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Texas Workforce Commission

Report on Texas Growth Occupations - 2020

LMCI
11-TBD-2020

I. Executive Summary

House Bill 2478 requires the Texas Workforce Commission (TWC) to gather and study information relating to existing and projected shortages in high-wage, high-demand occupations in this state on an annual basis. HB 2478 (83rd Legislature, Regular Session, Section 302.019) also directed TWC to include information on existing and projected shortages in high-wage, high-demand occupations in selected industries.

Data included in this report was the most recent data available as of the end of fiscal year 2020. Thus, the Quarterly Census of Employment and Wage (QCEW) data covers the period through the first quarter of 2020. The Current Employment Statistics (CES) data covers the period through the September 2020 estimates.

Despite the unprecedented event that is COVID-19 and the steps taken to try and mitigate the spread of the disease, the Texas economy enjoyed unprecedented growth with Total Nonagricultural employment reaching a historic high 13 million in employment for February 2020. The unemployment rate was at or slightly above a series low 3.4 percent for much of 2019 and early 2020. Series-low unemployment rates were also reflected in nearly all 26 Metropolitan Statistical Areas in 2019 and prior to the pandemic. The Texas economy is expected to continue to grow and prosper in the future.

Six major industries enjoyed year-over-year employment growth for over 100 consecutive months prior to COVID-19 including Construction, Trade, Transportation, & Utilities, Financial Activities, Professional & Business Services, Education & Health Services and Leisure & Hospitality. Education & Health Services expanded annually every month since the beginning of the series dating back to 1990. These industries represent a wide spectrum of the Texas economy, each demanding workers with different skill sets and who can adapt to changing technology and business strategies.

This report also considers TWC's latest projections for employment growth for Texas, released in 2020 with a base year of 2018 and covering the period of 2018 to 2028. Despite using a base year before the pandemic, industry projection models weigh long-term industry trends dating back to 1990. The next employment projections, covering the period of 2020 to 2030, will be released in the fall of 2022.

Of the 1.7 Million new jobs projected to be added between 2018 and 2028, 40.7 percent will require some form of postsecondary education and training, many of which are high-growth professional jobs requiring a college degree. Jobs in construction and manufacturing will also require training in specific technical skills. Higher-demand, higher-pay occupations tend to fall into one of these categories:

- a) Jobs requiring a bachelor's degree and specific technical skill training.

42 b) Jobs requiring some form of postsecondary education, specific technical skill
43 training, and additional on-the-job training.

44
45 There is no official definition of a high-wage occupation so, for purposes of this
46 report, TWC focuses on growing occupations that pay more than the Texas median
47 annual wage of \$38,013.

48 To segment Texas occupations by sector, TWC follows statistical data standards set
49 by the agency's contracts with the U.S. Bureau of Labor Statistics and the
50 Employment and Training Administration division of the U.S. Department of Labor.
51 TWC examined more than 800 occupations in Texas in making the occupational
52 projections and segmenting those occupations for specific industries. Those growth
53 occupations within industries are listed by industry sector in Section III.

54 **II. Apprentices and Participation** 55 **Trends**

56 In Texas, there are over 20,000 apprentices currently obtaining the skills they need
57 to succeed while earning the wages they need to build financial security. In FY
58 2019, more than 8,000 individuals entered the apprenticeship system and 1,966
59 participants graduated.

60 Apprenticeship in Texas continues to show strong growth, increasing over 81%
61 since 2014. Over 9,800 participants graduated in the last six years. There are
62 currently 389 registered apprenticeship programs in Texas, with 63 new
63 apprenticeship programs established in FY 2019.

64 Texas has over 300 apprenticeable occupations across all industries. The
65 Construction and Manufacturing sectors continue to have a strong presence within
66 the apprenticeship programs. About 60 percent of total occupations in these
67 sectors are apprenticeable. However, opportunities are becoming more diverse, as
68 apprenticeship programs expand within all industry sectors.

69 **III. Growth Occupations in Growth** 70 **Industries**

71 A growing economy in the United States and particularly in Texas and its
72 surrounding states has resulted in more demand for workers. That increased
73 demand for workers is focused in key occupations where local supply has at times
74 struggled to keep up with demand.

75 Predicting the occupations most in demand in an evolving labor market is part of
76 the mission of TWC. While this report shows the most in-demand occupations in
77 Texas for the 2018 through 2028 period, it is important to remember that each
78 employer needs a unique combination of technical skills, education, work
79 experience, and even soft skills for each of these jobs at each of their workplaces.

80 This section identifies occupations within major industries as defined in House Bill
81 2478. The charts display staffing and wage information for a specific occupation in
82 that specific industry. Each industry shown below lists only those occupations which
83 pay above the Texas median annual wage, as stated in Section I, ordering them by
84 projected employment growth in Texas from 2018 to 2028. Up to 20 high-wage
85 high-demand occupations are listed for each industry. Industry employment data
86 listed corresponds with the Texas employers identified by that industry's North
87 American Industry Classification System (NAICS) code.

88

90 **A. Construction**

91 Demand for construction workers remains strong as employment levels reached the
92 highest point in the history of the series on February 2020 with 797,000 jobs
93 according to Current Employment Statistics data. Additionally, the construction
94 industry experienced 31 consecutive months of growth up to February 2020 while
95 annual growth continued for 105 months ending March 2020. This data is for NAICS
96 code 23.

97 During the first quarter of 2020, Quarterly Census of Employment and Wages
98 (QCEW) reported construction employment reaching 802,876 jobs in Texas. First
99 quarter 2020 comparisons of Average Employment to previous years show 2.0
100 percent growth over one year, 14.6 percent growth over five years, and 36.2
101 percent growth over ten years.

102 The occupations within the Construction industry that are projected to add the most
103 jobs from 2018 to 2028 are listed below. This industry continues to experience
104 increased demand from commercial construction projects and residential building in
105 both urban and suburban areas of Texas. This increased demand, along with
106 increasing openings for experienced line workers and managers who are starting to
107 retire, supports a growing need for trained workers in this industry.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Supervisors of Construction and Extraction Workers	55,140	64,955	9,815	17.8%	\$66,145
Electricians ^A	48,347	55,780	7,433	15.4%	\$51,007
Plumbers, Pipefitters, and Steamfitters ^A	36,241	42,787	6,546	18.1%	\$50,117
Operating Engineers and Other Construction Equipment Operators ^A	28,494	34,076	5,582	19.6%	\$44,872
Carpenters ^A	30,974	35,601	4,627	14.9%	\$42,037
Construction Managers	25,201	29,533	4,332	17.2%	\$96,538
Cement Masons and Concrete Finishers ^A	21,111	25,109	3,998	18.9%	\$38,457
General and Operations Managers ^A	22,205	26,045	3,840	17.3%	\$119,469
Heating, Air Conditioning, and Refrigeration Mechanics and Installers ^A	17,298	20,515	3,217	18.6%	\$45,514
Heavy and Tractor-Trailer Truck Drivers ^A	12,962	15,562	2,600	20.1%	\$41,603
Welders, Cutters, Solderers, and Brazers ^A	11,328	13,381	2,053	18.1%	\$54,647
Office Clerks, General ^A	27,442	28,996	1,554	5.7%	\$40,891
Cost Estimators	9,709	11,225	1,516	15.6%	\$78,000
Structural Iron and Steel Workers ^A	8,373	9,865	1,492	17.8%	\$46,720
Telecommunications Line Installers and Repairers ^A	4,334	5,559	1,225	28.3%	\$44,333
Electrical Power-Line Installers and Repairers ^A	4,047	5,095	1,048	25.9%	\$57,540
Business Operations Specialists, All Other ^A	6,344	7,357	1,013	16.0%	\$82,803 ^{†‡}
Roustabouts, Oil and Gas	4,297	5,242	945	22.0%	\$38,557
Sheet Metal Workers ^A	6,021	6,869	848	14.1%	\$44,673
Excavating and Loading Machine and Dragline Operators	3,967	4,805	838	21.1%	\$41,564 ^{†‡}

108 **A - Apprenticeship** means an occupation approved for apprenticeship
109 by the United States Department of Labor, Bureau of Apprenticeship and Training.

