	3	170	\$47,860.00	\$5,430.00	-9%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	79	2	180	\$43,870.00	\$1,440.00	-24%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	79	4	2,490	\$46,810.00	\$4,380.00	0%	60	★
49-9052.00	Telecommunications Line Installers and Repairers	79	3	720	\$56,120.00	\$13,690.00	0%	19	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$4,200.00	3%	77	★
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	79	5	20	\$60,790.00	\$18,360.00	5%	1	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	79	3	440	\$49,450.00	\$7,020.00	-19%	15	
47-2152.01	Pipe Fitters and Steamfitters	78	3	2,110	\$42,430.00	\$0.00	2%	67	★
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	78	3	60	\$42,890.00	\$460.00	5%	2	
51-4111.00	Tool and Die Makers	77	3	160	\$51,670.00	\$9,240.00	-11%	2	
49-3011.00	Aircraft Mechanics and Service Technicians	76	3	210	\$44,280.00	\$1,850.00	-2%	2	
49-9062.00	Medical Equipment Repairers	76	3	80	\$46,700.00	\$4,270.00	30%	6	★

Special Occupations:

Top Industries for Helpers--Electricians					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	87.60%	92,278	97,774	5.96%
Self-employed workers, primary job	000601	2.83%	2,981	3,209	7.65%
Employment services	561300	1.71%	1,804	2,307	27.89%
Nonresidential building construction	236200	1.50%	1,581	1,790	13.22%
Plumbing, heating, and air-conditioning contractors	238220	1.44%	1,515	1,729	14.11%
Local government, excluding education and hospitals	939300	0.54%	570	647	13.52%
Electric power generation, transmission and distribution	221100	0.38%	401	373	-7.06%
Residential building construction	236100	0.36%	383	436	13.79%
Power and communication line and related structures construction	237130	0.29%	304	324	6.30%
Unpaid family workers, primary job	000701	0.24%	254	203	-20.06%
Offices of real estate agents and brokers	531200	0.20%	215	265	23.08%
Colleges, universities, and professional schools, public and private	611300	0.17%	177	200	13.05%
Other building equipment contractors	238290	0.13%	139	152	9.52%
Management of companies and enterprises	551100	0.12%	124	145	16.49%
General medical and surgical hospitals, public and private	622100	0.10%	108	121	11.87%

Top Industries for Plumbers					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	60.70%	304,837	344,241	12.93%
Self-employed workers, primary job	000601	11.92%	59,847	63,759	6.54%
Nonresidential building construction	236200	3.01%	15,109	16,929	12.05%
Local government, excluding education and hospitals	939300	2.99%	15,015	16,867	12.34%
Electrical contractors	238210	1.62%	8,138	8,533	4.86%
Natural gas distribution	221200	1.06%	5,343	4,373	-18.16%
Ship and boat building	336600	1.05%	5,290	5,921	11.93%
Residential building construction	236100	1.03%	5,149	5,798	12.61%
Colleges, universities, and professional schools, public and private	611300	0.94%	4,704	5,262	11.87%

Other building equipment contractors	238290	0.80%	3,994	4,329	8.38%
Federal government, excluding postal service	919999	0.74%	3,720	3,516	-5.47%
Employment services	561300	0.69%	3,452	4,368	26.56%
Other specialty trade contractors	238900	0.67%	3,342	3,694	10.52%
Motor vehicle parts manufacturing	336300	0.63%	3,141	2,501	-20.39%
Other heavy and civil engineering construction	237900	0.60%	2,989	3,210	7.41%



TORQ Analysis of Plumbers to Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Plumbers	47-2152.02	Abilities:	Importance Level: 50	Weight: 1
To Title:	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	47-3015.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					86						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	88	Level	82	Level	88						
Gaps To Narrow if Possible		Upgrade These Skills		Knowledge to Add							
Ability	Level	Gap	Impt	Knowledge	Level	Gap	Impt				
No Critical Gaps Recorded!				Equipment Maintenance	66	6	76	Building and Construction	65	14	70
				Negotiation	52	4	75	Public Safety and Security	48	9	69
LEVEL and IMPT (IMPORTANCE) refer to the Target Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters. GAP refers to level difference between Plumbers and Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters.											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Plumbers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance
Manual Dexterity	46	41	62
Near Vision	55	50	59
Oral Comprehension	59	50	56
Information Ordering	59	44	56
Extent Flexibility	85	57	56
Arm-Hand Steadiness	53	41	53
Trunk Strength	51	44	53
Problem Sensitivity	55	37	50
Multilimb Coordination	44	35	50
Static Strength	57	44	50
Skill Level Comparison - Abilities with importance scores over 69			
Description	Plumbers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance

Equipment Maintenance	60 	66 	76 
Negotiation	48 	52 	75 
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Plumbers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance
Building and Construction	51 	65 	70 
Public Safety and Security	39 	48 	69 

Experience & Education Comparison			
Related Work Experience Comparison		Required Education Level Comparison	
Description	Plumbers	Description	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
10+ years	3% 	0%	0%
8-10 years	0%	0%	0%
6-8 years	0%	11% 	0%
4-6 years	0%	13% 	0%
2-4 years	49% 	12% 	0%
1-2 years	31% 	3% 	0%
6-12 months	0%	14% 	0%
3-6 months	0%	24% 	0%
1-3 months	0%	4% 	0%
0-1 month	1% 	0%	0%
None	13% 	14% 	0%
Plumbers		Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	
Most Common Educational/Training Requirement:			
Long-term on-the-job training		Short-term on-the-job training	
Job Zone Comparison			
3 - Job Zone Three: Medium Preparation Needed		2 - Job Zone Two: Some Preparation Needed	
<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>		<p>Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.</p> <p>These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.</p> <p>Employees in these occupations need anywhere from a few months to one year of working with experienced employees.</p>	

Tasks	
Plumbers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
Core Tasks	Core Tasks

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Analyzing Data or Information - Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Specific Tasks

Occupation Specific Tasks:

