

“Our industry offers so many amazing opportunities to all kinds of people; skilled, semi-skilled, or entry-level. Highly educated or a high school dropout. We work in a recession-proof industry with great benefits! I think we need to do a better job promoting it and retaining workers.” — Survey respondent



WASTEWATER SECTOR SALARY SURVEY

REPORT TO THE INDUSTRY



MAJOR FINDINGS

- ◆ Average wages for operator positions are generally equivalent to comparable occupations requiring only a high-school degree, however wage ranges for those comparable occupations are often higher.
- ◆ Wages and/or salaries for other sector occupations, such as physical and electrical maintenance, vary in comparison with statewide occupational data.
- ◆ Wastewater chemists appear significantly underpaid when compared to statewide data.
- ◆ Potential for financial advancement is generally average to low throughout all surveyed occupations, more so for municipally run facilities.
- ◆ Sector benefits are generally high among the surveyed occupations, more so for municipal and quasi-state-run facilities.
- ◆ Respondents identified that holiday and weekend work requirements, shift assignments, working conditions, duties, and licensure requirements, may be deterring entry-level candidate interest and retention.
- ◆ Respondents identified job security, familiarity with one's present position, and/or the mission of clean water as the most important considerations for sector retention among all surveyed occupations, rather than wages/salaries, benefits, or opportunities to learn.



WASTEWATER SECTOR SALARY SURVEY

INTRODUCTION: THE FORMAT & DATA

Information provided to RIDEM has indicated that wastewater treatment facilities often struggle to recruit and/or retain qualified employees, which has the potential to impact the proper operations and maintenance of those critical facilities. With cooperation from the RI Department of Labor and Training (RIDLT) and the wastewater sector itself, RIDEM initiated a survey of sector wages, salaries, and benefits in response to these concerns. What follows is a summary of the data and the overall findings based on what the data tells us.

It must be noted that *every wastewater treatment facility provided data* about their staff's wages or annual salaries, as well as benefit data and information on paid time off. This impressive 100% response rate makes this summary report a telling snapshot of the entire industry in this post-COVID reality—a time in which many industries and professions struggle to attract and retain qualified and dedicated workers.

For the purposes of this study, seven federal "Occupational Employment and Wage Statistics" (OEWS) occupation categories were used. One of these occupations, the Water and Wastewater Treatment Plant and System Operators occupation, is exclusive to the drinking water and wastewater industries. The other six are also found within many other sectors and industries. These categories are:

- ◆ 19-2031 Chemists: This occupation conducts qualitative and quantitative chemical analyses or experiments in laboratories for quality or process control or to develop new products or knowledge.
- ◆ 47-2111 Electricians: This occupation installs, maintains, and repairs electrical wiring, equipment, and fixtures. They ensure that work is in accordance with relevant codes and may install or service streetlights, intercom systems, or electrical control systems.
- ◆ 49-2094 Electrical and Electronics Repairers, Commercial and Industrial Equipment: This occupation repairs, tests, adjusts, or installs electronic equipment, such as industrial controls, transmitters, and antennas.
- ◆ 49-9012 Control and Valve Installers and Repairers, Except Mechanical Door: This occupation installs, repairs, and maintains mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.
- ◆ 49-9041 Industrial Machinery Mechanics: This occupation repairs, installs, adjusts, or maintains industrial production and processing machinery or refinery and pipeline distribution systems. May also install, dismantle, or move machinery and heavy equipment according to plans.
- ◆ 51-8031 Water and Wastewater Treatment Plant and System Operators: This occupation operates or controls an entire process or system of machines, often through the use of control boards, to transfer or treat water or wastewater. This occupation includes operations staff that may also perform duties found in the other six occupations.
- ◆ 53-7072 Pump Operators: This occupation is for employees that tend, control, or operate power-driven, stationary, or portable pumps and manifold systems to transfer gases, oil, other liquids, slurries, or powdered materials to and from various vessels and processes.

Continued →



WASTEWATER SECTOR SALARY SURVEY

INTRODUCTION: THE FORMAT & DATA

What follows are summaries of wages for each position and, when possible, comparisons with data for those occupations in Rhode Island and in adjacent Connecticut and Massachusetts, which was provided by RIDLT’s Labor Market Information Division from their May 2021 OEWS Survey.

