

## Program Endorsement Brief: 2206.10/Geographic Information Systems

Los Angeles/Orange County Center of Excellence, October 2018

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### 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 geographic information systems. 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:

- Surveying and mapping technician jobs are increasing by 5% over the next five years, and nearly 150 job openings will be available annually due to new job growth and replacement need.
- Over the past 12 months, there were 109 online job postings related to geographic information systems in Los Angeles and Orange Counties.
- Two colleges in the region have programs closely related to geographic information systems.
- Between 2014 and 2017, community colleges in the region conferred an average of 36 awards annually (associate degrees and certificates) in related training programs.

**Occupational Demand**—In Los Angeles/Orange County the number of jobs for surveying and mapping technicians is projected to increase by 5%. There will be nearly 150 job openings per year through 2022 (Exhibit 1).

**Exhibit 1: Occupational demand in Los Angeles and Orange Counties<sup>1</sup>**

Geography	2017 Jobs	2022 Jobs	2017-2022 Change	2017-2022 % Change	Annual Openings
Los Angeles	788	831	43	5%	95
Orange	428	441	13	3%	50
<b>Total</b>	<b>1,215</b>	<b>1,273</b>	<b>58</b>	<b>5%</b>	<b>144</b>

**Wages**—Entry-level and median hourly wages for surveying and mapping technicians in the region are \$20.59 and \$30.14, respectively. Entry-level wages 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 \$46.01, which is higher than the living wage. Regional wages are above the average statewide wage for this occupation.

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<sup>1</sup> 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 109 online job postings related to geographic information systems listed in the past 12 months. The majority of job postings are for GIS technicians, survey technicians and field technicians. Top specialized skills are: geographic information systems (GIS), land/field surveys, and global positioning system (GPS). The top two employers, by number of job postings, in the region are TAIT & Associates and Southern California Gas Company.

**Educational Attainment**—The BLS lists a high school diploma or equivalent as the typical entry-level education for this occupation. The national-level educational attainment data indicates 59% of workers in the field have completed some college or an associate degree. In Los Angeles/Orange County, 73% of job postings request high school or vocational training.

**Community College Supply**—Appendix A shows the three-year average number of awards conferred by community colleges in the related TOP code: Geographic Information Systems (2206.10). The program with the most completions in the region is Rio Hondo. Between January and September 2018, there was one other related program recommendation request from a regional community college.

**Appendix A: Regional community college awards (certificates and degrees), 2014-2017<sup>2</sup>**

TOP Code	Program	College	2014-15 Awards	2015-16 Awards	2016-2017 Awards	3-Year Award Average
2206.10	Geographic Information Systems	Cypress	1	7	1	3
		Rio Hondo	25	47	28	33
<b>Total/Average</b>			26	54	29	36

**Appendix B: Occupational demand and wage data by county**

**Exhibit 2. 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
Surveying and Mapping Technicians (17-3031)	788	831	43	5%	95	\$17.06	\$28.91	\$44.83

**Exhibit 3. 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
Surveying and Mapping Technicians (17-3031)	428	441	13	3%	50	\$22.12	\$33.04	\$46.28

**Exhibit 4. 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
Surveying and Mapping Technicians (17-3031)	1,215	1,273	58	5%	144	\$20.59	\$30.14	\$46.01

**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

For more information, please contact:

Lori Sanchez, Director  
 Center of Excellence, Los Angeles/Orange County Region  
[Lsanchez144@mtsac.edu](mailto:Lsanchez144@mtsac.edu)

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