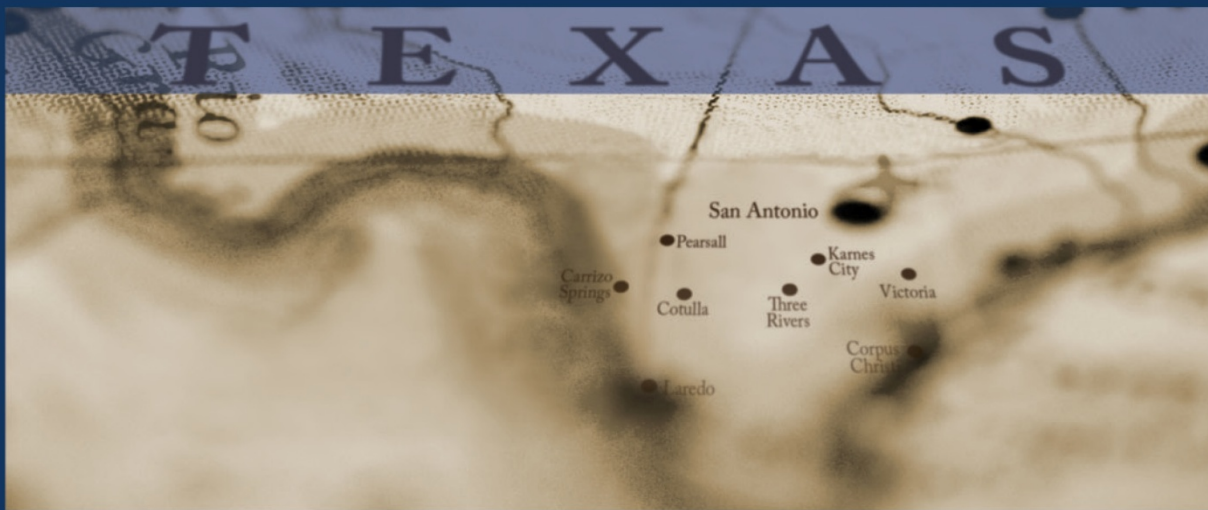


OCTOBER 2012

Workforce Analysis for the Eagle Ford Shale



Prepared by:
Center for Community and Business Research
The University of Texas at San Antonio
Institute for Economic Development



Acknowledgements

This study was performed by The University of Texas at San Antonio Institute for Economic Development's Center for Community and Business Research. The project was supported with funding from the America's Natural Gas Alliance. Any findings, conclusions or opinions are those of the authors and not necessarily those reflected by The University of Texas at San Antonio or the America's Natural Gas Alliance.

This report was prepared by Javier Oyakawa, Hisham Eid, Jennifer Castillo, Emmanuel Tomes, Storm Wald, Iliana Sanchez, Racquel Rivera, and David Morua, and Thomas Tunstall, Ph.D.

Contents

Acknowledgements.....	2
Executive summary.....	11
14-County Area Top 35 Occupations Impacted 2011	14
Top 35 Occupations: Direct and indirect impacts 2011.....	14
Top 35 Occupations: Total impacts (direct, indirect and induced) 2011.....	15
Top 35 Occupations: Direct and indirect impacts 2021.....	16
Top 35 Occupations: Total Impacts (direct, indirect and induced) 2021.....	17
BLS Postsecondary Training and Education Categories	24
Regional Impact in the 14-County Area	40
Direct and Indirect Impacts in the 14-County Area	44
2011 Impacts.....	48
2021 Projections and Analysis	52
Comparisons of Eagle Ford Direct and Indirect Impacts with the Year 2010	55
14-County Area Top 35 Occupations Impacted 2011	60
Top 35 Occupations: Direct and indirect impacts 2011.....	60
Top 35 Occupations: Total impacts 2011.....	61
14-County Area Top 35 Occupations Impacted 2021	62
Top 35 Occupations: Direct and indirect impacts 2021.....	62
Top 35 Occupations: Total Impacts 2021.....	63
Atascosa County.....	64
Atascosa Direct and Indirect Impacts	66
Atascosa Top 35 Occupations Impacted 2011	72
Top 35 Occupations: Direct and indirect impacts 2011.....	72
Top 35 Occupations: Total impacts 2011.....	73

Atascosa Top 35 Occupations Impacted 2021	74
Top 35 Occupations: Direct and indirect impacts 2021	74
Top 35 Occupations: Total impacts 2021	75
Bee County	76
Bee Direct and Indirect Impacts	78
Bee Top 35 Occupations Impacted 2011	84
Top 35 Occupations: Direct and indirect impacts 2011	84
Top 35 Occupations: Total impacts 2011	85
Bee Top 35 Occupations Impacted 2021	86
Top 35 Occupations: Direct and indirect impacts 2021	86
Top 35 Occupations: Total impacts 2021	87
DeWitt County	88
DeWitt Direct and Indirect Impacts	90
DeWitt Top 35 Occupations Impacted 2011	96
Top 35 Occupations: Direct and indirect impacts 2011	96
Top 35 Occupations: Total impacts 2011	97
DeWitt Top 35 Occupations Impacted 2021	98
Top 35 Occupations: Direct and indirect impacts 2021	98
Top 35 Occupations: Total impacts 2021	99
Dimmit County	100
Dimmit Direct and Indirect Impacts	102
Dimmit Top 35 Occupations Impacted 2011	108
Top 35 Occupations: Direct and indirect impacts 2011	108
Top 35 Occupations: Total impacts 2011	109
Dimmit Top 35 Occupations Impacted 2021	110

Top 35 Occupations: Direct and indirect impacts 2021.....	110
Top 35 Occupations: Total impacts 2021.....	111
Frio County.....	112
Frio Direct and Indirect Impacts	114
Frio Top 35 Occupations Impacted 2011	120
Top 35 Occupations: Direct and indirect impacts 2011.....	120
Top 35 Occupations: Total impacts 2011.....	121
Frio Top 35 Occupations Impacted 2021	122
Top 35 Occupations: Direct and indirect impacts 2021.....	122
Top 35 Occupations: Total impacts 2021.....	123
Gonzales County	124
Gonzales Direct and Indirect Impacts	126
Gonzales Top 35 Occupations Impacted 2011.....	132
Top 35 Occupations: Direct and indirect impacts 2011.....	132
Top 35 Occupations: total impacts 2011	133
Gonzales Top 35 Occupations Impacted 2021.....	134
Top 35 Occupations: Direct and indirect impacts 2021.....	134
Top 35 Occupations: Total impacts 2021.....	135
Karnes County	136
Karnes Direct and Indirect Impacts.....	138
Karnes Top 35 Occupations Impacted 2011	144
Top 35 Occupations: Direct and indirect impacts 2011.....	144
Top 35 Occupations: Total impacts 2011.....	145
Karnes Top 35 Occupations Impacted 2021	146
Top 35 Occupations: Direct and indirect impacts 2021.....	146

Top 35 Occupations: Total impacts 2021.....	147
La Salle County	148
La Salle Direct and Indirect Impacts.....	150
La Salle Top 35 Occupations Impacted 2011	156
Top 35 Occupations: Direct and indirect impacts 2011.....	156
Top 35 Occupations: Total impacts 2011.....	157
La Salle Top 35 Occupations Impacted 2021	158
Top 35 Occupations: Direct and indirect impacts 2021.....	158
Top 35 Occupations: Total impacts 2021.....	159
Live Oak County	160
Live Oak Direct and Indirect Impacts	162
Live Oak Top 35 Occupations Impacted 2011.....	168
Top 35 Occupations: Direct and indirect impacts 2011.....	168
Top 35 Occupations: Total impacts 2011.....	169
Live Oak Top 35 Occupations Impacted 2021.....	170
Top 35 Occupations: Direct and indirect impacts 2021.....	170
Top 35 Occupations: Total impacts 2021.....	171
Maverick County	172
Maverick Direct and Indirect Impacts.....	174
Maverick Top 35 Occupations Impacted 2011	180
Top 35 Occupations: Direct and indirect impacts 2011.....	180
Top 35 Occupations: Total impacts 2011.....	181
Maverick Top 35 Occupations Impacted 2021	182
Top 35 Occupations: Direct and indirect impacts 2021.....	182
Top 35 Occupations: Total impacts 2021.....	183

McMullen County	184
McMullen Direct and Indirect Impacts	186
McMullen Top 35 Occupations Impacted 2011.....	192
Top 35 Occupations: Direct and indirect impacts 2011.....	192
Top 35 Occupations: Total impacts 2011.....	193
McMullen Top 35 Occupations Impacted 2021.....	194
Top 35 Occupations: Direct and indirect impacts 2021.....	194
Top 35 Occupations: Total impacts 2021.....	195
Webb County	196
Webb Direct and Indirect Impacts	198
Webb Top 35 Occupations Impacted 2011.....	204
Top 35 Occupations: Direct and indirect impacts 2011.....	204
Top 35 Occupations: Total impacts 2011.....	205
Webb Top 35 Occupations Impacted 2021.....	206
Top 35 Occupations: Direct and indirect impacts 2021.....	206
Top 35 Occupations: Total impacts 2021.....	207
Wilson County.....	208
Wilson Direct and Indirect Impacts.....	210
Wilson Top 35 Occupations Impacted 2011	216
Top 35 Occupations: Direct and indirect impacts 2011.....	216
Top 35 Occupations: Total impacts 2011.....	217
Wilson Top 35 Occupations Impacted 2021	218
Top 35 Occupations: Direct and indirect impacts 2021.....	218
Top 35 Occupations: Total impacts 2021.....	219
Zavala County.....	220

Zavala Direct and Indirect Impacts	222
Zavala Top 35 Occupations Impacted 2011	228
Top 35 Occupations: Direct and indirect impacts 2011	228
Top 35 Occupations: Total impacts 2011	229
Zavala Top 35 Occupations Impacted 2021	230
Top 35 Occupations: Direct and indirect impacts 2021	230
Top 35 Occupations: Total impacts 2021	231
Bexar County	232
Bexar Direct and Indirect Impacts	234
Bexar Top 35 Occupations Impacted 2011	240
Top 35 Occupations: Direct and indirect impacts 2011	240
Top 35 Occupations: Total impacts 2011	241
Bexar Top 35 Occupations Impacted 2021	242
Top 35 Occupations: Direct and indirect impacts 2021	242
Top 35 Occupations: Total impacts 2021	243
Jim Wells County	244
Jim Wells Direct and Indirect Impacts	246
Jim Wells Top 35 Occupations Impacted 2011	252
Top 35 Occupations: Direct and indirect impacts 2011	252
Top 35 Occupations: Total impacts 2011	253
Jim Wells Top 35 Occupations Impacted 2021	254
Top 35 Occupations: Direct and indirect impacts 2021	254
Top 35 Occupations: Total impacts 2021	255
Nueces County	256
Nueces Direct and Indirect Impacts	258

Nueces Top 35 Occupations Impacted 2011	264
Top 35 Occupations: Direct and indirect impacts 2011.....	264
Top 35 Occupations: Total impacts 2011.....	265
Nueces Top 35 Occupations Impacted 2021	266
Top 35 Occupations: Direct and indirect impacts 2021.....	266
Top 35 Occupations: Total impacts 2021.....	267
San Patricio County.....	268
San Patricio Direct and Indirect Impacts.....	270
San Patricio Top 35 Occupations Impacted 2011	276
Top 35 Occupations: Direct and indirect impacts 2011.....	276
Top 35 Occupations: Total impacts 2011.....	277
San Patricio Top 35 Occupations Impacted 2021	278
Top 35 Occupations: Direct and indirect impacts 2021.....	278
Top 35 Occupations: Total impacts 2021.....	279
Uvalde County.....	280
Uvalde Direct and Indirect Impacts	282
Uvalde Top 35 Occupations Impacted 2011	288
Top 35 Occupations: Direct and indirect impacts 2011.....	288
Top 35 Occupations: Total impacts 2011.....	289
Uvalde Top 35 Occupations Impacted 2021	290
Top 35 Occupations: Direct and indirect impacts 2021.....	290
Top 35 Occupations: Total impacts 2021.....	291
Victoria County	292
Victoria Direct and Indirect Impacts	294
Victoria Top 35 Occupations Impacted 2011.....	300

Top 35 Occupations: Direct and indirect impacts 2011.....	300
Top 35 Occupations: Total impacts 2011.....	301
Victoria Top 35 Occupations Impacted 2021.....	302
Top 35 Occupations: Direct and indirect impacts 2021.....	302
Top 35 Occupations: Total impacts 2021.....	303

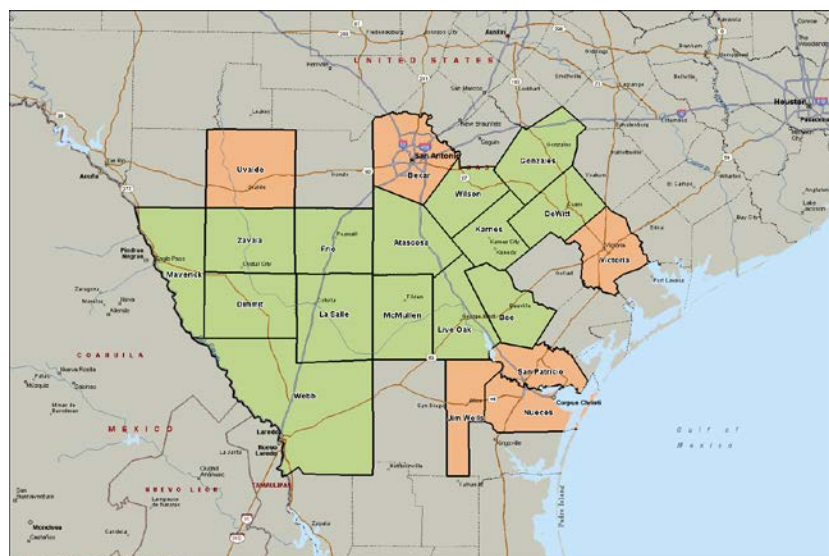
Executive summary

The 20 counties within Texas directly and indirectly involved in the development of the hydrocarbon producing formation known as the Eagle Ford Shale (EFS) have witnessed an increased supply of EFS-related jobs within certain industries and requiring specific job training. These education and workforce impacts vary based on the phase of EFS development occurring in different parts of the region, and affect the demand for certain occupations and training in each county.

For this comprehensive study of the EFS workforce impacts, the short-term effects are first analyzed by evaluating the 2010-2011 one-year occupational and educational impacts upon each county. Next, the long-term effects are assessed by comparing the 2011-2021 ten-year Eagle Ford Shale impacts upon each county's occupational and educational composition. The 14 producing counties examined in this report are Atascosa, Bee, DeWitt, Dimmit, Frio, Gonzales, Karnes, La Salle, Live Oak, Maverick, McMullen, Webb, Wilson, and Zavala. The 6 non-producing counties are Bexar, Jim Wells, Nueces, San Patricio, Uvalde, and Victoria.

In order to derive each county's workforce impact by county, we examined the direct, indirect, and induced economic impacts by county in the 20-county region. Direct impacts primarily consist of the actual production and employment by firms operating directly in the EFS. Indirect impacts include the operational and personnel expenditure made by suppliers, or inter-industry transactions spurred by the direct economic activity. Induced impacts include income flows created when workers spend money on various goods such as food, housing, and other products or services in the counties the counties under analysis.

The development of the Eagle Ford Shale has distinct phases, during which individual industries will experience varying levels of labor demand and evolving types of labor demanded. Thus, education and training requirements for workers will need to remain flexible enough to accommodate the vacillating needs of industry. For example, **during the exploration phase** counties will see a rise in the *need for occupations dealing with mineral leasing, site construction/management, drilling rig support, and material transport*. **As companies shift into the production and processing phase** of operations, they *require a workforce composed of business management, administrative support and the processing of gas, oil and condensates occupations*.



14-County Region:

Short- and long-term impacts on jobs in the 14 Eagle Ford counties that are actively producing are summarized below.

2011 Total Impacts: 38,000 jobs were supported by Eagle Ford shale.

Key Occupational Impacts: **Most Significant:**

- **Construction and extraction**
- **Office support**

Also Significant:

- **Transportation**
- **Service¹**
- **Business management**
- **Professional occupations²**

2021

Total Impacts: 82,644 jobs are expected to be supported in 2021.

Key Occupational Impacts: **Most Significant:**

- **Administrative support**
- **Professional**
- **Business management**
- **Service occupations**

Also Significant:

- **Transportation**
- **Construction and extraction (still showing significance in 2021)**

- Direct and Indirect Impacts: 2010-2011:

Between 2010 and 2011, construction and extraction occupations show the largest increase in the 14-County region. The direct and indirect impacts come from occupations dealing with exploration, drilling, production and midstream development. Eagle Ford shale activity provides a total occupational impact of 11.4 percent in the 14-county region. The occupations that saw the largest increase in relevance were construction and extraction (already mentioned), production occupations, architecture

¹ **Service occupations** include food preparation and serving, personal care and service, health care support, building/grounds cleaning and maintenance, and protective service.

² **Professional occupations** include health care practitioners and technical occupations, education/training/library occupations, computer and mathematical science, arts/design/entertainment/sports and media, architecture and engineering, life/physical/social sciences, and legal occupations.

and engineering occupations, transportation and installation, maintenance and repair occupations. Legal, management, physical and social science, office support, and computer and mathematical sciences were also significantly impacted relative to their 2010 levels.

The following two tables show a detailed breakdown of occupations in the 14-county area for **2011**. The first table includes the **direct and indirect effects only**. The second table shows the impact for all jobs, which consists of **induced effects as well as direct and indirect effects – the total multiplier effect across the 14- county South Texas economy**.

14-County Area Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts 14-County Area Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			26,481	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	1,778	6.7%
2	47-2031	Carpenters	1,170	4.4%
3	47-2061	Construction laborers	1,110	4.2%
4	47-2073	Operating engineers and other construction equipment operators	1,033	3.9%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	905	3.4%
6	43-9061	Office clerks, general	692	2.6%
7	53-7032	Excavating and loading machine and dragline operators	684	2.6%
8	43-3031	Bookkeeping, accounting, and auditing clerks	581	2.2%
9	11-1021	General and operations managers	569	2.1%
10	53-7062	Laborers and freight, stock, and material movers, hand	563	2.1%
11	49-9042	Maintenance and repair workers, general	486	1.8%
12	13-2011	Accountants and auditors	456	1.7%
13	43-6011	Executive secretaries and administrative assistants	433	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	428	1.6%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	408	1.5%
16	11-9021	Construction managers	357	1.3%
17	53-7051	Industrial truck and tractor operators	299	1.1%
18	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	290	1.1%
19	49-3042	Mobile heavy equipment mechanics, except engines	278	1.1%
20	43-4051	Customer service representatives	274	1.0%
21	47-5051	Rock splitters, quarry	257	1.0%
22	23-1011	Lawyers	250	0.9%
23	43-1011	First-line supervisors/managers of office and administrative support workers	249	0.9%
24	47-5041	Continuous mining machine operators	228	0.9%
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	212	0.8%
26	47-5042	Mine cutting and channeling machine operators	202	0.8%
27	51-1011	First-line supervisors/managers of production and operating workers	201	0.8%
28	51-4121	Welders, cutters, solderers, and brazers	190	0.7%
29	43-4171	Receptionists and information clerks	187	0.7%
30	53-3033	Truck drivers, light or delivery services	185	0.7%
31	13-1199	Business operation specialists, all other	177	0.7%
32	49-9041	Industrial machinery mechanics	168	0.6%
33	13-1051	Cost estimators	166	0.6%
34	47-2111	Electricians	166	0.6%
35	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	166	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts (direct, indirect and induced) 2011

Ranking	SOC Occupation Code	Total Impacts 14-County Area Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			38,000	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	1,864	4.9%
2	47-2031	Carpenters	1,192	3.1%
3	47-2061	Construction laborers	1,127	3.0%
4	47-2073	Operating engineers and other construction equipment operators	1,036	2.7%
5	43-9061	Office clerks, general	969	2.5%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	914	2.4%
7	41-2031	Retail salespersons	811	2.1%
8	43-3031	Bookkeeping, accounting, and auditing clerks	748	2.0%
9	11-1021	General and operations managers	712	1.9%
10	53-7062	Laborers and freight, stock, and material movers, hand	705	1.9%
11	41-2011	Cashiers, except gaming	689	1.8%
12	53-7032	Excavating and loading machine and dragline operators	685	1.8%
13	49-9042	Maintenance and repair workers, general	596	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	575	1.5%
15	43-6011	Executive secretaries and administrative assistants	564	1.5%
16	13-2011	Accountants and auditors	546	1.4%
17	43-4051	Customer service representatives	500	1.3%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	409	1.1%
19	43-1011	First-line supervisors/managers of office and administrative support workers	379	1.0%
20	11-9021	Construction managers	362	1.0%
21	35-3021	Combined food preparation and serving workers, including fast food	358	0.9%
22	35-3031	Waiters and waitresses	350	0.9%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	350	0.9%
24	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	348	0.9%
25	29-1111	Registered nurses	343	0.9%
26	43-4171	Receptionists and information clerks	332	0.9%
27	53-7051	Industrial truck and tractor operators	325	0.9%
28	43-5081	Stock clerks and order fillers	308	0.8%
29	23-1011	Lawyers	288	0.8%
30	49-3042	Mobile heavy equipment mechanics, except engines	281	0.7%
31	53-3033	Truck drivers, light or delivery services	258	0.7%
32	47-5051	Rock splitters, quarry	257	0.7%
33	37-2012	Maids and housekeeping cleaners	247	0.6%
34	13-1199	Business operation specialists, all other	246	0.6%
35	39-9021	Personal and home care aides	231	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following two tables show a detailed breakdown of occupations in the 14-county area for **2021**. The first table includes the projected **direct and indirect effects only**. The second table shows the projected impact for all jobs, which consists of **induced effects as well as direct and indirect effects – again, the total projected multiplier effect across the 14-county South Texas economy in 2021**. 14-County Area Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts 14-County Area Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			54,693	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	2,518	4.6%
2	13-2011	Accountants and auditors	1,645	3.0%
3	43-9061	Office clerks, general	1,582	2.9%
4	43-3031	Bookkeeping, accounting, and auditing clerks	1,534	2.8%
5	11-1021	General and operations managers	1,484	2.7%
6	47-2073	Operating engineers and other construction equipment operators	1,310	2.4%
7	43-6011	Executive secretaries and administrative assistants	1,208	2.2%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers	1,207	2.2%
9	51-8093	Petroleum pump system operators, refinery operators, and gaugers	1,193	2.2%
10	47-2061	Construction laborers	1,134	2.1%
11	43-6014	Secretaries, except legal, medical, and executive	1,112	2.0%
12	47-2031	Carpenters	1,091	2.0%
13	53-7073	Wellhead pumpers	1,066	1.9%
14	17-2171	Petroleum engineers	1,050	1.9%
15	49-9042	Maintenance and repair workers, general	915	1.7%
16	53-7062	Laborers and freight, stock, and material movers, hand	889	1.6%
17	53-7032	Excavating and loading machine and dragline operators	869	1.6%
18	47-5071	Roustabouts, oil and gas	797	1.5%
19	19-2042	Geoscientists, except hydrologists and geographers	792	1.4%
20	43-4051	Customer service representatives	615	1.1%
21	13-1199	Business operation specialists, all other	615	1.1%
22	19-4041	Geological and petroleum technicians	610	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	571	1.0%
24	23-1011	Lawyers	539	1.0%
25	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	520	1.0%
26	11-3031	Financial managers	492	0.9%
27	51-1011	First-line supervisors/managers of production and operating workers	490	0.9%
28	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	487	0.9%
29	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	467	0.9%
30	49-3042	Mobile heavy equipment mechanics, except engines	427	0.8%
31	53-7051	Industrial truck and tractor operators	412	0.8%
32	43-4171	Receptionists and information clerks	411	0.8%
33	33-9032	Security guards	395	0.7%
34	49-9041	Industrial machinery mechanics	366	0.7%
35	13-2051	Financial analysts	363	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total Impacts (direct, indirect and induced) 2021

Ranking	SOC Occupation Code	Total Impacts 14-County Area Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			82,644	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	2,730	3.3%
2	43-9061	Office clerks, general	2,253	2.7%
3	41-2031	Retail salespersons	1,966	2.4%
4	43-3031	Bookkeeping, accounting, and auditing clerks	1,937	2.3%
5	13-2011	Accountants and auditors	1,861	2.3%
6	11-1021	General and operations managers	1,830	2.2%
7	41-2011	Cashiers, except gaming	1,672	2.0%
8	43-6011	Executive secretaries and administrative assistants	1,524	1.8%
9	43-6014	Secretaries, except legal, medical, and executive	1,470	1.8%
10	47-2073	Operating engineers and other construction equipment operators	1,318	1.6%
11	53-7062	Laborers and freight, stock, and material movers, hand	1,230	1.5%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	1,230	1.5%
13	51-8093	Petroleum pump system operators, refinery operators, and gaugers	1,193	1.4%
14	49-9042	Maintenance and repair workers, general	1,189	1.4%
15	47-2061	Construction laborers	1,174	1.4%
16	43-4051	Customer service representatives	1,156	1.4%
17	47-2031	Carpenters	1,146	1.4%
18	53-7073	Wellhead pumpers	1,066	1.3%
19	17-2171	Petroleum engineers	1,050	1.3%
20	43-1011	First-line supervisors/managers of office and administrative support workers	885	1.1%
21	53-7032	Excavating and loading machine and dragline operators	871	1.1%
22	35-3021	Combined food preparation and serving workers, including fast food	860	1.0%
23	35-3031	Waiters and waitresses	836	1.0%
24	29-1111	Registered nurses	826	1.0%
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	800	1.0%
26	47-5071	Roustabouts, oil and gas	797	1.0%
27	19-2042	Geoscientists, except hydrologists and geographers	794	1.0%
28	13-1199	Business operation specialists, all other	782	0.9%
29	43-4171	Receptionists and information clerks	765	0.9%
30	43-5081	Stock clerks and order fillers	713	0.9%
31	23-1011	Lawyers	630	0.8%
32	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	628	0.8%
33	19-4041	Geological and petroleum technicians	610	0.7%
34	11-3031	Financial managers	610	0.7%
35	37-2012	Maids and housekeeping cleaners	608	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following table highlights the types of jobs that have been most significantly affected by EFS development. Employment in the EFS area from 2010 to 2011 indicates a significant increase and change in workforce composition that occurred in just one year.

Occupation Code	Direct and Indirect Impacts: 2010-2011	Employment 2010	Occupational Impact 2011	Percentage Impact
47-0000	Construction and extraction occupations	11,115	6,564	59.1%
51-0000	Production occupations	7,362	1,968	26.7%
17-0000	Architecture and engineering occupations	3,622	865	23.9%
53-0000	Transportation and material moving occupations	20,406	4,526	22.2%
49-0000	Installation, maintenance, and repair occupations	8,399	1,695	20.2%
23-0000	Legal occupations	2,778	425	15.3%
11-0000	Management occupations	14,073	1,673	11.9%
19-0000	Life, physical, and social science occupations	3,058	330	10.8%
43-0000	Office and administrative support occupations	39,721	4,274	10.8%
15-0000	Computer and mathematical science occupations	3,966	397	10.0%
13-0000	Business and financial operations occupations	15,295	1,463	9.6%
37-0000	Building and grounds cleaning and maintenance occupations	6,337	384	6.1%
27-0000	Arts, design, entertainment, sports, and media occupations	1,899	109	5.7%
41-0000	Sales and related occupations	22,065	1,076	4.9%
35-0000	Food preparation and serving related occupations	15,562	316	2.0%
33-0000	Protective service occupations	9,553	177	1.9%
39-0000	Personal care and service occupations	9,781	107	1.1%
29-0000	Healthcare practitioners and technical occupations	10,594	70	0.7%
25-0000	Education, training, and library occupations	3,234	16	0.5%
21-0000	Community and social services occupations	6,677	16	0.2%
31-0000	Healthcare support occupations	8,003	17	0.2%
45-0000	Farming, fishing, and forestry occupations	9,090	13	0.1%
	Total	232,590	26,481	11.4%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

- Direct and Indirect Impacts 2010-2021:

Between 2010 and 2021 construction and extraction occupations will continue to be the most relevant in the 14-county region. However, the drilling and production phases are expected to be much more evenly distributed. Architecture and engineering, physical and social science and production occupations also show large increases relative to their 2010 levels. Overall, between 2010 and 2021, Eagle Ford development is estimated to impact occupations within the 14-county region by 23.5 percent. These estimates can serve as a key policy tool for long-term growth planning in the projected occupations.

Occupation Code	Direct and Indirect Impacts: 2010-2021	Employment 2010	Occupational Impact 2021	Percentage Impact
47-0000	Construction and extraction occupations	11,115	8,681	78.1%
17-0000	Architecture and engineering occupations	3,622	2,764	76.3%
19-0000	Life, physical, and social science occupations	3,058	1,766	57.8%
51-0000	Production occupations	7,362	4,195	57.0%
15-0000	Computer and mathematical science occupations	3,966	1,668	42.1%
53-0000	Transportation and material moving occupations	20,406	7,732	37.9%
23-0000	Legal occupations	2,778	1,042	37.5%
49-0000	Installation, maintenance, and repair occupations	8,399	3,039	36.2%
11-0000	Management occupations	14,073	4,141	29.4%
13-0000	Business and financial operations occupations	15,295	4,470	29.2%
43-0000	Office and administrative support occupations	39,721	9,898	24.9%
27-0000	Arts, design, entertainment, sports, and media occupations	1,899	268	14.1%
37-0000	Building and grounds cleaning and maintenance occupations	6,337	880	13.9%
41-0000	Sales and related occupations	22,065	2,410	10.9%
33-0000	Protective service occupations	9,553	481	5.0%
35-0000	Food preparation and serving related occupations	15,562	685	4.4%
39-0000	Personal care and service occupations	9,781	233	2.4%
29-0000	Healthcare practitioners and technical occupations	10,594	192	1.8%
25-0000	Education, training, and library occupations	3,234	40	1.2%
21-0000	Community and social services occupations	6,677	41	0.6%
31-0000	Healthcare support occupations	8,003	43	0.5%
45-0000	Farming, fishing, and forestry occupations	9,090	25	0.3%
	Total	232,590	54,694	23.5%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

For the employment in 2010, the following table shows the level of training or education required for jobs prior to the onset of the current level of EFS activity.

14-County Study Area, Educational Structure		
Number of jobs	Educational Attainment	Percentage
86,274	Short-term on-the-job training	37.1%
39,180	Moderate-term on-the-job training	16.8%
29,589	Work experience in a related occupation	12.7%
25,394	Bachelor's degree	10.9%
12,881	Bachelor's or higher degree, plus work experience	5.5%
12,383	Long-term on-the-job training	5.3%
10,612	Postsecondary vocational award	4.6%
9,243	Associate degree	4.0%
3,623	Master's degree	1.6%
2,778	First professional degree	1.2%
634	Doctoral degree	0.3%
232,590	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The **additional** jobs supported by the EFS development in a single year from 2010 to 2011 shown in the table below indicate an increased need for moderate-term on-the-job training (1 to 12 months of combined on-the-job experience and informal training – see call out box below for additional definitions).

Eagle Ford Shale Direct and Indirect Impacts 14-County, Educational Structure 2011		
Number of jobs	Educational Attainment	Percentage
8,235	Moderate-term on-the-job training	31.1%
6,828	Short-term on-the-job training	25.8%
2,977	Work experience in a related occupation	11.2%
2,779	Long-term on-the-job training	10.5%
2,754	Bachelor's degree	10.4%
1,203	Bachelor's or higher degree, plus work experience	4.5%
664	Postsecondary vocational award	2.5%
629	Associate degree	2.4%
258	First professional degree	1.0%
149	Master's degree	0.6%
6	Doctoral degree	0.0%
26,481	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

For **projected employment in 2021**, the table below highlights the what effect the occupational impact will have on training and education needs in the future, **which can be used a planning tool for educators and policymakers** at the county, as well as state and regional levels. There are significant increases in the ***need for training and education at all levels*** in order to support the continued EFS development.

Eagle Ford Shale Direct and Indirect Impacts 14-County, Educational Structure 2021		
Number of jobs	Educational Attainment	Percentage
15,209	Moderate-term on-the-job training	27.8%
12,215	Short-term on-the-job training	22.3%
8,211	Bachelor's degree	15.0%
5,934	Work experience in a related occupation	10.8%
4,891	Long-term on-the-job training	8.9%
3,423	Bachelor's or higher degree, plus work experience	6.3%
1,990	Associate degree	3.6%
1,318	Postsecondary vocational award	2.4%
921	Master's degree	1.7%
563	First professional degree	1.0%
21	Doctoral degree	0.0%
54,694	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

While some of the educational attainment classifications above are intuitive, the specific definitions for each category of training and education are outlined in the call out box below for clarity.

BLS Postsecondary Training and Education Categories

First-professional degree. Completion of a first-professional degree, such as a medical or law degree usually requires at least 3 years of full-time academic study beyond a bachelor's degree.

Doctoral degree. Completion of a doctoral degree, such as a Ph.D., usually requires at least 3 years of full-time academic study beyond a bachelor's degree.

Master's degree. Completion of a Master's degree usually requires 1 or 2 years of full-time academic study beyond a bachelor's degree.

Work experience, plus a bachelor's or graduate degree. Most occupations in this category are managerial. Workers in occupations in this category usually have experience in a related non-management position and have obtained a bachelor's or higher degree.

Bachelor's degree. Completion of a bachelor's degree usually requires at least 4 years of full-time academic study beyond high school.

Associate's degree. Completion of an associate degree usually requires 2 years of full-time academic study beyond high school.

Postsecondary vocational training. Postsecondary vocational programs vary in length, ranging from several weeks to a year or more. They lead to a certificate or other award but not an academic degree.

Work experience in a related occupation. Many occupations in this category are supervisory and require experience in the occupation that is being supervised.

Long-term on-the-job training. Workers in occupations in this category usually have more than 12 months of on-the-job training or combined work experience and formal classroom instruction. Apprenticeships and employer-sponsored training are classified here.

Moderate-term on-the-job training. Workers in occupations in this category develop the skills they need during 1 to 12 months of combined on-the-job experience and informal training.

Short-term on-the-job training. Workers in occupations in this category develop skills they need after a short demonstration of job duties or during 1 month or less of on-the-job experience or instruction.

Atascosa County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* 1,660 jobs were supported by Eagle Ford shale.
 - *Total Occupational Impacts:* in 2011 construction and extraction occupations and transportation and material moving occupations were the two occupations most demanded within the county. However, service and transportation occupations were still quite relevant.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* between 2010 and 2011 construction and extraction, and transportation occupations were most relevant and showed the largest percentage point increase. However, administrative support and business management still maintained a good portion of the labor demanded.
 - *Education and Training Impacts:* in 2011 moderate-term and short-term job training share the bulk of training demanded, respectively 29.3 and 27.7 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* in 2021 the county is expected to see 4,444 jobs supported by Eagle Ford shale.
 - *Total Occupational Impacts:* estimates for 2021 show an increased significance in office and administrative jobs, the data also indicates the increased importance of service, professional and business management occupations, but a declining relevance of construction and extraction jobs.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations are still most relevant, but decrease in significance in relation to the 2011 level, as administrative support, business management and professional occupations show increasing relevance.
 - *Education and Training Impacts:* in 2021, the largest increase in significance is expected to be in the category of Bachelor's degrees, but still fall behind short-term and moderate-term on-the-job training.

Bee County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* in 2011, 554 jobs were supported by Eagle Ford shale.
 - *Total Occupational Impact:* construction and extraction occupations demanded a substantial percentage of the labor demanded, 41.2 percent of the labor demanded.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the relevancy of construction and extraction occupations increased more in Bee County than any other counties in the 20-County region—increasing 46.5 percentage points, representing 51.5 percent of the labor demanded in 2011.
 - *Education and Training Impacts:* long-term on-the-job training showed the largest percentage point increase relative to its 2010 level, a 19.1 percentage point increase to 24.4 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 252 jobs are projected to be supported by Eagle Ford shale in 2021.
 - *Total Occupational Impacts:* in 2021 office and administrative occupations are projected to be a significant percentage of the labor demanded—21.9 percent. Service, professional, business management and sales occupations are projected to still be quite relevant.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support is projected to be most relevant and demand 24.2 percent of the labor in the county.
 - *Educational and Training Impacts:* short-term on-the-job training is most relevant at 29.6 percent. Moderate-term on-the-job training, Bachelor's degrees and work experience in a related field are fairly evenly distributed, and follow respectively behind short-term training.

DeWitt County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 3,573 jobs were impacted by Eagle Ford activity in 2011.
 - *Total Occupational Impacts:* administrative occupations were most relevant, but were followed closely by construction and extraction occupations. In DeWitt County, there was a fairly even distribution of professional, transportation, business management, and service occupations in 2011.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the largest percentage point increases were in construction and extraction occupations and transportation occupations, roughly 19 and 11 percentage points respectively.
 - *Educational and Training Impacts:* moderate-term on-the-job training showed the largest percentage point increase and was the type of training most demanded by related industry in 2011 at 29.9 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* Eagle Ford development is projected to support 11,261 jobs in 2021.
 - *Total Occupational Impacts:* Industry within DeWitt County is projected to demand mainly business support occupations—the top four to be demanded are administrative support, professional, business management, and service occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* estimated to be the top three occupations demanded by related industry in 2021 are all non-drilling related—business management, administrative support, and professional occupations.
 - *Educational and Training Impacts:* while moderate-term on-the-job training is projected to be most demanded at 25.3 percent, Bachelor's degrees are expected to show the largest increase in relevancy.

Dimmit County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 4,309 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* the three most demanded occupations were transportation, construction and extraction, and administrative support occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the top three most demanded in 2011 were transportation, construction and extraction and administrative support occupations.
 - *Educational and Training Occupations:* moderate-term on-the-job training increased by 16.4 percentage points and was most relevant in the county in 2011 at 34.9 percent. Short-term on-the-job training is not far behind at 28.6 percent of the training demanded.

- **2021 Total, Direct, Indirect and Induced Impacts.**
- *Total Impacts:*
 - *Employment:* a total of 10,127 jobs are projected to be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* administrative support, professional and business management occupations. However, the top five occupations are fairly evenly distributed.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction, administrative support, and transportation occupations are projected to be most demanded in the county.
 - *Educational and Training Impacts:* moderate-term on-the-job training and short-term on-the-job training make up a large portion of the training demanded by industry.

Frio County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 982 jobs were supported by Eagle Ford in 2011.
 - *Total Occupational Impacts:* while construction and extraction occupations commands the majority of the labor demanded, the remainder of the top five occupations are business management and other jobs un related to drilling.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the relevancy of construction and extraction occupations showed one of the largest percentage point increases in the 20-county region, 33.5 percentage points—these occupations demanded 37.9 percent of the labor in 2011.
 - *Educational and Training Impacts:* moderate-term, short-term and long-term on-the-job training all showed significant percentage point increases and were the most demanded in the county in 2011.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 1,804 jobs are estimated to be supported by Eagle Ford shale in 2021.
 - *Total Occupational Impacts:* administrative support, professional, service, and business management occupations, respectively are projected to be most relevant in the county.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support, construction and extraction, and business management are the top three most demanded; however, construction and extraction occupations are projected to decrease substantially by 20.3 percentage points relative to its' 2011 level.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training together make up the majority of the projected training demanded in 2021.

Gonzales County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 3,636 jobs were supported by Eagle Ford development.
 - *Total Occupational Impacts:* administrative occupations and professional occupations were most demanded in 2011, while construction and extraction, service transportation and business management were all at relatively equal levels of the labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations showed the largest percentage point increase and were most demanded in 2011.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training were the two most relevant training requirements in 2011.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 9,812 jobs are projected to be supported by Eagle Ford development.
 - *Total Occupational Impacts:* the two most relevant occupations are projected to be administrative support and professional occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations are most relevant, while professional, business management, construction and extraction and transportation occupations are fairly evenly distributed.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training—respectively—are projected to be most relevant in 2021.

Karnes County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 6,092 jobs were supported by Eagle Ford activity.

- *Total Occupational Impacts:* construction and extraction and administrative support occupations were most demanded in 2011.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction and transportation occupations were the most demanded in the county and showed the largest percentage point increase relative to their 2010 levels.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training were most relevant in 2011.
- **2021 Total, Direct, Indirect and Induced Impacts:**
 - *Employment:* a total of 14,899 jobs are projected to be supported by Eagle Ford.
 - *Total Occupational Impacts:* the top three most demanded occupations are estimated to be administrative support, business management, and professional occupations, together comprising 46.1 percent of the projected labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support and business management occupations are estimated to be most relevant, but followed closely by construction and extraction occupations.
 - *Educational and Training Impacts:* moderate-term and short-term on-job-training are projected to be most relevant in the county in 2021, though Bachelor's degrees are projected to show the largest percentage point increase relative to the 2011 level.

La Salle Impacts:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impact:*
 - *Employment:* a total of 3,699 jobs were supported by Eagle Ford development.
 - *Total Occupational Impacts:* the two most demanded occupations were construction and extraction and transportation occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations increased by 24.2 percentage points relative to the 2010 levels, demanding 31.5 percent of the labor in 2011.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training were paramount, comprising 55.6 percent of the labor demanded.

- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 7,083 jobs are projected to be supported by Eagle Ford development.
 - *Total Occupational Impacts:* construction and extraction occupations are projected to be most relevant with 25.5 percent of the labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations are projected to be most relevant, but decrease by 13.6 percentage points relative to its' 2011 level. La Salle County projections show the top five occupations with relatively even distributions—construction, transportation, administrative support, business management, and professional occupations, respectively.
 - *Educational and Training Impacts:* moderate-term on-the-job training makes up the bulk with 31.8 percent of the labor demanded.

Live Oak County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 2,848 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* construction and extraction occupations were paramount, demanding 25.1 percent of the labor in 2011.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations demanded 31.4 percent of the labor in 2011. Administrative support, business management and transportation occupations follow, respectively.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training are most relevant, comprising 51.5 percent of the training demanded.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 5,763 jobs were supported by Eagle Ford in 2011.
 - *Total Occupational Impacts:* administrative support, service, and business management are estimated to be the top three demanded in the county.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* projected to be the top three most demanded are administrative support, business management, and transportation occupations.

- *Educational and Training Impacts:* short-term and moderate-term on-the-job-training—respectively—are estimated to be most relevant, comprising 51.8 percent of the training to be demanded in 2021.

Maverick County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 478 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* the top three most demanded occupations in 2011 were administrative support, construction and extraction, and professional occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations show the largest percentage point increase with respect to 2010 and were most demanded in 2011, followed by administrative support and transportation occupations.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training showed the largest percentage point increase from 2010 levels, and were the two most demanded training requirements in 2011, comprising 55.9 percent of the training demanded.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 697 jobs are projected to be supported by Eagle Ford development in 2021.
 - *Total Occupation Impacts:* the three most demanded occupations are projected to be administrative support, transportation, and professional occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations are projected to decrease in relevancy compared to its 2011 level, but still remain most relevant among the related occupations in the county.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training are projected to be the two most requested training requirements, comprising 56.4 percent of the training demanded.

McMullen County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 1,932 jobs were supported by Eagle Ford development in 2011.

- *Total Occupational Impacts:* construction and extraction and transportation occupations were the two most relevant categories, comprising 42.2 percent of the labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations alone made up 31.2 percent of the labor demanded in 2011.
 - *Educational and Training Impacts:* moderate-term on-the-job training made up 34.5 percent of the training demanded.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 3,286 jobs are projected to be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* in McMullen County professional occupations are projected to be most relevant. Also in McMullen there is an even distribution among the top three occupations—professional, administrative support and transportation occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the top three most demanded occupations in 2021 are projected to be transportation, administrative support, and professional occupations.
 - *Educational and Training Impacts:* moderate-term on-the-job training is projected to make up 31.8 percent of the training demanded.

Webb County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 6,983 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* the three most demanded occupations were administrative support, service and transportation occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the three most demanded occupations were administrative, transportation, and construction and extraction occupations.
 - *Educational and Training Impacts:* short-term on-the-job training made up 32.4 percent of the training demanded and moderate-term on-the-job training made up 28 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 10,298 jobs are projected to be supported by Eagle Ford development.

- *Total Occupational Impacts:* administrative support occupations alone are projected to make up 20.4 percent of the labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations are projected to make up 20.9 percent of the labor demanded.
 - *Educational and Training Impacts:* short-term and moderate-term on-the-job training respectively are the two most demanded training requirements and estimated to comprise 54.2 percent of training requested by industry in the county.

Wilson County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 816 jobs were supported by Eagle Ford shale in 2011.
 - *Total Occupational Impacts:* the three most demanded occupations were administrative support, transportation and construction and extraction occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the three most demanded occupations were transportation, construction and extraction and administrative support occupations in 2011.
 - *Educational and Training Impacts:* short-term on-the-job training made up 30.1 percent of the training demanded, and moderate-term on-the-job training, 27.9 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 2,001 jobs are projected to be supported by Eagle Ford shale in 2021.
 - *Total Occupational Impacts:* the three most demanded occupations are projected to be administrative support, professional, and construction and extraction occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the three most demanded occupations are estimated to be administrative support, construction and extraction and transportation occupations.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training are most relevant, comprising 51.6 percent of the training demanded in 2021.

Zavala County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*

- *Employment:* a total of 436 jobs were supported by Eagle Ford shale development in 2011.
- *Total Occupational Impacts:* construction and extraction, administrative support, and transportation occupations were the three most relevant occupations in 2011.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction occupations made up 26.1 percent of the labor demanded in 2011.
 - *Educational and Training Impacts:* moderate-term on-the-job training made up 34 percent of the training demanded in 2011.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 914 jobs are estimated to be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* administrative support, business management, and transportation occupations are projected to be the three most demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support, transportation, and business management occupations are estimated to be most relevant in 2021.
 - *Educational and Training Impacts:* moderate-term on-the-job training will make up approximately 32 percent of the training demanded in the county, and short-term on-the-job training, 23.6 percent.

Bexar County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 4,290 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* administrative support occupations were paramount at 21.7 percent of the labor demanded.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations made up 21.4 percent of the labor demanded. Construction and extraction and business management occupations also made up a significant portion of the labor demanded.
 - *Educational and Training Impacts:* short-term on-the-job training made up 28.4 percent and moderate-term on-the-job training made up 24 percent of the training demanded in 2011.

- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of approximately 11,627 jobs will be supported by Eagle Ford in 2021.
 - *Total Occupational Impacts:* administrative support occupations will make up approximately 21.8 percent of the labor demanded, followed by service occupations at 15.1 percent.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations will make up 22.1 percent, followed by business management at 15.7 percent of the labor demanded in the county.
 - *Educational and Training Impacts:* short-term and moderate-term on-the-job training will remain most relevant at 27.9 percent and 24.4 percent, respectively of the labor demanded in the county.

Jim Wells County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 227 jobs were supported by Eagle Ford in 2011.
 - *Total Occupational Impacts:* transportation, administrative support and service occupations are the three most demanded occupations, followed closely by construction and extraction occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations are paramount at 21.1 percent of the labor demanded in the county; transportation occupations made up 17.1 percent.
 - *Educational and Training Impacts:* short-term on-the-job training made up 35.8 percent of the training demanded; moderate-term on-the-job training made up 22.9 percent.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* an approximate total of 1,221 jobs will be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* transportation, administrative support, and construction and extraction occupations are estimated to be the three most demanded in the county in 2021.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* it is projected that transportation occupations will comprise 23.5 percent of the labor demanded in the county in 2021. Construction and extraction occupations will still make up 18.8 percent.
 - *Educational and Training Impacts:* moderate-term on-the-job training is estimated to increase by 14.4 percentage points relative to the 2011 level and is most relevant in the county at 37.3 percent. Short-term on-the-job training will make up 31.3 percent.

Nueces County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 3,880 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* administrative support, service, and professional occupations are most relevant in the county in 2011.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support, production and service occupations were the three most demanded in the county in 2011.
 - *Educational and Training Impacts:* short-term on-the-job training is paramount at 32.3 percent of the training demanded in 2011.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* approximately 18,699 jobs will be supported by Eagle Ford in 2021.
 - *Total Occupational Impacts:* the three most demanded occupations are service, administrative support and professional occupations.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the three most relevant occupations will be administrative support, service and production occupations.
 - *Educational and Training Impacts:* short-term on-the-job training is projected to be 35.4 percent of the training demanded among Eagle Ford related industry in 2021.

San Patricio County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 517 jobs were supported by Eagle Ford in 2011.
 - *Total Occupational Impacts:* construction and extraction, business management and administrative support occupations were most relevant among jobs associated with Eagle Ford in 2011.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support, business management and construction and extraction occupations were most relevant among related industry.
 - *Educational and Training Impacts:* short-term and moderate-term on-the-job training were most demanded among the impacted industry.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 2,301 jobs will be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* construction and extraction, business management, and administrative support occupations are estimated to be most relevant among industry.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* construction and extraction, business management and professional occupations are projected to be the three most demanded among related industry.
 - *Educational and Training Impacts:* among relevant industry within San Patricio County, moderate-term on-the-job training and Bachelor's degrees are most demanded.

Uvalde County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 75 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* administrative support, transportation and sales occupations are most relevant among related industry.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* transportation, construction and extraction and administrative support occupations were most demanded among Eagle Ford industry.
 - *Educational and Training Impacts:* moderate-term and short-term on-the-job training were most relevant, comprising 66.4 percent of the training demanded by Eagle Ford industry.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 213 jobs will be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* administrative support, transportation and sales occupations are estimated to be most demanded by related industry.

- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations are projected to make up 20.5 percent of the labor demanded in 2021; followed by transportation and business management occupations.
 - *Educational and Training Impacts:* short-term on-the-job training will comprise 34.1 percent of the training demanded; followed by moderate-term on-the-job training at 25.4 percent.

Victoria County:

- **2011 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* a total of 107 jobs were supported by Eagle Ford development in 2011.
 - *Total Occupational Impacts:* administrative support, service and sales occupations are most demanded among related industry in 2011.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* the three most demanded occupations among related industry in 2011 were administrative support, transportation and business management occupations.
 - *Educational and Training Impacts:* short-term on-the-job training was significant at 33.8 percent of the training demanded by related industry.
- **2021 Total, Direct, Indirect and Induced Impacts:**
- *Total Impacts:*
 - *Employment:* approximately 266 jobs will be supported by Eagle Ford development in 2021.
 - *Total Occupational Impacts:* administrative support occupations will be 20.7 percent of the labor demanded in 2021, followed by service and business management occupations, respectively.
- *Direct and Indirect Impacts:*
 - *Occupational Impacts:* administrative support occupations will make up 20.4 percent of the demanded labor; followed by transportation and business management occupations, respectively.
 - *Educational and Training Impacts:* short-term on-the-job training will make up 33.1 percent and moderate-term on-the-job training will make up 23.1 percent of the training demanded by related industry.

Regional Impact in the 14-County Area

In 2011, the Eagle Ford Shale has experienced remarkable growth affecting not only South Texas but also the surrounding areas in the State. For the 14 counties actively involved in drilling activity, the shale had an economic impact close to \$20.0 billion.

The following tables explain the estimated direct, indirect, and induced impacts within the 14-County Area for 2011 and 2012. Direct impacts consist mainly of the actual production and employment by firms operating directly in the shale. Indirect impacts include the operational and personnel expenditure made by suppliers, or inter-industry transactions spurred by the direct economic activity. The induced impacts include income flows created when workers spend money on various goods such as food, housing, etc. in the impacted counties.

It is estimated that a total of 38,000 14-County Area full-time jobs were supported by the Eagle Ford Shale in 2011.

Estimated Impacts 2011				
14-County Area				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	17,075	9,407	11,518	38,000

Under moderate assumptions, in 2021, the 14-County Area is projected to see a total of 82,444 full-time jobs impacted by Eagle Ford.

Estimated Impacts 2021				
14-County Area				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	30,391	24,302	27,951	82,644

These impacts affect not only the industries related to drilling activities but to several other industries active in the area like transportation or legal services. These industries hire workers and pay them salaries that in turn are spent in several other activities like restaurants and movie theaters. The industries impacts can be translated into occupational impacts.³ This translation is very helpful for the understanding of the workforce needs in the region because it offers new insights for current and future developments in education and housing in the communities studied here.

³ The study uses the Occupational Matrices from the IMPLAN group.

Occupational impacts within the 14-County Area in 2011 are shown below. Construction and extraction occupations are at 17.5 percent, followed by office and administrative occupations at 16.9 percent, transportation and material moving occupations at 13.6 percent, service occupations at 11.1 percent, management, business, and financial occupations at 10.9 percent, and professional occupations at 10.8 percent. Moving down, sales occupations are at 7.8 percent, followed by production occupations at 5.7 percent, installation, maintenance, and repair occupations at 5.5 percent, and farming, fishing, and forestry at 0.1 percent.

Occupation Code	Total Impacts 14-county Area Occupational Impacts 2011	Occupational	
		Impact	Percentage
47-0000	Construction and extraction occupations	6,647	17.5%
43-0000	Office and administrative support occupations	6,432	16.9%
53-0000	Transportation and material moving occupations	5,175	13.6%
31-3900	Service occupations	4,224	11.1%
11-1300	Management, business, and financial occupations	4,144	10.9%
15-2900	Professional and related occupations	4,115	10.8%
41-0000	Sales and related occupations	2,962	7.8%
51-0000	Production occupations	2,177	5.7%
49-0000	Installation, maintenance, and repair occupations	2,084	5.5%
45-0000	Farming, fishing, and forestry occupations	39	0.1%
		38,000	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following table shows the projected occupational impacts within the 14-County Area for the year 2021. It presents office and administrative occupations first at 18.3 percent of the labor demanded; followed by professional occupations at 14.9 percent, management, business, and financial occupations at 13.4 percent, service occupations at 12.4 percent, transportation and material moving occupations at 11.3 percent, and construction and extraction occupations at 10.8 percent. Next are sales occupations at 8.4 percent, production occupations at 5.7 percent, installation, maintenance, and repair occupations at 4.8 percent, and last are farming, fishing, and forestry occupations at 0.1 percent of the labor demanded.

Drilling Phase Jobs versus Production Phase Jobs

A study of the workforce needs in the Marcellus shale ⁴ shows that a large proportion of the total industry workforce in the shale will be required during the well drilling phase, while a small proportion will be required for the production phase. As the amount of wells actively producing increases over time the relative importance of the production jobs increases as well.

The Marcellus shale study shows that between 90 to 98 percent of natural gas exploration development jobs are found in the pre-drilling and drilling phase ***of bringing a well into production***, and this segment of the workforce will no longer be needed once the process of drilling gas wells and affiliated infrastructure in an area is completed. Given the level of mobility required, many employees in the drilling phase of gas development maintain temporary residency in a given area—such as in motels/hotels, RVs, “man camps”, monthly apartment/house leases, etc. Drilling phase estimates have ranged from 10 to 70 years, which in part reflects uncertainty created by future fluctuations in commodity prices, economic conditions, and technological changes, among other variables.

Jobs associated with the production phase are defined as the management of an operating well, generally serve a fixed geographic area and will last the lifetime of a producing well. Even if drilling were to cease completely, the production phase jobs necessary to manage and maintain the wells would still be required for decades. Within the industry, careers associated with the production phase are often referred to as long-term or even “permanent.” Occupations during the production phase tend to be less labor intensive, with fewer hazards involved, and more specialization than development phase occupations, while still retaining excellent salary and benefits.

The study’s methodology focuses on analyzing the types and numbers of workers needed to drill a single gas well and then extrapolates those numbers to achieve at total workforce requirement based on estimates of future well drilling. The assessment is based solely ***on the employees directly involved in developing a well and placing it into production and DOES NOT consider indirect or induced employment impacts.***

Workforce Model Results

- 420 individuals working across nearly 150 different occupations are needed to perform all the operations required to complete and produce gas from a single Marcellus Shale well
- The study found out that a pad (rig) on average can sustain 12 wells and breaks down full-time-equivalent (FTE) jobs needed by phase and type of well in a particular pad. It shows that for the first well, in a multi-well pad, a little over 13 FTE jobs are needed. For the additional wells close to 9.7 FTE jobs are needed.

⁴ *Pennsylvania Statewide Marcellus Shale Workforce Needs Assessment (June 2011)*, prepared by the Marcellus Shale Education & Training Center (MSETC).

Occupation Code	Total Impacts 14-county Area Occupational Impacts 2021	Occupational	
		Impact	Percentage
43-0000	Office and administrative support occupations	15,101	18.3%
15-2900	Professional and related occupations	12,329	14.9%
11-1300	Management, business, and financial occupations	11,039	13.4%
31-3900	Service occupations	10,230	12.4%
53-0000	Transportation and material moving occupations	9,315	11.3%
47-0000	Construction and extraction occupations	8,889	10.8%
41-0000	Sales and related occupations	6,950	8.4%
51-0000	Production occupations	4,704	5.7%
49-0000	Installation, maintenance, and repair occupations	3,995	4.8%
45-0000	Farming, fishing, and forestry occupations	92	0.1%
		82,644	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Because total impacts include induced effects, those resulting from expenditures made by the workers hired by the firms involved in the shale, they are not very instrumental for workforce development or for a study of future housing needs; for those matters, direct and indirect impacts offer a better description of the types of workers needed in the area and the number of potential home buyers, for example. For this reason, the next sections focus on direct and indirect impacts.

Direct and Indirect Impacts in the 14-County Area

With the recent developments of deposits of oil, condensates, and natural gas in South Central Texas, the counties directly and indirectly involved in the Eagle Ford Shale (EFS) have experienced significant economic growth. In the shale region, there are 14 producing counties of distinct interest to this report: Atascosa, Bee, DeWitt, Dimmit, Frio, Gonzales, Karnes, La Salle, Live Oak, Maverick, McMullen, Webb, Wilson, and Zavala. In order for industry to estimate future training needs and education requirements for the occupations involved in the Eagle Ford development, this report details the occupational and educational make-up of the 14-county area in three stages: the first stage details the study area, the 14-county region without Eagle Ford development, and its' occupational and educational make-up; the second shows the impact in 2011 as a result of EFS development and the changes in the occupational and educational composition; and lastly this report distinguishes between short-term and long-term growth by first analyzing the distributional changes in the occupational and educational make-up in 2011 and looking at long-term occupational and educational impacts by analyzing changes between 2011 and 2021 estimates⁵. The two tier analyses is key to understanding the occupational outlook both in terms of long and short-term employment, which affects many critical factors such as housing development, tax bases, and resource management.

Study Area

The following table details the employment make-up of the 14-county region in terms of industry groups using a 2-digit NAICS classification. It is a list of 20 different industries with employment and percentages as they relate to the total workforce in the 14-county Eagle Ford Shale region. It illustrates the relevance of government jobs in the region (21.7 percent of the jobs). Other key sectors are health and social services (12.1 percent of the jobs), and retail trade (10.9 percent of the jobs). This table is needed in order to comprehend the impact of the Eagle Ford Shale. To produce a thorough analysis of the characteristics of the workforce, coupled with this data the study looks at the occupations demanded by those industries, and the level of education and training needed for those occupations.

⁵ There are some differences in the way the data is collected and managed by different organizations. The input-output information from IMPLAN includes self-employed, complete agricultural employment information, railroad workers, and employment in religious organizations and in any other non-covered employment information used by the Bureau of Labor Statistics (BLS). However, for several statistics, the BLS uses information from the Current Employment Statistics (CES), and the Occupational Employment Statistics (OES) surveys, which do not include the self-employed or agricultural jobs. Therefore, accompanying each of the 14 producing counties is a reference to the total full-time and part-time employment numbers (for 2010 only) as calculated by the Bureau of Economic Analysis (BEA) in order to show additional Eagle Ford development impacts on those occupations—self-employed and agricultural—not included in sections of BLS statistical matrix.

	14-County Study Area Industry, 2-Digit NAICS Code	Employment	Percentage
11	Agriculture, Forestry, Fish and Hunting	15,208	6.5%
21	Mining	7,081	3.0%
22	Utilities	881	0.4%
23	Construction	11,261	4.8%
31-33	Manufacturing	5,446	2.3%
42	Wholesale Trade	5,511	2.4%
44-45	Retail Trade	25,381	10.9%
48-49	Transportation and Warehousing	17,314	7.4%
51	Information	1,274	0.5%
52	Finance and Insurance	11,864	5.1%
53	Real Estate and Rental	6,073	2.6%
54	Professional Scientific and Tech Services	6,944	3.0%
55	Management of Companies	472	0.2%
56	Administrative and Waste Services	9,206	4.0%
61	Educational Services	1,575	0.7%
62	Health and Social Services	28,043	12.1%
71	Arts Entertainment and Recreation	2,087	0.9%
72	Accommodation and Food Services	13,804	5.9%
81	Other Services	12,778	5.5%
92	Government and Non NAICS	50,389	21.7%
	Total	232,590	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Codified by an associated Standard Occupations Code (SOC), the Standard Occupational Classification system is used by Federal Statistical Agencies to group workers into categories based on occupation in order to collect, calculate and disseminate data. The study utilized the Occupational Matrices from IMPLAN which were developed from primary data from the BLS. This aggregation was developed by the IMPLAN group and uses ten occupational definitions to get a first look at the distribution of occupations in the area. The following table shows the 10 occupations demanded by the industries within the study area. The data illustrates the importance of service occupations (21.1 percent); followed by office and administrative support occupations (17.1 percent) and professional and related occupations (15.4 percent). Management, business and financial occupations appear in the fourth position (12.6 percent), followed by sales and related occupations (9.4 percent) and transportation and material moving occupations (8.7 percent). The final four occupational categories are construction and extraction occupations (4.7 percent), farming, fishing, and forestry occupations (3.9 percent), installation, maintenance, and repair occupations (3.6 percent) and production occupations (3.1 percent).

