

# Economic Development Performance Evaluation

**2009 Data Year**

## Marion County, Florida

**POLICOM**  
CORPORATION

## Summary

A local economy will grow and expand, decline and fall in direct proportion to the amount of money flowing into the area. Money is imported to a local economy by way of its contributory or primary industries. In 2002 the Ocala – Marion County Economic Development Corporation asked POLICOM to create an *Economic Development Goal Setting Study* which discussed the existing condition of the economy, projected the condition of the economy, and established a reasonable economic Goal to increase the size and improve the quality of the economy by the year 2023.

In order to achieve the economic Goal, POLICOM created annual milestones for new primary industry jobs and their associated wage levels which, if attained, will cause the Marion County to reach the desired level.

In 2009, the recession which began in 2008 deepened in the United States. During 2009, the nation lost 5.5% of its private sector jobs, more than 6.2 million. The greatest percentage decline occurred in construction (-16.5%). The nation lost more than 1.1 million jobs in this industry. This was the direct result of the collapse of the housing industry.

The greatest actual loss of jobs was in the manufacturing sector which declined by 1.57 million. The loss of jobs was “across the board” in manufacturing. Among the eighty-five “four digit” industrial sub-sectors for manufacturing, all but two declined in employment in 2009.

Florida lost more than 7% of its private sector jobs in 2009, dropping more than 470,000 positions. While most of the job loss can be attributed to the volatile decline in the new home construction industry, every industrial sector except Healthcare and Private Education lost workers. The state lost 118,000 construction jobs in 2009.

Employment in manufacturing declined by 12.7%, almost three times the rate of the previous year’s loss.

In 2009 Marion County had double digit losses ten of the nineteen industrial sectors. The county lost 10.7% of its private sector jobs in 2009. As expected, the county lost a large number of construction jobs due to the rapid decline in the new home industry. This decline is expected to continue. The county is approaching its 2002 employment level in construction of 5,973.

The second greatest loss of jobs was in manufacturing, dropping by 1,722. Most of the decline in Marion County’s manufacturing sector can be attributed to the national decline in home construction.

Marion County had a net loss of 2,235 primary jobs in 2009. Most of the loss occurred in manufacturing principally in the construction materials sub-sector. Also, there was a loss in wholesale trade, finance, and transportation.

As a result of the loss of primary jobs, Marion County did not reach its new primary job milestone set in the Goal Setting Study.

## *Introduction*

A local economy will grow and expand, decline and fall in direct proportion to the amount of money flowing into the area. Money is imported to a local economy by way of its contributory or primary industries. Typically, this is done through the business activity of companies which sell their goods or services outside the economy. The quality of a local economy (standard of living) depends upon the wage level paid to the workers employed in primary jobs.

In 2002 the Ocala – Marion County Economic Development Corporation asked POLICOM to create an *Economic Development Goal Setting Study* which discussed the existing condition of the economy, projected the condition of the economy, and established a reasonable economic Goal to increase the size and improve the quality of the economy by the year 2023. In order to achieve the economic Goal, POLICOM created annual milestones for new primary industry jobs and their associated wage levels which, if attained, will cause the Marion County to reach the desired level.

POLICOM created a mathematical matrix which extracts from general labor data the number of primary industry jobs and their associated average wage by industrial sub-sector. The formulas were used to create the baseline data for 2002 which identified the number of primary jobs for that year. Each year thereafter new data is applied to the baseline formulas to determine the net loss or gain of primary jobs. From these calculations, it can be determined if the annual milestones have been achieved.<sup>1</sup>

The purpose of the report is to determine if the community achieved the annual milestones for 2009.

The Ocala – Marion County Economic Development Corporation is the economic development organization which implements and coordinates the economic development programs for Marion County. Through the cooperative activities of other organizations in the area, it attempts to increase the number of primary industry jobs in the community.

This is accomplished by encouraging existing primary employers to expand, recruiting new employers to the area, and assisting new “start-up” businesses which are primary in nature. The Ocala – Marion County Economic Development Corporation works with other community development organizations in the county to improve the overall economy.

**It should be understood at the outset the job generating results of this and future evaluations, whether positive or negative, are not claimed to be the direct result of the programs of the Ocala – Marion County Economic Development Corporation, but the result of the overall condition of the national economy, state economy, and the combined efforts of the various economic and community development organizations and local government entities in Marion County.**

The database used for this analysis is called ES-202 or covered workers data. It includes only wage and salaried workers and does not include proprietors or workers not covered by the unemployment compensation program.

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<sup>1</sup> The methodology used to create the baseline data to determine the number of primary jobs appears at the end of this report.

### Employment Growth - Nation

In 2009, the recession which began in 2008 deepened in the United States. In 2009, the nation lost 5.5% of its private sector jobs, more than 6.2 million. The greatest percentage decline occurred in construction (-16.5%). The nation lost more than 1.1 million jobs in this industry. This was the direct result of the collapse of the housing industry.

The greatest actual loss of jobs was in the manufacturing sector which declined by 1.57 million. The loss of jobs was “across the board” in manufacturing. Among the eighty-five “four digit” industrial sub-sectors for manufacturing, all but two (3111 Animal Food Manufacturing and 3115 Dairy Products Manufacturing) declined in jobs in 2009. The chart shows the seven manufacturing sectors with the greatest loss. Note the two highlighted sectors.

NAICS	Employment Loss - 2008-2009 - USA	Jobs
3363	Motor Vehicle Parts Manufacturing	-128,953
3261	Plastics Product Manufacturing	-77,728
3231	Printing and Related Support Activities	-70,294
<b>3371</b>	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	-64,795
3323	Architectural and Structural Metals Manufacturing	-64,381
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	-56,458
<b>3219</b>	Other Wood Product Manufacturing	-55,651

Nationally, wages remained the same for “All Workers” while declining by .5% for the private sector. The greatest decline in wages was in the Finance – Insurance sector following the collapse of the mortgage industry.