110 **† - OES** occupation used for 2019 wages has a different occupation code.

111 **‡ - OES** occupation used for 2019 wages has a different occupation title.

112 Apprenticeships are common within the Construction industry. Fifteen of the listed
113 occupations are considered apprenticeable occupations. They include:

- 114 • Electricians
- 115 • Plumbers, Pipefitters, and Steamfitters
- 116 • Operating Engineers and Other Construction Equipment Operators
- 117 • Carpenters
- 118 • Cement Masons and Concrete Finishers
- 119 • General and Operations Managers
- 120 • Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- 121 • Heavy and Tractor-Trailer Truck Drivers
- 122 • Welders, Cutters, Solderers, and Brazers
- 123 • Office Clerks, General
- 124 • Structural Iron and Steel Workers
- 125 • Telecommunications Line Installers and Repairers
- 126 • Electrical Power-Line Installers and Repairers
- 127 • Business Operations Specialists, All Other
- 128 • Sheet Metal Workers

129 A high school diploma or equivalent is the typical education needed for entry into a
130 majority of the 2018 to 2028 high growth occupations shown in the preceding
131 table. However, additional and on-the-job training for certifications and specialized
132 skills are usually required. Occupations which typically require a high school
133 diploma are:

- 134 • Supervisors of Construction and Extraction Workers
- 135 • Electricians
- 136 • Plumbers, Pipefitters, and Steamfitters
- 137 • Operating Engineers and Other Construction Equipment Operators
- 138 • Carpenters
- 139 • Welders, Cutters, Solderers, and Brazers
- 140 • Office Clerks, General
- 141 • Structural Iron and Steel Workers
- 142 • Telecommunications Line Installers and Repairers
- 143 • Electrical Power-Line Installers and Repairers
- 144 • Sheet Metal Workers
- 145 • Excavating and Loading Machine and Dragline Operators

146 The following table shows the specialized skills and certifications associated with the
147 high growth occupations within this industry:

Specialized Skills	Certifications
Repair	Driver's License
Scheduling	Electrician Certification
Project Management	Plumbing License
Budgeting	Plumbing Certification
Plumbing	Environmental Protection Agency Certification
HVAC	Occupational Safety and Health Administration Certification
Construction Management	CDL Class A
Electrical Work	Project Management Certification
Estimating	First Aid CPR AED
Hand Tools	Project Management Professional (PMP)

148

149 **B. Manufacturing**

150 The Manufacturing industry's average employment in first quarter 2020 was
151 908,977, representing a five-year increase of 13,041 jobs (1.5 percent). But growth
152 in Manufacturing slowed more recently. On a year-over-year basis, employment in
153 Manufacturing increased by 6,646 compared to the first quarter 2019's increase of
154 35,415.

155 This data is for NAICS codes 31-33.

156 In general, staffing issues are often evolving in the Manufacturing industry, with
157 more automation and computerization occurring. New educated and specialized
158 staff are needed during a time of expanding demand for manufactured products.
159 This has meant that production plants are faced with hiring line workers who need
160 to have either years of experience or expanded education and training to be
161 effective at their jobs.

162 The occupations within Manufacturing companies that are projected to add the most
163 jobs and grow at the fastest rates from 2018 to 2028 are listed below.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Welders, Cutters, Solderers, and Brazers ^A	26,530	29,471	2,941	11.1%	\$43,198
Machinists ^A	18,778	20,557	1,779	9.5%	\$46,133
Industrial Engineers ^{S A}	11,277	12,495	1,218	10.8%	\$104,596
Industrial Machinery Mechanics ^A	12,299	13,490	1,191	9.7%	\$56,669
First-Line Supervisors of Production and Operating Workers	32,965	34,138	1,173	3.6%	\$69,002
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	17,904	18,866	962	5.4%	\$71,783
Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers	16,642	17,336	694	4.2%	\$39,012
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders ^A	7,151	7,841	690	9.6%	\$40,378 [†]
Maintenance Workers, Machinery ^A	5,368	6,043	675	12.6%	\$46,799
General and Operations Managers ^A	16,831	17,491	660	3.9%	\$135,110
Software Developers, Applications ^{S A}	7,077	7,535	458	6.5%	\$119,483 ^{†‡}
Electronics Engineers, Except Computer ^S	5,332	5,790	458	8.6%	\$124,607
Mechanical Engineers ^{S A}	10,497	10,923	426	4.1%	\$99,636
Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic ^{S A}	1,443	1,864	421	29.2%	\$61,901 ^{†‡}

164 **A - Apprenticesable occupation** means an occupation approved for apprenticeship
165 by the United States Department of Labor, Bureau of Apprenticeship and Training.
166 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
167 with science, technology, engineering, and math.
168 **† - OES** occupation used for 2019 wages has a different occupation code.
169 **‡ - OES** occupation used for 2019 wages has a different occupation title.

170 The high growth occupations listed in the manufacturing industry contain five STEM
 171 occupations.

- 172 • Industrial Engineers is projected to increase by 10.8 percent by 2028.
- 173 • Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic
 174 is projected to grow 29.2 percent.
- 175 • Software Developers, Applications is projected to grow 6.5 percent.
- 176 • Electronics Engineers, Except Computer is projected to grow 8.6 percent.
- 177 • Mechanical Engineers is projected to grow 4.1 percent.

178 Of the 14 occupations listed, seven require a high school diploma or equivalent for
 179 entry, while another five require a bachelor’s degree. Ten of the occupations are
 180 considered apprenticeable, including

- 181 • Welders, Cutters, Solderers, and Brazers
- 182 • Machinists
- 183 • Industrial Engineers
- 184 • Industrial Machinery Mechanics
- 185 • Coating, Painting, and Spraying Machine Setters, Operators, and Tenders
- 186 • Maintenance Workers, Machinery
- 187 • General and Operations Managers
- 188 • Software Developers, Applications
- 189 • Mechanical Engineers
- 190 • Computer Numerically Controlled Tool Programmers

191 The occupation projected to grow the fastest from 2018 to 2028 is Computer
 192 Numerically Controlled Tool Programmers, at 29.2 percent. General and Operations
 193 Managers is the growth occupation with the highest annual salary, of \$135,110.

194 The following table shows the specialized skills and certifications associated with the
 195 high growth occupations within this industry:

Specialized Skills	Certifications
Sales	Driver License
Scheduling	Security Clearance
Customer Service	American Board of Engineering and Technology (ABET) Accredited
Budgeting	Project Management Certification
Product Sales	Six Sigma Certification
Repair	Six Sigma Green Belt Certification
Software Engineering	Six Sigma Black Belt Certification
Project Management	OSHA Forklift Certification
Software Development	Licensed Professional Engineer
Customer Contact	Welding Certification

196

197 **C. Agriculture and Forestry**

198 In the last five years, demand for Agriculture and Forestry workers increased
 199 modestly, according to the Quarterly Census of Employment and Wages data. This
 200 data is for NAICS code 11.

201 In the first quarter of 2020, the number of workers with Agriculture and Forestry
 202 employers in Texas reached 58,866, up 2.1 percent from the same quarter in 2015.
 203 In the past year, growth has slowed. The Agriculture and Forestry industry in Texas
 204 had been using fewer workers in recent decades as farming methods have become
 205 more efficient.

206 Traditional labor market information may not completely capture the agriculture
 207 sector, since many Bureau of Labor Statistics programs are non-agricultural and a
 208 significant amount of agricultural labor is not covered by the unemployment tax
 209 system.

