

REGIONAL PROFILE

Overview	1
Population	4
Demographics	15
Future Development	16
Economic Impacts	18
Building Permits	18

Overview

The GBRA authority extends over a ten-county statutory district, which begins near the headwaters of the Guadalupe and Blanco Rivers, ends at San Antonio Bay, and includes Kendall, Comal, Hays, Caldwell, Guadalupe, Gonzales, DeWitt, Victoria, Calhoun and Refugio counties. The GBRA currently operates dams that form seven reservoirs along the Guadalupe River in Texas. The dams are located at Canyon Lake, Lake Dunlap, Lake Gonzales, Lake McQueeney, Meadow Lake, Lake Placid, and Lake Wood. Other reservoirs managed by the GBRA include the Coletto Creek Reservoir. At least six power stations in the middle and lower portions of the river depend on a steady release of water from spring flow. Recreation on the river, which include canoeing and inner-tubing as well as water parks and the facilities available at Canyon Reservoir and Guadalupe River State Park, attract large numbers of people to the vicinity and contribute heavily to the area’s economy.



SECTION 3: REGIONAL PROFILE

Figure 3-1. Map of Guadalupe-Blanco River Basin



Table 3-1 provides a listing of those jurisdictions along the GBRA basin and status of participation in the Hazard Mitigation Plan Update. It is important to note that in one instance, a participating municipality (the City of Cibolo) is located in a neighboring county (Guadalupe County) that is not participating. It is also important to note that three incorporated municipalities (each of which are located, all or partially, within participating counties) are not participating in this study.

SECTION 3: REGIONAL PROFILE

Table 3-1. Participating and Non-Participating Jurisdictions in the Study Area

PARTICIPATING JURISDICTIONS	NON-PARTICIPATING JURISDICTIONS
Caldwell County	
City of Lockhart	City of Niederwald
City of Luling	City of Uhland
City of Martindale	
Calhoun County	
Point Comfort	
Port Lavaca	
Seadrift	
DeWitt County	
DeWitt County Drainage District ¹	
City of Cuero	
City of Nordheim	
City of Yoakum	
City of Yorktown	
Gonzales County	
City of Gonzales	City of Smiley
City of Nixon	
City of Waelder	
—	Guadalupe County
City of Cibolo	
Kendall County	
City of Boerne	
Refugio County	
City of Austwell	
City of Bayside	
Town of Refugio	
City of Woodsboro	
Woodsboro Independent School District ²	

¹ The DeWitt County Drainage District is a participating jurisdiction of the Plan Update as they were included into the plan by amendment in 2007. The district fully participated in all workshops and developed mitigation actions, however, as the risks for the district are the same as the County, the district is not listed separately in the hazard sections of the Plan Update.

SECTION 3: REGIONAL PROFILE

PARTICIPATING JURISDICTIONS	NON-PARTICIPATING JURISDICTIONS
Victoria County	
City of Victoria	

Population

The population distribution (based on the United States Census Bureau for 2000) for the basin is depicted in Figure 3-2, which displays the seven counties including unincorporated areas as well as the participating jurisdictions. Census 2000 data was used to determine population distribution, as it was collected at the census block level. Table 3-2 provides a numeric breakdown of population by jurisdiction.

Table 3-2. Population Distribution by Jurisdiction

JURISDICTION	TOTAL ESTIMATED POPULATION	ESTIMATED SPECIAL NEEDS POPULATIONS	
		Elderly (Over 65)	Low Income (<= \$20,000)
Uninc. Caldwell County	14,661	709	258
Lockhart	11,591	599	443
Luling	5,025	310	309
Martindale	917	120	27
Uninc. Calhoun County	6,481	472	201
Point Comfort	781	29	4
Port Lavaca	12,035	631	530
Seadrift	1,350	88	71
Uninc. DeWitt County	8,805	679	385
Cuero	6,544	460	458
Nordheim	323	44	13
Yoakum	5,729	400	281
Yorktown	2,204	201	129
Uninc. Gonzales County	8,343	661	370
Gonzales	7,160	434	420
Nixon	2,178	109	122
Waelder	947	66	76
Cibolo (Guadalupe County)	3,035	85	66
Uninc. Kendall County	17,618	1,050	400

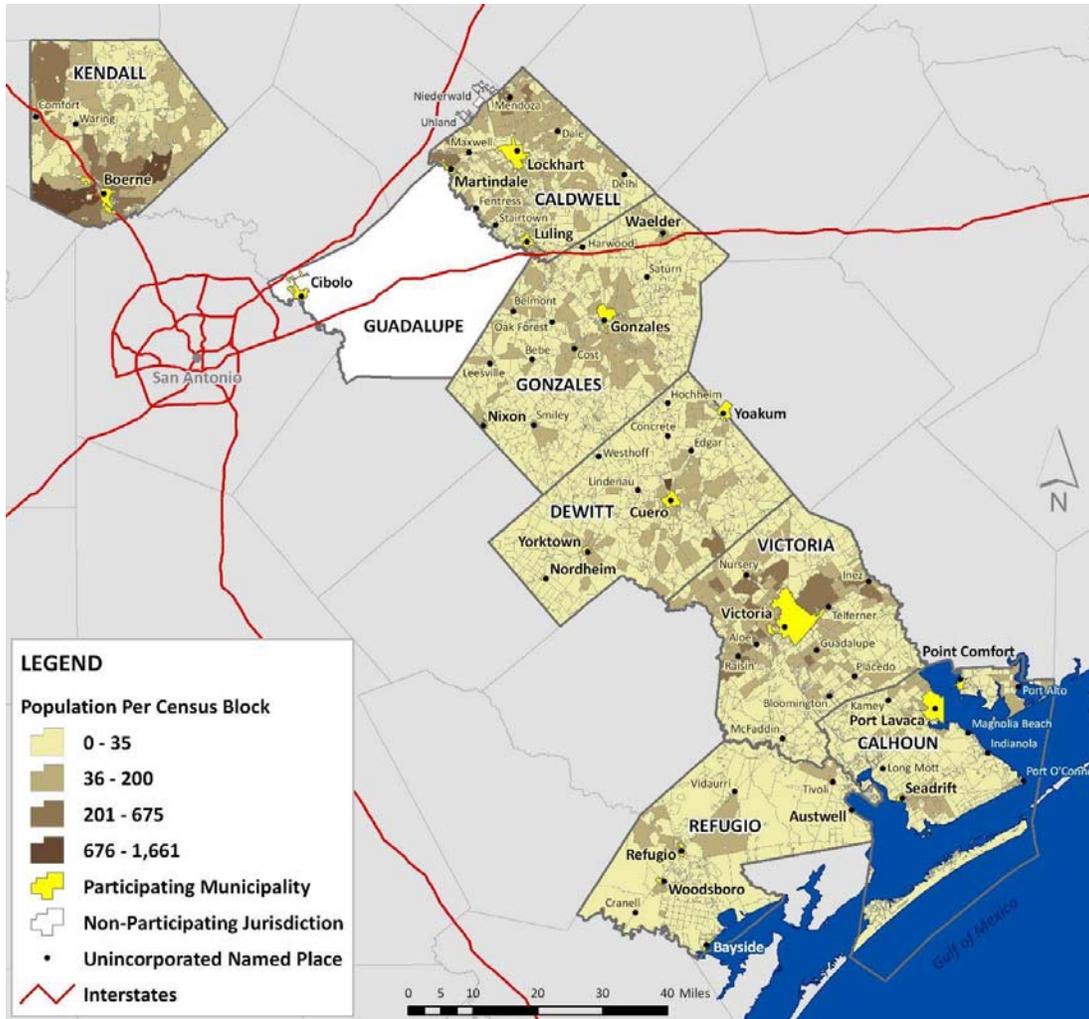
² Although Woodsboro ISD is a participating entity, the school district is not listed separately in the hazard sections of the Plan Update as the risks and vulnerabilities are the same as the Town of Woodsboro and critical facilities on campus were factored into the vulnerability assessment for Woodsboro.