NAICS Code	USA	2005 JOBS	% Gain/ Loss	2006 JOBS	% Gain/ Loss	2007 JOBS	% Gain/ Loss	2008 Jobs	% Gain/ Loss	2009 Jobs	% Gain/ Loss	Gain/ Loss	2008 Wages	2009 Wages	% Increase
10	Total - All Workers	131,595,637	1.8%	133,833,839	1.7%	135,371,408	1.1%	134,809,552	-0.4%	128,607,842	-4.6%	-6,201,710	45,559	45,559	0.0%
10.1	Total - Private Sector	110,634,510	2.0%	112,719,311	1.9%	114,014,680	1.1%	113,192,473	-0.7%	106,947,104	-5.5%	-6,245,369	45,368	45,155	-0.5%
11	Agriculture, Forestry	1,163,389	0.6%	1,160,881	-0.2%	1,166,745	0.5%	1,169,195	0.2%	1,142,192	-2.3%	-27,003	25,982	26,031	0.2%
21	Mining	560,236	7.8%	616,532	10.0%	660,440	7.1%	713,313	8.0%	641,366	-10.1%	-71,947	87,211	85,526	-1.9%
22	Utilities	550,689	-2.3%	546,593	-0.7%	549,560	0.5%	558,015	1.5%	560,713	0.5%	2,698	84,191	84,877	0.8%
23	Construction	7,267,301	5.1%	7,601,481	4.6%	7,562,373	-0.5%	7,125,029	-5.8%	5,948,837	-16.5%	-1,176,192	49,014	49,322	0.6%
31	Manufacturing	14,191,251	-0.5%	14,113,387	-0.5%	13,834,745	-2.0%	13,383,162	-3.3%	11,810,371	-11.8%	-1,572,791	54,392	54,873	0.9%
42	Wholesale Trade	5,752,186	2.0%	5,884,525	2.3%	5,985,704	1.7%	5,954,232	-0.5%	5,561,787	-6.6%	-392,445	61,847	61,595	-0.4%
44	Retail Trade	15,256,257	1.3%	15,367,132	0.7%	15,507,891	0.9%	15,306,516	-1.3%	14,544,111	-5.0%	-762,405	26,181	26,162	-0.1%
48	Transportation - Warehousing	4,098,365	2.2%	4,205,427	2.6%	4,291,526	2.0%	4,270,836	-0.5%	3,985,037	-6.7%	-285,799	42,969	42,823	-0.3%
51	Information	3,056,182	-1.4%	3,040,708	-0.5%	3,028,274	-0.4%	2,988,732	-1.3%	2,807,721	-6.1%	-181,011	70,780	71,191	0.6%
52	Finance - Insurance	5,912,734	1.7%	6,007,002	1.6%	5,992,144	-0.2%	5,856,864	-2.3%	5,618,477	-4.1%	-238,387	85,274	79,793	-6.4%
53	Real Estate	2,124,756	2.3%	2,153,739	1.4%	2,152,536	-0.1%	2,110,171	-2.0%	1,971,344	-6.6%	-138,827	43,239	42,263	-2.3%
54	Professional, -Scientific	7,053,123	4.3%	7,389,517	4.8%	7,631,158	3.3%	7,814,285	2.4%	7,479,760	-4.3%	-334,525	74,354	74,770	0.6%
55	Management of Companies	1,743,160	2.8%	1,785,155	2.4%	1,839,929	3.1%	1,895,570	3.0%	1,855,139	-2.1%	-40,431	94,842	91,429	-3.6%
56	Administrative and Support	8,081,781	3.2%	8,293,605	2.6%	8,393,060	1.2%	7,996,575	-4.7%	7,153,937	-10.5%	-842,638	32,078	32,590	1.6%
61	Educational Services	2,144,172	3.1%	2,206,905	2.9%	2,284,111	3.5%	2,367,685	3.7%	2,419,382	2.2%	51,697	40,832	41,994	2.8%
62	Health Care	14,337,714	2.4%	14,702,844	2.5%	15,144,814	3.0%	15,586,001	2.9%	15,902,253	2.0%	316,252	42,150	43,201	2.5%
71	Arts, Entertainment	1,868,561	0.8%	1,901,683	1.8%	1,953,865	2.7%	1,978,217	1.2%	1,921,653	-2.9%	-56,564	31,935	31,633	-0.9%
72	Accommodation & Food Services	10,870,381	2.4%	11,122,634	2.3%	11,373,174	2.3%	11,416,594	0.4%	11,079,375	-3.0%	-337,219	16,694	16,691	0.0%
81	Other Services	4,323,123	0.9%	4,363,751	0.9%	4,437,318	1.7%	4,483,967	1.1%	4,369,780	-2.5%	-114,187	28,776	28,814	0.1%

## Employment Growth - Florida

Florida lost more than 7% of its private sector jobs in 2009, dropping more than 470,000 positions. While most of the job loss can be attributed to the volatile decline in the new home construction industry, every industrial sector except Healthcare and Private Education lost workers. The state lost 118,000 construction jobs in 2009. Administrative Support also declined by 71,000 jobs. A large number of construction workers are included in this sector (sub sector 56133 - *Professional Employer Organizations.*)

NAICS	Employment Loss - 2008-2009 - Florida	Jobs
3366	Ship and Boat Building	-4547
3323	Architectural and Structural Metals Manufacturing	-3858
3273	Cement and Concrete Product Manufacturing	-3790
3231	Printing and Related Support Activities	-3354
<b>3371</b>	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	-2279
<b>3219</b>	Other Wood Product Manufacturing	-1993
3261	Plastics Product Manufacturing	-1812

Employment in manufacturing declined by 12.7%, almost three times the rate of the previous year's loss. The chart shows the seven manufacturing sectors with the greatest loss. Note the two highlighted sectors.

While private sector wages declined nationally, they increased .7% in Florida in 2009.