210 With that caveat, there are occupations within Agriculture and Forestry that had
 211 average wages above the statewide median from 2018 to 2028. They are listed
 212 below.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Animal Breeders	436	474	38	8.7%	\$38,870
Animal Trainers ^A	261	288	27	10.3%	\$57,832
Human Resources Specialists ^A	53	52	-1	-1.9%	\$73,274
First-Line Supervisors of Production and Operating Workers	70	60	-10	-14.3%	\$53,361
Bus and Truck Mechanics and Diesel Engine Specialists ^A	115	101	-14	-12.2%	\$54,267
First-Line Supervisors of Office and Administrative Support Workers	209	178	-31	-14.8%	\$59,838
Fallers ^A	186	147	-39	-21.0%	\$54,451
Logging Equipment Operators	655	580	-75	-11.5%	\$43,309

213 **A - Apprenticeable occupation** means an occupation approved for apprenticeship
 214 by the United States Department of Labor, Bureau of Apprenticeship and Training.

215 Not unlike the construction industry, a high school diploma or equivalent is the
 216 typical education needed for entry into most of the high growth occupations.
 217 However, the agriculture and forestry industry requires specialized, additional or
 218 on-the-job training to acquire the hard skills and certifications preferred for these
 219 occupations. Occupations typically requiring a high school education are as follows:

- 220 • Animal Breeders
- 221 • Animal Trainers
- 222 • First-Line Supervisors of Production and Operating Workers
- 223 • Bus and Truck Mechanics and Diesel Engine Specialists
- 224 • First-Line Supervisors of Office and Administrative Support Workers
- 225 • Fallers
- 226 • Logging Equipment Operators

227 The following table shows the specialized skills and certifications associated with the
 228 high growth occupations within this industry:

Specialized Skills	Certifications
Scheduling	Driver's License
Recruiting	Senior Professional in Human Resources
Technical Recruiting	SHRM Senior Certified Professional
Talent Acquisition	SHRM Certified Professional (SHRM-CP)
Food Safety	Mediation Certification
Human Resource Information System (HRIS)	Six Sigma Green Belt Certification
Office Management	Six Sigma Certification
Social Media	Global Food Safety Initiative (GFSI)
Applicant Tracking System	First Aid CPR AED
Customer Service	Certified Therapeutic Recreation Specialist (CTRS)
Financial Operation	
General Office Duties	
Onboarding	

229

230 **D. Health Care and Social Assistance**

231 In the last five years, demand for Health Care and Social Assistance workers in
232 Texas expanded robustly, according to the Quarterly Census of Employment and
233 Wages. This data is for NAICS code 62.

234 In the first quarter of 2020, the number of workers with Health Care and Social
235 Assistance employers in Texas was 1.7 million, up 13.5 percent from the same
236 quarter in 2015.

237 The Health Care and Social Assistance industry has become the dominant industry
238 for employment in Texas – and the United States – in the last decade. Demand for
239 health care workers in Texas is expected to continue to increase as the state has
240 growing populations of both old and young people, who are the primary customers
241 of the Health Care and Social Assistance industry.

242 This sector is faced with training challenges as employers are demanding higher
243 educated workers due to market demands and industry expectations.

244 The occupations within Health Care and Social Assistance that are projected to add
245 the most jobs and grow at the fastest rates from 2018 to 2028 are listed below.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018 - 2028	Percent Growth 2018 - 2028	Average Annual Wage 2019
Registered Nurses ^{S A}	185,291	217,668	32,377	17.5%	\$74,338
Dental Assistants ^A	28,563	39,302	10,739	37.6%	\$38,682
Licensed Practical and Licensed Vocational Nurses ^{S A}	62,952	69,583	6,631	10.5%	\$47,434
Medical and Health Services Managers ^{S A}	25,466	31,047	5,581	21.9%	\$104,303
Dental Hygienists ^S	12,670	17,459	4,789	37.8%	\$76,791 [†]
Physicians and Surgeons, All Other ^S	19,197	22,935	3,738	19.5%	\$216,701 ^{††}
Nurse Practitioners ^S	10,567	14,290	3,723	35.2%	\$116,842
Speech-Language Pathologists ^S	8,884	12,299	3,415	38.4%	\$78,518
Respiratory Therapists ^S	10,951	14,164	3,213	29.3%	\$60,456
Dentists, General ^S	7,817	10,739	2,922	37.4%	\$186,246
Physician Assistants ^S	7,132	10,024	2,892	40.5%	\$109,540
Physical Therapists ^S	14,654	17,453	2,799	19.1%	\$91,464
Radiologic Technologists and Technicians ^{S A}	15,290	17,686	2,396	15.7%	\$61,049
Physical Therapist Assistants	7,402	9,556	2,154	29.1%	\$68,702
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	6,214	8,324	2,110	34.0%	\$47,842
General and Operations Managers ^A	10,069	12,140	2,071	20.6%	\$112,956
Medical Records and Health Information Technicians ^{S A}	12,029	13,920	1,891	15.7%	\$42,908 ^{††}
Nurse Anesthetists ^S	5,935	7,478	1,543	26.0%	\$170,093
First-Line Supervisors of Office and Administrative Support Workers	12,547	14,071	1,524	12.1%	\$55,389
Occupational Therapists ^S	7,812	9,335	1,523	19.5%	\$86,939

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249 with science, technology, engineering, and math.

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 251 ‡ - **OES** occupation used for 2019 wages has a different occupation title.

252 Of the listed high growth occupations within the Health Care and Social Assistance
 253 industry, 75 percent are classified as STEM occupations. Eleven out of twenty of
 254 these occupations have typical education for entry as a bachelor’s degree or above.
 255 The highest paying STEM occupation is Physicians and Surgeons, All Other with a
 256 mean wage of \$216,701. This occupation has an expected 19.5 percent growth rate
 257 over the next 10 years.

258 The middle skill occupations which typically require postsecondary education,
 259 apprenticeship, or long-term training include

- 260 • Dental Assistants
- 261 • Licensed Practical and Licensed Vocational Nurses
- 262 • Dental Hygienists
- 263 • Respiratory Therapists
- 264 • Radiologic Technologists
- 265 • Physical Therapist Assistants
- 266 • Medical Records and Health Information Technicians

267 The following table shows specialized skills and certifications associated with the
 268 high growth occupations within this industry:

Specialized Skills	Certifications
Patient Care	Registered Nurse
Treatment Planning	Advanced Cardiac Life Support (ACLS) Certification
Cardiopulmonary Resuscitation (CPR)	Basic Life Saving (BLS)
Advanced Cardiac Life Support (ACLS)	First Aid CPR AED
Life Support	Basic Cardiac Life Support Certification
Patient/Family Education and Instruction	Licensed Vocational Nurse (LVN)
Teaching	Driver's License
Scheduling	Licensed Practical Nurse (LPN)
Acute Care	American Heart Association Certification
Home Health	Nursing Specialty Certification

269

270 **E. Educational Services**

271 In the last five years, demand for Educational Services workers in Texas grew at a
272 steady pace, according to the Quarterly Census of Employment and Wages. This
273 data is for NAICS code 61.

274 In the first quarter of 2020, the number of workers in Educational Services in Texas
275 was 1.3 million, up 8.6 percent from the same quarter in 2015. When looking at
276 Current Employment Statistics data the industry shows an 11.8 percent increase in
277 demand for educational workers over the last five years.

278 The Educational Services industry in Texas is facing growing demand from a
279 marketplace that increasingly needs better educated workers for a more
280 “knowledge-based economy” as well as an expanding population bringing more
281 students into schools.