- Assemble and secure pipes, tubes, fittings, and related equipment, according to specifications, by welding, brazing, cementing, soldering, and threading joints.
- Attach pipes to walls, structures and fixtures, such as radiators or tanks, using brackets, clamps, tools or welding equipment.
- Cut and bore holes in structures, such as bulkheads, decks, walls, and mains, prior to pipe installation, using hand and power tools.
- Cut, thread, and hammer pipe to specifications, using tools such as saws, cutting torches, and pipe threaders and benders.
- Dip nonferrous piping materials in a mixture of molten tin and lead to obtain a coating that prevents erosion or galvanic and electrolytic action.
- Inspect work sites for obstructions and to ensure that holes will not cause structural weakness.
- Inspect, examine, and test installed systems and pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods.
- Install automatic controls used to regulate pipe systems.
- Lay out full scale drawings of pipe systems, supports, and related equipment, following blueprints.
- Measure and mark pipes for cutting and threading.
- Modify, clean, and maintain pipe systems, units, fittings, and related machines and equipment, following specifications and using hand and power tools.
- Operate motorized pumps to remove water from flooded manholes, basements, or facility floors.

Generalized Work Activities:

- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

Specific Tasks

Occupation Specific Tasks:

- Assist pipe fitters in the layout, assembly, and installation of piping for air, ammonia, gas, and water systems.
- Assist plumbers by performing rough-ins, repairing and replacing fixtures, and locating and repairing leaking or broken pipes.
- Clean and renew steam traps.
- Clean shop, work area, and machines, using solvent and rags.
- Cut or drill holes in walls or floors to accommodate the passage of pipes.
- Cut pipe and lift up to fitters.
- Disassemble and remove damaged or worn pipe.
- Excavate and grade ditches, and lay and join pipe for water and sewer service.
- Fill pipes with sand or resin to prevent distortion, and hold pipes during bending and installation.
- Fit or assist in fitting valves, couplings, or assemblies to tanks, pumps, or systems, using hand tools.
- Immerse pipe in chemical solution to remove dirt, oil, and scale.
- Install gas burners to convert furnaces from wood, coal, or oil.
- Measure, cut, thread and assemble new pipe, placing the assembled pipe in hangers or other supports.
- Mount brackets and hangers on walls and ceilings to hold pipes, and set sleeves or inserts to provide support for pipes.
- Requisition tools and equipment, select type and size of pipe, and collect and transport materials and equipment to work site.

- Plan pipe system layout, installation, or repair according to specifications.
- Prepare cost estimates for clients.
- Remove and replace worn components.
- Select pipe sizes and types and related materials, such as supports, hangers, and hydraulic cylinders, according to specifications.
- Turn valves to shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- braze metal parts or components together
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- inspect project operations, or site to determine specification compliance
- install or replace meters, regulators, or related measuring or control devices
- lay out piping systems
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- operate power driven pumps
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- repair or replace gas, steam, sewer, or water

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- apply cleaning solvents
- assemble and install pipe sections, fittings, or plumbing fixtures
- assist mechanic, or extractive or construction trades craft worker
- bend tubing or conduit
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- clean rooms or work areas
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- fabricate, assemble, or disassemble manufactured products by hand
- measure and mark reference points or cutting lines on workpieces
- move materials or goods between work areas
- move or fit heavy objects
- repair or replace gas, steam, sewer, or water piping or fixtures
- requisition stock, materials, supplies or equipment
- use acetylene welding/cutting torch
- use basic plumbing techniques
- use hand or power tools
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use two-way radio or mobile phone

Technology - Examples

Tools - Examples

- Expanding-jaw pliers
- Adjustable wrenches
- Air compressors
- Augers
- Backhoes
- Bandsaws
- Bench chain vises
- Block and tackle equipment
- Butane torches

piping or fixtures

- repair or replace malfunctioning or worn mechanical components
- solder metal parts or components together
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use braze-welding equipment
- use building or land use regulations
- use combination welding procedures
- use hand or power tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use pressure gauges
- use soldering equipment
- weld together metal parts, components, or structures

Technology - Examples

Accounting software

- Bookkeeping software
- Intuit QuickBooks
- Intuit Quicken software
- Job costing software
- KRS Enterprises Service First!

Analytical or scientific software

- Elite Software DPIPE
- Elite Software FIRE
- Elite Software HSYM
- Elite Software Spipe
- Klear Estimator
- Quote Software QuoteExpress

Computer aided design CAD software

- Autodesk Building Systems
- Drawing and drafting software
- Elite Software Plumbing CAD
- Elite Software Sprinkler CAD
- Horizon Engineering Sigma Plumbing Calculator

Data base user interface and query software

- Database software

- Bolt cutters
- Boring machines
- Box end wrenches
- Calipers
- Caulking guns
- Wire tracers
- Compactors
- Deburring tools
- Line locators
- Utility pumps
- Diagonal cut pliers
- Test pumps
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dredges
- Drilling machines
- Dump trucks
- Explosimeters
- Flat files
- Flow gauges
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Graders
- Rotary hammers
- Ball peen hammers
- Allen wrenches
- Chain falls
- Hole cutting tools