NAICS	Florida	2005 Jobs	% Gain/ Loss	2006 Jobs	% Gain/ Loss	2007 Jobs	% Gain/ Loss	2008 Jobs	% Gain/ Loss	2009 Jobs	% Gain/ Loss	Gain/ Loss	2008 Wages	2009 Wages	% Gain
10	Total - All Workers	7,758,629	3.9%	7,950,708	2.5%	7,951,206	0.0%	7,667,616	-3.6%	7,182,815	-6.3%	-484,801	40,554	40,970	1.0%
10.1	Total - Private Sector	6,707,045	4.3%	6,885,696	2.7%	6,870,562	-0.2%	6,588,113	-4.1%	6,117,043	-7.2%	-471,070	39,596	39,856	0.7%
11	Agriculture, Forestry	92,832	-3.4%	92,567	-0.3%	91,434	-1.2%	90,116	-1.4%	88,609	-1.7%	-1,507	22,317	21,526	-3.5%
21	Mining	5,432	2.5%	4,525	-16.7%	4,711	4.1%	4,463	-5.3%	3,720	-16.6%	-743	55,922	54,756	-2.1%
22	Utilities	24,215	1.2%	24,409	0.8%	23,689	-2.9%	23,894	0.9%	23,632	-1.1%	-262	72,773	76,378	5.0%
23	Construction	579,536	17.4%	634,723	9.5%	593,020	-6.6%	512,019	-13.7%	393,598	-23.1%	-118,421	42,013	41,497	-1.2%
31	Manufacturing	399,278	2.7%	402,407	0.8%	388,515	-3.5%	371,059	-4.5%	323,857	-12.7%	-47,202	48,600	50,092	3.1%
42	Wholesale Trade	337,560	4.4%	347,455	2.9%	357,477	2.9%	345,639	-3.3%	318,416	-7.9%	-27,223	58,390	58,387	0.0%
44	Retail Trade	985,020	4.0%	1,005,905	2.1%	1,008,839	0.3%	988,489	-2.0%	924,294	-6.5%	-64,195	26,408	26,620	0.8%
48	Transportation - Warehousing	209,604	5.4%	213,995	2.1%	215,487	0.7%	216,075	0.3%	200,518	-7.2%	-15,557	41,678	42,340	1.6%
51	Information	168,543	0.7%	167,337	-0.7%	161,615	-3.4%	156,545	-3.1%	142,825	-8.8%	-13,720	58,156	59,033	1.5%
52	Finance - Insurance	353,721	4.0%	365,462	3.3%	364,470	-0.3%	349,747	-4.0%	324,654	-7.2%	-25,093	64,075	62,972	-1.7%
53	Real Estate	171,601	6.1%	178,078	3.8%	173,885	-2.4%	171,084	-1.6%	154,956	-9.4%	-16,128	38,632	38,052	-1.5%
54	Professional, -Scientific	428,723	6.7%	450,446	5.1%	454,009	0.8%	456,851	0.6%	432,610	-5.3%	-24,241	62,519	62,809	0.5%
55	Management of Companies	72,038	3.8%	73,887	2.6%	79,203	7.2%	81,906	3.4%	79,977	-2.4%	-1,929	82,823	82,303	-0.6%
56	Administrative and Support	831,461	0.7%	821,669	-1.2%	793,235	-3.5%	606,304	-23.6%	534,321	-11.9%	-71,983	30,291	31,254	3.2%
61	Educational Services	95,443	4.6%	99,859	4.6%	105,415	5.6%	112,521	6.7%	116,344	3.4%	3,823	36,035	36,880	2.3%
62	Health Care	809,824	2.4%	839,870	3.7%	868,029	3.4%	902,006	3.9%	911,752	1.1%	9,746	42,989	44,061	2.5%
71	Arts, Entertainment	169,381	3.7%	174,052	2.8%	181,266	4.1%	185,017	2.1%	183,370	-0.9%	-1,647	32,997	32,138	-2.6%
72	Accommodation & Food Services	717,154	4.0%	730,167	1.8%	747,856	2.4%	757,983	1.4%	726,827	-4.1%	-31,156	18,320	18,181	-0.8%
81	Other Services	243,244	2.9%	247,981	1.9%	251,448	1.4%	251,555	0.0%	232,405	-7.6%	-19,150	28,560	29,373	2.8%

## Employment Growth - Marion County

In 2009, Marion County had double digit losses in 10 of the 19 industrial sectors. The county lost 10.7% of its private sector jobs in 2009.

As expected, the county lost a large number of construction jobs due to the rapid decline in the new home industry. This decline is expected to continue. The county is approaching its 2002 employment level in construction of 5,973.

The second greatest loss of jobs was in manufacturing, dropping by 1,722. Most of the decline in Marion County's manufacturing sector can be attributed to the national decline in home construction. Almost 900 jobs were lost in NAICS 3371 and 3219. Both of these sub sectors were in the top seven for job loss nationally and in Florida.

NAICS	Employment Loss - 2008-2009 - Marion County	Jobs
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	-741
3219	Other Wood Product Manufacturing	-173
3391	Medical Equipment and Supplies Manufacturing	-65
3362	Motor Vehicle Body and Trailer Manufacturing	-64
3273	Cement and Concrete Product Manufacturing	-61
3323	Architectural and Structural Metals Manufacturing	-46
3339	Other General Purpose Machinery Manufacturing	-21

While growing nationally and in Florida in 2009, the Health Care sector also declined in Marion County.

Private sector wages increased by .1% - nationally they declined.

NAICS	Marion County	2005 Jobs	% Gain/Loss	2006 Jobs	% Gain/Loss	2007 Jobs	% Gain/Loss	2008 Jobs	% Gain/Loss	2009 Jobs	% Gain/Loss	Gain/Loss	2008 Wages	2009 Wages	% Gain
10	Total - All Workers	98,222	7.8%	103,211	5.1%	103,384	0.2%	100,754	-2.5%	91,809	-8.9%	-8,945	32,476	32,724	0.8%
10.1	Total - Private Sector	82,265	9.1%	86,769	5.5%	86,538	-0.3%	83,505	-3.5%	74,559	-10.7%	-8,946	31,599	31,625	0.1%
11	Agriculture, Forestry	2,384	5.4%	2,639	10.7%	2,663	0.9%	2,489	-6.5%	2,190	-12.0%	-299	27,053	27,329	1.0%
21	Mining	210	31.3%	167	-20.5%	155	-7.2%	145	-6.5%	110	-24.1%	-35	43,666	46,168	5.7%
22	Utilities	313	28.3%	325	3.8%	339	4.3%	339	0.0%	286	-15.6%	-53	58,027	61,148	5.4%
23	Construction	9,402	10.5%	10,914	16.1%	10,220	-6.4%	9,083	-11.1%	6,981	-23.1%	-2,102	33,321	31,964	-4.1%
31	Manufacturing	9,927	4.3%	9,872	-0.6%	9,428	-4.5%	8,300	-12.0%	6,578	-20.7%	-1,722	40,529	43,415	7.1%
42	Wholesale Trade	3,663	9.5%	3,848	5.1%	4,100	6.5%	3,752	-8.5%	3,265	-13.0%	-487	39,136	40,238	2.8%
44	Retail Trade	16,102	6.0%	16,198	0.6%	16,225	0.2%	15,653	-3.5%	14,430	-7.8%	-1,223	23,819	23,938	0.5%
48	Transportation - Warehousing	1,743	-3.9%	2,303	32.1%	2,437	5.8%	2,386	-2.1%	2,036	-14.7%	-350	35,112	35,541	1.2%
51	Information	2,240	96.5%	2,061	-8.0%	1,909	-7.4%	1,870	-2.0%	1,662	-11.1%	-208	37,744	37,784	0.1%
52	Finance - Insurance	3,601	4.5%	3,897	8.2%	4,065	4.3%	4,032	-0.8%	3,617	-10.3%	-415	46,802	47,319	1.1%
53	Real Estate	1,616	33.8%	1,725	6.7%	1,628	-5.6%	1,719	5.6%	1,406	-18.2%	-313	29,595	29,274	-1.1%
54	Professional, -Scientific	2,928	8.5%	3,160	7.9%	3,326	5.3%	3,290	-1.1%	3,019	-8.2%	-271	43,361	42,402	-2.2%
55	Management of Companies	318	33.1%	325	2.2%	337	3.7%	409	21.4%	425	3.9%	16	42,262	39,708	-6.0%
56	Administrative and Support	4,378	7.6%	4,914	12.2%	3,920	-20.2%	3,968	1.2%	3,828	-3.5%	-140	21,643	21,458	-0.9%
61	Educational Services	608	32.8%	716	17.8%	710	-0.8%	738	3.9%	786	6.5%	48	24,301	25,712	5.8%
62	Health Care	10,883	7.4%	11,527	5.9%	11,968	3.8%	12,486	4.3%	11,637	-6.8%	-849	40,981	41,747	1.9%
71	Arts, Entertainment	1,608	10.6%	1,726	7.3%	1,716	-0.6%	1,838	7.1%	1,799	-2.1%	-39	19,966	19,564	-2.0%
72	Accommodation & Food Services	7,687	11.3%	7,726	0.5%	8,597	11.3%	8,325	-3.2%	8,014	-3.7%	-311	14,106	14,409	2.1%
81	Other Services	2,580	1.9%	2,627	1.8%	2,720	3.5%	2,619	-3.7%	2,482	-5.2%	-137	23,648	23,568	-0.3%