For Water and Wastewater Treatment Plant and System Operators, Industrial Machinery Mechanics, and Pump Operators, the report provides comparison data to a compilation of occupations provided by RIDLT that could also attract individuals with the minimum education and skillsets needed in the wastewater sector. (See page 8 for that listing.) These three occupations were compared to such external sector data because:

- ◆ The wastewater operator occupation subsists only in the drinking water and wastewater sectors. In other words, there are no other industries to compare wage/salary data for this occupation. Thus, some other Rhode Island-based comparison was needed, and;
- ◆ Maintenance and collection system positions in the wastewater sector (captured via the Industrial Machinery Mechanics and Pump Operators occupations) are closely aligned with wastewater operations. Like Water and Wastewater Treatment Plant and System Operators, these two occupations are in competition with industries that may attract similarly education and technically inclined candidates.

Note that because of the number of Water and Wastewater Operators and Industrial Machinery Mechanics—which reflects the general operations and maintenance functions of all facilities, small and large—meaningful and anonymous graphical presentations were possible.

Data on benefits and paid time off follow the wages data. These are provided without comparison to other sectors, as such data would be difficult to extrapolate and ultimately unhelpful for purposes of comparison given the complexity and variability of benefit packages offered among different organizations. Thus, this report instead provides a summary of the data from the Rhode Island wastewater sector to offer an *internal comparison* of the dollar values of employee and employer contributions for both overall benefits and exclusively for health care.

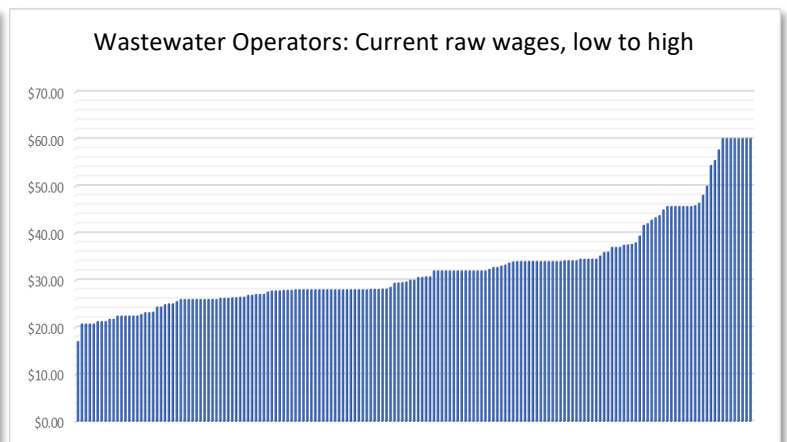
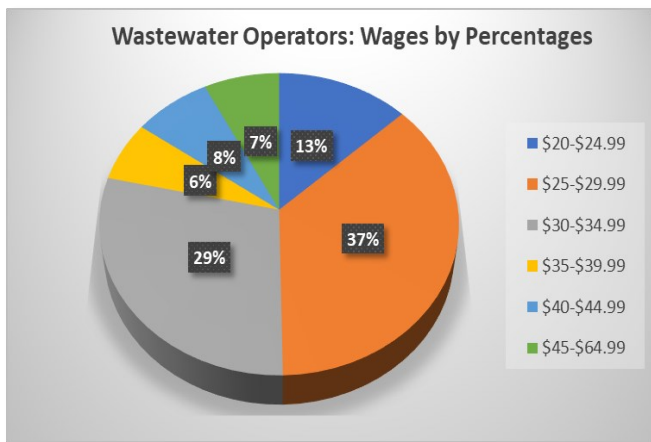
Following the convention of the RI Department of Labor and Training, the following data are provided to portray occupational wages at an “upper entry-level value” (the first quartile value); the median of the data; and an “experienced” level (the third quartile value). Benefits data are provided comparing overall industry values at the first and third quartiles and the median value.

With appreciation to the RI Department of Labor & Training’s Labor Market Information Division; the Rhode Island Clean Water Association; and the staff at RI’s wastewater treatment utilities for providing employee wage/salary and benefits data.