282 The occupations within the Educational Services industry that are projected to add
283 the most jobs from 2018 to 2028 are listed below. Eighteen of the 20 occupations
284 listed are above the 2019 Texas average wage of \$50,490. Of those, Health
285 Specialties Teachers, Postsecondary, General and Operations Managers, Education
286 Administrators, Postsecondary and Business Teachers, Postsecondary make
287 significantly more than the average Texas salary.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Secondary School Teachers, Except Special and Career/Technical Education	107,782	119,583	11,801	10.9%	\$58,017
Self-Enrichment Education Teachers	9,179	13,545	4,366	47.6%	\$46,809
Coaches and Scouts	10,912	14,669	3,757	34.4%	\$50,930
Health Specialties Teachers, Postsecondary ^S	13,185	16,465	3,280	24.9%	\$145,421
Education Administrators, Elementary and Secondary School	27,574	30,739	3,165	11.5%	\$86,356
Educational, Guidance, School, and Vocational Counselors ^A	22,523	25,371	2,848	12.6%	\$60,895
Instructional Coordinators	12,785	14,332	1,547	12.1%	\$66,241
Preschool Teachers, Except Special Education	9,132	10,492	1,360	14.9%	\$52,804
Business Operations Specialists, All Other ^A	12,041	13,130	1,089	9.0%	\$69,035 ^{†‡}
Vocational Education Teachers, Postsecondary ^S	9,458	10,543	1,085	11.5%	\$57,759
Speech-Language Pathologists ^S	4,818	5,869	1,051	21.8%	\$64,804
Business Teachers, Postsecondary	5,871	6,916	1,045	17.8%	\$93,391
Education Administrators, Postsecondary	9,623	10,568	945	9.8%	\$113,921
Registered Nurses ^{S A}	8,990	9,868	878	9.8%	\$70,421
Computer User Support Specialists ^A	7,884	8,714	830	10.5%	\$43,486 [†]
General and Operations Managers ^A	4,141	4,967	826	19.9%	\$121,316
Special Education Teachers, Middle School	7,456	8,200	744	10.0%	\$56,716 [†]
Librarians	6,582	7,248	666	10.1%	\$63,062 ^{†‡}
Accountants and Auditors ^S	4,490	5,025	535	11.9%	\$65,535
English Language and Literature Teachers, Postsecondary	5,134	5,630	496	9.7%	\$62,855

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291 with science, technology, engineering, and math.
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293 **‡ - OES** occupation used for 2019 wages has a different occupation title.

294 Of the 20 high growth occupations in this industry, 17 of them require at least a
 295 bachelor's degree, of which the following are identified as STEM Occupations:

- 296 • Health Specialties Teachers in Postsecondary Education
- 297 • Vocational Education Teachers, Postsecondary
- 298 • Speech-Language Pathologists
- 299 • Registered Nurses
- 300 • Accountants and Auditors

301 Overall, Self-Enrichment Education Teachers has the highest percentage job growth
 302 projected at 47.6 percent followed by Coaches and Scouts at 34.4 percent and
 303 Health Specialties Teachers, Postsecondary at 24.9 percent.

304 The following table shows the specialized skills and certifications associated with the
 305 high growth high demand occupations within this industry:

Specialized Skills	Certifications
Teaching	Certified Teacher
Lesson Planning	Driver's License
Budgeting	Teachers of English To Speakers of Other Languages (TESOL)
Special Education	First Aid CPR AED
Scheduling	Registered Nurse
Staff Development	Child Development Associate (CDA)
Child Care	Special Education Certification
Learning Styles	Counseling Certification
Early Childhood Education	Basic Life Saving (BLS)
Staff Management	Certified Public Accountant (CPA)

306

307 **F. Transportation and Warehousing**

308 In the last five years, demand for Transportation and Warehousing workers in
309 Texas increased, according to the Quarterly Census of Employment and Wages.
310 This data is for NAICS codes 48-49.

311 In the first quarter of 2020 employment in the Transportation and Warehousing
312 industry in Texas was 586,635, up 20.5 percent from the same quarter in 2015.

313 The Transportation and Warehousing industry in Texas has seen increasing
314 employment in the last five years. The occupation with the highest employment in
315 this industry is Heavy and Tractor-Trailer Truck Drivers. Which has over 100,000
316 jobs currently and is expected to add over 18,000 jobs by 2028.

317 As the economy grows, both businesses and consumers typically buy more goods;
318 those goods must be moved, stored, and distributed on their way to consumers'
319 homes.

320 This warehousing of goods has driven up demand for workers in this sector and is
321 expected to continue as Texas continues to bolster its transportation
322 infrastructures.

323 The occupations within Transportation and Warehousing that are projected to add
324 the most jobs are listed below, all of which have wages above the 2019 Texas
325 median wage of \$38,013.

326 Airline Pilots, Copilots and Flight Engineers specifically make considerably more
327 than the median salary at \$187,603.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Heavy and Tractor-Trailer Truck Drivers ^A	102,488	120,894	18,406	18.0%	\$47,145
Light Truck or Delivery Service Drivers	23,336	27,169	3,833	16.4%	\$50,717
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	13,614	15,638	2,024	14.9%	\$60,329 ⁺
Bus and Truck Mechanics and Diesel Engine Specialists ^A	7,982	9,258	1,276	16.0%	\$49,740
General and Operations Managers ^A	6,536	7,676	1,140	17.4%	\$117,295
Aircraft Mechanics and Service Technicians ^A	10,654	11,612	958	9.0%	\$73,038
Sales Representatives, Services, All Other	5,523	6,416	893	16.2%	\$63,958 ⁺⁺
Dispatchers, Except Police, Fire, and Ambulance ^A	8,788	9,677	889	10.1%	\$43,675
Reservation and Transportation Ticket Agents and Travel Clerks	12,605	13,452	847	6.7%	\$51,943
Petroleum Pump System Operators, Refinery Operators, and Gaugers ^A	2,562	3,358	796	31.1%	\$75,482
Office Clerks, General ^A	12,201	12,946	745	6.1%	\$38,704
Maintenance and Repair Workers, General ^A	4,578	5,294	716	15.6%	\$54,084
Production, Planning, and Expediting Clerks ^A	3,514	4,054	540	15.4%	\$49,488
Airline Pilots, Copilots, and Flight Engineers ^S	9,200	9,737	537	5.8%	\$187,603
Transportation, Storage, and Distribution Managers ^A	3,220	3,740	520	16.1%	\$97,404
First-Line Supervisors of Mechanics, Installers, and Repairers	2,810	3,233	423	15.1%	\$76,824
Accountants and Auditors ^S	2,466	2,886	420	17.0%	\$75,772

328 **A - Apprenticeable occupation** means an occupation approved for apprenticeship
 329 by the United States Department of Labor, Bureau of Apprenticeship and Training.
 330 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
 331 with science, technology, engineering, and math.
 332 † - **OES** occupation used for 2019 wages has a different occupation code.
 333 ‡ - **OES** occupation used for 2019 wages has a different occupation title.

334 Out of the 17 occupations listed above, 10 are apprenticeable. Meaning most of
 335 these occupations require on the job practical training in order to meet the varying
 336 needs of employers.

337 The following table shows the specialized skills and certifications associated with the
 338 high growth occupations within this industry:

Specialized Skills	Certifications
HAZMAT	CDL Class A
Truck Driving	Driver's License
Commercial Driving	CDL Class B
Scheduling	OSHA Forklift Certification
Customer Service	Department of Transportation (DOT) Certified
Logistics	Mobile Electronics Certified Professional (MECP)
Repair	Mobile Electronics Certified Professional
Over The Road	Certified Public Accountant (CPA)
Forklift Operation	Security Clearance
Customer Contact	CDL Class C

339

340 **G. Mining, Quarrying, and Oil and Gas**
 341 **Extraction**

342 In the last five years, demand for Mining, Quarrying, and Oil and Gas Extraction
 343 industry workers in Texas has varied, based on Quarterly Census of Employment
 344 and Wages. This data is for NAICS code 21.