**2009 Performance – Marion County – Primary Industry Employment - Results**

The preceding charts for employment for the nation, Florida, and Marion County included jobs for all workers included in ES-202 data. It is from this data primary industry jobs are mathematically extracted.

The formulas used to determine the number of primary jobs focus on identifying industries which are primary in nature and are targeted by the local economic development organization. Specifically not included in this evaluation are primary jobs created by state or federal government, as local economic development organizations typically have little influence or control on their formation. Also not included are jobs which are specific to the tourism industry, retirement industry, or the agricultural industry.

Marion County’s 2009 data was applied to the same formulas used to create the baseline and the evaluation for 2003 through 2008. The chart shows the results of this effort.

Marion 2009 2009 NAICS Description	<u>Jobs</u>	<u>Earnings</u>	<u>Wages</u>	Gain/ Loss	2009 Wage Prim Jobs Gained 38,545 Percent of area average 118% Wage Prim Jobs Lost 42,792
10 Total - All Workers	91,809	3,004,397,890	32,724	-8,945	
10.1 Total - Private Sector	74,559	2,357,895,837	31,625	-8,946	
Primary Industries	11,912	512,680,473	43,041	-2,235	
11 Agriculture, Forestry, Fishing and Hunting				0	
21 Mining				0	
22 Utilities	161	12,648,465	78,562	-18	
23 Construction				0	
31 Manufacturing	6,450	274,270,111	42,523	-1,704	
42 Wholesale Trade	1,645	68,215,561	41,470	-156	
44 Retail Trade	47	1,524,115	32,428	3	
48 Transportation and Warehousing	751	28,534,834	38,015	-122	
51 Information	633	23,245,604	36,721	-89	
52 Finance and Insurance	1,361	72,002,166	52,888	-136	
54 Professional, Scientific, and Technical Services	439	15,370,469	35,039	-29	
55 Management of Companies and Enterprises	425	16,869,148	39,692	16	

Marion County had a net loss of 2,235 primary jobs in 2009. Most of the loss occurred in manufacturing principally in the construction materials sub-sector. Also, there was a loss in wholesale trade and transportation, and Finance and Insurance.

## *Annual Milestones*

As previously stated, POLICOM created an Economic Development Goal Setting Study for Marion County in 2002. Annual milestones were established for the formation of new primary jobs and their associated wage, which, if achieved, would increase the size and quality of the Marion County economy.

As the following chart shows, in 2009, Marion County's net loss of 2,235 primary jobs caused the area not to meet the 2009 milestone of 692 new primary jobs. This is the greatest decline in primary jobs since the milestones were established.

As a result, the county is now about 5,541 primary jobs short of the seven year cumulative total.

For the new primary jobs created in 2009, the average wage of \$38,545 fell mildly short of the milestone wage by 7%. This is the first time the new primary job wage did not exceed the milestone.

Ocala - Marion County	New Primary Job Annual Milestone	Net Gain New Primary Jobs	Annual Variance from Milestone	Cumulative Total	Milestone New Primary Job Wage	New Primary Job Wage	% of Milestone Wage
2003	470	-321	-791	-791	29,783	34,449	116%
2004	513	962	449	-342	32,200	38,784	120%
2005	578	1,169	591	249	33,791	34,225	101%
2006	594	299	-295	-46	35,440	40,137	113%
2007	611	-101	-712	-758	37,216	42,690	115%
2008	651	-1,205	-1,856	-2,614	39,298	42,916	109%
2009	692	-2,235	-2,927	-5,541	41,272	38,545	93%

As a result of the national and statewide downturn in new home construction, the Marion County economy failed to reach its 2009 primary job milestone. Many of the manufacturers in the county produce products for the construction industry. The downturn in this industry caused these employers to reduce their workforce.

*Detailed Data*

The following is the detailed data to the four digit NAICS code which shows the number of primary jobs for the last seven years. Totaling the 3 and 4 digit data will likely **not equal** the amount shown at the 2 digit industry level due to data suppression.

When comparing a sector over the seven years, be aware data suppression might cause confusion. One year a number might appear for a NAICS sector, but the next it might not. POLICOM’s formulas compensate for this occurrence.

Remember the methodology first considered data at the most detailed level (4 and 5 digit). If that data was not available, it jumps to the 3 digit level, then to the 2 digit level, each time subtracting the previous level’s data.

On the following tables, the 3 digit number shown is all of the 3 digit data minus available 4 digit data.

The following chart is a good example to study to avoid being confused.

In 2002, full data was available (not suppressed) for “334” and data was available for “3342” (371 jobs). The 371 jobs in NAICS 3342 were subtracted from the total in NAICS 334, leaving a remainder of 753 jobs. Both numbers are counted in the total for primary jobs (1,124 jobs).