- Insight Direct ServiceCEO

- PricePoint software

- Wintac Pro Software

Electronic mail software

- Email software

Facilities management software

- Maintenance management software

Project management software

- Estimating software

- FastEST FastPipe

- FastEST software

- Vision InfoSoft Plumbing Bid Manager

Spreadsheet software

- Microsoft Excel

- Spreadsheet software

Word processing software

- Atlas Construction Business Forms

- Contractor City Contractor Forms Pack

- Microsoft Word

- Wilhelm Publishing Threshold

- Word processing software

Tools - Examples

- Water pump pliers

- Adjustable slip lock nut wrenches

- Air compressors

- Augers

- Backhoes

- Bandsaws

- Bench chain vises

- Butane torches

- Bolt cutters

- Ratcheting box wrenches

- Calipers

- Caulking guns

- Gasket cutters

- Cranes

- Hydraulic valve turners

- Tractor pipe carrier attachments

- Manual screw jacks

- Ladders

- Pipe lasers

- Lathes

- Trutest smoke detectors

- Transits

- Automatic levels

- Light pickup trucks

- Ultrasonic leak detectors

- Channel lock pliers

- Manlifts

- Magnetic locators

- Metal inert gas MIG welders

- Centering head tools

- Moisture meters

- Mud pumps

- Universal nut wrenches

- Hollow core socket wrenches

- Ohmmeters

- Oilers

- Mandrels

- Manual benders

- Pipe extractors

- Pipelayers

- Mini tubing cutters

- Aligning clamps

- End pipe wrenches

- Pneumatic drills

- Deburring tools
- Desktop computers
- Inductive clamps
- Utility pumps
- Diagonal cut pliers
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dump trucks
- Explosimeters
- Seat dressers
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Rotary hammers
- Ball peen hammers
- Heat guns
- Allen wrenches
- Hole cutting tools
- Gasket cutters
- Laser alignment tools
- Laser printers
- Lathes
- Trutest smoke detectors
- Levels
- Light pickup trucks
- Ultrasonic leak detectors
- Channel lock pliers
- Magnetic locators
- Moisture meters
- Air operated grinders
- Air hammers
- Sandblasters
- Cordless drills
- Bevel grinding machines
- Circular saws
- Cordless screwdrivers
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Ratchet wrenches
- Reamers
- Safety harnesses
- Hacksaws
- Scaffolding
- Impact screwdrivers
- Sewage pumps
- Narrow mouth shovels
- Belting slings
- Slip pliers
- Soldering equipment
- Basin wrenches
- Die heads for threading machines
- Staple guns
- Rubber strap wrenches
- Sump pumps
- Swaging tools
- Hand tachometers
- Powered tampers
- Measuring tapes
- Non-contact infrared thermometers
- Die heads for plastic pipe/conduit

- Notebook computers
- Universal nut wrenches
- Hollow core socket wrenches
- Oilers
- Personal computers
- Personal digital assistants PDA
- Tube bending springs
- Pipe extractors
- Copper cutting machines
- Pipe welding vises
- End pipe wrenches
- Plumb bobs
- Impact hammers
- Direct tap machines
- Reciprocating saws
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Manual ratchet threader sets
- Inner/outer reamers
- Hacksaws
- Flat blade screwdrivers
- Sewage pumps
- Shears
- Slip pliers
- Soldering equipment
- Basin wrenches
- Threading machine die heads
- Staple guns
- Rubber strap wrenches
- Sump pumps

- Pipe threaders
- Tin snips
- Chain tongs
- Four-in-one keys
- Excavators
- Track loaders
- Cable plows
- Crimping tools
- Tungsten inert gas TIG welding equipment
- Two way radios
- Vacuum gauges
- Vibration analyzers
- Amp meters
- Ditch pumps
- Water sampling devices
- Alternating current/direct current AC/DC welders
- Welding hoods
- Bulldozers
- Wheel loaders
- Winches
- Air wire brushes
- Cable saws
- Drill presses

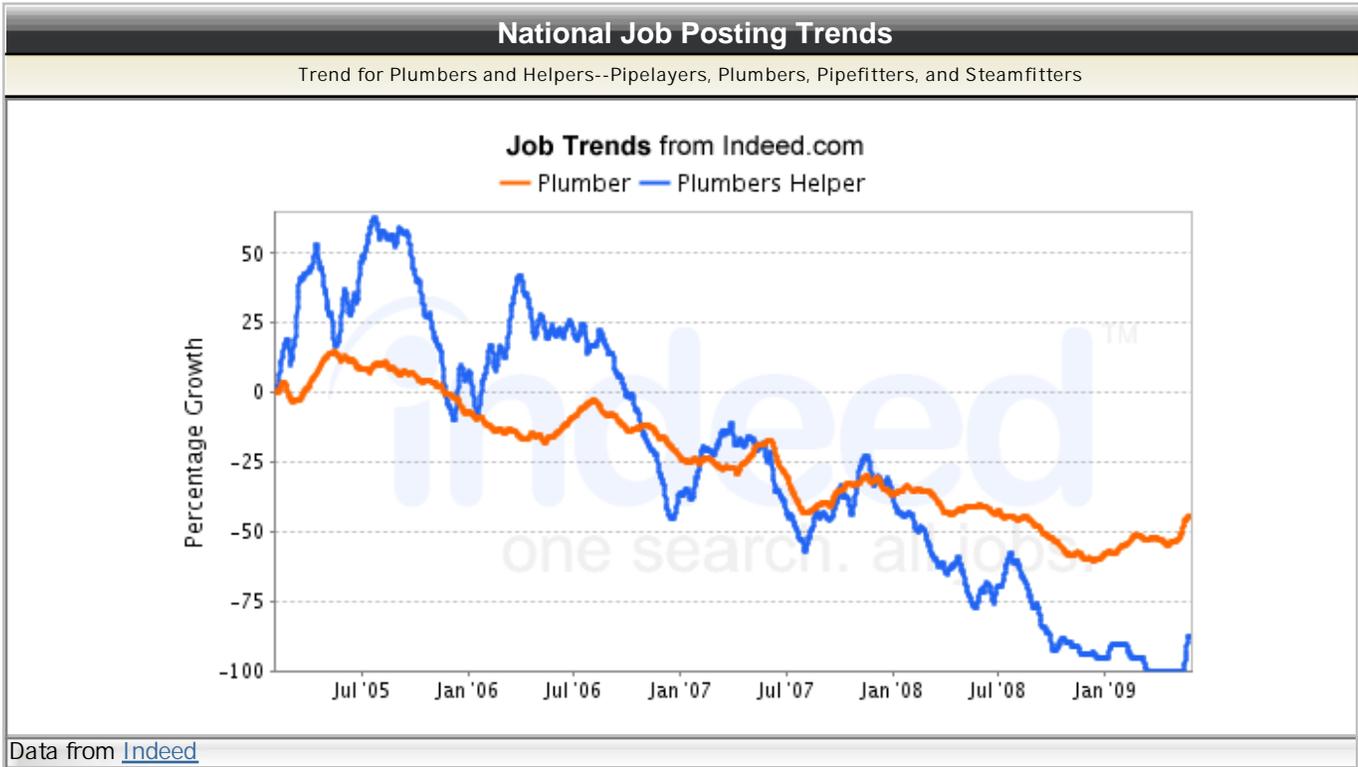
- Swaging tools
- Tablet computers
- Measuring tapes
- Pipe taps
- Non-contact infrared thermometers
- Plastic pipe/conduit die heads
- Power pipe threading machines
- Tin snips
- Chain tongs
- Four-in-one keys
- Trenchers
- Crimping tools
- Two way radios
- Utility knives
- Vacuum gauges
- Vibration analyzers
- Arc welders
- Welding hoods
- Cable saws