Occupation Code	14-County Study Area, 10-Occupational Categories	Occupational Impact	Percentage
31-3900	Service occupations	49,237	21.2%
43-0000	Office and administrative support occupations	39,721	17.1%
15-2900	Professional and related occupations	35,827	15.4%
11-1300	Management, business, and financial occupations	29,368	12.6%
41-0000	Sales and related occupations	22,065	9.5%
53-0000	Transportation and material moving occupations	20,406	8.8%
47-0000	Construction and extraction occupations	11,115	4.8%
45-0000	Farming, fishing, and forestry occupations	9,090	3.9%
49-0000	Installation, maintenance, and repair occupations	8,399	3.6%
51-0000	Production occupations	7,362	3.2%
	Total	232,590	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below details the 22 occupations in demand by the industries within the study area represented in the NAICS table. This chart details the occupations demanded in the 14-county region and is codified using a 2-digit standard occupational classification (SOC) developed from IMPLAN occupational matrices level 2 aggregations. The table points out the importance of office and administrative occupations (17.1 percent) and sales occupations (9.5 percent) in the region. Transportation and material moving occupations make up 8.8 percent, followed by food preparation and serving related occupations at 6.7 percent. Other key occupations include business and financial operations occupations at 6.6 percent; management occupations at 6.1 percent; construction and extraction occupations at 4.8 percent; and healthcare practitioners and technical occupations at 4.6 percent.

Occupation Code	14-County Study Area, 22-Occupational Categories	Employment	Percentage
43-0000	Office and administrative support occupations	39,721	17.1%
41-0000	Sales and related occupations	22,065	9.5%
53-0000	Transportation and material moving occupations	20,406	8.8%
35-0000	Food preparation and serving related occupations	15,562	6.7%
13-0000	Business and financial operations occupations	15,295	6.6%
11-0000	Management occupations	14,073	6.1%
47-0000	Construction and extraction occupations	11,115	4.8%
29-0000	Healthcare practitioners and technical occupations	10,594	4.6%
39-0000	Personal care and service occupations	9,781	4.2%
33-0000	Protective service occupations	9,553	4.1%
45-0000	Farming, fishing, and forestry occupations	9,090	3.9%
49-0000	Installation, maintenance, and repair occupations	8,399	3.6%
31-0000	Healthcare support occupations	8,003	3.4%
51-0000	Production occupations	7,362	3.2%
21-0000	Community and social services occupations	6,677	2.9%
37-0000	Building and grounds cleaning and maintenance occupations	6,337	2.7%
15-0000	Computer and mathematical science occupations	3,966	1.7%
17-0000	Architecture and engineering occupations	3,622	1.6%
25-0000	Education, training, and library occupations	3,234	1.4%
19-0000	Life, physical, and social science occupations	3,058	1.3%
23-0000	Legal occupations	2,778	1.2%
27-0000	Arts, design, entertainment, sports, and media occupations	1,899	0.8%
	Total	232,590	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

An effective strategy for analyzing the occupational impact is to look at the educational characteristics in the region. Utilizing data obtained from the Bureau of Labor Statistics (BLS) the following table describes the educational or training requirements for the occupations demanded by the industries within the study area. This data helps in the process of determining what forms of training businesses must implement in a given area, and assists in determining the potential occupational composition of an area based on education and training needs.

Below is a table detailing the educational attainment level of the study area. The two most prevalent requirements demanded by industry are short-term on-the-job training (37.1 percent) and moderate-term on-the-job training (16.8 percent). Following those is work experience in a related occupation (12.7 percent), occupations that require a Bachelor's degree (10.9 percent) and those that require a Bachelor's and work experience (5.5 percent); followed by long-term on-the-job-training (5.3 percent) and post secondary vocational awards (4.6 percent), and finally occupations requiring an associate degree (4.0 percent), Master's degree (1.6 percent), first professional degree (1.2 percent) and

those requiring a doctoral degree (0.3 percent). The table reflects the demand by industry in the region of those occupations within the study area that require short-term on-the-job-training.

14-County Study Area, Educational Structure		
Number of jobs	Educational Attainment	Percentage
86,274	Short-term on-the-job training	37.1%
39,180	Moderate-term on-the-job training	16.8%
29,589	Work experience in a related occupation	12.7%
25,394	Bachelor's degree	10.9%
12,881	Bachelor's or higher degree, plus work experience	5.5%
12,383	Long-term on-the-job training	5.3%
10,612	Postsecondary vocational award	4.6%
9,243	Associate degree	4.0%
3,623	Master's degree	1.6%
2,778	First professional degree	1.2%
634	Doctoral degree	0.3%
232,590	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

2011 Impacts

In order to analyze the short-term occupational and educational impact within the 14-county region, this reports looks at the 2011 impacts within the same categories described in the previous section. First we revisit the 10 category occupation list below showing construction and extraction jobs at 24.8 percent, transportation and material moving occupations at 17.1 percent, and office and administrative support occupations at 16.1 percent. Management, business and financial operations make up 11.8 percent of the labor demanded and professional and related occupations, 8.4 percent. Production occupations make up 7.4 percent while installation, maintenance, and repair occupations make up 6.4 percent. Lastly are sales and related jobs at 4.1 percent, service occupations at 3.8 percent and farming, fishing, and forestry occupations making up less than 1 percent.

Occupation Code	Eagle Ford Shale Direct and Indirect Impacts 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	6,564	24.8%
53-0000	Transportation and material moving occupations	4,526	17.1%
43-0000	Office and administrative support occupations	4,274	16.1%
11-1300	Management, business, and financial occupations	3,136	11.8%
15-2900	Professional and related occupations	2,227	8.4%
51-0000	Production occupations	1,968	7.4%
49-0000	Installation, maintenance, and repair occupations	1,695	6.4%
41-0000	Sales and related occupations	1,076	4.1%
31-3900	Service occupations	1,001	3.8%
45-0000	Farming, fishing, and forestry occupations	13	0.0%
	Total	26,481	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Next we must revisit the 22 category occupation list below. The list shows construction and extraction occupations at 24.8 percent, next are transportation and material moving occupations at 17.1 percent, office and administrative support occupations at 16.1 percent and production occupations at 7.4 percent. Also showing significance are installation, maintenance, and repair occupations at 6.4 percent, management occupations at 6.3 percent, and business and financial operations occupations at 5.5 percent.

Occupation Code	Eagle Ford Shale Direct and Indirect Impacts 22-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	6,564	24.8%
53-0000	Transportation and material moving occupations	4,526	17.1%
43-0000	Office and administrative support occupations	4,274	16.1%
51-0000	Production occupations	1,968	7.4%
49-0000	Installation, maintenance, and repair occupations	1,695	6.4%
11-0000	Management occupations	1,673	6.3%
13-0000	Business and financial operations occupations	1,463	5.5%
41-0000	Sales and related occupations	1,076	4.1%
17-0000	Architecture and engineering occupations	865	3.3%
23-0000	Legal occupations	425	1.6%
15-0000	Computer and mathematical science occupations	397	1.5%
37-0000	Building and grounds cleaning and maintenance occupations	384	1.5%
19-0000	Life, physical, and social science occupations	330	1.2%
35-0000	Food preparation and serving related occupations	316	1.2%
33-0000	Protective service occupations	177	0.7%
27-0000	Arts, design, entertainment, sports, and media occupations	109	0.4%
39-0000	Personal care and service occupations	107	0.4%
29-0000	Healthcare practitioners and technical occupations	70	0.3%
31-0000	Healthcare support occupations	17	0.1%
25-0000	Education, training, and library occupations	16	0.1%
21-0000	Community and social services occupations	16	0.1%
45-0000	Farming, fishing, and forestry occupations	13	0.0%
	Total	26,481	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Illustrated below are the educational impacts for 2011 within the 14-county region. The table shows moderate and short-term on-the-job training at 31.1 percent and 25.8 percent, respectively. Moving down the list, work experience in a related occupation at 11.2 percent is third and long-term on-the-job training fourth at 10.5 percent; Bachelor's degree and Bachelor's or higher degree plus work experience at 10.4 percent and 4.5 percent, respectively; postsecondary vocational awards are seventh at 2.5 percent; occupations requiring an associate degree are eighth and made up 2.4 percent of the labor demanded in 2011; first professional degrees, in the ninth position made up 1 percent; lastly master and doctoral degrees were the smallest categories and made up 0.6 percent and less than 1 percent, respectively.

Eagle Ford Shale Direct and Indirect Impacts 14-County, Educational Structure 2011		
Number of jobs	Educational Attainment	Percentage
8,235	Moderate-term on-the-job training	31.1%
6,828	Short-term on-the-job training	25.8%
2,977	Work experience in a related occupation	11.2%
2,779	Long-term on-the-job training	10.5%
2,754	Bachelor's degree	10.4%
1,203	Bachelor's or higher degree, plus work experience	4.5%
664	Postsecondary vocational award	2.5%
629	Associate degree	2.4%
258	First professional degree	1.0%
149	Master's degree	0.6%
6	Doctoral degree	0.0%
26,481	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Analysis

In order to understand the short-term occupational impact of the development of the Eagle Ford Shale, we must compare the shifts in the demand for labor—and therefore the educational attainment—between the study area and the 2011 occupational impacts. This will assist in revealing the short-term occupational outlook so that businesses and developers understand the tenure associated with various positions involved with the Eagle Ford Shale development.

The 2011 impacts accounted for several changes in the occupational demand profile of the 14-county region. The tables highlight that construction and extraction occupations became more relevant, moving to first on the list, demanding 24.8 percent of the labor pool, a 20 percentage point increase. Transportation and material moving occupations went to the second position at 17.1 percent, another substantial change in the demand for labor, increasing by eight percentage points. Office and administrative support occupations decreased slightly in relevance, moving to third at 16.1 percent; management, business, and financial operation occupations retained their approximate relevancy, remaining in fourth position but moving from 12.6 percent to 11.8 percent. Professional and related occupations decreased by seven percentage points, moving to fifth position at 8.4 percent. Production occupations moved up the list to sixth at 7.4 percent, a 4 percentage point increase; followed by installation, maintenance, and repair occupations at 6.4 percent, a 2 percentage point increase. Lastly, sales and related occupations went to eighth at 4.1 percent, service occupations to ninth at 3.8 percent and farming, fishing, and forestry occupations last at less than 1 percent. This illustrates the trend in the region of moving away from service oriented occupations to those centered on construction, extraction and production.

Looking at the 22 category occupation list detailing the 2011 impacts, there was a significant change in the relevance of construction and extraction occupations, moving from the seventh position at 4.8 percent to the first position at 24.8 percent, a 20 percentage point increase. Transportation and material moving occupations moved from the third position at 8.8 percent to the second position at 17.1 percent. While this category only moved one place up the list, it increased by 8.3 percentage points; followed by office support and administration whose relevance decreased by 1 percentage point, moving to the third position in 2011 at 16.1 percent. Production occupations moved up the list considerably, increasing by 4 percentage points and moving to the fourth position at 7.4 percent. Next, installation, maintenance, and repair occupations increased by 3 percentage points and moved to the fifth position in 2011 to 6.4 percent; management occupations stayed at the sixth position but with a slightly higher demand, from 6.1 percent to 6.3 percent in 2011. Again, the data depicts a critical shift in the demand for labor within the 14-county region, one which focuses on production, construction and related occupations, and technical occupations.

Since the industries employing in the region are demanding different occupations, there must also be a corresponding shift in the education and training requirements for those occupations. With this in mind, moderate-term on-the-job training becomes the most demanded in the region (31.1 percent) increasing by 14 percentage points, followed by short-term on-the-job training (25.8 percent), an 11 percentage point decrease. Next is work experience in a related occupation (11.2 percent), decreasing slightly by 1 percentage point. Long-term on-the-job training (10.5 percent) increased by 5 percentage points; occupations requiring a Bachelor's degree (10.4 percent) decreased by 0.5 percentage point and jobs requiring a Bachelor's degree plus work experience (4.5 percent) decreased by 1 percentage point. Employers requiring postsecondary vocational awards (2.5 percent) decreased by 2 percentage points and those requiring associate degrees (2.4 percent) decreased by 1 percentage point. Those occupations requiring a professional degree (1 percent) decreased by 0.2 percentage point and those requiring a Master's degree (0.6 percent) decreased by 1 percentage point. Lastly doctoral degrees remained the least demanded, decreasing by 0.3 percentage point to less than one percent. The two most significant changes were in moderate-term on-the-job training, increasing by 14 percentage points; and the second, incidentally the shift in short-term on-the-job-training, which moved to the second position due to the higher demand for occupations requiring moderate-term on-the-job training.

2021 Projections and Analysis

To analyze the long-term occupational and educational impact, this report looks at 2021 estimates of the distributional shifts in the demand for labor. Between 2011 and 2021 there are several key shifts projected in the demand for labor. Because there are several phases involved in the development of shale, different skills are needed at different intervals. These needs regulate the ebb and flow of groups of workers; as the life of a well develops so do the occupations, and the education and training associated with them.

The 10 category occupation list shows a focus in office and administration support occupations (18.1 percent), but a 2 percentage point decrease; followed by construction and extraction (15.9

percent), expected to decrease by roughly 8 percentage points. Next are management, business and financial occupations (15.7 percent), projected to decrease by roughly 3 percentage points. The chart also shows an increase in relevance for professional occupations (14.2 percent), moving to the fourth position and increasing by 5 percentage points. In the transportation and material moving sector (14.1 percent) the data shows a decrease of 3 percentage points. Production occupations (7.7 percent) show a minor dip in relevance, remaining in the sixth position and decreasing by 0.3 percentage point. Installation, maintenance, and repair occupations (5.6 percent) are expected to stay in the same position on the list, showing a decrease of 0.8 percentage point; moving down the list, sales occupations (4.4 percent) are estimated to decrease by 0.3 percentage point, and service occupations (4.2 percent) to increase by 0.4 percentage point; finally farming, fishing, and forestry occupations remained in the last position at less than 1 percent. The shift in the demand for labor in the region is reflective of the shale developing process—one which first emphasizes occupations dealing with permitting, site maintenance, drilling, hydraulic fracturing, etc., to one, as processing becomes more prevalent, where the processing of oil, condensates, and natural gas and maintaining business operations become the primary focus.

Occupation Code	Eagle Ford Shale Direct and Indirect Impacts 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	9,898	18.1%
47-0000	Construction and extraction occupations	8,681	15.9%
11-1300	Management, business, and financial occupations	8,611	15.7%
15-2900	Professional and related occupations	7,781	14.2%
53-0000	Transportation and material moving occupations	7,732	14.1%
51-0000	Production occupations	4,195	7.7%
49-0000	Installation, maintenance, and repair occupations	3,039	5.6%
41-0000	Sales and related occupations	2,410	4.4%
31-3900	Service occupations	2,322	4.2%
45-0000	Farming, fishing, and forestry occupations	25	0.0%
	Total	54,694	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below reflects the estimated change between 2011 and 2021 in the need for office and administrative workers (18.1 percent), increasing by 2 percentage points and moving up to the first position on the list by 2021. Construction and extraction occupations (15.9 percent) are estimated to move down to the second position, decreasing by 8 percentage points; followed by transportation and material moving occupations (14.1 percent), moving to third and decreasing by 3 percentage points. Estimated to be in the fourth position, business and financial operations occupations (8.2 percent), is projected to increase by 2 percentage points and production occupations (7.7 percent) projected to increase slightly by 0.3 percentage point, moving to fifth on the list. Management occupations (7.6 percent) are projected to stay relevant and remain in the sixth position, increasing by roughly 1 percentage point; additionally, installation, maintenance, and repair occupations (5.6 percent) move to

seventh on the list and architecture and engineering occupations (5.1 percent) to eighth, decreasing by less than 1 percentage point. Again the table illustrates the distinct shift in the demand for labor as the shale is developed. As time goes on, the long-term office oriented jobs become those that employers are looking to fill. This data can help employers when projecting growth and training needs, real estate developers when investing and public officials when calculating future tax bases and resource management.

Occupation Code	Eagle Ford Shale Direct and Indirect Impacts 22-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	9,898	18.1%
47-0000	Construction and extraction occupations	8,681	15.9%
53-0000	Transportation and material moving occupations	7,732	14.1%
13-0000	Business and financial operations occupations	4,470	8.2%
51-0000	Production occupations	4,195	7.7%
11-0000	Management occupations	4,141	7.6%
49-0000	Installation, maintenance, and repair occupations	3,039	5.6%
17-0000	Architecture and engineering occupations	2,764	5.1%
41-0000	Sales and related occupations	2,410	4.4%
19-0000	Life, physical, and social science occupations	1,766	3.2%
15-0000	Computer and mathematical science occupations	1,668	3.0%
23-0000	Legal occupations	1,042	1.9%
37-0000	Building and grounds cleaning and maintenance occupations	880	1.6%
35-0000	Food preparation and serving related occupations	685	1.3%
33-0000	Protective service occupations	481	0.9%
27-0000	Arts, design, entertainment, sports, and media occupations	268	0.5%
39-0000	Personal care and service occupations	233	0.4%
29-0000	Healthcare practitioners and technical occupations	192	0.4%
31-0000	Healthcare support occupations	43	0.1%
21-0000	Community and social services occupations	41	0.1%
25-0000	Education, training, and library occupations	40	0.1%
45-0000	Farming, fishing, and forestry occupations	25	0.0%
	Total	54,694	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Turning to the projected education and training needs for 2021, moderate-term on-the-job training remains first (27.8 percent), but projected to decrease by roughly 3 percentage points. Short-term on-the-job training (22.3 percent) is projected to decrease by roughly 3 percentage points; occupations requiring a Bachelor's degree (15 percent) moved up to third on the list increasing by roughly 4 percentage points; followed by work experience in a related occupation (10.8 percent) which

decreased by 0.4 percentage point. Long-term on-the-job training (8.9 percent) moved down to the fourth position and decreased by 1 percentage point. Bachelor's or higher degree, plus work experience (6.3 percent) increased by 1 percentage point and occupations requiring an associate degree (3.6 percent) increased by 1 percentage point. Post vocational awards (2.4 percent) moved down to the eighth position and decreased by 0.1 percentage point. Master's degrees (1.7 percent) are projected to become more relevant, increasing by 1 percent. Lastly, first professional degrees (1 percent) are expected to move to the ninth position and occupations requiring doctoral degrees to remain at the bottom of the list at less than 1 percent. This data shows that as office and business operations become more relevant in the region, so do Bachelor's degrees, which is estimated to move up 2 places on the list by 2021, the most significant increase projected.

Eagle Ford Shale Direct and Indirect Impacts 14-County, Educational Structure 2021		
Number of jobs	Educational Attainment	Percentage
15,209	Moderate-term on-the-job training	27.8%
12,215	Short-term on-the-job training	22.3%
8,211	Bachelor's degree	15.0%
5,934	Work experience in a related occupation	10.8%
4,891	Long-term on-the-job training	8.9%
3,423	Bachelor's or higher degree, plus work experience	6.3%
1,990	Associate degree	3.6%
1,318	Postsecondary vocational award	2.4%
921	Master's degree	1.7%
563	First professional degree	1.0%
21	Doctoral degree	0.0%
54,694	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Comparisons of Eagle Ford Direct and Indirect Impacts with the Year 2010

The table below summarizes the occupations that are most affected by the Eagle Ford Shale development with respect to the amount of jobs in 2010. Essentially, the year 2010 is working as a base year for comparisons of the amount of jobs in 2011 and those projected for 2021—this data will help reveal in which occupational categories additional workers and training are needed. The area that saw the biggest change between 2010 and 2011 is construction and extraction, impacted by 59.1 percent. Many aspects of the development of Eagle Ford are centered on the actual development of a site and it is therefore appropriate to see construction and extraction occupations affected in this fashion with respect to the 2010 numbers. Production occupations were affected by 26.7 percent, while architecture and engineering occupations experienced a 23.9 percent impact in the workforce. Eagle Ford

development affected transportation and material moving jobs by 22.2 percent in 2011 and installation, maintenance, and repair occupations by 20.2 percent.

The occupations mentioned above—construction, etc., production, architecture, etc., and transportation, etc.—are tied closely to the pre-drilling and drilling phases of the Eagle Ford development. In the short-term, this occupational composition is precisely what is to be expected because it is during these phases that much of the physical development takes place, e.g. site preparation, road paving, water transportation, waste management, pipeline construction, etc. In sum, the areas seeing the most significant impact short-term are construction, production, architecture and engineering, transportation, and installation, maintenance and repair occupations. Overall in 2011, within the specified occupations, the 14-county region saw an 11.4 percent impact in its workforce in relation to the 2010 workforce.

Occupation Code	Direct and Indirect Impacts: 2010-2011	Employment 2010	Occupational Impact 2011	Percentage impact
47-0000	Construction and extraction occupations	11,115	6,564	59.1%
51-0000	Production occupations	7,362	1,968	26.7%
17-0000	Architecture and engineering occupations	3,622	865	23.9%
53-0000	Transportation and material moving occupations	20,406	4,526	22.2%
49-0000	Installation, maintenance, and repair occupations	8,399	1,695	20.2%
23-0000	Legal occupations	2,778	425	15.3%
11-0000	Management occupations	14,073	1,673	11.9%
19-0000	Life, physical, and social science occupations	3,058	330	10.8%
43-0000	Office and administrative support occupations	39,721	4,274	10.8%
15-0000	Computer and mathematical science occupations	3,966	397	10.0%
13-0000	Business and financial operations occupations	15,295	1,463	9.6%
37-0000	Building and grounds cleaning and maintenance occupations	6,337	384	6.1%
27-0000	Arts, design, entertainment, sports, and media occupations	1,899	109	5.7%
41-0000	Sales and related occupations	22,065	1,076	4.9%
35-0000	Food preparation and serving related occupations	15,562	316	2.0%
33-0000	Protective service occupations	9,553	177	1.9%
39-0000	Personal care and service occupations	9,781	107	1.1%
29-0000	Healthcare practitioners and technical occupations	10,594	70	0.7%
25-0000	Education, training, and library occupations	3,234	16	0.5%
21-0000	Community and social services occupations	6,677	16	0.2%
31-0000	Healthcare support occupations	8,003	17	0.2%
45-0000	Farming, fishing, and forestry occupations	9,090	13	0.1%
	Total	232,590	26,481	11.4%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Turning to the long-term impacts, below is a table illustrating the projected occupational impact of Eagle Ford development from 2011 to 2021 with respect to the original 2010 employment numbers. Construction and extraction occupations are expected to be impacted during this interval by 78.1 percent with respect to the region's 2010 employment numbers. Architecture and engineering occupations are projected to move up to the second position and be impacted by 76.3 percent. Moving up to the third position are life, physical, and social science occupations at 57.8 percent. Projected

fourth are production occupations at 57 percent and fifth computer and mathematical science occupations at 42.1 percent. Transportation and material moving occupations move down to the sixth position, supporting 37.9 percent of the jobs associated with transportation and seventh, legal occupations at 37.5 percent. Projected to move down to eighth on the chart are installation, maintenance, and repair occupations at 36.2 percent. Projected ninth are management occupations at 29.4 percent.

Overall the chart shows a 23.5 percent impact in the jobs demanded by the selected industries with respect to 2010 employment numbers. This data details a much broader distributed impact because it includes the production phase of the Eagle Ford Shale which calls for occupations that deal with oil, condensate, and gas processing and maintaining business and production operations. This data tells industry in the region to expect substantial growth in these occupations between 2011 and 2021 in relation to 2010 employment numbers. With this and additional data, industry can begin to plan for and manage this growth efficiently.

Occupation Code	Direct and Indirect Impacts: 2011-2021	Employment 2010	Occupational Impact 2021	Percentage impact
47-0000	Construction and extraction occupations	11,115	8,681	78.1%
17-0000	Architecture and engineering occupations	3,622	2,764	76.3%
19-0000	Life, physical, and social science occupations	3,058	1,766	57.8%
51-0000	Production occupations	7,362	4,195	57.0%
15-0000	Computer and mathematical science occupations	3,966	1,668	42.1%
53-0000	Transportation and material moving occupations	20,406	7,732	37.9%
23-0000	Legal occupations	2,778	1,042	37.5%
49-0000	Installation, maintenance, and repair occupations	8,399	3,039	36.2%
11-0000	Management occupations	14,073	4,141	29.4%
13-0000	Business and financial operations occupations	15,295	4,470	29.2%
43-0000	Office and administrative support occupations	39,721	9,898	24.9%
27-0000	Arts, design, entertainment, sports, and media occupations	1,899	268	14.1%
37-0000	Building and grounds cleaning and maintenance occupations	6,337	880	13.9%
41-0000	Sales and related occupations	22,065	2,410	10.9%
33-0000	Protective service occupations	9,553	481	5.0%
35-0000	Food preparation and serving related occupations	15,562	685	4.4%
39-0000	Personal care and service occupations	9,781	233	2.4%
29-0000	Healthcare practitioners and technical occupations	10,594	192	1.8%
25-0000	Education, training, and library occupations	3,234	40	1.2%
21-0000	Community and social services occupations	6,677	41	0.6%
31-0000	Healthcare support occupations	8,003	43	0.5%
45-0000	Farming, fishing, and forestry occupations	9,090	25	0.3%
	Total	232,590	54,694	23.5%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

14-County Area Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts 14-County Area Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			26,481	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	1,778	6.7%
2	47-2031	Carpenters	1,170	4.4%
3	47-2061	Construction laborers	1,110	4.2%
4	47-2073	Operating engineers and other construction equipment operators	1,033	3.9%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	905	3.4%
6	43-9061	Office clerks, general	692	2.6%
7	53-7032	Excavating and loading machine and dragline operators	684	2.6%
8	43-3031	Bookkeeping, accounting, and auditing clerks	581	2.2%
9	11-1021	General and operations managers	569	2.1%
10	53-7062	Laborers and freight, stock, and material movers, hand	563	2.1%
11	49-9042	Maintenance and repair workers, general	486	1.8%
12	13-2011	Accountants and auditors	456	1.7%
13	43-6011	Executive secretaries and administrative assistants	433	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	428	1.6%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	408	1.5%
16	11-9021	Construction managers	357	1.3%
17	53-7051	Industrial truck and tractor operators	299	1.1%
18	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	290	1.1%
19	49-3042	Mobile heavy equipment mechanics, except engines	278	1.1%
20	43-4051	Customer service representatives	274	1.0%
21	47-5051	Rock splitters, quarry	257	1.0%
22	23-1011	Lawyers	250	0.9%
23	43-1011	First-line supervisors/managers of office and administrative support workers	249	0.9%
24	47-5041	Continuous mining machine operators	228	0.9%
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	212	0.8%
26	47-5042	Mine cutting and channeling machine operators	202	0.8%
27	51-1011	First-line supervisors/managers of production and operating workers	201	0.8%
28	51-4121	Welders, cutters, solderers, and brazers	190	0.7%
29	43-4171	Receptionists and information clerks	187	0.7%
30	53-3033	Truck drivers, light or delivery services	185	0.7%
31	13-1199	Business operation specialists, all other	177	0.7%
32	49-9041	Industrial machinery mechanics	168	0.6%
33	13-1051	Cost estimators	166	0.6%
34	47-2111	Electricians	166	0.6%
35	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	166	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts 14-County Area Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			38,000	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	1,864	4.9%
2	47-2031	Carpenters	1,192	3.1%
3	47-2061	Construction laborers	1,127	3.0%
4	47-2073	Operating engineers and other construction equipment operators	1,036	2.7%
5	43-9061	Office clerks, general	969	2.5%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	914	2.4%
7	41-2031	Retail salespersons	811	2.1%
8	43-3031	Bookkeeping, accounting, and auditing clerks	748	2.0%
9	11-1021	General and operations managers	712	1.9%
10	53-7062	Laborers and freight, stock, and material movers, hand	705	1.9%
11	41-2011	Cashiers, except gaming	689	1.8%
12	53-7032	Excavating and loading machine and dragline operators	685	1.8%
13	49-9042	Maintenance and repair workers, general	596	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	575	1.5%
15	43-6011	Executive secretaries and administrative assistants	564	1.5%
16	13-2011	Accountants and auditors	546	1.4%
17	43-4051	Customer service representatives	500	1.3%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	409	1.1%
19	43-1011	First-line supervisors/managers of office and administrative support workers	379	1.0%
20	11-9021	Construction managers	362	1.0%
21	35-3021	Combined food preparation and serving workers, including fast food	358	0.9%
22	35-3031	Waiters and waitresses	350	0.9%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	350	0.9%
24	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	348	0.9%
25	29-1111	Registered nurses	343	0.9%
26	43-4171	Receptionists and information clerks	332	0.9%
27	53-7051	Industrial truck and tractor operators	325	0.9%
28	43-5081	Stock clerks and order fillers	308	0.8%
29	23-1011	Lawyers	288	0.8%
30	49-3042	Mobile heavy equipment mechanics, except engines	281	0.7%
31	53-3033	Truck drivers, light or delivery services	258	0.7%
32	47-5051	Rock splitters, quarry	257	0.7%
33	37-2012	Maids and housekeeping cleaners	247	0.6%
34	13-1199	Business operation specialists, all other	246	0.6%
35	39-9021	Personal and home care aides	231	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

14-County Area Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts 14-County Area Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			54,693	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	2,518	4.6%
2	13-2011	Accountants and auditors	1,645	3.0%
3	43-9061	Office clerks, general	1,582	2.9%
4	43-3031	Bookkeeping, accounting, and auditing clerks	1,534	2.8%
5	11-1021	General and operations managers	1,484	2.7%
6	47-2073	Operating engineers and other construction equipment operators	1,310	2.4%
7	43-6011	Executive secretaries and administrative assistants	1,208	2.2%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers	1,207	2.2%
9	51-8093	Petroleum pump system operators, refinery operators, and gaugers	1,193	2.2%
10	47-2061	Construction laborers	1,134	2.1%
11	43-6014	Secretaries, except legal, medical, and executive	1,112	2.0%
12	47-2031	Carpenters	1,091	2.0%
13	53-7073	Wellhead pumpers	1,066	1.9%
14	17-2171	Petroleum engineers	1,050	1.9%
15	49-9042	Maintenance and repair workers, general	915	1.7%
16	53-7062	Laborers and freight, stock, and material movers, hand	889	1.6%
17	53-7032	Excavating and loading machine and dragline operators	869	1.6%
18	47-5071	Roustabouts, oil and gas	797	1.5%
19	19-2042	Geoscientists, except hydrologists and geographers	792	1.4%
20	43-4051	Customer service representatives	615	1.1%
21	13-1199	Business operation specialists, all other	615	1.1%
22	19-4041	Geological and petroleum technicians	610	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	571	1.0%
24	23-1011	Lawyers	539	1.0%
25	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	520	1.0%
26	11-3031	Financial managers	492	0.9%
27	51-1011	First-line supervisors/managers of production and operating workers	490	0.9%
28	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	487	0.9%
29	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	467	0.9%
30	49-3042	Mobile heavy equipment mechanics, except engines	427	0.8%
31	53-7051	Industrial truck and tractor operators	412	0.8%
32	43-4171	Receptionists and information clerks	411	0.8%
33	33-9032	Security guards	395	0.7%
34	49-9041	Industrial machinery mechanics	366	0.7%
35	13-2051	Financial analysts	363	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total Impacts 2021

Ranking	SOC Occupation Code	Total Impacts 14-County Area Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			82,644	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	2,730	3.3%
2	43-9061	Office clerks, general	2,253	2.7%
3	41-2031	Retail salespersons	1,966	2.4%
4	43-3031	Bookkeeping, accounting, and auditing clerks	1,937	2.3%
5	13-2011	Accountants and auditors	1,861	2.3%
6	11-1021	General and operations managers	1,830	2.2%
7	41-2011	Cashiers, except gaming	1,672	2.0%
8	43-6011	Executive secretaries and administrative assistants	1,524	1.8%
9	43-6014	Secretaries, except legal, medical, and executive	1,470	1.8%
10	47-2073	Operating engineers and other construction equipment operators	1,318	1.6%
11	53-7062	Laborers and freight, stock, and material movers, hand	1,230	1.5%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	1,230	1.5%
13	51-8093	Petroleum pump system operators, refinery operators, and gaugers	1,193	1.4%
14	49-9042	Maintenance and repair workers, general	1,189	1.4%
15	47-2061	Construction laborers	1,174	1.4%
16	43-4051	Customer service representatives	1,156	1.4%
17	47-2031	Carpenters	1,146	1.4%
18	53-7073	Wellhead pumpers	1,066	1.3%
19	17-2171	Petroleum engineers	1,050	1.3%
20	43-1011	First-line supervisors/managers of office and administrative support workers	885	1.1%
21	53-7032	Excavating and loading machine and dragline operators	871	1.1%
22	35-3021	Combined food preparation and serving workers, including fast food	860	1.0%
23	35-3031	Waiters and waitresses	836	1.0%
24	29-1111	Registered nurses	826	1.0%
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	800	1.0%
26	47-5071	Roustabouts, oil and gas	797	1.0%
27	19-2042	Geoscientists, except hydrologists and geographers	794	1.0%
28	13-1199	Business operation specialists, all other	782	0.9%
29	43-4171	Receptionists and information clerks	765	0.9%
30	43-5081	Stock clerks and order fillers	713	0.9%
31	23-1011	Lawyers	630	0.8%
32	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	628	0.8%
33	19-4041	Geological and petroleum technicians	610	0.7%
34	11-3031	Financial managers	610	0.7%
35	37-2012	Maids and housekeeping cleaners	608	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Atascosa County



The following tables explain the estimated direct, indirect, and induced impacts within Atascosa County for 2011 and 2012. It is estimated that a total of 1,660 Atascosa County jobs were supported by Eagle Ford Shale development in 2011, with the largest impact being in the direct employment.

Estimated Impact 2011				
Atascosa County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	678	387	594	1,660

In 2021, Atascosa County is projected to see a total of 4,444 jobs impacted by Eagle Ford development, with the largest impact on induced employment.

Estimated Impact 2021				
Atascosa County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,175	1,525	1,744	4,444

Total impacts within Atascosa County in 2011 are shown below. Construction and extraction occupations are at 19.5 percent, followed by office and administrative occupations at 15.9 percent, service occupations at 14.2 percent, transportation and material moving occupations at 11.4 percent, professional occupations at 11.2 percent and management, business, and financial occupations at 9.7 percent. Moving down, sales occupations are at 8.2 percent, followed by installation, maintenance, and repair occupations at 5.3 percent, production occupations at 4.5 percent, and farming, fishing, and forestry at 0.1 percent.

Occupation Code	Total Impacts Atascosa County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	324	19.5%
43-0000	Office and administrative support occupations	265	15.9%
31-3900	Service occupations	235	14.2%
53-0000	Transportation and material moving occupations	189	11.4%
15-2900	Professional and related occupations	186	11.2%
11-1300	Management, business, and financial occupations	161	9.7%
41-0000	Sales and related occupations	136	8.2%
49-0000	Installation, maintenance, and repair occupations	88	5.3%
51-0000	Production occupations	75	4.5%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	1,660	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following table shows the projected total occupational impacts within Atascosa County for 2021. It indicates that office and administrative occupations first at 17.2 percent of the labor demanded; followed by service occupations at 16.6 percent, professional occupations at 15.6 percent, construction and extraction occupations at 11.5 percent, management, business, and financial occupations at 11.3 percent, and transportation and material moving occupations at 9.7 percent. Next are sales occupations at 8.9 percent, installation, maintenance, and repair occupations at 4.8 percent, production occupations at 4.4 percent and last are farming, fishing, and forestry occupations at 0.1 percent of the labor demanded.

Occupation Code	Total Impacts Atascosa County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	764	17.2%
31-3900	Service occupations	736	16.6%
15-2900	Professional and related occupations	695	15.6%
47-0000	Construction and extraction occupations	511	11.5%
11-1300	Management, business, and financial occupations	503	11.3%
53-0000	Transportation and material moving occupations	430	9.7%
41-0000	Sales and related occupations	394	8.9%
49-0000	Installation, maintenance, and repair occupations	212	4.8%
51-0000	Production occupations	196	4.4%
45-0000	Farming, fishing, and forestry occupations	3	0.1%
	Total	4,445	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Atascosa Direct and Indirect Impacts

The table below reveals the occupational composition of Atascosa County in 2010⁶; it shows a focus in service occupations (19 percent) and in office and support occupations (16.2 percent). Professional and related occupations (13.6 percent) and management, business, and financial occupations (11.9 percent) representing a significant portion of the workforce. Next are sale occupations (9.2 percent), construction and extraction occupations (8.7 percent) and transportation and material moving occupations (7.6 percent).

Showing the least relevance in the demand for labor were farming, fishing, and forestry operations (5.4 percent), installation, maintenance, and repair occupations (4.6 percent), and production occupations (3.7 percent). This data illustrates the tendency of industries in Atascosa County to recruit and rely on workers trained in service occupations, (such as healthcare support and food preparation) administrative, business, and other professional occupations including the legal, social science, technical and education fields.

Occupation Code	Atascosa County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	3,336	19.0%
43-0000	Office and administrative support occupations	2,854	16.2%
15-2900	Professional and related occupations	2,394	13.6%
11-1300	Management, business, and financial occupations	2,092	11.9%
41-0000	Sales and related occupations	1,622	9.2%
47-0000	Construction and extraction occupations	1,537	8.7%
53-0000	Transportation and material moving occupations	1,338	7.6%
45-0000	Farming, fishing, and forestry occupations	957	5.4%
49-0000	Installation, maintenance, and repair occupations	802	4.6%
51-0000	Production occupations	641	3.7%
	Total	17,572	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The education and training associated with the occupational composition of 2010 Atascosa county is illustrated below. Short-term (34.7 percent) and moderate-term (17.4 percent) on-the-job-training were the most demanded on the chart followed by work experience (14.3 percent), occupations requiring a Bachelor's degree (9.5 percent), long-term on-the-job training (7.3 percent), and Bachelor's or higher degree, plus work experience (6 percent). Postsecondary vocational awards are next (4.8 percent), followed by associate degrees (3.3 percent). Lastly are occupations requiring a Master's degree (1.4 percent), first professional degrees (1.1 percent), and doctoral degrees (0.2 percent).

⁶ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 18,322.

Atascosa County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
6,100	Short-term on-the-job training	34.7%
3,054	Moderate-term on-the-job training	17.4%
2,506	Work experience in a related occupation	14.3%
1,671	Bachelor's degree	9.5%
1,281	Long-term on-the-job training	7.3%
1,050	Bachelor's or higher degree, plus work experience	6.0%
848	Postsecondary vocational award	4.8%
582	Associate degree	3.3%
238	Master's degree	1.4%
202	First professional degree	1.1%
42	Doctoral degree	0.2%
17,574	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Moving forward to 2011 the data shows a heavier focus on construction and extraction jobs (29.8 percent), a substantial increase of 21 percentage points moving it to the first position; additionally, transportation and material moving occupations (14.9 percent) increased by 7 percentage points, followed closely by office and administrative support occupations (14.4 percent), showing a 1.8 percentage point decrease. Management, business, and financial occupations (10.7 percent) still represent a significant portion of the workforce, but declined by 1 percentage point; followed by a decline in the relevance of service occupations (6.9 percent), decreasing by 12 percentage points.

Professional occupations (6.4 percent) show a 7 percentage point decrease and installation, maintenance, and repair occupations (6.4 percent) show a 1.8 percentage point increase. Rounding out the bottom of the list are production occupations (6.2 percent) despite showing a 2.5 percentage point increase, sales occupations (4.3 percent), showing a 4.9 percentage point decrease, and farming, fishing, and forestry occupations declining by 5 percentage points. With construction and extraction moving up five places on the occupational chart, transportation moving up five, and a substantial decrease in the relevance of service and sales occupations, it is clear that area industry is requiring more workers with a physical development and technical background.

Occupation Code	Direct Plus Indirect Impacts Atascosa County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	318	29.8%
53-0000	Transportation and material moving occupations	158	14.9%
43-0000	Office and administrative support occupations	154	14.4%
11-1300	Management, business, and financial occupations	114	10.7%
31-3900	Service occupations	74	6.9%
15-2900	Professional and related occupations	68	6.4%
49-0000	Installation, maintenance, and repair occupations	68	6.4%
51-0000	Production occupations	66	6.2%
41-0000	Sales and related occupations	45	4.3%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	1,066	100.00%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below details the impacts of Eagle Ford development on education and training requirements in Atascosa County 2011. Moderate-term on-the-job training moved to first position at 29.3 percent, taking the place of short-term on-the-job training, now in second at 27.7 percent. These represent a 12 percentage point increase and 7 percentage point decrease, respectively. Long-term on-the-job training increased by 5.6 percentage points moving to the third position at 12.9 percent and, and work experience in a related occupation at 11.5 percent declined by 2.8 percentage points. Occupations requiring a Bachelor's degree show up fifth at 9.4 percent and those requiring a Bachelor's or higher plus work experience are sixth at 4 percent, decreasing by 2 percentage points.

Postsecondary vocational awards show up at 2.6 percent declining 2 percentage points, first professional degrees at 0.7 percent, with no change in relevance, Master's degrees at 0.3 percent, decreasing by 1 percentage point and occupations requiring a doctoral degree at less than 1 percent. The biggest changes were in moderate, short, and long-term on the job training, as many of the jobs the Eagle Ford Shale development engenders are best suited with this type of training. The 2011 impact tables illustrate the short-term impact that the Eagle Ford Shale has had in Atascosa County. We now move to long term impacts.

Direct Plus Indirect Impacts Atascosa County Education Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
312	Moderate-term on-the-job training	29.3%
296	Short-term on-the-job training	27.7%
137	Long-term on-the-job training	12.9%
123	Work experience in a related occupation	11.5%
100	Bachelor's degree	9.4%
43	Bachelor's or higher degree, plus work experience	4.0%
28	Postsecondary vocational award	2.6%
18	Associate degree	1.7%
8	First professional degree	0.7%
3	Master's degree	0.3%
0	Doctoral degree	0.0%
1,066	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The report looks at the long-term impacts in Atascosa County resulting from Eagle Ford development by comparing 2011 impact numbers with 2021 projections in occupational composition and education and training needs. Construction and extraction occupations are projected to remain in first at 18.4 percent, followed by office and administrative support at 16.3 percent, an 11.4 percentage point decrease and a 1.9 percentage point increase, respectively. Projected to move to the third position, management, business and financial occupations are at 13.6 percent, a 2.9 percentage point increase. Fourth are professional occupations at 13.3 percent, increasing by 6.9 percentage points.

Projected fifth, sixth and seventh, are transportation and material moving occupations at 12.4 percent, decreasing by 2.5 percentage points; service occupations at 9.4 percent, increasing by 2.5 percentage points and production occupations at 6.1 percent, decreasing by 0.1 percentage point. Last are installation, maintenance, and repair occupations at 5.6 percent (a 0.8 percentage point decrease) and sales occupations at 4.9 percent, (a 0.6 percentage point increase) and farming, fishing, and forestry jobs representing less than 1 percent of the labor demanded.

Occupation Code	Direct Plus Indirect Impacts Atascosa County 10-Occupational Categories, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	496	18.4%
43-0000	Office and administrative support occupations	440	16.3%
11-1300	Management, business, and financial occupations	367	13.6%
15-2900	Professional and related occupations	358	13.3%
53-0000	Transportation and material moving occupations	335	12.4%
31-3900	Service occupations	254	9.4%
51-0000	Production occupations	166	6.1%
49-0000	Installation, maintenance, and repair occupations	152	5.6%
41-0000	Sales and related occupations	133	4.9%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	2,701	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2021 projections of the Eagle Ford development impact on the educational structure in Atascosa County are depicted below. Short-term on-the-job training moves back up to the first position at 26.8 percent and moderate-term on-the-job training moves to second at 25.5 percent, a 0.9 and 3.8 percentage point decrease, respectively. Projected third are occupations requiring a Bachelor's degree at 14.3 percent, a 4.9 percentage point increase; fourth are occupations requiring work experience in a related occupation at 10.7 percent showing 0.8 percentage point decrease. Long-term on-the-job training is projected to show up fifth at 9.5 percent, a 3.4 percentage point decrease with Bachelor's or higher degree plus work experience at 5.6 percent, estimated to show a 1.6 percentage point increase.

Jobs requiring an associate degree (3.1 percent) are estimated to increase by 1.4 percentage points, postsecondary vocational awards (2.5 percent) to decrease by 0.1 percentage point, and Master's degrees (1.2 percent) to increase by 0.9 percentage point. Lastly, projected eleventh and twelfth are occupations requiring a first professional degree (0.8 percent) and doctoral degrees at less than 1 percent. The occupations with the biggest change in relevance over the long-term are those requiring a Bachelor's degree.

Direct Plus Indirect Impacts Atascosa County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
724	Short-term on-the-job training	26.8%
689	Moderate-term on-the-job training	25.5%
387	Bachelor's degree	14.3%
290	Work experience in a related occupation	10.7%
255	Long-term on-the-job training	9.5%
150	Bachelor's or higher degree, plus work experience	5.6%
84	Associate degree	3.1%
67	Postsecondary vocational award	2.5%
33	Master's degree	1.2%
22	First professional degree	0.8%
1	Doctoral degree	0.0%
2,701	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Atascosa Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Atascosa County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	1,066	100.0%
1	47-2031	Carpenters	71	6.7%
2	53-3032	Truck drivers, heavy and tractor-trailer	64	6.0%
3	47-2061	Construction laborers	61	5.7%
4	47-1011	First-line supervisors/managers of construction trades and extraction workers	46	4.3%
5	47-2073	Operating engineers and other construction equipment operators	38	3.6%
6	43-9061	Office clerks, general	25	2.3%
7	53-7032	Excavating and loading machine and dragline operators	24	2.2%
8	33-9032	Security guards	22	2.0%
9	11-1021	General and operations managers	21	2.0%
10	43-3031	Bookkeeping, accounting, and auditing clerks	21	2.0%
11	11-9021	Construction managers	21	2.0%
12	53-7062	Laborers and freight, stock, and material movers, hand	21	2.0%
13	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	20	1.9%
14	49-9042	Maintenance and repair workers, general	17	1.6%
15	43-6014	Secretaries, except legal, medical, and executive	16	1.5%
16	43-6011	Executive secretaries and administrative assistants	15	1.4%
17	13-2011	Accountants and auditors	15	1.4%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	14	1.3%
19	43-4051	Customer service representatives	11	1.1%
20	37-3011	Landscaping and groundskeeping workers	11	1.0%
21	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	11	1.0%
22	49-3042	Mobile heavy equipment mechanics, except engines	10	1.0%
23	53-7051	Industrial truck and tractor operators	10	0.9%
24	13-1051	Cost estimators	10	0.9%
25	43-1011	First-line supervisors/managers of office and administrative support workers	9	0.8%
26	47-5051	Rock splitters, quarry	9	0.8%
27	47-2051	Cement masons and concrete finishers	8	0.8%
28	51-4121	Welders, cutters, solderers, and brazers	8	0.8%
29	47-5041	Continuous mining machine operators	8	0.7%
30	53-3033	Truck drivers, light or delivery services	8	0.7%
31	47-2111	Electricians	7	0.7%
32	23-1011	Lawyers	7	0.7%
33	47-3012	Helpers Carpenters	7	0.7%
34	47-2152	Plumbers, pipefitters, and steamfitters	7	0.7%
35	43-4171	Receptionists and information clerks	7	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Atascosa County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	1,660	100.0%
1	47-2031	Carpenters	73	4.4%
2	53-3032	Truck drivers, heavy and tractor-trailer	68	4.1%
3	47-2061	Construction laborers	63	3.8%
4	47-1011	First-line supervisors/managers of construction trades and extraction workers	47	2.8%
5	43-9061	Office clerks, general	39	2.4%
6	41-2031	Retail salespersons	39	2.4%
7	47-2073	Operating engineers and other construction equipment operators	38	2.3%
8	41-2011	Cashiers, except gaming	33	2.0%
9	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	32	2.0%
10	33-9032	Security guards	32	1.9%
11	43-3031	Bookkeeping, accounting, and auditing clerks	30	1.8%
12	11-1021	General and operations managers	29	1.7%
13	53-7062	Laborers and freight, stock, and material movers, hand	27	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	25	1.5%
15	53-7032	Excavating and loading machine and dragline operators	24	1.4%
16	43-4051	Customer service representatives	23	1.4%
17	43-6011	Executive secretaries and administrative assistants	22	1.3%
18	11-9021	Construction managers	22	1.3%
19	49-9042	Maintenance and repair workers, general	21	1.3%
20	29-1111	Registered nurses	21	1.2%
21	13-2011	Accountants and auditors	19	1.2%
22	37-3011	Landscaping and groundskeeping workers	17	1.0%
23	43-1011	First-line supervisors/managers of office and administrative support workers	16	0.9%
24	43-4171	Receptionists and information clerks	15	0.9%
25	43-5081	Stock clerks and order fillers	14	0.9%
26	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	14	0.8%
27	35-3021	Combined food preparation and serving workers, including fast food	13	0.8%
28	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	13	0.8%
29	31-1012	Nursing aides, orderlies, and attendants	13	0.8%
30	35-3031	Waiters and waitresses	12	0.7%
31	37-2012	Maids and housekeeping cleaners	12	0.7%
32	53-3033	Truck drivers, light or delivery services	11	0.7%
33	41-1011	First-line supervisors/managers of retail sales workers	11	0.7%
34	53-7051	Industrial truck and tractor operators	11	0.6%
35	41-2021	Counter and rental clerks	11	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Atascosa Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

SOC Occupation Code		Direct plus Indirect Impacts Atascosa County Top 35 Occupations Impacted in 2021	Occupational Impact	Percentage
Ranking				
		Total	2,701	100.0%
1	33-9032	Security guards	117	4.3%
2	53-3032	Truck drivers, heavy and tractor-trailer	114	4.2%
3	47-2031	Carpenters	89	3.3%
4	47-2061	Construction laborers	81	3.0%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	71	2.6%
6	43-9061	Office clerks, general	69	2.6%
7	13-2011	Accountants and auditors	67	2.5%
8	11-1021	General and operations managers	67	2.5%
9	43-3031	Bookkeeping, accounting, and auditing clerks	65	2.4%
10	47-2073	Operating engineers and other construction equipment operators	61	2.3%
11	43-6011	Executive secretaries and administrative assistants	50	1.9%
12	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	50	1.9%
13	43-6014	Secretaries, except legal, medical, and executive	48	1.8%
14	53-7062	Laborers and freight, stock, and material movers, hand	40	1.5%
15	51-8093	Petroleum pump system operators, refinery operators, and gaugers	39	1.5%
16	53-7073	Wellhead pumpers	39	1.4%
17	53-7032	Excavating and loading machine and dragline operators	39	1.4%
18	49-9042	Maintenance and repair workers, general	38	1.4%
19	17-2171	Petroleum engineers	38	1.4%
20	43-4051	Customer service representatives	35	1.3%
21	47-5071	Roustabouts, oil and gas	29	1.1%
22	19-2042	Geoscientists, except hydrologists and geographers	29	1.1%
23	37-3011	Landscaping and groundskeeping workers	28	1.0%
24	11-9021	Construction managers	27	1.0%
25	43-1011	First-line supervisors/managers of office and administrative support workers	26	0.9%
26	13-1199	Business operation specialists, all other	25	0.9%
27	15-1021	Computer programmers	24	0.9%
28	15-1031	Computer software engineers, applications	24	0.9%
29	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	23	0.8%
30	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	22	0.8%
31	19-4041	Geological and petroleum technicians	22	0.8%
32	15-1041	Computer support specialists	22	0.8%
33	15-1051	Computer systems analysts	22	0.8%
34	49-3042	Mobile heavy equipment mechanics, except engines	20	0.7%
35	23-1011	Lawyers	20	0.7%

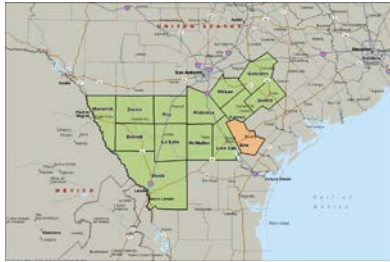
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Atascosa County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	4,445	164.5%
1	33-9032	Security guards	155	5.7%
2	53-3032	Truck drivers, heavy and tractor-trailer	126	4.7%
3	43-9061	Office clerks, general	112	4.1%
4	41-2031	Retail salespersons	111	4.1%
5	47-2031	Carpenters	94	3.5%
6	41-2011	Cashiers, except gaming	93	3.4%
7	43-3031	Bookkeeping, accounting, and auditing clerks	91	3.4%
8	11-1021	General and operations managers	88	3.3%
9	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	85	3.1%
10	47-2061	Construction laborers	84	3.1%
11	13-2011	Accountants and auditors	80	2.9%
12	43-6014	Secretaries, except legal, medical, and executive	74	2.7%
13	47-1011	First-line supervisors/managers of construction trades and extraction workers	73	2.7%
14	43-6011	Executive secretaries and administrative assistants	71	2.6%
15	43-4051	Customer service representatives	70	2.6%
16	47-2073	Operating engineers and other construction equipment operators	62	2.3%
17	29-1111	Registered nurses	61	2.3%
18	53-7062	Laborers and freight, stock, and material movers, hand	59	2.2%
19	49-9042	Maintenance and repair workers, general	52	1.9%
20	43-1011	First-line supervisors/managers of office and administrative support workers	45	1.7%
21	37-3011	Landscaping and groundskeeping workers	45	1.7%
22	43-4171	Receptionists and information clerks	42	1.5%
23	51-8093	Petroleum pump system operators, refinery operators, and gaugers	39	1.5%
24	43-5081	Stock clerks and order fillers	39	1.4%
25	53-7032	Excavating and loading machine and dragline operators	39	1.4%
26	53-7073	Wellhead pumpers	39	1.4%
27	17-2171	Petroleum engineers	38	1.4%
28	35-3021	Combined food preparation and serving workers, including fast food	37	1.4%
29	31-1012	Nursing aides, orderlies, and attendants	36	1.3%
30	13-1199	Business operation specialists, all other	34	1.3%
31	35-3031	Waiters and waitresses	34	1.3%
32	37-2012	Maids and housekeeping cleaners	34	1.3%
33	41-2021	Counter and rental clerks	33	1.2%
34	41-1011	First-line supervisors/managers of retail sales workers	32	1.2%
35	39-9011	Child care workers	30	1.1%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Bee County



The following tables detail the estimated direct, indirect, and induced impacts within Bee County for 2011 and 2021. Within Bee County, it is estimated that a total of 554 jobs were supported by Eagle Ford Shale in 2011, with the largest impact in the direct employment category.

Estimated Impact 2011				
Bee County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	360	80	113	554

Within Bee County, there is expected to be a total of 252 jobs impacted in 2021, with the largest impact on indirect employment.

Estimated Impact 2021				
Bee County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	12	146	95	252

The following table shows the Eagle Ford total impacts within Bee County in 2011. It demonstrates construction and extraction occupations as most relevant at 41.2 percent; followed by office and administrative occupations at 13.3 percent, management, business, and financial occupations at 12.9 percent, professional occupations at 8.3 percent, and service occupations at 7.4 percent. Next are sales occupations at 6.3 percent, transportation and material moving occupations at 4.5 percent, installation, maintenance, and repair occupations at 3.4 percent, production occupations at 2.5 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Bee County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	228	41.2%
43-0000	Office and administrative support occupations	74	13.3%
11-1300	Management, business, and financial occupations	72	12.9%
15-2900	Professional and related occupations	46	8.3%
31-3900	Service occupations	41	7.4%
41-0000	Sales and related occupations	35	6.3%
53-0000	Transportation and material moving occupations	25	4.5%
49-0000	Installation, maintenance, and repair occupations	19	3.4%
51-0000	Production occupations	14	2.5%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	554	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below details the projected total occupational impact of Eagle Ford on Bee County for 2021. Projections put office and administrative occupations first on the list at 21.9 percent; followed by service occupations at 15.2 percent, professional occupations at 14.3 percent, management, business and financial occupations at 14 percent and sales occupations at 13.1 percent.

In the sixth position are transportation and material moving occupations at 8.8 percent; followed by installation, maintenance, and repair occupations at 5.3 percent, production occupations at 4.7 percent, construction and extraction occupations at 2.4 percent, and farming, fishing, and forestry occupations at 0.4 percent of the labor demanded.

Occupation Code	Total Impacts Bee County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	55	21.9%
31-3900	Service occupations	38	15.2%
15-2900	Professional and related occupations	36	14.3%
11-1300	Management, business, and financial occupations	35	14.0%
41-0000	Sales and related occupations	33	13.1%
53-0000	Transportation and material moving occupations	22	8.8%
49-0000	Installation, maintenance, and repair occupations	13	5.3%
51-0000	Production occupations	12	4.7%
47-0000	Construction and extraction occupations	6	2.4%
45-0000	Farming, fishing, and forestry occupations	1	0.4%
	Total	252	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Bee Direct and Indirect Impacts

The 2010 occupational data for Bee County shows a concentration in service occupations at 21.3 percent, professional occupations at 18.6 percent, office and administrative support at 16.6 percent and management and business occupations at 12.8 percent⁷. Fifth down are sales occupations at 8.3 percent, followed by transportation and material moving occupations at 5.7 percent and farming, fishing, and forestry occupations at 5.6 percent. In the eighth position are construction and extraction occupations at 5 percent, followed by installation, maintenance, and repair occupations at 3.2 percent and in tenth are production occupations at 2.8 percent.

Occupation Code	Bee County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	2,817	21.3%
15-2900	Professional and related occupations	2,461	18.6%
43-0000	Office and administrative support occupations	2,195	16.6%
11-1300	Management, business, and financial occupations	1,693	12.8%
41-0000	Sales and related occupations	1,099	8.3%
53-0000	Transportation and material moving occupations	759	5.7%
45-0000	Farming, fishing, and forestry occupations	740	5.6%
47-0000	Construction and extraction occupations	655	5.0%
49-0000	Installation, maintenance, and repair occupations	422	3.2%
51-0000	Production occupations	369	2.8%
	Total	13,208	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2010 Bee County educational structure is illustrated below. It reflects an industry focus on short-term on-the-job training, shown at 31.8 percent, moderate-term on-the-job training at 18 percent, work experience in a related field at 14.3 percent and occupations requiring a Bachelor's degree at 12.2 percent. In the fifth position are those occupations requiring a Bachelor's degree, plus work experience at 6 percent; followed by long-term on-the-job training at 5.3 percent, postsecondary vocational award at 4.5 percent, associate degree at 4.1 percent, and Master's degree at 2.4 percent. Lastl are occupations requiring a first professional degree at 1.3 percent and doctoral degrees at 0.2 percent.

⁷ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 12,659.

Bee County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
4,203	Short-term on-the-job training	31.8%
2,375	Moderate-term on-the-job training	18.0%
1,883	Work experience in a related occupation	14.3%
1,605	Bachelor's degree	12.2%
788	Bachelor's or higher degree, plus work experience	6.0%
697	Long-term on-the-job training	5.3%
599	Postsecondary vocational award	4.5%
541	Associate degree	4.1%
311	Master's degree	2.4%
177	First professional degree	1.3%
30	Doctoral degree	0.2%
13,208	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The table below illustrates the Eagle Ford development impacts between 2010 and 2011 within Bee County. Construction and extraction occupations (51.5 percent) moved from eighth to the first position showing a sizeable 46.5 percentage point increase. Following are occupations dealing with management, business and finance (14.4 percent), showing a 1.6 percentage point increase and office and administrative support occupations (12.4 percent), showing a 4.2 percentage point decrease; followed by professional occupations (4.9 percent), declining substantially by 13.7 percentage points, transportation and material moving occupations (4.6 percent), showing a 1.1 percentage point decrease and sales occupations (4 percent), declining by 4.3 percentage points.

In the seventh position are installation, maintenance and repair occupations (3.6 percent), showing a 0.4 percentage point increase; followed by production occupations (2.7 percent), a 0.1 percentage point decrease, and service occupations (1.9 percent), a substantial 19.4 percentage point decrease. Lastly, farming, fishing, and forestry (0.1 percent) showed a 5.5 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Bee County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	227	51.5%
11-1300	Management, business, and financial occupations	63	14.4%
43-0000	Office and administrative support occupations	55	12.4%
15-2900	Professional and related occupations	22	4.9%
53-0000	Transportation and material moving occupations	20	4.6%
41-0000	Sales and related occupations	18	4.0%
49-0000	Installation, maintenance, and repair occupations	16	3.6%
51-0000	Production occupations	12	2.7%
31-3900	Service occupations	8	1.9%
45-0000	Farming, fishing, and forestry occupations	0	0.1%
	Total	441	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2011 Eagle Ford development impacts within Bee County on educational and training requirements are illustrated below. It shows moderate-term on-the-job training (26.5 percent) in the first position, gaining an 8.5 percentage points. Second on the list is long-term on-the-job training (24.4 percent), a significant increase of 19.1 percentage points. Short-term on-the-job training (14.5 percent) moved to the third position and decreased by 17.3 percentage points relative to the 2010 figure; followed by work experience in a related field (14.3 percent), Bachelor's degree (12.7 percent), showing a 0.5 percentage point increase, and Bachelor's of higher degree plus work experience (4.3 percent), declining by 1.7 percentage point.