	3 and 4 Digit NAICS	2002	2003	2004	2005	2006
	NAICS Description	<u>Jobs</u>	<u>Jobs</u>	<u>Jobs</u>	<u>Jobs</u>	<u>Jobs</u>
334	Computer and Electronic Product Manufacturing	753	1,015		1,143	1,163
3341	Computer and Peripheral Equipment Manufacturing					
3342	Communications Equipment Manufacturing	371		291		
3343	Audio and Video Equipment Manufacturing					
3344	Semiconductor and Other Electronic Component Manufacturing					
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing			857		

However, for some reason, in 2003 the data for 3342 was suppressed. There was no other 4 digit data available, so the total data for 334 (1,015) was counted.

Strangely in 2004 data was available for not only 3342 but also 3345. The sum of these two sub-sectors equaled the total of NAICS 334. As a result, no number appears in the line for 334. In 2005 and 2006, as in 2003, data for only the three digit NAICS 334 was available.

NAICS	Marion County, FL Primary Jobs	2003	2004	2005	2006	2007	2008	2009	2009
Code	NAICS Description	Jobs	Jobs	Jobs	Jobs	Jobs	Jobs	Jobs	Wages
	Total - All Workers	86,176	91,076	98,222	103,211	103,384	100,754	91,809	32,724
	Total - Private Sector	70,707	75,434	82,265	86,769	86,538	83,505	74,559	31,625
	Primary Industries	13,017	13,985	15,154	15,453	15,549	14,146	11,912	43,041
11	Agriculture, Forestry, Fishing and Hunting								
21	Mining								
22	Utilities	169	163	169	180	181	179	161	78,562
23	Construction								
31	Manufacturing	9,050	9,389	9,803	9,742	9,281	8,154	6,450	42,523
42	Wholesale Trade	1,483	1,647	1,725	1,866	1,948	1,801	1,645	41,470
44	Retail Trade	17	21	43	44	48	44	47	32,428
48	Transportation and Warehousing	826	866	698	904	981	873	751	38,015
51	Information	362	333	1,076	926	747	722	633	36,721
52	Finance and Insurance	586	1,063	993	1,073	1,399	1,497	1,361	52,888
54	Professional, Scientific, and Technical Services	229	208	328	393	429	468	439	35,039
55	Management of Companies and Enterprises	246	239	318	325	337	409	425	39,692
56	Administrative and Support Services								
61	Educational Services								
62	Health Care and Social Assistance								
71	Arts, Entertainment, and Recreation								
72	Accommodation and Food Services								
81	Other Services (except Public Administration)								
	<b>3 and 4 Digit NAICS</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>
	<b>NAICS Description</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Wages</b>
		-	-	-	-	-	-	-	-
221	Utilities								
2211	Electric Power Generation, Transmission and Distribution	169	163	169	180	181	179	161	78,725
2212	Natural Gas Distribution								
311	Food Manufacturing	283	246	244	279	380	395	358	38,720
3111	Animal Food Manufacturing								
3112	Grain and Oilseed Milling								
3113	Sugar and Confectionery Product Manufacturing								
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing								
3115	Dairy Product Manufacturing								
3116	Animal Slaughtering and Processing								
3117	Seafood Product Preparation and Packaging								
3118	Bakeries and Tortilla Manufacturing								
3119	Other Food Manufacturing		30	38	39				
312	Beverage and Tobacco Product Manufacturing								
3121	Beverage Manufacturing								
3122	Tobacco Manufacturing								
313	Textile Mills								
3131	Fiber, Yarn, and Thread Mills								
3132	Fabric Mills								
3133	Textile and Fabric Finishing and Fabric Coating Mills					8			
314	Textile Product Mills	82	118	104	78	86	79	55	29,213
3141	Textile Furnishings Mills								
3149	Other Textile Product Mills								
315	Apparel Manufacturing								
3151	Apparel Knitting Mills								

	<b>3 and 4 Digit NAICS</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>
	<b>NAICS Description</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Wages</b>
3152	Cut and Sew Apparel Manufacturing								
3159	Apparel Accessories and Other Apparel Manufacturing								
316	Leather and Allied Product Manufacturing								
3161	Leather and Hide Tanning and Finishing								
3162	Footwear Manufacturing								
3169	Other Leather and Allied Product Manufacturing								
321	Wood Product Manufacturing	348	321	322	321		158	51	32,027
3211	Sawmills and Wood Preservation					18			
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing					267			
3219	Other Wood Product Manufacturing	651	907	1,081	878	668	506	333	31,175
322	Paper Manufacturing								
3221	Pulp, Paper, and Paperboard Mills								
3222	Converted Paper Product Manufacturing	128	132	170	126	126	120	112	41,140
323	Printing and Related Support Activities								
3231	Printing and Related Support Activities	53	56	54	51	52	47	39	29,712
324	Petroleum and Coal Products Manufacturing								
3241	Petroleum and Coal Products Manufacturing								
325	Chemical Manufacturing	126	110	194	149	139	132	128	48,644
3251	Basic Chemical Manufacturing								
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing								
3253	Pesticide, Fertilizer, and Other Agricultural Chemical Manufacturing								
3254	Pharmaceutical and Medicine Manufacturing								
3255	Paint, Coating, and Adhesive Manufacturing								
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing								
3259	Other Chemical Product and Preparation Manufacturing	98	91						
326	Plastics and Rubber Products Manufacturing	801	810	819	810		579		
3261	Plastics Product Manufacturing					324		263	35,745
3262	Rubber Product Manufacturing					497		102	54,376
327	Nonmetallic Mineral Product Manufacturing	45	68	81	149	201	176	162	36,918
3271	Clay Product and Refractory Manufacturing								
3272	Glass and Glass Product Manufacturing								
3273	Cement and Concrete Product Manufacturing	241	236	263	345	311	219	158	38,137
3274	Lime and Gypsum Product Manufacturing								
3279	Other Nonmetallic Mineral Product Manufacturing								
331	Primary Metal Manufacturing		122	133	144	121	136	121	49,999
3311	Iron and Steel Mills and Ferroalloy Manufacturing								
3312	Steel Product Manufacturing from Purchased Steel								
3313	Alumina and Aluminum Production and Processing								
3314	Nonferrous Metal (except Aluminum) Production and Processing								
3315	Foundries								
332	Fabricated Metal Product Manufacturing	1,100	976	928	949	888	705	526	36,582
3321	Forging and Stamping								
3322	Cutlery and Handtool Manufacturing								