“The necessity of being on call as well as personal liability for violations with state and EPA regulators is also a concerning factor [for sector job applicants].” — Survey Respondent

Water and Wastewater Treatment Plant and System Operators

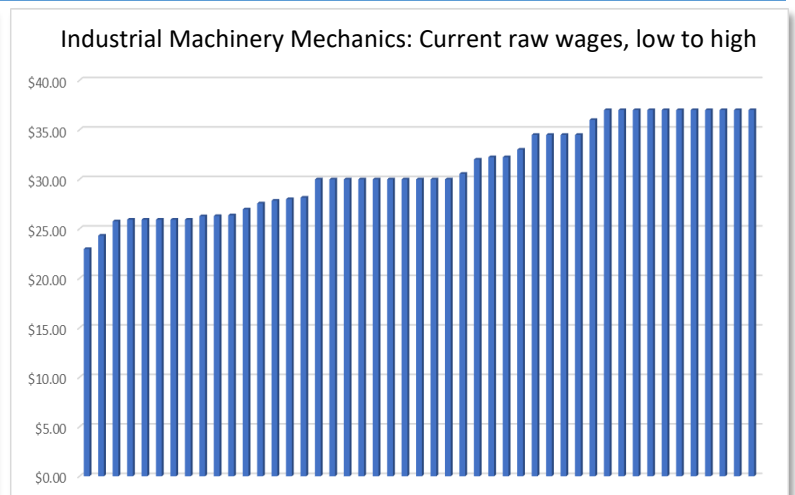
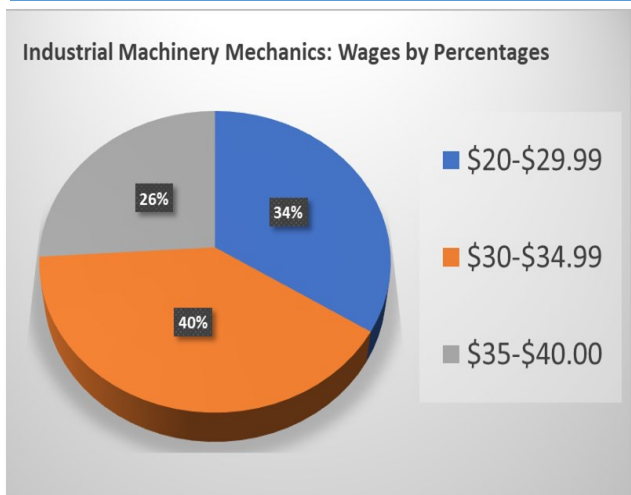
| SOC: 51-8031 | Survey Findings | Avg. Comparable Occupations (RI)* | Range for Comparable Occupations (RI)* | CT Data | MA Data |
|--------------------------------------|-----------------|-----------------------------------|--|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$26.61 | \$25.41 | \$17.90—\$45.48 | \$28.72 | \$27.85 |
| Median Wage | \$30.00 | \$30.62 | \$21.57—\$50.96 | \$30.71 | \$29.16 |
| 3rd Quartile: Experienced Wage | \$34.49 | \$36.39 | \$23.09—\$72.45 | \$37.46 | \$34.35 |



* Because this occupation subsists only in the water and wastewater sector, comparison data is related to a compilation of comparable occupations. See Page 8.

Industrial Machinery Mechanics

| SOC: 49-9041 | Survey Findings | RI Occupational Data | Range for Comparable Occupations (RI)* | CT Data | MA Data |
|--------------------------------------|-----------------|----------------------|--|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$27.27 | \$22.93 | \$17.90—\$45.48 | \$23.38 | \$23.45 |
| Median Wage | \$30.00 | \$28.62 | \$21.57—\$50.96 | \$29.76 | \$29.55 |
| 3rd Quartile: Experienced Wage | \$35.25 | \$29.89 | \$23.09—\$72.45 | \$37.40 | \$37.13 |



* See Page 8.