In the seventh position are postsecondary vocational awards (2.4 percent) showing a 2.1 percentage point decrease, followed by associate degree (0.6 percent), decreasing by 3.5 percentage points from the 2010 figure, first professional degree (0.2 percent), decreasing by 1.1 percentage point, Master's degree (0.1 percent), decreasing by 2.3 percentage points and occupations requiring a doctoral degree at less than 1 percent.

Direct Plus Indirect Impacts Bee County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
117	Moderate-term on-the-job training	26.5%
108	Long-term on-the-job training	24.4%
64	Short-term on-the-job training	14.5%
63	Work experience in a related occupation	14.3%
56	Bachelor's degree	12.7%
19	Bachelor's or higher degree, plus work experience	4.3%
10	Postsecondary vocational award	2.4%
3	Associate degree	0.6%
1	First professional degree	0.2%
1	Master's degree	0.1%
0	Doctoral degree	0.0%
441	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The table below illustrates the projected long-term Eagle Ford development impacts on the occupational make-up of Bee County in 2021. Office and administrative support occupations (24.2 percent) move to the first position, increasing by 11.8 percentage points while management and business occupations (17.6 percent) move to second decreasing by 3.2 percentage points. Following are professional occupations (12.3percent), showing an increase of 7.4 percentage points, sales occupations (11.7 percent), increasing by 7.7 percentage points, transportation and material moving occupations (10.7 percent), increasing by 6.1 percentage points and service occupations (7.2 percent), increasing by 5.3 percentage points.

Moving to the seventh position are installation, maintenance, and repair occupations (6.4 percent), increasing by 2.8 percentage points; followed by production occupations (6.2 percent) showing an increase of 3.5 percentage points and—moving from first to ninth—construction and extraction occupations (3.6 percent), decreasing considerably by 47.9 percentage points. Last are farming, fishing, and forestry occupations (0.3 percent), increasing by 0.2 percentage points.

Occupation Code	Direct Plus Indirect Impacts Bee County 10-Occupational Category, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	38	24.2%
11-1300	Management, business, and financial occupations	28	17.6%
15-2900	Professional and related occupations	19	12.3%
41-0000	Sales and related occupations	18	11.7%
53-0000	Transportation and material moving occupations	17	10.7%
31-3900	Service occupations	11	7.2%
49-0000	Installation, maintenance, and repair occupations	10	6.4%
51-0000	Production occupations	10	6.2%
47-0000	Construction and extraction occupations	6	3.6%
45-0000	Farming, fishing, and forestry occupations	1	0.3%
	Total	158	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on the educational structure within Bee County in 2021 are shown below. Projected to move to the first position is short-term on-the-job training (29.6 percent), showing a 15.1 percentage point increase; followed by moderate-term on-the-job training (19.3 percent), decreasing by 7.2 percentage points, occupations requiring a Bachelor's degree (14.5 percent), decreasing by 1.8 percentage point and work experience in a related field (14.2 percent), decreasing by 0.1 percentage point. In the fifth position are occupations requiring a Bachelor's degree or higher, plus work experience (7.5 percent) showing a 3.2 percentage point increase, followed by long-term on-the-job training (7.4 percent), decreasing by 17 percentage points. Next are occupations requiring a post secondary vocational award (3.1 percent), increasing by 0.7 percentage points and an associate degree (2.7 percent) showing a 2.1 percentage point increase.

In the ninth position are occupations requiring a professional degree (0.7 percent) showing a 0.5 percentage point increase; tenth and eleventh are Master's degree (0.6 percent), increasing by 0.5 percentage points and doctoral degree (0.1 percent), increasing by 0.1 percentage point.

Direct Plus Indirect Impacts Bee County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
47	Short-term on-the-job training	29.6%
30	Moderate-term on-the-job training	19.3%
23	Bachelor's degree	14.5%
23	Work experience in a related occupation	14.4%
12	Bachelor's or higher degree, plus work experience	7.5%
12	Long-term on-the-job training	7.4%
5	Postsecondary vocational award	3.1%
4	Associate degree	2.7%
1	First professional degree	0.7%
1	Master's degree	0.6%
0	Doctoral degree	0.1%
158	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Bee Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Bee County Top 35 Occupations Impacted in 2011		Occupational	
				Impact	Percentage
		Total		441	100.0%
1	47-2031	Carpenters		70	15.9%
2	47-2061	Construction laborers		53	12.1%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers		36	8.2%
4	11-9021	Construction managers		21	4.7%
5	13-1051	Cost estimators		9	2.1%
6	11-1021	General and operations managers		9	2.1%
7	43-3031	Bookkeeping, accounting, and auditing clerks		9	2.0%
8	43-9061	Office clerks, general		9	2.0%
9	43-6011	Executive secretaries and administrative assistants		8	1.9%
10	47-2051	Cement masons and concrete finishers		8	1.9%
11	47-2073	Operating engineers and other construction equipment operators		8	1.8%
12	43-6014	Secretaries, except legal, medical, and executive		7	1.6%
13	47-3012	HelpersùCarpenters		7	1.6%
14	47-2152	Plumbers, pipefitters, and steamfitters		7	1.6%
15	17-2051	Civil engineers		6	1.5%
16	47-2221	Structural iron and steel workers		6	1.4%
17	13-2011	Accountants and auditors		5	1.2%
18	53-7062	Laborers and freight, stock, and material movers, hand		5	1.2%
19	53-3032	Truck drivers, heavy and tractor-trailer		5	1.1%
20	47-2111	Electricians		5	1.0%
21	51-4121	Welders, cutters, solderers, and brazers		4	1.0%
22	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		4	1.0%
23	49-9042	Maintenance and repair workers, general		4	0.9%
24	41-2031	Retail salespersons		4	0.9%
25	47-2021	Brickmasons and blockmasons		4	0.9%
26	43-1011	First-line supervisors/managers of office and administrative support workers		3	0.8%
27	47-2081	Drywall and ceiling tile installers		3	0.8%
28	47-2141	Painters, construction and maintenance		3	0.7%
29	43-4171	Receptionists and information clerks		3	0.7%
30	41-2011	Cashiers, except gaming		3	0.6%
31	13-1199	Business operation specialists, all other		3	0.6%
32	43-4051	Customer service representatives		3	0.6%
33	49-9044	Millwrights		2	0.5%
34	53-3033	Truck drivers, light or delivery services		2	0.5%
35	43-5081	Stock clerks and order fillers		2	0.5%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Bee County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	554	100.0%
1	47-2031	Carpenters	71	12.8%
2	47-2061	Construction laborers	53	9.6%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	36	6.6%
4	11-9021	Construction managers	21	3.8%
5	43-9061	Office clerks, general	11	2.0%
6	41-2031	Retail salespersons	11	2.0%
7	11-1021	General and operations managers	11	1.9%
8	43-3031	Bookkeeping, accounting, and auditing clerks	10	1.9%
9	43-6011	Executive secretaries and administrative assistants	10	1.7%
10	13-1051	Cost estimators	10	1.7%
11	43-6014	Secretaries, except legal, medical, and executive	9	1.6%
12	41-2011	Cashiers, except gaming	9	1.5%
13	47-2051	Cement masons and concrete finishers	8	1.5%
14	47-2073	Operating engineers and other construction equipment operators	8	1.4%
15	47-3012	Helpers—Carpenters	7	1.3%
16	47-2152	Plumbers, pipefitters, and steamfitters	7	1.3%
17	17-2051	Civil engineers	6	1.2%
18	47-2221	Structural iron and steel workers	6	1.1%
19	53-7062	Laborers and freight, stock, and material movers, hand	6	1.1%
20	13-2011	Accountants and auditors	6	1.1%
21	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	5	0.9%
22	49-9042	Maintenance and repair workers, general	5	0.9%
23	53-3032	Truck drivers, heavy and tractor-trailer	5	0.9%
24	43-1011	First-line supervisors/managers of office and administrative support workers	5	0.8%
25	47-2111	Electricians	5	0.8%
26	43-4051	Customer service representatives	5	0.8%
27	51-4121	Welders, cutters, solderers, and brazers	5	0.8%
28	29-1111	Registered nurses	4	0.8%
29	43-5081	Stock clerks and order fillers	4	0.8%
30	43-4171	Receptionists and information clerks	4	0.8%
31	35-3021	Combined food preparation and serving workers, including fast food	4	0.7%
32	47-2021	Brickmasons and blockmasons	4	0.7%
33	35-3031	Waiters and waitresses	4	0.7%
34	47-2081	Drywall and ceiling tile installers	3	0.6%
35	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	3	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Bee Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Bee County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
		Total	158	100.0%
1	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	6	3.5%
2	43-4051	Customer service representatives	5	3.0%
3	43-9061	Office clerks, general	5	2.9%
4	43-3031	Bookkeeping, accounting, and auditing clerks	4	2.7%
5	53-7062	Laborers and freight, stock, and material movers, hand	4	2.6%
6	13-2011	Accountants and auditors	4	2.6%
7	11-1021	General and operations managers	4	2.4%
8	43-6011	Executive secretaries and administrative assistants	3	2.0%
9	53-3032	Truck drivers, heavy and tractor-trailer	3	1.9%
10	41-2031	Retail salespersons	3	1.6%
11	43-6014	Secretaries, except legal, medical, and executive	2	1.6%
12	43-1011	First-line supervisors/managers of office and administrative support workers	2	1.5%
13	41-2011	Cashiers, except gaming	2	1.5%
14	43-5081	Stock clerks and order fillers	2	1.5%
15	13-1199	Business operation specialists, all other	2	1.4%
16	49-9042	Maintenance and repair workers, general	2	1.3%
17	53-3033	Truck drivers, light or delivery services	2	1.1%
18	11-3031	Financial managers	2	1.0%
19	35-3031	Waiters and waitresses	1	0.9%
20	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	0.9%
21	43-5071	Shipping, receiving, and traffic clerks	1	0.9%
22	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.8%
23	51-8093	Petroleum pump system operators, refinery operators, and gaugers	1	0.8%
24	35-3021	Combined food preparation and serving workers, including fast food	1	0.8%
25	13-1111	Management analysts	1	0.8%
26	15-1051	Computer systems analysts	1	0.8%
27	49-9051	Electrical power-line installers and repairers	1	0.7%
28	43-4171	Receptionists and information clerks	1	0.7%
29	43-3021	Billing and posting clerks and machine operators	1	0.6%
30	51-1011	First-line supervisors/managers of production and operating workers	1	0.6%
31	13-2072	Loan officers	1	0.6%
32	41-3099	Sales representatives, services, all other	1	0.6%
33	15-1041	Computer support specialists	1	0.6%
34	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	1	0.6%
35	53-7064	Packers and packagers, hand	1	0.6%

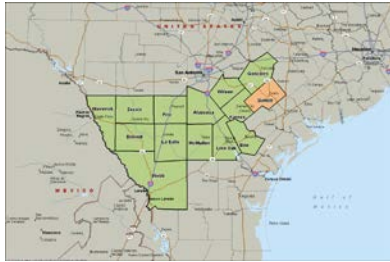
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Bee County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	252	100.0%
1	41-2031	Retail salespersons	8	3.0%
2	41-2011	Cashiers, except gaming	7	2.8%
3	43-9061	Office clerks, general	7	2.7%
4	43-4051	Customer service representatives	7	2.6%
5	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	6	2.5%
6	43-3031	Bookkeeping, accounting, and auditing clerks	6	2.2%
7	53-7062	Laborers and freight, stock, and material movers, hand	5	2.1%
8	11-1021	General and operations managers	5	1.9%
9	13-2011	Accountants and auditors	5	1.9%
10	43-5081	Stock clerks and order fillers	4	1.7%
11	35-3021	Combined food preparation and serving workers, including fast food	4	1.6%
12	35-3031	Waiters and waitresses	4	1.6%
13	43-6011	Executive secretaries and administrative assistants	4	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	4	1.4%
15	53-3032	Truck drivers, heavy and tractor-trailer	3	1.4%
16	43-1011	First-line supervisors/managers of office and administrative support workers	3	1.4%
17	29-1111	Registered nurses	3	1.3%
18	49-9042	Maintenance and repair workers, general	3	1.1%
19	13-1199	Business operation specialists, all other	3	1.1%
20	53-3033	Truck drivers, light or delivery services	2	1.0%
21	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	2	0.9%
22	41-1011	First-line supervisors/managers of retail sales workers	2	0.9%
23	31-1012	Nursing aides, orderlies, and attendants	2	0.8%
24	43-4171	Receptionists and information clerks	2	0.8%
25	11-3031	Financial managers	2	0.7%
26	31-1011	Home health aides	2	0.7%
27	43-5071	Shipping, receiving, and traffic clerks	2	0.7%
28	37-2012	Maids and housekeeping cleaners	2	0.7%
29	39-9021	Personal and home care aides	2	0.7%
30	13-2072	Loan officers	2	0.6%
31	39-9011	Child care workers	2	0.6%
32	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	2	0.6%
33	43-3021	Billing and posting clerks and machine operators	2	0.6%
34	41-2021	Counter and rental clerks	1	0.6%
35	53-7064	Packers and packagers, hand	1	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

DeWitt County



The tables below explain the estimated direct, indirect, and induced impacts within DeWitt County for 2011 and 2021. DeWitt County data shows an estimated total of 3,573 jobs supported by Eagle Ford Shale in 2011, with the direct category being most affected.

Estimated Impact 2011				
DeWitt County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,470	920	1,183	3,573

DeWitt County is projected to see a total of 11,261 jobs affected in 2021, with the largest impact on induced employment.

Estimated Impact 2021				
DeWitt County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	3,670	3,416	4,174	11,261

The Table below looks at the total occupational impacts within DeWitt County in 2011. Office and administrative occupations are foremost at 17.1 percent; followed by construction and extraction occupations at 16.3 percent, professional occupations at 12.9 percent, professional occupations at 12.9 percent, transportation and material moving occupations at 12.8 percent, and management, business, and financial occupations at 11.2 percent. In the sixth position are service occupations at 10.6 percent, preceding sales occupations at 8.9 percent, production occupations at 5.2 percent, installation, maintenance, and repair occupations at 5 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts DeWitt County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	612	17.1%
47-0000	Construction and extraction occupations	584	16.3%
15-2900	Professional and related occupations	459	12.9%
53-0000	Transportation and material moving occupations	458	12.8%
11-1300	Management, business, and financial occupations	398	11.2%
31-3900	Service occupations	378	10.6%
41-0000	Sales and related occupations	319	8.9%
51-0000	Production occupations	185	5.2%
49-0000	Installation, maintenance, and repair occupations	177	5.0%
45-0000	Farming, fishing, and forestry occupations	2	0.1%
	Total	3,573	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following table shows the projected total impacts for 2021 for DeWitt County. Office and administrative occupations are first at 18.5 percent; followed by professional occupations at 17.6 percent, management, business, and financial occupations at 14.6 percent, service occupations at 11.6 percent, and construction and extraction occupations at 10.9 percent.

Next are sales occupations at 6 percent, transportation and material moving occupations at 8.7 percent, production occupations at 4.5 percent, installation, maintenance, and repair occupations at 3.9 percent and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts DeWitt County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	2,081	18.5%
15-2900	Professional and related occupations	1,987	17.6%
11-1300	Management, business, and financial occupations	1,648	14.6%
31-3900	Service occupations	1,301	11.6%
47-0000	Construction and extraction occupations	1,230	10.9%
41-0000	Sales and related occupations	1,078	9.6%
53-0000	Transportation and material moving occupations	976	8.7%
51-0000	Production occupations	509	4.5%
49-0000	Installation, maintenance, and repair occupations	435	3.9%
45-0000	Farming, fishing, and forestry occupations	16	0.1%
	Total	11,261	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

DeWitt Direct and Indirect Impacts

The table below details the occupational composition of DeWitt County in 2010⁸. It shows that in 2010 the county focused on the service industry (16.9 percent), office and administrative occupations (16.4 percent), management and business occupations (14.4 percent), and professional occupations (14.3 percent). Also showing significance are farming, fishing, and forestry jobs, (8.4 percent), sales occupations (7.9 percent), production occupations (7.2 percent), and transportation occupations (6 percent). The ninth and tenth positions are filled by construction and extraction occupations (5.4 percent) and installation, maintenance, and repair occupations (3.2 percent).

Occupation Code	DeWitt County 10-Occupational Category, 2010	Employment	Percentage
31-3900	Service occupations	2,044	16.9%
43-0000	Office and administrative support occupations	1,975	16.4%
11-1300	Management, business, and financial occupations	1,742	14.4%
15-2900	Professional and related occupations	1,723	14.3%
45-0000	Farming, fishing, and forestry occupations	1,011	8.4%
41-0000	Sales and related occupations	953	7.9%
51-0000	Production occupations	867	7.2%
53-0000	Transportation and material moving occupations	727	6.0%
47-0000	Construction and extraction occupations	646	5.4%
49-0000	Installation, maintenance, and repair occupations	383	3.2%
	Total	12,073	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The educational make-up of DeWitt County in 2010 shows that industry in the county primarily relied on occupations requiring short-term on-the-job training (29.2 percent). In the second position are jobs requiring moderate-term on-the-job training (18.3 percent); followed by work experience in a related field (16.9 percent), Bachelor's degree (11.4 percent), Bachelor's or higher, plus work experience (7.5 percent) and long-term on-the-job training (6.2 percent). Seventh down are jobs requiring postsecondary vocational training (4.4 percent); followed by associate degree (3.3 percent), Master's degree (1.3 percent), first professional degree (1.1 percent) and doctoral degree (0.3 percent).

⁸ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 12,002.

Number of Jobs	DeWitt County Educational Structure, 2010	Percentage
3,529	Short-term on-the-job training	29.2%
2,212	Moderate-term on-the-job training	18.3%
2,041	Work experience in a related occupation	16.9%
1,371	Bachelor's degree	11.4%
907	Bachelor's or higher degree, plus work experience	7.5%
752	Long-term on-the-job training	6.2%
533	Postsecondary vocational award	4.4%
401	Associate degree	3.3%
162	Master's degree	1.3%
131	First professional degree	1.1%
33	Doctoral degree	0.3%
12,073	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

There were several shifts in the relevance of occupations due to Eagle Ford development. Construction and extraction moved to the first position (24.1 percent), showing an 18.7 percentage point increase from the 2010 figure; followed by transportation occupations (16.5 percent), a 10.5 percentage point increase. Third down are office and administrative occupations (16.1 percent), showing a 0.3 percentage point decrease. Fourth are management and business occupations (12.4 percent), decreasing by 2 percentage points; followed by professional occupations (10.4 percent) showing a 3.9 percentage point decrease and production occupations (7 percent), decreasing by 0.2 percentage point. Lastly there are installation and repair occupations (6.1 percent) showing a 2.9 percentage point increase and sales occupations moving to eighth (4.4 percent), showing a 3.5 percentage point decrease; service occupations (3 percent), moving from first to the ninth position, showed a 13.9 percentage point decrease, while farming, fishing, and forestry came in last with less than 1 percent of the labor demanded in 2011.

Occupation Code	Direct Plus Indirect Impacts DeWitt County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	577	24.1%
53-0000	Transportation and material moving occupations	396	16.5%
43-0000	Office and administrative support occupations	385	16.1%
11-1300	Management, business, and financial occupations	297	12.4%
15-2900	Professional and related occupations	249	10.4%
51-0000	Production occupations	167	7.0%
49-0000	Installation, maintenance, and repair occupations	146	6.1%
41-0000	Sales and related occupations	105	4.4%
31-3900	Service occupations	72	3.0%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	2,395	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The distributional affects of Eagle Ford development on education and training requirements are illustrated below. Moderate-term on-the-job training (29.9 percent) takes over the most demanded category showing an 11.6 percentage point increase; followed by short-term on-the-job training (24.8 percent), decreasing by 4.4 percentage points. Occupations requiring a Bachelor's degree (12.1 percent) increased by 0.7 percentage point, work experience in a related field (11.3 percent) decreased by 5. 6 percentage points, and long-term on-the-job training (10.3 percent) increased by 4.1 percentage points. Occupations requiring a Bachelor's or higher, plus work experience (5 percent) decreased by 2. 5 percentage points and postsecondary vocational awards (2.6 percent) decreased by 1.8 percentage point between 2010 and 2011. Lastly, associate degree (2.4 percent) showed a 0.9 percentage point decrease, first professional degree (0.8 percent) decreased by 0.3 percentage point, Master's degree (0.6 percent) decreased by 0.7 percentage point, and doctoral degrees at less than 1 percent.

Occupational Impact	Direct Plus Indirect Impacts DeWitt County Educational Structure, 2011	Percentage
717	Moderate-term on-the-job training	29.9%
593	Short-term on-the-job training	24.8%
290	Bachelor's degree	12.1%
272	Work experience in a related occupation	11.3%
247	Long-term on-the-job training	10.3%
119	Bachelor's or higher degree, plus work experience	5.0%
63	Postsecondary vocational award	2.6%
58	Associate degree	2.4%
18	First professional degree	0.8%
15	Master's degree	0.6%
1	Doctoral degree	0.0%
2,394	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Looking at the long term affects, the table below shows management and business occupations (18.2 percent) first on the list, increasing by 5.8 percentage points relative to the 2011 figure. Moving to the second position are office and administrative occupations (18.2 percent), showing a 2.1 percentage point increase and third are professional occupations (17.5 percent) showing a 7.1 percentage point increase. Following are construction and extraction occupations (17 percent), with a 7.1 percentage point decrease and transportation and material moving occupations (10.7 percent), with a 5.8 percentage point decrease. Production occupations (6.3 percent) are projected to show a 0.7 percentage point decrease from the 2011 figure, while sales occupations (4.6 percent) are projected to show a 0.2 percentage point increase. Last are installations and repair occupations (4.5 percent), projected to show a 1.6 percentage point decrease, service occupations (2.9 percent), a 0.1 percentage point decrease, and farming, fishing, and forestry operations remaining at less than 1 percent. This table shows that over the long-term business development becomes paramount in place of the physical development aspect of Eagle Ford.

Occupation Code	Direct Plus Indirect Impacts DeWitt County 10-Occupational Categories, 2021	Occupational Impact	Percentage
11-1300	Management, business, and financial occupations	1,293	18.2%
43-0000	Office and administrative support occupations	1,291	18.2%
15-2900	Professional and related occupations	1,244	17.5%
47-0000	Construction and extraction occupations	1,206	17.0%
53-0000	Transportation and material moving occupations	757	10.7%
51-0000	Production occupations	449	6.3%
41-0000	Sales and related occupations	328	4.6%
49-0000	Installation, maintenance, and repair occupations	322	4.5%
31-3900	Service occupations	205	2.9%
45-0000	Farming, fishing, and forestry occupations	2	0.0%
	Total	7,097	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The projected impacts on the distribution of education and training are shown below. Moderate-term on-the-job training (25.3 percent) will stay in the first spot, showing a 4.6 percentage point decrease from the 2011 figure, however the Bachelor's degree (18.5 percent) category showed a 6.4 percentage point increase, moving it to second on the list; followed by short-term on-the-job training (17.8 percent), with a 7 percentage point decrease from the 2011 figure, work experience in a relate field (11.3 percent) showing no change in relevance, and long-term on-the-job training (10.5 percent) showing a 0.2 percentage point increase.

In the sixth position, Bachelor's or higher degree, plus work experience (7.3 percent) show a 2. 3 percentage point increase, followed by associate degrees (4 percent), showing a 1.6 percentage point increase. Postsecondary vocational award (2.4 percent) moved to seventh and decreased by 0.2 percent from the 2011 figure; while Master's degrees (2.1 percent) are projected to show a 1.5 percentage point increase. Last are first professional degrees (0.8 percent) and doctoral degrees at less than 1 percent. The most significant change is the Bachelor's degree category moving to second in place of short-term on-the-job training.

Occupational Impact	Direct Plus Indirect Impacts DeWitt County Educational Structure, 2021	Percentage
1,793	Moderate-term on-the-job training	25.3%
1,314	Bachelor's degree	18.5%
1,262	Short-term on-the-job training	17.8%
801	Work experience in a related occupation	11.3%
745	Long-term on-the-job training	10.5%
518	Bachelor's or higher degree, plus work experience	7.3%
281	Associate degree	4.0%
170	Postsecondary vocational award	2.4%
153	Master's degree	2.1%
58	First professional degree	0.8%
3	Doctoral degree	0.0%
7,097	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

DeWitt Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts De Witt County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	2,395	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	160	6.7%
2	47-2031	Carpenters	105	4.4%
3	47-2061	Construction laborers	98	4.1%
4	47-2073	Operating engineers and other construction equipment operators	88	3.7%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	80	3.3%
6	43-9061	Office clerks, general	62	2.6%
7	53-7032	Excavating and loading machine and dragline operators	58	2.4%
8	11-1021	General and operations managers	54	2.2%
9	43-3031	Bookkeeping, accounting, and auditing clerks	52	2.2%
10	53-7062	Laborers and freight, stock, and material movers, hand	49	2.1%
11	43-6011	Executive secretaries and administrative assistants	42	1.7%
12	49-9042	Maintenance and repair workers, general	41	1.7%
13	43-6014	Secretaries, except legal, medical, and executive	39	1.6%
14	13-2011	Accountants and auditors	37	1.5%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	35	1.4%
16	11-9021	Construction managers	32	1.4%
17	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	27	1.1%
18	49-3042	Mobile heavy equipment mechanics, except engines	26	1.1%
19	53-7051	Industrial truck and tractor operators	25	1.1%
20	43-4051	Customer service representatives	25	1.0%
21	43-1011	First-line supervisors/managers of office and administrative support workers	23	1.0%
22	17-2051	Civil engineers	23	0.9%
23	47-5051	Rock splitters, quarry	22	0.9%
24	53-3033	Truck drivers, light or delivery services	20	0.9%
25	47-5041	Continuous mining machine operators	19	0.8%
26	23-1011	Lawyers	18	0.7%
27	51-1011	First-line supervisors/managers of production and operating workers	17	0.7%
28	13-1199	Business operation specialists, all other	17	0.7%
29	51-4121	Welders, cutters, solderers, and brazers	17	0.7%
30	47-5042	Mine cutting and channeling machine operators	17	0.7%
31	43-4171	Receptionists and information clerks	16	0.7%
32	11-3031	Financial managers	16	0.7%
33	13-1051	Cost estimators	15	0.6%
34	49-9041	Industrial machinery mechanics	15	0.6%
35	47-2111	Electricians	14	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts De Witt County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	3,573	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	169	4.7%
2	47-2031	Carpenters	107	3.0%
3	47-2061	Construction laborers	99	2.8%
4	41-2031	Retail salespersons	98	2.7%
5	43-9061	Office clerks, general	89	2.5%
6	47-2073	Operating engineers and other construction equipment operators	89	2.5%
7	47-1011	First-line supervisors/managers of construction trades and extraction workers	81	2.3%
8	41-2011	Cashiers, except gaming	76	2.1%
9	11-1021	General and operations managers	68	1.9%
10	43-3031	Bookkeeping, accounting, and auditing clerks	68	1.9%
11	53-7062	Laborers and freight, stock, and material movers, hand	62	1.7%
12	53-7032	Excavating and loading machine and dragline operators	58	1.6%
13	43-6011	Executive secretaries and administrative assistants	55	1.5%
14	43-6014	Secretaries, except legal, medical, and executive	52	1.5%
15	49-9042	Maintenance and repair workers, general	49	1.4%
16	43-4051	Customer service representatives	49	1.4%
17	13-2011	Accountants and auditors	44	1.2%
18	29-1111	Registered nurses	42	1.2%
19	43-1011	First-line supervisors/managers of office and administrative support workers	37	1.0%
20	35-3021	Combined food preparation and serving workers, including fast food	35	1.0%
21	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	35	1.0%
22	35-3031	Waiters and waitresses	33	0.9%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	33	0.9%
24	11-9021	Construction managers	33	0.9%
25	43-5081	Stock clerks and order fillers	33	0.9%
26	43-4171	Receptionists and information clerks	32	0.9%
27	31-1012	Nursing aides, orderlies, and attendants	30	0.8%
28	53-3033	Truck drivers, light or delivery services	29	0.8%
29	53-7051	Industrial truck and tractor operators	27	0.8%
30	49-3042	Mobile heavy equipment mechanics, except engines	26	0.7%
31	41-1011	First-line supervisors/managers of retail sales workers	25	0.7%
32	41-3031	Securities, commodities, and financial services sales agents	25	0.7%
33	13-2072	Loan officers	24	0.7%
34	13-1199	Business operation specialists, all other	24	0.7%
35	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	24	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

DeWitt Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts De Witt County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	7,097	100.0%
1	13-2011	Accountants and auditors	228	3.2%
2	47-2031	Carpenters	217	3.1%
3	11-1021	General and operations managers	217	3.1%
4	43-3031	Bookkeeping, accounting, and auditing clerks	213	3.0%
5	53-3032	Truck drivers, heavy and tractor-trailer	204	2.9%
6	43-9061	Office clerks, general	204	2.9%
7	43-6011	Executive secretaries and administrative assistants	184	2.6%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers	183	2.6%
9	47-2061	Construction laborers	182	2.6%
10	51-8093	Petroleum pump system operators, refinery operators, and gaugers	181	2.6%
11	53-7073	Wellhead pumpers	177	2.5%
12	17-2171	Petroleum engineers	174	2.4%
13	43-6014	Secretaries, except legal, medical, and executive	157	2.2%
14	47-5071	Roustabouts, oil and gas	133	1.9%
15	19-2042	Geoscientists, except hydrologists and geographers	132	1.9%
16	19-4041	Geological and petroleum technicians	101	1.4%
17	47-2073	Operating engineers and other construction equipment operators	98	1.4%
18	49-9042	Maintenance and repair workers, general	98	1.4%
19	13-1199	Business operation specialists, all other	96	1.4%
20	53-7062	Laborers and freight, stock, and material movers, hand	85	1.2%
21	43-1011	First-line supervisors/managers of office and administrative support workers	78	1.1%
22	11-3031	Financial managers	76	1.1%
23	43-4051	Customer service representatives	75	1.1%
24	11-9021	Construction managers	69	1.0%
25	13-2051	Financial analysts	58	0.8%
26	51-1011	First-line supervisors/managers of production and operating workers	57	0.8%
27	23-1011	Lawyers	55	0.8%
28	53-7032	Excavating and loading machine and dragline operators	55	0.8%
29	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	53	0.8%
30	15-1041	Computer support specialists	53	0.7%
31	41-2031	Retail salespersons	52	0.7%
32	43-4171	Receptionists and information clerks	52	0.7%
33	15-1051	Computer systems analysts	51	0.7%
34	17-2051	Civil engineers	48	0.7%
35	13-1111	Management analysts	46	0.7%

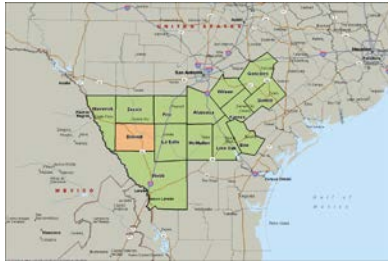
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts De Witt County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	11,261	100.0%
1	41-2031	Retail salespersons	354	3.1%
2	43-9061	Office clerks, general	299	2.7%
3	43-3031	Bookkeeping, accounting, and auditing clerks	271	2.4%
4	41-2011	Cashiers, except gaming	270	2.4%
5	11-1021	General and operations managers	268	2.4%
6	13-2011	Accountants and auditors	254	2.3%
7	53-3032	Truck drivers, heavy and tractor-trailer	238	2.1%
8	43-6011	Executive secretaries and administrative assistants	228	2.0%
9	47-2031	Carpenters	225	2.0%
10	43-6014	Secretaries, except legal, medical, and executive	205	1.8%
11	47-2061	Construction laborers	187	1.7%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	186	1.6%
13	51-8093	Petroleum pump system operators, refinery operators, and gaugers	181	1.6%
14	53-7073	Wellhead pumpers	177	1.6%
15	17-2171	Petroleum engineers	174	1.5%
16	43-4051	Customer service representatives	157	1.4%
17	29-1111	Registered nurses	154	1.4%
18	47-5071	Roustabouts, oil and gas	133	1.2%
19	19-2042	Geoscientists, except hydrologists and geographers	132	1.2%
20	53-7062	Laborers and freight, stock, and material movers, hand	129	1.1%
21	49-9042	Maintenance and repair workers, general	127	1.1%
22	43-1011	First-line supervisors/managers of office and administrative support workers	127	1.1%
23	13-1199	Business operation specialists, all other	120	1.1%
24	35-3021	Combined food preparation and serving workers, including fast food	118	1.0%
25	35-3031	Waiters and waitresses	111	1.0%
26	43-5081	Stock clerks and order fillers	109	1.0%
27	43-4171	Receptionists and information clerks	109	1.0%
28	31-1012	Nursing aides, orderlies, and attendants	103	0.9%
29	19-4041	Geological and petroleum technicians	101	0.9%
30	47-2073	Operating engineers and other construction equipment operators	99	0.9%
31	11-3031	Financial managers	95	0.8%
32	41-1011	First-line supervisors/managers of retail sales workers	90	0.8%
33	31-1011	Home health aides	79	0.7%
34	13-2072	Loan officers	78	0.7%
35	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	75	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Dimmit County



The following tables explain the estimated direct, indirect, and induced impacts within Dimmit County for 2011 and 2012. In Dimmit County, it is estimated that 4,309 jobs were supported by Eagle Ford Shale in 2011, with the largest impact in direct employment.

Estimated Impact 2011				
Dimmit County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,333	896	1,080	4,309

Dimmit County is projected to see a total of 10,127 jobs affected by Eagle Ford in 2021, with the largest impact on direct employment.

Estimated Impact 2021				
Dimmit County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	4,879	2,397	2,851	10,127

The following table details the total occupational impacts in 2011 within Dimmit County. Foremost are transportation and material moving occupations at 19 percent; followed by construction and extraction occupations at 16.9 percent, office and administrative occupations at 16.2 percent, professional occupations at 9 percent, and management, business, and financial occupations at 8.9 percent. Service occupations came in sixth at 8.9 percent, followed by production occupations at 7.5 percent, sales occupations at 6.9 percent, installation, maintenance, and repair occupations at 6.8 percent, and farming, fishing, and forestry occupations at less than 1 percent of the labor demanded.

Occupation Code	Total Impacts Dimmit County Occupational Impacts, 2011	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	818	19.0%
47-0000	Construction and extraction occupations	727	16.9%
43-0000	Office and administrative support occupations	696	16.2%
15-2900	Professional and related occupations	387	9.0%
11-1300	Management, business, and financial occupations	384	8.9%
31-3900	Service occupations	382	8.9%
51-0000	Production occupations	321	7.5%
41-0000	Sales and related occupations	299	6.9%
49-0000	Installation, maintenance, and repair occupations	293	6.8%
45-0000	Farming, fishing, and forestry occupations	2	0.0%
	Total	4,309	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The chart below details the projected total occupational impacts within Dimmit County in 2021. Office and administrative occupations are first at 17.6 percent, followed by professional occupations at 14.3 percent, management, business, and financial occupations at 13.3 percent, and transportation and material moving occupations at 13.2 percent. In the fifth position are construction and extraction occupations at 12.9 percent; followed by service occupations at 9.5 percent, sales occupations at 7.5 percent, production occupations at 6.3 percent, installation, maintenance, and repair occupations at 5.3 percent, and farming, fishing, and forestry occupations at less than 1 percent of the labor demanded.

Occupation Code	Total Impacts Dimmit County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,779	17.6%
15-2900	Professional and related occupations	1,448	14.3%
11-1300	Management, business, and financial occupations	1,346	13.3%
53-0000	Transportation and material moving occupations	1,339	13.2%
47-0000	Construction and extraction occupations	1,305	12.9%
31-3900	Service occupations	966	9.5%
41-0000	Sales and related occupations	763	7.5%
51-0000	Production occupations	641	6.3%
49-0000	Installation, maintenance, and repair occupations	536	5.3%
45-0000	Farming, fishing, and forestry occupations	4	0.0%
	Total	10,127	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Dimmit Direct and Indirect Impacts

In 2010, service occupations demanded the most labor at 16.6 percent in Dimmit County followed by office and administrative support occupations at 15.5 percent⁹; third in rank were professional occupations at 15.2 percent, and fourth are management, business, and financial occupations at 14.8 percent. In the fifth position are transportation and material moving occupations at 15.2 percent, followed by construction and extraction occupations at 7.6 percent, sale occupations at 6.6 percent, and farming, fishing, and forestry occupations at 6.2 percent. Installations, maintenance, and repair occupations at 4.3 percent and production occupations at 3.2 percent demanded the least labor in Dimmit County.

Occupation Code	Dimmit County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	776	16.6%
43-0000	Office and administrative support occupations	723	15.5%
15-2900	Professional and related occupations	710	15.2%
11-1300	Management, business, and financial occupations	690	14.8%
53-0000	Transportation and material moving occupations	476	10.2%
47-0000	Construction and extraction occupations	354	7.6%
41-0000	Sales and related occupations	307	6.6%
45-0000	Farming, fishing, and forestry occupations	288	6.2%
49-0000	Installation, maintenance, and repair occupations	200	4.3%
51-0000	Production occupations	149	3.2%
	Total	4,673	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

In 2010, the educational structure of Dimmit County showed a concentration in short-term on-the-job training at 31.2 percent, moderate-term on-the-job training at 18.5 percent, work experience in a related field at 14.6 percent, and those occupations requiring a Bachelor's degree at 11.7 percent. Long-term on-the-job training ranked fifth at 6.8 percent; followed by Bachelor's degree or higher, plus work experience at 6.8 percent, postsecondary vocational awards at 3.6 percent, occupations requiring an associate degree are eighth at 3.4 percent and those requiring a Master's degree at 1.6 percent. Occupations requiring a first professional degree at 1.3 percent and those requiring a doctoral degree had the least significance in Dimmit County at 0.3 percent.

⁹ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 4,637.

Dimmit County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
1,459	Short-term on-the-job training	31.2%
866	Moderate-term on-the-job training	18.5%
684	Work experience in a related occupation	14.6%
549	Bachelor's degree	11.7%
320	Long-term on-the-job training	6.8%
317	Bachelor's or higher degree, plus work experience	6.8%
170	Postsecondary vocational award	3.6%
160	Associate degree	3.4%
75	Master's degree	1.6%
61	First professional degree	1.3%
15	Doctoral degree	0.3%
4,673	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Of the selected industries, the table below illustrates the impact of Eagle Ford development on the labor demanded within Dimmit County in 2011. Ranking first are transportation and material moving occupations (23.3 percent) increasing by 13 percentage points relative to the 2010 figure. Moving to the second position, construction and extraction occupations (22.2 percent) show a 14.6 percentage point increase, followed by office and administrative support occupations, (15.4 percent) showing a 0.1 percentage point decrease. Moving to the fourth position are production occupations (9.5 percent), increased by 6.3 percentage points, followed by management, business, and financial occupations (9.2 percent) showing a 5.6 percentage point decrease.

Installation, maintenance, and repair occupations (7.7 percent) ranked sixth showing a 3.4 percentage point increase. Followed by professional occupations (7.3 percent), showing a 7.9 percentage point decrease and sales occupations, (3.1 percent) decreasing by 3.5 percentage points relative to the 2010 figure. In the ninth position are service occupations (2.3 percent), decreasing significantly by 14.3 percentage points with farming, fishing, and forestry occupations (less than 1 percent) positioned last, decreasing by 6.2 percentage points with respect to the 2010 figure.

Occupation Code	Direct Plus Indirect Impacts Dimmit County 10-Occupational Categories, 2011	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	748	23.2%
47-0000	Construction and extraction occupations	717	22.2%
43-0000	Office and administrative support occupations	498	15.4%
51-0000	Production occupations	306	9.5%
11-1300	Management, business, and financial occupations	297	9.2%
49-0000	Installation, maintenance, and repair occupations	250	7.7%
15-2900	Professional and related occupations	237	7.3%
41-0000	Sales and related occupations	100	3.1%
31-3900	Service occupations	75	2.3%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	3,229	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below depicts the impact of Eagle Ford development on the education structure of Dimmit County in 2011. Moderate-term on-the-job training (34.9 percent) is foremost, increasing by 16.4 percentage points. In the second position is short-term on-the-job training (28.6 percent), decreasing by 2.6 percentage points; followed by work experience in a related field (10.4 percent), decreasing by 4.2 percentage points, long-term on-the-job training (7.9 percent), decreasing by 1.1 percentage point, and Bachelor's degrees (6.8 percent), showing a decrease of 4.9 percentage points.

In the sixth position are occupations requiring a Bachelor's degree or higher, plus work experience (3.9 percent), showing a 2.9 percentage point decrease; followed by positions requiring an associate degree (2.9 percent), showing a decrease of 0.5 percentage point in relation to the 2010 figure. Ranking eighth are postsecondary vocational degrees (2.4 percent), decreasing by 1.2 percentage point; followed by first professional degrees (1.7 percent), increasing by 0.4 percentage point, Master's degrees (0.5 percent), decreasing by 1.1 percentage point, and doctoral degrees (less than 1 percent), decreasing by 0.3 percentage point.

Direct Plus Indirect Impacts Dimmit County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
1,127	Moderate-term on-the-job training	34.9%
924	Short-term on-the-job training	28.6%
337	Work experience in a related occupation	10.4%
256	Long-term on-the-job training	7.9%
219	Bachelor's degree	6.8%
125	Bachelor's or higher degree, plus work experience	3.9%
94	Associate degree	2.9%
76	Postsecondary vocational award	2.4%
54	First professional degree	1.7%
16	Master's degree	0.5%
0	Doctoral degree	0.0%
3,229	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Long-term Eagle Ford development impacts in Dimmit County are projected below. Moving up to the first position of the 10-occupational categories are construction and extraction occupations (17.6 percent), decreasing by 4.6 percentage points. In the second position are office and administrative support occupations (17.3 percent), showing a 1.9 percentage point increase; followed by transportation and material moving occupations (15.9 percent), decreasing by 7.4 percentage points, management, business, and finance occupations (15.3 percent), increasing by 6.1 percentage points, and professional occupations (14.5 percent), increasing by 7.2 percentage points.

Ranking sixth are production occupations (8.3 percent) showing a 1.2 percentage point decrease in relation to the 2011 figure; followed by installation, maintenance, and repair occupations (5.7 percent), showing a 2 percentage point decrease, sale occupations (3.3 percent), increasing by 0.2 percentage point, and service occupations (2.1 percent), decreasing by 0.2 percentage point. Ranking last are farming, fishing, and forestry occupations (less than 1 percent).

Occupation Code	Direct Plus Indirect Impacts Dimmit County 10-Occupational Categories, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	1,279	17.6%
43-0000	Office and administrative support occupations	1,259	17.3%
53-0000	Transportation and material moving occupations	1,153	15.8%
11-1300	Management, business, and financial occupations	1,115	15.3%
15-2900	Professional and related occupations	1,056	14.5%
51-0000	Production occupations	601	8.3%
49-0000	Installation, maintenance, and repair occupations	418	5.7%
41-0000	Sales and related occupations	242	3.3%
31-3900	Service occupations	151	2.1%
45-0000	Farming, fishing, and forestry occupations	2	0.0%
	Total	7,289	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Looking forward to the 2021 educational structure as it relates to occupations impacted by Eagle Ford development in Dimmit County, moderate-term on-the-job training (29.6 percent) is projected to remain in the first position but decrease by 5.3 percentage points relative to the 2011 figure. In the second position is short-term on-the-job training (20.4 percent), decreasing by 8.2 percentage points; followed by occupations requiring a Bachelor's degree (13.9 percent) showing a 7.1 percentage point increase, work experience in a related field (10.6 percent), increasing by 0.2 percentage point, long-term on-the-job training (9.4 percent), decreasing by 1.5 percentage point, and occupations requiring a Bachelor's degree or higher plus work experience (6.1 percent) increased by 2.2 percentage points.

In the seventh position are jobs requiring an associate degree (4.2 percent), showing 1.3 percentage point increase, followed by jobs requiring a postsecondary vocational award (2.3 percent) decreasing by 0.1 percentage point and those requiring a Master's degree (1.5 percent) are projected to increase by 1.5 percentage point. In the ninth and tenth position are occupations requiring a first professional degree (1.5 percent), showing a 0.2 percentage point decrease, and finally doctoral degrees at less than 1 percent.

Direct Plus Indirect Impacts Dimmit County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
2,151	Moderate-term on-the-job training	29.6%
1,484	Short-term on-the-job training	20.4%
1,009	Bachelor's degree	13.9%
774	Work experience in a related occupation	10.6%
683	Long-term on-the-job training	9.4%
447	Bachelor's or higher degree, plus work experience	6.1%
308	Associate degree	4.2%
164	Postsecondary vocational award	2.3%
143	Master's degree	2.0%
111	First professional degree	1.5%
1	Doctoral degree	0.0%
7,276	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Dimmit Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Dimmit County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	3,229	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	322	10.0%
2	47-2073	Operating engineers and other construction equipment operators	175	5.4%
3	53-7032	Excavating and loading machine and dragline operators	125	3.9%
4	47-2061	Construction laborers	91	2.8%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	89	2.7%
6	43-9061	Office clerks, general	85	2.6%
7	53-7062	Laborers and freight, stock, and material movers, hand	81	2.5%
8	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	75	2.3%
9	49-9042	Maintenance and repair workers, general	74	2.3%
10	11-1021	General and operations managers	68	2.1%
11	43-3031	Bookkeeping, accounting, and auditing clerks	67	2.1%
12	47-2031	Carpenters	67	2.1%
13	23-1011	Lawyers	53	1.6%
14	53-7051	Industrial truck and tractor operators	51	1.6%
15	43-6014	Secretaries, except legal, medical, and executive	49	1.5%
16	47-5051	Rock splitters, quarry	47	1.5%
17	49-3042	Mobile heavy equipment mechanics, except engines	46	1.4%
18	43-6011	Executive secretaries and administrative assistants	43	1.3%
19	13-2011	Accountants and auditors	43	1.3%
20	47-5041	Continuous mining machine operators	42	1.3%
21	47-5042	Mine cutting and channeling machine operators	37	1.1%
22	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	37	1.1%
23	51-1011	First-line supervisors/managers of production and operating workers	32	1.0%
24	43-6012	Legal secretaries	32	1.0%
25	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	30	0.9%
26	53-3033	Truck drivers, light or delivery services	28	0.9%
27	49-9041	Industrial machinery mechanics	28	0.9%
28	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle operators	27	0.9%
29	43-1011	First-line supervisors/managers of office and administrative support workers	27	0.8%
30	51-9111	Packaging and filling machine operators and tenders	27	0.8%
31	51-4121	Welders, cutters, solderers, and brazers	25	0.8%
32	49-3031	Bus and truck mechanics and diesel engine specialists	24	0.7%
33	51-9198	Helpers--Production workers	24	0.7%
34	51-9061	Inspectors, testers, sorters, samplers, and weighers	24	0.7%
35	23-2011	Paralegals and legal assistants	24	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Dimmit County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	4,309	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	333	7.7%
2	47-2073	Operating engineers and other construction equipment operators	175	4.1%
3	53-7032	Excavating and loading machine and dragline operators	125	2.9%
4	43-9061	Office clerks, general	110	2.6%
5	53-7062	Laborers and freight, stock, and material movers, hand	94	2.2%
6	47-2061	Construction laborers	93	2.2%
7	47-1011	First-line supervisors/managers of construction trades and extraction workers	90	2.1%
8	49-9042	Maintenance and repair workers, general	87	2.0%
9	41-2031	Retail salespersons	87	2.0%
10	43-3031	Bookkeeping, accounting, and auditing clerks	83	1.9%
11	11-1021	General and operations managers	81	1.9%
12	41-2011	Cashiers, except gaming	80	1.9%
13	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	75	1.7%
14	47-2031	Carpenters	69	1.6%
15	43-6014	Secretaries, except legal, medical, and executive	63	1.5%
16	23-1011	Lawyers	58	1.3%
17	43-6011	Executive secretaries and administrative assistants	54	1.3%
18	53-7051	Industrial truck and tractor operators	54	1.2%
19	35-3021	Combined food preparation and serving workers, including fast food	51	1.2%
20	13-2011	Accountants and auditors	49	1.1%
21	35-3031	Waiters and waitresses	49	1.1%
22	47-5051	Rock splitters, quarry	47	1.1%
23	49-3042	Mobile heavy equipment mechanics, except engines	46	1.1%
24	47-5041	Continuous mining machine operators	42	1.0%
25	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	41	1.0%
26	43-4051	Customer service representatives	41	1.0%
27	43-1011	First-line supervisors/managers of office and administrative support workers	39	0.9%
28	47-5042	Mine cutting and channeling machine operators	37	0.9%
29	43-5081	Stock clerks and order fillers	37	0.9%
30	53-3033	Truck drivers, light or delivery services	36	0.8%
31	43-4171	Receptionists and information clerks	36	0.8%
32	43-6012	Legal secretaries	35	0.8%
33	51-1011	First-line supervisors/managers of production and operating workers	34	0.8%
34	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	30	0.7%
35	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle operators	29	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Dimmit Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Dimmit County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
		Total	7,276	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	403	5.5%
2	13-2011	Accountants and auditors	212	2.9%
3	43-9061	Office clerks, general	211	2.9%
4	43-3031	Bookkeeping, accounting, and auditing clerks	210	2.9%
5	11-1021	General and operations managers	209	2.9%
6	47-2073	Operating engineers and other construction equipment operators	205	2.8%
7	51-8093	Petroleum pump system operators, refinery operators, and gaugers	180	2.5%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers	177	2.4%
9	53-7073	Wellhead pumpers	176	2.4%
10	17-2171	Petroleum engineers	173	2.4%
11	43-6011	Executive secretaries and administrative assistants	164	2.3%
12	43-6014	Secretaries, except legal, medical, and executive	156	2.1%
13	47-2061	Construction laborers	153	2.1%
14	47-2031	Carpenters	141	1.9%
15	53-7032	Excavating and loading machine and dragline operators	138	1.9%
16	49-9042	Maintenance and repair workers, general	135	1.9%
17	47-5071	Roustabouts, oil and gas	131	1.8%
18	19-2042	Geoscientists, except hydrologists and geographers	130	1.8%
19	53-7062	Laborers and freight, stock, and material movers, hand	114	1.6%
20	23-1011	Lawyers	105	1.4%
21	19-4041	Geological and petroleum technicians	100	1.4%
22	13-1199	Business operation specialists, all other	86	1.2%
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	83	1.1%
24	51-1011	First-line supervisors/managers of production and operating workers	73	1.0%
25	43-1011	First-line supervisors/managers of office and administrative support workers	70	1.0%
26	11-3031	Financial managers	65	0.9%
27	49-3042	Mobile heavy equipment mechanics, except engines	63	0.9%
28	53-7051	Industrial truck and tractor operators	60	0.8%
29	43-4171	Receptionists and information clerks	58	0.8%
30	43-6012	Legal secretaries	55	0.8%
31	49-9041	Industrial machinery mechanics	55	0.8%
32	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	54	0.7%
33	47-5051	Rock splitters, quarry	52	0.7%
34	43-4051	Customer service representatives	50	0.7%
35	13-2051	Financial analysts	49	0.7%

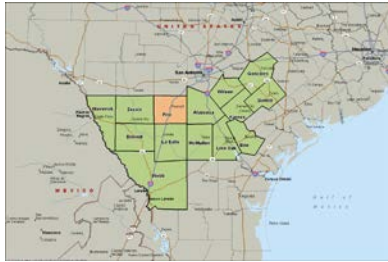
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Dimmit County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	10,127	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	433	4.3%
2	43-9061	Office clerks, general	280	2.8%
3	43-3031	Bookkeeping, accounting, and auditing clerks	251	2.5%
4	11-1021	General and operations managers	245	2.4%
5	41-2031	Retail salespersons	232	2.3%
6	13-2011	Accountants and auditors	229	2.3%
7	41-2011	Cashiers, except gaming	209	2.1%
8	47-2073	Operating engineers and other construction equipment operators	206	2.0%
9	43-6011	Executive secretaries and administrative assistants	194	1.9%
10	43-6014	Secretaries, except legal, medical, and executive	192	1.9%
11	47-1011	First-line supervisors/managers of construction trades and extraction workers	180	1.8%
12	51-8093	Petroleum pump system operators, refinery operators, and gaugers	180	1.8%
13	53-7073	Wellhead pumpers	176	1.7%
14	17-2171	Petroleum engineers	173	1.7%
15	49-9042	Maintenance and repair workers, general	172	1.7%
16	47-2061	Construction laborers	157	1.6%
17	53-7062	Laborers and freight, stock, and material movers, hand	148	1.5%
18	47-2031	Carpenters	147	1.5%
19	53-7032	Excavating and loading machine and dragline operators	139	1.4%
20	47-5071	Roustabouts, oil and gas	131	1.3%
21	19-2042	Geoscientists, except hydrologists and geographers	130	1.3%
22	35-3021	Combined food preparation and serving workers, including fast food	126	1.2%
23	35-3031	Waiters and waitresses	120	1.2%
24	23-1011	Lawyers	120	1.2%
25	13-1199	Business operation specialists, all other	103	1.0%
26	43-1011	First-line supervisors/managers of office and administrative support workers	100	1.0%
27	19-4041	Geological and petroleum technicians	100	1.0%
28	43-4051	Customer service representatives	99	1.0%
29	43-4171	Receptionists and information clerks	93	0.9%
30	43-5081	Stock clerks and order fillers	90	0.9%
31	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	83	0.8%
32	51-1011	First-line supervisors/managers of production and operating workers	76	0.8%
33	11-3031	Financial managers	74	0.7%
34	53-7051	Industrial truck and tractor operators	66	0.7%
35	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	65	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Frio County



The following tables explain the estimated direct, indirect, and induced impacts within Frio County for 2011 and 2021. Frio County data shows an estimated total of 982 jobs supported by Eagle Ford in 2011, with direct employment most affected.

Estimated Impact 2011				
Frio County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	529	141	312	982

Within Frio County there is projected to be a total of 1,804 jobs impacted by Eagle Ford in 2021, with the largest impact on induced employment.

Estimated Impact 2021				
Frio County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	648	456	700	1,804

The table below details the 2011 total occupational impacts within Frio County. Construction and extraction occupations are most relevant at 26.1 percent; followed by office and administration occupations at 15.4 percent, management, business, and financial occupations at 11.1 percent, service occupations at 11 percent, and professional occupations at 10.9 percent. Transportation and material occupations are ranked sixth at 9.6 percent; followed by sales occupations at 6.9 percent, installation, maintenance, and repair occupations at 4.8 percent, production occupations at 4.4 percent, and farming, fishing, and forestry occupations at less than 1 percent.

Occupation Code	Total Impacts Frio County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	256	26.1%
43-0000	Office and administrative support occupations	151	15.4%
11-1300	Management, business, and financial occupations	109	11.1%
31-3900	Service occupations	108	11.0%
15-2900	Professional and related occupations	107	10.9%
53-0000	Transportation and material moving occupations	94	9.6%
41-0000	Sales and related occupations	68	6.9%
49-0000	Installation, maintenance, and repair occupations	47	4.8%
51-0000	Production occupations	43	4.4%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	983	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The following table details the projected total occupational impacts within Frio County for 2021. Ranking first are office and administrative occupations at 18.1 percent; followed by professional occupations at 16.4 percent, service occupations at 13.3 percent, management, business, and financial occupations at 12.5 percent, and construction and extraction occupations at 11 percent.

In the sixth position are transportation and material moving occupations at 10.4 percent, followed by sales occupations at 8 percent, and production occupations at 5.4 percent. Last are installation, maintenance, and repair occupations at 4.9 percent and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Frio County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	327	18.1%
15-2900	Professional and related occupations	295	16.4%
31-3900	Service occupations	240	13.3%
11-1300	Management, business, and financial occupations	225	12.5%
47-0000	Construction and extraction occupations	198	11.0%
53-0000	Transportation and material moving occupations	188	10.4%
41-0000	Sales and related occupations	144	8.0%
51-0000	Production occupations	97	5.4%
49-0000	Installation, maintenance, and repair occupations	88	4.9%
45-0000	Farming, fishing, and forestry occupations	2	0.1%
	Total	1,804	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Frio Direct and Indirect Impacts

Frio County employment numbers for 2010 within the selected categories are shown in the table below¹⁰. Service occupations rank first on the list at 21.3 percent, followed by professional occupations at 16.3 percent, office and administration occupations at 16.2 percent, and management, business, and financial occupations at 14.3 percent. In the fifth position, farming, fishing, and forestry occupations make up 8.3 percent of the labor pool; followed by sales occupations at 6.5 percent, transportation and material moving occupations at 5.9 percent, construction and extraction occupations at 4.4 percent, and installation, maintenance, and repair occupations at 4.1 percent. Ranking last are production occupations at 2.7 percent.

Occupation Code	Frio County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	1,515	21.3%
15-2900	Professional and related occupations	1,160	16.3%
43-0000	Office and administrative support occupations	1,156	16.2%
11-1300	Management, business, and financial occupations	1,022	14.3%
45-0000	Farming, fishing, and forestry occupations	593	8.3%
41-0000	Sales and related occupations	465	6.5%
53-0000	Transportation and material moving occupations	420	5.9%
47-0000	Construction and extraction occupations	311	4.4%
49-0000	Installation, maintenance, and repair occupations	296	4.1%
51-0000	Production occupations	192	2.7%
	Total	7,129	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Illustrated below are the education and training distributions for Frio County. In highest demand is short-term on-the-job training at 30.2 percent. In the second position are moderate-term on-the-job training at 18.1 percent, followed by work experience in a related field at 16.4 percent, occupations requiring a Bachelor's degree at 11.4 percent, and those requiring a Bachelor's or higher degree, plus work experience at 7.3 percent. In the sixth position are long-term on-the-job training at 5.1 percent, occupations requiring a postsecondary vocational award at 4.4 percent, those requiring an associate degree at 4.1 percent and those requiring a Master's degree at 1.7 percent. In the final two positions were first professional degrees at 1 percent and doctoral degrees at 0.3 percent.

¹⁰ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 6,980.

Frio County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
2,156	Short-term on-the-job training	30.2%
1,290	Moderate-term on-the-job training	18.1%
1,169	Work experience in a related occupation	16.4%
816	Bachelor's degree	11.4%
520	Bachelor's or higher degree, plus work experience	7.3%
362	Long-term on-the-job training	5.1%
310	Postsecondary vocational award	4.4%
291	Associate degree	4.1%
119	Master's degree	1.7%
75	First professional degree	1.0%
21	Doctoral degree	0.3%
7,129	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The occupational impacts of Eagle Ford development within Frio County in 2011 are shown below. Construction and extraction occupations (37.9 percent) moved to the first position showing a 33.5 percentage point increase; followed by office and administrative support occupations (14.7 percent), decreasing by 1.5 percentage point, management, business, and financial occupations (12.7 percent), showing a 1.6 percentage point decrease, and transportation and material moving occupations (11.1 percent), increasing by 5.2 percentage points. In the fifth position are professional occupations (6.8 percent) showing a 9.5 percentage point decrease. Installation, maintenance, and repair occupations (5.5 percent), increasing by 1.4 percentage point; followed by production occupations (5.3 percent), increasing by 2.6 percent, sales occupations (3.9 percent), decreasing by 2.6 percentage points, and service occupations (2 percent), decreasing by 19.3 percentage points. In the tenth position are farming, fishing, and forestry occupations (less than 1 percent) and decreasing by 8.3 percentage points.

Occupation Code	Direct Plus Indirect Impacts Frio County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	254	37.9%
43-0000	Office and administrative support occupations	98	14.7%
11-1300	Management, business, and financial occupations	85	12.7%
53-0000	Transportation and material moving occupations	75	11.1%
15-2900	Professional and related occupations	46	6.8%
49-0000	Installation, maintenance, and repair occupations	37	5.5%
51-0000	Production occupations	35	5.3%
41-0000	Sales and related occupations	26	3.9%
31-3900	Service occupations	14	2.0%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	670	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The impacts on education and training requirements between 2010 and 2011 within Frio County are illustrated below. Moving to the first position is moderate-term on-the-job training (29.9 percent) increasing by 11.8 percentage points. Followed by short-term on-the-job training (19.7 percent), decreasing by 10.5 percentage points, long-term on-the-job training (17.2 percent), increasing by 12.1 percentage points, work experience in a related field (12.7 percent), decreasing by 3.7 percentage points and Bachelor's degrees (11.4 percent) showing no change in significance.

In the sixth position are occupations requiring a Bachelor's degree or higher, plus work experience (4.3 percent), decreasing by 3 percentage points; followed by postsecondary vocational awards (2.5 percent), decreasing by 1.9 percentage point, associate degrees (1.5 percent), decreasing by 2.6 percentage points, and first professional degrees (0.5 percent) showing a 0.5 percentage point decrease. Ranking lowest are occupations requiring a Master's degrees (0.3 percent), decreasing by 1.4 percentage point and doctoral degrees (less than 1 percent) showing a 0.3 percentage point decrease.

Direct Plus Indirect Impacts Frio County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
200	Moderate-term on-the-job training	29.9%
132	Short-term on-the-job training	19.7%
115	Long-term on-the-job training	17.2%
85	Work experience in a related occupation	12.7%
76	Bachelor's degree	11.4%
29	Bachelor's or higher degree, plus work experience	4.3%
16	Postsecondary vocational award	2.5%
10	Associate degree	1.5%
4	First professional degree	0.5%
2	Master's degree	0.3%
0	Doctoral degree	0.0%
670	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Shown below are the projected occupational impacts from Eagle Ford development in 2021. Between 2011 and 2021, office and administrative occupations (18.3percent) are projected be in highest demand, increasing by 3.6 percentage points; followed by construction and extraction occupations (17.6 percent), increasing by 20.3 percentage points, management, business, and financial occupations (15.1 percent), increasing by 2.4 percentage points, and transportation and material moving occupations (14.5 percent), decreasing by 3.4 percentage points.