Labor Market Comparison

Maine Department of Labor.

Description	Plumbers	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Difference
Median Wage	\$ 42,430	\$ 25,760	\$(16,670)
10th Percentile Wage	\$ 28,580	\$ 18,110	\$(10,470)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 48,200	\$ 31,390	\$(16,810)
90th Percentile Wage	\$ 52,630	\$ 42,050	\$(10,580)
Mean Wage	\$ 41,260	\$ 27,550	\$(13,710)
Total Employment - 2468	2,110	320	-1,790
Employment Base - 2006	2,905	333	-2,572

Projected Employment - 2477	2,973	362	-2,611
Projected Job Growth - 2006-2477	2.3 %	8.7 %	6.4 %
Projected Annual Openings - 2006-2477	67	11	-56
Special	★		
Special Occupations:			



Programs

Related Programs

Plumbing Technology/Plumber

Plumbing Technology/Plumber. A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.

Institution	Address	City	URL
Wasington County Community College	One College Drive	Calais	www.wccc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu
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Maine Statewide Promotion Opportunities for Plumbers									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2152.02	Plumbers	100	3	2,110	\$42,430.00	\$0.00	2%	67	★
47-2111.00	Electricians	87	3	2,910	\$43,650.00	\$1,220.00	1%	89	★
49-9051.00	Electrical Power-Line Installers and Repairers	82	3	280	\$47,750.00	\$5,320.00	9%	12	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	82	3	170	\$47,860.00	\$5,430.00	-9%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	79	2	180	\$43,870.00	\$1,440.00	-24%	3	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	79	3	440	\$49,450.00	\$7,020.00	-19%	15	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$4,200.00	3%	77	★
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	79	5	20	\$60,790.00	\$18,360.00	5%	1	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	79	4	2,490	\$46,810.00	\$4,380.00	0%	60	★
49-9052.00	Telecommunications Line Installers and Repairers	79	3	720	\$56,120.00	\$13,690.00	0%	19	
47-2152.01	Pipe Fitters and Steamfitters	78	3	2,110	\$42,430.00	\$0.00	2%	67	★
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	78	3	60	\$42,890.00	\$460.00	5%	2	
51-4111.00	Tool and Die Makers	77	3	160	\$51,670.00	\$9,240.00	-11%	2	
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$29,890.00	4%	35	



49-9062.00	Medical Equipment Repairers	76	3	80	\$46,700.00	\$4,270.00	30%	6	
Special Occupations:									

Top Industries for Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	75.60%	63,986	72,257	12.93%
Nonresidential building construction	236200	3.50%	2,962	3,318	12.05%
Self-employed workers, primary job	000601	2.83%	2,391	2,548	6.54%
Other specialty trade contractors	238900	1.56%	1,323	1,463	10.52%
Electrical contractors	238210	1.55%	1,312	1,376	4.86%
Local government, excluding education and hospitals	939300	1.06%	895	1,006	12.34%
Residential building construction	236100	0.75%	638	718	12.61%
Employment services	561300	0.67%	568	719	26.56%
Highway, street, and bridge construction	237300	0.59%	495	533	7.66%
Remediation and other waste management services	562900	0.39%	330	436	32.25%
Power and communication line and related structures construction	237130	0.38%	325	342	5.19%
Other heavy and civil engineering construction	237900	0.36%	301	323	7.41%
Land subdivision	237200	0.30%	257	256	-0.15%
Unpaid family workers, primary job	000701	0.24%	204	161	-20.89%
Natural gas distribution	221200	0.21%	177	145	-18.16%

Top Industries for Plumbers

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	60.70%	304,837	344,241	12.93%
Self-employed workers, primary job	000601	11.92%	59,847	63,759	6.54%
Nonresidential building construction	236200	3.01%	15,109	16,929	12.05%
Local government, excluding education and hospitals	939300	2.99%	15,015	16,867	12.34%
Electrical contractors	238210	1.62%	8,138	8,533	4.86%
Natural gas distribution	221200	1.06%	5,343	4,373	-18.16%
Ship and boat building	336600	1.05%	5,290	5,921	11.93%
Residential building construction	236100	1.03%	5,149	5,798	12.61%
Colleges, universities, and professional schools, public and private	611300	0.94%	4,704	5,262	11.87%

Other building equipment contractors	238290	0.80%	3,994	4,329	8.38%
Federal government, excluding postal service	919999	0.74%	3,720	3,516	-5.47%
Employment services	561300	0.69%	3,452	4,368	26.56%
Other specialty trade contractors	238900	0.67%	3,342	3,694	10.52%
Motor vehicle parts manufacturing	336300	0.63%	3,141	2,501	-20.39%
Other heavy and civil engineering construction	237900	0.60%	2,989	3,210	7.41%