SECTION 3: REGIONAL PROFILE

JURISDICTION	TOTAL ESTIMATED POPULATION	ESTIMATED SPECIAL NEEDS POPULATIONS	
		Elderly (Over 65)	Low Income (<= \$20,000)
Boerne	6,125	362	200
Uninc. Refugio County	2,670	185	97
Austwell	192	18	3
Bayside	360	21	22
Refugio	2,920	216	185
Woodsboro	1,683	106	86
Uninc. Victoria County	23,482	1,173	570
Victoria	60,606	2,852	2,241
TOTALS FOR STUDY AREA	213,765	12,080	7,967

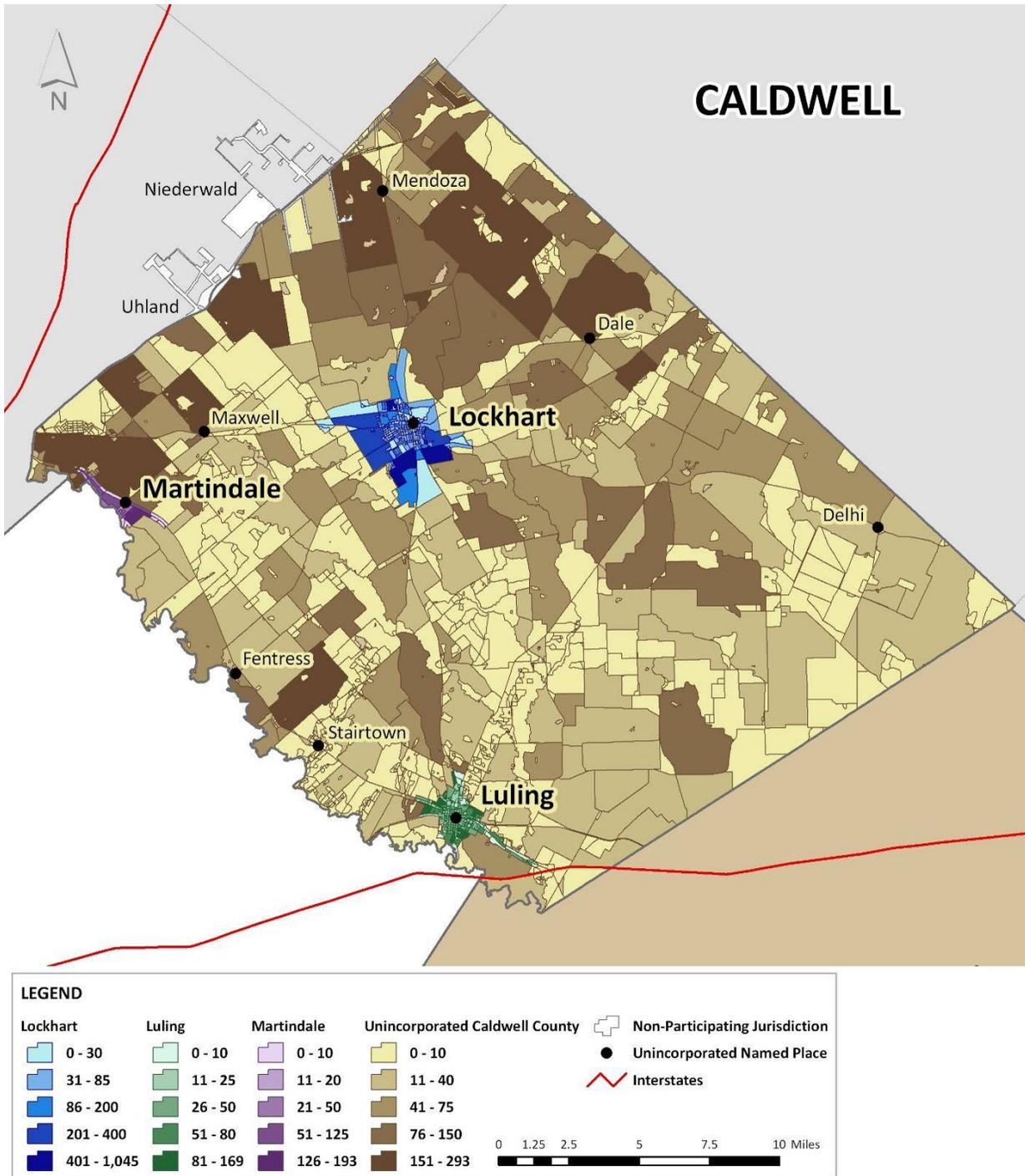
SECTION 3: REGIONAL PROFILE

Figure 3-2. Population Distribution by Census Block for Unincorporated Areas



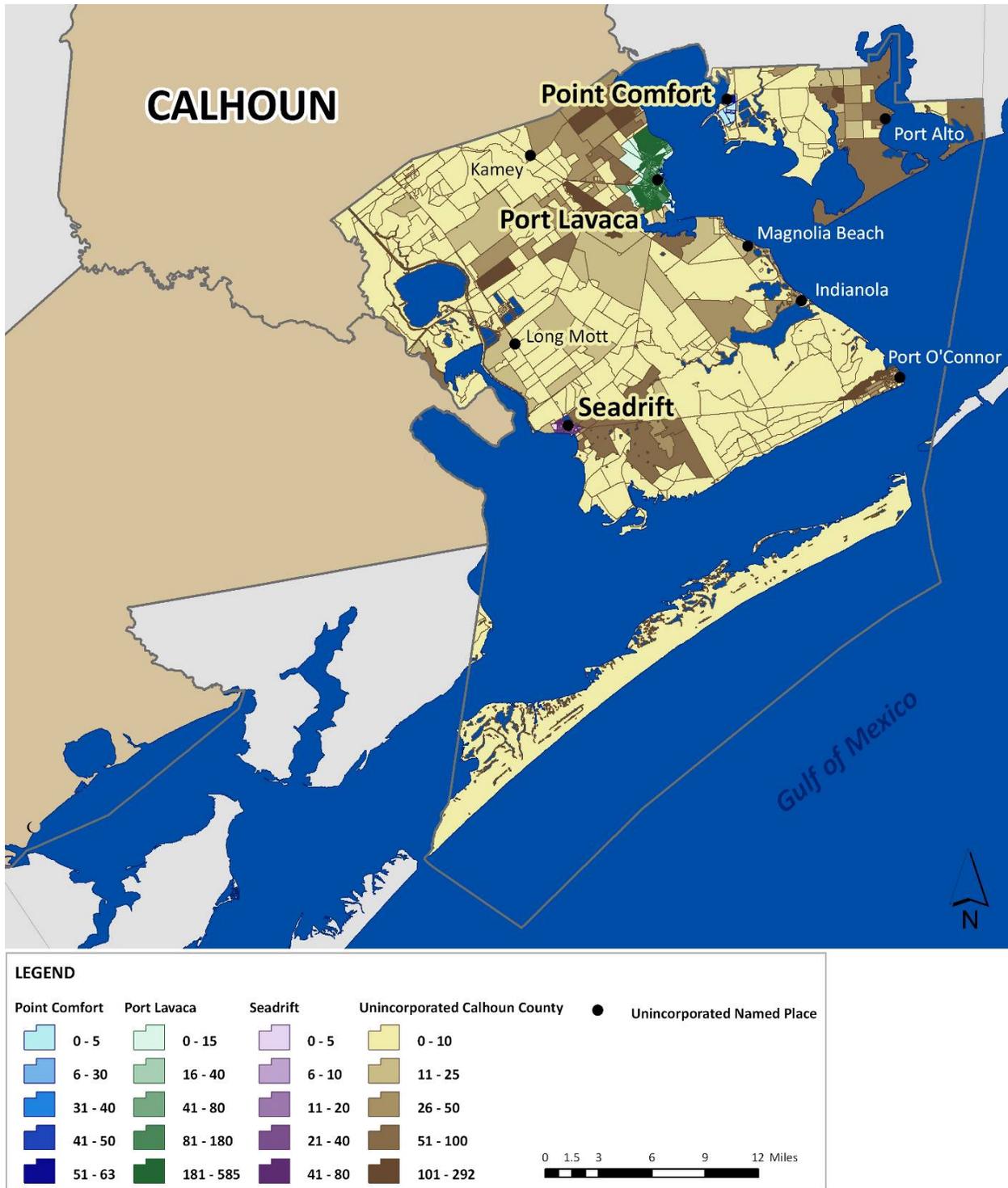
SECTION 3: REGIONAL PROFILE

Figure 3-3. Population Distribution by Census Block in Caldwell County



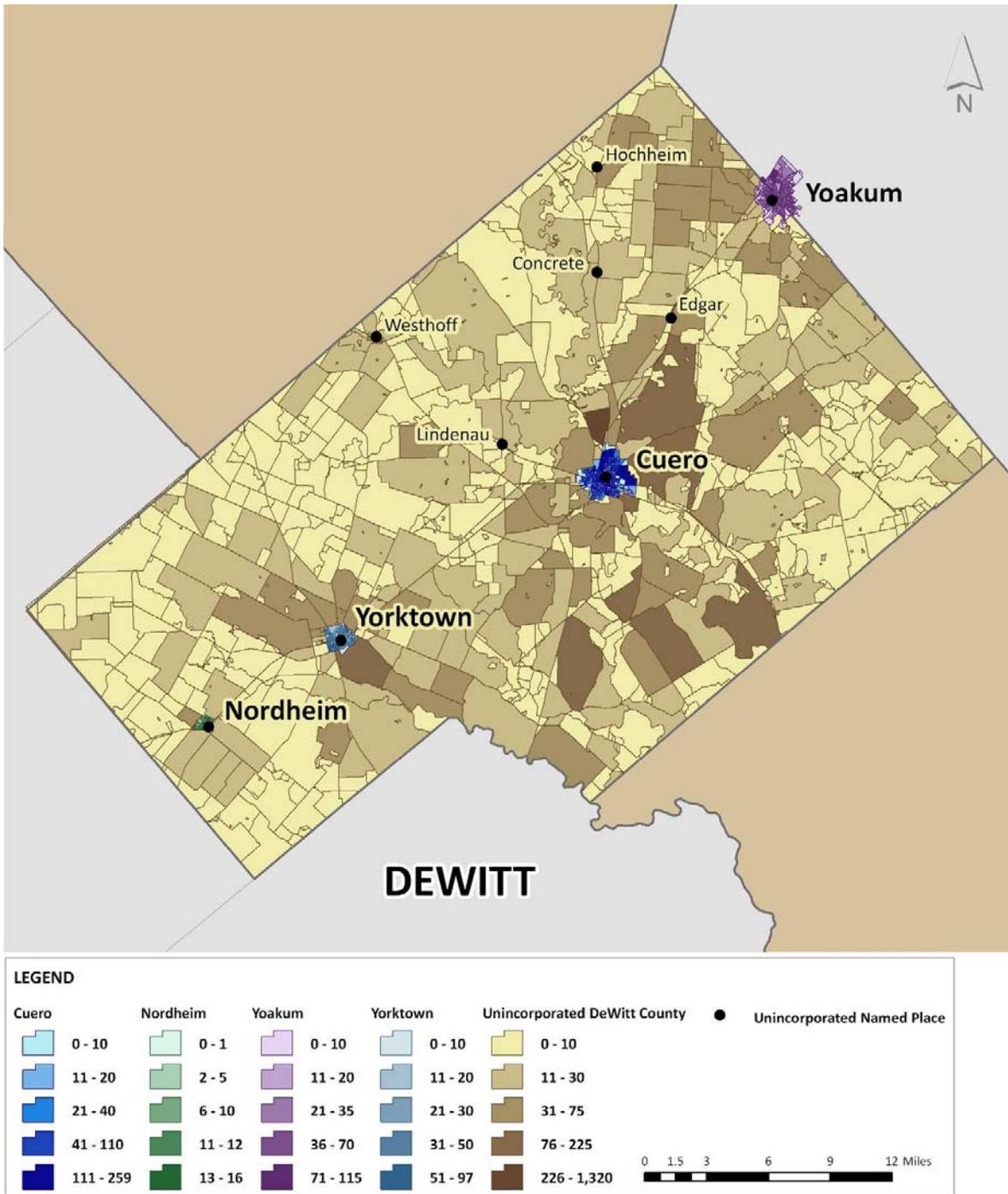
SECTION 3: REGIONAL PROFILE

Figure 3-4. Population Distribution by Census Block in Calhoun County



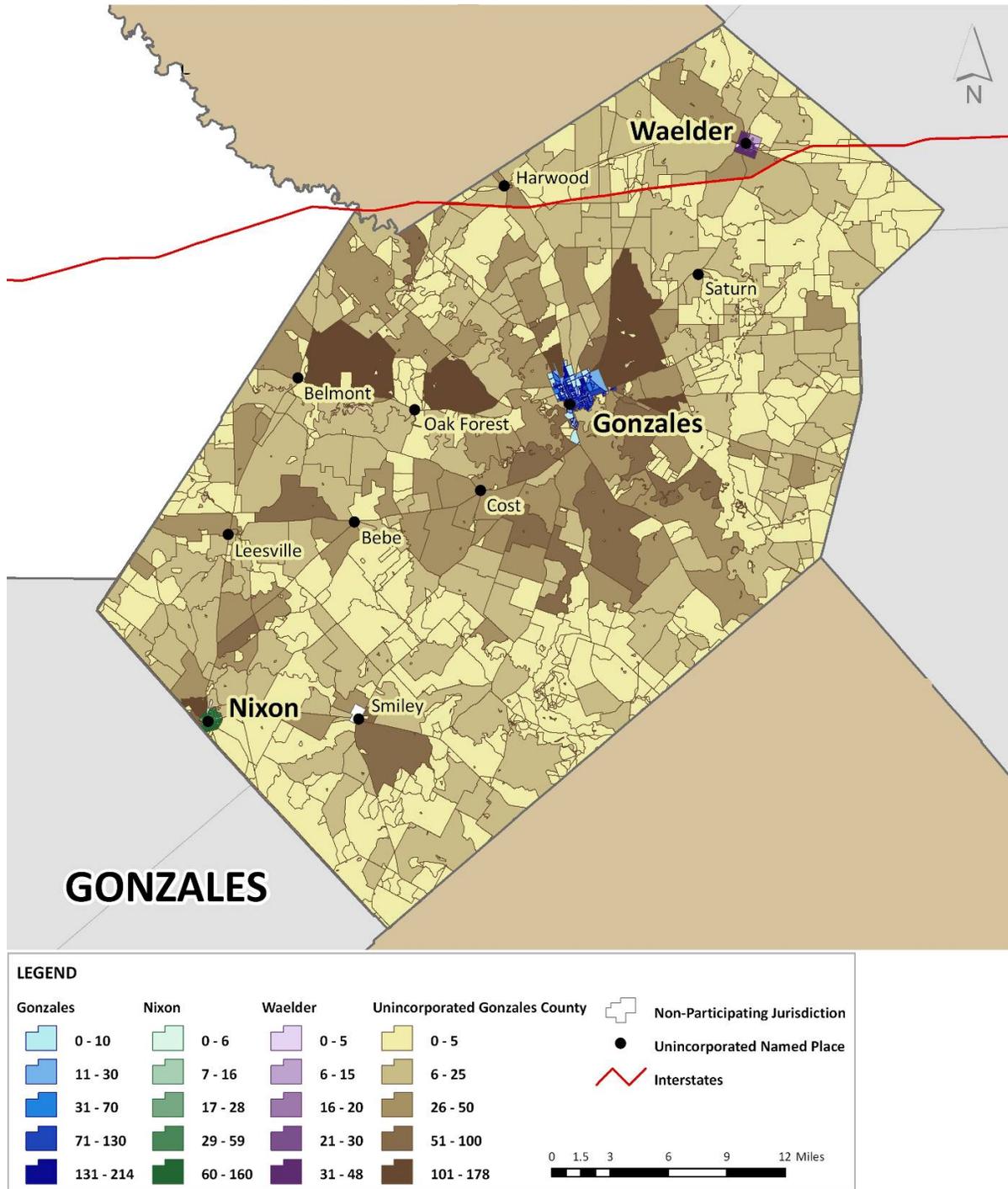
SECTION 3: REGIONAL PROFILE

Figure 3-5. Population Distribution by Census Block in DeWitt County