Projected to be in the fifth position are professional occupations (13.5 percent), decreasing by 6.7 percentage points; followed by production occupations (7.9 percent), increasing by 2.6 percentage points, installation, maintenance, and repair occupations (6.1 percent), decreasing by 0.6 percentage points, and sales occupations (4.8 percent), increasing by 0.9 percentage points. Ranking last are service occupations (2.3 percent) showing a 0.3 percentage point increase, and farming, fishing, and forestry occupations (0.1 percent) showing a 0.1 percentage point increase.

Occupation Code	Direct Plus Indirect Impacts Frio County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	202	18.3%
47-0000	Construction and extraction occupations	194	17.6%
11-1300	Management, business, and financial occupations	167	15.1%
53-0000	Transportation and material moving occupations	160	14.5%
15-2900	Professional and related occupations	149	13.5%
51-0000	Production occupations	87	7.9%
49-0000	Installation, maintenance, and repair occupations	67	6.1%
41-0000	Sales and related occupations	52	4.8%
31-3900	Service occupations	25	2.3%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	1,104	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected impacts on education and training distributions are shown below. Moderate-term on-the-job training (29.8 percent) remains in the primary position, increasing by 0.1 percentage point; followed by short-term on-the-job training (21.1 percent), decreasing by 1.4 percentage point, Bachelor's degrees (14.3 percent), increasing by 2.9 percentage points and work experience in a related field (11.3 percent) showing a 1.4 percentage point decrease.

In the fifth position is long-term on-the-job training (9.3 percent), increasing by 7.9 percentage points; followed by Bachelor's or higher degree, plus work experience (6.1 percent), increasing by 1.8 percentage point, associate degrees (3.3 percent), increasing by 1.8 percentage point, and postsecondary vocational awards (2.4 percent) showing a 0.1 percentage point decrease from the 2011 figure. In the ninth position are Master's degrees (1.6 percent), increasing by 1.3 percentage point; followed by first professional degrees (0.8 percent), increasing by 0.3 percentage point and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Frio County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
329	Moderate-term on-the-job training	29.8%
233	Short-term on-the-job training	21.1%
158	Bachelor's degree	14.3%
125	Work experience in a related occupation	11.3%
102	Long-term on-the-job training	9.3%
67	Bachelor's or higher degree, plus work experience	6.1%
37	Associate degree	3.3%
26	Postsecondary vocational award	2.4%
18	Master's degree	1.6%
9	First professional degree	0.8%
0	Doctoral degree	0.0%
1,104	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Frio Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

SOC		Direct plus Indirect Impacts		
Occupation		Frio County		Occupational
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	670	100.0%
1	47-2031	Carpenters	66	9.8%
2	47-2061	Construction laborers	53	7.9%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	38	5.7%
4	53-3032	Truck drivers, heavy and tractor-trailer	27	4.0%
5	47-2073	Operating engineers and other construction equipment operators	21	3.1%
6	11-9021	Construction managers	20	2.9%
7	43-9061	Office clerks, general	15	2.3%
8	11-1021	General and operations managers	14	2.1%
9	43-3031	Bookkeeping, accounting, and auditing clerks	14	2.0%
10	43-6011	Executive secretaries and administrative assistants	12	1.7%
11	53-7032	Excavating and loading machine and dragline operators	11	1.7%
12	43-6014	Secretaries, except legal, medical, and executive	11	1.6%
13	53-7062	Laborers and freight, stock, and material movers, hand	11	1.6%
14	49-9042	Maintenance and repair workers, general	10	1.5%
15	13-1051	Cost estimators	9	1.3%
16	13-2011	Accountants and auditors	8	1.2%
17	47-2051	Cement masons and concrete finishers	8	1.1%
18	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	8	1.1%
19	17-2051	Civil engineers	7	1.1%
20	47-3012	Helpers Carpenters	7	1.0%
21	47-2152	Plumbers, pipefitters, and steamfitters	7	1.0%
22	43-4051	Customer service representatives	7	1.0%
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	6	1.0%
24	51-4121	Welders, cutters, solderers, and brazers	6	0.9%
25	43-1011	First-line supervisors/managers of office and administrative support workers	6	0.9%
26	47-2221	Structural iron and steel workers	6	0.9%
27	47-2111	Electricians	6	0.8%
28	49-3042	Mobile heavy equipment mechanics, except engines	5	0.8%
29	53-7051	Industrial truck and tractor operators	5	0.7%
30	43-4171	Receptionists and information clerks	4	0.7%
31	13-1199	Business operation specialists, all other	4	0.6%
32	47-5051	Rock splitters, quarry	4	0.6%
33	53-3033	Truck drivers, light or delivery services	4	0.6%
34	47-2021	Brickmasons and blockmasons	4	0.5%
35	47-5041	Continuous mining machine operators	4	0.5%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Frio County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	983	100.0%
1	47-2031	Carpenters	66	6.7%
2	47-2061	Construction laborers	53	5.4%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	38	3.9%
4	53-3032	Truck drivers, heavy and tractor-trailer	31	3.2%
5	47-2073	Operating engineers and other construction equipment operators	24	2.4%
6	43-9061	Office clerks, general	22	2.3%
7	11-9021	Construction managers	20	2.0%
8	11-1021	General and operations managers	18	1.8%
9	41-2011	Cashiers, except gaming	18	1.8%
10	43-3031	Bookkeeping, accounting, and auditing clerks	18	1.8%
11	41-2031	Retail salespersons	17	1.7%
12	29-1111	Registered nurses	16	1.7%
13	43-6011	Executive secretaries and administrative assistants	15	1.5%
14	39-9021	Personal and home care aides	14	1.4%
15	43-6014	Secretaries, except legal, medical, and executive	14	1.4%
16	31-1011	Home health aides	14	1.4%
17	53-7062	Laborers and freight, stock, and material movers, hand	14	1.4%
18	53-7032	Excavating and loading machine and dragline operators	13	1.4%
19	49-9042	Maintenance and repair workers, general	13	1.3%
20	43-4051	Customer service representatives	12	1.2%
21	13-2011	Accountants and auditors	10	1.0%
22	43-1011	First-line supervisors/managers of office and administrative support workers	9	1.0%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	9	0.9%
24	13-1051	Cost estimators	9	0.9%
25	31-1012	Nursing aides, orderlies, and attendants	9	0.9%
26	35-3021	Combined food preparation and serving workers, including fast food	8	0.9%
27	43-5081	Stock clerks and order fillers	8	0.8%
28	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	8	0.8%
29	43-4171	Receptionists and information clerks	8	0.8%
30	47-2051	Cement masons and concrete finishers	8	0.8%
31	35-3031	Waiters and waitresses	7	0.8%
32	17-2051	Civil engineers	7	0.7%
33	47-2152	Plumbers, pipefitters, and steamfitters	7	0.7%
34	47-3012	HelpersùCarpenters	6	0.7%
35	51-4121	Welders, cutters, solderers, and brazers	6	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Frio Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

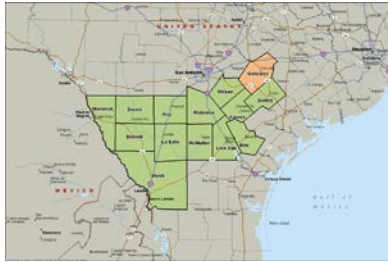
Ranking	SOC Occupation Code	Direct plus Indirect Impacts Frio County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	1,104	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	50	4.6%
2	47-2073	Operating engineers and other construction equipment operators	32	2.9%
3	43-9061	Office clerks, general	31	2.8%
4	11-1021	General and operations managers	30	2.7%
5	43-3031	Bookkeeping, accounting, and auditing clerks	29	2.7%
6	13-2011	Accountants and auditors	28	2.6%
7	47-1011	First-line supervisors/managers of construction trades and extraction workers	27	2.4%
8	47-2061	Construction laborers	25	2.3%
9	47-2031	Carpenters	24	2.1%
10	43-6011	Executive secretaries and administrative assistants	23	2.1%
11	53-7032	Excavating and loading machine and dragline operators	22	2.0%
12	43-6014	Secretaries, except legal, medical, and executive	21	1.9%
13	51-8093	Petroleum pump system operators, refinery operators, and gaugers	21	1.9%
14	53-7073	Wellhead pumpers	21	1.9%
15	17-2171	Petroleum engineers	20	1.8%
16	49-9042	Maintenance and repair workers, general	19	1.8%
17	53-7062	Laborers and freight, stock, and material movers, hand	17	1.6%
18	47-5071	Roustabouts, oil and gas	15	1.4%
19	19-2042	Geoscientists, except hydrologists and geographers	15	1.4%
20	43-4051	Customer service representatives	15	1.4%
21	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	13	1.2%
22	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	13	1.2%
23	13-1199	Business operation specialists, all other	12	1.1%
24	43-1011	First-line supervisors/managers of office and administrative support workers	12	1.1%
25	19-4041	Geological and petroleum technicians	12	1.1%
26	49-3042	Mobile heavy equipment mechanics, except engines	10	0.9%
27	51-1011	First-line supervisors/managers of production and operating workers	10	0.9%
28	11-3031	Financial managers	10	0.9%
29	53-7051	Industrial truck and tractor operators	9	0.8%
30	23-1011	Lawyers	9	0.8%
31	47-5051	Rock splitters, quarry	8	0.7%
32	49-9041	Industrial machinery mechanics	8	0.7%
33	11-9021	Construction managers	8	0.7%
34	43-4171	Receptionists and information clerks	8	0.7%
35	13-2072	Loan officers	8	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

Ranking	SOC Occupation Code	Total Impacts Frio County		
		Top 35 Occupations Impacted in 2021		Occupational Impact Percentage
		Total	1,804	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	53	3.0%
2	43-9061	Office clerks, general	47	2.6%
3	43-3031	Bookkeeping, accounting, and auditing clerks	38	2.1%
4	11-1021	General and operations managers	38	2.1%
5	29-1111	Registered nurses	38	2.1%
6	41-2011	Cashiers, except gaming	36	2.0%
7	41-2031	Retail salespersons	35	1.9%
8	39-9021	Personal and home care aides	34	1.9%
9	13-2011	Accountants and auditors	32	1.8%
10	31-1011	Home health aides	32	1.8%
11	47-2073	Operating engineers and other construction equipment operators	32	1.8%
12	43-6011	Executive secretaries and administrative assistants	31	1.7%
13	43-6014	Secretaries, except legal, medical, and executive	29	1.6%
14	43-4051	Customer service representatives	29	1.6%
15	47-1011	First-line supervisors/managers of construction trades and extraction workers	27	1.5%
16	47-2061	Construction laborers	26	1.4%
17	49-9042	Maintenance and repair workers, general	25	1.4%
18	47-2031	Carpenters	25	1.4%
19	53-7062	Laborers and freight, stock, and material movers, hand	23	1.3%
20	53-7032	Excavating and loading machine and dragline operators	22	1.2%
21	51-8093	Petroleum pump system operators, refinery operators, and gaugers	21	1.2%
22	53-7073	Wellhead pumpers	21	1.1%
23	17-2171	Petroleum engineers	20	1.1%
24	43-1011	First-line supervisors/managers of office and administrative support workers	20	1.1%
25	31-1012	Nursing aides, orderlies, and attendants	19	1.1%
26	35-3021	Combined food preparation and serving workers, including fast food	18	1.0%
27	43-5081	Stock clerks and order fillers	17	0.9%
28	35-3031	Waiters and waitresses	16	0.9%
29	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	16	0.9%
30	13-1199	Business operation specialists, all other	16	0.9%
31	47-5071	Roustabouts, oil and gas	15	0.9%
32	19-2042	Geoscientists, except hydrologists and geographers	15	0.9%
33	43-4171	Receptionists and information clerks	15	0.8%
34	13-2072	Loan officers	15	0.8%
35	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	13	0.7%

Gonzales County



The following tables detail the estimated direct, indirect, and induced impacts within Gonzales County for 2011 and 2021. Within Gonzales County it was estimated that a total of 3,636 jobs were impacted by Eagle Ford development in 2011, with induced employment most affected.

Estimated Impact 2011				
Gonzales County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,327	900	1,409	3,636

Within Gonzales County there is projected to be a total of 9,812 jobs supported by Eagle Ford Shale in 2021, with the largest impact on induced employment.

Estimated Impact 2021				
Gonzales County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	3,117	2,658	4,037	9,812

The table below details the estimated total impacts on the demand for labor within Gonzales County in 2011. In the first position are office and administrative support occupations at 18.6 percent; followed by professional occupations at 15.1 percent, construction and extraction occupations at 11.7 percent, service occupations at 11.6 percent, and transportation and material moving occupations at 11.5 percent. In the sixth position are management, business, and financial occupations at 11.3 percent, sales occupations at 9.2 percent, production occupations at 5.7 percent, installation, maintenance, and repair occupations at 5.2 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Gonzales County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	676	18.6%
15-2900	Professional and related occupations	547	15.1%
47-0000	Construction and extraction occupations	426	11.7%
31-3900	Service occupations	423	11.6%
53-0000	Transportation and material moving occupations	417	11.5%
11-1300	Management, business, and financial occupations	412	11.3%
41-0000	Sales and related occupations	334	9.2%
51-0000	Production occupations	206	5.7%
49-0000	Installation, maintenance, and repair occupations	190	5.2%
45-0000	Farming, fishing, and forestry occupations	5	0.1%
	Total	3,636	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected 2021 total impacts on the labor demand within Gonzales County are shown in the following table. Office and administration occupations are most significant at 19.2 percent; followed by professional occupations at 17.2 percent, management, business, and financial occupations at 12.8 percent, service occupations at 12.3 percent, and transportation and material moving occupations at 9.6 percent. Ranking sixth are sales occupations, also at 9.6 percent, followed by construction and extraction occupations at 8.9 percent, production occupations at 5.5 percent, installations, maintenance, and repair occupations at 4.8 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Gonzales County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,889	19.2%
15-2900	Professional and related occupations	1,683	17.2%
11-1300	Management, business, and financial occupations	1,257	12.8%
31-3900	Service occupations	1,207	12.3%
53-0000	Transportation and material moving occupations	946	9.6%
41-0000	Sales and related occupations	938	9.6%
47-0000	Construction and extraction occupations	870	8.9%
51-0000	Production occupations	537	5.5%
49-0000	Installation, maintenance, and repair occupations	472	4.8%
45-0000	Farming, fishing, and forestry occupations	13	0.1%
	Total	9,812	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Gonzales Direct and Indirect Impacts

The table below details the occupational make-up of Gonzales County in 2010¹¹. Service occupations rank first on the list at 15.8 percent, followed by office and administrative support occupations at 15.4 percent, management, business, and financial occupations at 14.3 percent, professional occupations at 12.3 percent, and farming, fishing, and forestry occupations at 11.9 percent. In the sixth position are production occupations at 8.4 percent; followed by sales occupations at 8.1 percent, transportation and material moving occupations at 6.5 percent, installation, maintenance, and repair occupations at 3.8 percent and construction and extraction occupations at 3.4 percent.

Occupation Code	Gonzales County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	1,634	15.8%
43-0000	Office and administrative support occupations	1,591	15.4%
11-1300	Management, business, and financial occupations	1,483	14.3%
15-2900	Professional and related occupations	1,275	12.3%
45-0000	Farming, fishing, and forestry occupations	1,235	11.9%
51-0000	Production occupations	873	8.4%
41-0000	Sales and related occupations	835	8.1%
53-0000	Transportation and material moving occupations	672	6.5%
49-0000	Installation, maintenance, and repair occupations	398	3.8%
47-0000	Construction and extraction occupations	347	3.4%
	Total	10,344	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below illustrates the educational and training structure of Gonzales County in 2010. In the first position is short-term on-the-job training at 31.4 percent; followed by work experience in a related field at 19.8 percent, moderate-term on-the-job training at 16.6 percent, bachelor's degrees at 9.4 percent, and bachelor's or higher degree, plus work experience at 8.2 percent. Long-term on-the-job training accounted for 4.6 percent of the education pool, postsecondary vocational awards accounted for 4 percent, and associate degrees 3.5 percent. In the ninth position are first professional degrees at 1.2 percent; followed by Master's degrees at 1.1 percent and doctoral degrees at 0.2 percent.

¹¹ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 10,563.

Gonzales County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
3,253	Short-term on-the-job training	31.4%
2,049	Work experience in a related occupation	19.8%
1,715	Moderate-term on-the-job training	16.6%
974	Bachelor's degree	9.4%
851	Bachelor's or higher degree, plus work experience	8.2%
479	Long-term on-the-job training	4.6%
410	Postsecondary vocational award	4.0%
359	Associate degree	3.5%
123	First professional degree	1.2%
110	Master's degree	1.1%
21	Doctoral degree	0.2%
10,344	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The table below depicts the Eagle Ford development impacts on occupations within Gonzales County in 2011. Construction and extraction occupations (19 percent) are foremost, increasing by 15.6 percentage points; followed by office and administrative support occupations (17.6 percent), increasing by 2.2 percentage points, transportation and material moving occupations (15.6 percent), increasing by 9.1 percentage points, management, business, and financial occupations (13 percent), decreasing by 1.3 percentage point, and professional occupations (12.5 percent) showing a 0.2 percentage point increase.

Moving to the seventh position are installation, maintenance, and repair occupations (6.2 percent), increasing by 2.4 percentage points; followed by sales occupations (4.3 percent), decreasing by 3.8 percentage points, service occupations (4 percent), decreasing by 11.8 percentage points, and farming, fishing, and forestry occupations (less than 1 percent), decreasing by 11.9 percentage points.

Occupation Code	Direct Plus Indirect Impacts Gonzales County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	424	19.0%
43-0000	Office and administrative support occupations	391	17.6%
53-0000	Transportation and material moving occupations	347	15.6%
11-1300	Management, business, and financial occupations	289	13.0%
15-2900	Professional and related occupations	279	12.5%
51-0000	Production occupations	171	7.7%
49-0000	Installation, maintenance, and repair occupations	139	6.2%
41-0000	Sales and related occupations	95	4.3%
31-3900	Service occupations	90	4.0%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	2,227	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The impacts of Eagle Ford development in 2011 on the distribution of education and training within Gonzales County are shown below. Moving to the forefront is moderate-term on-the-job training (30.4 percent) showing 13.8 percentage point increase. Followed by short-term on-the-job training (24.6 percent), decreasing by 6.8 percentage points, bachelor's degrees (13.2 percent), increasing by 3.8 percentage points, work experience in a related field (10.7 percent), decreasing by 9.1 percentage points, and long-term on-the-job training (8 percent) showing a 3.4 percentage point increase.

Ranking sixth are bachelor's or higher degrees, plus work experience (5 percent) showing a 3.2 percentage point decrease; followed by associate degrees (3.4 percent), decreasing by 0.1 percentage point, postsecondary vocational awards (2.7 percent), increasing by 1.5 percentage point, first professional degrees (1.3 percent), increasing by 0.1 percentage point, and Master's degrees (0.8 percent), decreasing by 0.3 percentage point. Ranking last were doctoral degrees (less than 1 percent) showing a 0.2 percentage point decrease.

Direct Plus Indirect Impacts Gonzales County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
678	Moderate-term on-the-job training	30.4%
547	Short-term on-the-job training	24.6%
293	Bachelor's degree	13.2%
238	Work experience in a related occupation	10.7%
178	Long-term on-the-job training	8.0%
111	Bachelor's or higher degree, plus work experience	5.0%
75	Associate degree	3.4%
61	Postsecondary vocational award	2.7%
28	First professional degree	1.3%
19	Master's degree	0.8%
1	Doctoral degree	0.0%
2,227	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projected impacts on the occupational demand for 2021 within Gonzales County are depicted below. Foremost are office and administrative support occupations(18.6 percent) showing 1 percentage point increase; followed by professional occupations(15.7 percent), increasing by 3.2 percentage points, management, business, and financial occupations(15.6 percent), increasing by 2.6 percentage points, construction and extraction occupations(14.6 percent) moving to the fourth position and decreasing by 3 percentage points, and transportation and material moving occupations (13.1 percent), decreasing by 2.5 percentage points.

Ranking sixth are production occupations (7.7 percent) showing no percentage point change; followed by installation, maintenance, and repair occupations (5.6 percent), decreasing by 0.6 percentage point, and sale occupations (4.6 percent), increasing by 0.3 percentage point. Ranking last are service occupations (4.4 percent) showing a 0.4 percentage point increase and farming, fishing, and forestry occupations (0.1 percent), increasing by 0.1 percentage point.

Occupation Code	Direct Plus Indirect Impacts Gonzales County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,076	18.6%
15-2900	Professional and related occupations	904	15.7%
11-1300	Management, business, and financial occupations	901	15.6%
47-0000	Construction and extraction occupations	844	14.6%
53-0000	Transportation and material moving occupations	758	13.1%
51-0000	Production occupations	447	7.7%
49-0000	Installation, maintenance, and repair occupations	326	5.6%
41-0000	Sales and related occupations	263	4.6%
31-3900	Service occupations	253	4.4%
45-0000	Farming, fishing, and forestry occupations	3	0.1%
	Total	5,775	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford development impacts for 2021 within Gonzales County are shown below. Remaining in the first position is moderate-term on-the-job training (27.8 percent) showing a decrease of 2.6 percentage points. Second down is short-term on-the-job training (22 percent) showing a 2.6 percentage point decrease; followed by bachelor's degrees (16 percent), increasing by 2.8 percentage points, work experience in a related field (10.6 percent), decreasing by 0.1 percentage point, long-term on-the-job training (8.1 percent), increasing by 0.1 percentage point, and bachelor's or higher degree, plus work experience (6 percent) showing a 1 percentage point increase from the 2011 figure.

Ranking seventh are occupations requiring an associate degree (4 percent) showing a 0.6 percentage point increase; followed by postsecondary vocational awards (2.6 percent), decreasing by 0.1 percentage point, Master's degrees (1.5 percent), increasing by 0.7 percentage points, first professional degrees (1.2 percent), decreasing by 0.1 percentage point, and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Gonzales County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
1,607	Moderate-term on-the-job training	27.8%
1,273	Short-term on-the-job training	22.0%
923	Bachelor's degree	16.0%
615	Work experience in a related occupation	10.6%
466	Long-term on-the-job training	8.1%
346	Bachelor's or higher degree, plus work experience	6.0%
232	Associate degree	4.0%
152	Postsecondary vocational award	2.6%
89	Master's degree	1.5%
71	First professional degree	1.2%
3	Doctoral degree	0.0%
5,775	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Gonzales Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Gonzales County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	2,227	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	131	5.9%
2	47-2073	Operating engineers and other construction equipment operators	83	3.7%
3	43-9061	Office clerks, general	63	2.8%
4	47-2061	Construction laborers	60	2.7%
5	53-7032	Excavating and loading machine and dragline operators	58	2.6%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	55	2.5%
7	43-3031	Bookkeeping, accounting, and auditing clerks	55	2.5%
8	13-2011	Accountants and auditors	54	2.4%
9	47-2031	Carpenters	53	2.4%
10	11-1021	General and operations managers	50	2.2%
11	53-7062	Laborers and freight, stock, and material movers, hand	42	1.9%
12	49-9042	Maintenance and repair workers, general	41	1.9%
13	43-6011	Executive secretaries and administrative assistants	41	1.8%
14	43-6014	Secretaries, except legal, medical, and executive	40	1.8%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	35	1.6%
16	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	28	1.3%
17	23-1011	Lawyers	27	1.2%
18	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	26	1.2%
19	53-7051	Industrial truck and tractor operators	24	1.1%
20	43-4051	Customer service representatives	23	1.0%
21	49-3042	Mobile heavy equipment mechanics, except engines	23	1.0%
22	43-1011	First-line supervisors/managers of office and administrative support workers	22	1.0%
23	47-5051	Rock splitters, quarry	22	1.0%
24	47-5041	Continuous mining machine operators	19	0.9%
25	17-2051	Civil engineers	19	0.8%
26	51-8093	Petroleum pump system operators, refinery operators, and gaugers	19	0.8%
27	53-7073	Wellhead pumpers	18	0.8%
28	51-1011	First-line supervisors/managers of production and operating workers	18	0.8%
29	17-2171	Petroleum engineers	18	0.8%
30	11-9021	Construction managers	18	0.8%
31	47-5042	Mine cutting and channeling machine operators	17	0.8%
32	43-4171	Receptionists and information clerks	17	0.8%
33	13-1199	Business operation specialists, all other	16	0.7%
34	11-3031	Financial managers	16	0.7%
35	43-6012	Legal secretaries	16	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: total impacts 2011

SOC Occupation		Total Impacts Gonzales County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	3,636	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	141	3.9%
2	41-2031	Retail salespersons	100	2.8%
3	43-9061	Office clerks, general	99	2.7%
4	47-2073	Operating engineers and other construction equipment operators	85	2.3%
5	41-2011	Cashiers, except gaming	80	2.2%
6	43-3031	Bookkeeping, accounting, and auditing clerks	76	2.1%
7	13-2011	Accountants and auditors	67	1.8%
8	11-1021	General and operations managers	66	1.8%
9	29-1111	Registered nurses	66	1.8%
10	47-2061	Construction laborers	60	1.7%
11	43-6014	Secretaries, except legal, medical, and executive	59	1.6%
12	53-7032	Excavating and loading machine and dragline operators	59	1.6%
13	53-7062	Laborers and freight, stock, and material movers, hand	58	1.6%
14	43-6011	Executive secretaries and administrative assistants	57	1.6%
15	49-9042	Maintenance and repair workers, general	57	1.6%
16	47-1011	First-line supervisors/managers of construction trades and extraction workers	55	1.5%
17	47-2031	Carpenters	53	1.5%
18	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	49	1.3%
19	43-4051	Customer service representatives	48	1.3%
20	43-1011	First-line supervisors/managers of office and administrative support workers	39	1.1%
21	43-4171	Receptionists and information clerks	39	1.1%
22	31-1012	Nursing aides, orderlies, and attendants	37	1.0%
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	36	1.0%
24	43-5081	Stock clerks and order fillers	35	1.0%
25	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	35	1.0%
26	35-3021	Combined food preparation and serving workers, including fast food	33	0.9%
27	23-1011	Lawyers	32	0.9%
28	35-3031	Waiters and waitresses	31	0.9%
29	53-7051	Industrial truck and tractor operators	27	0.8%
30	41-3031	Securities, commodities, and financial services sales agents	26	0.7%
31	13-2072	Loan officers	26	0.7%
32	41-1011	First-line supervisors/managers of retail sales workers	26	0.7%
33	37-3011	Landscaping and groundskeeping workers	26	0.7%
34	13-1199	Business operation specialists, all other	24	0.7%
35	37-2012	Maids and housekeeping cleaners	24	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Gonzales Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Gonzales County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	5,775	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	247	4.3%
2	13-2011	Accountants and auditors	190	3.3%
3	43-9061	Office clerks, general	171	3.0%
4	43-3031	Bookkeeping, accounting, and auditing clerks	165	2.9%
5	11-1021	General and operations managers	149	2.6%
6	47-2073	Operating engineers and other construction equipment operators	147	2.5%
7	43-6011	Executive secretaries and administrative assistants	126	2.2%
8	43-6014	Secretaries, except legal, medical, and executive	119	2.1%
9	51-8093	Petroleum pump system operators, refinery operators, and gaugers	114	2.0%
10	47-1011	First-line supervisors/managers of construction trades and extraction workers	113	2.0%
11	47-2061	Construction laborers	103	1.8%
12	53-7032	Excavating and loading machine and dragline operators	100	1.7%
13	53-7073	Wellhead pumpers	99	1.7%
14	49-9042	Maintenance and repair workers, general	99	1.7%
15	17-2171	Petroleum engineers	98	1.7%
16	53-7062	Laborers and freight, stock, and material movers, hand	89	1.5%
17	47-2031	Carpenters	88	1.5%
18	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	77	1.3%
19	19-2042	Geoscientists, except hydrologists and geographers	75	1.3%
20	47-5071	Roustabouts, oil and gas	74	1.3%
21	23-1011	Lawyers	69	1.2%
22	43-4051	Customer service representatives	63	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	61	1.1%
24	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	60	1.0%
25	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	60	1.0%
26	13-1199	Business operation specialists, all other	59	1.0%
27	19-4041	Geological and petroleum technicians	57	1.0%
28	11-3031	Financial managers	52	0.9%
29	51-1011	First-line supervisors/managers of production and operating workers	51	0.9%
30	43-4171	Receptionists and information clerks	46	0.8%
31	53-7051	Industrial truck and tractor operators	45	0.8%
32	49-3042	Mobile heavy equipment mechanics, except engines	45	0.8%
33	37-3011	Landscaping and groundskeeping workers	44	0.8%
34	49-9041	Industrial machinery mechanics	40	0.7%
35	47-5051	Rock splitters, quarry	38	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Gonzales County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	9,812	100.0%
1	41-2031	Retail salespersons	290	3.0%
2	43-9061	Office clerks, general	276	2.8%
3	53-3032	Truck drivers, heavy and tractor-trailer	269	2.7%
4	13-2011	Accountants and auditors	227	2.3%
5	43-3031	Bookkeeping, accounting, and auditing clerks	227	2.3%
6	41-2011	Cashiers, except gaming	225	2.3%
7	29-1111	Registered nurses	196	2.0%
8	11-1021	General and operations managers	196	2.0%
9	43-6014	Secretaries, except legal, medical, and executive	175	1.8%
10	43-6011	Executive secretaries and administrative assistants	173	1.8%
11	47-2073	Operating engineers and other construction equipment operators	147	1.5%
12	49-9042	Maintenance and repair workers, general	145	1.5%
13	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	137	1.4%
14	43-4051	Customer service representatives	135	1.4%
15	53-7062	Laborers and freight, stock, and material movers, hand	134	1.4%
16	47-1011	First-line supervisors/managers of construction trades and extraction workers	116	1.2%
17	51-8093	Petroleum pump system operators, refinery operators, and gaugers	114	1.2%
18	43-1011	First-line supervisors/managers of office and administrative support workers	110	1.1%
19	47-2061	Construction laborers	108	1.1%
20	43-4171	Receptionists and information clerks	107	1.1%
21	31-1012	Nursing aides, orderlies, and attendants	105	1.1%
22	53-7032	Excavating and loading machine and dragline operators	100	1.0%
23	53-7073	Wellhead pumpers	99	1.0%
24	43-5081	Stock clerks and order fillers	98	1.0%
25	17-2171	Petroleum engineers	98	1.0%
26	35-3021	Combined food preparation and serving workers, including fast food	94	1.0%
27	47-2031	Carpenters	94	1.0%
28	35-3031	Waiters and waitresses	88	0.9%
29	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	85	0.9%
30	23-1011	Lawyers	83	0.8%
31	13-1199	Business operation specialists, all other	81	0.8%
32	19-2042	Geoscientists, except hydrologists and geographers	75	0.8%
33	41-1011	First-line supervisors/managers of retail sales workers	75	0.8%
34	47-5071	Roustabouts, oil and gas	74	0.8%
35	37-3011	Landscaping and groundskeeping workers	74	0.8%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Karnes County



The following tables depict the estimated direct, indirect, and induced impacts on employment within Karnes County for 2011 and 2021. Within Karnes County a total of 6,092 jobs are estimated to have been impacted by Eagle Ford Shale development in 2011, with direct employment being most affected.

Estimated Impact 2011				
Karnes County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,888	1,436	1,767	6,092

Karnes County is projected to see a total of 14,899 jobs affected by Eagle Ford development in 2021, with the largest impact being on direct employment.

Estimated Impact 2021				
Karnes County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	5,846	4,297	4,757	14,899

The table below shows the total occupational impacts within Karnes County in 2011. Ranking first were construction and extraction occupations at 17.8 percent; followed by office and administrative occupations at 17.2 percent, transportation and material moving occupations at 13.4 percent, management, business, and financial occupations at 12.1 percent, and service occupations at 11.3 percent. In the sixth position are professional occupations at 9 percent, followed by sales occupations at 7.6 percent, production occupations at 6.2 percent, installation, maintenance, and repair occupations at 5.3 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Karnes County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	1,084	17.8%
43-0000	Office and administrative support occupations	1,048	17.2%
53-0000	Transportation and material moving occupations	819	13.4%
11-1300	Management, business, and financial occupations	738	12.1%
31-3900	Service occupations	685	11.3%
15-2900	Professional and related occupations	548	9.0%
41-0000	Sales and related occupations	465	7.6%
51-0000	Production occupations	376	6.2%
49-0000	Installation, maintenance, and repair occupations	323	5.3%
45-0000	Farming, fishing, and forestry occupations	6	0.1%
	Total	6,092	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford total impacts for 2021 within Karnes County are shown below. Office and administrative occupations are at the top of the list at 18.5 percent; followed by management, business, and financial occupations at 14.5 percent, professional occupations at 13.1 percent, service occupations at 12.2 percent and construction and extraction occupations at 11.6 percent. In the sixth position are transportation and material moving occupations at 11.3 percent; followed by sales occupations at 8 percent, production occupations at 6 percent, installation, maintenance, and repair occupations at 4.7 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Karnes County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	2,763	18.5%
11-1300	Management, business, and financial occupations	2,156	14.5%
15-2900	Professional and related occupations	1,945	13.1%
31-3900	Service occupations	1,822	12.2%
47-0000	Construction and extraction occupations	1,735	11.6%
53-0000	Transportation and material moving occupations	1,684	11.3%
41-0000	Sales and related occupations	1,194	8.0%
51-0000	Production occupations	893	6.0%
49-0000	Installation, maintenance, and repair occupations	694	4.7%
45-0000	Farming, fishing, and forestry occupations	15	0.1%
	Total	14,899	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Karnes Direct and Indirect Impacts

In 2010, much of the Karnes County labor force resided in the service sector at 19.4 percent of the labor demanded¹². Following the service sector are office and administrative support occupations 16.2 percent, management, business and financial occupations at 15.2 percent, professional occupations at 13.5 percent, farming, fishing and forestry occupations at 7 percent and sales occupations also at 7 percent. In the seventh position are transportation and material moving occupations at 5.8 percent; followed by construction and extraction occupations at 4.9 percent, production occupations at 4.3 percent, and installation, maintenance and repair occupations at 3 percent.

Occupation Code	Karnes County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	1,401	19.4%
43-0000	Office and administrative support occupations	1,169	16.2%
11-1300	Management, business, and financial occupations	1,095	15.2%
15-2900	Professional and related occupations	976	13.5%
45-0000	Farming, fishing, and forestry occupations	733	10.2%
41-0000	Sales and related occupations	506	7.0%
53-0000	Transportation and material moving occupations	416	5.8%
47-0000	Construction and extraction occupations	351	4.9%
51-0000	Production occupations	309	4.3%
49-0000	Installation, maintenance, and repair occupations	260	3.6%
	Total	7,216	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

In 2010 the top four demanded training and education requirements in Karnes County were short-term on-the-job training at 29.6 percent, work experience in a related location at 18.3 percent, moderate-term on-the-job training at 17.3 percent, and bachelor's degrees at 11.9 percent. Followed by bachelor's or higher degree, plus work experience at 7.7 percent, long-term on-the-job training at 5.5 percent, postsecondary vocational awards at 4.1 percent, and associate degrees at 2.9 percent. In the ninth spot are Master's degrees at 1.3 percent, in tenth first professional degree at 1 percent and last doctoral degrees at 0.3 percent.

¹² Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 6,854.

Karnes County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
2,139	Short-term on-the-job training	29.6%
1,320	Work experience in a related occupation	18.3%
1,249	Moderate-term on-the-job training	17.3%
860	Bachelor's degree	11.9%
558	Bachelor's or higher degree, plus work experience	7.7%
399	Long-term on-the-job training	5.5%
294	Postsecondary vocational award	4.1%
211	Associate degree	2.9%
96	Master's degree	1.3%
71	First professional degree	1.0%
19	Doctoral degree	0.3%
7,216	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts within Karnes County are illustrated in the table below. Foremost are construction and extraction occupations (24.8 percent), which increased by 19.9 percentage points. Transportation and material moving occupations (16.7 percent) moved to second, increasing by 10.9 percentage points; followed by office and administrative support occupations (16.4 percent), increasing by 0.2 percentage points, management, business, and financial occupations (13.3 percent), decreasing by 1.9 percent, and production occupations (7.7 percent) showing a 3.4 percentage point increase.

In the sixth position were professional occupations (7.5 percent), showing a 6 percentage point decrease; followed by installation, maintenance, and repair occupations (6.1 percent), showing a 2.5 percentage point increase, sales occupations (3.9 percent), decreasing by 3.1 percentage points, and service occupations (3.5 percent) moving to ninth and decreasing by 15.9 percentage points. Ranking last were farming, fishing, and forestry occupations (less than 1 percent) showing a 10.2 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Karnes County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	1,071	24.8%
53-0000	Transportation and material moving occupations	723	16.7%
43-0000	Office and administrative support occupations	710	16.4%
11-1300	Management, business, and financial occupations	575	13.3%
51-0000	Production occupations	335	7.7%
15-2900	Professional and related occupations	326	7.5%
49-0000	Installation, maintenance, and repair occupations	264	6.1%
41-0000	Sales and related occupations	168	3.9%
31-3900	Service occupations	151	3.5%
45-0000	Farming, fishing, and forestry occupations	2	0.0%
	Total	4,324	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on educational and training distributions in 2011 are shown in the table below. Moderate-term on-the-job training (31.8 percent) moved to the forefront, increasing by 14.5 percentage points; followed by short-term on-the-job training (24.8 percent), decreasing by 4.8 percent, bachelor's degrees (11.4 percent), decreasing by 0.5 percentage point, work experience in a related field (11.3 percent), decreasing by 7 percentage points, and long-term on-the-job training (10.5 percent), showing 5 percentage point increase.

Bachelor's or higher degree, plus work experience (4.8 percent) are ranked sixth, decreasing by 2.9 percentage points; followed by postsecondary vocational awards (2.2 percent), decreasing by 1.9 percentage points, occupations requiring an Associate degree (1.9 percent) decreased by 2.2 percentage points, master's degrees (0.7 percent), decreasing by 0.6 percentage point and first professional degrees (0.5 percent), decreasing by 0.5 percentage point. Ranking last are doctoral degrees (less than 1 percent), having decreased by 0.3 percentage point.

Direct Plus Indirect Impacts Karnes County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
1,376	Moderate-term on-the-job training	31.8%
1,073	Short-term on-the-job training	24.8%
494	Bachelor's degree	11.4%
487	Work experience in a related occupation	11.3%
455	Long-term on-the-job training	10.5%
208	Bachelor's or higher degree, plus work experience	4.8%
94	Postsecondary vocational award	2.2%
82	Associate degree	1.9%
30	Master's degree	0.7%
23	First professional degree	0.5%
1	Doctoral degree	0.0%
4,324	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Depicted below are the projected direct plus indirect occupational impacts within Karnes County. Projected to move into the first position are office and administrative support occupations (18.3 percent), showing a 1.9 percentage point increase; followed by management, business, and financial occupations (17 percent), increasing by 3.7 percentage points, construction and extraction occupations (16.7 percent), decreasing by 8.1 percentage points, transportation and material moving occupations (14 percent), decreasing by 2.7 percentage points, professional occupations (13.3 percent), decreasing by 5.8 percentage points, and production occupations (7.7 percent) with no change in significance. Ranking seventh are installation, maintenance, and repair occupations (5.3 percent), decreasing by 0.8 percentage point; followed by sales occupations (4 percent), increasing by 0.1 percentage point, service occupations (3.6 percent), increasing by 0.1 percentage point and farming, fishing, and forestry occupations remaining at less than 1 percent.

Occupation Code	Direct Plus Indirect Impacts Karnes County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,860	18.3%
11-1300	Management, business, and financial occupations	1,722	17.0%
47-0000	Construction and extraction occupations	1,695	16.7%
53-0000	Transportation and material moving occupations	1,424	14.0%
15-2900	Professional and related occupations	1,353	13.3%
51-0000	Production occupations	781	7.7%
49-0000	Installation, maintenance, and repair occupations	534	5.3%
41-0000	Sales and related occupations	409	4.0%
31-3900	Service occupations	362	3.6%
45-0000	Farming, fishing, and forestry occupations	5	0.0%
	Total	10,143	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford development impacts on education and training distributions for 2021 within Karnes County are shown in the table below. Moderate-term on-the-job training (28.8 percent) remains foremost but projected to decrease by 3 percentage points; followed by short-term on-the-job training (21.2 percent), decreasing by 3.6 percentage points, bachelor's degrees (15.9 percent), increasing by 4.5 percentage points, work experience in a related field (10.9 percent), decreasing by 0.4 percentage points, long-term on-the-job training (9 percent), decreasing by 1.5 percentage point, bachelor's or higher degree, plus work experience (6.4 percent), increasing by 1.6 percentage point, and Associate degrees (3.2 percent) showing a 1.9 percentage point increase.

In the eighth position are postsecondary vocational awards, (2.1 percent) showing a 0.1 percentage point decrease, followed by master's degrees (1.7 percent), increasing by 1 percentage point, first professional degrees (0.6 percent), increasing by 0.1 percentage point, and doctoral degrees (0.1 percent), increasing by 0.1 percentage point.

Direct Plus Indirect Impacts Karnes County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
2,922	Moderate-term on-the-job training	28.8%
2,155	Short-term on-the-job training	21.2%
1,614	Bachelor's degree	15.9%
1,105	Work experience in a related occupation	10.9%
912	Long-term on-the-job training	9.0%
651	Bachelor's or higher degree, plus work experience	6.4%
322	Associate degree	3.2%
215	Postsecondary vocational award	2.1%
175	Master's degree	1.7%
65	First professional degree	0.6%
6	Doctoral degree	0.1%
10,143	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Karnes Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Karnes County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	4,324	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	278	6.4%
2	47-2031	Carpenters	185	4.3%
3	47-2061	Construction laborers	178	4.1%
4	47-2073	Operating engineers and other construction equipment operators	170	3.9%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	148	3.4%
6	43-9061	Office clerks, general	115	2.7%
7	53-7032	Excavating and loading machine and dragline operators	113	2.6%
8	43-3031	Bookkeeping, accounting, and auditing clerks	105	2.4%
9	13-2011	Accountants and auditors	103	2.4%
10	11-1021	General and operations managers	97	2.2%
11	53-7062	Laborers and freight, stock, and material movers, hand	90	2.1%
12	43-6011	Executive secretaries and administrative assistants	76	1.8%
13	49-9042	Maintenance and repair workers, general	74	1.7%
14	43-6014	Secretaries, except legal, medical, and executive	72	1.7%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	68	1.6%
16	11-9021	Construction managers	56	1.3%
17	53-7051	Industrial truck and tractor operators	48	1.1%
18	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	47	1.1%
19	43-4051	Customer service representatives	44	1.0%
20	49-3042	Mobile heavy equipment mechanics, except engines	44	1.0%
21	47-5051	Rock splitters, quarry	43	1.0%
22	43-1011	First-line supervisors/managers of office and administrative support workers	42	1.0%
23	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	41	1.0%
24	47-5041	Continuous mining machine operators	38	0.9%
25	51-1011	First-line supervisors/managers of production and operating workers	34	0.8%
26	51-8093	Petroleum pump system operators, refinery operators, and gaugers	34	0.8%
27	47-5042	Mine cutting and channeling machine operators	33	0.8%
28	53-7073	Wellhead pumpers	33	0.8%
29	17-2171	Petroleum engineers	32	0.7%
30	13-1199	Business operation specialists, all other	31	0.7%
31	11-3031	Financial managers	30	0.7%
32	51-4121	Welders, cutters, solderers, and brazers	30	0.7%
33	43-4171	Receptionists and information clerks	29	0.7%
34	47-2111	Electricians	28	0.6%
35	49-9041	Industrial machinery mechanics	27	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Karnes County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	6,092	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	292	4.8%
2	47-2031	Carpenters	189	3.1%
3	47-2061	Construction laborers	181	3.0%
4	47-2073	Operating engineers and other construction equipment operators	170	2.8%
5	43-9061	Office clerks, general	156	2.6%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	149	2.4%
7	43-3031	Bookkeeping, accounting, and auditing clerks	131	2.1%
8	41-2031	Retail salespersons	121	2.0%
9	13-2011	Accountants and auditors	120	2.0%
10	11-1021	General and operations managers	119	2.0%
11	41-2011	Cashiers, except gaming	116	1.9%
12	53-7062	Laborers and freight, stock, and material movers, hand	114	1.9%
13	53-7032	Excavating and loading machine and dragline operators	113	1.9%
14	43-6011	Executive secretaries and administrative assistants	95	1.6%
15	43-6014	Secretaries, except legal, medical, and executive	92	1.5%
16	49-9042	Maintenance and repair workers, general	84	1.4%
17	43-4051	Customer service representatives	81	1.3%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	68	1.1%
19	43-1011	First-line supervisors/managers of office and administrative support workers	62	1.0%
20	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	61	1.0%
21	35-3021	Combined food preparation and serving workers, including fast food	59	1.0%
22	35-3031	Waiters and waitresses	58	0.9%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	58	0.9%
24	11-9021	Construction managers	57	0.9%
25	43-5081	Stock clerks and order fillers	53	0.9%
26	43-4171	Receptionists and information clerks	53	0.9%
27	53-7051	Industrial truck and tractor operators	52	0.8%
28	41-3031	Securities, commodities, and financial services sales agents	46	0.7%
29	49-3042	Mobile heavy equipment mechanics, except engines	44	0.7%
30	31-1012	Nursing aides, orderlies, and attendants	43	0.7%
31	31-1011	Home health aides	43	0.7%
32	47-5051	Rock splitters, quarry	43	0.7%
33	13-2072	Loan officers	42	0.7%
34	13-1199	Business operation specialists, all other	41	0.7%
35	11-3031	Financial managers	40	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Karnes Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Karnes County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	10,143	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	457	4.5%
2	13-2011	Accountants and auditors	367	3.6%
3	43-3031	Bookkeeping, accounting, and auditing clerks	304	3.0%
4	43-9061	Office clerks, general	297	2.9%
5	11-1021	General and operations managers	280	2.8%
6	47-2073	Operating engineers and other construction equipment operators	258	2.5%
7	47-1011	First-line supervisors/managers of construction trades and extraction workers	236	2.3%
8	43-6011	Executive secretaries and administrative assistants	232	2.3%
9	47-2061	Construction laborers	224	2.2%
10	47-2031	Carpenters	215	2.1%
11	51-8093	Petroleum pump system operators, refinery operators, and gaugers	211	2.1%
12	43-6014	Secretaries, except legal, medical, and executive	208	2.1%
13	53-7073	Wellhead pumpers	206	2.0%
14	17-2171	Petroleum engineers	202	2.0%
15	53-7032	Excavating and loading machine and dragline operators	172	1.7%
16	53-7062	Laborers and freight, stock, and material movers, hand	165	1.6%
17	49-9042	Maintenance and repair workers, general	156	1.5%
18	47-5071	Roustabouts, oil and gas	154	1.5%
19	19-2042	Geoscientists, except hydrologists and geographers	152	1.5%
20	19-4041	Geological and petroleum technicians	118	1.2%
21	13-1199	Business operation specialists, all other	117	1.2%
22	43-4051	Customer service representatives	112	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	108	1.1%
24	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	103	1.0%
25	11-3031	Financial managers	100	1.0%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	96	0.9%
27	51-1011	First-line supervisors/managers of production and operating workers	90	0.9%
28	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	89	0.9%
29	49-3042	Mobile heavy equipment mechanics, except engines	77	0.8%
30	53-7051	Industrial truck and tractor operators	76	0.8%
31	13-2051	Financial analysts	76	0.7%
32	43-4171	Receptionists and information clerks	74	0.7%
33	11-9021	Construction managers	69	0.7%
34	15-1041	Computer support specialists	66	0.7%
35	49-9041	Industrial machinery mechanics	66	0.6%

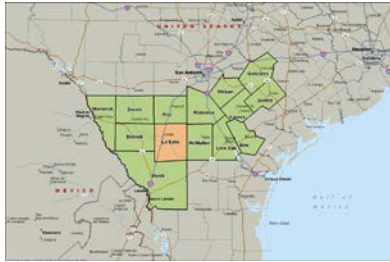
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Karnes County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	14,899	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	494	3.3%
2	13-2011	Accountants and auditors	412	2.8%
3	43-9061	Office clerks, general	406	2.7%
4	43-3031	Bookkeeping, accounting, and auditing clerks	375	2.5%
5	11-1021	General and operations managers	339	2.3%
6	41-2031	Retail salespersons	319	2.1%
7	41-2011	Cashiers, except gaming	306	2.1%
8	43-6011	Executive secretaries and administrative assistants	283	1.9%
9	43-6014	Secretaries, except legal, medical, and executive	263	1.8%
10	47-2073	Operating engineers and other construction equipment operators	259	1.7%
11	47-1011	First-line supervisors/managers of construction trades and extraction workers	240	1.6%
12	47-2061	Construction laborers	234	1.6%
13	53-7062	Laborers and freight, stock, and material movers, hand	231	1.6%
14	47-2031	Carpenters	226	1.5%
15	51-8093	Petroleum pump system operators, refinery operators, and gaugers	211	1.4%
16	43-4051	Customer service representatives	210	1.4%
17	53-7073	Wellhead pumpers	206	1.4%
18	17-2171	Petroleum engineers	202	1.4%
19	49-9042	Maintenance and repair workers, general	185	1.2%
20	53-7032	Excavating and loading machine and dragline operators	172	1.2%
21	43-1011	First-line supervisors/managers of office and administrative support workers	162	1.1%
22	35-3021	Combined food preparation and serving workers, including fast food	156	1.0%
23	47-5071	Roustabouts, oil and gas	154	1.0%
24	19-2042	Geoscientists, except hydrologists and geographers	152	1.0%
25	35-3031	Waiters and waitresses	152	1.0%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	149	1.0%
27	13-1199	Business operation specialists, all other	144	1.0%
28	43-4171	Receptionists and information clerks	137	0.9%
29	43-5081	Stock clerks and order fillers	135	0.9%
30	11-3031	Financial managers	124	0.8%
31	31-1011	Home health aides	120	0.8%
32	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	119	0.8%
33	19-4041	Geological and petroleum technicians	118	0.8%
34	31-1012	Nursing aides, orderlies, and attendants	110	0.7%
35	13-2072	Loan officers	107	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

La Salle County



The following tables detail the direct, indirect, and induced impacts of Eagle Ford development within the La Salle County for 2011 and 2021. It is estimated that Eagle Ford Shale supported a total of 3,699 jobs within La Salle County in 2011, with the largest impact on direct employment.

Estimated Impact 2011				
La Salle County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,392	569	739	3,699

Within La Salle County there is projected to be a total of 7,083 jobs impacted by Eagle Ford development in 2021, with the largest impact on direct employment.

Estimated Impact 2021				
La Salle County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	3,987	1,372	1,724	7,083

The following chart details the Eagle Ford total occupational impacts within La Salle County in 2011. Construction and extraction occupations were foremost at 25.5 percent; followed by transportation and material moving occupations at 14.4 percent, office and administrative support occupations at 13.4 percent, management, business, and financial occupations at 10.9 percent, and professional occupations at 8.8 percent. Service occupations ranked sixth at 8.7 percent, followed by production occupations at 6.6 percent, installation, maintenance, and repair occupations at 6.1 percent, and sales occupations at 5.7 percent. Farming, fishing, and forestry occupations ranked last demanding 0.1 percent of the labor within La Salle County in 2011.

Occupation Code	Total Impacts La Salle County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	942	25.5%
53-0000	Transportation and material moving occupations	533	14.4%
43-0000	Office and administrative support occupations	495	13.4%
11-1300	Management, business, and financial occupations	402	10.9%
15-2900	Professional and related occupations	326	8.8%
31-3900	Service occupations	321	8.7%
51-0000	Production occupations	243	6.6%
49-0000	Installation, maintenance, and repair occupations	225	6.1%
41-0000	Sales and related occupations	209	5.7%
45-0000	Farming, fishing, and forestry occupations	4	0.1%
	Total	3,699	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford total impacts on occupations in 2021 within La Salle County are shown below. Office and administrative occupations are at 15.5 percent, professional occupations are next at 14 percent, followed by construction and extraction, transportation and material moving, and management, business, and financial occupations, each demanding 13.7 percent of the labor in the county. In the sixth position are service occupations at 10.1 percent, followed by production occupations at 7.2 percent, and sales occupations at 6.5 percent. Installation, maintenance, and repair occupations account for 5.6 percent, while farming, fishing, and forestry occupations make up 0.1 percent of the potential labor demanded.

Occupation Code	Total Impacts La Salle County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,096	15.5%
15-2900	Professional and related occupations	995	14.0%
47-0000	Construction and extraction occupations	969	13.7%
53-0000	Transportation and material moving occupations	967	13.7%
11-1300	Management, business, and financial occupations	967	13.7%
31-3900	Service occupations	712	10.1%
51-0000	Production occupations	508	7.2%
41-0000	Sales and related occupations	461	6.5%
49-0000	Installation, maintenance, and repair occupations	400	5.6%
45-0000	Farming, fishing, and forestry occupations	8	0.1%
	Total	7,083	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

La Salle Direct and Indirect Impacts

In 2010, the La Salle County labor force was focused primarily in the service sector, ranking first on the occupation list at 18.2 percent¹³. Following the service sector were management, business and financial occupations at 15.1 percent, office and administrative support occupations at 14.6 percent, professional occupations at 13.5 percent, and farming, fishing and forestry occupations at 9.2 percent. Transportation and material moving occupations ranked sixth at 8.5 percent, proceeding construction and extraction occupations at 7.3 percent, sales occupations at 5.3 percent, and installation, maintenance, and repair occupations at 4.8 percent. Ranking last were production occupations at 3.5 percent.

Occupation Code	La Salle County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	560	18.2%
11-1300	Management, business, and financial occupations	464	15.1%
43-0000	Office and administrative support occupations	448	14.6%
15-2900	Professional and related occupations	415	13.5%
45-0000	Farming, fishing, and forestry occupations	282	9.2%
53-0000	Transportation and material moving occupations	260	8.5%
47-0000	Construction and extraction occupations	225	7.3%
41-0000	Sales and related occupations	162	5.3%
49-0000	Installation, maintenance, and repair occupations	147	4.8%
51-0000	Production occupations	106	3.5%
	Total	3,069	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The La Salle County educational and training distributions in 2010 are shown below; short-term on-the-job training is ranked highest at 27.8 percent, followed by moderate-term on-the-job training at 21 percent, work experience in a related field at 17.1 percent and bachelor's degrees at 12 percent. Ranking fifth is bachelor's degrees, plus work experience at 7.6 percent, followed by long-term on-the-job training at 5.5 percent, postsecondary vocational awards at 3.8 percent, Associate degrees at 2.8 percent, master's degrees at 1.4 percent, first professional degrees at 0.8 percent and lastly doctoral degrees at 0.3 percent.

¹³ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 3,149.

La Salle County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
853	Short-term on-the-job training	27.8%
645	Moderate-term on-the-job training	21.0%
524	Work experience in a related occupation	17.1%
369	Bachelor's degree	12.0%
233	Bachelor's or higher degree, plus work experience	7.6%
170	Long-term on-the-job training	5.5%
116	Postsecondary vocational award	3.8%
85	Associate degree	2.8%
42	Master's degree	1.4%
23	First professional degree	0.8%
9	Doctoral degree	0.3%
3,069	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Short-term Eagle Ford development impacts on the demand for labor—between 2010 and 2011—are shown in the table below. Construction and extraction occupations (31.5 percent) moved to the first position on the list showing a significant 24.2 percentage point increase; followed by transportation and material moving occupations (16.7 percent), increasing by 8.2 percentage points, office and administrative occupations (12.8 percent, decreasing by 1.8 percent, management, business, and financial occupations (11.4 percent), decreasing by 3.7 percentage points, and production occupations (8 percent) showing a 4.5 percentage point decrease.

Moving to the sixth position were professional occupations (7.7 percent) showing a 5.8 percentage point decrease, followed by installation, maintenance, and repair occupations (6.7 percent), increasing by 1.9 percentage point, sales occupations (3 percent), decreasing by 2.3 percentage points, and service occupations (2.3 percent), decreasing by 15.9 percentage points. Farming, fishing, and forestry occupations (less than 1 percent) ranked last showing a 9.2 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts La Salle County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	934	31.5%
53-0000	Transportation and material moving occupations	493	16.7%
43-0000	Office and administrative support occupations	378	12.8%
11-1300	Management, business, and financial occupations	337	11.4%
51-0000	Production occupations	236	8.0%
15-2900	Professional and related occupations	228	7.7%
49-0000	Installation, maintenance, and repair occupations	199	6.7%
41-0000	Sales and related occupations	89	3.0%
31-3900	Service occupations	67	2.3%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	2,961	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Below are the Eagle Ford development impacts on education and training in 2011 within La Salle County. Moving to the first position is moderate-term on-the job training (34 percent), increasing by 13 percentage points relative to the 2010 figure. In the second position is short-term on-the-job training (12.8 percent), showing a decrease of 15 percentage points; followed by long-term on-the job training (12.8 percent), increasing by 7.3 percentage points, work experience in a related field (11.5 percent), decreasing by 5.6 percentage points, and bachelor's degrees (10.9 percent), decreasing by 1.1 percentage point.

Moving to the sixth position is bachelor's degrees (10.9 percent) showing a decrease of 3.3 percentage points; followed by postsecondary vocational awards (2.6 percent), decreasing by 1.2 percentage point, Associate degrees (1.5 percent), decreasing by 1.3 percentage point, and master's degrees (0.6 percent), decreasing by 0.8 percentage point. In the tenth position are first professional degrees (0.1 percent), decreasing by 0.7 percentage point, preceding doctoral degrees (less than 1 percent), which decreased by 0.3 percentage point.

Direct Plus Indirect Impacts LaSalle County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
1,007	Moderate-term on-the-job training	34.0%
640	Short-term on-the-job training	21.6%
378	Long-term on-the-job training	12.8%
339	Work experience in a related occupation	11.5%
324	Bachelor's degree	10.9%
128	Bachelor's or higher degree, plus work experience	4.3%
78	Postsecondary vocational award	2.6%
45	Associate degree	1.5%
19	Master's degree	0.6%
3	First professional degree	0.1%
0	Doctoral degree	0.0%
2,961	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Shown below are the direct plus indirect impacts for 2021 on occupations within La Salle County. Construction and extraction occupations (17.9 percent) are projected to remain in highest demand, but decrease by 13.6 percentage points; followed by transportation and material moving occupations (16.2 percent), decreasing by 0.5 percentage point, office and administrative occupations (15.3 percent), increasing by 2.5 percentage points, and management, business, and financial occupations (15.2 percent) showing a 3.8 percentage point increase. Professional occupations (14.3 percent) will move to the fifth position, increasing by 6.6 percentage points.

Production occupations (9.1 percent) ranked sixth, show a 1.1 percentage point increase, installation, maintenance, and repair occupations (6.3 percent) show a 0.4 percentage point decrease, and sales occupations (3.4 percent) show a 0.4 percentage point increase. Service occupations (2.4 percent) are ranked ninth, preceding farming, fishing, and forestry occupations at less than 1 percent.

Occupation Code	Direct Plus Indirect Impacts La Salle County 10-Occupational Categories, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	960	17.9%
53-0000	Transportation and material moving occupations	866	16.2%
43-0000	Office and administrative support occupations	820	15.3%
11-1300	Management, business, and financial occupations	816	15.2%
15-2900	Professional and related occupations	764	14.3%
51-0000	Production occupations	488	9.1%
49-0000	Installation, maintenance, and repair occupations	335	6.3%
41-0000	Sales and related occupations	181	3.4%
31-3900	Service occupations	126	2.4%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	5,358	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Long-term Eagle Ford development impacts on education and training distributions within La Salle County are depicted in the table below. Moderate-term on-the-job training (32.8 percent) are projected to remain the primary training requirement in the county, but decrease by 2.2 percentage points; followed by short-term on-the-job training (19.1 percent), decreasing by 2.5 percentage points, bachelor's degrees (15.2 percent), increasing by 4.3 percentage points, work experience in a related field (10.6 percent), decreasing by 0.9 percentage points, long-term on-the-job training (8.8 percent), decreasing by 4 percentage points, and bachelor's or higher, plus work experience (6.2 percent) increasing by 1.3 percentage points.

Ranked seventh are Associate degrees (3.2 percent) showing a 1.7 percentage point increase; followed by postsecondary vocational awards (2.6 percent) showing no change in significance, master's degrees (2 percent), increasing by 1.5 percentage point, and first professional degrees (0.3 percent) showing a 0.2 percentage point increase. Doctoral degrees ranked eleventh at less than 1 percent.