	<b>3 and 4 Digit NAICS</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>
	<b>NAICS Description</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Wages</b>
3323	Architectural and Structural Metals Manufacturing	305	378	431	494	510	516	470	33,805
3324	Boiler, Tank, and Shipping Container Manufacturing								
3325	Hardware Manufacturing								
3326	Spring and Wire Product Manufacturing								
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	64	93	150	137	134	121	108	36,429
3328	Coating, Engraving, Heat Treating, and Allied Activities	13				14	12	26	60,115
3329	Other Fabricated Metal Product Manufacturing								
333	Machinery Manufacturing	419	241	257	286	310	268	258	51,095
3331	Agriculture, Construction, and Mining Machinery Manufacturing								
3332	Industrial Machinery Manufacturing								
3333	Commercial and Service Industry Machinery Manufacturing								
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment								
3335	Metalworking Machinery Manufacturing	40	43	47	47	46	30	24	38,584
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing								
3339	Other General Purpose Machinery Manufacturing	85	305	281	270	269	279	258	56,751
334	Computer and Electronic Product Manufacturing	1,015		1,143	1,163	1,145	134	85	56,684
3341	Computer and Peripheral Equipment Manufacturing								
3342	Communications Equipment Manufacturing		291						
3343	Audio and Video Equipment Manufacturing								
3344	Semiconductor and Other Electronic Component Manufacturing								
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing		857				1,046	1,058	50,525
3346	Manufacturing and Reproducing Magnetic and Optical Media								
335	Electrical Equipment, Appliance, and Component Manufacturing								
3351	Electric Lighting Equipment Manufacturing								
3352	Household Appliance Manufacturing								
3353	Electrical Equipment Manufacturing								
3359	Other Electrical Equipment and Component Manufacturing								
336	Transportation Equipment Manufacturing	1,377	1,328	1,307	1,352	1,282	1,093	877	47,481
3361	Motor Vehicle Manufacturing								
3362	Motor Vehicle Body and Trailer Manufacturing	231	102	84	49	147	116	52	29,285
3363	Motor Vehicle Parts Manufacturing	66	52	38	61	39	39	30	29,339
3364	Aerospace Product and Parts Manufacturing								
3365	Railroad Rolling Stock Manufacturing								
3366	Ship and Boat Building			24	29	40	33		
3369	Other Transportation Equipment Manufacturing								
337	Furniture and Related Product Manufacturing	47	43	59	48	914	62	459	36,151
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	831	901	983	962		741		

	<b>3 and 4 Digit NAICS</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>
	<b>NAICS Description</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Wages</b>
3372	Office Furniture (including Fixtures) Manufacturing								
3379	Other Furniture Related Product Manufacturing								
339	Miscellaneous Manufacturing				1	1	1		
3391	Medical Equipment and Supplies Manufacturing	131	129	134	132	66	184	119	39,918
3399	Other Miscellaneous Manufacturing	107	103	125	95	40	31	34	24,900
423	Merchant Wholesalers, Durable Goods	1			1				
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	154	197	217	222	230	218	176	29,910
4232	Furniture and Home Furnishing Merchant Wholesalers	15	16	17	13	14	11	7	51,694
4233	Lumber and Other Construction Materials Merchant Wholesalers	80	77	96	131	155	113	85	40,869
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	139	135	119	128	107	113	140	60,330
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	17	23	24	18	17	43	32	34,659
4236	Electrical and Electronic Goods Merchant Wholesalers	126	141	156	153	167	140	111	47,281
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	134	168	172	170	210	207	182	41,548
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	370	423	469	575	543	494	390	40,772
4239	Miscellaneous Durable Goods Merchant Wholesalers	182	206	239	262	254	217	164	40,076
424	Merchant Wholesalers, Nondurable Goods								
4241	Paper and Paper Product Merchant Wholesalers								
4242	Drugs and Druggists' Sundries Merchant Wholesalers								
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers								
4244	Grocery and Related Product Wholesalers	31							
4245	Farm Product Raw Material Merchant Wholesalers				10	5	6	6	17,904
4246	Chemical and Allied Products Merchant Wholesalers	58	72	72	48	97	132	131	35,524
4247	Petroleum and Petroleum Products Merchant Wholesalers	91	112	59	49	45	22		
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers							145	43,386
4249	Miscellaneous Nondurable Goods Merchant Wholesalers					3			
425	Wholesale Electronic Markets and Agents and Brokers								
4251	Wholesale Electronic Markets and Agents and Brokers	86	77	86	88	102	86	77	42,741
454	Nonstore Retailers								
4541	Electronic Shopping and Mail-Order Houses	17	21	43	44	48	44	47	32,256
481	Air Transportation								
4811	Scheduled Air Transportation								
4812	Nonscheduled Air Transportation								
483	Water Transportation								
4831	Deep Sea, Coastal, and Great Lakes Water Transportation								
4832	Inland Water Transportation								
484	Truck Transportation								

	<b>3 and 4 Digit NAICS</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2009</b>
	<b>NAICS Description</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Jobs</b>	<b>Wages</b>
4841	General Freight Trucking	542	586	571	572	719	708	606	37,667
48412	General Freight Trucking, Long-Distance								
4842	Specialized Freight Trucking	251	240	93	69	56	106	64	30,407
486	Pipeline Transportation								
4861	Pipeline Transportation of Crude Oil								
4862	Pipeline Transportation of Natural Gas								
4869	Other Pipeline Transportation								
488	Support Activities for Transportation	32	39	34	61	50	58	59	51,903
4881	Support Activities for Air Transportation								
4883	Support Activities for Water Transportation								
492	Couriers and Messengers								
4921	Couriers								
4922	Local Messengers and Local Delivery	2	1		5				
493	Warehousing and Storage								
4931	Warehousing and Storage				197	157		21	32,398
511	Publishing Industries (except Internet)		227	295	238	231			
5111	Newspaper, Periodical, Book, and Directory Publishers	245					239	196	36,643
5112	Software Publishers						33	34	73,860
512	Motion Picture and Sound Recording Industries	96	89						
5121	Motion Picture and Video Industries			76	83	89	81	78	11,134
5122	Sound Recording Industries								
515	Broadcasting (except Internet)								
5151	Radio and Television Broadcasting								
516	Internet Publishing and Broadcasting								
5161	Internet Publishing and Broadcasting				4				
517	Telecommunications			688	580	427	369	325	38,948
5171	Wired Telecommunications Carriers								
5172	Wireless Telecommunications Carriers (except Satellite)								
5173	Telecommunications Resellers								
5174	Satellite Telecommunications								
518	Internet Service Providers, Web Search Portals, and Data Processing Services								
5181	Internet Service Providers and Web Search Portals	21	17	18	21				
5182	Data Processing, Hosting, and Related Services								
519	Other Information Services								
5191	Other Information Services								
521	Monetary Authorities - Central Bank								
5211	Monetary Authorities - Central Bank								
522	Credit Intermediation and Related Activities				493	805	1,038	170	44,443
5221	Depository Credit Intermediation	201	182	172	258	333	258	297	39,365
5222	Nondepository Credit Intermediation		527	430					
5223	Activities Related to Credit Intermediation							699	56,456
523	Securities, Commodity Contracts, and Other Financial Investments								
5231	Securities and Commodity Contracts Intermediation and Brokerage								
5232	Securities and Commodity Exchanges								
5239	Other Financial Investment Activities								
524	Insurance Carriers and Related Activities								
5241	Insurance Carriers	385	350	386	323	261	201	196	67,841
525	Funds, Trusts, and Other Financial Vehicles		4	5					
5251	Insurance and Employee Benefit Funds								
5259	Other Investment Pools and Funds								
541	Professional, Scientific, and Technical Services								
5413	Architectural, Engineering, and Related Services								
5414	Specialized Design Services		1					26	28,616