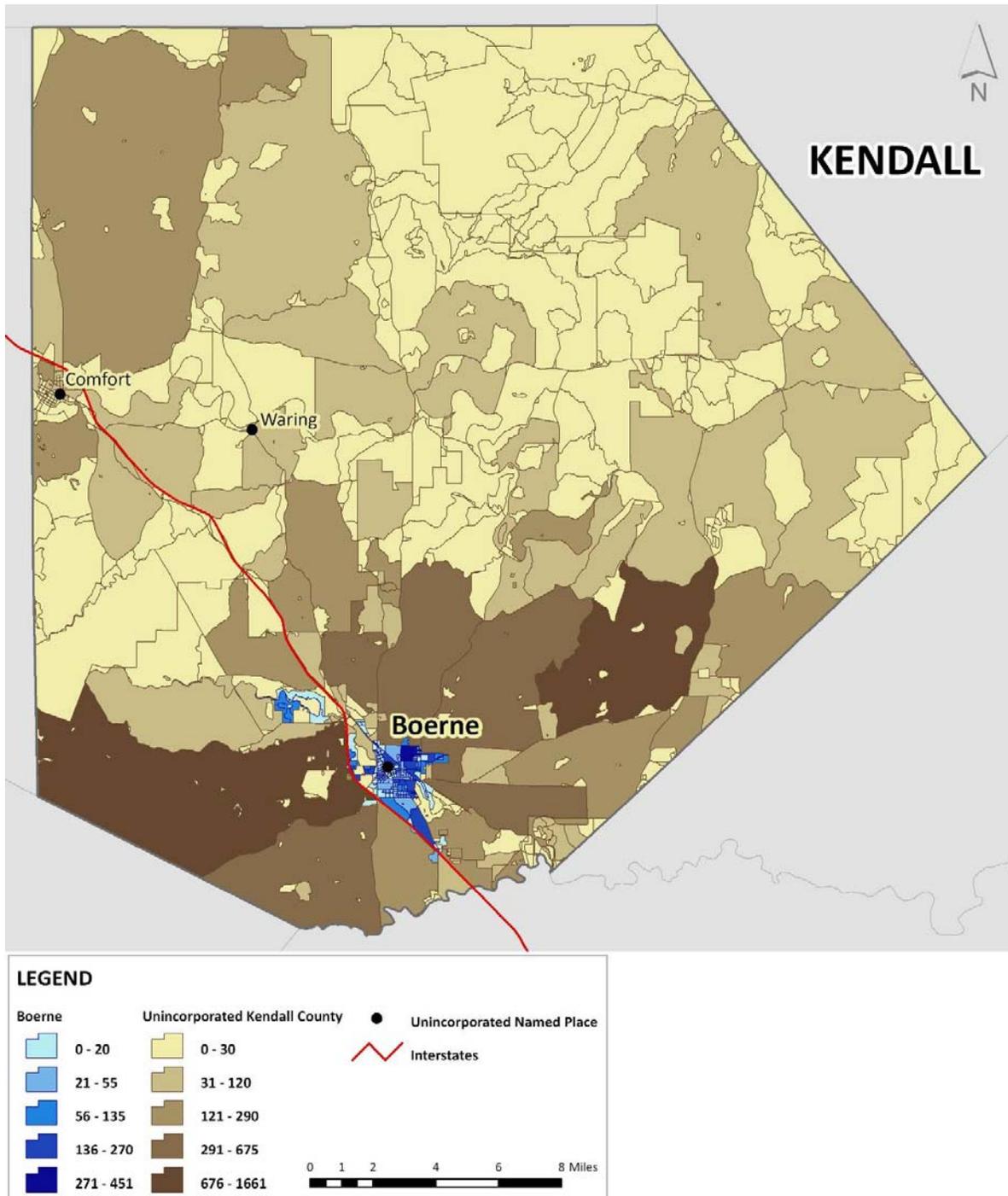
SECTION 3: REGIONAL PROFILE

Figure 3-6. Population Distribution by Census Block in Gonzales County



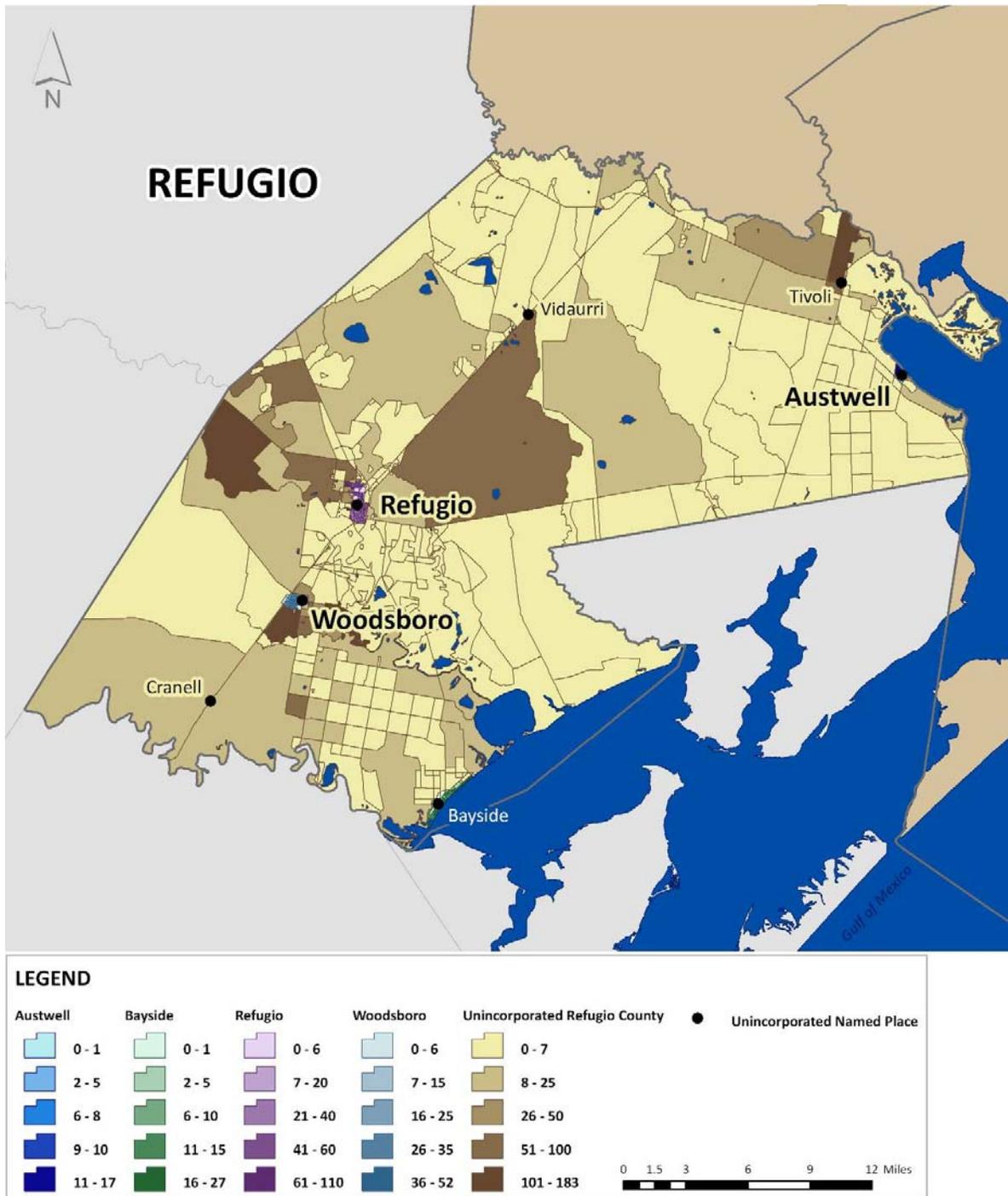
SECTION 3: REGIONAL PROFILE

Figure 3-7. Population Distribution by Census Block in Kendall County



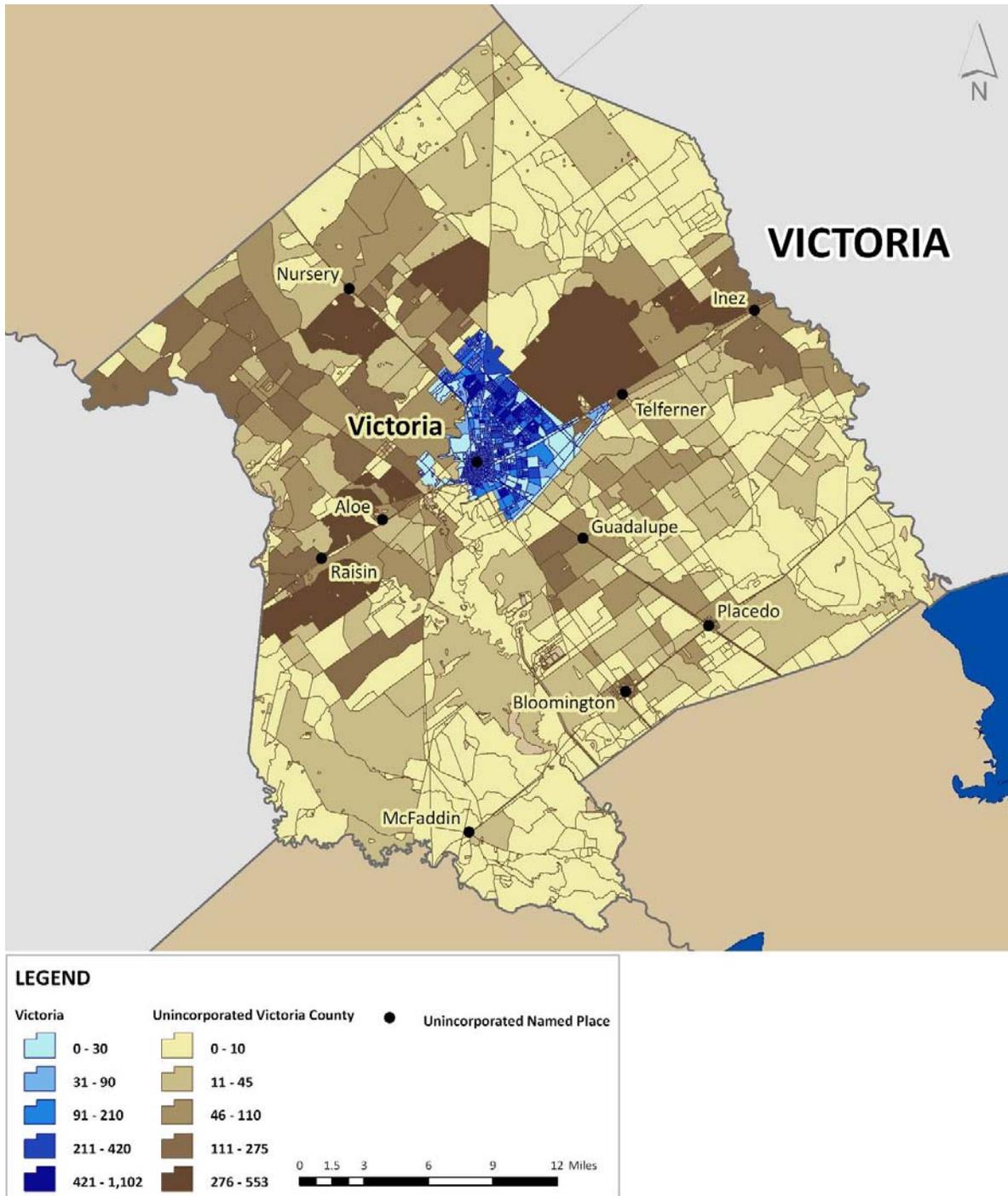
SECTION 3: REGIONAL PROFILE

Figure 3-8. Population Distribution by Census Block in Refugio County



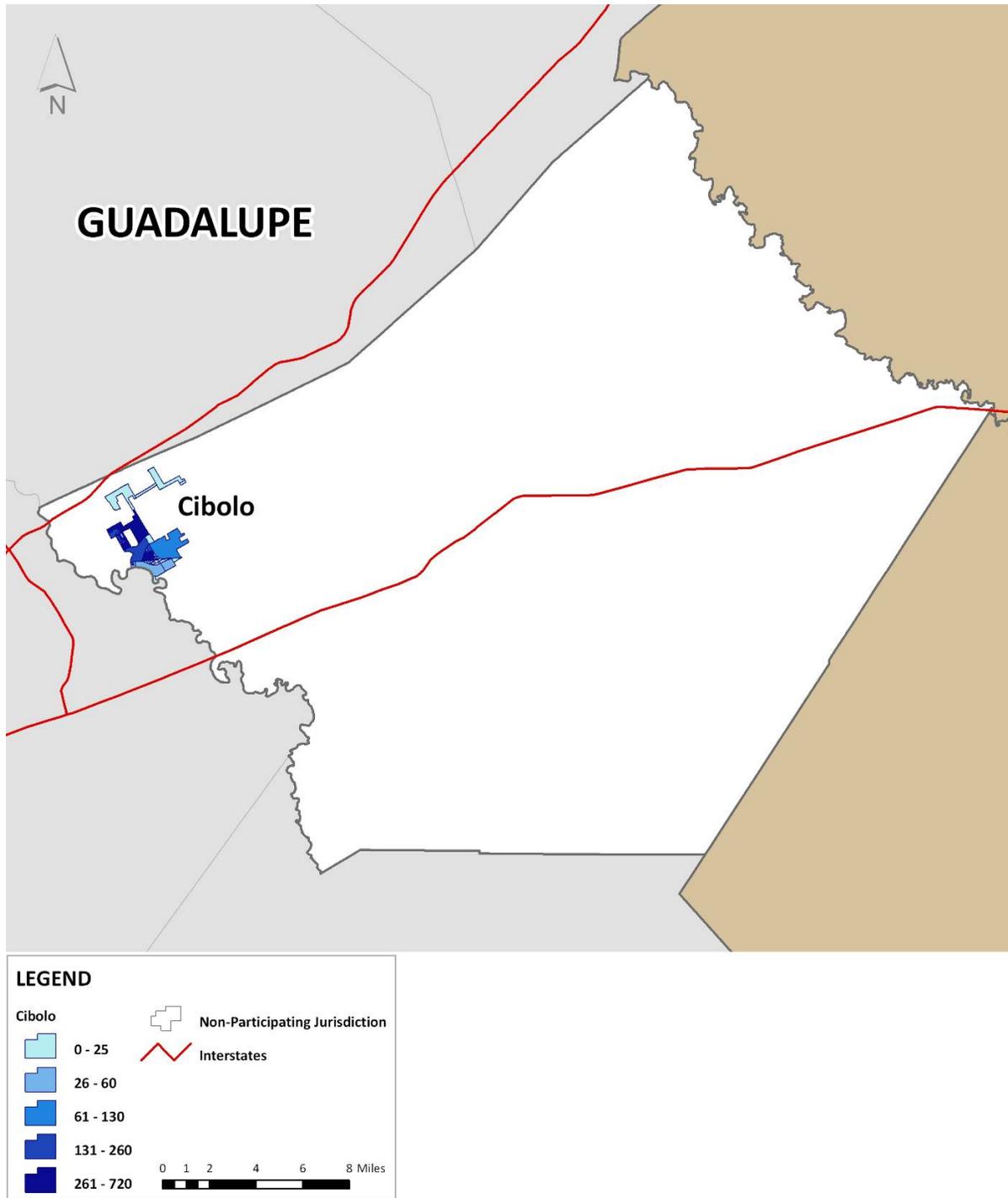
SECTION 3: REGIONAL PROFILE

Figure 3-9. Population Distribution by Census Block in Victoria County



SECTION 3: REGIONAL PROFILE

Figure 3-10. Population Distribution by Census Block in Cibolo (in Guadalupe County)



SECTION 3: REGIONAL PROFILE

Demographics

Table 3-3 provides the total estimated dollar exposure by key occupancy, and Table 3-4 includes the amount (in kilometers) of oil and gas pipelines, highways and railways, and the number of hazardous materials sites in the study area.³

