

Program Endorsement Brief: 0303.00/Environmental Technology Geotechnician

Los Angeles/Orange County Center of Excellence, October 2018

Summary:

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide regional labor market supply and demand data related to environmental technology. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with relevant occupations.

The following summarizes key findings from this data brief:

- The number of jobs for environmental technology-related occupations is projected to increase by 4% over the next five years. More than 300 job openings will be available annually due to new job growth and replacement need (e.g. retirements).
- Over the past 12 months, there were 175 online job postings related to environmental technology in Los Angeles and Orange Counties.
- Four colleges in the region have environmental technology programs.
- Between 2014 and 2017, community colleges in the region conferred an average of 22 awards (associate degrees and certificates) in related training programs.

Occupational Demand—In Los Angeles/Orange County, the number of jobs for environmental technology-related occupations is projected to increase by 4%. There will be more than 300 job openings per year through 2022 (Exhibit 1).

Exhibit 1: Occupational demand in Los Angeles and Orange Counties¹

| Geography | 2017 Jobs | 2022 Jobs | 2017-2022 Change | 2017-2022 % Change | Annual Openings |
|--------------|--------------|--------------|------------------|--------------------|-----------------|
| Los Angeles | 1,748 | 1,802 | 54 | 3% | 191 |
| Orange | 921 | 978 | 57 | 6% | 111 |
| Total | 2,668 | 2,781 | 113 | 4% | 302 |

Wages—Entry-level hourly wages for environmental technology-related occupations in the region are between \$11.17 and \$15.71. Entry-level wages for two of the three occupations in this report are higher than the MIT Living hourly wage for one adult in the region (\$13.54 in Los Angeles County, \$15.31 in Orange County). Experienced workers earn between \$31.89 and \$44.01 per hour, which is higher than the living wage.

¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Job Postings—There were 175 online job postings for environmental technology-related occupations listed in the past 12 months. The majority of job postings are for environmental technicians, field technicians and locators. Top specialized skills are: knowledge of occupational health and safety, hazardous waste, and groundwater sampling. The top employers, by number of job postings, in the region are: Cascade Drilling and AECOM Technology.

Educational Attainment—The BLS lists an associate degree as the typical entry-level education for this occupation. The national-level educational attainment data indicates between 34% and 55% of workers in the field have completed some college or an associate degree. In Los Angeles/Orange County, 81% of job postings request high school or vocational training.

Community College Supply—Appendix A shows the annual and three-year average number of awards conferred by community colleges in the related TOP code: Environmental Technology (0303.00). The colleges with the most completions in the region are: Rio Hondo and Santa Monica. Between January and September 2018, there was one other community college request for data related to a similar program.

Appendix A: Regional community college awards (certificates and degrees), 2014-2017

| TOP Code | Program | College | 2014-15 Awards | 2015-16 Awards | 2016-2017 Awards | 3-Year Award Average |
|----------------------|--------------------------|-----------------|----------------|----------------|------------------|----------------------|
| 0303.00 | Environmental Technology | Irvine | 6 | - | 4 | 3 |
| | | Rio Hondo | 9 | 10 | 7 | 9 |
| | | Santa Monica | 4 | 9 | 11 | 8 |
| | | Santiago Canyon | - | 4 | 1 | 2 |
| Total/Average | | | 19 | 23 | 23 | 22 |

Appendix B: Occupational demand and wage data by county

Exhibit 3. Los Angeles County

| Occupation (SOC) | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings | Median Hourly Earnings | Experienced Hourly Earnings |
|--|--------------|--------------|-------------|---------------|-----------------|-----------------------------|------------------------|-----------------------------|
| Environmental Science and Protection Technicians, Including Health (19-4091) | 798 | 835 | 37 | 5% | 101 | \$13.68 | \$30.18 | \$46.31 |
| Environmental Engineering Technicians (17-3025) | 680 | 699 | 19 | 3% | 62 | \$15.41 | \$20.95 | \$32.97 |
| Geological and Petroleum Technicians (19-4041) | 270 | 269 | (1) | (0%) | 27 | \$12.22 | \$17.84 | \$30.65 |
| Total | 1,748 | 1,802 | 54 | 3% | 191 | | | |

Exhibit 4. Orange County

| Occupation (SOC) | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings | Median Hourly Earnings | Experienced Hourly Earnings |
|--|------------------|------------------|--------------------|----------------------|------------------------|------------------------------------|-------------------------------|------------------------------------|
| Environmental Science and Protection Technicians, Including Health (19-4091) | 530 | 565 | 35 | 7% | 69 | \$13.95 | \$26.33 | \$38.08 |
| Environmental Engineering Technicians (17-3025) | 210 | 223 | 13 | 6% | 21 | \$17.75 | \$24.00 | \$38.76 |
| Geological and Petroleum Technicians (19-4041) | 181 | 190 | 9 | 5% | 20 | \$10.59 | \$15.69 | \$34.54 |
| Total | 921 | 978 | 57 | 6% | 111 | | | |

Exhibit 5. Los Angeles and Orange Counties

| Occupation (SOC) | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings | Median Hourly Earnings | Experienced Hourly Earnings |
|--|------------------|------------------|--------------------|----------------------|------------------------|------------------------------------|-------------------------------|------------------------------------|
| Environmental Science and Protection Technicians, Including Health (19-4091) | 1,328 | 1,400 | 72 | 5% | 170 | \$13.80 | \$28.27 | \$44.01 |
| Environmental Engineering Technicians (17-3025) | 890 | 922 | 32 | 4% | 83 | \$15.71 | \$21.89 | \$33.95 |
| Geological and Petroleum Technicians (19-4041) | 450 | 459 | 9 | 2% | 48 | \$11.17 | \$17.22 | \$31.89 |
| Total | 2,668 | 2,781 | 113 | 4% | 302 | | | |

Appendix C: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (EMSI)
- Employment Development Department, Labor Market Information Division, OES
- Employment Development Department, Unemployment Insurance Dataset
- Living Insight Center for Community Economic Development
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- MIT Living Wage

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