TORQ Analysis of Plumbers to Boilermakers

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Plumbers	47-2152.02	Abilities:	Importance Level: 50	Weight: 1
To Title:	Boilermakers	47-2011.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS							
Grand TORQ:					85		
Ability TORQ		Skills TORQ		Knowledge TORQ			
Level	86	Level	85	Level	83		
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add		
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt
Perceptual Speed	46	4	50	Mathematics	72	15	79
Depth Perception	41	4	50	Reading Comprehension	71	16	74
Multilimb Coordination	46	2	62	Operation Monitoring	64	10	76
				Quality Control Analysis	51	3	71
Knowledge		Level	Gap	Impt			
Mechanical	74	13	80				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Boilermakers. GAP refers to level difference between Plumbers and Boilermakers.</p>							

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Plumbers	Boilermakers	Importance
Problem Sensitivity	55	48	75
Arm-Hand Steadiness	53	48	72
Manual Dexterity	46	44	65
Control Precision	51	51	65
Near Vision	55	51	65
Oral Comprehension	59	46	62
Deductive Reasoning	64	46	62
Inductive Reasoning	55	44	62
Finger Dexterity	51	46	62
Multilimb Coordination	44	46	62
Information Ordering	59	42	59
Visualization	60	48	59
Static Strength	57	41	56
Written Comprehension	60	44	53

Oral Expression	59	46	53
Written Expression	51	39	53
Trunk Strength	51	42	53
Flexibility of Closure	50	39	50
Perceptual Speed	42	46	50
Depth Perception	37	41	50
Speech Recognition	48	41	50
Speech Clarity	42	37	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Plumbers	Boilermakers	Importance
Mathematics	57	72	79
Operation Monitoring	54	64	76
Reading Comprehension	55	71	74
Quality Control Analysis	48	51	71

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Plumbers	Boilermakers	Importance
Mechanical	61	74	80

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Plumbers	Boilermakers	Description	Plumbers	Boilermakers
10+ years	3%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	0%	21%	Master's Degree	0%	0%
2-4 years	49%	20%	Post-Bachelor Cert	0%	0%
1-2 years	31%	19%	Bachelors	0%	0%
6-12 months	0%	0%	AA or Equiv	0%	6%
3-6 months	0%	0%	Some College	0%	0%
1-3 months	0%	6%	Post-Secondary Certificate	34%	27%
0-1 month	1%	0%	High School Diploma or GED	60%	61%
None	13%	31%	No HSD or GED	5%	4%

Plumbers

Boilermakers

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

4 - Job Zone Four: Considerable Preparation Needed

A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

Most of these occupations require a four - year bachelor's degree, but some do not.



Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Tasks

Plumbers

Core Tasks

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Analyzing Data or Information - Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.

Specific Tasks

Occupation Specific Tasks:

- Assemble and secure pipes, tubes, fittings, and related equipment, according to specifications, by welding, brazing, cementing, soldering, and threading joints.
- Attach pipes to walls, structures and fixtures, such as radiators or tanks, using brackets, clamps, tools or welding equipment.
- Cut and bore holes in structures, such as bulkheads, decks, walls, and mains, prior to pipe installation, using hand and power tools.
- Cut, thread, and hammer pipe to specifications, using tools such as saws, cutting torches, and pipe threaders and benders.
- Dip nonferrous piping materials in a mixture of molten tin and lead to obtain a coating that prevents erosion or galvanic and electrolytic action.
- Inspect work sites for obstructions and to ensure that holes will not cause structural weakness.
- Inspect, examine, and test installed systems and pipe lines, using pressure gauge, hydrostatic testing, observation, or other methods.
- Install automatic controls used to regulate pipe systems.
- Lay out full scale drawings of pipe systems, supports, and related equipment, following

Boilermakers

Core Tasks

Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

Specific Tasks

Occupation Specific Tasks:

- Assemble large vessels in an on-site fabrication shop prior to installation, in order to ensure proper fit.
- Attach rigging, and signal crane or hoist operators to lift heavy frame and plate sections and other parts into place.
- Bell, bead with power hammers, or weld pressure vessel tube ends, in order to ensure leakproof joints.
- Bolt or arc-weld pressure vessel structures and parts together, using wrenches and welding equipment.
- Clean pressure vessel equipment, using scrapers, wire brushes, and cleaning solvents.
- Examine boilers, pressure vessels, tanks, and vats to locate defects such as leaks, weak spots, and defective sections so that they can be repaired.
- Inspect assembled vessels and individual components, such as tubes, fittings, valves, controls, and auxiliary mechanisms, to locate any defects.
- Install manholes, handholes, taps, tubes, valves, gauges, and feedwater connections in drums of water tube boilers, using hand tools.
- Install refractory bricks and other heat-resistant materials in fireboxes of

blueprints.

- Measure and mark pipes for cutting and threading.
- Modify, clean, and maintain pipe systems, units, fittings, and related machines and equipment, following specifications and using hand and power tools.
- Operate motorized pumps to remove water from flooded manholes, basements, or facility floors.
- Plan pipe system layout, installation, or repair according to specifications.
- Prepare cost estimates for clients.
- Remove and replace worn components.
- Select pipe sizes and types and related materials, such as supports, hangers, and hydraulic cylinders, according to specifications.
- Turn valves to shut off steam, water, or other gases or liquids from pipe sections, using valve keys or wrenches.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- braze metal parts or components together
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- inspect project operations, or site to determine specification compliance
- install or replace meters, regulators, or related measuring or control devices
- lay out piping systems
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- operate power driven pumps
- perform safety inspections in construction or resource extraction setting

pressure vessels.