	3 and 4 Digit NAICS	2003	2004	2005	2006	2007	2008	2009	2009
	NAICS Description	Jobs	Jobs	Jobs	Jobs	Jobs	Jobs	Jobs	Wages
5415	Computer Systems Design and Related Services								
5416	Management, Scientific, and Technical Consulting Services								
5417	Scientific Research and Development Services	49	52	56	58	61	77	67	44,127
5419	Other Professional, Scientific, and Technical Services	180	155	272	335	368	391	346	33,739
551	Management of Companies and Enterprises								
5511	Management of Companies and Enterprises	246	239	318	325	337	409	425	39,708
561	Administrative and Support Services								
5611	Office Administrative Services								
5614	Business Support Services							2	19,233
611	Educational Services								
6112	Junior Colleges								
6113	Colleges, Universities, and Professional Schools								
6114	Business Schools and Computer and Management Training								
6115	Technical and Trade Schools								
6116	Other Schools and Instruction	50	56		120	106	17		
6215	Medical and Diagnostic Laboratories			93	95	92	76	23	44,735
	<b>3 digit data is total of 3 digit sub-sector less the available data of the 4 digit level.</b>								
	<b>If no data appears for a sub-sector, either no contributory jobs were available or the data was suppressed.</b>								

**About POLICOM Corporation**

POLICOM Corporation is an independent economic research firm, which specializes in analyzing local and state economies. Its products and services evaluate the economic condition of counties, metropolitan areas, and states, determine what is the cause of the condition, and offers suggestions and ideas on how to improve or maintain the economic “quality of life” for the residents.

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## *Methodology used to create the 2002 Baseline*

The process of estimating the number of primary jobs in a local economy involves utilizing specific mathematical formulas which attempt to “extract” primary jobs from “all jobs” within an area.

As previously stated, a primary job is one for which the wages paid are generated from the sale of goods or services outside the local area. This imports money to the area. It is from this money a vast majority of all the (dependent) jobs in the area are created. Typically a primary job can be identified by the industrial activity of the worker.

The Performance Matrix is based upon the North American Industrial Classification System (NAICS). Employers in the United States are required to report to the state and federal governments the number of employees and related wages paid. When reporting, the employer is required to provide an industry code for the work activity. The required reporting is part of the “Unemployment Compensation” program. The data collected is known as “covered workers” data or ES-202 data. State governments collect the data and forward it to the federal government.<sup>2</sup> POLICOM Corporation utilized ES-202 data for 2002 to create the Evaluation Matrix.

In order to determine the number of primary industry jobs and their ancillary wages paid, POLICOM Corporation created elaborate mathematical formulas for Marion County which identify the primary industry jobs to their most definitive NAICS code.

These formulas were applied to 2002 ES-202 data, published by the Bureau of Labor Statistics, U.S. Department of Labor, and the number of primary jobs for the county has been determined. The total of these jobs serves as the baseline for the county. The jobs identified are wage and salaried jobs and coincide with the methodology used to create the annual milestones in the *Goal Setting Study*.

The mathematical matrix used to create the baseline will be frozen in time, and applied to the data for each successive year, in order to determine the net gain or loss. It is important, for the veracity of the results, to use the same formulas and methodology each year in calculating the number of primary jobs in the economy.

The purpose of creating the Primary Job Matrix is to determine the number and wage level of the primary jobs in the area. Done annually, the net gain from the previous year can be determined.

Once again, a primary job is one for which the wages paid are generated from the sale of goods or services outside the local area. This imports money to the area. It is from this money a vast majority of all the (dependent) jobs in the area are created.

Whether or not a job is primary can be determined from the nature of the business, or the industrial activity. Since NAICS data (and previously SIC) is collected from employers coded by industrial activity, much of this information can be attained by reviewing the data. The task before the researcher is to separate primary jobs from all the other jobs included in the overall data. This is done by reviewing each industrial sector for its inherent primary-dependent industry nature.

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<sup>2</sup> Beginning with 2001, employers were required to report using NAICS. Prior to that year, employers reported under the Standard Industrial Classification System created in 1987 and known as SIC.

The process described below is not “perfect.” It is not possible to identify the exact number of primary jobs in a local economy. POLICOM Corporation believes it is able to create a “reasonable” estimate of the number of jobs and wages paid. However, by using the same methodology each year thereafter, gains and losses relative to 2002 can be determined.

Some industries are inherently dependent. This means the businesses feed upon or utilize money which is already present in the economy. A vast, vast majority of all jobs fall into this category. An example is Retail Trade. The wages paid to retail trade workers are generated from the sale of goods on a local basis. Therefore, jobs in retail trade are dependent, not primary.

However, workers employed in “cane sugar refining” are primary in nature. It is not likely very much of the sugar processed at a cane sugar refinery is actually sold locally. The sugar is not only sold outside the area, but likely sold outside the state. Therefore, this sector is inherently a primary industrial activity and the workers employed are considered primary jobs.

<u>Code</u>	<u>Industrial Activity</u>
31	Manufacturing
311	Food Manufacturing
3113	Sugar and Confectionery Product Manufacturing
31131	Sugar Manufacturing
311311	Sugarcane Mills
311312	Cane Sugar Refining
311313	Beet Sugar Manufacturing

NAICS data is constructed in a hierarchical system or code based upon the industrial activity of the business. This code begins with a general industry (now known as “Sector” level, formerly “Industry” level – 2 digit code) and continues in specificity to a 6 digit sub-sector level based upon the continued refinement of the activity. The following is the path from 31 - Manufacturing to 311312 - Cane Sugar Refining:

There are more than 2,200 industrial codes in NAICS, running from the 2 digit Sector to 6 digit sub-sector levels. To identify primary industry jobs, the researcher first examines all 2,283 codes for their inherent tendency to be primary in nature. However, even at the 5 or 6 digit sub-sector, it cannot be determined for certain all jobs are primary in nature.