345 The annual average number of jobs in the industry has steadily increased over the
 346 past few years since 2016. Not seasonally adjusted Current Employment Statistics
 347 data show that the number of jobs increased from 211,900 in 2016 to 248,500 in
 348 2019, a 17.3 percent increase.

349 The 10 occupations within the Mining, Quarrying, and Oil and Gas Extraction
 350 industry that are projected to add the most jobs are listed below, all of which are
 351 above the 2019 Texas median wage of \$38,013. Petroleum Engineers make
 352 considerably more than the median salary at \$163,749 annually.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Service Unit Operators, Oil and Gas	21,924	26,273	4,349	19.8%	\$48,136
Roustabouts, Oil and Gas	22,478	26,801	4,323	19.2%	\$39,909
Heavy and Tractor-Trailer Truck Drivers ^A	13,593	16,055	2,462	18.1%	\$45,498
Rotary Drill Operators, Oil and Gas ^A	6,839	8,224	1,385	20.3%	\$56,916
Derrick Operators, Oil and Gas	5,847	7,052	1,205	20.6%	\$45,510
Petroleum Engineers ^S	8,855	9,520	665	7.5%	\$163,749
Geological and Petroleum Technicians ^{S A}	3,803	4,220	417	11.0%	\$61,990 ^{†‡}
Wellhead Pumpers	6,608	6,900	292	4.4%	\$54,803
Extraction Workers, All Other	1,205	1,472	267	22.2%	\$51,851 ^{†‡}
Bus and Truck Mechanics and Diesel Engine Specialists ^A	1,166	1,421	255	21.9%	\$48,477

353 **A - Apprenticiable occupation** means an occupation approved for apprenticeship
 354 by the United States Department of Labor, Bureau of Apprenticeship and Training.
 355 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
 356 with science, technology, engineering, and math.
 357 **† - OES** occupation used for 2019 wages has a different occupation code.
 358 **‡ - OES** occupation used for 2019 wages has a different occupation title.

359 There is a mix of educational requirements associated with the above listed
 360 occupations. Seven out of the ten occupations require a high school diploma or no
 361 formal education, while one required a bachelor’s degree. An associate’s degree and
 362 postsecondary nondegree awards combine to make up the remaining two
 363 occupations.

364 The following are high growth occupations in this industry that are also considered
 365 middle skill jobs:

- 366 • Heavy and Tractor-Trailer Truck Drivers
- 367 • Geological and Petroleum Technicians
- 368 • Bus and Truck Mechanics and Diesel Engine Specialists

369 Both Petroleum Engineer and Geological and Petroleum Technicians are STEM
 370 professions, with Geological and Petroleum Technicians also being apprenticeable.
 371 Typical education for Petroleum Engineers is a bachelor’s degree and an associate’s
 372 degree is generally required for Geological and Petroleum Technicians.

373 The following table shows the specialized skills and certifications associated with the
 374 high growth occupations within this industry:

Specialized Skills	Certifications
Repair	Driver’s License
Energy Services	Class A Commercial Driver’s License
Machinery	Class B Commercial Driver’s License
Physical Impairment	Air Brake Certified
Customer Service	Certified Crane Operator
Hydraulic Jacks	OSHA Forklift Certification
Lifting Ability	IT Infrastructure Library (ITIL) Certification
HAZMAT	First Aid CPR AED
Predictive / Preventative Maintenance	Department of Transportation (DOT) Medical Certification
Commercial Driving	Class C Commercial Driver’s License

375

376 **H. Utilities**

377 In the last five years, demand for utilities workers in Texas was largely unchanged,
378 according to the Quarterly Census of Employment and Wages data. This data is for
379 NAICS code 22.

380 In the first quarter of 2020, the number of workers with Utilities employers in Texas
381 was 83,378, up 4.4 percent from the same quarter in 2015. When looking at Not
382 Seasonally Adjusted Current Employment Statistics data the industry shows a 4.0
383 percent increase in demand for utilities workers in the last two years.

384 Continuing technological advances have led to the Utilities industry's need for a
385 more skilled worker. Meanwhile, the Utilities industry has been dominated by "Baby
386 Boomer" workers, who are now starting to retire as part of "the Great Shift
387 Change." Those retirements come as economic growth and population increases in
388 Texas are creating more demand for energy delivery. The result is increased
389 demand for new and replacement workers for utility jobs, which mostly require
390 years of training.

391 The occupations within Utilities employers that are projected to grow at the fastest
392 rates from 2018 to 2028 are listed below. It should be noted that due to limited
393 staffing in this industry, many of these occupations do not have numeric changes of
394 at least 400 jobs.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Electrical Power-Line Installers and Repairers ^A	4,791	5,293	502	10.5%	\$63,195
Industrial Machinery Mechanics ^A	2,345	2,570	225	9.6%	\$70,438
Wind Turbine Service Technicians ^A	569	754	185	32.5%	\$57,945
General and Operations Managers ^A	1,173	1,338	165	14.1%	\$134,918
First-Line Supervisors of Mechanics, Installers, and Repairers	1,377	1,523	146	10.6%	\$77,216
Control and Valve Installers and Repairers, Except Mechanical Door ^A	1,061	1,206	145	13.7%	\$55,594
Electrical Engineers ^S	1,217	1,351	134	11.0%	\$107,573
Business Operations Specialists, All Other ^A	1,107	1,239	132	11.9%	\$88,830 ^{†‡}
Electricians ^A	1,257	1,379	122	9.7%	\$63,769
Maintenance and Repair Workers, General ^A	752	859	107	14.2%	\$41,830

395 **A - Apprenticesable occupation** means an occupation approved for apprenticeship
396 by the United States Department of Labor, Bureau of Apprenticeship and Training.
397 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
398 with science, technology, engineering, and math.
399 **† - OES** occupation used for 2019 wages has a different occupation code.
400 **‡ - OES** occupation used for 2019 wages has a different occupation title.

401 Six out of 10 occupations listed have an educational requirement of only a High
402 School Diploma or equivalent., five of which offer wages of \$55,000 and higher.
403 Three of the 10 occupations require a bachelor’s degree for entry into the position.
404 All the occupations listed above in the Utilities industry pay above Texas’s 2019
405 median wage of \$38,013.

406 In the Utilities industry, Electrical Engineers are among the high growth STEM
407 occupations, projecting double-digit growth rates from 2018 to 2028. These
408 occupations typically require a bachelor’s degree with an Average Annual Wage of
409 \$107,573

410 The following table shows the specialized skills and certifications associated with the
 411 high growth occupations within this industry:

Specialized Skills	Certifications
Repair	Driver's License
Scheduling	CDL Class A
Transformers	Electrician Certification
Budgeting	Licensed Professional Engineer
Power Tools	American Board for Engineering and Technology (ABET) Accredited
Electrical Work	CDL Class C
Predictive / Preventative Maintenance	Wastewater Treatment Plant Operator
Schematic Diagrams	Building Performance Institute (BPI)
Customer Service	Wastewater Collection License
Project Management	Plumbing License

412

413 **I. Wholesale Trade**

414 In the last five years, demand for Wholesale Trade industry workers in Texas rose
415 rapidly, according to the Quarterly Census of Employment and Wages. This data is
416 for NAICS code 42.

417 In the first quarter of 2020, the number of workers with Wholesale Trade employers
418 in Texas was 610,122, up 3.3 percent from the same quarter in 2015.

419 The Wholesale Trade industry has experienced rising demand for workers due to a
420 recovering economy in Texas and across North America. The companies in this
421 sector have sought to take advantage of this population and economic expansion by
422 putting more sales professionals into the field while also trying to fill management
423 positions that have been staffed by Baby Boomer supervisors who are set to retire.