- Lay out plate, sheet steel, or other heavy metal, and locate and mark bending and cutting lines, using protractors, compasses, and drawing instruments or templates.
- Locate and mark reference points for columns or plates on boiler foundations, following blueprints and using straightedges, squares, transits, and measuring instruments.
- Position, align, and secure structural parts and related assemblies to boiler frames, tanks, or vats of pressure vessels, following blueprints.
- Repair or replace defective pressure vessel parts, such as safety valves and regulators, using torches, jacks, caulking hammers, power saws, threading dies, welding equipment, and metalworking machinery.
- Shape and fabricate parts, such as stacks, uptakes, and chutes, in order to adapt pressure vessels, heat exchangers, and piping to premises, using heavy-metalworking machines such as brakes, rolls, and drill presses.
- Shape seams, joints, and irregular edges of pressure vessel sections and structural parts in order to attain specified fit of parts, using cutting torches, hammers, files, and metalworking machines.
- Straighten or reshape bent pressure vessel plates and structure parts, using hammers, jacks, and torches.
- Study blueprints to determine locations, relationships, and dimensions of parts.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- align or adjust clearances of mechanical components or parts
- apply cleaning solvents
- assemble and install pipe sections, fittings, or plumbing fixtures
- build or repair structures in construction, repair, or manufacturing setting
- burn (cut), trim, or scarf metal objects
- cut metal or plastic
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- determine installation, service, or repair needed
- determine project methods and procedures
- fabricate sheet metal parts or items
- fabricate, assemble, or disassemble manufactured products by hand
- identify base metals for welding
- identify properties of metals for repair or fabrication activities
- inspect machinery or equipment to determine adjustments or repairs needed
- install generating plant equipment

- plan or organize work
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- solder metal parts or components together
- understand construction specifications
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use braze-welding equipment
- use building or land use regulations
- use combination welding procedures
- use hand or power tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use pressure gauges
- use soldering equipment
- weld together metal parts, components, or structures

- install or replace meters, regulators, or related measuring or control devices
- lay or install brick, block, stone, tile, or related masonry material
- lay out machining, welding or precision assembly projects
- maintain or repair industrial or related equipment/machinery
- maintain welding machines or equipment
- make independent judgment in assembly procedures
- measure and mark reference points or cutting lines on workpieces
- move or fit heavy objects
- overhaul power-generating equipment or machinery
- perform safety inspections in industrial, manufacturing or repair setting
- position, align, or level machines, equipment, or structures
- pressure test piping system or equipment for leaks
- read blueprints
- read specifications
- read technical drawings
- recognize characteristics of alloys
- recognize characteristics of metals
- repair or adjust measuring or control devices
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- signal directions or warnings to coworkers
- stretch, bend, straighten, shape, pound, or press metal or plastic
- test mechanical products or equipment
- understand technical operating, service or repair manuals
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic plumbing techniques
- use combination welding procedures
- use hand or power tools
- use pipe fitting equipment
- use pneumatic tools
- use precision measuring devices in mechanical repair work
- use precision measuring tools or equipment
- use pressure gauges
- use turnbuckle in structural repair or assembly work
- verify levelness or verticality, using level or plumb bob
- weld together metal parts, components, or structures

Technology - Examples

Accounting software

- Bookkeeping software
- Intuit QuickBooks
- Intuit Quicken software
- Job costing software
- KRS Enterprises Service First!

Analytical or scientific software

- Elite Software DPIPE
- Elite Software FIRE
- Elite Software HSYM
- Elite Software Spipe
- Klear Estimator

Quote Software QuoteExpress

Computer aided design CAD software

- Autodesk Building Systems
- Drawing and drafting software

Technology - Examples

- Elite Software Plumbing CAD
- Elite Software Sprinkler CAD
- Horizon Engineering Sigma Plumbing Calculator

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- PricePoint software
- Wintac Pro Software

Electronic mail software

- Email software

Facilities management software

- Maintenance management software

Project management software

- Estimating software
- FastEST FastPipe
- FastEST software
- Vision InfoSoft Plumbing Bid Manager

Spreadsheet software

- Microsoft Excel
- Spreadsheet software

Word processing software

- Atlas Construction Business Forms
- Contractor City Contractor Forms Pack
- Microsoft Word
- Wilhelm Publishing Threshold
- Word processing software

Tools - Examples

- Water pump pliers
- Adjustable slip lock nut wrenches
- Air compressors
- Augers
- Backhoes
- Bandsaws
- Bench chain vises
- Butane torches

Computer aided design CAD software

- Autodesk AutoCAD software
- Computer aided design CAD software

Computer based training software

- Health and safety training software

Office suite software

- Microsoft Office

Spreadsheet software

- Microsoft Excel

Word processing software

- Microsoft Word

Tools - Examples

- Adjustable crescent wrenches
- Air compressors
- Air manifolds
- Atmospheric testing equipment
- Beam clamps
- Bench vises
- Sliding t-bevels
- Block and tackle equipment
- Acetylene torches
- Bolt cutters
- Box end wrenches
- C clamps
- Calipers
- Caulking guns
- Chalk lines
- Metal-cutting chisels
- Combination wrenches
- Compasses
- Desktop computers
- Ear plugs
- Electrode holders
- End cutting pliers



- Bolt cutters
- Ratcheting box wrenches
- Calipers
- Caulking guns
- Deburring tools
- Desktop computers
- Inductive clamps
- Utility pumps
- Diagonal cut pliers
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dump trucks
- Explosimeters
- Seat dressers
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Rotary hammers
- Ball peen hammers
- Heat guns
- Allen wrenches
- Hole cutting tools
- Gasket cutters
- Laser alignment tools
- Laser printers
- Lathes
- Trutest smoke detectors
- Levels
- Light pickup trucks

- Ventilation fans
- Files
- Fire extinguishers
- Fire retardant coveralls
- Forklifts
- Bull pins
- Air carbon arc cutting equipment
- Drill point gauges
- Beam trolleys
- Safety goggles
- Ball peen hammers
- Bar clamps
- Catalyst dispensers
- Hard hats
- Allen wrenches
- Chain falls
- Boom trucks
- Hydraulic jacks
- Heat lamps
- Ladders
- Digital lasers
- Bench lathes
- Transits
- Digital levels
- Shackles
- Friction lighters
- Plate clamps
- Channel lock pliers
- Longnose pliers
- Inspection mirrors
- Dust masks
- Metal inert gas MIG welders
- Contour markers