As an example, 51112 – Periodical Publishers (magazines), for the most part is a primary activity, as most magazines are sold nationally or statewide. However, many metropolitan areas have local magazines specifically targeted to the local market. That portion of the activity is not primary. The researcher makes reasonable estimates as to the percentage each industrial sub-sector is relative to being primary, based upon a review of national data.

Determining the general tendency for a sub-sector to be primary in nature is the beginning of the process due to “data suppression.”

Federal and state laws require employers to report the number of employees and their respective earning for the administration of various government programs such as the Unemployment Compensation program. It is from this reporting most economic data is created, including NAICS.

However, the privacy of individual employers is protected. The law provides if, through a reasonable effort, the actual number of employees or the actual wage paid by a private company can be determined from the publication of economic data, then that data must be withheld from the public. The data is suppressed.

As an example, suppose there is one cane sugar refinery in a community. The employer must report the number of employees and their respective earnings to the government. If this data is published, then all will know the company's workforce and wages paid. This private information, by law, cannot be ascertained through the public release of data.

As a result, data for *311312 – Cane Sugar Refining* is withheld or suppressed. However, the total employment and earnings are carried upward in the hierarchy of codes to the next level, *31131 – Sugar Manufacturing*. But, if the cane sugar refiner is still virtually the only sugar manufacturer in the area, the data will once again be suppressed but included in the next higher level, *3113 – Sugar and Confectionery Product Manufacturing*. Once again the data might be suppressed, but it is carried upward to *311 – Food Manufacturing*. Since there will likely be several food manufactures in the area, this data will be published. However, under this scenario, you cannot determine from the data the number of workers employed in cane sugar refining.

As a result of data suppression, the process of determining the number of primary jobs becomes very difficult. In large, highly populated areas, there is less data suppression as the frequency of employers in a particular industry increases. In small areas, data suppression is prevalent as there quite often might be one business operating in a particular sub-sector.

To estimate the number of primary jobs, POLICOM Corporation applies both "rule of thumb" and specific mathematical tests to data sub-sectors to extract the jobs and earnings from consolidated data levels.

A "rule of thumb" test is the process of applying a percentage of employment in a sub-sector which is generally inherently primary in nature. As an example, for most manufacturing sub-sectors, 100% of the employment is considered primary. The manufacturing of automobile, semi-conductors, and aircraft parts is primary in nature.

However, *311 – Food Manufacturing* includes manufacturers serving the local marketplace, such as bakeries and soda pop canners. These are not primary. If data is available for exceptions like these, it is deducted from the total of 100%. If it is not, having been suppressed, then the percentage applied to sub-sector is adjusted downward based upon the percentage each is of the national percentage of the workforce in each industry.

As an example, if local bakeries account for 4% of the national workforce in *311 – Food Manufacturing*, then only 96% of the data for this sub-sector is considered primary. (Yes, a "baker" could be a bread manufacturer with distribution "statewide," making it primary. This anomaly is detected through the process below.)

This "rule of thumb" test is applied to many of the sub-sectors. However, it is taken even much further for most sub-sectors which are not inherently primary.

Sector *42 – Wholesale Trade* is split into two 3 digit sub-sectors: *421 – Wholesale Trade Durable* and *422 – Wholesale Trade – Non Durable*. The wholesale trade of durable goods is more inherently primary than non durable goods. Therefore, the rule of thumb percentage is 75% for durable and 25% for non durable, based upon the experience of the researcher.

A second specific test is now taken to determine anomalous employment. The percentage of the workforce for the sub-sector is examined to “detect” the presence of a primary employer(s). For each sub-sector, the percentage of the national and state workforce is determined. Suppose for 422 – *Wholesale Non Durable* it is 1.8% of the national workforce and 1.9% of the state’s workforce. However, the area has 3.5% of the workforce employed in this sub-sector.

This indicates the presence of a wholesaler(s) of non durable goods doing business in excess of what is needed for the local marketplace and is therefore primary in nature. As a result, the number of jobs in excess of what is the norm (higher between state and USA) is added to the total generated by the rule of thumb percentage. In this case,  $3.5\% - 1.8\% = 1.7\%$ . The 1.7% is multiplied by the total private employment in the area and the average wage for the sub-sector is used to create the earnings estimate.

This process is applied to many of the sub-sectors. A third test is also used for more difficult sub-sectors.

The publishing of books is inherently primary in nature. However, this data is rarely disclosed except in large areas. The following is the NAICS code path:

<u>Code</u>	<u>Industrial Activity</u>
51	Information
511	Publishing Industries (except Internet)
5111	Newspaper, Periodical, Book, and Directory Publishers
51111	Newspaper Publishers
51112	Periodical Publishers
51113	Book Publishers

Book publishing data is frequently not disclosed because it is coded at the 5 digit level with newspaper publishers. In many communities, there is only one dominant newspaper. As a result, the data for *51111 – Newspaper Publishers* is suppressed, causing the data for *51112 – Periodical Publishers* and *51113 – Book Publishers* to be suppressed.

Since the total data is carried upward to *5111 - Newspaper, Periodical, Book, and Directory Publishers*, data for 51112 and 51113 must be withheld or you could simply subtract from 5111 the data for 51112 and 51113 and get the data for 51111.

In this case, no inherent percentage is applied to 5111 as it cannot be assumed any book publishers are in the area. Therefore, in this case only the employment percentage test is used. First, from national data, the percentage newspaper publishers of national and state employment totals and the total of 5111 is determined. Then, the area percentage of workforce in 5111 is compared to the nation and state. If the area percentage of 5111 is greater than the national percentage of 51111 and 5111, then it is determined there is a presence of either 51112 or 51113 in the economy, and the variance is considered primary in nature. This test is applied to several sub-sectors.

In order to create totals for each area, primary jobs for the 5 and 4 digit sub-sectors are calculated first. Second, jobs for the 3 digit sub-sectors are determined. All of the jobs in the 5 and 4 digit sub-sectors are included in the totals. To create a total for the 3 digit sub-sectors, the sum of the respective 4 and 5 digit sub-sectors is subtracted from the initial total at the 3 digit level. The formula is basically: “If the number of 3 digit jobs is greater than the sum of the 4 and 5 digit jobs, then 3 digit jobs minus sum of 4 and 5 digit, otherwise, 0.” Worker earnings are concurrently calculated. The Earnings per Worker (Wages) is typically determined by dividing the Earnings by the number of jobs.

The sum of the 5, 4, and 3 digit sub-sectors are used to create the Sector totals.