	Direct Plus Indirect Impacts La Salle County Educational Structure, 2021	
Occupational Impact	Educational Attainment	Percentage
1,706	Moderate-term on-the-job training	31.8%
1,025	Short-term on-the-job training	19.1%
814	Bachelor's degree	15.2%
571	Work experience in a related occupation	10.6%
473	Long-term on-the-job training	8.8%
333	Bachelor's or higher degree, plus work experience	6.2%
170	Associate degree	3.2%
139	Postsecondary vocational award	2.6%
110	Master's degree	2.1%
16	First professional degree	0.3%
1	Doctoral degree	0.0%
5,358	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

La Salle Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts La Salle County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	2,961	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	186	6.3%
2	47-2031	Carpenters	177	6.0%
3	47-2061	Construction laborers	163	5.5%
4	47-2073	Operating engineers and other construction equipment operators	137	4.6%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	131	4.4%
6	53-7032	Excavating and loading machine and dragline operators	90	3.0%
7	43-9061	Office clerks, general	74	2.5%
8	11-1021	General and operations managers	66	2.2%
9	49-9042	Maintenance and repair workers, general	64	2.2%
10	43-3031	Bookkeeping, accounting, and auditing clerks	62	2.1%
11	11-9021	Construction managers	54	1.8%
12	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	53	1.8%
13	53-7062	Laborers and freight, stock, and material movers, hand	53	1.8%
14	43-6011	Executive secretaries and administrative assistants	51	1.7%
15	43-6014	Secretaries, except legal, medical, and executive	48	1.6%
16	13-2011	Accountants and auditors	41	1.4%
17	53-7051	Industrial truck and tractor operators	35	1.2%
18	49-3042	Mobile heavy equipment mechanics, except engines	34	1.1%
19	47-5051	Rock splitters, quarry	34	1.1%
20	47-5041	Continuous mining machine operators	30	1.0%
21	17-2051	Civil engineers	27	0.9%
22	47-5042	Mine cutting and channeling machine operators	26	0.9%
23	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	25	0.9%
24	13-1051	Cost estimators	25	0.8%
25	51-1011	First-line supervisors/managers of production and operating workers	25	0.8%
26	51-4121	Welders, cutters, solderers, and brazers	25	0.8%
27	47-2111	Electricians	23	0.8%
28	43-1011	First-line supervisors/managers of office and administrative support workers	22	0.7%
29	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	21	0.7%
30	47-2051	Cement masons and concrete finishers	21	0.7%
31	49-9041	Industrial machinery mechanics	20	0.7%
32	51-8093	Petroleum pump system operators, refinery operators, and gaugers	20	0.7%
33	53-7073	Wellhead pumpers	19	0.7%
34	17-2171	Petroleum engineers	19	0.6%
35	51-9111	Packaging and filling machine operators and tenders	19	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts La Salle County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	3,699	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	188	5.1%
2	47-2031	Carpenters	180	4.9%
3	47-2061	Construction laborers	165	4.4%
4	47-2073	Operating engineers and other construction equipment operators	137	3.7%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	132	3.6%
6	43-9061	Office clerks, general	92	2.5%
7	53-7032	Excavating and loading machine and dragline operators	90	2.4%
8	49-9042	Maintenance and repair workers, general	78	2.1%
9	11-1021	General and operations managers	75	2.0%
10	43-3031	Bookkeeping, accounting, and auditing clerks	72	2.0%
11	43-6011	Executive secretaries and administrative assistants	61	1.6%
12	53-7062	Laborers and freight, stock, and material movers, hand	59	1.6%
13	43-6014	Secretaries, except legal, medical, and executive	58	1.6%
14	11-9021	Construction managers	55	1.5%
15	41-2011	Cashiers, except gaming	53	1.4%
16	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	53	1.4%
17	13-2011	Accountants and auditors	45	1.2%
18	41-2031	Retail salespersons	44	1.2%
19	53-7051	Industrial truck and tractor operators	36	1.0%
20	49-3042	Mobile heavy equipment mechanics, except engines	34	0.9%
21	47-5051	Rock splitters, quarry	34	0.9%
22	35-3021	Combined food preparation and serving workers, including fast food	32	0.9%
23	35-3031	Waiters and waitresses	31	0.8%
24	47-5041	Continuous mining machine operators	30	0.8%
25	43-1011	First-line supervisors/managers of office and administrative support workers	29	0.8%
26	43-4171	Receptionists and information clerks	28	0.8%
27	17-2051	Civil engineers	28	0.7%
28	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	27	0.7%
29	47-5042	Mine cutting and channeling machine operators	26	0.7%
30	13-1051	Cost estimators	25	0.7%
31	51-1011	First-line supervisors/managers of production and operating workers	25	0.7%
32	51-4121	Welders, cutters, solderers, and brazers	25	0.7%
33	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	25	0.7%
34	13-1199	Business operation specialists, all other	24	0.7%
35	43-4051	Customer service representatives	24	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

La Salle Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts La Salle County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	5,358	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	274	5.1%
2	47-2073	Operating engineers and other construction equipment operators	181	3.4%
3	43-9061	Office clerks, general	158	3.0%
4	11-1021	General and operations managers	156	2.9%
5	13-2011	Accountants and auditors	153	2.9%
6	43-3031	Bookkeeping, accounting, and auditing clerks	152	2.8%
7	51-8093	Petroleum pump system operators, refinery operators, and gaugers	135	2.5%
8	53-7073	Wellhead pumpers	132	2.5%
9	17-2171	Petroleum engineers	129	2.4%
10	47-1011	First-line supervisors/managers of construction trades and extraction workers	128	2.4%
11	53-7032	Excavating and loading machine and dragline operators	126	2.4%
12	43-6011	Executive secretaries and administrative assistants	126	2.3%
13	49-9042	Maintenance and repair workers, general	122	2.3%
14	43-6014	Secretaries, except legal, medical, and executive	114	2.1%
15	47-2061	Construction laborers	102	1.9%
16	47-5071	Roustabouts, oil and gas	98	1.8%
17	19-2042	Geoscientists, except hydrologists and geographers	98	1.8%
18	47-2031	Carpenters	79	1.5%
19	53-7062	Laborers and freight, stock, and material movers, hand	78	1.5%
20	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	76	1.4%
21	19-4041	Geological and petroleum technicians	76	1.4%
22	13-1199	Business operation specialists, all other	63	1.2%
23	51-1011	First-line supervisors/managers of production and operating workers	59	1.1%
24	49-3042	Mobile heavy equipment mechanics, except engines	53	1.0%
25	53-7051	Industrial truck and tractor operators	50	0.9%
26	11-3031	Financial managers	48	0.9%
27	47-5051	Rock splitters, quarry	48	0.9%
28	43-1011	First-line supervisors/managers of office and administrative support workers	45	0.8%
29	49-9041	Industrial machinery mechanics	43	0.8%
30	47-5041	Continuous mining machine operators	43	0.8%
31	41-9022	Real estate sales agents	41	0.8%
32	13-2051	Financial analysts	40	0.7%
33	43-4171	Receptionists and information clerks	38	0.7%
34	47-5042	Mine cutting and channeling machine operators	38	0.7%
35	17-2151	Mining and geological engineers, including mining safety engineers	37	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation Code		Total Impacts La Salle County		Occupational	
Ranking		Top 35 Occupations Impacted in 2021	Impact	Percentage	
		Total	7,083	100.0%	
1	53-3032	Truck drivers, heavy and tractor-trailer	283	4.0%	
2	43-9061	Office clerks, general	202	2.9%	
3	47-2073	Operating engineers and other construction equipment operators	181	2.6%	
4	11-1021	General and operations managers	179	2.5%	
5	43-3031	Bookkeeping, accounting, and auditing clerks	177	2.5%	
6	13-2011	Accountants and auditors	165	2.3%	
7	49-9042	Maintenance and repair workers, general	155	2.2%	
8	43-6011	Executive secretaries and administrative assistants	149	2.1%	
9	43-6014	Secretaries, except legal, medical, and executive	138	2.0%	
10	51-8093	Petroleum pump system operators, refinery operators, and gaugers	135	1.9%	
11	53-7073	Wellhead pumpers	132	1.9%	
12	17-2171	Petroleum engineers	129	1.8%	
13	47-1011	First-line supervisors/managers of construction trades and extraction workers	129	1.8%	
14	53-7032	Excavating and loading machine and dragline operators	126	1.8%	
15	41-2011	Cashiers, except gaming	118	1.7%	
16	47-2061	Construction laborers	103	1.5%	
17	41-2031	Retail salespersons	99	1.4%	
18	47-5071	Roustabouts, oil and gas	98	1.4%	
19	19-2042	Geoscientists, except hydrologists and geographers	98	1.4%	
20	53-7062	Laborers and freight, stock, and material movers, hand	93	1.3%	
21	47-2031	Carpenters	81	1.1%	
22	13-1199	Business operation specialists, all other	76	1.1%	
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	76	1.1%	
24	19-4041	Geological and petroleum technicians	76	1.1%	
25	35-3021	Combined food preparation and serving workers, including fast food	69	1.0%	
26	35-3031	Waiters and waitresses	67	0.9%	
27	43-1011	First-line supervisors/managers of office and administrative support workers	62	0.9%	
28	51-1011	First-line supervisors/managers of production and operating workers	60	0.8%	
29	43-4171	Receptionists and information clerks	59	0.8%	
30	41-9022	Real estate sales agents	57	0.8%	
31	11-3031	Financial managers	55	0.8%	
32	53-7051	Industrial truck and tractor operators	54	0.8%	
33	49-3042	Mobile heavy equipment mechanics, except engines	54	0.8%	
34	39-9021	Personal and home care aides	51	0.7%	
35	11-9141	Property, real estate, and community association managers	51	0.7%	

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Live Oak County



The tables below depict the estimated direct, indirect, and induced impacts within Live Oak County for 2011 and 2021. In Live Oak County it is estimated that a total of 2,848 jobs were impacted in 2011, with the largest impact on direct employment.

Estimated Impact 2011				
Live Oak County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,547	712	588	2,848

Live Oak County is projected to see 5,763 jobs affected by Eagle Ford development in 2021, with the largest impact on indirect employment.

Estimated Impact 2021				
Live Oak County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,102	2,150	1,511	5,763

The table below details the total impacts on the occupational composition within Live Oak County in 2011. Construction and extraction occupations are at 25.1 percent; followed by office and administrative occupations at 15.8 percent, management, business, and financial occupations at 12.3 percent, transportation and material moving occupations at 10.9, service occupations at 10.2 percent, and professional occupations at 8.3 percent. In the seventh position are sales occupations at 6.5 percent; followed by production occupations at 5.6 percent, installation, maintenance, and repair occupations at 5.2 percent, and farming, fishing, and forestry occupations at 0.1 percent of the labor demanded in 2011.

Occupation Code	Total Impacts Live Oak County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	714	25.1%
43-0000	Office and administrative support occupations	451	15.8%
11-1300	Management, business, and financial occupations	350	12.3%
53-0000	Transportation and material moving occupations	311	10.9%
31-3900	Service occupations	290	10.2%
15-2900	Professional and related occupations	236	8.3%
41-0000	Sales and related occupations	184	6.5%
51-0000	Production occupations	160	5.6%
49-0000	Installation, maintenance, and repair occupations	149	5.2%
45-0000	Farming, fishing, and forestry occupations	3	0.1%
	Total	2,848	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Total occupational impact projections for 2021 within Live Oak County are shown below. Office and administrative occupations rank first at 18.3 percent; followed by service occupations at 14.6 percent, management, business, and financial occupations at 13.7 percent, and professional occupations at 12.4 percent.

Ranking fifth are transportation and material moving occupations at 11.4 percent; followed by production occupations at 8 percent, sales occupations also at 8 percent, and construction and extraction occupations at 7.9 percent. Finally installation, maintenance, and repair occupations are at 5.6 percent and farming, fishing, forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Live Oak County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,058	18.3%
31-3900	Service occupations	840	14.6%
11-1300	Management, business, and financial occupations	787	13.7%
15-2900	Professional and related occupations	715	12.4%
53-0000	Transportation and material moving occupations	659	11.4%
51-0000	Production occupations	462	8.0%
41-0000	Sales and related occupations	460	8.0%
47-0000	Construction and extraction occupations	456	7.9%
49-0000	Installation, maintenance, and repair occupations	321	5.6%
45-0000	Farming, fishing, and forestry occupations	8	0.1%
	Total	5,763	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Live Oak Direct and Indirect Impacts

The table below shows the occupational demand within Live Oak County in 2010¹⁴. The top three are fairly evenly distributed with service occupations at 16.2 percent, management, business, and financial occupations at 16 percent, office and administrative support occupations at 15.7 percent, and professional occupations at 12.3 percent. Following are farming, fishing, and forestry occupations at 9 percent, transportation and material moving occupations at 8.2 percent, sales occupations at 7.9 percent, and constructions and extraction occupations at 6.1 percent. Installation, maintenance, and repair occupations rank ninth at 4.3 percent, preceding production occupations at 4.2 percent.

Occupation Code	Live Oak County 10-Occupational Categories	Employment	Percentage
31-3900	Service occupations	896	16.2%
11-1300	Management, business, and financial occupations	884	16.0%
43-0000	Office and administrative support occupations	869	15.7%
15-2900	Professional and related occupations	679	12.3%
45-0000	Farming, fishing, and forestry occupations	498	9.0%
53-0000	Transportation and material moving occupations	454	8.2%
41-0000	Sales and related occupations	438	7.9%
47-0000	Construction and extraction occupations	339	6.1%
49-0000	Installation, maintenance, and repair occupations	240	4.3%
51-0000	Production occupations	232	4.2%
	Total	5,529	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Live Oak County education and training distributions are show below. First on the list is short-term on-the-job training at 31 percent, followed by work experience in a related field at 17.7 percent, moderate-term on-the-job training at 16.4 percent, occupations requiring bachelor's degrees at 11.4 percent and bachelor's or higher degree, plus work experience at 7.9 percent. Long-term on-the-job training ranked sixth at 6.8 percent, followed by postsecondary vocational awards at 3.6 percent and occupations requiring an Associate's degree at 2.8 percent. In the ninth position were master's degrees at 1.2 percent, followed by first professional degrees at 1 percent, and doctoral degrees at 0.3 percent.

¹⁴ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 5,466.

Live Oak County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
1,712	Short-term on-the-job training	31.0%
976	Work experience in a related occupation	17.7%
905	Moderate-term on-the-job training	16.4%
632	Bachelor's degree	11.4%
435	Bachelor's or higher degree, plus work experience	7.9%
378	Long-term on-the-job training	6.8%
197	Postsecondary vocational award	3.6%
157	Associate degree	2.8%
65	Master's degree	1.2%
57	First professional degree	1.0%
15	Doctoral degree	0.3%
5,529	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts on occupations are illustrated in the table below. Construction and extraction occupations (31.4 percent) moved to the first position showing a 25.3 percentage point increase; followed by office and administrative support occupations (15.3 percent), which ranked second, but decreased by 0.4 percentage point relative to the 2010 figure. Management, business, and financial operations (13 percent) move to the third position decreasing by 3 percentage points, preceding transportation and material moving occupations (12.4 percent) showing an increase of 4.2 percentage points.

Professional occupations (7.2 percent) are next decreasing by 5.1 percentage points, followed by production occupations (6.6 percent), increasing by 2.4 percentage points, followed by installation, maintenance, and repair occupations (5.6 percent), which increased by 1.3 percent. The most impacted, service occupations (4.7 percent) moved from first to the eighth position, decreasing by 11.5 percentage points; followed by sales occupations (3.6 percent), decreasing by 4.3 percentage points and farming, fishing, and forestry occupations (less than 1 percent), decreasing by 9 percentage points.

Occupation Code	Direct Plus Indirect Impacts Live Oak County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	710	31.4%
43-0000	Office and administrative support occupations	346	15.3%
11-1300	Management, business, and financial occupations	295	13.0%
53-0000	Transportation and material moving occupations	280	12.4%
15-2900	Professional and related occupations	163	7.2%
51-0000	Production occupations	148	6.6%
49-0000	Installation, maintenance, and repair occupations	128	5.6%
31-3900	Service occupations	107	4.7%
41-0000	Sales and related occupations	82	3.6%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	2,260	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on education and training distribution in 2011 are shown below. Moderate-term on-the-job training (28.3 percent) moved to the forefront showing an 11.9 percentage point increase; followed by short-term on-the-job training (23.2 percent), decreasing by 7.8 percentage points, long-term on-the-job training (15.3 percent), showing an 8.5 percentage point increase, and work experience in a related field (11.9 percent), decreasing by 5.8 percentage points. Occupations requiring a bachelor's degree (11 percent) and bachelor's or higher degree, plus work experience (4.6 percent), decreased by 0.4 and 3.3 percentage points, respectively.

In the seventh position are postsecondary vocational awards (2.3 percent), decreasing by 1.3 percentage points, followed by Associate degrees (2 percent), decreasing by 0.8 percentage points, and first professional degrees remaining at 1 percent. Last are occupations requiring a master's degree (0.4 percent), decreasing by 0.8 percentage points and doctoral degrees (less than 1 percent), decreasing by 0.3 percentage points.

Direct Plus Indirect Impacts Live Oak County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
639	Moderate-term on-the-job training	28.3%
524	Short-term on-the-job training	23.2%
345	Long-term on-the-job training	15.3%
269	Work experience in a related occupation	11.9%
248	Bachelor's degree	11.0%
104	Bachelor's or higher degree, plus work experience	4.6%
53	Postsecondary vocational award	2.3%
46	Associate degree	2.0%
22	First professional degree	1.0%
10	Master's degree	0.4%
0	Doctoral degree	0.0%
2,260	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projected Eagle Ford occupational impacts on the occupational distribution for 2021 within Live Oak County are depicted in the table below. Office and administrative occupations (18.6 percent) are projected to move to the forefront increasing by 3.3 percentage points. Followed by management, business, and financial occupations (15.2 percent), increasing by 2.2 percentage points, transportation and material moving occupations (13.6 percent), increasing by 1.2 percentage points, professional occupations (12.4 percent), increasing by 5.2 percentage points and construction and extraction occupations (10.5 percent) decreasing substantially by 20.9 percentage points relative to the 2011 figure.

In the sixth position are production occupations (10.2 percent) showing a 3.6 percentage point increase; followed by service occupations (8.5 percent), increasing by 3.8 percentage points, and installation, maintenance, and repair occupations (6.3 percent), increasing by 0.7 percentage points. The last two positions are sales occupations (4.8 percent) projected to show a 1.2 percentage point increase and farming, fishing, and forestry occupations (0.1 percent), showing a 0.1 percentage point increase.

Occupation Code	Direct Plus Indirect Impacts Live Oak County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	791	18.6%
11-1300	Management, business, and financial occupations	645	15.2%
53-0000	Transportation and material moving occupations	577	13.6%
15-2900	Professional and related occupations	527	12.4%
47-0000	Construction and extraction occupations	445	10.5%
51-0000	Production occupations	433	10.2%
31-3900	Service occupations	363	8.5%
49-0000	Installation, maintenance, and repair occupations	266	6.3%
41-0000	Sales and related occupations	203	4.8%
45-0000	Farming, fishing, and forestry occupations	3	0.1%
	Total	4,252	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford development impacts on the distribution of education and training in 2021 within Live Oak County are shown below. Short-term on-the-job training (27.2 percent) is projected to move to the first position, increasing by 4 percentage points. Following is moderate-term on-the-job training (24.6 percent) showing a 3.7 percentage point decrease, bachelor's degrees, (13.1 percent) showing a 2.1 percentage point increase, work experience in a related field, (10.7 percent) decreasing by 1.2 percentage point and long-term on-the-job training (9.7 percent) showing a 5.6 percentage point decrease.

In the sixth position are occupations requiring a bachelor's or higher degree, plus work experience (6.1 percent) showing an increase of 1.5 percent, followed by Associate degrees (3.5 percent) increasing by 1.5 percentage point, postsecondary vocational awards (2.4 percent) increasing by 0.1 percentage point, and master's degrees (1.5 percent) increasing by 0.9 percentage point. First professional degrees ranked tenth (1.2 percent), increasing by 0.2 percent and preceded doctoral degrees remaining at less than 1 percent.

	Direct Plus Indirect Impacts Live Oak County Educational Structure, 2021	
Occupational Impact	Educational Attainment	Percentage
1,157	Short-term on-the-job training	27.2%
1,047	Moderate-term on-the-job training	24.6%
557	Bachelor's degree	13.1%
457	Work experience in a related occupation	10.7%
412	Long-term on-the-job training	9.7%
260	Bachelor's or higher degree, plus work experience	6.1%
148	Associate degree	3.5%
103	Postsecondary vocational award	2.4%
57	Master's degree	1.4%
53	First professional degree	1.2%
2	Doctoral degree	0.0%
4,252	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Live Oak Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Live Oak County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	2,260	100.0%
1	47-2031	Carpenters	175	7.7%
2	47-2061	Construction laborers	145	6.4%
3	53-3032	Truck drivers, heavy and tractor-trailer	111	4.9%
4	47-1011	First-line supervisors/managers of construction trades and extraction workers	106	4.7%
5	47-2073	Operating engineers and other construction equipment operators	65	2.9%
6	43-9061	Office clerks, general	55	2.4%
7	11-9021	Construction managers	52	2.3%
8	43-3031	Bookkeeping, accounting, and auditing clerks	49	2.2%
9	11-1021	General and operations managers	48	2.1%
10	53-7062	Laborers and freight, stock, and material movers, hand	40	1.8%
11	43-6011	Executive secretaries and administrative assistants	39	1.7%
12	13-2011	Accountants and auditors	39	1.7%
13	43-6014	Secretaries, except legal, medical, and executive	37	1.7%
14	53-7032	Excavating and loading machine and dragline operators	37	1.6%
15	49-9042	Maintenance and repair workers, general	33	1.5%
16	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	28	1.3%
17	51-8093	Petroleum pump system operators, refinery operators, and gaugers	24	1.1%
18	13-1051	Cost estimators	24	1.1%
19	43-4051	Customer service representatives	21	0.9%
20	23-1011	Lawyers	21	0.9%
21	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	21	0.9%
22	43-1011	First-line supervisors/managers of office and administrative support workers	21	0.9%
23	47-2051	Cement masons and concrete finishers	20	0.9%
24	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	20	0.9%
25	47-3012	Helpers Carpenters	18	0.8%
26	53-7051	Industrial truck and tractor operators	18	0.8%
27	49-3042	Mobile heavy equipment mechanics, except engines	18	0.8%
28	47-2152	Plumbers, pipefitters, and steamfitters	17	0.8%
29	17-2051	Civil engineers	17	0.8%
30	51-4121	Welders, cutters, solderers, and brazers	17	0.7%
31	47-2111	Electricians	17	0.7%
32	43-4171	Receptionists and information clerks	16	0.7%
33	47-2221	Structural iron and steel workers	15	0.7%
34	13-1199	Business operation specialists, all other	15	0.7%
35	37-3011	Landscaping and groundskeeping workers	15	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts Live Oak County		
		Top 35 Occupations Impacted in 2011		Occupational Impact Percentage
		Total	2,848	100.0%
1	47-2031	Carpenters	176	6.2%
2	47-2061	Construction laborers	146	5.1%
3	53-3032	Truck drivers, heavy and tractor-trailer	116	4.1%
4	47-1011	First-line supervisors/managers of construction trades and extraction workers	106	3.7%
5	43-9061	Office clerks, general	68	2.4%
6	47-2073	Operating engineers and other construction equipment operators	65	2.3%
7	43-3031	Bookkeeping, accounting, and auditing clerks	58	2.0%
8	11-1021	General and operations managers	56	2.0%
9	11-9021	Construction managers	52	1.8%
10	41-2031	Retail salespersons	50	1.7%
11	53-7062	Laborers and freight, stock, and material movers, hand	47	1.7%
12	43-6011	Executive secretaries and administrative assistants	46	1.6%
13	41-2011	Cashiers, except gaming	44	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	44	1.5%
15	13-2011	Accountants and auditors	43	1.5%
16	49-9042	Maintenance and repair workers, general	37	1.3%
17	53-7032	Excavating and loading machine and dragline operators	37	1.3%
18	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	36	1.3%
19	43-4051	Customer service representatives	34	1.2%
20	35-3021	Combined food preparation and serving workers, including fast food	30	1.1%
21	35-3031	Waiters and waitresses	30	1.1%
22	43-1011	First-line supervisors/managers of office and administrative support workers	27	1.0%
23	51-8093	Petroleum pump system operators, refinery operators, and gaugers	24	0.9%
24	13-1051	Cost estimators	24	0.9%
25	23-1011	Lawyers	24	0.8%
26	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	22	0.8%
27	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	21	0.7%
28	43-4171	Receptionists and information clerks	21	0.7%
29	47-2051	Cement masons and concrete finishers	20	0.7%
30	37-3011	Landscaping and groundskeeping workers	19	0.7%
31	53-7051	Industrial truck and tractor operators	19	0.7%
32	13-1199	Business operation specialists, all other	19	0.7%
33	47-3012	HelpersùCarpenters	18	0.6%
34	49-3042	Mobile heavy equipment mechanics, except engines	18	0.6%
35	47-2152	Plumbers, pipefitters, and steamfitters	18	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Live Oak Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Live Oak County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	4,252	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	202	4.7%
2	51-8093	Petroleum pump system operators, refinery operators, and gaugers	153	3.6%
3	13-2011	Accountants and auditors	123	2.9%
4	43-9061	Office clerks, general	120	2.8%
5	43-3031	Bookkeeping, accounting, and auditing clerks	113	2.7%
6	11-1021	General and operations managers	104	2.4%
7	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	85	2.0%
8	43-6011	Executive secretaries and administrative assistants	85	2.0%
9	43-6014	Secretaries, except legal, medical, and executive	80	1.9%
10	53-7062	Laborers and freight, stock, and material movers, hand	78	1.8%
11	47-2073	Operating engineers and other construction equipment operators	75	1.8%
12	49-9042	Maintenance and repair workers, general	68	1.6%
13	17-2171	Petroleum engineers	65	1.5%
14	53-7073	Wellhead pumpers	62	1.5%
15	47-1011	First-line supervisors/managers of construction trades and extraction workers	59	1.4%
16	43-4051	Customer service representatives	59	1.4%
17	47-2061	Construction laborers	53	1.3%
18	23-1011	Lawyers	51	1.2%
19	53-7032	Excavating and loading machine and dragline operators	49	1.2%
20	51-1011	First-line supervisors/managers of production and operating workers	48	1.1%
21	37-3011	Landscaping and groundskeeping workers	48	1.1%
22	43-1011	First-line supervisors/managers of office and administrative support workers	46	1.1%
23	47-5071	Roustabouts, oil and gas	46	1.1%
24	19-2042	Geoscientists, except hydrologists and geographers	46	1.1%
25	13-1199	Business operation specialists, all other	44	1.0%
26	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	40	0.9%
27	47-2031	Carpenters	39	0.9%
28	49-9041	Industrial machinery mechanics	37	0.9%
29	35-3031	Waiters and waitresses	37	0.9%
30	11-3031	Financial managers	36	0.8%
31	19-4041	Geological and petroleum technicians	35	0.8%
32	13-1111	Management analysts	34	0.8%
33	35-3021	Combined food preparation and serving workers, including fast food	34	0.8%
34	53-7051	Industrial truck and tractor operators	33	0.8%
35	43-4171	Receptionists and information clerks	31	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation Code		Total Impacts Live Oak County Top 35 Occupations Impacted in 2021		Occupational Impact	Percentage
Ranking					
		Total		5,763	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer		216	3.7%
2	43-9061	Office clerks, general		154	2.7%
3	51-8093	Petroleum pump system operators, refinery operators, and gaugers		153	2.6%
4	13-2011	Accountants and auditors		136	2.4%
5	43-3031	Bookkeeping, accounting, and auditing clerks		135	2.3%
6	41-2031	Retail salespersons		124	2.2%
7	11-1021	General and operations managers		124	2.2%
8	41-2011	Cashiers, except gaming		113	2.0%
9	37-2011	Janitors and cleaners, except maids and housekeeping cleaners		105	1.8%
10	43-6011	Executive secretaries and administrative assistants		101	1.8%
11	43-6014	Secretaries, except legal, medical, and executive		96	1.7%
12	53-7062	Laborers and freight, stock, and material movers, hand		96	1.7%
13	43-4051	Customer service representatives		92	1.6%
14	35-3031	Waiters and waitresses		90	1.6%
15	35-3021	Combined food preparation and serving workers, including fast food		89	1.6%
16	49-9042	Maintenance and repair workers, general		79	1.4%
17	47-2073	Operating engineers and other construction equipment operators		76	1.3%
18	17-2171	Petroleum engineers		65	1.1%
19	43-1011	First-line supervisors/managers of office and administrative support workers		63	1.1%
20	53-7073	Wellhead pumpers		62	1.1%
21	47-1011	First-line supervisors/managers of construction trades and extraction workers		60	1.0%
22	37-3011	Landscaping and groundskeeping workers		59	1.0%
23	23-1011	Lawyers		58	1.0%
24	47-2061	Construction laborers		56	1.0%
25	13-1199	Business operation specialists, all other		53	0.9%
26	51-1011	First-line supervisors/managers of production and operating workers		50	0.9%
27	53-7032	Excavating and loading machine and dragline operators		49	0.9%
28	47-5071	Roustabouts, oil and gas		46	0.8%
29	19-2042	Geoscientists, except hydrologists and geographers		46	0.8%
30	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		46	0.8%
31	43-4171	Receptionists and information clerks		44	0.8%
32	11-3031	Financial managers		43	0.8%
33	47-2031	Carpenters		42	0.7%
34	13-2072	Loan officers		42	0.7%
35	43-5081	Stock clerks and order fillers		41	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Maverick County



The following tables explain the estimated direct, indirect, and induced impacts within Maverick County for 2011 and 2021. Maverick County data shows an estimated total of 478 jobs impacted in 2011, with the largest impact on induced employment.

Estimated Impact 2011				
Maverick County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	168	127	182	478

Maverick County is projected to see 697 jobs impacted by Eagle Ford Shale in 2021, with the largest impact on induced employment.

Estimated Impact 2021				
Maverick County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	181	245	270	697

The following table details the total occupational impacts within Maverick County in 2011. At the top of the list are office and administrative occupations at 18.4 percent; followed by construction and extraction occupations at 15 percent, professional occupations at 13.5 percent, transportation and material moving occupations at 11.9 percent, and service occupations at 11.7 percent. In the sixth position are management, business, and financial occupations at 10.4 percent; followed by sales occupations at 9.1 percent, installation, maintenance, and repair occupations at 5.1 percent, production occupations at 4.9 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Maverick County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	88	18.4%
47-0000	Construction and extraction occupations	71	15.0%
15-2900	Professional and related occupations	64	13.5%
53-0000	Transportation and material moving occupations	57	11.9%
31-3900	Service occupations	56	11.7%
11-1300	Management, business, and financial occupations	50	10.4%
41-0000	Sales and related occupations	44	9.1%
49-0000	Installation, maintenance, and repair occupations	24	5.1%
51-0000	Production occupations	23	4.9%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	478	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Below are the projected Eagle Ford Shale total occupational impacts for 2021. In the first position are office and administrative occupations at 18.3 percent, transportation and material moving occupations at 13.6 percent, professional occupations at 13.3 percent, service occupations at 12.1 percent, and construction and extraction occupations at 11.9 percent. In the sixth position are management, business, and financial occupations at 10.6 percent; followed by sales occupations at 10 percent, production occupations at 5 percent, installation, maintenance, and repair occupations at 5 percent, and farming, fishing, and forestry occupations projected at 0.2 percent of the labor demanded.

Occupation Code	Total Impacts Maverick County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	128	18.3%
53-0000	Transportation and material moving occupations	94	13.6%
15-2900	Professional and related occupations	93	13.3%
31-3900	Service occupations	84	12.1%
47-0000	Construction and extraction occupations	83	11.9%
11-1300	Management, business, and financial occupations	74	10.6%
41-0000	Sales and related occupations	70	10.0%
51-0000	Production occupations	35	5.0%
49-0000	Installation, maintenance, and repair occupations	35	5.0%
45-0000	Farming, fishing, and forestry occupations	1	0.2%
	Total	697	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Maverick Direct and Indirect Impacts

The table below details the occupational composition of Maverick County in 2010¹⁵. At the top of the list demanding 23.8 percent of the labor are service occupations; followed by professional occupations at 19 percent, office and administrative occupations at 16.4 percent, management, business, and financial occupations at 11.7 percent, and in the fifth position, sales occupations at 10 percent of the labor demanded in 2010.

Sixth are transportation and material moving occupations at 7.5 percent, followed by construction and extraction occupations at 4.2 percent, installation, maintenance, and repair occupations at 3.1 percent, production occupations at 2.8 percent, and farming, fishing and forestry occupations at 1.5 percent.

Occupation Code	Maverick County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	5,159	23.8%
15-2900	Professional and related occupations	4,116	19.0%
43-0000	Office and administrative support occupations	3,564	16.4%
11-1300	Management, business, and financial occupations	2,530	11.7%
41-0000	Sales and related occupations	2,160	10.0%
53-0000	Transportation and material moving occupations	1,619	7.5%
47-0000	Construction and extraction occupations	919	4.2%
49-0000	Installation, maintenance, and repair occupations	679	3.1%
51-0000	Production occupations	604	2.8%
45-0000	Farming, fishing, and forestry occupations	319	1.5%
	Total	21,671	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

In 2010 short-term on-the-job training was most relevant to industry in the county, at 39 percent; followed by moderate-term on-the-job training at 15.7 percent, bachelor's degrees at 10.9 percent, work experience in a related field at 9.7 percent, Associate degrees at 5.6 percent. Long-term on-the-job training is at 5.4 percent, postsecondary vocational awards seventh at 5.2 percent and bachelor's or higher degree, plus work experience eighth at 4.6 percent. Master's degrees are next at 2.2 percent, followed by first professional degrees at 1.4 percent and doctoral degrees at 0.3 percent.

¹⁵ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 22,163.

Maverick County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
8,457	Short-term on-the-job training	39.0%
3,407	Moderate-term on-the-job training	15.7%
2,372	Bachelor's degree	10.9%
2,102	Work experience in a related occupation	9.7%
1,210	Associate degree	5.6%
1,161	Long-term on-the-job training	5.4%
1,133	Postsecondary vocational award	5.2%
988	Bachelor's or higher degree, plus work experience	4.6%
476	Master's degree	2.2%
300	First professional degree	1.4%
66	Doctoral degree	0.3%
21,671	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Detailed below are the occupational impacts of Eagle Ford in 2011 within Maverick County. Moving to the first position are construction and extraction occupations (23.8 percent) showing a 19.6 percentage point increase; followed by office and administrative occupations (17.3 percent), moving to the second position and increasing by 0.9 percentage point, transportation and material moving occupations (16.2 percent), increasing by 8.7 percentage points, management, business, and financial occupations (11.4 percent), decreasing by 0.3 percentage point, and fifth professional occupations (10.4 percent) showing a 8.6 percentage point decrease.

Production occupations (6.6 percent) move to the sixth position showing a 3.8 percentage point increase; followed by installation, maintenance, and repair occupations (6.1 percent), increasing by 3 percentage points, sales occupations, (4.4 percent) decreasing by 5.6 percentage points. The last two on the list are service occupations (3.9 percent), which dropped significantly in relevance, moving to the ninth position and decreasing by 19.9 percentage points; last are farming, fishing, and forestry occupations showing a 1.4 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Maverick County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	70	23.8%
43-0000	Office and administrative support occupations	51	17.3%
53-0000	Transportation and material moving occupations	48	16.2%
11-1300	Management, business, and financial occupations	34	11.4%
15-2900	Professional and related occupations	31	10.4%
51-0000	Production occupations	19	6.6%
49-0000	Installation, maintenance, and repair occupations	18	6.1%
41-0000	Sales and related occupations	13	4.4%
31-3900	Service occupations	11	3.9%
45-0000	Farming, fishing, and forestry occupations	0	0.1%
	Total	295	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on education and training disbursement in 2011 are shown in the table below. Moderate-term on-the-job (29.8 percent) moves to the first position, increasing by 14.1 percentage points; followed by short-term on-the-job training (26.1 percent), decreasing by 12.9 percentage points, bachelor's degrees remaining at 10.9 percent, work experience in a related field (10.9 percent), increasing by 1.2 percentage point, and long-term on-the-job training (9.8 percent), increasing by 4.4 percentage points.

In the sixth position are bachelor's or higher degree, plus work experience (4.1 percent) showing a 0.5 percentage point decrease; followed by Associate degrees (3.3 percent), decreasing by 2.3 percentage points, postsecondary vocational awards (2.8 percent), decreasing by 2.4 percent, and first professional degrees (1.8 percent) showing a 0.4 percentage point increase. Last are master's degrees (0.3 percent), decreasing by 1.9 percentage point, and doctoral degrees (less than 1 percent) showing a 0.3 percentage point decrease.

Direct Plus Indirect Impacts Maverick County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
88	Moderate-term on-the-job training	29.8%
77	Short-term on-the-job training	26.1%
32	Bachelor's degree	10.9%
32	Work experience in a related occupation	10.9%
29	Long-term on-the-job training	9.8%
12	Bachelor's or higher degree, plus work experience	4.1%
10	Associate degree	3.3%
8	Postsecondary vocational award	2.8%
5	First professional degree	1.8%
1	Master's degree	0.3%
0	Doctoral degree	0.0%
295	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projected Eagle Ford development impacts for 2021 within Maverick County are shown below. Construction and extraction occupations (18.9 percent) are projected to remain in the first position but decrease by 4.9 percentage points; followed by office and administrative occupations (18.6 percent), increasing by 1.3 percentage point, transportation and material moving occupations (18.3 percent), increasing by 2.1 percentage points, and management, business, and financial occupations (12.3 percent), increasing by 0.9 percentage point.

Professional occupations remain at 10.4 percent but are projected to move to the fifth position; followed by production occupations (7.1 percent), increasing by 0.5 percentage point, installation, maintenance, and repair occupations (6 percent), decreasing by 0.1 percentage point, sales occupations (5.1 percent), increasing by 0.7 percentage point, service occupations (3.4 percent), decreasing by 0.5 percentage point, and farming, fishing, and forestry occupations (0.1 percent).

Occupation Code	Direct Plus Indirect Impacts Maverick County 10-Occupational Categories, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	80	18.9%
43-0000	Office and administrative support occupations	79	18.6%
53-0000	Transportation and material moving occupations	78	18.3%
11-1300	Management, business, and financial occupations	52	12.3%
15-2900	Professional and related occupations	44	10.4%
51-0000	Production occupations	30	7.1%
49-0000	Installation, maintenance, and repair occupations	26	6.0%
41-0000	Sales and related occupations	22	5.1%
31-3900	Service occupations	14	3.4%
45-0000	Farming, fishing, and forestry occupations	0	0.1%
	Total	426	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

In the table below are 2021 projections of Eagle Ford development impacts on education and training requirements within Maverick County. Projected to remain in the first position is moderate-term on-the-job training (29.3 percent) showing a decrease of 0.5 percentage point; followed by short-term on-the-job training (27.1 percent), increasing by 0.9 percentage point, work experience in a related field (11 percent), increasing by 0.1 percent, bachelor's degrees (9.8 percent), decreasing by 1.1 percentage point, and long-term on-the-job training (8.9 percent) showing a 0.9 percentage point decrease.

Remaining in the sixth position is bachelor's degree, plus work experience (4.7 percent) showing a 0.6 percentage point increase; followed by occupations requiring Associate degrees (3.8 percent), increasing by 0.5 percentage point, postsecondary vocational awards (2.4 percent), decreasing by 0.4 percentage point, and first professional degrees (2.2 percent) showing a 0.4 percentage point increase. Master's degrees (0.8 percent) remain tenth, increasing by 0.5 percentage point, and last doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Maverick County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
125	Moderate-term on-the-job training	29.3%
115	Short-term on-the-job training	27.1%
47	Work experience in a related occupation	11.0%
42	Bachelor's degree	9.8%
38	Long-term on-the-job training	8.9%
20	Bachelor's or higher degree, plus work experience	4.7%
16	Associate degree	3.8%
10	Postsecondary vocational award	2.4%
9	First professional degree	2.2%
3	Master's degree	0.8%
0	Doctoral degree	0.0%
426	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Maverick Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Maverick County	Occupational Impact	Percentage
		Top 35 Occupations Impacted in 2011		
		Total	295	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	20	6.7%
2	47-2031	Carpenters	13	4.5%
3	47-2061	Construction laborers	12	4.2%
4	47-2073	Operating engineers and other construction equipment operators	11	3.6%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	10	3.3%
6	43-9061	Office clerks, general	8	2.6%
7	53-7032	Excavating and loading machine and dragline operators	7	2.4%
8	43-3031	Bookkeeping, accounting, and auditing clerks	6	2.1%
9	53-7062	Laborers and freight, stock, and material movers, hand	6	2.0%
10	11-1021	General and operations managers	6	1.9%
11	23-1011	Lawyers	5	1.8%
12	13-2011	Accountants and auditors	5	1.7%
13	49-9042	Maintenance and repair workers, general	5	1.7%
14	43-6014	Secretaries, except legal, medical, and executive	5	1.6%
15	43-6011	Executive secretaries and administrative assistants	5	1.6%
16	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	4	1.4%
17	11-9021	Construction managers	4	1.4%
18	43-6012	Legal secretaries	3	1.1%
19	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	1.1%
20	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	3	1.1%
21	43-4051	Customer service representatives	3	1.1%
22	53-7051	Industrial truck and tractor operators	3	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	3	1.0%
24	17-2051	Civil engineers	3	1.0%
25	49-3042	Mobile heavy equipment mechanics, except engines	3	0.9%
26	47-5051	Rock splitters, quarry	3	0.9%
27	23-2011	Paralegals and legal assistants	2	0.8%
28	47-5041	Continuous mining machine operators	2	0.8%
29	43-4171	Receptionists and information clerks	2	0.8%
30	51-4121	Welders, cutters, solderers, and brazers	2	0.7%
31	47-5042	Mine cutting and channeling machine operators	2	0.7%
32	41-2031	Retail salespersons	2	0.7%
33	53-3033	Truck drivers, light or delivery services	2	0.7%
34	13-1051	Cost estimators	2	0.7%
35	13-2072	Loan officers	2	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation Code		Total Impacts Maverick County Top 35 Occupations Impacted in 2011		Occupational Impact	Percentage
Ranking					
		Total		478	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer		21	4.4%
2	41-2031	Retail salespersons		14	2.9%
3	47-2031	Carpenters		14	2.9%
4	47-2061	Construction laborers		13	2.7%
5	43-9061	Office clerks, general		12	2.6%
6	47-2073	Operating engineers and other construction equipment operators		11	2.2%
7	41-2011	Cashiers, except gaming		11	2.2%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers		10	2.1%
9	43-3031	Bookkeeping, accounting, and auditing clerks		9	1.9%
10	29-1111	Registered nurses		8	1.7%
11	53-7062	Laborers and freight, stock, and material movers, hand		8	1.7%
12	11-1021	General and operations managers		8	1.6%
13	43-6014	Secretaries, except legal, medical, and executive		7	1.5%
14	53-7032	Excavating and loading machine and dragline operators		7	1.5%
15	49-9042	Maintenance and repair workers, general		7	1.4%
16	43-6011	Executive secretaries and administrative assistants		7	1.4%
17	13-2011	Accountants and auditors		7	1.4%
18	43-4051	Customer service representatives		7	1.4%
19	23-1011	Lawyers		6	1.3%
20	37-2011	Janitors and cleaners, except maids and housekeeping cleaners		6	1.2%
21	43-1011	First-line supervisors/managers of office and administrative support workers		5	1.1%
22	43-4171	Receptionists and information clerks		5	1.0%
23	35-3021	Combined food preparation and serving workers, including fast food		5	1.0%
24	43-5081	Stock clerks and order fillers		5	1.0%
25	31-1012	Nursing aides, orderlies, and attendants		5	0.9%
26	35-3031	Waiters and waitresses		4	0.9%
27	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		4	0.9%
28	11-9021	Construction managers		4	0.9%
29	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders		4	0.9%
30	43-6012	Legal secretaries		4	0.8%
31	13-2072	Loan officers		4	0.8%
32	41-1011	First-line supervisors/managers of retail sales workers		3	0.7%
33	53-7051	Industrial truck and tractor operators		3	0.7%
34	37-2012	Maids and housekeeping cleaners		3	0.7%
35	41-3031	Securities, commodities, and financial services sales agents		3	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Maverick Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Maverick County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	426	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	30	7.1%
2	47-2031	Carpenters	13	3.1%
3	47-2073	Operating engineers and other construction equipment operators	13	3.0%
4	47-2061	Construction laborers	13	3.0%
5	43-9061	Office clerks, general	11	2.7%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	11	2.6%
7	43-3031	Bookkeeping, accounting, and auditing clerks	10	2.3%
8	11-1021	General and operations managers	9	2.2%
9	23-1011	Lawyers	9	2.1%
10	53-7062	Laborers and freight, stock, and material movers, hand	9	2.1%
11	53-7032	Excavating and loading machine and dragline operators	8	2.0%
12	13-2011	Accountants and auditors	8	2.0%
13	43-6014	Secretaries, except legal, medical, and executive	7	1.7%
14	43-6011	Executive secretaries and administrative assistants	7	1.6%
15	49-9042	Maintenance and repair workers, general	7	1.6%
16	43-6012	Legal secretaries	6	1.3%
17	43-4051	Customer service representatives	5	1.3%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	5	1.2%
19	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	5	1.2%
20	43-1011	First-line supervisors/managers of office and administrative support workers	5	1.1%
21	53-7051	Industrial truck and tractor operators	4	1.0%
22	23-2011	Paralegals and legal assistants	4	1.0%
23	11-9021	Construction managers	4	0.9%
24	41-2031	Retail salespersons	4	0.9%
25	13-2072	Loan officers	4	0.9%
26	51-8093	Petroleum pump system operators, refinery operators, and gaugers	4	0.9%
27	53-7073	Wellhead pumpers	4	0.9%
28	17-2171	Petroleum engineers	4	0.9%
29	49-3042	Mobile heavy equipment mechanics, except engines	4	0.8%
30	53-3033	Truck drivers, light or delivery services	3	0.8%
31	43-4171	Receptionists and information clerks	3	0.8%
32	47-5051	Rock splitters, quarry	3	0.7%
33	51-1011	First-line supervisors/managers of production and operating workers	3	0.7%
34	13-1199	Business operation specialists, all other	3	0.7%
35	47-5041	Continuous mining machine operators	3	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Maverick County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	697	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	33	4.7%
2	41-2031	Retail salespersons	25	3.6%
3	43-9061	Office clerks, general	17	2.5%
4	41-2011	Cashiers, except gaming	16	2.2%
5	47-2031	Carpenters	14	2.0%
6	43-3031	Bookkeeping, accounting, and auditing clerks	14	2.0%
7	47-2061	Construction laborers	13	1.9%
8	47-2073	Operating engineers and other construction equipment operators	13	1.8%
9	11-1021	General and operations managers	12	1.8%
10	53-7062	Laborers and freight, stock, and material movers, hand	12	1.7%
11	47-1011	First-line supervisors/managers of construction trades and extraction workers	11	1.6%
12	29-1111	Registered nurses	11	1.6%
13	43-4051	Customer service representatives	11	1.5%
14	43-6014	Secretaries, except legal, medical, and executive	11	1.5%
15	23-1011	Lawyers	10	1.5%
16	13-2011	Accountants and auditors	10	1.5%
17	43-6011	Executive secretaries and administrative assistants	10	1.4%
18	49-9042	Maintenance and repair workers, general	9	1.3%
19	53-7032	Excavating and loading machine and dragline operators	9	1.2%
20	31-1011	Home health aides	8	1.1%
21	39-9021	Personal and home care aides	8	1.1%
22	43-1011	First-line supervisors/managers of office and administrative support workers	8	1.1%
23	35-3021	Combined food preparation and serving workers, including fast food	7	1.1%
24	35-3031	Waiters and waitresses	7	1.1%
25	43-5081	Stock clerks and order fillers	7	1.0%
26	13-2072	Loan officers	7	1.0%
27	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	7	1.0%
28	43-6012	Legal secretaries	6	0.9%
29	41-1011	First-line supervisors/managers of retail sales workers	6	0.9%
30	43-4171	Receptionists and information clerks	6	0.8%
31	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	5	0.7%
32	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	5	0.7%
33	31-1012	Nursing aides, orderlies, and attendants	5	0.7%
34	53-3033	Truck drivers, light or delivery services	5	0.7%
35	53-7051	Industrial truck and tractor operators	5	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

McMullen County



The tables below explain the estimated direct, indirect, and induced impacts within McMullen County for 2011 and 2021. McMullen County data shows an estimated 1,932 jobs supported by Eagle Ford Shale in 2011, with direct employment being the most impacted.

Estimated Impact 2011				
McMullen County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,335	277	320	1,932

Within McMullen County there is projected to be a total of 3,286 jobs supported by Eagle Ford Shale in 2021, with the largest impact on direct employment.

Estimated Impact 2021				
McMullen County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,065	502	720	3,286

The following table details the total occupational impacts within McMullen County in 2011. It shows construction and extraction occupations at 26.1 percent of the labor demanded; followed by transportation and material moving occupations at 16.1 percent, office and administrative support occupations at 13.8 percent, service occupations at 9.9 percent, and professional occupations at 9 percent. Next on the list are management, business, and financial occupations at 8.8 percent, production occupations at 7.6 percent, installation, maintenance, and repair occupations at 6.1 percent, sales occupations at 2.6 percent, and farming, fishing, and forestry occupations at less than 1 percent.

Occupation Code	Total Impacts McMullen County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	504	26.1%
53-0000	Transportation and material moving occupations	310	16.1%
43-0000	Office and administrative support occupations	266	13.8%
31-3900	Service occupations	191	9.9%
15-2900	Professional and related occupations	175	9.0%
11-1300	Management, business, and financial occupations	170	8.8%
51-0000	Production occupations	146	7.6%
49-0000	Installation, maintenance, and repair occupations	117	6.1%
41-0000	Sales and related occupations	51	2.6%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	1,932	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The next table shows the projected total impacts on occupations within the county for 2021 resulting from Eagle Ford Shale development. Professional occupations are projected foremost at 16 percent; followed by office and administrative occupations at 15.9 percent, transportation and material moving occupations at 14.9 percent, service occupations at 12.8 percent, and management, business, and financial occupations at 12 percent.

Projected to be in the sixth position are construction and extraction occupations at 11.6 percent, in the seventh position are production occupations at 8.3 percent, followed by installation, maintenance, and repair occupations at 5.4 percent, sales occupations at 3 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts McMullen County Occupational Impacts, 2021	Occupational Impact	Percentage
15-2900	Professional and related occupations	525	16.0%
43-0000	Office and administrative support occupations	523	15.9%
53-0000	Transportation and material moving occupations	490	14.9%
31-3900	Service occupations	420	12.8%
11-1300	Management, business, and financial occupations	394	12.0%
47-0000	Construction and extraction occupations	382	11.6%
51-0000	Production occupations	274	8.3%
49-0000	Installation, maintenance, and repair occupations	178	5.4%
41-0000	Sales and related occupations	100	3.0%
45-0000	Farming, fishing, and forestry occupations	2	0.1%
	Total	3,286	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

McMullen Direct and Indirect Impacts

The 2010 occupational structure of McMullen County is depicted in the table below¹⁶. Farming, fishing, and forestry are first at 20.2 percent, followed by service occupations at 17.1 percent, management, business, and financial occupations at 16.7 percent, professional occupations at 13.1 percent, and office and administrative occupations at 12.9 percent. In the sixth spot are transportation and material moving occupations at 5.5 percent, production occupations are seventh at 5.3 percent, and sales occupations, ninth at 4 percent. Construction and extraction occupations are ninth at 2.6 percent and finally installation, maintenance, and repair occupations at 2.5 percent.

Occupation Code	McMullen County 10-Occupational Categories, 2010	Employment	Percentage
45-0000	Farming, fishing, and forestry occupations	122	20.2%
31-3900	Service occupations	103	17.1%
11-1300	Management, business, and financial occupations	100	16.7%
15-2900	Professional and related occupations	79	13.1%
43-0000	Office and administrative support occupations	78	12.9%
53-0000	Transportation and material moving occupations	33	5.5%
51-0000	Production occupations	32	5.3%
41-0000	Sales and related occupations	24	4.0%
47-0000	Construction and extraction occupations	16	2.6%
49-0000	Installation, maintenance, and repair occupations	15	2.5%
	Total	602	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The educational and training distributions within McMullen County for 2010 are shown below. Short-term on-the-job training are first at 26 percent; followed by work experience in a related field at 25.9 percent, moderate-term on-the-job training at 14 percent, bachelor's degree or higher, plus work experience at 11.7 percent, and bachelor's degrees at 8.4 percent. Long-term on-the-job training are sixth at 4.6 percent, followed by postsecondary vocational awards at 3.4 percent, Associate degrees at 3.3 percent, first professional degrees at 1.6 percent, master's degrees at 1 percent, and doctoral degrees at 0.2 percent.

¹⁶ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 737.

McMullen County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
157	Short-term on-the-job training	26.0%
156	Work experience in a related occupation	25.9%
84	Moderate-term on-the-job training	14.0%
71	Bachelor's or higher degree, plus work experience	11.7%
50	Bachelor's degree	8.4%
28	Long-term on-the-job training	4.6%
21	Postsecondary vocational award	3.4%
20	Associate degree	3.3%
10	First professional degree	1.6%
6	Master's degree	1.0%
1	Doctoral degree	0.2%
602	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Eagle Ford development impacts in 2011 within McMullen County are shown below. Moving to the first position are construction and extraction occupations (31.2 percent), showing a substantial 28.6 percentage point increase; followed by transportation and material occupations (18.4 percent), increasing by 12.9 percentage points, office and administrative occupations (14.3 percent), increasing by 1.4 percentage points, management, and business, and financial occupations (9.4 percent), decreasing by 7.3 percentage points.

In the fifth position are production occupations (8.8 percent) showing a decrease of 3.5 percentage points; followed by professional occupations (8.1 percent), decreasing by 5 percentage points and installation, maintenance, and repair occupations (6.6 percent), increasing by 4.1 percentage points. Next are sales occupations (1.8 percent), decreasing by 2.2 percentage points, service occupations (1.5 percent), decreasing by 15.6 percentage points, and farming, fishing, and forestry occupations (less than one percent), moving to the tenth position showing a substantial decrease of 20.2 percentage points.

Occupation Code	Direct Plus Indirect Impacts McMullen County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	502	31.2%
53-0000	Transportation and material moving occupations	296	18.4%
43-0000	Office and administrative support occupations	230	14.3%
11-1300	Management, business, and financial occupations	151	9.4%
51-0000	Production occupations	141	8.8%
15-2900	Professional and related occupations	131	8.1%
49-0000	Installation, maintenance, and repair occupations	107	6.6%
41-0000	Sales and related occupations	30	1.8%
31-3900	Service occupations	23	1.5%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	1,612	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts within McMullen County for 2011 are shown below. Moving to the first position is moderate-term on-the-job training (34.5 percent), increasing by 20.5 percentage points. Next are short-term on-the-job training (23.1 percent), decreasing by 2.9 percentage points, long-term on-the-job training (12 percent), increasing by 7.4 percentage points, work experience in a related field (10.8 percent), decreasing by 15.1 percentage points, and bachelor's degrees (7.8 percent) showing a 0.6 percentage point decrease.

In the sixth position is bachelor's or higher degree, plus work experience (3.6 percent), decreasing by 8.1 percentage points; followed by Associate degrees (3.4 percent), increasing by 0.1 percentage points, first professional degrees (2.2 percent), increasing by 0.6 percentage points, and postsecondary vocational awards (2.2 percent) showing a 1.2 percentage point decrease. Master's degrees (0.4 percent) remain in the ninth position but decreases by 0.6 percentage points, and last are doctoral degrees (less than 1 percent), decreasing by 0.2 percentage points.

Direct Plus Indirect Impacts McMullen County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
555	Moderate-term on-the-job training	34.5%
372	Short-term on-the-job training	23.1%
194	Long-term on-the-job training	12.0%
174	Work experience in a related occupation	10.8%
126	Bachelor's degree	7.8%
59	Bachelor's or higher degree, plus work experience	3.6%
55	Associate degree	3.4%
36	First professional degree	2.2%
35	Postsecondary vocational award	2.2%
7	Master's degree	0.4%
0	Doctoral degree	0.0%
1,612	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projections for McMullen County are illustrated below. Transportation and material moving occupations (17.8 percent) move to the first position showing a 0.6 percentage point increase; followed by office and administrative occupations (17.2 percent), increasing by 2.9 percentage points, professional occupations (16.7 percent), increasing by 8.1 percentage points, construction and extraction occupations (14.7 percent) move to fourth, decreasing by 16.5 percentage points, and management, business, and financial occupations (13.7 percent) showing a 4.3 percentage point increase.

Next are production occupations (10.2 percent), increasing by 1.4 percentage point, installation, maintenance, and repair occupations (6 percent), decreasing by 0.6 percentage point, sales occupations (2.1 percent), increasing by 0.3 percentage point and service occupations (1.5 percent), holding its 2011 relevancy level. Last are farming, fishing and forestry occupations at less than 1 percent.

Occupation Code	Direct Plus Indirect Impacts McMullen County 10-Occupational Categories, 2021	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	458	17.8%
43-0000	Office and administrative support occupations	442	17.2%
15-2900	Professional and related occupations	428	16.7%
47-0000	Construction and extraction occupations	378	14.7%
11-1300	Management, business, and financial occupations	352	13.7%
51-0000	Production occupations	262	10.2%
49-0000	Installation, maintenance, and repair occupations	155	6.0%
41-0000	Sales and related occupations	54	2.1%
31-3900	Service occupations	38	1.5%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	2,567	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected educational and training distributions for 2021 are shown below. Remaining in the first spot are moderate-term on the job training (31.8 percent) showing a 2.5 percentage point decrease; followed by short-term on-the-job training (19.9 percent), decreasing by 3.2 percentage points, bachelor's degrees (13.1 percent), increasing by 5.3 percentage points, work experience in a related field (9.7 percent), decreasing by 1.1 percentage point, and long-term on-the-job training (7.1 percent) showing a 4.9 percentage point decrease.