This demographic and building stock data form the basis of large portions of this risk assessment and were derived from HAZUS-MH MR4. Commercial building stock data has been updated to Dun & Bradstreet 2006, Building valuations have been updated to R.S. Means 2006, and building counts are based on census housing unit counts.

Table 3-3. Estimated Building Distribution by Key Occupancy by Jurisdiction⁴

JURISDICTION	RESIDENTIAL		COMMERCIAL		INDUSTRIAL		ESSENTIAL FACILITIES	
	Num.	Value	Num.	Value	Num.	Value	Num.	Value
Uninc. Caldwell Co.	6,107	\$531,566,000	218	\$43,405,000	74	\$13,764,000	10	\$23,277,000
Lockhart	3,893	\$474,538,000	230	\$79,459,000	43	\$10,551,000	11	\$50,987,000
Luling	2,387	\$196,890,000	136	\$47,944,000	31	\$7,738,000	4	\$14,041,000
Martindale	411	\$34,042,000	9	\$6,315,000	2	\$81,000	0	\$0
Uninc. Calhoun County	5,242	\$486,122,000	119	\$43,594,000	51	\$64,267,000	3	\$305,000
Point Comfort	424	\$52,760,000	16	\$7,501,000	14	\$16,513,000	3	\$2,235,000
Port Lavaca	4,958	\$499,874,000	271	\$91,042,000	62	\$27,204,000	18	\$74,876,000