• Light pickup trucks

- Ultrasonic leak detectors
- Channel lock pliers
- Magnetic locators
- Moisture meters
- Notebook computers
- Universal nut wrenches
- Hollow core socket wrenches
- Oilers
- Personal computers
- Personal digital assistants PDA
- Tube bending springs
- Pipe extractors
- Copper cutting machines
- Pipe welding vises
- End pipe wrenches
- Plumb bobs
- Impact hammers
- Direct tap machines
- Reciprocating saws
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Manual ratchet threader sets
- Inner/outer reamers
- Hacksaws
- Flat blade screwdrivers
- Sewage pumps
- Shears
- Slip pliers
- Soldering equipment
- Basin wrenches

- Micrometers
- Milling machines
- Atmospheric monitoring devices
- Nibblers
- Open end wrenches
- Personal computers
- Pipe and tubing cutters
- Pipe vises
- Adjustable pipe wrenches
- Plasma arc welding equipment
- Staging equipment
- Plumb bobs
- Pneumatic drills
- Air grinders
- Air hammers
- Pneumatic impact wrenches
- Air scalers
- Buffing tools
- Chipping hammers
- Power grinders
- Circular saws
- Hydrostatic testers
- Leather protective clothing
- Protective gloves
- Protractors
- Pry bars
- Hydraulic stub pullers
- Blacksmiths' punches
- Putty knives
- Tube wall reducing tools
- Resin spray guns
- Self-contained breathing apparatus

Full face respirators

- Threading machine die heads

- Staple guns

- Rubber strap wrenches

- Sump pumps

- Swaging tools

- Tablet computers

- Measuring tapes

- Pipe taps

- Non-contact infrared thermometers

- Plastic pipe/conduit die heads

- Power pipe threading machines

- Tin snips

- Chain tongs

- Four-in-one keys

- Trenchers

- Crimping tools

- Two way radios

- Utility knives

- Vacuum gauges

- Vibration analyzers

- Arc welders

- Welding hoods

- Cable saws

- Full-face respirators

- Clear lenses

- Full body harnesses

- Hacksaws

- Scaffolding

- Scale rules

- Scissor lifts

- Screwdrivers

- Scribes

- Tube pullers

- Shears

- Carbon dioxide CO2 meters

- Slings

- Slip joint pliers

- Socket wrench sets

- Chain wrenches

- Combination squares

- Straightedges

- Strap wrenches

- Measuring tapes

- Tap and die sets

- Telescoping lifts

- Temperature sticks

- Metal-cutting snips

- Torque wrenches

- Flaring tools

- Tungsten inert gas TIG welding equipment

- Two way radios

- Utility knives

- Wedges

- Electric welding equipment

- Stick electrodes

- Welding distribution panels

- Welding shields
- Welding tip cleaning files
- Welding tips
- Computer-controlled welding equipment
- Adaptors
- Wire brushes
- Hydraulic cranes
- Brakes
- X ray inspection equipment

Labor Market Comparison

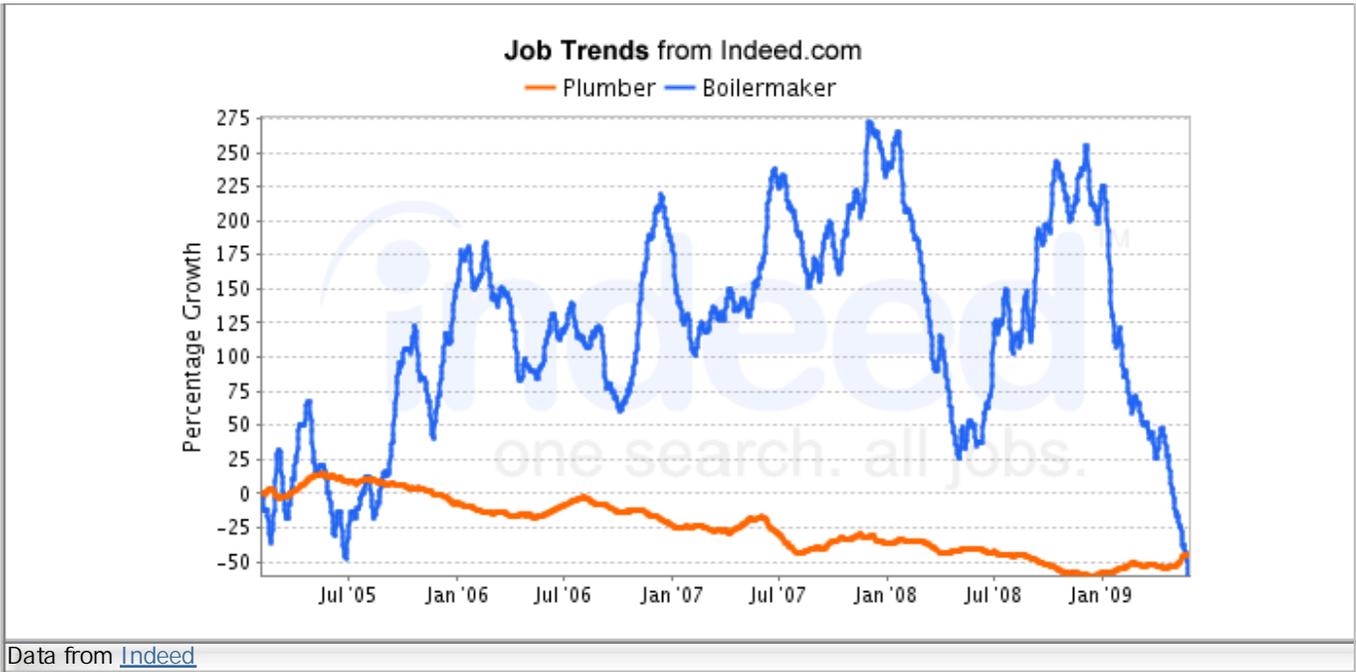
Maine Department of Labor.