Projected sixth are bachelor's or higher degree, plus work experience (5.9 percent), increasing by 2.3 percentage points; next are Associate degrees (5.6 percent), increasing by 2.2 percentage points, first professional degrees (2.6 percent), increasing by 0.4 percentage point, and postsecondary vocational awards (2.1 percent) showing a 0.1 percentage point decrease. Last are master's degrees (2.1 percent) showing a 1.7 percentage point increase, and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts McMullen County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
816	Moderate-term on-the-job training	31.8%
511	Short-term on-the-job training	19.9%
336	Bachelor's degree	13.1%
249	Work experience in a related occupation	9.7%
183	Long-term on-the-job training	7.1%
151	Bachelor's or higher degree, plus work experience	5.9%
144	Associate degree	5.6%
67	First professional degree	2.6%
54	Postsecondary vocational award	2.1%
53	Master's degree	2.1%
0	Doctoral degree	0.0%
2,566	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

McMullen Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts McMullen County Top 35 Occupations Impacted in 2011		Occupational Impact	
				Impact	Percentage
		Total		1,612	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer		119	7.4%
2	47-2031	Carpenters		90	5.6%
3	47-2061	Construction laborers		86	5.3%
4	47-2073	Operating engineers and other construction equipment operators		82	5.1%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers		69	4.3%
6	53-7032	Excavating and loading machine and dragline operators		55	3.4%
7	43-9061	Office clerks, general		41	2.5%
8	53-7062	Laborers and freight, stock, and material movers, hand		36	2.2%
9	23-1011	Lawyers		36	2.2%
10	11-1021	General and operations managers		33	2.0%
11	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders		33	2.0%
12	43-3031	Bookkeeping, accounting, and auditing clerks		32	2.0%
13	49-9042	Maintenance and repair workers, general		31	1.9%
14	11-9021	Construction managers		27	1.7%
15	43-6014	Secretaries, except legal, medical, and executive		26	1.6%
16	43-6011	Executive secretaries and administrative assistants		24	1.5%
17	43-6012	Legal secretaries		22	1.4%
18	53-7051	Industrial truck and tractor operators		22	1.3%
19	47-5051	Rock splitters, quarry		21	1.3%
20	49-3042	Mobile heavy equipment mechanics, except engines		20	1.3%
21	13-2011	Accountants and auditors		18	1.1%
22	47-5041	Continuous mining machine operators		18	1.1%
23	23-2011	Paralegals and legal assistants		16	1.0%
24	47-5042	Mine cutting and channeling machine operators		16	1.0%
25	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		14	0.9%
26	51-1011	First-line supervisors/managers of production and operating workers		14	0.9%
27	51-4121	Welders, cutters, solderers, and brazers		14	0.9%
28	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping		13	0.8%
29	13-1051	Cost estimators		12	0.8%
30	47-2111	Electricians		12	0.8%
31	43-4171	Receptionists and information clerks		12	0.8%
32	51-9111	Packaging and filling machine operators and tenders		12	0.8%
33	51-9198	Helpers--Production workers		12	0.7%
34	43-1011	First-line supervisors/managers of office and administrative support workers		12	0.7%
35	49-9041	Industrial machinery mechanics		12	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation Code		Total Impacts McMullen County Top 35 Occupations Impacted in 2011		Occupational Impact	Percentage
Ranking					
		Total		1,932	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer		122	6.3%
2	47-2031	Carpenters		90	4.6%
3	47-2061	Construction laborers		87	4.5%
4	47-2073	Operating engineers and other construction equipment operators		82	4.2%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers		69	3.6%
6	37-2012	Maids and housekeeping cleaners		56	2.9%
7	53-7032	Excavating and loading machine and dragline operators		55	2.8%
8	43-9061	Office clerks, general		46	2.4%
9	39-9011	Child care workers		46	2.4%
10	53-7062	Laborers and freight, stock, and material movers, hand		39	2.0%
11	23-1011	Lawyers		39	2.0%
12	11-1021	General and operations managers		36	1.8%
13	43-3031	Bookkeeping, accounting, and auditing clerks		35	1.8%
14	49-9042	Maintenance and repair workers, general		34	1.7%
15	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders		33	1.7%
16	43-6014	Secretaries, except legal, medical, and executive		29	1.5%
17	11-9021	Construction managers		27	1.4%
18	43-6011	Executive secretaries and administrative assistants		26	1.4%
19	43-6012	Legal secretaries		25	1.3%
20	53-7051	Industrial truck and tractor operators		22	1.1%
21	47-5051	Rock splitters, quarry		21	1.1%
22	49-3042	Mobile heavy equipment mechanics, except engines		20	1.0%
23	13-2011	Accountants and auditors		20	1.0%
24	47-5041	Continuous mining machine operators		18	0.9%
25	23-2011	Paralegals and legal assistants		18	0.9%
26	47-5042	Mine cutting and channeling machine operators		16	0.8%
27	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		15	0.8%
28	43-4171	Receptionists and information clerks		15	0.8%
29	51-1011	First-line supervisors/managers of production and operating workers		14	0.7%
30	51-4121	Welders, cutters, solderers, and brazers		14	0.7%
31	39-9021	Personal and home care aides		14	0.7%
32	43-1011	First-line supervisors/managers of office and administrative support workers		14	0.7%
33	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping		13	0.7%
34	13-1051	Cost estimators		13	0.7%
35	47-2111	Electricians		12	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

McMullen Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts McMullen County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	2,567	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	157	6.1%
2	47-2073	Operating engineers and other construction equipment operators	95	3.7%
3	43-9061	Office clerks, general	77	3.0%
4	13-2011	Accountants and auditors	73	2.9%
5	43-3031	Bookkeeping, accounting, and auditing clerks	73	2.9%
6	11-1021	General and operations managers	73	2.8%
7	53-7032	Excavating and loading machine and dragline operators	69	2.7%
8	23-1011	Lawyers	67	2.6%
9	51-8093	Petroleum pump system operators, refinery operators, and gaugers	67	2.6%
10	53-7073	Wellhead pumpers	65	2.5%
11	17-2171	Petroleum engineers	64	2.5%
12	43-6014	Secretaries, except legal, medical, and executive	56	2.2%
13	43-6011	Executive secretaries and administrative assistants	56	2.2%
14	49-9042	Maintenance and repair workers, general	50	1.9%
15	47-5071	Roustabouts, oil and gas	49	1.9%
16	19-2042	Geoscientists, except hydrologists and geographers	48	1.9%
17	53-7062	Laborers and freight, stock, and material movers, hand	46	1.8%
18	47-1011	First-line supervisors/managers of construction trades and extraction workers	46	1.8%
19	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	42	1.6%
20	43-6012	Legal secretaries	39	1.5%
21	19-4041	Geological and petroleum technicians	37	1.4%
22	51-1011	First-line supervisors/managers of production and operating workers	30	1.2%
23	13-1199	Business operation specialists, all other	30	1.2%
24	23-2011	Paralegals and legal assistants	29	1.1%
25	49-3042	Mobile heavy equipment mechanics, except engines	28	1.1%
26	53-7051	Industrial truck and tractor operators	27	1.1%
27	47-5051	Rock splitters, quarry	26	1.0%
28	47-2061	Construction laborers	25	1.0%
29	47-5041	Continuous mining machine operators	23	0.9%
30	49-9041	Industrial machinery mechanics	23	0.9%
31	43-1011	First-line supervisors/managers of office and administrative support workers	22	0.9%
32	11-3031	Financial managers	21	0.8%
33	43-4171	Receptionists and information clerks	21	0.8%
34	47-5042	Mine cutting and channeling machine operators	21	0.8%
35	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle operators	19	0.7%

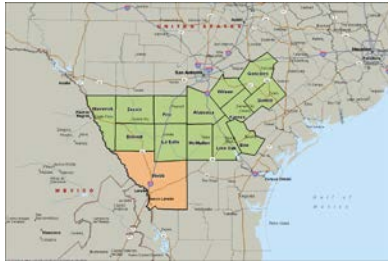
Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts McMullen County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	3,286	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	162	4.9%
2	37-2012	Maids and housekeeping cleaners	129	3.9%
3	39-9011	Child care workers	103	3.1%
4	47-2073	Operating engineers and other construction equipment operators	95	2.9%
5	43-9061	Office clerks, general	89	2.7%
6	43-3031	Bookkeeping, accounting, and auditing clerks	80	2.4%
7	11-1021	General and operations managers	79	2.4%
8	13-2011	Accountants and auditors	76	2.3%
9	23-1011	Lawyers	75	2.3%
10	53-7032	Excavating and loading machine and dragline operators	69	2.1%
11	51-8093	Petroleum pump system operators, refinery operators, and gaugers	67	2.0%
12	53-7073	Wellhead pumpers	65	2.0%
13	17-2171	Petroleum engineers	64	1.9%
14	43-6014	Secretaries, except legal, medical, and executive	63	1.9%
15	43-6011	Executive secretaries and administrative assistants	62	1.9%
16	49-9042	Maintenance and repair workers, general	55	1.7%
17	53-7062	Laborers and freight, stock, and material movers, hand	54	1.7%
18	47-5071	Roustabouts, oil and gas	49	1.5%
19	19-2042	Geoscientists, except hydrologists and geographers	48	1.5%
20	47-1011	First-line supervisors/managers of construction trades and extraction workers	47	1.4%
21	43-6012	Legal secretaries	43	1.3%
22	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	42	1.3%
23	19-4041	Geological and petroleum technicians	37	1.1%
24	13-1199	Business operation specialists, all other	35	1.1%
25	23-2011	Paralegals and legal assistants	33	1.0%
26	39-9021	Personal and home care aides	32	1.0%
27	51-1011	First-line supervisors/managers of production and operating workers	31	0.9%
28	49-3042	Mobile heavy equipment mechanics, except engines	28	0.9%
29	53-7051	Industrial truck and tractor operators	28	0.9%
30	43-4171	Receptionists and information clerks	27	0.8%
31	47-2061	Construction laborers	27	0.8%
32	43-1011	First-line supervisors/managers of office and administrative support workers	26	0.8%
33	47-5051	Rock splitters, quarry	26	0.8%
34	41-2011	Cashiers, except gaming	25	0.7%
35	47-5041	Continuous mining machine operators	23	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Webb County



The following tables explain the estimated direct, indirect, and induced impacts within Webb County for 2011 and 2021. Within Webb County it is estimated that a total of 6,983 jobs were affected by Eagle Ford in 2011, with the largest impact on induced employment.

Estimated Impact 2011				
Webb County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,569	2,529	2,885	6,983

Within Webb County there is projected to be a total of 10,298 jobs supported by Eagle Ford Shale in 2021, with the largest impact on induced employment.

Estimated Impact 2021				
Webb County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	1,734	4,081	4,483	10,298

The following table details the total occupational impacts within Webb County for 2011. Office and administrative occupations are most relevant at 19.9 percent; followed by service occupations at 14 percent, transportation and material occupations at 13.5 percent, professional occupations at 13 percent, management, business, and financial occupations at 10.9 percent, and sales occupations at 10.3 percent. In the seventh position are construction and extraction occupations at 8.5 percent; followed by installation, maintenance, and repair occupations at 5.2 percent, production occupations at 4.5 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Webb County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,388	19.9%
31-3900	Service occupations	980	14.0%
53-0000	Transportation and material moving occupations	946	13.5%
15-2900	Professional and related occupations	909	13.0%
11-1300	Management, business, and financial occupations	762	10.9%
41-0000	Sales and related occupations	720	10.3%
47-0000	Construction and extraction occupations	596	8.5%
49-0000	Installation, maintenance, and repair occupations	361	5.2%
51-0000	Production occupations	314	4.5%
45-0000	Farming, fishing, and forestry occupations	7	0.1%
	Total	6,983	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Total occupational impacts within Webb County for 2021 resulting from Eagle Ford development are detailed below. Office and administrative occupations are at 20.4 percent; followed by professional occupations at 14.9 percent, service occupations at 14.8 percent, management, business, and financial occupations at 12.3 percent, and transportation and material moving occupations at 11.1 percent.

Sales occupations are sixth at 10.5 percent, construction and extraction occupations seventh at 7.6 percent and eighth are installation, maintenance, and repair occupations at 4.5 percent. Last are production occupations at 3.7 percent and farming, fishing, and forestry occupations projected at 0.1 percent of the labor demanded.

Occupation Code	Total Impacts Webb County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	2,098	20.4%
15-2900	Professional and related occupations	1,534	14.9%
31-3900	Service occupations	1,529	14.8%
11-1300	Management, business, and financial occupations	1,271	12.3%
53-0000	Transportation and material moving occupations	1,138	11.1%
41-0000	Sales and related occupations	1,084	10.5%
47-0000	Construction and extraction occupations	785	7.6%
49-0000	Installation, maintenance, and repair occupations	467	4.5%
51-0000	Production occupations	382	3.7%
45-0000	Farming, fishing, and forestry occupations	10	0.1%
	Total	10,298	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Webb Direct and Indirect Impacts

The 2010 Webb County occupational composition is shown below¹⁷. Most significant are service occupations at 22.8 percent, followed by office and administrative occupations at 18.2 percent, professional occupations at 15.4 percent, management, business, and financial occupations at 11.7 percent and sales occupations at 10.9 percent. In the sixth position are transportation and material moving occupations at 10.9 percent, construction and extraction occupations at 3.9 percent are seventh, and installation, maintenance, and repair occupations at 3.6 percent are eighth. In the ninth position are production occupations at 2.1 percent and farming, fishing, and forestry occupations are last at 0.6 percent of the labor demanded in 2010.

Occupation Code	Webb County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	25,544	22.8%
43-0000	Office and administrative support occupations	20,416	18.2%
15-2900	Professional and related occupations	17,323	15.4%
11-1300	Management, business, and financial occupations	13,125	11.7%
41-0000	Sales and related occupations	12,194	10.9%
53-0000	Transportation and material moving occupations	12,192	10.9%
47-0000	Construction and extraction occupations	4,382	3.9%
49-0000	Installation, maintenance, and repair occupations	4,007	3.6%
51-0000	Production occupations	2,311	2.1%
45-0000	Farming, fishing, and forestry occupations	637	0.6%
	Total	112,128	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Webb County educational and training distributions for 2010 are shown in the table below. Short-term on-the-job training is foremost at 41.7 percent; followed by moderate-term on-the-job training at 16.6 percent, bachelor's degree at 10.9 percent, work experience in a related field at 9.9 percent, and long-term on-the-job training at 4.8 percent. Next are postsecondary vocational awards at 4.6 percent, bachelor's or higher degree, plus work experience at 4.3 percent, Associate degrees at 4.2 percent, master's degrees at 1.5 percent, first professional degrees at 1.2 percent, and doctoral degrees at 0.3 percent.

¹⁷ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 113,171.

Webb County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
46,716	Short-term on-the-job training	41.7%
18,620	Moderate-term on-the-job training	16.6%
12,227	Bachelor's degree	10.9%
11,152	Work experience in a related occupation	9.9%
5,379	Long-term on-the-job training	4.8%
5,148	Postsecondary vocational award	4.6%
4,848	Bachelor's or higher degree, plus work experience	4.3%
4,692	Associate degree	4.2%
1,664	Master's degree	1.5%
1,359	First professional degree	1.2%
324	Doctoral degree	0.3%
112,128	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Eagle Ford development impacts within Webb County are illustrated in the table below. Moving to the first position are office and administration occupations (20 percent) showing an 1.8 percentage point increase; followed by transportation and material moving occupations (18.7 percent), increasing by 7.8 percentage points, construction and extraction occupations (13.8 percent) moves to the third position, increasing by 9.9 percentage points. In the fourth position are management, business, and financial occupations (12.1 percent) showing a 0.4 percentage point increase; followed by professional occupations (9.2 percent), decreasing by 6.2 percentage points, service occupations (6.8 percent) move to the sixth position and decreased by 16 percentage points, and production occupations (6.5 percent) showing a 4.4 percentage point increase.

Eighth down are installation, maintenance, and repair occupations (6.5 percent) showing a 2.9 percentage point increase; followed by sales occupations (6.4 percent), decreasing by 4.5 percentage points, and farming, fishing, and forestry occupations (0.1 percent) showing a 0.5 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Webb County 10-Occupational Categories, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	820	20.0%
53-0000	Transportation and material moving occupations	764	18.7%
47-0000	Construction and extraction occupations	564	13.8%
11-1300	Management, business, and financial occupations	494	12.1%
15-2900	Professional and related occupations	379	9.2%
31-3900	Service occupations	279	6.8%
51-0000	Production occupations	267	6.5%
49-0000	Installation, maintenance, and repair occupations	266	6.5%
41-0000	Sales and related occupations	261	6.4%
45-0000	Farming, fishing, and forestry occupations	3	0.1%
	Total	4,098	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts for 2011 within Webb County are detailed in the table below. Short-term on-the-job training (32.4 percent) remains in the first position but decreases by 9.3 percentage points. Next are moderate-term on-the-job (28 percent), increasing by 11.4 percentage points, work experience in a related field (11.1 percent), increasing by 1.2 percentage point, bachelor's degrees (9.9 percent), decreasing by 1 percentage point, and long-term on-the-job training (6.2 percent), increasing by 1.4 percentage point.

Moving up to the sixth position is bachelor's or higher degree, plus work experience (5 percent), increasing by 0.7 percentage point; followed by postsecondary vocational awards (2.9 percent), decreasing by 1.7 percentage point, Associate degrees (2.7 percent), decreasing by 1.5 percentage point, and first professional degrees (1.1 percent) showing a 0.1 percentage point decrease.

Direct Plus Indirect Impacts Webb County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
1,330	Short-term on-the-job training	32.4%
1,149	Moderate-term on-the-job training	28.0%
454	Work experience in a related occupation	11.1%
405	Bachelor's degree	9.9%
255	Long-term on-the-job training	6.2%
205	Bachelor's or higher degree, plus work experience	5.0%
118	Postsecondary vocational award	2.9%
112	Associate degree	2.7%
47	First professional degree	1.1%
23	Master's degree	0.6%
1	Doctoral degree	0.0%
4,098	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Long-term Eagle Ford development impacts for 2021 within Webb County are shown in the chart below. Projected to remain in the first position are office and administrative support occupations (20.9 percent) and increase slightly by 0.9 percentage point; followed by management, business, and financial occupations (14.7 percent), increasing by 2.6 percentage points, transportation and material moving occupations (14.2 percent), decreasing by 4.5 percentage points, and construction and extraction occupations (12.9 percent) showing a 0.9 percentage point decrease.

Also remaining in the same position are professional occupations (11.9 percent) but projected to increase by 2.7 percentage points. Next are service occupations (7.8 percent), increasing by 1 percentage point, sales occupations (6.9 percent), increasing by 0.5 percentage point, installation, maintenance, and repair occupations (5.6 percent), decreasing by 0.9 percentage point. In the ninth position are production occupations (5.2 percent), decreasing by 1.3 percentage point, and tenth farming, fishing, and forestry occupations (0.1 percent) showing no change in the percentage of the labor demanded in long-term projections.

Occupation Code	Direct Plus Indirect Impacts Webb County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,216	20.9%
11-1300	Management, business, and financial occupations	858	14.7%
53-0000	Transportation and material moving occupations	826	14.2%
47-0000	Construction and extraction occupations	750	12.9%
15-2900	Professional and related occupations	691	11.9%
31-3900	Service occupations	452	7.8%
41-0000	Sales and related occupations	404	6.9%
49-0000	Installation, maintenance, and repair occupations	314	5.4%
51-0000	Production occupations	300	5.2%
45-0000	Farming, fishing, and forestry occupations	5	0.1%
	Total	5,816	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projections of Eagle Ford development impacts for 2021 on the educational structure in Webb County are found in the table below. Short-term on-the-job training (29.8 percent) remains in the first position, but projected to decrease by 2.6 percentage points. Moving down, moderate-term on-the-job training (24.4 percent) is in the second position showing a 3.6 percentage point decrease; followed by bachelor's degrees (13.1 percent), increasing by 3.2 percentage points, work experience in a related field (11.3 percent), increasing by 0.2 percentage point, and long-term on-the-job training (7.5 percent), increasing by 1.3 percentage point.

In the sixth position is bachelor's or higher degree, plus work experience (6 percent) showing a 1 percentage point increase. Next are Associate degrees (3 percent), increasing by 0.3 percentage point, postsecondary vocational awards (2.8 percent), decreasing by 0.1 percentage point, and Master's degrees (1.1 percent), increasing by 0.5 percentage point. Projected to move to the tenth position are first professional degrees (1 percent) showing a decrease of 0.1 percentage point, and last doctoral degrees projected to remain at less than 1 percent.

Direct Plus Indirect Impacts Webb County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
1,738	Short-term on-the-job training	29.8%
1,425	Moderate-term on-the-job training	24.4%
766	Bachelor's degree	13.1%
656	Work experience in a related occupation	11.3%
437	Long-term on-the-job training	7.5%
349	Bachelor's or higher degree, plus work experience	6.0%
178	Associate degree	3.0%
164	Postsecondary vocational award	2.8%
62	Master's degree	1.1%
56	First professional degree	1.0%
3	Doctoral degree	0.0%
5,833	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Webb Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Webb County	Occupational	
		Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	4,098	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	277	6.8%
2	47-2073	Operating engineers and other construction equipment operators	121	2.9%
3	43-9061	Office clerks, general	117	2.8%
4	53-7062	Laborers and freight, stock, and material movers, hand	107	2.6%
5	33-9032	Security guards	90	2.2%
6	43-3031	Bookkeeping, accounting, and auditing clerks	90	2.2%
7	43-4051	Customer service representatives	86	2.1%
8	11-1021	General and operations managers	85	2.1%
9	53-7032	Excavating and loading machine and dragline operators	84	2.1%
10	47-2061	Construction laborers	78	1.9%
11	13-2011	Accountants and auditors	75	1.8%
12	49-9042	Maintenance and repair workers, general	75	1.8%
13	47-1011	First-line supervisors/managers of construction trades and extraction workers	71	1.7%
14	47-2031	Carpenters	65	1.6%
15	43-6014	Secretaries, except legal, medical, and executive	65	1.6%
16	43-6011	Executive secretaries and administrative assistants	64	1.6%
17	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	57	1.4%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	51	1.2%
19	43-1011	First-line supervisors/managers of office and administrative support workers	49	1.2%
20	53-7051	Industrial truck and tractor operators	47	1.1%
21	23-1011	Lawyers	45	1.1%
22	49-3042	Mobile heavy equipment mechanics, except engines	38	0.9%
23	53-3033	Truck drivers, light or delivery services	36	0.9%
24	43-3011	Bill and account collectors	33	0.8%
25	41-9041	Telemarketers	33	0.8%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	32	0.8%
27	47-5051	Rock splitters, quarry	32	0.8%
28	13-2072	Loan officers	32	0.8%
29	43-4171	Receptionists and information clerks	32	0.8%
30	13-1199	Business operation specialists, all other	31	0.7%
31	47-5041	Continuous mining machine operators	28	0.7%
32	41-2031	Retail salespersons	28	0.7%
33	13-1111	Management analysts	27	0.7%
34	43-6012	Legal secretaries	26	0.6%
35	49-3031	Bus and truck mechanics and diesel engine specialists	26	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Webb County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	6,983	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	296	4.2%
2	41-2031	Retail salespersons	211	3.0%
3	43-9061	Office clerks, general	191	2.7%
4	53-7062	Laborers and freight, stock, and material movers, hand	151	2.2%
5	43-4051	Customer service representatives	150	2.1%
6	41-2011	Cashiers, except gaming	136	2.0%
7	33-9032	Security guards	133	1.9%
8	43-3031	Bookkeeping, accounting, and auditing clerks	132	1.9%
9	11-1021	General and operations managers	122	1.7%
10	47-2073	Operating engineers and other construction equipment operators	121	1.7%
11	29-1111	Registered nurses	108	1.5%
12	49-9042	Maintenance and repair workers, general	106	1.5%
13	43-6014	Secretaries, except legal, medical, and executive	105	1.5%
14	13-2011	Accountants and auditors	100	1.4%
15	43-6011	Executive secretaries and administrative assistants	99	1.4%
16	47-2061	Construction laborers	86	1.2%
17	53-7032	Excavating and loading machine and dragline operators	84	1.2%
18	43-1011	First-line supervisors/managers of office and administrative support workers	84	1.2%
19	47-2031	Carpenters	76	1.1%
20	47-1011	First-line supervisors/managers of construction trades and extraction workers	75	1.1%
21	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	75	1.1%
22	35-3031	Waiters and waitresses	73	1.0%
23	35-3021	Combined food preparation and serving workers, including fast food	70	1.0%
24	43-5081	Stock clerks and order fillers	69	1.0%
25	43-4171	Receptionists and information clerks	67	1.0%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	66	1.0%
27	39-9021	Personal and home care aides	65	0.9%
28	31-1011	Home health aides	61	0.9%
29	13-2072	Loan officers	58	0.8%
30	53-7051	Industrial truck and tractor operators	56	0.8%
31	53-3033	Truck drivers, light or delivery services	54	0.8%
32	43-3011	Bill and account collectors	54	0.8%
33	23-1011	Lawyers	54	0.8%
34	41-1011	First-line supervisors/managers of retail sales workers	52	0.7%
35	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	51	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Webb Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Webb County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	5,816	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	252	4.3%
2	33-9032	Security guards	185	3.2%
3	43-9061	Office clerks, general	168	2.9%
4	43-3031	Bookkeeping, accounting, and auditing clerks	142	2.4%
5	13-2011	Accountants and auditors	138	2.4%
6	11-1021	General and operations managers	136	2.3%
7	47-2031	Carpenters	135	2.3%
8	43-4051	Customer service representatives	132	2.3%
9	53-7062	Laborers and freight, stock, and material movers, hand	127	2.2%
10	47-2061	Construction laborers	122	2.1%
11	43-6011	Executive secretaries and administrative assistants	111	1.9%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	107	1.8%
13	43-6014	Secretaries, except legal, medical, and executive	104	1.8%
14	47-2073	Operating engineers and other construction equipment operators	89	1.5%
15	49-9042	Maintenance and repair workers, general	88	1.5%
16	43-1011	First-line supervisors/managers of office and administrative support workers	74	1.3%
17	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	69	1.2%
18	51-8093	Petroleum pump system operators, refinery operators, and gaugers	59	1.0%
19	53-7073	Wellhead pumpers	58	1.0%
20	13-1199	Business operation specialists, all other	57	1.0%
21	17-2171	Petroleum engineers	57	1.0%
22	53-7032	Excavating and loading machine and dragline operators	56	1.0%
23	41-9041	Telemarketers	54	0.9%
24	41-2031	Retail salespersons	54	0.9%
25	23-1011	Lawyers	52	0.9%
26	43-3011	Bill and account collectors	51	0.9%
27	13-1111	Management analysts	47	0.8%
28	43-4171	Receptionists and information clerks	46	0.8%
29	13-2072	Loan officers	45	0.8%
30	19-2042	Geoscientists, except hydrologists and geographers	44	0.8%
31	11-3031	Financial managers	44	0.8%
32	47-5071	Roustabouts, oil and gas	44	0.8%
33	53-3033	Truck drivers, light or delivery services	44	0.8%
34	53-7051	Industrial truck and tractor operators	44	0.8%
35	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	44	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Webb County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	10,298	100.0%
1	41-2031	Retail salespersons	318	3.1%
2	53-3032	Truck drivers, heavy and tractor-trailer	288	2.8%
3	43-9061	Office clerks, general	285	2.8%
4	33-9032	Security guards	263	2.6%
5	43-4051	Customer service representatives	233	2.3%
6	43-3031	Bookkeeping, accounting, and auditing clerks	208	2.0%
7	53-7062	Laborers and freight, stock, and material movers, hand	202	2.0%
8	41-2011	Cashiers, except gaming	201	2.0%
9	11-1021	General and operations managers	194	1.9%
10	13-2011	Accountants and auditors	177	1.7%
11	43-6014	Secretaries, except legal, medical, and executive	168	1.6%
12	43-6011	Executive secretaries and administrative assistants	167	1.6%
13	29-1111	Registered nurses	159	1.5%
14	47-2031	Carpenters	144	1.4%
15	49-9042	Maintenance and repair workers, general	140	1.4%
16	47-2061	Construction laborers	129	1.3%
17	43-1011	First-line supervisors/managers of office and administrative support workers	127	1.2%
18	47-1011	First-line supervisors/managers of construction trades and extraction workers	111	1.1%
19	35-3031	Waiters and waitresses	106	1.0%
20	43-5081	Stock clerks and order fillers	104	1.0%
21	35-3021	Combined food preparation and serving workers, including fast food	103	1.0%
22	43-4171	Receptionists and information clerks	99	1.0%
23	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	99	1.0%
24	39-9021	Personal and home care aides	98	1.0%
25	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	97	0.9%
26	31-1011	Home health aides	91	0.9%
27	47-2073	Operating engineers and other construction equipment operators	91	0.9%
28	13-1199	Business operation specialists, all other	87	0.8%
29	43-3011	Bill and account collectors	86	0.8%
30	41-9041	Telemarketers	85	0.8%
31	13-2072	Loan officers	85	0.8%
32	41-1011	First-line supervisors/managers of retail sales workers	79	0.8%
33	53-3033	Truck drivers, light or delivery services	71	0.7%
34	23-1011	Lawyers	66	0.6%
35	13-1111	Management analysts	65	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Wilson County



In the tables explain below are the estimated direct, indirect, and induced impacts within Wilson County for 2011 and 2021. Wilson County data shows an estimated total of 816 jobs impacted in 2011, with the largest impact on indirect employment.

Wilson County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	265	332	219	816

Wilson County is expected to see a total of 2,001 jobs affected by Eagle Ford Shale in 2021, with the largest impact on indirect employment.

Estimated Impact 2021				
Wilson County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	607	802	593	2,001

Eagle Ford total occupational impacts for 2011 within Wilson County are detailed in the following table. Office and administrative support occupations are foremost at 18.1 percent, transportation and material moving occupations are next at 16.6 percent, followed by construction and extraction occupations at 14.4 percent. Professional occupations are fourth at 10.7 percent; followed by service occupations at 10.5 percent, management, business, and financial occupations at 10.4 percent, sales occupations at 7.8 percent, and production occupations at 5.5 percent. Last are installation, maintenance, and repair occupations at 5.3 percent, and farming, fishing, and forestry occupations at 0.7 percent of the labor demanded in 2011.

Occupation Code	Total Impacts Wilson County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	148	18.1%
53-0000	Transportation and material moving occupations	135	16.6%
47-0000	Construction and extraction occupations	117	14.4%
15-2900	Professional and related occupations	87	10.7%
31-3900	Service occupations	86	10.5%
11-1300	Management, business, and financial occupations	85	10.4%
41-0000	Sales and related occupations	64	7.8%
51-0000	Production occupations	45	5.5%
49-0000	Installation, maintenance, and repair occupations	44	5.3%
45-0000	Farming, fishing, and forestry occupations	6	0.7%
	Total	816	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Total occupational impacts within Wilson County projected for 2021 are shown in the table below. Foremost are office and administrative occupations at 18.8 percent, followed by professional occupations at 13.7 percent, construction and extraction occupations at 13 percent, transportation and material moving occupations at 12.9 percent, management, business, and financial occupations at 12.3 percent, and service occupations at 11.2 percent. In the seventh spot are sales occupations at 7.9 percent, eighth are production occupations at 5.2 percent, followed by installation, maintenance, and repair occupations at 4.5 percent, and farming, fishing, and forestry occupations projected at 0.4 percent of the labor demanded.

Occupation Code	Total Impacts Wilson County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	375	18.8%
15-2900	Professional and related occupations	274	13.7%
47-0000	Construction and extraction occupations	261	13.0%
53-0000	Transportation and material moving occupations	258	12.9%
11-1300	Management, business, and financial occupations	247	12.3%
31-3900	Service occupations	225	11.2%
41-0000	Sales and related occupations	158	7.9%
51-0000	Production occupations	104	5.2%
49-0000	Installation, maintenance, and repair occupations	91	4.5%
45-0000	Farming, fishing, and forestry occupations	9	0.4%
	Total	2,001	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Wilson Direct and Indirect Impacts

The 2010 occupational distribution in Wilson County are shown in the following table. Foremost are service occupations at 18.9 percent¹⁸; followed by office and administrative occupations at 15.5 percent, management, business, and financial occupations at 14.3 percent, professional occupations at 13.9 percent, farming, fishing, and forestry occupations at 11 percent, and sales occupations at 8.1 percent. Next are construction and extraction occupations at 6.7 percent, transportation and material moving occupations at 5.6 percent, production occupations at 3.2 percent, and finally installation, maintenance, and repair occupations at 2.7 percent.

Occupation Code	Wilson County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	2,398	18.9%
43-0000	Office and administrative support occupations	1,957	15.5%
11-1300	Management, business, and financial occupations	1,807	14.3%
15-2900	Professional and related occupations	1,762	13.9%
45-0000	Farming, fishing, and forestry occupations	1,395	11.0%
41-0000	Sales and related occupations	1,028	8.1%
47-0000	Construction and extraction occupations	852	6.7%
53-0000	Transportation and material moving occupations	713	5.6%
51-0000	Production occupations	411	3.2%
49-0000	Installation, maintenance, and repair occupations	339	2.7%
	Total	12,662	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2010 Wilson County educational distribution is shown below. Foremost is short-term on-the-job training at 31 percent, work experience in a related field at 18.7 percent, moderate-term on-the-job training at 15.2 percent, bachelor's degrees at 10.2 percent, and bachelor's degree, plus work experience at 8 percent. In the sixth position is long-term on-the-job training at 6 percent; followed by postsecondary vocational awards at 5.1 percent, Associate degrees at 3.1 percent, master's degrees at 1.2 percent, first professional degrees also at 1.2 percent, and doctoral degree at 0.2 percent.

¹⁸ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 13,098.

Wilson County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
3,928	Short-term on-the-job training	31.0%
2,366	Work experience in a related occupation	18.7%
1,929	Moderate-term on-the-job training	15.2%
1,292	Bachelor's degree	10.2%
1,014	Bachelor's or higher degree, plus work experience	8.0%
754	Long-term on-the-job training	6.0%
645	Postsecondary vocational award	5.1%
398	Associate degree	3.1%
157	Master's degree	1.2%
154	First professional degree	1.2%
23	Doctoral degree	0.2%
12,662	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Foremost are transportation and material moving occupations (20.3 percent), which increased by 14.7 percentage points; followed by construction and extraction occupations (19.2 percent), increasing by 12.5 percentage points, office and administrative occupations (18.1 percent), increasing by 2.6 percentage points, and management, business, and financial occupations (11 percent) showing a 3.3 percentage point decrease.

In the fifth position are professional occupations (8.9 percent) showing a 5 percentage point decrease. Next are production occupations (6.9 percent), increasing by 3.7 percentage points, installation, maintenance, and repair occupations (6.2 percent), increasing by 3.5 percentage points, sales occupations (5.2 percent), decreasing by 2.9 percentage points, service occupations (3.3 percent) moved to the ninth position and decreased by 15.6 percentage points. Finally, farming, fishing, and forestry occupations (0.8 percent) showed a 10.2 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Wilson County 10-Occupational Categories, 2011	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	121	20.3%
47-0000	Construction and extraction occupations	115	19.2%
43-0000	Office and administrative support occupations	108	18.1%
11-1300	Management, business, and financial occupations	66	11.0%
15-2900	Professional and related occupations	53	8.9%
51-0000	Production occupations	41	6.9%
49-0000	Installation, maintenance, and repair occupations	37	6.2%
41-0000	Sales and related occupations	31	5.2%
31-3900	Service occupations	20	3.3%
45-0000	Farming, fishing, and forestry occupations	5	0.8%
	Total	597	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on education and training distributions in 2011 within Webb County are shown in the table below. Short-term on-the-job training (30.1 percent) remains foremost showing a 0.9 percentage point decrease. Next are moderate-term on-the-job training (27.9 percent), increasing by 12.7 percentage points, work experience in a related field (11.7 percent), decreasing by 7 percentage points, and bachelor's degrees (9.3 percent) showing a 0.9 percentage point decrease.

In the fifth position is long-term on-the-job training, (8.6 percent) showing a 2.6 percentage point increase; followed by bachelor's degree, plus work experience (4.7 percent), decreasing by 3.3 percentage points, Associate degrees (2.9 percent), decreasing by 0.2 percentage point, and postsecondary vocational awards (2.6 percent), showing a 2.5 percentage point decrease. In the ninth position are first professional degrees (1.5 percent), increasing by 0.3 percentage point, tenth are master's degrees (0.4 percent), decreasing by 0.8 percentage point, and last are doctoral degrees (less than 1 percent), decreasing by 0.2 percentage point.

Direct Plus Indirect Impacts Webb County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
180	Short-term on-the-job training	30.1%
167	Moderate-term on-the-job training	27.9%
70	Work experience in a related occupation	11.7%
56	Bachelor's degree	9.3%
51	Long-term on-the-job training	8.6%
28	Bachelor's or higher degree, plus work experience	4.7%
17	Associate degree	2.9%
16	Postsecondary vocational award	2.6%
9	First professional degree	1.5%
3	Master's degree	0.4%
0	Doctoral degree	0.0%
597	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Long-term Eagle Ford development impacts on occupations within Wilson County are shown below. Office and administrative occupations (19 percent) are projected to move to the first position and increase by 0.9 percentage point; followed by construction and extraction occupations (18.1 percent), decreasing by 1.1 percentage point, and transportation and material moving occupations, (15.6 percent) decreasing by 4.7 percentage points.

Remaining in the fourth position are management, business, and financial occupations (14 percent) showing a 3 percentage point increase; next are professional occupations (12.9 percent), increasing by 4 percentage points, production occupations (6.6 percent), decreasing by 0.3 percentage point, installation, maintenance, and repair occupations (5.2 percent), decreasing by 1 percentage point, and sales occupations, (5 percent) showing a 0.2 percentage point decrease. In the ninth position are service occupations (3.1 percent) showing a 0.2 percentage point decrease, and finally farming, fishing, and forestry occupations (0.4 percent) showed a 0.4 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Wilson County 10-Occupational Category, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	268	19.0%
47-0000	Construction and extraction occupations	255	18.1%
53-0000	Transportation and material moving occupations	220	15.6%
11-1300	Management, business, and financial occupations	198	14.0%
15-2900	Professional and related occupations	182	12.9%
51-0000	Production occupations	94	6.6%
49-0000	Installation, maintenance, and repair occupations	74	5.2%
41-0000	Sales and related occupations	70	5.0%
31-3900	Service occupations	44	3.1%
45-0000	Farming, fishing, and forestry occupations	6	0.4%
	Total	1,410	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Long-term Eagle Ford development impacts in 2021 within Wilson County are shown below. Moderate-term on-the-job training (26.9 percent) is projected to decrease by 1 percentage point; followed by short-term on-the-job training (24.7 percent), decreasing by 5.4 percentage points, bachelor's degrees (13 percent), increasing by 3.7 percentage points, work experience in a related field (11.3 percent), decreasing by 0.4 percentage point, and long-term on-the-job training (9.4 percent), decreasing by 0.8 percentage point.

In the sixth position is bachelor's degree, plus work experience (5.8 percent) showing a 1.1 percentage point increase; followed by Associate degrees (3.7 percent), increasing by 0.8 percentage point, postsecondary vocational awards (2.4 percent), decreasing by 0.2 percentage point, first professional degrees remaining at 1.5 percent, master's degrees (1.2 percent), increasing by 0.8 percentage point, and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Wilson County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
380	Moderate-term on-the-job training	26.9%
348	Short-term on-the-job training	24.7%
184	Bachelor's degree	13.0%
159	Work experience in a related occupation	11.3%
132	Long-term on-the-job training	9.4%
82	Bachelor's or higher degree, plus work experience	5.8%
52	Associate degree	3.7%
34	Postsecondary vocational award	2.4%
21	First professional degree	1.5%
17	Master's degree	1.2%
0	Doctoral degree	0.0%
1,409	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Wilson Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

SOC		Direct plus Indirect Impacts		
Occupation		Wilson County		Occupational
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
		Total	597	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	58	9.7%
2	47-2073	Operating engineers and other construction equipment operators	20	3.4%
3	47-2031	Carpenters	19	3.1%
4	47-2061	Construction laborers	18	3.0%
5	43-9061	Office clerks, general	15	2.6%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	15	2.6%
7	53-7062	Laborers and freight, stock, and material movers, hand	15	2.5%
8	43-3031	Bookkeeping, accounting, and auditing clerks	12	2.0%
9	53-7032	Excavating and loading machine and dragline operators	12	2.0%
10	11-1021	General and operations managers	12	2.0%
11	43-4051	Customer service representatives	10	1.6%
12	49-9042	Maintenance and repair workers, general	9	1.5%
13	43-6014	Secretaries, except legal, medical, and executive	9	1.5%
14	43-6011	Executive secretaries and administrative assistants	9	1.5%
15	23-1011	Lawyers	9	1.5%
16	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	9	1.4%
17	13-2011	Accountants and auditors	8	1.3%
18	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	7	1.2%
19	49-3042	Mobile heavy equipment mechanics, except engines	7	1.1%
20	53-7051	Industrial truck and tractor operators	6	1.1%
21	53-3033	Truck drivers, light or delivery services	6	1.1%
22	43-1011	First-line supervisors/managers of office and administrative support workers	6	1.0%
23	11-9021	Construction managers	6	1.0%
24	43-6012	Legal secretaries	5	0.9%
25	47-5041	Continuous mining machine operators	5	0.9%
26	47-5051	Rock splitters, quarry	5	0.8%
27	49-3031	Bus and truck mechanics and diesel engine specialists	4	0.7%
28	51-4121	Welders, cutters, solderers, and brazers	4	0.7%
29	43-4171	Receptionists and information clerks	4	0.7%
30	47-5042	Mine cutting and channeling machine operators	4	0.7%
31	51-1011	First-line supervisors/managers of production and operating workers	4	0.7%
32	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle ope	4	0.7%
33	41-9041	Telemarketers	4	0.7%
34	23-2011	Paralegals and legal assistants	4	0.7%
35	13-1199	Business operation specialists, all other	4	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts Wilson County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	816	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	60	7.3%
2	43-9061	Office clerks, general	20	2.5%
3	47-2073	Operating engineers and other construction equipment operators	20	2.5%
4	47-2031	Carpenters	19	2.4%
5	47-2061	Construction laborers	19	2.3%
6	53-7062	Laborers and freight, stock, and material movers, hand	17	2.1%
7	47-1011	First-line supervisors/managers of construction trades and extraction workers	16	1.9%
8	43-3031	Bookkeeping, accounting, and auditing clerks	15	1.9%
9	11-1021	General and operations managers	15	1.8%
10	41-2011	Cashiers, except gaming	15	1.8%
11	43-4051	Customer service representatives	14	1.7%
12	53-7032	Excavating and loading machine and dragline operators	12	1.5%
13	43-6014	Secretaries, except legal, medical, and executive	12	1.4%
14	43-6011	Executive secretaries and administrative assistants	11	1.4%
15	41-2031	Retail salespersons	11	1.4%
16	49-9042	Maintenance and repair workers, general	11	1.3%
17	23-1011	Lawyers	10	1.2%
18	13-2011	Accountants and auditors	9	1.2%
19	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	9	1.2%
20	43-1011	First-line supervisors/managers of office and administrative support workers	9	1.1%
21	31-1011	Home health aides	8	1.0%
22	53-3033	Truck drivers, light or delivery services	8	0.9%
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	7	0.9%
24	39-9021	Personal and home care aides	7	0.9%
25	43-4171	Receptionists and information clerks	7	0.8%
26	49-3042	Mobile heavy equipment mechanics, except engines	7	0.8%
27	53-7051	Industrial truck and tractor operators	7	0.8%
28	43-5081	Stock clerks and order fillers	7	0.8%
29	35-3021	Combined food preparation and serving workers, including fast food	6	0.8%
30	43-6012	Legal secretaries	6	0.7%
31	35-3031	Waiters and waitresses	6	0.7%
32	11-9021	Construction managers	6	0.7%
33	39-9011	Child care workers	6	0.7%
34	31-1012	Nursing aides, orderlies, and attendants	6	0.7%
35	41-9041	Telemarketers	5	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Wilson Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Wilson County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	1,410	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	91	6.4%
2	47-2031	Carpenters	43	3.1%
3	47-2061	Construction laborers	39	2.8%
4	43-9061	Office clerks, general	39	2.7%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers	36	2.6%
6	43-3031	Bookkeeping, accounting, and auditing clerks	35	2.5%
7	11-1021	General and operations managers	35	2.5%
8	47-2073	Operating engineers and other construction equipment operators	35	2.5%
9	13-2011	Accountants and auditors	32	2.2%
10	43-6011	Executive secretaries and administrative assistants	28	2.0%
11	43-6014	Secretaries, except legal, medical, and executive	26	1.9%
12	53-7062	Laborers and freight, stock, and material movers, hand	25	1.8%
13	43-4051	Customer service representatives	23	1.6%
14	53-7032	Excavating and loading machine and dragline operators	21	1.5%
15	49-9042	Maintenance and repair workers, general	20	1.4%
16	23-1011	Lawyers	20	1.4%
17	51-8093	Petroleum pump system operators, refinery operators, and gaugers	20	1.4%
18	53-7073	Wellhead pumpers	19	1.4%
19	17-2171	Petroleum engineers	19	1.3%
20	43-1011	First-line supervisors/managers of office and administrative support workers	15	1.1%
21	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	15	1.0%
22	19-2042	Geoscientists, except hydrologists and geographers	15	1.0%
23	47-5071	Roustabouts, oil and gas	15	1.0%
24	13-1199	Business operation specialists, all other	14	1.0%
25	11-9021	Construction managers	13	0.9%
26	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	12	0.9%
27	41-9041	Telemarketers	12	0.9%
28	49-3042	Mobile heavy equipment mechanics, except engines	12	0.9%
29	43-6012	Legal secretaries	11	0.8%
30	19-4041	Geological and petroleum technicians	11	0.8%
31	43-4171	Receptionists and information clerks	11	0.8%
32	11-3031	Financial managers	11	0.8%
33	51-1011	First-line supervisors/managers of production and operating workers	11	0.8%
34	53-7051	Industrial truck and tractor operators	10	0.7%
35	53-3033	Truck drivers, light or delivery services	10	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Wilson County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	2,001	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	95	4.8%
2	43-9061	Office clerks, general	52	2.6%
3	47-2031	Carpenters	45	2.2%
4	43-3031	Bookkeeping, accounting, and auditing clerks	43	2.1%
5	11-1021	General and operations managers	42	2.1%
6	47-2061	Construction laborers	40	2.0%
7	41-2011	Cashiers, except gaming	38	1.9%
8	47-1011	First-line supervisors/managers of construction trades and extraction workers	37	1.8%
9	43-4051	Customer service representatives	35	1.8%
10	13-2011	Accountants and auditors	35	1.8%
11	47-2073	Operating engineers and other construction equipment operators	35	1.7%
12	43-6011	Executive secretaries and administrative assistants	34	1.7%
13	43-6014	Secretaries, except legal, medical, and executive	33	1.7%
14	53-7062	Laborers and freight, stock, and material movers, hand	31	1.5%
15	41-2031	Retail salespersons	29	1.5%
16	49-9042	Maintenance and repair workers, general	24	1.2%
17	23-1011	Lawyers	23	1.2%
18	31-1011	Home health aides	23	1.2%
19	43-1011	First-line supervisors/managers of office and administrative support workers	22	1.1%
20	39-9021	Personal and home care aides	21	1.0%
21	53-7032	Excavating and loading machine and dragline operators	21	1.0%
22	51-8093	Petroleum pump system operators, refinery operators, and gaugers	20	1.0%
23	53-7073	Wellhead pumpers	19	1.0%
24	17-2171	Petroleum engineers	19	0.9%
25	43-4171	Receptionists and information clerks	17	0.9%
26	41-9041	Telemarketers	17	0.9%
27	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	17	0.9%
28	13-1199	Business operation specialists, all other	17	0.8%
29	35-3021	Combined food preparation and serving workers, including fast food	16	0.8%
30	43-5081	Stock clerks and order fillers	16	0.8%
31	39-9011	Child care workers	15	0.7%
32	43-3011	Bill and account collectors	15	0.7%
33	19-2042	Geoscientists, except hydrologists and geographers	15	0.7%
34	29-1111	Registered nurses	15	0.7%
35	47-5071	Roustabouts, oil and gas	15	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Zavala County



The following tables explain the estimated direct, indirect, and induced impacts within Zavala County for 2011 and 2021. Within Zavala County it is estimated that 436 jobs were impacted by Eagle Ford development in 2011, with direct employment being most affected.

Estimated Impact 2011				
Zavala County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	214	96	126	436

Zavala County is projected to see a total of 914 jobs impacted in 2021, with the largest impact on direct employment.

Estimated Impact 2021				
Zavala County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	369	253	292	914

Total Eagle Ford development impacts within Zavala County for 2011 are shown in the subsequent table. Construction and extraction occupations are first at 18.7 percent; followed by office and administrative occupations at 16.5 percent, transportation and material occupations at 14.5 percent, management, business, and financial occupations at 11.9 percent, and service occupations at 10.9 percent. Next are professional occupations at 8 percent, sales occupations at 7.4 percent, installations, maintenance, and repair occupations at 6.1 percent, production occupations at 5.9 percent, and farming, fishing, and forestry occupations at 0.1 percent of the labor demanded in 2011.

Occupation Code	Total Impacts Zavala County Occupational Impacts, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	82	18.7%
43-0000	Office and administrative support occupations	72	16.5%
53-0000	Transportation and material moving occupations	63	14.5%
11-1300	Management, business, and financial occupations	52	11.9%
31-3900	Service occupations	48	10.9%
15-2900	Professional and related occupations	35	8.0%
41-0000	Sales and related occupations	32	7.4%
49-0000	Installation, maintenance, and repair occupations	27	6.1%
51-0000	Production occupations	26	5.9%
45-0000	Farming, fishing, and forestry occupations	0	0.1%
	Total	436	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected total occupational impacts for 2021 in Zavala County are detailed below. Office and administrative occupations are first at 18.2 percent; followed by management, business, and financial occupations at 13.9 percent, transportation and material moving occupations at 13.5 percent, service occupations at 12.2 percent, professional occupations at 11.6 percent and construction and extraction occupations at 10.9 percent. In the seventh position are sales occupations at 7.9 percent, followed by production occupations at 6 percent, installation, maintenance, and repair occupations at 5.8 percent, and farming, fishing and forestry occupations at 0.1 percent of the potential labor demanded.

Occupation Code	Total Impacts Zavala County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	166	18.2%
11-1300	Management, business, and financial occupations	127	13.9%
53-0000	Transportation and material moving occupations	124	13.5%
31-3900	Service occupations	111	12.2%
15-2900	Professional and related occupations	106	11.6%
47-0000	Construction and extraction occupations	99	10.9%
41-0000	Sales and related occupations	73	7.9%
51-0000	Production occupations	55	6.0%
49-0000	Installation, maintenance, and repair occupations	53	5.8%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	914	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Zavala Direct and Indirect Impacts

The table below details the occupational composition of Zavala County in 2010¹⁹. The chart shows service occupations most relevant at 22.4 percent; followed by professional occupations at 16 percent, office and administrative occupations at 15.4 percent, management, business, and financial occupations at 13.6 percent, transportation and material moving occupations at 7 percent, and farming, fishing, and forestry occupations at 6 percent. In the seventh position are sales occupations at 5.8 percent, in the eighth spot are production occupations at 5.6 percent; followed by installation, maintenance, and repair occupations at 4.5 percent and construction and extraction occupations at 3.8 percent.

Occupation Code	Zavala County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	1,053	22.4%
15-2900	Professional and related occupations	754	16.0%
43-0000	Office and administrative support occupations	726	15.4%
11-1300	Management, business, and financial occupations	639	13.6%
53-0000	Transportation and material moving occupations	328	7.0%
45-0000	Farming, fishing, and forestry occupations	281	6.0%
41-0000	Sales and related occupations	273	5.8%
51-0000	Production occupations	266	5.6%
49-0000	Installation, maintenance, and repair occupations	211	4.5%
47-0000	Construction and extraction occupations	180	3.8%
	Total	4,712	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below shows the educational distribution of Zavala County for 2010. At the top of the list is short-term on-the-job training at 34.2 percent; followed by moderate-term on-the-job training at 17.8 percent, work experience in a related field at 13.9 percent, bachelor's degrees at 12.9 percent, and bachelor's or higher degree, plus work experience at 6.4 percent. In the sixth position is long-term on-the-job training at 4.7 percent, followed by postsecondary vocational awards at 4 percent, Associate degrees at 2.9 percent, and master's degrees at 2.2 percent. Last are first professional degrees at 0.7 percent and doctoral degrees at 0.3 percent.

¹⁹ Bureau of Economic Analysis: 2010 Total full-time and part-time employment (number of jobs): 4,774.

Zavala County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
1,613	Short-term on-the-job training	34.2%
836	Moderate-term on-the-job training	17.8%
654	Work experience in a related occupation	13.9%
606	Bachelor's degree	12.9%
303	Bachelor's or higher degree, plus work experience	6.4%
224	Long-term on-the-job training	4.7%
188	Postsecondary vocational award	4.0%
136	Associate degree	2.9%
102	Master's degree	2.2%
34	First professional degree	0.7%
15	Doctoral degree	0.3%
4,712	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts on occupations within Zavala County are shown in the table below. Construction and extraction occupations (26.1 percent) move to the first position and increased 22.3 percentage points; followed by transportation and material moving occupations (17.8 percent), increasing by 10.8 percentage points, office and administrative occupations (16 percent), increasing by 0.6 percentage point, management, business and financial occupations (12.6 percent), decreasing by 1 percentage point.

In the fifth position are production occupations (7.7 percent) showing a 2.1 percentage point increase; followed by installation, maintenance, and repair occupations (7.1 percent), increasing by 2.6 percentage points, professional occupations (5.1 percent), decreasing by 10.9 percentage points, and sales occupations (4.6 percent), decreasing by 1.2 percentage point. Last are service occupations (2.9 percent) moving to the ninth position and decreasing by 19.5 percentage points, and farming, fishing, and forestry occupations (less than 1 percent), decreasing by 6 percentage points.

Occupation Code	Direct Plus Indirect Impacts Zavala County 10-Occupational Categories, 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	81	26.1%
53-0000	Transportation and material moving occupations	55	17.8%
43-0000	Office and administrative support occupations	50	16.0%
11-1300	Management, business, and financial occupations	39	12.6%
51-0000	Production occupations	24	7.7%
49-0000	Installation, maintenance, and repair occupations	22	7.1%
15-2900	Professional and related occupations	16	5.1%
41-0000	Sales and related occupations	14	4.6%
31-3900	Service occupations	9	2.9%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	310	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2011 Eagle Ford development impacts on the distribution of education within Zavala County are shown in the table below. Moderate-term on-the-job training (34 percent) is first, increasing by 16.2 percentage points; followed by short-term on-the-job training (24.7 percent), decreasing by 9.5 percentage points, work experience in a related field (11.2 percent), decreased 2.7 percentage points, bachelor's degrees (11 percent), decreasing by 1.9 percentage point, and long-term on-the-job training, (10.1 percent) showing a 5.4 percentage point increase.

In the sixth position are bachelor's or higher degree, plus work experience (4.6 percent) showing a 1.8 percentage point increase; followed by postsecondary vocational awards (2.5 percent), decreasing by 1.5 percentage point, Associate degrees (1.3 percent), decreasing by 1.6 percentage point and first professional degrees (0.4 percent), decreasing by 0.3 percentage point. Last are master's degrees (0.3 percent), decreasing by 1.9 percentage point, and doctoral degrees (less than 1 percent), decreasing by 0.3 percentage point.

Direct Plus Indirect Impacts Zavala County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
105	Moderate-term on-the-job training	34.0%
77	Short-term on-the-job training	24.7%
35	Work experience in a related occupation	11.2%
34	Bachelor's degree	11.0%
31	Long-term on-the-job training	10.1%
14	Bachelor's or higher degree, plus work experience	4.6%
8	Postsecondary vocational award	2.5%
4	Associate degree	1.3%
1	First professional degree	0.4%
1	Master's degree	0.3%
0	Doctoral degree	0.0%
310	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Long-term Eagle Ford development impacts within Zavala County are shown below. Moving to the top of the list are office and administrative occupations (18.5 percent) showing a 2.5 percentage point increase; followed by transportation and material moving occupations (16.9 percent), decreasing by 0.9 percentage point, management, business, and financial occupations (15.7 percent), increasing by 3.1 percentage point, construction and extraction occupations (15.7 percent), decreasing by 10.4 percentage points, and professional occupations (9.8 percent) showing a 4.7 percentage point increase.

In the seventh position are installation, maintenance, and repair occupations (6.7 percent), decreasing by 0.4 percentage point; followed by sales occupations (5 percent), increasing by 0.4 percentage point, service occupations (3.5 percent), increasing by 0.6 percentage point, and farming, fishing, forestry remaining at less than 1 percent.

Occupation Code	Direct Plus Indirect Impacts Zavala County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	115	18.5%
53-0000	Transportation and material moving occupations	105	16.9%
11-1300	Management, business, and financial occupations	98	15.7%
47-0000	Construction and extraction occupations	97	15.7%
15-2900	Professional and related occupations	61	9.8%
51-0000	Production occupations	50	8.1%
49-0000	Installation, maintenance, and repair occupations	42	6.7%
41-0000	Sales and related occupations	31	5.0%
31-3900	Service occupations	22	3.5%
45-0000	Farming, fishing, and forestry occupations	0	0.0%
	Total	622	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected 2021 Eagle Ford Shale impacts within Zavala County are shown in the table below. Remaining in the first position is moderate-term on-the-job training (32 percent) showing a 2 percentage point decrease; followed by short-term on-the-job training (23.6 percent), decreasing by 1.1 percentage point, bachelor's degrees (14.2 percent), increasing by 3.2 percentage point, work experience in a related field (10.7 percent), decreasing by 0.5 percentage point, and long-term on-the-job training (6.9 percent) showing a 3.2 percentage point decrease.

In the sixth position are bachelor's degrees (6 percent) showing a 1.4 percentage point increase; followed by postsecondary vocational awards remaining at 2.5 percent, Associate degrees (2.4 percent), increasing by 1.1 percentage point, and master's degrees (1.2 percent), decreasing by 0.9 percentage point. Last are first professional degrees (0.5 percent), increasing by 0.1 percentage point and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Zavala County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
199	Moderate-term on-the-job training	32.0%
147	Short-term on-the-job training	23.6%
88	Bachelor's degree	14.2%
66	Work experience in a related occupation	10.7%
43	Long-term on-the-job training	6.9%
37	Bachelor's or higher degree, plus work experience	6.0%
15	Postsecondary vocational award	2.5%
15	Associate degree	2.4%
7	Master's degree	1.2%
3	First professional degree	0.5%
0	Doctoral degree	0.0%
622	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Zavala Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

SOC Occupation Code		Direct plus Indirect Impacts Zavala County Top 35 Occupations Impacted in 2011		Occupational Impact	Percentage
Ranking					
		Total		310	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer		21	6.9%
2	47-2073	Operating engineers and other construction equipment operators		15	4.7%
3	47-2031	Carpenters		13	4.3%
4	47-2061	Construction laborers		13	4.3%
5	47-1011	First-line supervisors/managers of construction trades and extraction workers		11	3.5%
6	53-7032	Excavating and loading machine and dragline operators		10	3.2%
7	43-9061	Office clerks, general		9	2.8%
8	43-3031	Bookkeeping, accounting, and auditing clerks		7	2.3%
9	49-9042	Maintenance and repair workers, general		7	2.2%
10	11-1021	General and operations managers		6	2.1%
11	13-2011	Accountants and auditors		6	2.0%
12	53-7062	Laborers and freight, stock, and material movers, hand		6	1.9%
13	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders		6	1.9%
14	43-6011	Executive secretaries and administrative assistants		5	1.7%
15	43-6014	Secretaries, except legal, medical, and executive		5	1.6%
16	41-3031	Securities, commodities, and financial services sales agents		5	1.5%
17	11-9021	Construction managers		4	1.3%
18	53-7051	Industrial truck and tractor operators		4	1.3%
19	47-5051	Rock splitters, quarry		4	1.2%
20	49-3042	Mobile heavy equipment mechanics, except engines		4	1.2%
21	47-5041	Continuous mining machine operators		3	1.1%
22	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		3	1.0%
23	43-4051	Customer service representatives		3	1.0%
24	43-1011	First-line supervisors/managers of office and administrative support workers		3	1.0%
25	47-5042	Mine cutting and channeling machine operators		3	0.9%
26	51-4121	Welders, cutters, solderers, and brazers		3	0.8%
27	51-1011	First-line supervisors/managers of production and operating workers		2	0.8%
28	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping		2	0.8%
29	49-9041	Industrial machinery mechanics		2	0.7%
30	11-3031	Financial managers		2	0.7%
31	43-4171	Receptionists and information clerks		2	0.7%
32	51-9111	Packaging and filling machine operators and tenders		2	0.7%
33	37-2011	Janitors and cleaners, except maids and housekeeping cleaners		2	0.7%
34	47-2111	Electricians		2	0.6%
35	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle ope		2	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts Zavala County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
		Total	436	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	22	5.0%
2	47-2073	Operating engineers and other construction equipment operators	15	3.3%
3	47-2031	Carpenters	14	3.1%
4	47-2061	Construction laborers	13	3.1%
5	43-9061	Office clerks, general	12	2.8%
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	11	2.5%
7	53-7032	Excavating and loading machine and dragline operators	10	2.3%
8	43-3031	Bookkeeping, accounting, and auditing clerks	9	2.1%
9	49-9042	Maintenance and repair workers, general	8	1.9%
10	11-1021	General and operations managers	8	1.9%
11	13-2011	Accountants and auditors	7	1.7%
12	43-6011	Executive secretaries and administrative assistants	7	1.6%
13	53-7062	Laborers and freight, stock, and material movers, hand	7	1.6%
14	43-6014	Secretaries, except legal, medical, and executive	7	1.6%
15	41-2011	Cashiers, except gaming	7	1.5%
16	41-3031	Securities, commodities, and financial services sales agents	7	1.5%
17	41-2031	Retail salespersons	6	1.4%
18	39-9021	Personal and home care aides	6	1.4%
19	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	6	1.4%
20	31-1011	Home health aides	5	1.2%
21	43-4051	Customer service representatives	5	1.2%
22	43-1011	First-line supervisors/managers of office and administrative support workers	4	1.0%
23	11-9021	Construction managers	4	0.9%
24	53-7051	Industrial truck and tractor operators	4	0.9%
25	35-3021	Combined food preparation and serving workers, including fast food	4	0.9%
26	35-3031	Waiters and waitresses	4	0.9%
27	47-5051	Rock splitters, quarry	4	0.9%
28	49-3042	Mobile heavy equipment mechanics, except engines	4	0.8%
29	43-4171	Receptionists and information clerks	4	0.8%
30	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	0.8%
31	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	3	0.8%
32	47-5041	Continuous mining machine operators	3	0.8%
33	11-3031	Financial managers	3	0.7%
34	47-5042	Mine cutting and channeling machine operators	3	0.7%
35	29-1111	Registered nurses	3	0.6%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Zavala Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct plus Indirect Impacts Zavala County	Occupational	
		Top 35 Occupations Impacted in 2021	Impact	Percentage
		Total	622	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	37	5.9%
2	47-2073	Operating engineers and other construction equipment operators	23	3.7%
3	43-9061	Office clerks, general	20	3.2%
4	13-2011	Accountants and auditors	20	3.2%
5	43-3031	Bookkeeping, accounting, and auditing clerks	18	2.8%
6	53-7032	Excavating and loading machine and dragline operators	17	2.7%
7	11-1021	General and operations managers	16	2.5%
8	49-9042	Maintenance and repair workers, general	14	2.3%
9	43-6011	Executive secretaries and administrative assistants	14	2.2%
10	43-6014	Secretaries, except legal, medical, and executive	12	2.0%
11	47-1011	First-line supervisors/managers of construction trades and extraction workers	12	2.0%
12	47-2061	Construction laborers	10	1.7%
13	53-7062	Laborers and freight, stock, and material movers, hand	10	1.6%
14	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	10	1.6%
15	41-3031	Securities, commodities, and financial services sales agents	8	1.3%
16	51-8093	Petroleum pump system operators, refinery operators, and gaugers	8	1.3%
17	53-7073	Wellhead pumpers	8	1.3%
18	17-2171	Petroleum engineers	8	1.3%
19	43-4051	Customer service representatives	7	1.1%
20	43-1011	First-line supervisors/managers of office and administrative support workers	7	1.1%
21	53-7051	Industrial truck and tractor operators	7	1.1%
22	47-2031	Carpenters	7	1.1%
23	49-3042	Mobile heavy equipment mechanics, except engines	7	1.1%
24	47-5051	Rock splitters, quarry	6	1.0%
25	13-1199	Business operation specialists, all other	6	1.0%
26	47-5071	Roustabouts, oil and gas	6	1.0%
27	19-2042	Geoscientists, except hydrologists and geographers	6	1.0%
28	11-3031	Financial managers	6	0.9%
29	51-1011	First-line supervisors/managers of production and operating workers	6	0.9%
30	47-5041	Continuous mining machine operators	6	0.9%
31	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	6	0.9%
32	47-5042	Mine cutting and channeling machine operators	5	0.8%
33	43-4171	Receptionists and information clerks	5	0.8%
34	13-2051	Financial analysts	5	0.8%
35	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	5	0.8%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Top 35 Occupations: Total impacts 2021

Ranking	SOC Occupation Code	Total Impacts Zavala County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
		Total	914	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	38	4.2%
2	43-9061	Office clerks, general	28	3.1%
3	47-2073	Operating engineers and other construction equipment operators	23	2.5%
4	13-2011	Accountants and auditors	23	2.5%
5	43-3031	Bookkeeping, accounting, and auditing clerks	22	2.4%
6	11-1021	General and operations managers	20	2.1%
7	49-9042	Maintenance and repair workers, general	18	2.0%
8	43-6011	Executive secretaries and administrative assistants	18	1.9%
9	43-6014	Secretaries, except legal, medical, and executive	17	1.8%
10	53-7032	Excavating and loading machine and dragline operators	17	1.8%
11	41-2011	Cashiers, except gaming	15	1.6%
12	39-9021	Personal and home care aides	14	1.6%
13	41-2031	Retail salespersons	14	1.5%
14	31-1011	Home health aides	13	1.4%
15	41-3031	Securities, commodities, and financial services sales agents	13	1.4%
16	47-1011	First-line supervisors/managers of construction trades and extraction workers	12	1.4%
17	53-7062	Laborers and freight, stock, and material movers, hand	12	1.3%
18	43-4051	Customer service representatives	12	1.3%
19	47-2061	Construction laborers	11	1.2%
20	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	10	1.1%
21	43-1011	First-line supervisors/managers of office and administrative support workers	10	1.1%
22	35-3021	Combined food preparation and serving workers, including fast food	9	0.9%
23	35-3031	Waiters and waitresses	9	0.9%
24	43-4171	Receptionists and information clerks	8	0.9%
25	51-8093	Petroleum pump system operators, refinery operators, and gaugers	8	0.9%
26	53-7073	Wellhead pumpers	8	0.9%
27	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	8	0.9%
28	17-2171	Petroleum engineers	8	0.9%
29	13-1199	Business operation specialists, all other	8	0.9%
30	11-3031	Financial managers	8	0.8%
31	53-7051	Industrial truck and tractor operators	7	0.8%
32	47-2031	Carpenters	7	0.8%
33	29-1111	Registered nurses	7	0.7%
34	49-3042	Mobile heavy equipment mechanics, except engines	7	0.7%
35	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	6	0.7%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Bexar County



The following tables explain the estimated direct, indirect, and induced impacts within Bexar County for 2011 and 2021. It is estimated that a total of 4,290 Bexar County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
Bexar County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	486	2,164	1,640	4,290

In 2021, Bexar County is projected to see a total of 11,627 jobs impacted by Eagle Ford development, with the largest impact on indirect employment.