Seadrift	918	\$54,269,000	21	\$5,201,000	5	\$432,000	2	\$4,893,000
Uninc. DeWitt County	4,122	\$408,529,000	127	\$22,314,000	62	\$21,936,000	4	41,741,000
Cuero	3,267	\$269,738,000	207	\$92,793,000	53	\$18,496,000	19	\$37,547,000
Nordheim	170	\$21,023,000	7	\$1,571,000	2	\$134,000	1	\$914,000
Yoakum	3,048	\$259,109,000	186	\$68,442,000	33	\$22,746,000	8	\$27,154,000
Yorktown	1,209	\$99,614,000	66	\$17,240,000	11	\$4,916,000	3	\$7,500,000
Uninc. Gonzales Co.	5,419	\$375,664,000	100	\$46,358,000	36	\$11,628,000	5	\$23,013,000
Gonzales	3,344	\$280,908,000	204	\$82,546,000	33	\$11,703,000	9	\$35,033,000
Nixon	1,269	\$75,442,000	42	\$11,576,000	3	\$3,663,000	5	\$11,049,000
Waelder	560	\$33,877,000	8	\$2,172,000	1	\$250,000	0	\$0
Cibolo (Guadalupe Co.)	1,242	\$165,972,000	68	\$27,759,000	19	\$17,845,000	0	\$0
Uninc. Kendall County	7,573	\$953,491,000	372	\$142,677,000	146	\$40,234,000	11	\$41,464,000

³ Appendix C provides a more detailed listing of the hazardous materials facilities included in Table 3 (as derived from HAZUS-MH).