“Recruitment seems to be a problem across many industry sectors while retention is probably associated with limited internal opportunities for upward mobility.” — Survey Respondent

Chemists

| SOC: 19-2031 | Survey Findings | RI Occupation Data | CT Data | MA Data |
|--------------------------------------|-----------------|--------------------|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$31.01 | \$37.02 | \$35.37 | \$37.68 |
| Median Wage | \$34.83 | \$45.46 | \$46.51 | \$48.23 |
| 3rd Quartile: Experienced Wage | \$35.00 | \$50.45 | \$60.16 | \$62.25 |

Electricians

| SOC: 47-2111 | Survey Findings | RI Occupation Data† | CT Data | MA Data |
|--------------------------------------|-----------------|---------------------|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$34.51 | \$23.00 | \$24.09 | \$23.25 |
| Median Wage | \$39.00 | \$29.21 | \$29.91 | \$36.53 |
| 3rd Quartile: Experienced Wage | \$41.40 | \$36.05 | \$38.53 | \$47.41 |

† State Occupational Data for this occupation includes apprentices, which results in lower-than-expected wage statistics.

Electrical and Electronics Repairers, Commercial and Industrial Equipment

| SOC: 49-2094 | Survey Findings | RI Occupation Data | CT Data | MA Data |
|--------------------------------------|-----------------|--------------------|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$30.41 | \$27.54 | \$18.91 | \$24.19 |
| Median Wage | \$31.60 | \$29.84 | \$28.85 | \$29.98 |
| 3rd Quartile: Experienced Wage | \$33.31 | \$38.43 | \$36.46 | \$39.38 |

Control and Valve Installers and Repairers

| SOC: 49-9012 | Survey Findings | RI Occupation Data | CT Data | MA Data |
|--------------------------------------|-----------------|--------------------|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$26.51 | \$28.85 | \$29.89 | \$35.73 |
| Median Wage | \$27.88 | \$36.48 | \$42.13 | \$39.89 |
| 3rd Quartile: Experienced Wage | \$27.88 | \$44.72 | \$46.46 | \$48.16 |

Pump Operators

| SOC: 53-7072 | Survey Findings | Avg. Comparable Occupations (RI)* | Range for Comparable Occupations (RI)* | CT Data | MA Data |
|--------------------------------------|-----------------|-----------------------------------|--|---------|---------|
| 1st Quartile: Upper-Level Entry Wage | \$28.10 | \$25.41 | \$17.90—\$45.48 | N/A | \$19.01 |
| Median Wage | \$31.00 | \$30.62 | \$21.57—\$50.96 | N/A | \$44.50 |
| 3rd Quartile: Experienced Wage | \$31.57 | \$36.39 | \$23.09—\$72.45 | N/A | \$47.93 |

* Because Rhode Island does not have statewide data for this occupation, comparison data is related to a compilation of comparable occupations. See Page 8.



WASTEWATER SECTOR SALARY SURVEY

THE DATA: BENEFITS AND PAID TIME OFF

“Wastewater O&M requires a specialized education and a combined skill set that includes nuances of several trades such as plumbing, electrical, and construction and also includes technical skills involving laboratory computers and instrumentation. ... Good wages and benefits will help absolutely [attract qualified individuals], but getting the word out as to what we do may attract more qualified candidates ...” — Survey Respondent

Water and Wastewater Treatment Plant and System Operators

| SOC: 51-8031 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|---|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$15,600.00 | \$3,600.00 | \$600.00 | \$264.00 |
| Median of Entry Values | \$23,363.00 | \$4,319.00 | \$7484.00 | \$893.00 |
| 3rd Quartile of Industry Values | \$34,161.00 | \$7,618.00 | \$16,711.00 | \$3,416.00 |
| Average Total Paid Time Off (or the average of the total of vacation and sick time) | | | | |
| Less than Five Years | | Five to Ten Years | Over Ten Years | |
| 26 days | | 32 days | 39 days | |

Industrial Machinery Mechanics

| SOC: 49-9041 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|---|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$15,600.00 | \$3,600.00 | \$600.00 | \$264.00 |
| Median of Industry Values | \$19,876.00 | \$3,600.00 | \$2,610.00 | \$264.00 |
| 3rd Quartile of Industry Values | \$39,193.00 | \$7,076.42 | \$20,476.00 | \$4403.00 |
| Average Total Paid Time Off (or the average of the total of vacation and sick time) | | | | |
| Less than Five Years | | Five to Ten Years | Over Ten Years | |
| 27 days | | 33 days | 39 days | |