424 As of 2018, the 20 most in-demand occupations in the Wholesale industry
425 employed over 220,000 people and are expected to grow another 35,555 by 2028.
426 Sixteen of the 20 occupations listed pay Average Annual Wages above the state
427 average of \$50,490 according to 2019 data.

428 The occupations within the Wholesale Trade industry that are projected to add the
429 most jobs and grow at the fastest rates from 2018 to 2028 are listed below.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	76,957	88,792	11,835	15.4%	\$69,200
Heavy and Tractor-Trailer Truck Drivers ^A	27,784	32,174	4,390	15.8%	\$47,651
General and Operations Managers ^A	19,573	22,544	2,971	15.2%	\$131,919
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products ^A	19,032	21,934	2,902	15.2%	\$88,931
Mobile Heavy Equipment Mechanics, Except Engines ^A	7,265	8,413	1,148	15.8%	\$53,722
Sales Managers	7,508	8,642	1,134	15.1%	\$146,352
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	7,595	8,713	1,118	14.7%	\$56,014 [†]
Software Developers, Applications ^{S A}	4,297	5,401	1,104	25.7%	\$109,535 ^{†‡}
First-Line Supervisors of Non-Retail Sales Workers	7,231	8,320	1,089	15.1%	\$83,477
Bus and Truck Mechanics and Diesel Engine Specialists ^A	5,305	6,247	942	17.8%	\$52,514
Computer User Support Specialists ^A	6,051	6,926	875	14.5%	\$52,532 [†]
Market Research Analysts and Marketing Specialists ^S	3,293	4,147	854	25.9%	\$67,437
Accountants and Auditors ^S	4,951	5,705	754	15.2%	\$76,504
Sales Engineers	4,762	5,499	737	15.5%	\$123,246
Production, Planning, and Expediting Clerks ^A	4,776	5,503	727	15.2%	\$49,728
Industrial Machinery Mechanics ^A	4,250	4,944	694	16.3%	\$57,678
Financial Managers ^{S A}	2,295	2,910	615	26.8%	\$152,891
Maintenance and Repair Workers, General ^A	4,041	4,652	611	15.1%	\$40,366
Computer, Automated Teller, and Office Machine Repairers ^A	3,803	4,333	530	13.9%	\$38,802
Software Developers, Systems Software ^{S A}	3,713	4,238	525	14.1%	\$109,535 ^{†‡}

430 **A - Apprenticiable occupation** means an occupation approved for apprenticeship
 431 by the United States Department of Labor, Bureau of Apprenticeship and Training.
 432 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
 433 with science, technology, engineering, and math.
 434 † - **OES** occupation used for 2019 wages has a different occupation code.
 435 ‡ - **OES** occupation used for 2019 wages has a different occupation title.

436 Five of the 20 occupations listed are STEM occupations with high demand
 437 employing over 18,500 workers as of 2018. These are:

- 438 • Software Developers, Applications
- 439 • Market Research Analysts and Marketing Specialists
- 440 • Accountants and Auditors
- 441 • Financial Managers
- 442 • Software Developers, Systems Software

443 These occupations typically require a bachelor’s degree, pay well over the 2019
 444 Average Annual Wage in Texas and are expected to grow between 14 and 27
 445 percent by 2028.

446 The following table shows the specialized skills and certifications associated with the
 447 high growth occupations within this industry:

Specialized Skills	Certifications
Sales	Driver's License
Customer Service	CDL Class A
Scheduling	OSHA Forklift Certification
Product Sales	Air Brake Certified
Budgeting	Certified Public Accountant (CPA)
Repair	CDL Class B
Commercial Driving	Department of Transportation (DOT) Medical Certification
Outside Sales	Automotive Service Excellence (ASE) Certification
Merchandising	Department of Transportation (DOT) Certified
Sales Planning	Project Management Certification

448

449 **J. Retail Trade**

450 Despite growing competition from online shopping, in the last five years, demand
 451 for Retail Trade workers in Texas increased, according to the Quarterly Census of
 452 Employment and Wages program. This data is for NAICS codes 44-45.

453 In the first quarter of 2020, the number of workers in the Retail Trade industry in
 454 Texas was 1.3 million, up 3.6 percent from the same quarter in 2015. Population
 455 growth across most of Texas, coupled with a strong economy, has pushed up
 456 demand for retail goods. Retail Trade companies have been adding workers to jobs
 457 across the board from salespeople to stocking clerks to drivers to managers.

458 The occupations within retail trade employers that are projected to add the most
 459 jobs from 2018 to 2028 are listed below.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
First-Line Supervisors of Retail Sales Workers ^A	87,571	97,048	9,477	10.8%	\$45,420
General and Operations Managers ^A	22,356	25,248	2,892	12.9%	\$90,432
Automotive Service Technicians and Mechanics ^A	25,217	27,750	2,533	10.0%	\$47,528
Counter and Rental Clerks	8,385	9,537	1,152	13.7%	\$38,313
Sales Representatives, Services, All Other	19,066	20,125	1,059	5.6%	\$41,769 ^{†‡}
First-Line Supervisors of Mechanics, Installers, and Repairers	5,456	6,261	805	14.8%	\$61,246
First-Line Supervisors of Office and Administrative Support Workers	14,572	15,307	735	5.0%	\$44,255
Pharmacists ^S	11,678	12,406	728	6.2%	\$128,310
Sales Managers	3,865	4,405	540	14.0%	\$128,025
Heavy and Tractor-Trailer Truck Drivers ^A	3,651	4,142	491	13.4%	\$41,933
Automotive Body and Related Repairers ^A	3,137	3,616	479	15.3%	\$43,948
Securities, Commodities, and Financial Services Sales Agents ^A	3,024	3,498	474	15.7%	\$90,455

460 **A - Apprenticeship** means an occupation approved for apprenticeship
 461 by the United States Department of Labor, Bureau of Apprenticeship and Training.

462 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
 463 with science, technology, engineering, and math.

464 **† - OES** occupation used for 2019 wages has a different occupation code.

465 **‡ - OES** occupation used for 2019 wages has a different occupation title.

466 Of the top 12 high demand occupations, five have an annual wage above the 2019
 467 average annual wage of \$50,490 and combined, are projected to grow by over
 468 20,000 jobs by 2028.

469 The only STEM occupation on the list is Pharmacists. The Average Annual Wage in
 470 2019 for Pharmacists was \$128,310, the highest of the top 12 occupations. A close
 471 second was Sales Managers whose Average Annual Wage in 2019 was \$128,025.
 472 Pharmacists are projected to grow an estimated 6.2 percent by 2028 with an
 473 increase of over 700 in employment for the same period. Pharmacists are
 474 considered a high-skill occupation, requiring a doctoral or professional degree.

475 The following table shows the specialized skills and certifications associated with the
 476 high growth occupations within this industry:

Specialized Skills	Certifications
Retail Industry Knowledge	Driver's License
Store Management	Automotive Service Excellence (ASE) Certification
Sales	Pharmacy Technician Certification Board (PTCB)
Merchandising	CDL Class A
Customer Service	Food Handler Certification
Scheduling	Pharmacist License
Store Operations	American Council of Pharmaceutical Education (ACPE)
Inventory Management	Project Management Certification
Retail Management	Food Safety Manager Certification
Sales Goals	OSHA Forklift Certification

477

478 **K. Finance and Insurance**

479 In the last five years, demand for Finance and Insurance industry workers in Texas
480 rose, according to the Quarterly Census of Employment and Wages. This data is for
481 NAICS code 52.

482 In the first quarter of 2020, the number of workers with Finance and Insurance
483 industry employers in Texas was 557,627, up 11.6 percent from the same quarter
484 in 2015.

485 Following the economic downturn of 2008-2009, the Finance and Insurance sector
486 has rebounded in Texas with rising demand for workers who interact with
487 customers as well as back-office workers.