⁴ Table 3-3 provides information for participating jurisdictions. Refer to Appendix D for a more complete and detailed listing of essential facilities in the GBRA study area.

SECTION 3: REGIONAL PROFILE

JURISDICTION	RESIDENTIAL		COMMERCIAL		INDUSTRIAL		ESSENTIAL FACILITIES	
	Num.	Value	Num.	Value	Num.	Value	Num.	Value
Boerne	2,634	\$336,372,000	266	\$108,149,000	59	\$24,059,000	9	\$64,348,000
Uninc. Refugio County	1,304	\$132,044,000	26	\$5,932,000	16	\$5,446,000	4	\$1,934,000
Austwell	157	\$11,532,000	5	\$653,000	2	\$521,000	0	\$0
Bayside	293	\$24,090,000	4	\$682,000	2	\$179,000	0	\$0
Refugio	1,665	\$135,815,000	94	\$30,309,000	20	\$8,009,000	7	\$16,050,000
Woodsboro	784	\$64,016,000	20	\$3,776,000	10	1,402,000	4	\$6,283,000
Uninc. Victoria County	9,063	\$1,001,520,000	366	\$97,444,000	152	\$38,106,000	20	\$26,055,000
Victoria	22,221	\$2,927,528,000	1,583	\$731,433,000	334	\$93,264,000	36	\$389,250,000

Future Development

GBRA provides stewardship for the water resources in its 10-county statutory district, which begins near the headwaters of the Guadalupe and Blanco Rivers, ends at San Antonio Bay, and includes Kendall, Comal, Hays, Caldwell, Guadalupe, Gonzales, DeWitt, Victoria, Calhoun, and Refugio counties (not all of which are participating in this risk assessment). Planning and resource development efforts are carefully coordinated within the broader consideration of regional and statewide water needs in order to fulfill GBRA's primary responsibilities of developing, conserving and protecting the water resources of the Guadalupe River Basin. A component of this is the basin-wide hazard mitigation plan.

To better understand how future growth and developments in this region might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts.

This section includes an analysis of the projected population change, the number of permits that have been issued throughout the region and economic impacts.