Chemists

| SOC: 19-2031 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|---|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$15,600.00 | \$3,600.00 | \$600.00 | \$264.00 |
| Median of Industry Values | \$15,600.00 | \$3,600.00 | \$600.00 | \$264.00 |
| 3rd Quartile of Industry Values | \$40,513.34 | \$7,260.40 | \$20,476.30 | \$4,222.00 |
| Average Total Paid Time Off (or the average of the total of vacation and sick time) | | | | |
| Less than Five Years | | Five to Ten Years | Over Ten Years | |
| 29 days | | 37 days | 42 days | |



WASTEWATER SECTOR SALARY SURVEY

THE DATA: BENEFITS AND PAID TIME OFF

Electricians

| SOC: 47-2111 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|--|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$15,839.75 | \$3,600.00 | \$600.00 | \$264.00 |
| Median of Industry Values | \$24,860.92 | \$5,423.23 | \$9,297.00 | \$2,183.41 |
| 3rd Quartile of Industry Values | \$42,047.62 | \$9,347.30 | \$20,476.30 | \$4,698.98 |
| Total Paid Time Off (as PTO or total vacation and sick time) | | | | |
| | Less than Five Years | Five to Ten Years | Over Ten Years | |
| | 21 days | 31 days | 36 days | |

Electrical and Electronics Repairers, Commercial and Industrial Equipment

| SOC: 49-2094 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|--|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$35,080.67 | \$6,830.47 | \$14,304.11 | \$3,261.01 |
| Median of Industry Values | \$41,923.06 | \$7,082.66 | \$20,476.30 | \$4,698.98 |
| 3rd Quartile of Industry Values | \$46,814.55 | \$7,626.32 | \$20,476.30 | \$4,698.98 |
| Total Paid Time Off (as PTO or total vacation and sick time) | | | | |
| | Less than Five Years | Five to Ten Years | Over Ten Years | |
| | 32 days | 37 days | 43 days | |

Control and Valve Installers and Repairers

| SOC: 49-9012 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|--|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$33,679.00 | \$5,603.38 | \$8,789.00 | \$365.00 |
| Median of Industry Values | \$34,008.00 | \$5,874.09 | \$8,789.00 | \$365.00 |
| 3rd Quartile of Industry Values | \$47,479.50 | \$6,266.73 | \$21,756.00 | \$893.00 |
| Total Paid Time Off (as PTO or total vacation and sick time) | | | | |
| | Less than Five Years | Five to Ten Years | Over Ten Years | |
| | 34 days | 40 days | 46 days | |

Pump Operators

| SOC: 53-7072 | All Benefits: Total Employer Cost | All Benefits: Total Employee Cost | Healthcare: Total Employer Cost | Healthcare: Total Employee Cost |
|--|-----------------------------------|-----------------------------------|---------------------------------|---------------------------------|
| 1st Quartile of Industry Values | \$15,600.00 | \$3,600.00 | \$600.00 | \$264.00 |
| Median of Industry Values | \$25,550.00 | \$5,556.23 | \$4,480.50 | \$264.00 |
| 3rd Quartile of Industry Values | \$27,713.25 | \$7,300.00 | \$19,285.50 | \$1,096.00 |
| Total Paid Time Off (as PTO or total vacation and sick time) | | | | |
| | Less than Five Years | Five to Ten Years | Over Ten Years | |
| | 30 days | 37 days | 42 days | |

Wastewater O&M compared to statewide occupations requiring a high school degree or postsecondary non-degree award