Estimated Impact 2021				
Bexar County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	50	6,145	5,432	11,627

Total Eagle Ford development impacts within Bexar County in 2011 are detailed in the table below. First are office and administrative occupations at 21.7 percent, followed by management, business, and financial occupations at 13.4 percent, service occupations at 13.3 percent, construction and extraction occupations at 11.3 percent, and professional occupations at 11.1 percent. Sixth are sales occupations at 10.9 percent, followed by transportation and material moving occupations at 8.1 percent, production occupations at 5.2 percent, installation, maintenance, and repair occupations at 4.9 percent, and farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Bexar County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	933	21.7%
11-1300	Management, business, and financial occupations	574	13.4%
31-3900	Service occupations	570	13.3%
47-0000	Construction and extraction occupations	487	11.3%
15-2900	Professional and related occupations	478	11.1%
41-0000	Sales and related occupations	466	10.9%
53-0000	Transportation and material moving occupations	346	8.1%
51-0000	Production occupations	222	5.2%
49-0000	Installation, maintenance, and repair occupations	209	4.9%
45-0000	Farming, fishing, and forestry occupations	6	0.1%
	Total	4,290	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected total Eagle Ford development impacts for 2021 within Bexar County are detailed below. Foremost are office and administrative occupations at 21.8 percent, followed by service occupations at 15.1 percent, management, business, and financial occupations at 13.4 percent, professional occupations at 12.8 percent, sales occupations at 11.3 percent, and transportation and material moving occupations at 8 percent. Next are construction and extraction occupations at 7.3 percent, production occupations at 5.2 percent, installation, maintenance, and repair occupations at 4.9 percent, and farming, fishing, forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Bexar County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	2,537	21.8%
31-3900	Service occupations	1,760	15.1%
11-1300	Management, business, and financial occupations	1,559	13.4%
15-2900	Professional and related occupations	1,489	12.8%
41-0000	Sales and related occupations	1,317	11.3%
53-0000	Transportation and material moving occupations	932	8.0%
47-0000	Construction and extraction occupations	849	7.3%
51-0000	Production occupations	603	5.2%
49-0000	Installation, maintenance, and repair occupations	564	4.9%
45-0000	Farming, fishing, and forestry occupations	16	0.1%
	Total	11,627	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Bexar Direct and Indirect Impacts

The table below is a depiction of the occupational composition of Bexar County in 2010. It shows service occupations at 21 percent; followed by office and administrative occupations at 19.7 percent, professional occupations at 17.6 percent, management, business, and financial occupations at 13.5 percent, and sales occupations at 9.9 percent.

In the sixth position are transportation and material moving occupations at 5.5 percent; followed by construction and extraction occupations at 5 percent, production occupations at 3.7 percent, installation, maintenance, and repair occupations also at 3.7 percent, and farming, fishing, and forestry occupations at 0.3 percent of the labor demanded in 2010.

Occupation Code	Bexar County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	212,498	21.0%
43-0000	Office and administrative support occupations	199,541	19.7%
15-2900	Professional and related occupations	177,882	17.6%
11-1300	Management, business, and financial occupations	136,713	13.5%
41-0000	Sales and related occupations	99,894	9.9%
53-0000	Transportation and material moving occupations	55,332	5.5%
47-0000	Construction and extraction occupations	50,318	5.0%
51-0000	Production occupations	37,879	3.7%
49-0000	Installation, maintenance, and repair occupations	37,332	3.7%
45-0000	Farming, fishing, and forestry occupations	2,983	0.3%
	Total	1,010,371	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The table below details the educational distribution of Bexar County in 2010. It shows short-term on-the-job training at 36.2 percent; followed by moderate-term on-the-job training at 16.9 percent, bachelor's degrees at 13.6 percent, work experience in a related field at 9.5 percent, long-term on-the-job training at 6.2 percent and postsecondary vocational awards at 5 percent. In the seventh position are bachelor's degrees, plus work experience at 4.8 percent; followed by Associate degrees at 4.5 percent, first professional degrees at 1.4 percent, master's degrees at 1.3 percent, and doctoral degrees at 0.7 percent.

Bexar County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
365,377	Short-term on-the-job training	36.2%
171,040	Moderate-term on-the-job training	16.9%
137,025	Bachelor's degree	13.6%
95,958	Work experience in a related occupation	9.5%
62,230	Long-term on-the-job training	6.2%
50,776	Postsecondary vocational award	5.0%
48,615	Bachelor's or higher degree, plus work experience	4.8%
45,187	Associate degree	4.5%
14,066	First professional degree	1.4%
13,424	Master's degree	1.3%
6,674	Doctoral degree	0.7%
1,010,371	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts on occupations within Bexar County are shown below. Foremost are office and administrative occupations (21.4 percent) showing a 1.7 percentage point increase; followed by construction and extraction occupations (17.5 percent), increasing by 12.5 percentage points, management, business, and financial occupations (14.6 percent), increasing by 1.1 percent, transportation and material occupations (9.5 percent), increasing by 4 percentage points, and professional occupations (9.2 percent), decreasing by 8.4 percentage points.

In the sixth position are sales occupations (8.8 percent) showing a 1.1 percentage point decrease; followed by service occupations (7.1 percent), decreasing by 13.9 percentage points, production occupations (6.5 percent), increasing by 2.8 percentage points, installation, maintenance, and repair occupations (5.2 percent), increasing by 1.5 percentage point, and farming, fishing, and forestry occupations (0.1 percent), decreasing by 0.2 percentage point.

Occupation Code	Direct Plus Indirect Impacts Bexar County 10-Occupational Categories, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	567	21.4%
47-0000	Construction and extraction occupations	464	17.5%
11-1300	Management, business, and financial occupations	388	14.6%
53-0000	Transportation and material moving occupations	251	9.5%
15-2900	Professional and related occupations	244	9.2%
41-0000	Sales and related occupations	234	8.8%
31-3900	Service occupations	189	7.1%
51-0000	Production occupations	172	6.5%
49-0000	Installation, maintenance, and repair occupations	138	5.2%
45-0000	Farming, fishing, and forestry occupations	4	0.1%
	Total	2,651	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Below are the Eagle Ford development impacts on the educational distribution in 2011 within Bexar County. Remaining in the first position is short-term on-the-job training (28.4 percent) showing a 7.8 percentage point decrease; followed by moderate-term on-the-job training (24 percent), increasing by 7.1 percentage points, bachelor's degrees (12.7 percent), decreasing by 0.9 percentage point, work experience in a related field (12.4 percent), increasing by 2.9 percentage points, and long-term on-the-job training (10.3 percent), increasing by 4.1 percentage points.

In the sixth position is bachelor's degree, plus work experience (5.2 percent), increasing by 0.4 percentage point; followed by postsecondary vocational awards (3.8 percent), decreasing by 1.2 percentage point, Associate degrees (2.1 percent), decreasing by 2.4 percentage points, first professional degrees (0.4 percent), decreasing by 1 percentage point, master's degrees (0.4 percent), decreasing by 0.9 percentage point and doctoral degrees (0.1 percent), decreasing by 0.6 percentage point.

Direct Plus Indirect Impacts Bexar County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
754	Short-term on-the-job training	28.4%
636	Moderate-term on-the-job training	24.0%
337	Bachelor's degree	12.7%
329	Work experience in a related occupation	12.4%
274	Long-term on-the-job training	10.3%
139	Bachelor's or higher degree, plus work experience	5.2%
102	Postsecondary vocational award	3.8%
57	Associate degree	2.1%
12	First professional degree	0.4%
11	Master's degree	0.4%
2	Doctoral degree	0.1%
2,651	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The long-term occupational impacts of Eagle Ford development within Bexar County are shown in the table below. Projected to remain in the first position are office and administrative occupations (22.1 percent) showing a 0.7 percentage point increase; followed by management, business, and financial occupations (15.7 percent), increasing by 1.1 percentage point, construction and extraction occupations (12.6 percent), decreasing by 4.9 percentage points, professional occupations (11 percent), increasing by 1.8 percentage point, transportation and material occupations (10 percent), increasing by 0.5 percentage point, and sale occupations (8.6 percent), decreasing by 0.2 percentage point.

In the seventh position are production occupations (7.2 percent) showing a 0.7 percentage point increase; followed by service occupations (7.2 percent), increasing by 0.1 percentage point, installation, maintenance, and repair occupations (5.5 percent), increasing by 0.3 percentage point, and farming, fishing, and forestry occupations projected to remain at 0.1 percent of the labor demanded.

Occupation Code	Direct Plus Indirect Impacts Bexar County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,369	22.1%
11-1300	Management, business, and financial occupations	974	15.7%
47-0000	Construction and extraction occupations	782	12.6%
15-2900	Professional and related occupations	678	11.0%
53-0000	Transportation and material moving occupations	619	10.0%
41-0000	Sales and related occupations	535	8.6%
51-0000	Production occupations	446	7.2%
31-3900	Service occupations	445	7.2%
49-0000	Installation, maintenance, and repair occupations	340	5.5%
45-0000	Farming, fishing, and forestry occupations	7	0.1%
	Total	6,195	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected long-term Eagle Ford development impacts in 2021 on the educational distribution within Bexar County are shown below. Remaining in the first position, but decreasing by 0.5 percentage point is short-term on-the-job training (27.9 percent); followed by moderate-term on-the-job training (24.4 percent), increasing by 0.4 percentage points, bachelor's degrees (13.7 percent), increasing by 1 percentage point, work experience in a related field (11.9 percent), decreasing by 0.5 percentage point, and long-term on-the-job training (8.6 percent), decreasing by 1.7 percentage point.

In the sixth position is bachelor's degrees, plus work experience (5.9 percent), increasing by 0.7 percentage point; followed by postsecondary vocational awards (3.5 percent), decreasing by 0.3 percentage point, Associate degrees (2.7 percent), increasing by 0.6 percentage point, and master's degrees (0.8 percent), increasing by 0.4 percentage point. Last are first professional degrees (0.5 percent), increasing by 0.1 percentage point, and doctoral degrees projected to remain at 0.1 percent of the labor demanded.

Bexar County Projected Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
1,727	Short-term on-the-job training	27.9%
1,511	Moderate-term on-the-job training	24.4%
846	Bachelor's degree	13.7%
739	Work experience in a related occupation	11.9%
533	Long-term on-the-job training	8.6%
367	Bachelor's or higher degree, plus work experience	5.9%
220	Postsecondary vocational award	3.5%
164	Associate degree	2.7%
50	Master's degree	0.8%
33	First professional degree	0.5%
5	Doctoral degree	0.1%
6,195	Total	100.0%

Bexar Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Bexar County Top 35 Occupations Impacted in 2011		Occupational Impact Percentage	
			2,651	100.0%	
1	47-2031	Carpenters	130	4.9%	
2	47-2061	Construction laborers	102	3.8%	
3	43-9061	Office clerks, general	80	3.0%	
4	53-3032	Truck drivers, heavy and tractor-trailer	76	2.8%	
5	43-4051	Customer service representatives	71	2.7%	
6	47-1011	First-line supervisors/managers of construction trades and extraction workers	71	2.7%	
7	53-7062	Laborers and freight, stock, and material movers, hand	60	2.3%	
8	43-3031	Bookkeeping, accounting, and auditing clerks	59	2.2%	
9	49-9042	Maintenance and repair workers, general	57	2.1%	
10	11-1021	General and operations managers	53	2.0%	
11	43-6011	Executive secretaries and administrative assistants	50	1.9%	
12	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	49	1.9%	
13	43-6014	Secretaries, except legal, medical, and executive	46	1.7%	
14	13-2011	Accountants and auditors	41	1.5%	
15	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	40	1.5%	
16	11-9021	Construction managers	39	1.5%	
17	43-1011	First-line supervisors/managers of office and administrative support workers	35	1.3%	
18	41-2031	Retail salespersons	25	0.9%	
19	41-9041	Telemarketers	25	0.9%	
20	43-4171	Receptionists and information clerks	24	0.9%	
21	51-2092	Team assemblers	24	0.9%	
22	47-2073	Operating engineers and other construction equipment operators	23	0.9%	
23	43-3011	Bill and account collectors	23	0.9%	
24	13-1199	Business operation specialists, all other	23	0.9%	
25	41-9022	Real estate sales agents	23	0.9%	
26	13-2072	Loan officers	22	0.8%	
27	53-3033	Truck drivers, light or delivery services	22	0.8%	
28	11-9141	Property, real estate, and community association managers	21	0.8%	
29	37-3011	Landscaping and groundskeeping workers	20	0.7%	
30	13-1051	Cost estimators	19	0.7%	
31	17-2051	Civil engineers	18	0.7%	
32	11-3031	Financial managers	18	0.7%	
33	35-3031	Waiters and waitresses	17	0.7%	
34	51-4121	Welders, cutters, solderers, and brazers	17	0.6%	
35	43-5081	Stock clerks and order fillers	17	0.6%	

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Bexar County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
			4,290	100.0%
1	47-2031	Carpenters	136	3.2%
2	43-9061	Office clerks, general	130	3.0%
3	43-4051	Customer service representatives	117	2.7%
4	47-2061	Construction laborers	107	2.5%
5	49-9042	Maintenance and repair workers, general	90	2.1%
6	41-2031	Retail salespersons	90	2.1%
7	53-3032	Truck drivers, heavy and tractor-trailer	88	2.1%
8	43-3031	Bookkeeping, accounting, and auditing clerks	87	2.0%
9	53-7062	Laborers and freight, stock, and material movers, hand	86	2.0%
10	11-1021	General and operations managers	76	1.8%
11	43-6011	Executive secretaries and administrative assistants	75	1.7%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	73	1.7%
13	43-6014	Secretaries, except legal, medical, and executive	72	1.7%
14	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	71	1.6%
15	41-2011	Cashiers, except gaming	65	1.5%
16	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	62	1.4%
17	13-2011	Accountants and auditors	57	1.3%
18	43-1011	First-line supervisors/managers of office and administrative support workers	57	1.3%
19	35-3031	Waiters and waitresses	51	1.2%
20	35-3021	Combined food preparation and serving workers, including fast food	49	1.2%
21	43-4171	Receptionists and information clerks	46	1.1%
22	11-9021	Construction managers	40	0.9%
23	13-2072	Loan officers	39	0.9%
24	37-2012	Maids and housekeeping cleaners	39	0.9%
25	43-5081	Stock clerks and order fillers	39	0.9%
26	29-1111	Registered nurses	38	0.9%
27	41-9022	Real estate sales agents	38	0.9%
28	41-9041	Telemarketers	37	0.9%
29	43-3011	Bill and account collectors	37	0.9%
30	37-3011	Landscaping and groundskeeping workers	36	0.8%
31	13-1199	Business operation specialists, all other	35	0.8%
32	11-9141	Property, real estate, and community association managers	35	0.8%
33	53-3033	Truck drivers, light or delivery services	32	0.7%
34	51-2092	Team assemblers	30	0.7%
35	43-4131	Loan interviewers and clerks	28	0.7%

Bexar Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Bexar County Top 35 Occupations Impacted in 2021		Occupational Impact Percentage	
			6,195	100.0%	
1	43-9061	Office clerks, general	195	3.2%	
2	47-2031	Carpenters	173	2.8%	
3	43-4051	Customer service representatives	163	2.6%	
4	53-3032	Truck drivers, heavy and tractor-trailer	163	2.6%	
5	43-3031	Bookkeeping, accounting, and auditing clerks	151	2.4%	
6	47-2061	Construction laborers	145	2.3%	
7	49-9042	Maintenance and repair workers, general	139	2.2%	
8	11-1021	General and operations managers	138	2.2%	
9	53-7062	Laborers and freight, stock, and material movers, hand	131	2.1%	
10	43-6011	Executive secretaries and administrative assistants	127	2.1%	
11	13-2011	Accountants and auditors	125	2.0%	
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	114	1.8%	
13	43-6014	Secretaries, except legal, medical, and executive	113	1.8%	
14	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	105	1.7%	
15	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	94	1.5%	
16	43-1011	First-line supervisors/managers of office and administrative support workers	83	1.3%	
17	47-2073	Operating engineers and other construction equipment operators	65	1.1%	
18	13-1199	Business operation specialists, all other	64	1.0%	
19	51-8093	Petroleum pump system operators, refinery operators, and gaugers	64	1.0%	
20	41-2031	Retail salespersons	61	1.0%	
21	41-9022	Real estate sales agents	56	0.9%	
22	43-4171	Receptionists and information clerks	56	0.9%	
23	41-9041	Telemarketers	54	0.9%	
24	13-2072	Loan officers	54	0.9%	
25	11-9021	Construction managers	53	0.9%	
26	43-3011	Bill and account collectors	53	0.8%	
27	11-9141	Property, real estate, and community association managers	51	0.8%	
28	11-3031	Financial managers	50	0.8%	
29	51-2092	Team assemblers	48	0.8%	
30	37-3011	Landscaping and groundskeeping workers	46	0.7%	
31	17-2171	Petroleum engineers	45	0.7%	
32	53-7073	Wellhead pumpers	45	0.7%	
33	53-3033	Truck drivers, light or delivery services	44	0.7%	
34	35-3031	Waiters and waitresses	40	0.6%	
35	51-1011	First-line supervisors/managers of production and operating workers	39	0.6%	

Top 35 Occupations: Total impacts 2021

Ranking	SOC Occupation Code	Total Impacts Bexar County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			11,627	100.0%
1	43-9061	Office clerks, general	354	3.0%
2	43-4051	Customer service representatives	307	2.6%
3	41-2031	Retail salespersons	296	2.5%
4	43-3031	Bookkeeping, accounting, and auditing clerks	241	2.1%
5	49-9042	Maintenance and repair workers, general	237	2.0%
6	41-2011	Cashiers, except gaming	218	1.9%
7	53-7062	Laborers and freight, stock, and material movers, hand	215	1.9%
8	11-1021	General and operations managers	211	1.8%
9	53-3032	Truck drivers, heavy and tractor-trailer	205	1.8%
10	43-6011	Executive secretaries and administrative assistants	205	1.8%
11	43-6014	Secretaries, except legal, medical, and executive	196	1.7%
12	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	192	1.7%
13	47-2031	Carpenters	192	1.6%
14	13-2011	Accountants and auditors	178	1.5%
15	47-2061	Construction laborers	161	1.4%
16	35-3031	Waiters and waitresses	154	1.3%
17	43-1011	First-line supervisors/managers of office and administrative support workers	154	1.3%
18	35-3021	Combined food preparation and serving workers, including fast food	152	1.3%
19	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	145	1.2%
20	29-1111	Registered nurses	128	1.1%
21	43-4171	Receptionists and information clerks	127	1.1%
22	37-2012	Maids and housekeeping cleaners	124	1.1%
23	47-1011	First-line supervisors/managers of construction trades and extraction workers	122	1.0%
24	43-5081	Stock clerks and order fillers	114	1.0%
25	13-2072	Loan officers	106	0.9%
26	13-1199	Business operation specialists, all other	103	0.9%
27	41-9022	Real estate sales agents	98	0.8%
28	37-3011	Landscaping and groundskeeping workers	98	0.8%
29	43-3011	Bill and account collectors	93	0.8%
30	11-9141	Property, real estate, and community association managers	91	0.8%
31	41-9041	Telemarketers	90	0.8%
32	39-9011	Child care workers	79	0.7%
33	53-3033	Truck drivers, light or delivery services	79	0.7%
34	11-3031	Financial managers	78	0.7%
35	41-1011	First-line supervisors/managers of retail sales workers	78	0.7%

Jim Wells County



The following tables explain the estimated direct, indirect, and induced impacts within Jim Wells County for 2011 and 2021. It is estimated that a total of 227 Jim Wells County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
Jim Wells County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	162	66	227

In 2021, Jim Wells County is projected to see a total of 1,221 jobs impacted by Eagle Ford, with the largest impact on indirect employment.

Estimated Impact 2021				
Jim Wells County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	868	353	1,221

Eagle Ford total impacts in 2011 within Jim Wells County are detailed in the table below. First are transportation and material moving occupations at 17.6 percent, followed by office and administrative occupations at 16.3 percent, service occupations at 12.3 percent, construction and extraction occupations at 12 percent, management, business, and financial occupations at 8.7 percent, and production occupations at 8.3 percent. Next are sales occupations at 8.3 percent, professional occupations at 8.1 percent, installation, maintenance, and repair occupations at 8.1 percent, and farming, fishing, and forestry occupations at 0.2 percent.

Occupation Code	Total Impacts Jim Wells County Occupational Impacts, 2011	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	40	17.6%
43-0000	Office and administrative support occupations	37	16.3%
31-3900	Service occupations	28	12.3%
47-0000	Construction and extraction occupations	27	12.0%
11-1300	Management, business, and financial occupations	20	8.7%
51-0000	Production occupations	19	8.3%
41-0000	Sales and related occupations	19	8.2%
15-2900	Professional and related occupations	19	8.1%
49-0000	Installation, maintenance, and repair occupations	19	8.1%
45-0000	Farming, fishing, and forestry occupations	1	0.2%
	Total	227	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projections of Eagle Ford total impacts in 2021 are shown in the table below. Transportation and material moving occupations are first at 18.5 percent, next are office and administrative occupations at 15.8 percent, construction and extraction occupations at 13.6 percent, service occupations at 12.1 percent, management, business, and financial occupations at 8.5 percent, and production occupations at 8.5 percent. Seventh are professional occupations at 8 percent, installation, maintenance, and repair occupations at 7.5 percent, sales occupations at 7.4 percent, and farming, fishing, and forestry occupations at 0.2 percent.

Occupation Code	Total Impacts Jim Wells County Occupational Impacts, 2021	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	225	18.5%
43-0000	Office and administrative support occupations	192	15.8%
47-0000	Construction and extraction occupations	166	13.6%
31-3900	Service occupations	148	12.1%
11-1300	Management, business, and financial occupations	104	8.5%
51-0000	Production occupations	103	8.5%
15-2900	Professional and related occupations	98	8.0%
49-0000	Installation, maintenance, and repair occupations	92	7.5%
41-0000	Sales and related occupations	90	7.4%
45-0000	Farming, fishing, and forestry occupations	2	0.2%
	Total	1,221	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Jim Wells Direct and Indirect Impacts

The Jim Wells 2010 occupational composition is shown below. Service occupations are positioned first at 23.2 percent; followed by office and administrative occupations at 15.2 percent, professional occupations at 14 percent, management, business, and financial occupations at 10.3 percent, transportation and material occupations at 10.1 percent, and sales occupations at 8.2 percent. Construction and extraction occupations are next at 6.4 percent, followed by production occupations at 4.4 percent, installation, maintenance, and repair occupations at 4.2 percent, and farming, fishing and forestry at 3.9 percent.

Occupation Code	Jim Wells County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	5,513	23.2%
43-0000	Office and administrative support occupations	3,609	15.2%
15-2900	Professional and related occupations	3,332	14.0%
11-1300	Management, business, and financial occupations	2,455	10.3%
53-0000	Transportation and material moving occupations	2,396	10.1%
41-0000	Sales and related occupations	1,956	8.2%
47-0000	Construction and extraction occupations	1,517	6.4%
51-0000	Production occupations	1,057	4.4%
49-0000	Installation, maintenance, and repair occupations	1,009	4.2%
45-0000	Farming, fishing, and forestry occupations	925	3.9%
	Total	23,771	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The educational distribution within Jim Wells County in 2010 is depicted in the table below. First on the list is short-term on-the-job training at 39.6 percent; followed by moderate-term on-the-job training at 17.7 percent, work experience in a related field at 12.5 percent, bachelor's degrees at 8.3 percent, postsecondary vocational awards at 5.1 percent, and bachelor's or higher degree, plus work experience at 5 percent of the labor demanded in 2010. Seventh is long-term on-the-job training at 4.8 percent; followed by occupations requiring Associate degrees at 4.5 percent, master's degrees at 1.3 percent, first professional degrees at 0.9 percent, and doctoral degrees at 0.2 percent.

Jim Wells County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
9,423	Short-term on-the-job training	39.6%
4,204	Moderate-term on-the-job training	17.7%
2,969	Work experience in a related occupation	12.5%
1,970	Bachelor's degree	8.3%
1,217	Postsecondary vocational award	5.1%
1,185	Bachelor's or higher degree, plus work experience	5.0%
1,153	Long-term on-the-job training	4.8%
1,060	Associate degree	4.5%
318	Master's degree	1.3%
213	First professional degree	0.9%
59	Doctoral degree	0.2%
23,771	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Eagle Ford development impacts in 2011 within Jim Wells County are illustrated in the table below. Office and administrative occupations (21.1 percent) move to the first position showing a 5.9 percentage point increase; followed by transportation and material moving occupations (17.1 percent), increasing by 7 percentage points, sales occupations (13.2), increasing by 5 percentage points, management, business, and financial occupations (11 percent), increasing by 0.3 percentage point, and installation, maintenance, and repair occupations (8.3 percent), increasing by 4.1 percentage point.

Moving to the fifth position are construction and extraction occupations (8 percent) showing a 1.6 percentage point increase, followed by service occupations (7.2 percent), decreasing by 16 percentage points, professional occupations (7 percent), decreasing by 7 percentage points, production occupations (6.6 percent), increasing by 2.2 percentage points, farming, fishing, and forestry occupations (0.4 percent) showing a 3.5 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Jim Wells County 10-Occupational Categories, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	12	21.1%
53-0000	Transportation and material moving occupations	9	17.1%
41-0000	Sales and related occupations	7	13.2%
11-1300	Management, business, and financial occupations	6	11.0%
49-0000	Installation, maintenance, and repair occupations	5	8.3%
47-0000	Construction and extraction occupations	4	8.0%
31-3900	Service occupations	4	7.2%
15-2900	Professional and related occupations	4	7.0%
51-0000	Production occupations	4	6.6%
45-0000	Farming, fishing, and forestry occupations	0	0.4%
	Total	55	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The educational distribution impacts of Eagle Ford development in 2011 within Jim Wells County are shown below. Short-term on-the-job training (35.8 percent) stays in the first position but decreased 3.8 percentage points; followed by moderate-term on-the-job training (22.9 percent), increasing by 5.2 percentage points, work experience in a related field (15.9 percent), increasing by 3.4 percentage points, bachelor's degrees (8.7 percent), increasing by 0.4 percentage point, and long-term on-the-job training (6.4 percent).

Sixth is bachelor's degree, plus work experience (4.6 percent) showing a 0.4 percentage point decrease; followed by postsecondary vocational awards (3.2 percent), decreasing by 1.9 percentage point, Associate degrees (1.7 percent), decreasing by 2.8 percentage points, and first professional degrees (0.3 percent), decreasing by 0.6 percentage point. Last are master's degrees (0.2 percent), decreasing by 1.1 percentage point and doctoral degrees (less than 1 percent) showing a 0.2 percentage point decrease.

Direct Plus Indirect Impacts Jim Wells County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
20	Short-term on-the-job training	35.8%
13	Moderate-term on-the-job training	22.9%
9	Work experience in a related occupation	15.9%
5	Bachelor's degree	8.7%
4	Long-term on-the-job training	6.4%
3	Bachelor's or higher degree, plus work experience	4.6%
2	Postsecondary vocational award	3.2%
1	Associate degree	1.7%
0	First professional degree	0.3%
0	Master's degree	0.2%
0	Doctoral degree	0.0%
55	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projected Eagle Ford development impacts for 2021 within Jim Wells County are shown below. Transportation and material moving occupations (23.5 percent) are projected to move up to the first position and increase 6.4 percentage points; followed by construction and extraction occupations (18.8 percent), increasing by 10.8 percentage points, office and administration occupations (14.9 percent), decreasing by 6.2 percentage points, production occupations (11.2 percent), increasing by 6.6 percentage points, and installation, maintenance, and repair occupations (9.2 percent) showing a 0.9 percentage point increase.

Management, business, and financial occupations (8.4 percent) are sixth showing a 2.6 percentage point decrease; followed by professional occupations (5 percent), decreasing by 2 percentage points, and service occupations (4.6 percent), decreasing by 2.6 percentage points. Last are sales occupations (4.4 percent), decreasing by 8.8 percentage points, and farming, fishing, and forestry occupations (0.1 percent), decreasing by 0.3 percentage point.

Occupation Code	Direct Plus Indirect Impacts Jim Wells County 10-Occupational Categories, 2021	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	204	23.5%
47-0000	Construction and extraction occupations	163	18.8%
43-0000	Office and administrative support occupations	129	14.9%
51-0000	Production occupations	97	11.2%
49-0000	Installation, maintenance, and repair occupations	80	9.2%
11-1300	Management, business, and financial occupations	73	8.4%
15-2900	Professional and related occupations	44	5.0%
31-3900	Service occupations	40	4.6%
41-0000	Sales and related occupations	38	4.4%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	868	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Long-term projected Eagle Ford development impacts for 2021 within Jim Wells County are shown below. Moderate-term on-the-job training (37.3 percent) projected to show an increase of 14.4 percentage points; followed by short-term on-the-job training (31.3 percent), decreasing by 4.5 percentage points, work experience in a related field (10.7 percent), decreasing by 5.2 percentage points, bachelor's degrees (6.4 percent), decreasing by 2.3 percentage points, and long-term on-the-job training (6 percent) showing a 0.4 percentage point decrease.

In the sixth position is bachelor's degree or higher, plus work experience (3.8 percent) showing a 0.8 percentage point decrease; followed by postsecondary vocational awards (2.5 percent), decreasing by 0.7 percentage point, and Associate degrees (1.4 percent), decreasing by 0.7 percentage point, first professional degrees remaining at 0.3 percent. In the tenth position are master's degrees remaining at 0.2 percent and doctoral degrees (0.1 percent) showing a projected 0.1 percentage point increase of the labor demanded.

Jim Wells County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
323	Moderate-term on-the-job training	37.3%
272	Short-term on-the-job training	31.3%
93	Work experience in a related occupation	10.7%
56	Bachelor's degree	6.4%
52	Long-term on-the-job training	6.0%
33	Bachelor's or higher degree, plus work experience	3.8%
21	Postsecondary vocational award	2.5%
12	Associate degree	1.4%
3	First professional degree	0.3%
2	Master's degree	0.2%
1	Doctoral degree	0.1%
868	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Jim Wells Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

SOC		Direct Plus Indirect Impacts		
Occupation		Jim Wells County		
Ranking	Code	Top 35 Occupations Impacted in 2011	Occupational Impact	Percentage
			55	100.0%
1	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	5.6%
2	53-3032	Truck drivers, heavy and tractor-trailer	3	4.7%
3	53-7062	Laborers and freight, stock, and material movers, hand	2	3.8%
4	43-9061	Office clerks, general	1	2.5%
5	43-4051	Customer service representatives	1	2.5%
6	33-9032	Security guards	1	2.5%
7	47-2073	Operating engineers and other construction equipment operators	1	2.1%
8	43-3031	Bookkeeping, accounting, and auditing clerks	1	2.0%
9	53-3033	Truck drivers, light or delivery services	1	1.9%
10	11-1021	General and operations managers	1	1.8%
11	43-5081	Stock clerks and order fillers	1	1.5%
12	13-2011	Accountants and auditors	1	1.5%
13	49-9042	Maintenance and repair workers, general	1	1.4%
14	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	1.3%
15	49-3042	Mobile heavy equipment mechanics, except engines	1	1.3%
16	43-1011	First-line supervisors/managers of office and administrative support workers	1	1.2%
17	43-5071	Shipping, receiving, and traffic clerks	1	1.2%
18	43-6011	Executive secretaries and administrative assistants	1	1.2%
19	43-6014	Secretaries, except legal, medical, and executive	1	1.2%
20	41-2031	Retail salespersons	1	1.2%
21	53-7051	Industrial truck and tractor operators	1	1.0%
22	43-3071	Tellers	1	1.0%
23	13-2072	Loan officers	1	0.9%
24	47-5041	Continuous mining machine operators	0	0.9%
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	0	0.8%
26	53-3031	Driver/sales workers	0	0.8%
27	47-1011	First-line supervisors/managers of construction trades and extraction workers	0	0.8%
28	49-9041	Industrial machinery mechanics	0	0.8%
29	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	0	0.7%
30	41-2011	Cashiers, except gaming	0	0.7%
31	41-1012	First-line supervisors/managers of non-retail sales workers	0	0.7%
32	41-2021	Counter and rental clerks	0	0.7%
33	47-2061	Construction laborers	0	0.7%
34	53-7032	Excavating and loading machine and dragline operators	0	0.7%
35	13-1199	Business operation specialists, all other	0	0.7%

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Jim Wells County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
			227	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	15	6.6%
2	47-2073	Operating engineers and other construction equipment operators	9	3.8%
3	53-7032	Excavating and loading machine and dragline operators	6	2.5%
4	43-9061	Office clerks, general	6	2.4%
5	53-7062	Laborers and freight, stock, and material movers, hand	5	2.4%
6	49-9042	Maintenance and repair workers, general	5	2.0%
7	11-1021	General and operations managers	4	1.8%
8	43-3031	Bookkeeping, accounting, and auditing clerks	4	1.8%
9	41-2031	Retail salespersons	4	1.7%
10	43-4051	Customer service representatives	4	1.6%
11	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	4	1.6%
12	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	4	1.6%
13	49-3042	Mobile heavy equipment mechanics, except engines	3	1.5%
14	41-2011	Cashiers, except gaming	3	1.5%
15	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	3	1.3%
16	43-6014	Secretaries, except legal, medical, and executive	3	1.3%
17	47-1011	First-line supervisors/managers of construction trades and extraction workers	3	1.3%
18	53-7051	Industrial truck and tractor operators	3	1.2%
19	35-3021	Combined food preparation and serving workers, including fast food	3	1.2%
20	13-2011	Accountants and auditors	3	1.2%
21	35-3031	Waiters and waitresses	3	1.2%
22	43-6011	Executive secretaries and administrative assistants	3	1.1%
23	47-5041	Continuous mining machine operators	2	1.1%
24	47-2061	Construction laborers	2	1.0%
25	53-3033	Truck drivers, light or delivery services	2	1.0%
26	43-1011	First-line supervisors/managers of office and administrative support workers	2	1.0%
27	47-5051	Rock splitters, quarry	2	1.0%
28	47-5042	Mine cutting and channeling machine operators	2	0.9%
29	51-4121	Welders, cutters, solderers, and brazers	2	0.9%
30	51-1011	First-line supervisors/managers of production and operating workers	2	0.8%
31	49-9041	Industrial machinery mechanics	2	0.8%
32	43-5081	Stock clerks and order fillers	2	0.8%
33	29-1111	Registered nurses	2	0.8%
34	41-2021	Counter and rental clerks	2	0.7%
35	37-2012	Maids and housekeeping cleaners	2	0.7%

Jim Wells Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

SOC		Direct Plus Indirect Impacts		
Occupation		Jim Wells County		Occupational
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
			868	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	80	9.3%
2	47-2073	Operating engineers and other construction equipment operators	55	6.3%
3	53-7032	Excavating and loading machine and dragline operators	39	4.5%
4	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	24	2.8%
5	53-7062	Laborers and freight, stock, and material movers, hand	23	2.7%
6	49-9042	Maintenance and repair workers, general	22	2.5%
7	43-9061	Office clerks, general	22	2.5%
8	11-1021	General and operations managers	17	2.0%
9	47-1011	First-line supervisors/managers of construction trades and extraction workers	17	2.0%
10	43-3031	Bookkeeping, accounting, and auditing clerks	17	1.9%
11	49-3042	Mobile heavy equipment mechanics, except engines	17	1.9%
12	53-7051	Industrial truck and tractor operators	16	1.8%
13	47-5051	Rock splitters, quarry	15	1.7%
14	47-2061	Construction laborers	14	1.7%
15	47-5041	Continuous mining machine operators	14	1.6%
16	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	14	1.6%
17	47-5042	Mine cutting and channeling machine operators	12	1.4%
18	13-2011	Accountants and auditors	11	1.3%
19	43-6014	Secretaries, except legal, medical, and executive	11	1.2%
20	51-1011	First-line supervisors/managers of production and operating workers	10	1.2%
21	43-6011	Executive secretaries and administrative assistants	10	1.1%
22	43-4051	Customer service representatives	10	1.1%
23	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	10	1.1%
24	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	9	1.1%
25	49-9041	Industrial machinery mechanics	9	1.0%
26	51-9111	Packaging and filling machine operators and tenders	9	1.0%
27	51-4121	Welders, cutters, solderers, and brazers	8	1.0%
28	51-9061	Inspectors, testers, sorters, samplers, and weighers	8	0.9%
29	51-9198	Helpers--Production workers	8	0.9%
30	53-3033	Truck drivers, light or delivery services	8	0.9%
31	53-1031	First-line supervisors/managers of transportation and material-moving machine and vehicle ope	8	0.9%
32	43-1011	First-line supervisors/managers of office and administrative support workers	7	0.9%
33	49-3031	Bus and truck mechanics and diesel engine specialists	7	0.8%
34	53-7011	Conveyor operators and tenders	7	0.8%
35	51-9012	Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	7	0.8%

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Jim Wells County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
			1,221	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	84	6.9%
2	47-2073	Operating engineers and other construction equipment operators	55	4.5%
3	53-7032	Excavating and loading machine and dragline operators	39	3.2%
4	43-9061	Office clerks, general	30	2.5%
5	53-7062	Laborers and freight, stock, and material movers, hand	28	2.3%
6	49-9042	Maintenance and repair workers, general	25	2.1%
7	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	24	2.0%
8	11-1021	General and operations managers	22	1.8%
9	43-3031	Bookkeeping, accounting, and auditing clerks	22	1.8%
10	41-2031	Retail salespersons	20	1.6%
11	41-2011	Cashiers, except gaming	18	1.5%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers	18	1.5%
13	53-7051	Industrial truck and tractor operators	17	1.4%
14	49-3042	Mobile heavy equipment mechanics, except engines	17	1.4%
15	43-4051	Customer service representatives	16	1.3%
16	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	16	1.3%
17	43-6014	Secretaries, except legal, medical, and executive	15	1.2%
18	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	15	1.2%
19	47-5051	Rock splitters, quarry	15	1.2%
20	47-2061	Construction laborers	15	1.2%
21	35-3021	Combined food preparation and serving workers, including fast food	14	1.2%
22	13-2011	Accountants and auditors	14	1.2%
23	47-5041	Continuous mining machine operators	14	1.1%
24	35-3031	Waiters and waitresses	14	1.1%
25	43-6011	Executive secretaries and administrative assistants	14	1.1%
26	47-5042	Mine cutting and channeling machine operators	12	1.0%
27	43-1011	First-line supervisors/managers of office and administrative support workers	11	0.9%
28	51-1011	First-line supervisors/managers of production and operating workers	10	0.9%
29	53-3033	Truck drivers, light or delivery services	10	0.8%
30	43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	10	0.8%
31	29-1111	Registered nurses	10	0.8%
32	49-9041	Industrial machinery mechanics	9	0.8%
33	43-5081	Stock clerks and order fillers	9	0.7%
34	43-4171	Receptionists and information clerks	9	0.7%
35	51-9111	Packaging and filling machine operators and tenders	9	0.7%

Nueces County



The following tables explain the estimated direct, indirect, and induced impacts within Nueces County for 2011 and 2021. It is estimated that a total of 3,880 Nueces County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
Nueces County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	713	1,788	1,380	3,880

In 2021, Nueces County is projected to see a total of 18,699 jobs impacted by Eagle Ford, with the largest impact on indirect employment.

Estimated Impact 2021				
Nueces County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	2,582	9,040	7,077	18,699

Eagle Ford total impacts in 2011 within Nueces County are shown in the following table. It shows office and administrative occupations at 18.3 percent, service occupations at 17.6 percent, professional occupations at 12.1 percent, management, business, and financial occupations at 10.2 percent, sales occupations at 9.8 percent, and production occupations at 9.2 percent. In the seventh position are transportation and material moving occupations at 9.1 percent, construction and extraction occupations at 7.8 percent, installation, maintenance, and financial occupations at 5.8 percent, farming, fishing, and forestry occupations at 0.1 percent.

Occupation Code	Total Impacts Nueces County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	712	18.3%
31-3900	Service occupations	682	17.6%
15-2900	Professional and related occupations	468	12.1%
11-1300	Management, business, and financial occupations	397	10.2%
41-0000	Sales and related occupations	380	9.8%
51-0000	Production occupations	356	9.2%
53-0000	Transportation and material moving occupations	351	9.1%
47-0000	Construction and extraction occupations	304	7.8%
49-0000	Installation, maintenance, and repair occupations	224	5.8%
45-0000	Farming, fishing, and forestry occupations	6	0.1%
	Total	3,880	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected 2021 Eagle Ford total impacts within Nueces County are detailed below. Service occupations are first on the list at 19.8 percent, followed by office and administrative occupations at 18.5 percent, professional occupations at 12 percent, sales occupations at 10.4 percent, management, business, and financial occupations at 9.8 percent, and production occupations at 9.4 percent. Next are transportation and material moving occupations at 9.4 percent, installation, maintenance, and repair occupations at 6 percent, construction and extraction occupations at 4.7 percent, and farming, fishing, and forestry occupations at 0.2 percent.

Occupation Code	Total Impacts Nueces County Occupational Impacts, 2021	Occupational Impact	Percentage
31-3900	Service occupations	3,696	19.8%
43-0000	Office and administrative support occupations	3,458	18.5%
15-2900	Professional and related occupations	2,251	12.0%
41-0000	Sales and related occupations	1,939	10.4%
11-1300	Management, business, and financial occupations	1,825	9.8%
51-0000	Production occupations	1,755	9.4%
53-0000	Transportation and material moving occupations	1,751	9.4%
49-0000	Installation, maintenance, and repair occupations	1,114	6.0%
47-0000	Construction and extraction occupations	880	4.7%
45-0000	Farming, fishing, and forestry occupations	29	0.2%
	Total	18,699	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Nueces Direct and Indirect Impacts

The occupational composition in 2010 within Nueces County is shown in the table below. It shows a focus in service occupations at 22.7 percent, followed by office and administrative occupations at 17.7 percent, professional occupations at 16.8 percent, management, business, and financial occupations at 11.2 percent, sales occupations at 9.7 percent and construction and extraction occupations at 6.9 percent. In the seventh position are transportation and material occupations at 6.1 percent; followed by production occupations at 4.3 percent, installation, maintenance, and repair occupations at 3.9 percent, and farming, fishing, and forestry occupations at 0.6 percent.

Occupation Code	Nueces County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	45,265	22.7%
43-0000	Office and administrative support occupations	35,361	17.7%
15-2900	Professional and related occupations	33,424	16.8%
11-1300	Management, business, and financial occupations	22,390	11.2%
41-0000	Sales and related occupations	19,380	9.7%
47-0000	Construction and extraction occupations	13,843	6.9%
53-0000	Transportation and material moving occupations	12,221	6.1%
51-0000	Production occupations	8,676	4.3%
49-0000	Installation, maintenance, and repair occupations	7,710	3.9%
45-0000	Farming, fishing, and forestry occupations	1,258	0.6%
	Total	199,529	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Nueces County educational distribution in 2010 is shown below. First on the list is short-term on-the-job training at 37.5 percent, followed by moderate-term on-the-job training at 17.3 percent, bachelor's degree at 10.9 percent, work experience in a related field at 9.8 percent, long-term on-the-job training at 6.9 percent, and postsecondary vocational awards at 5.2 percent. Associate degrees are seventh at 5 percent; followed by bachelor's degree, plus work experience at 4.2 percent, first professional degrees at 1.4 percent, master's degrees at 1.4 percent, and doctoral degrees at 0.3 percent.

Nueces County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
74,796	Short-term on-the-job training	37.5%
34,483	Moderate-term on-the-job training	17.3%
21,756	Bachelor's degree	10.9%
19,641	Work experience in a related occupation	9.8%
13,790	Long-term on-the-job training	6.9%
10,371	Postsecondary vocational award	5.2%
10,013	Associate degree	5.0%
8,472	Bachelor's or higher degree, plus work experience	4.2%
2,879	First professional degree	1.4%
2,741	Master's degree	1.4%
586	Doctoral degree	0.3%
199,529	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2011 occupational impact within Nueces County are detailed in the table below. Moving to the first position are office and administrative occupations (17.7 percent); followed by production occupations (13 percent), increasing by 8.7 percentage points, service occupations (12.2 percent), decreasing by 10.5 percentage points, construction and extraction occupations (11.5 percent), increasing by 4.6 percentage points, and transportation and material moving occupations (11 percent).

Next are management, business, and financial occupations (10.9 percent) showing a 0.3 percentage point decrease; followed by professional occupations (9.3 percent), decreasing by 7.5 percentage points, sales occupations (7.2 percent), decreasing by 2.5 percentage points, installation, maintenance, and repair occupations (6.9 percent), increasing by 3 percentage points, and farming, fishing, and forestry occupations (0.1 percent) showing a 0.5 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts Nueces County 10-Occupational Categories, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	443	17.7%
51-0000	Production occupations	324	13.0%
31-3900	Service occupations	306	12.2%
47-0000	Construction and extraction occupations	288	11.5%
53-0000	Transportation and material moving occupations	275	11.0%
11-1300	Management, business, and financial occupations	274	10.9%
15-2900	Professional and related occupations	233	9.3%
41-0000	Sales and related occupations	181	7.2%
49-0000	Installation, maintenance, and repair occupations	172	6.9%
45-0000	Farming, fishing, and forestry occupations	4	0.1%
	Total	2,501	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2011 Eagle Ford development impacts within Nueces County are shown in the table below. Remaining at the top of the list is short-term on-the-job training (32.3 percent) but decreased by 5.2 percentage points; followed by moderate-term on-the-job training (19.8 percent), increasing by 2.5 percentage points, long-term on-the-job training (14.4 percent), increasing by 7.5 percentage points, work experience in a related field (12.4 percent), increasing by 2.6 percentage point, and bachelor's degrees (10 percent), decreasing by 0.9 percentage points.

In the sixth position are bachelor's degrees, plus work experience (4.3 percent) showing a 0.1 percentage point increase, followed by postsecondary vocational awards (3.2 percent), decreasing by 2 percentage points, Associate degrees (2.4 percent), decreasing by 2.6 percentage points, and first professional degrees (0.8 percent), decreasing by 0.6 percentage point. Last are master's degrees (0.2 percent), decreasing by 1.2 percentage points, and doctoral degrees (less than 1 percent) showing a 0.3 percentage point decrease.

Direct Plus Indirect Impacts Nueces County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
809	Short-term on-the-job training	32.3%
494	Moderate-term on-the-job training	19.8%
360	Long-term on-the-job training	14.4%
311	Work experience in a related occupation	12.4%
251	Bachelor's degree	10.0%
108	Bachelor's or higher degree, plus work experience	4.3%
81	Postsecondary vocational award	3.2%
61	Associate degree	2.4%
20	First professional degree	0.8%
5	Master's degree	0.2%
1	Doctoral degree	0.0%
2,501	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The projections for 2021 of the Eagle Ford development impacts are shown in the table below. Remaining in the first position are office and administrative occupations (18.2 percent) showing a 0.5 percentage point increase; followed by service occupations (14.4 percent), increasing by 2.2 percentage points, production occupations (13.7 percent), increasing by 0.7 percentage point, transportation and material moving occupations (11.8 percent), increasing by 0.8 percentage point, and management, business and financial occupations (10.5 percent), decreasing by 0.4 percentage point.

Next are professional occupations (9.2 percent), decreasing by 0.1 percent point; followed by sales occupations (7.8 percent), increasing by 0.6 percentage point, installation, maintenance, and repair occupations (7.3 percent), increasing by 0.4 percentage point, construction and extraction occupations (6.9 percent), decreasing by 4.6 percentage points, and farming, fishing, and forestry occupations (0.2 percent) showing a 0.1 percentage point increase.

Occupation Code	Direct Plus Indirect Impacts Nueces County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	2,118	18.2%
31-3900	Service occupations	1,677	14.4%
51-0000	Production occupations	1,595	13.7%
53-0000	Transportation and material moving occupations	1,366	11.8%
11-1300	Management, business, and financial occupations	1,215	10.5%
15-2900	Professional and related occupations	1,068	9.2%
41-0000	Sales and related occupations	909	7.8%
49-0000	Installation, maintenance, and repair occupations	851	7.3%
47-0000	Construction and extraction occupations	805	6.9%
45-0000	Farming, fishing, and forestry occupations	18	0.2%
	Total	11,622	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The projected Eagle Ford development impacts on Nueces County educational distribution in 2021 are shown below. Short-term on-the-job training (35.4 percent) remains first and projected to increase by 3.1 percentage points; followed by moderate-term on-the-job training (18.7 percent), decreasing by 1.1 percentage point, long-term on-the-job training (13.2 percent), decreasing by 1.2 percentage point, work experience in a related field (12.2 percent), decreasing by 0.2 percentage point, and bachelor's degrees (9.4 percent) showing a 0.6 percentage point decrease.

In the sixth position is bachelor's or higher degrees, plus work experience (4.3 percent), followed by postsecondary vocational awards (3.3 percent), increasing by 0.1 percentage point, Associate degrees (2.5 percent), increasing by 0.1 percentage point, and first professional degrees (0.9 percent), increasing by 0.1 percentage point. Last are master's degrees (0.2 percent), and doctoral degrees projected to remain at less than one percent.

Direct Plus Indirect Impacts Nueces County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
4,113	Short-term on-the-job training	35.4%
2,174	Moderate-term on-the-job training	18.7%
1,532	Long-term on-the-job training	13.2%
1,421	Work experience in a related occupation	12.2%
1,087	Bachelor's degree	9.4%
494	Bachelor's or higher degree, plus work experience	4.3%
382	Postsecondary vocational award	3.3%
289	Associate degree	2.5%
99	First professional degree	0.9%
25	Master's degree	0.2%
6	Doctoral degree	0.0%
11,622	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Nueces Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Nueces County Top 35 Occupations Impacted in 2011		Occupational Impact Percentage	
				Impact	Percentage
				2,501	100.0%
1	51-8093	Petroleum pump system operators, refinery operators, and gaugers		117	4.7%
2	53-3032	Truck drivers, heavy and tractor-trailer		80	3.2%
3	47-2031	Carpenters		74	3.0%
4	47-2061	Construction laborers		65	2.6%
5	37-2011	Janitors and cleaners, except maids and housekeeping cleaners		65	2.6%
6	43-9061	Office clerks, general		61	2.4%
7	53-7062	Laborers and freight, stock, and material movers, hand		61	2.4%
8	43-4051	Customer service representatives		50	2.0%
9	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products		49	2.0%
10	43-3031	Bookkeeping, accounting, and auditing clerks		45	1.8%
11	11-1021	General and operations managers		43	1.7%
12	47-1011	First-line supervisors/managers of construction trades and extraction workers		42	1.7%
13	49-9042	Maintenance and repair workers, general		39	1.6%
14	37-3011	Landscaping and groundskeeping workers		37	1.5%
15	43-6011	Executive secretaries and administrative assistants		35	1.4%
16	43-6014	Secretaries, except legal, medical, and executive		35	1.4%
17	13-2011	Accountants and auditors		35	1.4%
18	51-1011	First-line supervisors/managers of production and operating workers		33	1.3%
19	35-3031	Waiters and waitresses		28	1.1%
20	49-9041	Industrial machinery mechanics		27	1.1%
21	33-9032	Security guards		26	1.0%
22	43-1011	First-line supervisors/managers of office and administrative support workers		26	1.0%
23	41-2031	Retail salespersons		26	1.0%
24	35-3021	Combined food preparation and serving workers, including fast food		25	1.0%
25	11-9021	Construction managers		22	0.9%
26	41-2011	Cashiers, except gaming		21	0.9%
27	53-3033	Truck drivers, light or delivery services		21	0.8%
28	51-2092	Team assemblers		20	0.8%
29	53-7051	Industrial truck and tractor operators		20	0.8%
30	51-9023	Mixing and blending machine setters, operators, and tenders		20	0.8%
31	49-1011	First-line supervisors/managers of mechanics, installers, and repairers		20	0.8%
32	43-5081	Stock clerks and order fillers		19	0.8%
33	43-4171	Receptionists and information clerks		18	0.7%
34	41-9041	Telemarketers		17	0.7%
35	23-1011	Lawyers		17	0.7%

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts Nueces County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			3,880	100.0%
1	51-8093	Petroleum pump system operators, refinery operators, and gaugers	117	3.0%
2	43-9061	Office clerks, general	97	2.5%
3	41-2031	Retail salespersons	95	2.4%
4	53-3032	Truck drivers, heavy and tractor-trailer	91	2.3%
5	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	86	2.2%
6	43-4051	Customer service representatives	80	2.1%
7	47-2031	Carpenters	79	2.0%
8	53-7062	Laborers and freight, stock, and material movers, hand	79	2.0%
9	41-2011	Cashiers, except gaming	77	2.0%
10	47-2061	Construction laborers	69	1.8%
11	43-3031	Bookkeeping, accounting, and auditing clerks	65	1.7%
12	11-1021	General and operations managers	60	1.5%
13	35-3031	Waiters and waitresses	60	1.5%
14	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	59	1.5%
15	35-3021	Combined food preparation and serving workers, including fast food	59	1.5%
16	49-9042	Maintenance and repair workers, general	58	1.5%
17	43-6014	Secretaries, except legal, medical, and executive	55	1.4%
18	43-6011	Executive secretaries and administrative assistants	51	1.3%
19	37-3011	Landscaping and groundskeeping workers	48	1.2%
20	29-1111	Registered nurses	47	1.2%
21	13-2011	Accountants and auditors	46	1.2%
22	47-1011	First-line supervisors/managers of construction trades and extraction workers	44	1.1%
23	43-1011	First-line supervisors/managers of office and administrative support workers	41	1.1%
24	43-5081	Stock clerks and order fillers	41	1.1%
25	33-9032	Security guards	38	1.0%
26	43-4171	Receptionists and information clerks	36	0.9%
27	37-2012	Maids and housekeeping cleaners	36	0.9%
28	51-1011	First-line supervisors/managers of production and operating workers	35	0.9%
29	53-3033	Truck drivers, light or delivery services	30	0.8%
30	49-9041	Industrial machinery mechanics	28	0.7%
31	13-1199	Business operation specialists, all other	25	0.6%
32	41-1011	First-line supervisors/managers of retail sales workers	25	0.6%
33	39-9011	Child care workers	25	0.6%
34	31-1012	Nursing aides, orderlies, and attendants	25	0.6%
35	23-1011	Lawyers	24	0.6%

Nueces Top 35 Occupations Impacted 2021

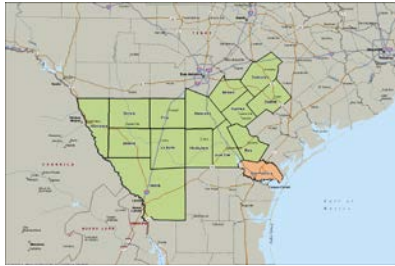
Top 35 Occupations: Direct and indirect impacts 2021

SOC Occupation Code		Direct Plus Indirect Impacts Nueces County		Occupational	
Ranking		Top 35 Occupations Impacted in 2021	Impact	Percentage	
			11,622	100.0%	
1	51-8093	Petroleum pump system operators, refinery operators, and gaugers	596	5.1%	
2	53-3032	Truck drivers, heavy and tractor-trailer	394	3.4%	
3	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	337	2.9%	
4	53-7062	Laborers and freight, stock, and material movers, hand	297	2.6%	
5	43-9061	Office clerks, general	288	2.5%	
6	43-4051	Customer service representatives	247	2.1%	
7	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	241	2.1%	
8	43-3031	Bookkeeping, accounting, and auditing clerks	205	1.8%	
9	11-1021	General and operations managers	192	1.7%	
10	37-3011	Landscaping and groundskeeping workers	191	1.6%	
11	49-9042	Maintenance and repair workers, general	188	1.6%	
12	47-2061	Construction laborers	178	1.5%	
13	47-2031	Carpenters	174	1.5%	
14	35-3031	Waiters and waitresses	165	1.4%	
15	51-1011	First-line supervisors/managers of production and operating workers	164	1.4%	
16	13-2011	Accountants and auditors	164	1.4%	
17	43-6014	Secretaries, except legal, medical, and executive	157	1.3%	
18	43-6011	Executive secretaries and administrative assistants	153	1.3%	
19	35-3021	Combined food preparation and serving workers, including fast food	151	1.3%	
20	49-9041	Industrial machinery mechanics	135	1.2%	
21	41-2031	Retail salespersons	133	1.1%	
22	33-9032	Security guards	131	1.1%	
23	43-1011	First-line supervisors/managers of office and administrative support workers	120	1.0%	
24	41-2011	Cashiers, except gaming	115	1.0%	
25	47-1011	First-line supervisors/managers of construction trades and extraction workers	109	0.9%	
26	53-3033	Truck drivers, light or delivery services	103	0.9%	
27	53-7051	Industrial truck and tractor operators	100	0.9%	
28	51-9023	Mixing and blending machine setters, operators, and tenders	100	0.9%	
29	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	98	0.8%	
30	51-2092	Team assemblers	97	0.8%	
31	43-5081	Stock clerks and order fillers	95	0.8%	
32	41-9041	Telemarketers	85	0.7%	
33	23-1011	Lawyers	83	0.7%	
34	43-5071	Shipping, receiving, and traffic clerks	82	0.7%	
35	43-4171	Receptionists and information clerks	81	0.7%	

Top 35 Occupations: Total impacts 2021

Ranking	SOC Occupation Code	Total Impacts Nueces County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			18,699	100.0%
1	51-8093	Petroleum pump system operators, refinery operators, and gaugers	597	3.2%
2	41-2031	Retail salespersons	499	2.7%
3	43-9061	Office clerks, general	468	2.5%
4	53-3032	Truck drivers, heavy and tractor-trailer	447	2.4%
5	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	443	2.4%
6	41-2011	Cashiers, except gaming	409	2.2%
7	43-4051	Customer service representatives	392	2.1%
8	53-7062	Laborers and freight, stock, and material movers, hand	388	2.1%
9	35-3031	Waiters and waitresses	348	1.9%
10	35-3021	Combined food preparation and serving workers, including fast food	340	1.8%
11	43-3031	Bookkeeping, accounting, and auditing clerks	309	1.7%
12	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	287	1.5%
13	49-9042	Maintenance and repair workers, general	282	1.5%
14	11-1021	General and operations managers	280	1.5%
15	43-6014	Secretaries, except legal, medical, and executive	255	1.4%
16	37-3011	Landscaping and groundskeeping workers	248	1.3%
17	43-6011	Executive secretaries and administrative assistants	235	1.3%
18	29-1111	Registered nurses	234	1.3%
19	13-2011	Accountants and auditors	219	1.2%
20	43-5081	Stock clerks and order fillers	210	1.1%
21	43-1011	First-line supervisors/managers of office and administrative support workers	199	1.1%
22	47-2031	Carpenters	195	1.0%
23	47-2061	Construction laborers	194	1.0%
24	33-9032	Security guards	191	1.0%
25	37-2012	Maids and housekeeping cleaners	188	1.0%
26	43-4171	Receptionists and information clerks	177	0.9%
27	51-1011	First-line supervisors/managers of production and operating workers	173	0.9%
28	53-3033	Truck drivers, light or delivery services	147	0.8%
29	49-9041	Industrial machinery mechanics	139	0.7%
30	39-9011	Child care workers	133	0.7%
31	41-1011	First-line supervisors/managers of retail sales workers	130	0.7%
32	31-1012	Nursing aides, orderlies, and attendants	124	0.7%
33	35-2014	Cooks, restaurant	120	0.6%
34	13-1199	Business operation specialists, all other	120	0.6%
35	23-1011	Lawyers	119	0.6%

San Patricio County



The following tables explain the estimated direct, indirect, and induced impacts within San Patricio County for 2011 and 2021. It is estimated that a total of 517 San Patricio County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
San Patricio County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	65	345	107	517

In 2021, San Patricio County is projected to see a total of 2,301 jobs impacted by Eagle Ford, with the largest impact on indirect employment.