488 The occupations within the Finance and Insurance industry that are projected to
489 add the most jobs and grow at the fastest rates from 2018 to 2028 are listed
490 below.

491 Sixteen of the 20 occupations shown made above the average 2018 annual Texas
492 wage of \$50,490.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Securities, Commodities, and Financial Services Sales Agents	39,491	47,151	7,660	19.4%	\$77,633
Loan Interviewers and Clerks	21,077	25,096	4,019	19.1%	\$42,865
Loan Officers ^S	17,413	20,776	3,363	19.3%	\$82,350
Financial Managers ^{S A}	8,965	11,658	2,693	30.0%	\$134,060
First-Line Supervisors of Office and Administrative Support Workers	20,664	23,117	2,453	11.9%	\$58,520
Software Developers, Applications ^{S A}	6,581	8,513	1,932	29.4%	\$107,341 ^{†‡}
Accountants and Auditors ^S	10,213	12,103	1,890	18.5%	\$83,226
General and Operations Managers ^A	8,918	10,619	1,701	19.1%	\$146,174
Financial Analysts ^S	8,477	10,104	1,627	19.2%	\$90,592 ^{†‡}
Operations Research Analysts ^S	4,045	5,493	1,448	35.8%	\$83,580
Office Clerks, General ^A	19,874	21,251	1,377	6.9%	\$40,047
Business Operations Specialists, All Other ^A	6,430	7,619	1,189	18.5%	\$80,363 ^{†‡}
Market Research Analysts and Marketing Specialists ^S	3,496	4,534	1,038	29.7%	\$78,097
Billing and Posting Clerks	6,279	7,278	999	15.9%	\$38,100
Brokerage Clerks	4,718	5,693	975	20.7%	\$53,280
Management Analysts ^A	5,352	6,294	942	17.6%	\$86,107
Bookkeeping, Accounting, and Auditing Clerks ^{S A}	12,954	13,768	814	6.3%	\$44,153
Compliance Officers ^A	3,804	4,515	711	18.7%	\$73,202
Computer User Support Specialists ^A	4,107	4,817	710	17.3%	\$53,338 [†]
Computer Systems Analysts ^{S A}	5,092	5,784	692	13.6%	\$93,002 [†]

493 **A - Apprenticeship** means an occupation approved for apprenticeship
494 by the United States Department of Labor, Bureau of Apprenticeship and Training.
495 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
496 with science, technology, engineering, and math.
497 **† - OES** occupation used for 2019 wages has a different occupation code.
498 **‡ - OES** occupation used for 2019 wages has a different occupation title.

499 Of the occupations listed, nine are identified as STEM occupations and all but eight
 500 require at least a bachelor's degree. The following are projected to grow more than
 501 25 percent by 2026.

- 502 • Financial Managers
- 503 • Software Developers, Applications
- 504 • Operations Research Analysts
- 505 • Market Research Analysts and Marketing Specialists

506 The following table shows the specialized skills and certifications associated with the
 507 high growth occupations within this industry:

Specialized Skills	Certifications
Customer Service	Certified Public Accountant (CPA)
Mortgage Lending	Mortgage License
Accounting	Driver's License
Project Management	Series 7
Budgeting	Series 6
Sales	Certified Information Systems Auditor (CISA)
Customer Contact	Insurance License
SQL	Life and Health Insurance License
Scheduling	Series 63
Mortgage Underwriting	Project Management Certification

508

509 **L. Professional, Scientific, and Technical**
510 **Services**

511 In the last five years, demand for Professional, Scientific, and Technical Services
512 workers in Texas continues with steady growth, according to the Quarterly Census
513 of Employment and Wages. This data is for NAICS code 54.

514 In the first quarter of 2020, the number of workers with Professional, Scientific, and
515 Technical Services industry employers in Texas was 853,440, up 20.2 percent from
516 the same quarter in 2015.

517 The ongoing shift to an American economy that focuses on services is seen in Texas
518 with above-average employment growth in the Professional, Scientific, and
519 Technical Services industry.

520 This professional services industry is also shifting to require workers with more
521 education than in the past, which is creating training challenges.

522 The occupations within the Professional, Scientific, and Technical Services industry
523 that are projected to add the most jobs from 2018 to 2028 are listed below.
524 Eighteen of the top 20 occupations earn more than the 2019 Texas average wage.

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Software Developers, Applications ^{S A}	30,459	42,808	12,349	40.5%	\$105,358 ^{†‡}
Accountants and Auditors ^S	42,448	54,243	11,795	27.8%	\$80,804
General and Operations Managers ^A	22,539	29,725	7,186	31.9%	\$149,562
Sales Representatives, Services, All Other	18,938	24,922	5,984	31.6%	\$70,588 ^{†‡}
Lawyers	28,739	34,607	5,868	20.4%	\$148,253
Computer Systems Analysts ^{S A}	20,014	25,802	5,788	28.9%	\$105,891 [†]
Management Analysts ^A	12,724	18,381	5,657	44.5%	\$97,938
Paralegals and Legal Assistants ^A	19,429	24,806	5,377	27.7%	\$53,069
Computer User Support Specialists ^{S A}	18,138	23,410	5,272	29.1%	\$54,502 [†]
Office Clerks, General ^A	33,591	37,999	4,408	13.1%	\$39,041
Market Research Analysts and Marketing Specialists ^S	7,993	12,278	4,285	53.6%	\$68,025
Business Operations Specialists, All Other ^A	13,170	17,450	4,280	32.5%	\$95,300 ^{†‡}
Financial Managers ^{S A}	7,316	10,759	3,443	47.1%	\$164,870
Software Developers, Systems Software ^{S A}	12,200	15,377	3,177	26.0%	\$105,358 ^{†‡}
Computer Occupations, All Other ^{S A}	9,410	12,339	2,929	31.1%	\$82,519 [†]
Computer and Information Systems Managers ^{S A}	8,548	11,346	2,798	32.7%	\$164,917
Bookkeeping, Accounting, and Auditing Clerks ^{S A}	20,545	23,294	2,749	13.4%	\$44,999
Network and Computer Systems Administrators ^{S A}	9,931	12,476	2,545	25.6%	\$90,693 [†]
Financial Analysts ^S	5,384	7,366	1,982	36.8%	\$89,406 ^{†‡}
Human Resources Specialists ^A	6,113	8,032	1,919	31.4%	\$68,851

525 **A - Apprenticiable occupation** means an occupation approved for apprenticeship
526 by the United States Department of Labor, Bureau of Apprenticeship and Training.

527 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
528 with science, technology, engineering, and math.

529 **† - OES** occupation used for 2019 wages has a different occupation code.

530 **‡ - OES** occupation used for 2019 wages has a different occupation title.

531 Of the occupations listed above, Software Developers and Software Quality
 532 Assurance Analysts and Testers, Accountants and Auditors, Computer Systems
 533 Analysts, Civil Engineers, Market Research Analysts and Marketing Specialists,
 534 Computer and Information Systems Managers, and Financial Managers are also
 535 STEM professions and earn considerably more than the 2019 Texas average wage.
 536 Management Analysts have an above average growth projected at 44.5 percent and
 537 earn nearly double the Texas average wage. The typical education required for
 538 these STEM professions is a bachelor’s degree.

539 The following table shows the specialized skills and certifications associated with the
 540 high growth occupations within this industry:

Specialized Skills	Certifications
Project Management	Security Clearance
Customer Service	Certified Public Accountant
SQL	Driver's License
Java	IT Infrastructure Library (ITIL) Certification
Software Development	Project Management Certification
Business Process	CompTIA Security+
Sales	Project Management Professional (PMP)
Budgeting	Licensed Attorney
Oracle	Certified Information Systems Professional (CISS)
Scheduling	Paralegal Certification

541

542 **M. Accommodation and Food Services**

543 In the last five years, demand for Accommodation and Food Services workers in
 544 Texas has grown, according to Quarterly Census of Employment and Wages. This
 545 data is for NAICS code 72.