Description	Plumbers	Boilermakers	Difference
Median Wage	\$ 42,430	\$ 39,260	\$(3,170)
10th Percentile Wage	\$ 28,580	\$ 28,300	\$(280)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 48,200	\$ 50,050	\$ 1,850
90th Percentile Wage	\$ 52,630	\$ 61,790	\$ 9,160
Mean Wage	\$ 41,260	\$ 42,410	\$ 1,150
Total Employment - 2468	2,110	60	-2,050
Employment Base - 2006	2,905	58	-2,847
Projected Employment - 2477	2,973	65	-2,908
Projected Job Growth - 2006-2477	2.3 %	12.1 %	9.7 %
Projected Annual Openings - 2006-2477	67	3	-64
Special	★		

Special Occupations:

National Job Posting Trends

Trend for Plumbers and Boilermakers



Programs			
Related Programs			
Boilermaking/Boilermaker			
Boilermaking/Boilermaker. A program that prepares individuals to apply technical knowledge and skills to fabricate and repair steam boiler components. Includes instruction in principles of steam power, material selection, welding, riveting, sealing materials, pressure testing, pipefitting, and applicable codes and standards.			
No information on schools for the program			
Machinist/Machine Technologist			
Machine Tool Technology/Machinist. A program that prepares individuals to apply technical knowledge and skills to plan, manufacture, assemble, test, and repair parts, mechanisms, machines, and structures in which materials are cast, formed, shaped, molded, heat treated, cut, twisted, pressed, fused, stamped or worked.			
Institution	Address	City	URL
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
Central Maine Community College	1250 Turner St	Auburn	www.cmcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu
Sheet Metal Worker			
Sheet Metal Technology/Sheetworking. A program that prepares individuals to apply technical knowledge and skills to form, shape, bend and fold extruded metals, including the creation of new products, using hand tools and machines such as cornice brakes, forming rolls, and squaring shears.			

Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu

Maine Statewide Promotion Opportunities for Plumbers									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2152.02	Plumbers	100	3	2,110	\$42,430.00	\$0.00	2%	67	★
47-2111.00	Electricians	87	3	2,910	\$43,650.00	\$1,220.00	1%	89	★
49-9051.00	Electrical Power-Line Installers and Repairers	82	3	280	\$47,750.00	\$5,320.00	9%	12	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	82	3	170	\$47,860.00	\$5,430.00	-9%	3	
51-4192.00	Lay-Out Workers, Metal and Plastic	79	2	180	\$43,870.00	\$1,440.00	-24%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	79	4	2,490	\$46,810.00	\$4,380.00	0%	60	★
49-9052.00	Telecommunications Line Installers and Repairers	79	3	720	\$56,120.00	\$13,690.00	0%	19	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$4,200.00	3%	77	★
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	79	5	20	\$60,790.00	\$18,360.00	5%	1	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	79	3	440	\$49,450.00	\$7,020.00	-19%	15	
47-2152.01	Pipe Fitters and Steamfitters	78	3	2,110	\$42,430.00	\$0.00	2%	67	★
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	78	3	60	\$42,890.00	\$460.00	5%	2	
51-4111.00	Tool and Die Makers	77	3	160	\$51,670.00	\$9,240.00	-11%	2	

49-3011.00	Aircraft Mechanics and Service Technicians	76	3	210	\$44,280.00	\$1,850.00	-2%	2	
49-9062.00	Medical Equipment Repairers	76	3	80	\$46,700.00	\$4,270.00	30%	6	★

Special Occupations:

Top Industries for Boilermakers					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Nonresidential building construction	236200	19.51%	3,429	4,194	22.31%
Plumbing, heating, and air-conditioning contractors	238220	17.55%	3,083	3,421	10.94%
Boiler, tank, and shipping container manufacturing	332400	6.52%	1,145	1,127	-1.63%
Other building equipment contractors	238290	4.60%	808	956	18.31%
Electrical contractors	238210	4.39%	771	882	14.46%
Other heavy and civil engineering construction	237900	4.29%	753	883	17.25%
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	811300	3.92%	689	796	15.52%
Petroleum and coal products manufacturing	324100	1.90%	334	275	-17.59%
Ship and boat building	336600	1.66%	292	356	22.18%
Residential building construction	236100	1.30%	228	280	22.93%
Colleges, universities, and professional schools, public and private	611300	1.17%	206	251	22.12%
Rail transportation	482100	0.95%	168	157	-6.06%
Local government, excluding education and hospitals	939300	0.94%	165	203	22.62%
Other fabricated metal product manufacturing	332900	0.83%	147	142	-3.28%
Federal government, excluding postal service	919999	0.80%	141	146	3.20%

Top Industries for Plumbers					
Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	60.70%	304,837	344,241	12.93%
Self-employed workers, primary job	000601	11.92%	59,847	63,759	6.54%
Nonresidential building construction	236200	3.01%	15,109	16,929	12.05%
Local government, excluding education and hospitals	939300	2.99%	15,015	16,867	12.34%
Electrical contractors	238210	1.62%	8,138	8,533	4.86%
Natural gas distribution	221200	1.06%	5,343	4,373	-18.16%
Ship and boat building	336600	1.05%	5,290	5,921	11.93%

Residential building construction	236100	1.03%	5,149	5,798	12.61%
Colleges, universities, and professional schools, public and private	611300	0.94%	4,704	5,262	11.87%
Other building equipment contractors	238290	0.80%	3,994	4,329	8.38%
Federal government, excluding postal service	919999	0.74%	3,720	3,516	-5.47%
Employment services	561300	0.69%	3,452	4,368	26.56%
Other specialty trade contractors	238900	0.67%	3,342	3,694	10.52%
Motor vehicle parts manufacturing	336300	0.63%	3,141	2,501	-20.39%
Other heavy and civil engineering construction	237900	0.60%	2,989	3,210	7.41%

Industry & Occupational Data Sources

TORQ Results: The TORQ Scores is based upon an proprietary algorithm applied against Knowledge, Skills and Ability levels and importance derived from O*NET 12.

ASK Analysis, Experience & Education Levels and Tasks: O*Net 12

Labor Market Comparisons Occupational Projections data from Maine Department of Labor

National Posting Trends Indeed.com

Labor Pool & Promotions Opportunities: Occupational Projections data from Maine Department of Labor

Top Industries: Occupational Employment Statistics program (U.S. Bureau of Labor Statistics)