Estimated Impact 2021				
San Patricio County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	1,812	488	2,301

Eagle Ford total impacts in 2011 within San Patricio County are detailed in the table below. Positioned first are construction and extraction occupations at 22.8 percent, followed by management, business, and financial occupations at 15.8 percent, office and administrative occupations at 15.4 percent, professional occupations at 14.3 percent, service occupations at 10.2 percent, and transportation and material moving occupations at 6.8 percent. In the seventh position are sales occupations at 5.4 percent, followed by production occupations at 5.3 percent, installation, maintenance, and repair occupations at 3.8 percent, and farming, fishing, and forestry occupations at 0.1 percent of the labor demanded.

Occupation Code	Total Impacts San Patricio County Occupational Impacts 2011	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	118	22.8%
11-1300	Management, business, and financial occupations	81	15.8%
43-0000	Office and administrative support occupations	80	15.4%
15-2900	Professional and related occupations	74	14.3%
31-3900	Service occupations	53	10.2%
53-0000	Transportation and material moving occupations	35	6.8%
41-0000	Sales and related occupations	28	5.4%
51-0000	Production occupations	28	5.3%
49-0000	Installation, maintenance, and repair occupations	19	3.8%
45-0000	Farming, fishing, and forestry occupations	1	0.1%
	Total	517	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projections of Eagle Ford total impacts in 2021 within San Patricio County are illustrated below. Construction and extraction occupations are positioned first at 19.8 percent, followed by management, business, and financial occupations at 16.1 percent, office and administrative occupations at 15.8 percent, professional occupations at 15.2 percent, and service occupations at 10.5 percent. In the sixth position are transportation and material moving occupations at 7.2 percent, production occupations at 5.7 percent, sales occupations at 5.6 percent, installation, maintenance, and repair occupations at 3.8 percent and farming, fishing, and forestry occupations at 0.2 percent.

Occupation Code	Total Impacts San Patricio County Occupational Impacts, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	455	19.8%
11-1300	Management, business, and financial occupations	371	16.1%
43-0000	Office and administrative support occupations	364	15.8%
15-2900	Professional and related occupations	350	15.2%
31-3900	Service occupations	242	10.5%
53-0000	Transportation and material moving occupations	166	7.2%
51-0000	Production occupations	131	5.7%
41-0000	Sales and related occupations	130	5.6%
49-0000	Installation, maintenance, and repair occupations	88	3.8%
45-0000	Farming, fishing, and forestry occupations	4	0.2%
	Total	2,301	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

San Patricio Direct and Indirect Impacts

The San Patricio County occupational composition in 2010 is detailed in the table below. At the top of the list are service occupations at 19.2 percent; followed by office and administrative occupations at 15.6 percent, professional occupations at 14.2 percent, management, business, and financial occupations at 12.8 percent, construction and extraction occupations at 11.4 percent, and sales occupations at 9 percent. In the seventh position are transportation and material moving occupations at 5.5 percent; followed by production occupations at 4.9 percent, installation, maintenance, and repair occupations at 4 percent, and farming, fishing, and forestry occupations at 3.3 percent.

Occupation Code	San Patricio County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	4,871	19.2%
43-0000	Office and administrative support occupations	3,967	15.6%
15-2900	Professional and related occupations	3,605	14.2%
11-1300	Management, business, and financial occupations	3,259	12.8%
47-0000	Construction and extraction occupations	2,885	11.4%
41-0000	Sales and related occupations	2,287	9.0%
53-0000	Transportation and material moving occupations	1,385	5.5%
51-0000	Production occupations	1,249	4.9%
49-0000	Installation, maintenance, and repair occupations	1,013	4.0%
45-0000	Farming, fishing, and forestry occupations	849	3.3%
	Total	25,370	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

In 2010, San Patricio County industry showed a focus in short-term on-the-job training at 32.5 percent, followed by moderate-term on-the-job training at 18.7 percent, work experience in a related field at 12.8 percent, bachelor's degrees at 12.2 percent, long-term on-the-job training at 9 percent, and bachelor's or higher degree, plus work experience at 5.1 percent. In the seventh position are postsecondary vocational awards at 3.9 percent, followed by Associate degrees at 3.3 percent, master's degrees at 1.2 percent, first professional degrees at 1.1 percent, and doctoral degrees at 0.3 percent.

San Patricio County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
8,236	Short-term on-the-job training	32.5%
4,738	Moderate-term on-the-job training	18.7%
3,248	Work experience in a related occupation	12.8%
3,089	Bachelor's degree	12.2%
2,281	Long-term on-the-job training	9.0%
1,300	Bachelor's or higher degree, plus work experience	5.1%
997	Postsecondary vocational award	3.9%
835	Associate degree	3.3%
294	Master's degree	1.2%
274	First professional degree	1.1%
78	Doctoral degree	0.3%
25,370	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The Eagle Ford development impacts in 2011 within San Patricio County are detailed in the table below. Office and administrative occupations move to the first position (22.1 percent), increasing by 6.5 percentage point; followed by management, business, and financial occupations (15.7 percent), increasing by 2.9 percentage points, construction and extraction occupations (12.6 percent), increasing by 1.2 percentage point, professional occupations (11 percent), decreasing by 3.2 percentage points, and transportation and material moving occupations (10 percent) showing a 4.5 percentage point increase.

In the sixth position are sales occupations (8.6 percent) showing a 0.4 percentage point decrease; followed by production occupations (7.2 percent), increasing by 2.3 percentage points, service occupations (7.2 percent), decreasing by 12 percentage points, installation, maintenance, and repair occupations (5.5 percent), increase 1.5 percentage point, and farming, fishing, and forestry (0.1 percent) showing a 3.2 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts San Patricio County 10-Occupational Categories, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	1,369	22.1%
11-1300	Management, business, and financial occupations	974	15.7%
47-0000	Construction and extraction occupations	782	12.6%
15-2900	Professional and related occupations	678	11.0%
53-0000	Transportation and material moving occupations	619	10.0%
41-0000	Sales and related occupations	535	8.6%
51-0000	Production occupations	446	7.2%
31-3900	Service occupations	445	7.2%
49-0000	Installation, maintenance, and repair occupations	340	5.5%
45-0000	Farming, fishing, and forestry occupations	7	0.1%
	Total	6,195	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2011 Eagle Ford development impacts on the educational distribution within San Patricio County are detailed in the chart below. Remaining in the first position is short-term on-the-job training (27.9 percent) but decreasing by 4.6 percentage points; followed by moderate-term on-the-job training (24.4 percent), increasing by 5.7 percentage points, bachelor's degrees (13.7 percent), increasing by 1.5 percentage point, work experience in a related field (11.9 percent), decreasing by 0.9 percentage point, and long-term on-the-job training (8.6 percent) showing a 0.4 percentage point decrease.

In the sixth position are bachelor's or higher degree, plus work experience (5.9 percent), increasing by 0.8 percentage point; followed by postsecondary vocational awards (3.5 percent), decreasing by 0.4 percentage point, Associate degrees (2.7 percent), decreasing by 0.6 percentage point, and master's degrees (0.8 percent), decreasing by 0.4 percentage point. Last are first professional degrees (0.5 percent), decreasing by 0.6 percentage point and doctoral degrees (0.1 percent), decreasing by 0.2 percentage point.

San Patricio County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentages
1,727	Short-term on-the-job training	27.9%
1,511	Moderate-term on-the-job training	24.4%
846	Bachelor's degree	13.7%
739	Work experience in a related occupation	11.9%
533	Long-term on-the-job training	8.6%
367	Bachelor's or higher degree, plus work experience	5.9%
220	Postsecondary vocational award	3.5%
164	Associate degree	2.7%
50	Master's degree	0.8%
33	First professional degree	0.5%
5	Doctoral degree	0.1%
6,195	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Long-term Eagle Ford impact projections for 2021 within San Patricio County are shown below. Projected to move to the first position are construction and extraction occupations (24.5 percent) showing a 11.9 percentage point increase; followed by management, business, and financial occupations (18.2 percent), increasing by 2.5 percentage points, professional occupations (16 percent), increasing by 5 percentage points, office and administrative occupations (15.4 percent), decreasing by 6.7 percentage points, and transportation and material moving occupations (7.8 percent) showing a 2.2 percentage point decrease.

In the sixth position are production occupations (6.7 percent) showing a 0.5 percentage point decrease; followed by service occupations (4.8 percent), decreasing by 2.4 percentage points, installations, maintenance, and repair occupations (3.9 percent), decreasing by 5.5 percentage points, sales occupations (2.7 percent), decreasing by 5.9 percentage points, and farming, fishing, and forestry occupations (less than 1 percent) showing a 0.1 percentage point decrease.

Occupation Code	Direct Plus Indirect Impacts San Patricio County 10-Occupational Categories, 2021	Occupational Impact	Percentage
47-0000	Construction and extraction occupations	444	24.5%
11-1300	Management, business, and financial occupations	329	18.2%
15-2900	Professional and related occupations	289	16.0%
43-0000	Office and administrative support occupations	279	15.4%
53-0000	Transportation and material moving occupations	141	7.8%
51-0000	Production occupations	122	6.7%
31-3900	Service occupations	87	4.8%
49-0000	Installation, maintenance, and repair occupations	71	3.9%
41-0000	Sales and related occupations	49	2.7%
45-0000	Farming, fishing, and forestry occupations	1	0.0%
	Total	1,812	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Long-term Eagle Ford development impacts in 2021 on the educational distribution within San Patricio County are detailed below. Moving to the first position is moderate-term on-the-job training (25.6 percent) showing a 1.2 percentage point increase; next are bachelor's degrees (17.8 percent), increasing by 4.1 percentage points, followed by long-term on-the-job training (14.8 percent), increasing by 6.2 percentage points, short-term on-the-job training (14.7 percent), decreasing by 13.2 percentage points, and work experience in a related field (11.6 percent), decreasing by 0.3 percentage point.

In the sixth position is bachelor's or higher degree, plus work experience (6.9 percent) showing a 1 percentage point increase; followed by Associate degrees (3.6 percent), increasing by 0.9 percentage point, master's degrees (2.4 percent), increasing by 1.6 percentage point, and postsecondary vocational awards (2.1 percent) showing a 1.4 percentage point decrease. Last are first professional degrees (0.6 percent), increasing by 0.1 percentage point, and doctoral degrees (less than 1 percent) showing a 0.1 percentage point decrease.

Direct Plus Indirect Impacts San Patricio County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
464	Moderate-term on-the-job training	25.6%
323	Bachelor's degree	17.8%
268	Long-term on-the-job training	14.8%
266	Short-term on-the-job training	14.7%
210	Work experience in a related occupation	11.6%
125	Bachelor's or higher degree, plus work experience	6.9%
65	Associate degree	3.6%
43	Master's degree	2.4%
39	Postsecondary vocational award	2.1%
10	First professional degree	0.6%
0	Doctoral degree	0.0%
1,812	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

San Patricio Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts San Patricio County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			411	100.0%
1	47-2031	Carpenters	29	7.0%
2	47-2061	Construction laborers	22	5.4%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	18	4.4%
4	13-2011	Accountants and auditors	13	3.1%
5	11-1021	General and operations managers	12	3.0%
6	43-3031	Bookkeeping, accounting, and auditing clerks	12	2.9%
7	51-8093	Petroleum pump system operators, refinery operators, and gaugers	11	2.7%
8	43-6011	Executive secretaries and administrative assistants	11	2.6%
9	43-9061	Office clerks, general	11	2.6%
10	53-7073	Wellhead pumpers	10	2.5%
11	17-2171	Petroleum engineers	10	2.5%
12	43-6014	Secretaries, except legal, medical, and executive	9	2.2%
13	11-9021	Construction managers	9	2.1%
14	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	8	2.0%
15	47-5071	Roustabouts, oil and gas	8	1.9%
16	19-2042	Geoscientists, except hydrologists and geographers	8	1.9%
17	19-4041	Geological and petroleum technicians	6	1.5%
18	53-3032	Truck drivers, heavy and tractor-trailer	5	1.3%
19	13-1199	Business operation specialists, all other	5	1.2%
20	49-9042	Maintenance and repair workers, general	5	1.2%
21	37-3011	Landscaping and groundskeeping workers	5	1.2%
22	47-2073	Operating engineers and other construction equipment operators	5	1.1%
23	13-1051	Cost estimators	4	0.9%
24	11-3031	Financial managers	4	0.9%
25	17-2051	Civil engineers	4	0.9%
26	43-1011	First-line supervisors/managers of office and administrative support workers	4	0.9%
27	47-2051	Cement masons and concrete finishers	3	0.8%
28	53-7062	Laborers and freight, stock, and material movers, hand	3	0.8%
29	51-1011	First-line supervisors/managers of production and operating workers	3	0.8%
30	43-4171	Receptionists and information clerks	3	0.8%
31	47-2111	Electricians	3	0.7%
32	47-3012	Helpers—Carpenters	3	0.7%
33	47-2152	Plumbers, pipefitters, and steamfitters	3	0.7%
34	13-2051	Financial analysts	3	0.7%
35	47-5012	Rotary drill operators, oil and gas	3	0.7%

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts San Patricio County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
			517	100.0%
1	47-2031	Carpenters	30	5.8%
2	47-2061	Construction laborers	23	4.4%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	19	3.6%
4	11-1021	General and operations managers	14	2.6%
5	13-2011	Accountants and auditors	13	2.6%
6	43-3031	Bookkeeping, accounting, and auditing clerks	13	2.6%
7	43-9061	Office clerks, general	13	2.5%
8	43-6011	Executive secretaries and administrative assistants	12	2.3%
9	51-8093	Petroleum pump system operators, refinery operators, and gaugers	11	2.2%
10	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	11	2.1%
11	43-6014	Secretaries, except legal, medical, and executive	11	2.0%
12	53-7073	Wellhead pumpers	10	2.0%
13	17-2171	Petroleum engineers	10	2.0%
14	11-9021	Construction managers	9	1.7%
15	47-5071	Roustabouts, oil and gas	8	1.5%
16	19-2042	Geoscientists, except hydrologists and geographers	8	1.5%
17	41-2011	Cashiers, except gaming	7	1.4%
18	41-2031	Retail salespersons	7	1.3%
19	37-3011	Landscaping and groundskeeping workers	6	1.2%
20	19-4041	Geological and petroleum technicians	6	1.2%
21	53-3032	Truck drivers, heavy and tractor-trailer	6	1.1%
22	49-9042	Maintenance and repair workers, general	6	1.1%
23	13-1199	Business operation specialists, all other	6	1.1%
24	47-2073	Operating engineers and other construction equipment operators	5	0.9%
25	43-1011	First-line supervisors/managers of office and administrative support workers	5	0.9%
26	53-7062	Laborers and freight, stock, and material movers, hand	4	0.8%
27	43-4171	Receptionists and information clerks	4	0.8%
28	11-3031	Financial managers	4	0.8%
29	35-3021	Combined food preparation and serving workers, including fast food	4	0.8%
30	13-1051	Cost estimators	4	0.8%
31	35-3031	Waiters and waitresses	4	0.7%
32	43-4051	Customer service representatives	4	0.7%
33	17-2051	Civil engineers	4	0.7%
34	47-2051	Cement masons and concrete finishers	3	0.7%
35	51-1011	First-line supervisors/managers of production and operating workers	3	0.6%

San Patricio Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts San Patricio County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			1,812	100.0%
1	47-2031	Carpenters	103	5.7%
2	47-2061	Construction laborers	81	4.4%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers	70	3.9%
4	13-2011	Accountants and auditors	62	3.4%
5	11-1021	General and operations managers	57	3.1%
6	51-8093	Petroleum pump system operators, refinery operators, and gaugers	56	3.1%
7	43-3031	Bookkeeping, accounting, and auditing clerks	55	3.0%
8	53-7073	Wellhead pumpers	53	2.9%
9	17-2171	Petroleum engineers	52	2.9%
10	43-6011	Executive secretaries and administrative assistants	49	2.7%
11	43-9061	Office clerks, general	49	2.7%
12	43-6014	Secretaries, except legal, medical, and executive	42	2.3%
13	47-5071	Roustabouts, oil and gas	40	2.2%
14	19-2042	Geoscientists, except hydrologists and geographers	39	2.2%
15	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	34	1.9%
16	11-9021	Construction managers	32	1.7%
17	19-4041	Geological and petroleum technicians	30	1.7%
18	13-1199	Business operation specialists, all other	24	1.3%
19	53-3032	Truck drivers, heavy and tractor-trailer	24	1.3%
20	49-9042	Maintenance and repair workers, general	23	1.2%
21	37-3011	Landscaping and groundskeeping workers	20	1.1%
22	47-2073	Operating engineers and other construction equipment operators	19	1.1%
23	11-3031	Financial managers	18	1.0%
24	43-1011	First-line supervisors/managers of office and administrative support workers	16	0.9%
25	51-1011	First-line supervisors/managers of production and operating workers	15	0.9%
26	13-2051	Financial analysts	14	0.8%
27	13-1051	Cost estimators	14	0.8%
28	53-7062	Laborers and freight, stock, and material movers, hand	14	0.8%
29	43-4171	Receptionists and information clerks	14	0.8%
30	51-8092	Gas plant operators	14	0.8%
31	47-5012	Rotary drill operators, oil and gas	14	0.7%
32	17-2051	Civil engineers	13	0.7%
33	47-2111	Electricians	13	0.7%
34	17-2151	Mining and geological engineers, including mining safety engineers	12	0.7%
35	47-2051	Cement masons and concrete finishers	12	0.7%

Top 35 Occupations: Total impacts 2021

SOC Occupation Code		Total Impacts San Patricio County Top 35 Occupations Impacted in 2021		Occupational Impact	Percentage
Ranking					
				2,301	100.0%
1	47-2031	Carpenters		107	4.6%
2	47-2061	Construction laborers		83	3.6%
3	47-1011	First-line supervisors/managers of construction trades and extraction workers		72	3.1%
4	13-2011	Accountants and auditors		65	2.8%
5	11-1021	General and operations managers		63	2.7%
6	43-3031	Bookkeeping, accounting, and auditing clerks		62	2.7%
7	43-9061	Office clerks, general		59	2.6%
8	51-8093	Petroleum pump system operators, refinery operators, and gaugers		56	2.5%
9	43-6011	Executive secretaries and administrative assistants		54	2.4%
10	53-7073	Wellhead pumpers		53	2.3%
11	17-2171	Petroleum engineers		52	2.3%
12	43-6014	Secretaries, except legal, medical, and executive		48	2.1%
13	37-2011	Janitors and cleaners, except maids and housekeeping cleaners		45	1.9%
14	47-5071	Roustabouts, oil and gas		40	1.7%
15	19-2042	Geoscientists, except hydrologists and geographers		39	1.7%
16	41-2011	Cashiers, except gaming		36	1.6%
17	11-9021	Construction managers		32	1.4%
18	41-2031	Retail salespersons		32	1.4%
19	19-4041	Geological and petroleum technicians		30	1.3%
20	13-1199	Business operation specialists, all other		27	1.2%
21	49-9042	Maintenance and repair workers, general		26	1.1%
22	53-3032	Truck drivers, heavy and tractor-trailer		26	1.1%
23	37-3011	Landscaping and groundskeeping workers		26	1.1%
24	43-1011	First-line supervisors/managers of office and administrative support workers		21	0.9%
25	35-3021	Combined food preparation and serving workers, including fast food		20	0.9%
26	11-3031	Financial managers		20	0.9%
27	47-2073	Operating engineers and other construction equipment operators		20	0.9%
28	35-3031	Waiters and waitresses		19	0.8%
29	53-7062	Laborers and freight, stock, and material movers, hand		19	0.8%
30	43-4171	Receptionists and information clerks		19	0.8%
31	43-4051	Customer service representatives		17	0.7%
32	51-1011	First-line supervisors/managers of production and operating workers		16	0.7%
33	13-2051	Financial analysts		16	0.7%
34	43-5081	Stock clerks and order fillers		15	0.6%
35	13-1051	Cost estimators		15	0.6%

Uvalde County



The following tables explain the estimated direct, indirect, and induced impacts within Uvalde County for 2011 and 2021. It is estimated that a total of 75 Uvalde County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
Uvalde County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	55	20	75

In 2021, Uvalde County is projected to see a total of 213 jobs impacted by Eagle Ford, with the largest impact on indirect employment.

Estimated Impact 2021				
Uvalde County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	159	54	213

Eagle Ford total impacts in 2011 within Uvalde County are shown in the table below. At the top of the list are office and administrative occupations at 20.6 percent, followed by transportation and material moving occupations at 14.6 percent, sales occupations at 13.9 percent, service occupations at 11.9 percent, and management, business, and financial occupations at 10.5 percent. Next are professional occupations at 8.1 percent, installation, maintenance, and repair occupations at 7.1 percent, production occupations at 6.7 percent, construction and extraction occupations at 6.2 percent, and farming, fishing, and forestry occupations at 0.5 percent.

Occupation Code	Total Impacts Uvalde County Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	15	20.6%
53-0000	Transportation and material moving occupations	11	14.6%
41-0000	Sales and related occupations	10	13.9%
31-3900	Service occupations	9	11.9%
11-1300	Management, business, and financial occupations	8	10.5%
15-2900	Professional and related occupations	6	8.1%
49-0000	Installation, maintenance, and repair occupations	5	7.1%
51-0000	Production occupations	5	6.7%
47-0000	Construction and extraction occupations	5	6.2%
45-0000	Farming, fishing, and forestry occupations	0	0.5%
	Total	75	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford total impacts in 2021 within Uvalde County are shown in the table below. Estimated to move to the first position are office and administrative occupations at 20.1 percent, followed by transportation and material occupations at 14.3 percent, sales occupations at 12.1 percent, service occupations at 11.8 percent, and management, business, and financial occupations at 10.8 percent. In the sixth position are professional occupations at 8.5 percent, followed by construction and extraction occupations at 8.1 percent, installation, maintenance and repair occupations at 7 percent, production occupations at 7 percent, and farming, fishing, and forestry occupations at 0.4 percent.

Occupation Code	Total Impacts Uvalde County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	43	20.1%
53-0000	Transportation and material moving occupations	31	14.3%
41-0000	Sales and related occupations	26	12.1%
31-3900	Service occupations	25	11.8%
11-1300	Management, business, and financial occupations	23	10.8%
15-2900	Professional and related occupations	18	8.5%
47-0000	Construction and extraction occupations	17	8.1%
49-0000	Installation, maintenance, and repair occupations	15	7.0%
51-0000	Production occupations	15	7.0%
45-0000	Farming, fishing, and forestry occupations	1	0.4%
	Total	213	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Uvalde Direct and Indirect Impacts

The occupational make-up of Uvalde County in 2010 is shown in the chart below. It shows first, service occupations at 21.5 percent, followed by office and administrative occupations at 16.5 percent, professional occupations at 14.3 percent, management, business, and financial occupations at 12.2 percent, sales occupations at 11.1 percent, and transportation and material moving occupations at 6.8 percent. Next are farming, fishing, and forestry occupations at 5.2 percent, followed by production occupations at 4.6 percent, construction and extraction occupations at 4.1 percent, and installation, maintenance, and repair occupations at 3.8 percent of the labor demanded in 2010.

Occupation Code	Uvalde County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	2,906	21.5%
43-0000	Office and administrative support occupations	2,224	16.5%
15-2900	Professional and related occupations	1,931	14.3%
11-1300	Management, business, and financial occupations	1,645	12.2%
41-0000	Sales and related occupations	1,502	11.1%
53-0000	Transportation and material moving occupations	917	6.8%
45-0000	Farming, fishing, and forestry occupations	698	5.2%
51-0000	Production occupations	615	4.6%
47-0000	Construction and extraction occupations	548	4.1%
49-0000	Installation, maintenance, and repair occupations	508	3.8%
	Total	13,493	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The educational structure within Uvalde County in 2010 shows a focus in short-term on-the-job training at 37.1 percent, followed by moderate-term on-the-job training at 17.2 percent, work experience in a related field at 13.9 percent, bachelor's degrees at 10.6 percent, bachelor's or higher degrees, plus work experience at 5.6 percent, and long-term on-the-job training at 5.1 percent. In the seventh position are postsecondary vocational awards at 4.2 percent, followed by Associate degrees at 3.5 percent, master's degrees at 1.3 percent, first professional degrees at 1.2 percent and doctoral degrees at 0.3 percent.

Uvalde County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
5,012	Short-term on-the-job training	37.1%
2,318	Moderate-term on-the-job training	17.2%
1,877	Work experience in a related occupation	13.9%
1,429	Bachelor's degree	10.6%
762	Bachelor's or higher degree, plus work experience	5.6%
688	Long-term on-the-job training	5.1%
561	Postsecondary vocational award	4.2%
466	Associate degree	3.5%
180	Master's degree	1.3%
164	First professional degree	1.2%
34	Doctoral degree	0.3%
13,493	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts on occupations within Uvalde County are shown in the table below. Moving to the first position are transportation and material moving occupations (22.2 percent) showing a 15.4 percentage point increase; followed by construction and extraction occupations (16.4 percent), increasing by 12.3 percentage points, office and administrative occupations (15.6 percent), decreasing by 0.9 percentage point, production occupations (10.9 percent), increasing by 6.3 percentage points, and installation, maintenance, and repair occupations (10.1 percent), increasing by 6.3 percentage points.

In the sixth position are management, business, and financial occupations (8.7 percent) showing a 3.5 percentage point decrease; followed by sales occupations (5.6 percent), decreasing by 5.5 percentage points, professional occupations (5.3 percent), decreasing by 9 percentage points. Last are service occupations (5.1 percent), decreasing by 16.4 percentage points, and farming, fishing, and forestry (0.1 percent), decreasing by 5.1 percentage points.

Occupation Code	Direct Plus Indirect Impacts Uvalde County 10-Occupational Categories, 2011	Occupational Impact	Percentage
53-0000	Transportation and material moving occupations	36	22.2%
47-0000	Construction and extraction occupations	27	16.4%
43-0000	Office and administrative support occupations	25	15.6%
51-0000	Production occupations	18	10.9%
49-0000	Installation, maintenance, and repair occupations	16	10.1%
11-1300	Management, business, and financial occupations	14	8.7%
41-0000	Sales and related occupations	9	5.6%
15-2900	Professional and related occupations	9	5.3%
31-3900	Service occupations	8	5.1%
45-0000	Farming, fishing, and forestry occupations	0	0.1%
	Total	162	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Eagle Ford development impacts on educational distribution in 2011 within Uvalde County are detailed below. Moving to the first position is moderate-term on-the-job training (34.2 percent) showing a 17 percentage point increase; followed by short-term on-the-job training (32.2 percent), decreasing by 4.9 percentage points, work experience in a related field (11.2 percent), decreasing by 2.7 percentage points, and long-term on-the-job training (6.8 percent) showing a 1.7 percentage point increase.

In the fifth position are bachelor's degrees (6.6 percent) showing a 4 percentage point decrease; followed by bachelor's or higher degree, plus work experience (4 percent), decreasing by 1.6 percentage point, postsecondary vocational awards (3 percent), decreasing by 1.2 percentage point, and Associate degrees (1.4 percent) showing a 2.1 percentage point decrease. Last are first professional degrees (0.3 percent), decreasing by 0.9 percentage point, master's degrees (0.2 percent), decreasing by 1.1 percentage point and doctoral degrees (0.1 percent) showing a 0.2 percentage point decrease.

Direct Plus Indirect Impacts Uvalde County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
55	Moderate-term on-the-job training	34.2%
52	Short-term on-the-job training	32.2%
18	Work experience in a related occupation	11.2%
11	Long-term on-the-job training	6.8%
11	Bachelor's degree	6.6%
6	Bachelor's or higher degree, plus work experience	4.0%
5	Postsecondary vocational award	3.0%
2	Associate degree	1.4%
1	First professional degree	0.3%
0	Master's degree	0.2%
0	Doctoral degree	0.1%
162	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The Eagle Ford projected impacts for 2021 within Uvalde County show office and administrative occupations (20.5 percent) first, increasing by 4.9 percentage points; followed by transportation and material moving occupations (16.7 percent), decreasing by 5.5 percentage points, management, business, and financial occupations (11.4 percent), increasing by 2.7 percentage points, sales occupations (10.7 percent), increasing by 5.1 percentage points, and construction and extraction occupations (10.4 percent), moving to the fifth position and decreasing by 6 percentage points.

Next are Installation, maintenance, and repair occupations (8 percent) and are projected to decrease by 2.1 percentage points; followed by professional occupations (7.5 percent), increasing by 2.2 percentage points, service occupations (7.3 percent), increasing by 2.2 percentage points, production occupations (7.2 percent), decreasing by 3.7 percentage points, and farming, fishing, and forestry occupations (0.3 percent) showing a 0.2 percentage point increase.

Occupation Code	Direct Plus Indirect Impacts Uvalde County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	33	20.5%
53-0000	Transportation and material moving occupations	27	16.7%
11-1300	Management, business, and financial occupations	18	11.4%
41-0000	Sales and related occupations	17	10.7%
47-0000	Construction and extraction occupations	17	10.4%
49-0000	Installation, maintenance, and repair occupations	13	8.0%
15-2900	Professional and related occupations	12	7.5%
31-3900	Service occupations	12	7.3%
51-0000	Production occupations	11	7.2%
45-0000	Farming, fishing, and forestry occupations	0	0.3%
	Total	159	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The 2021 projected educational distribution resulting from Eagle Ford development is shown in the table below. Moving to the third position is short-term on-the-job training (34.1 percent) and projected to increase by 1.9 percentage point; followed by moderate-term on-the-job training (25.4 percent), decreasing by 8.8 percentage points, work experience in a related field (14.2 percent), increasing by 3 percentage points, bachelor's degrees (9.4 percent), increasing by 2.8 percentage points, and long-term on-the-job training (6.6 percent), decreasing by 0.2 percentage point.

Sixth are bachelor's degrees or higher, plus work experience (4.7 percent), increasing by 0.7 percentage point; followed by postsecondary vocational awards (3.1 percent), increasing by 0.1 percentage point, Associate degrees (1.8 percent), increasing by 0.4 percentage point, and first professional degrees (0.4 percent) showing a 0.1 percentage point increase. Last are master's degrees remaining at 0.2 percent and doctoral degrees (less than 1 percent) showing a 0.1 percentage point decrease.

Direct Plus Indirect Impacts Uvalde County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
54	Short-term on-the-job training	34.1%
40	Moderate-term on-the-job training	25.4%
23	Work experience in a related occupation	14.2%
15	Bachelor's degree	9.4%
10	Long-term on-the-job training	6.6%
7	Bachelor's or higher degree, plus work experience	4.7%
5	Postsecondary vocational award	3.1%
3	Associate degree	1.8%
1	First professional degree	0.4%
0	Master's degree	0.2%
0	Doctoral degree	0.0%
159	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Uvalde Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Uvalde County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			55	100.0%
1	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	5.6%
2	53-3032	Truck drivers, heavy and tractor-trailer	3	4.7%
3	53-7062	Laborers and freight, stock, and material movers, hand	2	3.8%
4	43-9061	Office clerks, general	1	2.5%
5	43-4051	Customer service representatives	1	2.5%
6	33-9032	Security guards	1	2.5%
7	47-2073	Operating engineers and other construction equipment operators	1	2.1%
8	43-3031	Bookkeeping, accounting, and auditing clerks	1	2.0%
9	53-3033	Truck drivers, light or delivery services	1	1.9%
10	11-1021	General and operations managers	1	1.8%
11	43-5081	Stock clerks and order fillers	1	1.5%
12	13-2011	Accountants and auditors	1	1.5%
13	49-9042	Maintenance and repair workers, general	1	1.4%
14	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	1.3%
15	49-3042	Mobile heavy equipment mechanics, except engines	1	1.3%
16	43-1011	First-line supervisors/managers of office and administrative support workers	1	1.2%
17	43-5071	Shipping, receiving, and traffic clerks	1	1.2%
18	43-6011	Executive secretaries and administrative assistants	1	1.2%
19	43-6014	Secretaries, except legal, medical, and executive	1	1.2%
20	41-2031	Retail salespersons	1	1.2%
21	53-7051	Industrial truck and tractor operators	1	1.0%
22	43-3071	Tellers	1	1.0%
23	13-2072	Loan officers	1	0.9%
24	47-5041	Continuous mining machine operators	<1	N/A
25	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	<1	N/A
26	53-3031	Driver/sales workers	<1	N/A
27	47-1011	First-line supervisors/managers of construction trades and extraction workers	<1	N/A
28	49-9041	Industrial machinery mechanics	<1	N/A
29	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	<1	N/A
30	41-2011	Cashiers, except gaming	<1	N/A
31	41-1012	First-line supervisors/managers of non-retail sales workers	<1	N/A
32	41-2021	Counter and rental clerks	<1	N/A
33	47-2061	Construction laborers	<1	N/A
34	53-7032	Excavating and loading machine and dragline operators	<1	N/A
35	13-1199	Business operation specialists, all other	<1	N/A

Top 35 Occupations: Total impacts 2011

SOC Occupation		Total Impacts Uvalde County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2011	Impact	Percentage
			75	100.0%
1	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	4.4%
2	53-3032	Truck drivers, heavy and tractor-trailer	3	3.7%
3	53-7062	Laborers and freight, stock, and material movers, hand	2	3.2%
4	43-9061	Office clerks, general	2	2.5%
5	43-4051	Customer service representatives	2	2.4%
6	33-9032	Security guards	2	2.4%
7	41-2031	Retail salespersons	2	2.0%
8	43-3031	Bookkeeping, accounting, and auditing clerks	1	1.9%
9	11-1021	General and operations managers	1	1.7%
10	53-3033	Truck drivers, light or delivery services	1	1.6%
11	47-2073	Operating engineers and other construction equipment operators	1	1.6%
12	41-2011	Cashiers, except gaming	1	1.6%
13	43-5081	Stock clerks and order fillers	1	1.5%
14	13-2011	Accountants and auditors	1	1.3%
15	49-9042	Maintenance and repair workers, general	1	1.3%
16	43-1011	First-line supervisors/managers of office and administrative support workers	1	1.2%
17	43-6014	Secretaries, except legal, medical, and executive	1	1.2%
18	43-6011	Executive secretaries and administrative assistants	1	1.2%
19	51-6011	Laundry and dry-cleaning workers	1	1.2%
20	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	1.1%
21	43-5071	Shipping, receiving, and traffic clerks	1	1.0%
22	35-3031	Waiters and waitresses	1	1.0%
23	35-3021	Combined food preparation and serving workers, including fast food	1	1.0%
24	41-2021	Counter and rental clerks	1	1.0%
25	13-2072	Loan officers	1	1.0%
26	49-3042	Mobile heavy equipment mechanics, except engines	1	1.0%
27	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.9%
28	43-3071	Tellers	1	0.9%
29	53-7051	Industrial truck and tractor operators	1	0.8%
30	53-3031	Driver/sales workers	1	0.8%
31	43-4171	Receptionists and information clerks	1	0.7%
32	43-4131	Loan interviewers and clerks	0	0.7%
33	47-5041	Continuous mining machine operators	0	0.7%
34	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	0	0.6%
35	47-1011	First-line supervisors/managers of construction trades and extraction workers	0	0.6%

Uvalde Top 35 Occupations Impacted 2021

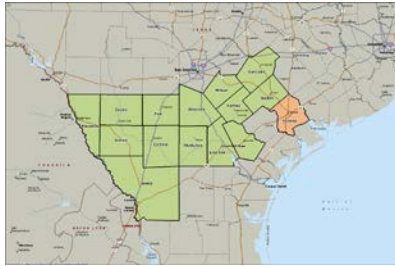
Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Uvalde County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			159	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	8	4.9%
2	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	7	4.1%
3	53-7062	Laborers and freight, stock, and material movers, hand	5	3.2%
4	47-2073	Operating engineers and other construction equipment operators	4	2.7%
5	43-9061	Office clerks, general	4	2.7%
6	33-9032	Security guards	4	2.5%
7	43-4051	Customer service representatives	4	2.3%
8	43-3031	Bookkeeping, accounting, and auditing clerks	3	2.1%
9	11-1021	General and operations managers	3	1.9%
10	13-2011	Accountants and auditors	3	1.6%
11	49-9042	Maintenance and repair workers, general	3	1.6%
12	53-7032	Excavating and loading machine and dragline operators	2	1.5%
13	53-3033	Truck drivers, light or delivery services	2	1.5%
14	43-6011	Executive secretaries and administrative assistants	2	1.4%
15	43-6014	Secretaries, except legal, medical, and executive	2	1.3%
16	43-1011	First-line supervisors/managers of office and administrative support workers	2	1.2%
17	47-2061	Construction laborers	2	1.2%
18	43-5081	Stock clerks and order fillers	2	1.2%
19	47-1011	First-line supervisors/managers of construction trades and extraction workers	2	1.2%
20	53-7051	Industrial truck and tractor operators	2	1.1%
21	49-3042	Mobile heavy equipment mechanics, except engines	2	1.1%
22	41-2031	Retail salespersons	2	1.0%
23	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	2	1.0%
24	43-5071	Shipping, receiving, and traffic clerks	2	1.0%
25	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	2	0.9%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.9%
27	43-3071	Tellers	1	0.9%
28	13-2072	Loan officers	1	0.9%
29	47-2031	Carpenters	1	0.8%
30	47-5041	Continuous mining machine operators	1	0.8%
31	41-2011	Cashiers, except gaming	1	0.7%
32	51-1011	First-line supervisors/managers of production and operating workers	1	0.7%
33	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	1	0.7%
34	49-9041	Industrial machinery mechanics	1	0.7%
35	13-1199	Business operation specialists, all other	1	0.7%

Top 35 Occupations: Total impacts 2021

SOC Occupation		Total Impacts Uvalde County	Occupational	
Ranking	Code	Top 35 Occupations Impacted in 2021	Impact	Percentage
			213	100.0%
1	53-3032	Truck drivers, heavy and tractor-trailer	8	3.9%
2	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	7	3.4%
3	53-7062	Laborers and freight, stock, and material movers, hand	6	2.8%
4	43-9061	Office clerks, general	5	2.6%
5	33-9032	Security guards	5	2.4%
6	43-4051	Customer service representatives	5	2.2%
7	47-2073	Operating engineers and other construction equipment operators	4	2.0%
8	43-3031	Bookkeeping, accounting, and auditing clerks	4	2.0%
9	41-2031	Retail salespersons	4	1.9%
10	11-1021	General and operations managers	4	1.8%
11	41-2011	Cashiers, except gaming	3	1.5%
12	49-9042	Maintenance and repair workers, general	3	1.5%
13	13-2011	Accountants and auditors	3	1.5%
14	53-3033	Truck drivers, light or delivery services	3	1.3%
15	43-6011	Executive secretaries and administrative assistants	3	1.3%
16	43-6014	Secretaries, except legal, medical, and executive	3	1.3%
17	43-5081	Stock clerks and order fillers	3	1.3%
18	43-1011	First-line supervisors/managers of office and administrative support workers	3	1.2%
19	53-7032	Excavating and loading machine and dragline operators	2	1.2%
20	35-3031	Waiters and waitresses	2	1.0%
21	35-3021	Combined food preparation and serving workers, including fast food	2	1.0%
22	51-6011	Laundry and dry-cleaning workers	2	1.0%
23	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	2	1.0%
24	47-2061	Construction laborers	2	0.9%
25	53-7051	Industrial truck and tractor operators	2	0.9%
26	13-2072	Loan officers	2	0.9%
27	47-1011	First-line supervisors/managers of construction trades and extraction workers	2	0.9%
28	41-2021	Counter and rental clerks	2	0.9%
29	43-3071	Tellers	2	0.9%
30	43-5071	Shipping, receiving, and traffic clerks	2	0.8%
31	49-3042	Mobile heavy equipment mechanics, except engines	2	0.8%
32	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	2	0.8%
33	43-4171	Receptionists and information clerks	2	0.8%
34	51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	2	0.7%
35	47-2031	Carpenters	1	0.7%

Victoria County



The following tables explain the estimated direct, indirect, and induced impacts within Victoria County for 2011 and 2021. It is estimated that a total of 107 Victoria County jobs were supported by the Eagle Ford Shale in 2011, with the largest impact being in indirect employment.

Estimated Impact 2011				
Victoria County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	71	36	107

In 2021, Victoria County is projected to see a total of 266 jobs impacted by Eagle Ford, with the largest impact on indirect employment.

Estimated Impact 2021				
Victoria County				
		Economic Impacts		
	Direct	Indirect	Induced	Total
Employment	0	176	90	266

The table below details the Eagle Ford total impacts for 2011 within Victoria County. At the top of the list are office and administrative occupations at 21.2 percent, followed by service occupations at 14.1 percent, sales occupations at 11.8 percent, management, business, and financial occupations at 11.7 percent, and transportation and material moving occupations at 10.9 percent. In the sixth position are professional occupations at 10.3 percent, followed by production occupations at 8.9 percent, installation, maintenance, and repair occupations at 7.3 percent, construction and extraction occupations at 3.3 percent, and farming, fishing, and forestry occupations at 0.4 percent.

Occupation Code	Total Impacts Victoria County Occupation Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	23	21.2%
31-3900	Service occupations	15	14.1%
41-0000	Sales and related occupations	13	11.8%
11-1300	Management, business, and financial occupations	13	11.7%
53-0000	Transportation and material moving occupations	12	10.9%
15-2900	Professional and related occupations	11	10.3%
51-0000	Production occupations	10	8.9%
49-0000	Installation, maintenance, and repair occupations	8	7.3%
47-0000	Construction and extraction occupations	4	3.3%
45-0000	Farming, fishing, and forestry occupations	0	0.4%
	Total	108	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected total occupational impacts for 2021 within Victoria County are shown below. Office and administrative occupations are first at 20.7 percent, followed by service occupations at 14.3 percent, management, business, and financial occupations at 11.7 percent, sales occupations at 11.2 percent, and transportation and material moving occupations at 11 percent.

Sixth are professional occupations at 10.5 percent, next are production occupations at 8 percent, installation, maintenance, and repair occupations at 7.7 percent, construction and extraction occupations at 4.5 percent, and farming, fishing, and forestry occupations at 0.4 percent.

Occupation Code	Total Impacts Victoria County Occupational Impacts, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	55	20.7%
31-3900	Service occupations	38	14.3%
11-1300	Management, business, and financial occupations	31	11.7%
41-0000	Sales and related occupations	30	11.2%
53-0000	Transportation and material moving occupations	29	11.0%
15-2900	Professional and related occupations	28	10.5%
51-0000	Production occupations	21	8.0%
49-0000	Installation, maintenance, and repair occupations	20	7.7%
47-0000	Construction and extraction occupations	12	4.5%
45-0000	Farming, fishing, and forestry occupations	1	0.4%
	Total	266	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Victoria Direct and Indirect Impacts

The occupational composition of Victoria County in 2010 is shown below. Service occupations are first on the list at 19.3 percent, followed by office and administrative occupations at 18 percent, professional occupations at 15.4 percent, management, business, and financial occupations at 15.4 percent and sales occupations at 11.6 percent.

In the sixth position are transportation and material moving occupations at 6.9 percent; followed by construction and extraction occupations at 6.4 percent, production occupations at 5.2 percent, installation, maintenance, and repair occupations at 4.3 percent and farming, fishing, forestry occupations at 2.2 percent of the labor demanded in 2010.

Occupation Code	Victoria County 10-Occupational Categories, 2010	Employment	Percentage
31-3900	Service occupations	9,896	19.3%
43-0000	Office and administrative support occupations	9,242	18.0%
15-2900	Professional and related occupations	7,880	15.4%
11-1300	Management, business, and financial occupations	5,936	11.6%
41-0000	Sales and related occupations	5,509	10.7%
53-0000	Transportation and material moving occupations	3,534	6.9%
47-0000	Construction and extraction occupations	3,281	6.4%
51-0000	Production occupations	2,647	5.2%
49-0000	Installation, maintenance, and repair occupations	2,185	4.3%
45-0000	Farming, fishing, and forestry occupations	1,148	2.2%
	Total	51,259	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Educational distribution in 2010 within Victoria County show a focus on short-term on-the-job training at 35.4 percent; followed by moderate-term on-the-job training at 18.8 percent, work experience in a related field at 11.6 percent, bachelor's degrees at 10.5 percent, and long-term on-the-job training at 6.4 percent. Next are postsecondary vocational awards at 5.3 percent, bachelor's or higher degrees, plus work experience at 4.9 percent, Associate degrees at 4.2 percent, and first professional degrees at 1.4 percent. Last are master's degrees at 1.4 percent and doctoral degrees at 0.2 percent.

Victoria County Educational Structure, 2010		
Number of Jobs	Educational Attainment	Percentage
18,132	Short-term on-the-job training	35.4%
9,657	Moderate-term on-the-job training	18.8%
5,938	Work experience in a related occupation	11.6%
5,369	Bachelor's degree	10.5%
3,266	Long-term on-the-job training	6.4%
2,697	Postsecondary vocational award	5.3%
2,506	Bachelor's or higher degree, plus work experience	4.9%
2,162	Associate degree	4.2%
730	First professional degree	1.4%
696	Master's degree	1.4%
106	Doctoral degree	0.2%
51,259	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

The 2011 Eagle Ford development impacts on occupations within Victoria County are shown in the table below. Moving to the first position are office and administrative occupations (21.3 percent) showing a 3.3 percentage point increase; followed by transportation and material moving occupations (13.4 percent), increasing by 6.5 percentage points, management, business, and financial occupations (12.5 percent), increasing by 0.9 percentage point, production occupations (11.8 percent), increasing by 6.6 percentage points, and sales occupations (10.9 percent) showing a 0.2 percentage point increase.

In the sixth position are installation, maintenance, and repair occupations (9.1 percent) showing a 4.8 percentage point increase; followed by service occupations (8.6 percent), decreasing by 10.7 percentage points, professional occupations (8 percent), decreasing by 7.4 percentage points, construction and extraction occupations (4.1 percent), decreasing by 2.3 percentage points, and farming, fishing, and forestry (0.3 percent), showing a 1.9 percentage point increase.

Occupation Code	Direct Plus Indirect Impacts Victoria County 10-Occupational Impacts, 2011	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	15	21.3%
53-0000	Transportation and material moving occupations	10	13.4%
11-1300	Management, business, and financial occupations	9	12.5%
51-0000	Production occupations	8	11.8%
41-0000	Sales and related occupations	8	10.9%
49-0000	Installation, maintenance, and repair occupations	6	9.1%
31-3900	Service occupations	6	8.6%
15-2900	Professional and related occupations	6	8.0%
47-0000	Construction and extraction occupations	3	4.1%
45-0000	Farming, fishing, and forestry occupations	0	0.3%
	Total	71	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

The Eagle Ford development impacts on education and training in 2011 within Victoria County are shown in the table below. Short-term on-the-job training (33.8 percent) remains foremost but decreased by 1.6 percentage point; followed by moderate-term on-the-job training (22.3 percent), increasing by 3.5 percentage points, work experience in a related field (13.7 percent), increasing by 2.1 percentage points, bachelor's degrees (9.1 percent), decreasing by 1.4 percentage point, and long-term on-the-job training (7.5 percent) showing a 1.1 percentage point increase.

Sixth are bachelor's degrees, plus work experience (5.9 percent) showing a 1 percentage point increase; followed by postsecondary vocational awards (5 percent), decreasing by 0.3 percentage point, and Associate degrees (1.9 percent) showing a 2.3 percentage point decrease. Master's degrees (0.4 percent) are ninth showing a 1 percentage point decrease, first professional degrees (0.4 percent) are tenth showing a 1 percentage point decrease, and last are doctoral degrees (less than 1 percent) showing a 0.2 percentage point decrease.

Direct Plus Indirect Impacts Victoria County Educational Structure, 2011		
Occupational Impact	Educational Attainment	Percentage
24	Short-term on-the-job training	33.8%
16	Moderate-term on-the-job training	22.3%
10	Work experience in a related occupation	13.7%
6	Bachelor's degree	9.1%
5	Long-term on-the-job training	7.5%
4	Bachelor's or higher degree, plus work experience	5.9%
4	Postsecondary vocational award	5.0%
1	Associate degree	1.9%
0	Master's degree	0.4%
0	First professional degree	0.4%
0	Doctoral degree	0.0%
71	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices, and BLS for education and training categories.

Projected Eagle Ford development impacts for 2021 within Victoria County are detailed in the table below. Remaining in the first position are office and administrative occupations (20.4 percent) showing a 0.9 percentage point decrease; followed by transportation and material moving occupations (13.6 percent), increasing by 0.2 percentage point, management, business, and financial occupations (12.4 percent), decreasing by 0.1 percentage point, production occupations (10.7 percent), decreasing by 1.1 percentage point, and sales occupations (9.9 percent) showing a 1 percentage point decrease.

Next are installation, maintenance, and repair occupations (9.6 percent) showing a 0.5 percentage point increase; followed by service occupations (8.9 percent), increasing by 0.3 percentage point, professional occupations (8.2 percent), increasing by 0.2 percentage point, construction and extraction occupations (6.1 percent), increasing by 2 percentage points, and farming, fishing, and forestry occupations remaining at 0.3 percent.

Occupation Code	Direct Plus Indirect Impacts Victoria County 10-Occupational Categories, 2021	Occupational Impact	Percentage
43-0000	Office and administrative support occupations	36	20.4%
53-0000	Transportation and material moving occupations	24	13.6%
11-1300	Management, business, and financial occupations	22	12.4%
51-0000	Production occupations	19	10.7%
41-0000	Sales and related occupations	17	9.9%
49-0000	Installation, maintenance, and repair occupations	17	9.6%
31-3900	Service occupations	16	8.9%
15-2900	Professional and related occupations	14	8.2%
47-0000	Construction and extraction occupations	11	6.1%
45-0000	Farming, fishing, and forestry occupations	1	0.3%
	Total	176	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Projected Eagle Ford development impacts for 2021 within Victoria County show a focus on short-term on-the-job training (33.1 percent) decreasing by 0.7 percentage points; followed by moderate-term on-the-job training (23.1 percent), increasing by 0.8 percentage point, work experience in a related field (13.2 percent), decreasing by 0.5 percentage point, bachelor's degrees (9.2 percent), increasing by 0.1 percentage point, and long-term on-the-job training (8.4 percent) showing a 0.9 percentage point increase.

In the sixth position is bachelor's degree, plus work experience (5.7 percent) showing a 0.2 percentage point decrease, followed by postsecondary vocational awards (4.5 percent), showing a 0.5 percentage point decrease, Associate degrees (2 percent), increasing by 0.1 percentage point and master's degrees (0.5 percent) showing a 0.1 percentage point increase. Last are first professional degrees remaining at 0.4 percent and doctoral degrees remaining at less than 1 percent.

Direct Plus Indirect Impacts Victoria County Educational Structure, 2021		
Occupational Impact	Educational Attainment	Percentage
58	Short-term on-the-job training	33.1%
41	Moderate-term on-the-job training	23.1%
23	Work experience in a related occupation	13.2%
16	Bachelor's degree	9.2%
15	Long-term on-the-job training	8.4%
10	Bachelor's or higher degree, plus work experience	5.7%
8	Postsecondary vocational award	4.5%
4	Associate degree	2.0%
1	Master's degree	0.5%
1	First professional degree	0.4%
0	Doctoral degree	0.0%
176	Total	100.0%

Source: IMPLAN v.3 and IMPLAN Occupational Matrices.

Victoria Top 35 Occupations Impacted 2011

Top 35 Occupations: Direct and indirect impacts 2011

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Victoria County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			72	100.0%
1	53-7062	Laborers and freight, stock, and material movers, hand	2	3.4%
2	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	2	3.4%
3	33-9032	Security guards	2	3.3%
4	43-4051	Customer service representatives	2	3.0%
5	53-3032	Truck drivers, heavy and tractor-trailer	2	2.8%
6	43-9061	Office clerks, general	2	2.8%
7	11-1021	General and operations managers	2	2.3%
8	43-3031	Bookkeeping, accounting, and auditing clerks	2	2.1%
9	49-9042	Maintenance and repair workers, general	1	1.8%
10	51-2092	Team assemblers	1	1.7%
11	41-2021	Counter and rental clerks	1	1.6%
12	43-6014	Secretaries, except legal, medical, and executive	1	1.6%
13	51-4121	Welders, cutters, solderers, and brazers	1	1.6%
14	13-2011	Accountants and auditors	1	1.6%
15	53-3033	Truck drivers, light or delivery services	1	1.5%
16	43-6011	Executive secretaries and administrative assistants	1	1.5%
17	43-1011	First-line supervisors/managers of office and administrative support workers	1	1.3%
18	49-3042	Mobile heavy equipment mechanics, except engines	1	1.2%
19	41-2031	Retail salespersons	1	1.1%
20	43-5071	Shipping, receiving, and traffic clerks	1	1.0%
21	51-1011	First-line supervisors/managers of production and operating workers	1	1.0%
22	13-1111	Management analysts	1	0.9%
23	43-5081	Stock clerks and order fillers	1	0.9%
24	13-1199	Business operation specialists, all other	1	0.9%
25	41-3099	Sales representatives, services, all other	1	0.9%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.9%
27	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	0.8%
28	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	1	0.8%
29	53-7051	Industrial truck and tractor operators	1	0.8%
30	53-7064	Packers and packagers, hand	1	0.7%
31	43-4171	Receptionists and information clerks	1	0.7%
32	35-3031	Waiters and waitresses	<1	N/A
33	49-9041	Industrial machinery mechanics	<1	N/A
34	47-2031	Carpenters	<1	N/A
35	35-3021	Combined food preparation and serving workers, including fast food	<1	N/A

Top 35 Occupations: Total impacts 2011

Ranking	SOC Occupation Code	Total Impacts Victoria County Top 35 Occupations Impacted in 2011	Occupational	
			Impact	Percentage
			108	100.0%
1	43-4051	Customer service representatives	3	2.9%
2	33-9032	Security guards	3	2.8%
3	53-7062	Laborers and freight, stock, and material movers, hand	3	2.8%
4	43-9061	Office clerks, general	3	2.8%
5	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3	2.6%
6	41-2031	Retail salespersons	2	2.3%
7	53-3032	Truck drivers, heavy and tractor-trailer	2	2.2%
8	11-1021	General and operations managers	2	2.0%
9	43-3031	Bookkeeping, accounting, and auditing clerks	2	2.0%
10	43-6014	Secretaries, except legal, medical, and executive	2	1.6%
11	41-2011	Cashiers, except gaming	2	1.6%
12	49-9042	Maintenance and repair workers, general	2	1.5%
13	43-6011	Executive secretaries and administrative assistants	2	1.4%
14	13-2011	Accountants and auditors	1	1.4%
15	41-2021	Counter and rental clerks	1	1.3%
16	43-1011	First-line supervisors/managers of office and administrative support workers	1	1.3%
17	53-3033	Truck drivers, light or delivery services	1	1.2%
18	51-2092	Team assemblers	1	1.2%
19	35-3031	Waiters and waitresses	1	1.2%
20	35-3021	Combined food preparation and serving workers, including fast food	1	1.2%
21	43-5081	Stock clerks and order fillers	1	1.1%
22	51-4121	Welders, cutters, solderers, and brazers	1	1.1%
23	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.9%
24	29-1111	Registered nurses	1	0.9%
25	43-4171	Receptionists and information clerks	1	0.9%
26	13-1199	Business operation specialists, all other	1	0.8%
27	43-5071	Shipping, receiving, and traffic clerks	1	0.8%
28	49-3042	Mobile heavy equipment mechanics, except engines	1	0.8%
29	13-1111	Management analysts	1	0.8%
30	41-3099	Sales representatives, services, all other	1	0.7%
31	51-1011	First-line supervisors/managers of production and operating workers	1	0.7%
32	53-7064	Packers and packagers, hand	1	0.7%
33	41-1011	First-line supervisors/managers of retail sales workers	1	0.7%
34	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	1	0.7%
35	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	0.6%

Victoria Top 35 Occupations Impacted 2021

Top 35 Occupations: Direct and indirect impacts 2021

Ranking	SOC Occupation Code	Direct Plus Indirect Impacts Victoria County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			176	100.0%
1	33-9032	Security guards	7	3.8%
2	53-3032	Truck drivers, heavy and tractor-trailer	6	3.2%
3	53-7062	Laborers and freight, stock, and material movers, hand	5	3.1%
4	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	5	2.9%
5	43-4051	Customer service representatives	5	2.8%
6	43-9061	Office clerks, general	5	2.7%
7	11-1021	General and operations managers	4	2.3%
8	43-3031	Bookkeeping, accounting, and auditing clerks	4	2.1%
9	49-9042	Maintenance and repair workers, general	3	1.8%
10	13-2011	Accountants and auditors	3	1.6%
11	43-6014	Secretaries, except legal, medical, and executive	3	1.5%
12	43-6011	Executive secretaries and administrative assistants	3	1.5%
13	41-2021	Counter and rental clerks	3	1.5%
14	53-3033	Truck drivers, light or delivery services	2	1.4%
15	51-2092	Team assemblers	2	1.2%
16	43-1011	First-line supervisors/managers of office and administrative support workers	2	1.2%
17	49-3042	Mobile heavy equipment mechanics, except engines	2	1.2%
18	51-4121	Welders, cutters, solderers, and brazers	2	1.2%
19	41-2031	Retail salespersons	2	1.1%
20	47-2073	Operating engineers and other construction equipment operators	2	1.0%
21	51-1011	First-line supervisors/managers of production and operating workers	2	0.9%
22	13-1199	Business operation specialists, all other	2	0.9%
23	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	2	0.9%
24	43-5071	Shipping, receiving, and traffic clerks	1	0.8%
25	43-5081	Stock clerks and order fillers	1	0.8%
26	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	1	0.8%
27	41-3099	Sales representatives, services, all other	1	0.8%
28	13-1111	Management analysts	1	0.8%
29	53-7051	Industrial truck and tractor operators	1	0.8%
30	47-2061	Construction laborers	1	0.8%
31	47-2031	Carpenters	1	0.8%
32	49-9051	Electrical power-line installers and repairers	1	0.8%
33	47-1011	First-line supervisors/managers of construction trades and extraction workers	1	0.7%
34	49-9041	Industrial machinery mechanics	1	0.7%
35	41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1	0.7%

Top 35 Occupations: Total impacts 2021

Ranking	SOC Occupation Code	Total Impacts Victoria County Top 35 Occupations Impacted in 2021	Occupational	
			Impact	Percentage
			266	100.0%
1	33-9032	Security guards	8	3.2%
2	43-4051	Customer service representatives	7	2.8%
3	43-9061	Office clerks, general	7	2.7%
4	53-7062	Laborers and freight, stock, and material movers, hand	7	2.6%
5	53-3032	Truck drivers, heavy and tractor-trailer	6	2.4%
6	41-2031	Retail salespersons	6	2.3%
7	41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	6	2.2%
8	11-1021	General and operations managers	5	2.0%
9	43-3031	Bookkeeping, accounting, and auditing clerks	5	2.0%
10	41-2011	Cashiers, except gaming	4	1.6%
11	49-9042	Maintenance and repair workers, general	4	1.6%
12	43-6014	Secretaries, except legal, medical, and executive	4	1.6%
13	43-6011	Executive secretaries and administrative assistants	4	1.4%
14	13-2011	Accountants and auditors	4	1.4%
15	43-1011	First-line supervisors/managers of office and administrative support workers	3	1.2%
16	35-3021	Combined food preparation and serving workers, including fast food	3	1.2%
17	35-3031	Waiters and waitresses	3	1.2%
18	41-2021	Counter and rental clerks	3	1.2%
19	53-3033	Truck drivers, light or delivery services	3	1.1%
20	43-5081	Stock clerks and order fillers	3	1.1%
21	29-1111	Registered nurses	3	0.9%
22	37-2011	Janitors and cleaners, except maids and housekeeping cleaners	2	0.9%
23	51-2092	Team assemblers	2	0.9%
24	43-4171	Receptionists and information clerks	2	0.9%
25	13-1199	Business operation specialists, all other	2	0.8%
26	49-3042	Mobile heavy equipment mechanics, except engines	2	0.8%
27	51-4121	Welders, cutters, solderers, and brazers	2	0.8%
28	43-5071	Shipping, receiving, and traffic clerks	2	0.7%
29	13-1111	Management analysts	2	0.7%
30	47-2073	Operating engineers and other construction equipment operators	2	0.7%
31	41-3099	Sales representatives, services, all other	2	0.7%
32	49-1011	First-line supervisors/managers of mechanics, installers, and repairers	2	0.7%
33	51-1011	First-line supervisors/managers of production and operating workers	2	0.7%
34	41-1011	First-line supervisors/managers of retail sales workers	2	0.7%
35	47-2031	Carpenters	2	0.6%

* * *