546 In the first quarter of 2020, the number of workers at Accommodation and Food
 547 Services industry employers in Texas was 1.2 million, up 14.8 percent from the
 548 same quarter in 2015.

549 Annually, employment in the large Accommodation and Food Services industry has
 550 expanded continuously from late 2010 through February 2020. An increasing
 551 population is partly responsible for the growth of this industry. Above-average
 552 employment growth in this sector has been spread across many occupations, whose
 553 pay ranges are broad.

554 The occupations within Accommodation and Food Services employers that are
 555 projected to add the most jobs and grow at the fastest rates from 2018 to 2028 are
 556 listed below:

Occupational Title	Annual Average Employment 2018	Annual Average Employment 2028	Number Change 2018-2028	Percent Growth 2018-2028	Average Annual Wage 2019
Food Service Managers ^A	8,963	10,648	1,685	18.8%	\$57,652
Chefs and Head Cooks ^A	4,592	5,534	942	20.5%	\$57,710
Sales Representatives, Services, All Other	2,724	3,207	483	17.7%	\$54,379 ^{†‡}
First-Line Supervisors of Office and Administrative Support Workers	2,488	2,854	366	14.7%	\$46,150
Meeting, Convention, and Event Planners	1,157	1,366	209	18.1%	\$48,652
Accountants and Auditors ^S	1,080	1,289	209	19.4%	\$70,391
Public Relations Specialists ^A	798	948	150	18.8%	\$49,600
Human Resources Specialists ^A	753	871	118	15.7%	\$62,391
Training and Development Specialists ^A	569	680	111	19.5%	\$53,937
First-Line Supervisors of Mechanics, Installers, and Repairers	483	578	95	19.7%	\$59,432

557 **A - Apprenticeable occupation** means an occupation approved for apprenticeship
 558 by the United States Department of Labor, Bureau of Apprenticeship and Training.

559 **S - STEM** is defined to consist of 176 occupations related to functional areas dealing
 560 with science, technology, engineering, and math.

561 **† - OES** occupation used for 2019 wages has a different occupation code.

562 **‡ - OES** occupation used for 2019 wages has a different occupation title.

563 The typical educational requirement for five out of 10 occupations listed is a
 564 bachelor’s degree. Food Service Managers earned an annual average wage of
 565 \$57,652. There is one STEM occupation, Accounts and Auditors, in the high growth
 566 category for this industry.

567 The following table shows the specialized skills and certifications associated with the
 568 high growth occupations within this industry:

Specialized Skills	Certifications
Restaurant Management	Driver's License
Scheduling	ServSafe
Cost Control	Food Handler Certification
Guest Services	Food Service Certification
Food Safety	Food Safety Manager Certification
Retail Industry Knowledge	Certified Dietary Manager
Cooking	Alcohol Server Certification
Budgeting	First Aid CPR AED
Staff Management	Registered Dietitian
Inventory Management	Certified Public Accountant (CPA)

569

570

571 **IV. Conclusion**

572 TWC reviewed the top growth occupations across the key industries for this report
573 as required by statute.

574 TWC tracks approximately 800 different occupations in and employment is
575 projected to increase in nearly all those occupations based on the 2018-2028
576 projections.

577 Economic changes can impact employment in all industries in Texas. Still, demand
578 across occupations varies depending on the need of employers in different
579 industries and in different locations.

580 It is important to note that Texas employers continue to experience the retirements
581 of the Baby Boom generation of workers. The workforce for many industries in
582 Texas has been dominated by Baby Boomer workers, many of whom are now in
583 their sixties and had delayed retirement but now are starting to exit the workforce.

584 This demographic shift is increasing demand for many occupations. These
585 workforce demographic and economic changes are occurring as Texas employers
586 also have enhanced their employment requirements. Hiring managers are looking
587 for more workers while also demanding workers with more technical skills, more
588 work experience, and more education than in the past.

589 Such trends lead to rising demand for two kinds of workers in the high-demand,
590 high-wage fields:

- 591 a) Jobs requiring a bachelor's degree and specific technical skill training.
- 592 b) Jobs requiring some form of post-secondary education, specific technical skill
593 training, and additional on-the-job training.

594 These trends show no signs of slowing down in Texas.

595

V. Methodology

596

597 The Texas Workforce Commission collects data and makes projections on
598 employment by industry as part of its contracts with the U.S. Bureau of Labor
599 Statistics (BLS) and the Employment and Training Division of the U.S. Department
600 of Labor (DOL). In accordance with the statistical methodology established by the
601 DOL and the federal Office of Management and Budget, the TWC calculated
602 employment data for approximately 800 occupations to analyze pay ranges and
603 growth trends for these different occupations.

604 TWC measures many aspects of the Texas labor market. The number of workers
605 employed and wages paid by industry are tracked by the Quarterly Census of
606 Employment and Wages (QCEW). This program utilizes data from TWC's
607 Unemployment Insurance program and is updated every three months. Wage
608 information for specific occupations is gathered from surveys sent to sampled
609 employers in the Occupational Employment Statistics (OES) program, which
610 updates each year.

611 Employers supply the data for both of these programs, and TWC analyzed the
612 employment and wage data from both the QCEW and OES programs. This data is
613 further supplemented by monthly employment data from the Current Employment
614 Statistics program surveys of employers in Texas. All of these programs serve to
615 validate each other in identifying staffing trends with employers.

616 TWC then examines the number of workers by industry as the basis for producing
617 industry employment projections. TWC produces these industry employment
618 projections and corresponding occupational employment projections to help job
619 seekers, students, parents, policy makers, and company hiring managers better
620 understand their regional labor market. Occupational employment growth is based
621 on industry growth and other variables, which will include population growth and
622 changing skill requirements by employers.

623 The current long-term projections were completed in September 2020 for the
624 period of 2018 to 2028. This report also includes industry employment level
625 comparisons from QCEW data over the most recent five years to give context, as
626 Section II of this report shows.

627 This report focuses on occupations with high demand or significant job growth and
628 high pay rates as required by statute. Not all occupations are specific to a single
629 industry.

630 For determination of specialized skills, as well as industry certifications, TWC used
631 data from Burning Glass's Labor Insight for fiscal year 2020. The job listings data
632 captured by Labor Insight is from online ads from a broad and comprehensive set of
633 job boards.

634 For topics regarding occupational education requirements, TWC considered typical
635 education identified in the 2018-2028 long term occupational projections. For

636 middle-skilled occupations, typical education that includes associate’s degrees,
637 postsecondary nondegree awards, some college no degree, and high school diploma
638 or equivalent with long term typical on the job training or apprenticeship were
639 included. For higher skilled occupations, bachelor’s degrees, master’s degrees, and
640 doctoral or professional degrees were considered.

641 For occupations heavily involved with science, technology, engineering, and math
642 (STEM), TWC used Labor Market and Career Information’s web application Texas
643 Labor Analysis.

644 Occupations considered apprenticeable were derived from the U.S. Department of
645 Labor’s Employment and Training Administration apprenticeable occupations listing,
646 updated August 07, 2020.

647 There is no official definition of a “high-wage” job and the term may be interpreted
648 differently by individuals depending on their age, work history, education level,
649 geographic setting, ability to stay at a job for the long term, and even their
650 expectations in life. The median pay across all occupations in Texas is \$38,013 a
651 year, according to the 2019 Occupational Employment Statistics estimates of Texas
652 employers which represents the most recent data for the time of this publication.
653 For the purposes of this report, TWC only looked at occupations where the annual
654 average pay was estimated to be more than the statewide median, \$38,013 a year
655 with expected employment change greater than or equal 400 with up to 20
656 occupations per industry. Industries with few occupations meeting the employment
657 change threshold of 400 were displayed with at least ten occupations.