| SOC CODE | OCCUPATION | ENTRY WAGE | UPPER ENTRY WAGE | MEDIAN WAGE | EXPERIENCED WAGE | % increase from Upper Entry to Experienced. |
|--------------------------|---|------------|------------------|-------------|------------------|---|
| 51-8031 | Water and Wastewater Treatment Plant and System Operators | \$22.80 | \$26.61 | \$30.00 | \$34.49 | 29.6% |
| 49-9041 | Industrial Machinery Mechanics | \$25.93 | \$27.27 | \$30.00 | \$35.25 | 29.3% |
| 11-3071 | Transportation, Storage, & Distribution Managers | \$27.37 | \$45.48 | \$50.96 | \$72.45 | 59.3% |
| 17-3031 | Surveying & Mapping Technicians | \$28.78 | \$28.86 | \$29.86 | \$37.73 | 30.7% |
| 19-5012 | Occupational Health & Safety Technicians | \$22.71 | \$29.02 | \$30.55 | \$37.97 | 30.8% |
| 37-1012 | First-Line Supervisors of Landscaping, Lawn Service, & Groundskeeping Workers | \$18.46 | \$18.46 | \$29.68 | \$38.64 | 109% |
| 47-1011 | First-Line Supervisors of Construction Trades & Extraction Workers | \$23.41 | \$29.64 | \$37.28 | \$46.88 | 58.2% |
| 47-2031 | Carpenters | \$18.29 | \$22.96 | \$26.57 | \$35.75 | 55.7% |
| 47-2071 | Paving, Surfacing, & Tamping Equipment Operators | \$17.85 | \$22.59 | \$28.45 | \$30.92 | 36.9% |
| 47-2073 | Operating Engineers & Other Construction Equipment Operators | \$22.85 | \$23.37 | \$29.41 | \$36.11 | 54.5% |
| 47-2141 | Painters, Construction & Maintenance | \$17.74 | \$18.13 | \$22.68 | \$23.31 | 28.6% |
| 47-2152 | Plumbers, Pipefitters, & Steamfitters | \$14.27 | \$22.54 | \$29.29 | \$38.14 | 69.2% |
| 47-2181 | Roofers | \$22.67 | \$23.20 | \$28.45 | \$37.24 | 60.5% |
| 47-2211 | Sheet Metal Workers | \$18.32 | \$23.37 | \$29.80 | \$38.14 | 63.2% |
| 47-2221 | Structural Iron & Steel Workers | \$29.65 | \$37.79 | \$37.79 | \$37.79 | Insufficient Data |
| 47-4011 | Construction & Building Inspectors | \$18.57 | \$23.46 | \$30.05 | \$38.15 | 62.6% |
| 47-4041 | Hazardous Materials Removal Workers | \$17.78 | \$18.05 | \$26.62 | \$29.80 | 65.1% |
| 47-4051 | Highway Maintenance Workers | \$18.36 | \$22.92 | \$23.06 | \$23.09 | 0.7% |
| 49-3011 | Aircraft Mechanics & Service Technicians | \$23.14 | \$28.23 | \$34.06 | \$38.37 | 35.9% |
| 49-3021 | Automotive Body & Related Repairers | \$18.25 | \$22.65 | \$23.23 | \$29.42 | 29.9% |
| 49-3052 | Motorcycle Mechanics | \$12.11 | \$18.12 | \$28.38 | \$28.97 | 59.9% |
| 49-3053 | Outdoor Power Equipment & Other Small Engine Mechanics | \$17.59 | \$17.90 | \$21.57 | \$23.50 | 31.3% |
| 49-9021 | Heating, Air Conditioning, & Refrigeration Mechanics & Installers | \$21.45 | \$23.24 | \$29.13 | \$36.39 | 56.6% |
| 49-9051 | Electrical Power-Line Installers & Repairers | \$32.89 | \$38.25 | \$46.42 | \$49.14 | 28.5% |
| 51-8013 | Power Plant Operators | \$25.85 | \$37.24 | \$47.26 | \$48.55 | 30.4% |
| 51-8021 | Stationary Engineers & Boiler Operators | \$23.60 | \$28.62 | \$29.40 | \$37.03 | 29.4% |
| 51-9011 | Chemical Equipment Operators & Tenders | \$17.11 | \$18.27 | \$23.12 | \$23.37 | 27.9% |
| 51-9161 | Computer Numerically Controlled Tool Operators | \$17.33 | \$18.17 | \$23.09 | \$29.24 | 60.9% |

Sources: Blue highlighted occupations: RI DEM Wastewater Sector Salary Survey, April 2023;

White/grey highlighted occupations: RI Department of Labor and Training, Labor Market Information Division, May 2021 OEWS Survey.