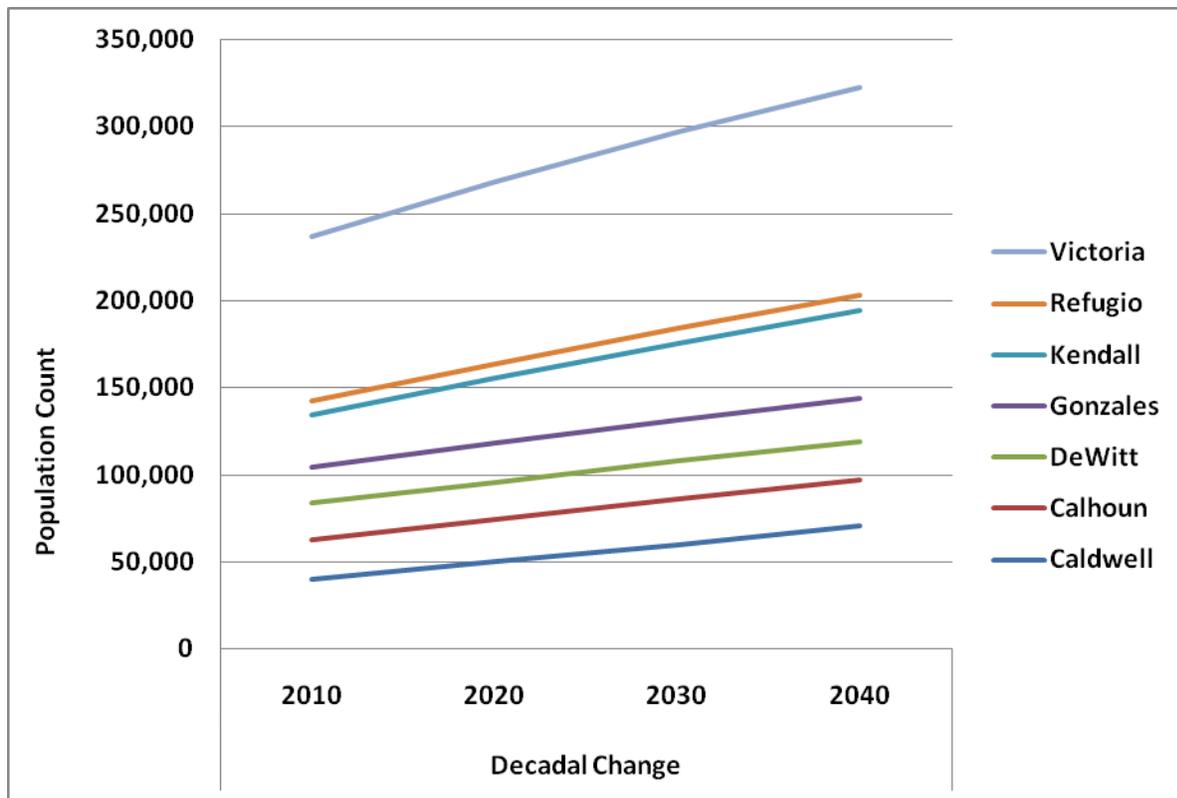
Population projections from 2010 to 2040 are listed in Table 3-4 and illustrated in Figure 3-11, as provided by the Office of the State Demographer, Texas State Data Center, Institute for Demographic and Socioeconomic Research. Population projects were based on a 0.5 scenario growth rate, which is 50 percent of the population growth rate that occurred during 1990-2000. Population projects were not available for the City of Cibolo.

SECTION 3: REGIONAL PROFILE

Table 3-4. GBRA Study Area Population Projections

JURISDICTION	LAND AREA	2010		2020		2030		2040	
		Population							
		Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
Caldwell County	545.73	40,289	74	49,975	92	60,127	110	70,593	129
Calhoun County	512.31	22,689	44	24,427	48	25,724	50	26,569	52
DeWitt County	909.18	20,834	23	21,536	24	21,896	24	21,987	24
Gonzales County	1,067.75	20,439	19	22,079	21	23,465	22	24,538	23
Kendall County	662.44	29,939	45	37,307	56	44,411	67	50,744	77
Refugio County	770.21	8,367	11	8,661	11	8,792	11	8,784	11
Victoria County	882.50	94,228	107	104,269	118	112,417	127	119,336	135

Figure 3-11. GBRA Study Area Population Projections



SECTION 3: REGIONAL PROFILE

Economic Impacts

The economy is vital to all infrastructures. A major key to the economy of the area is tourism. In some locations, the population can double during the summer months due to the high number of tourists. Each year, tourists are attracted to the vast nature preserves to enjoy the water, trails, and bird watching opportunities to see one of the 400 species of birds identified in the area. If this nature preserve were to be damaged or destroyed, a large portion of the economy would suffer.

Additionally, a critical portion of the economy lies within the industries of Alcoa, Formosa Plastics Corporation, Ineos, Seadrift Coke, and Port of Port Lavaca-Point Comfort. Most notably though is the Port Authority. The Port of Port Lavaca-Point Comfort employs thousands of families both directly and indirectly. A 2004 study by Martin Associates of Lancaster, Pennsylvania, reports that the public and private marine terminals on the Matagorda Ship Channel generate more than 16,000 jobs nationwide. If this terminal was lost or experienced downtime, it would affect the annual business revenue of nearly \$2 billion, plus an additional \$338 million of indirect revenue generated with local suppliers of goods and services of firms directly dependent upon cargo activity.⁵

Furthermore, the DeWitt Industrial Park located in the City of Cuero, as well as the Business District in the City of Luling are both looking to expand. Depending on what industry these locations draw to their areas and how much they expand, this could have a large financial impact in the community also. These areas need to consider mitigation actions also, should something impact the location and cause the shutdown of any of the facilities for a day or more leading to more widespread impacts.

Also of importance to note, is that the State Highway 130 (SH 130) is being extended through Caldwell and Guadalupe counties to 1-10 near Seguin. Construction began in 2009 and completion is expected in 2012. Although this is part of the larger Central Texas Turnpike System and would not be the responsibility of the counties, this highway segment should be considered as a future mobile hazardous materials transportation corridor. Since this road is still under construction, GIS data is not readily available to include in the hazardous materials assessment. However, a static map that was obtained via the Central Texas Turnpike Authority Web site is included in this report to assist with emergency management decision making.

Building Permits

Building permits indicate what types and uses of buildings are being constructed. Table 3-5 lists the number of residential building permits for each county that have been granted between 1990 and 2009. The data includes all sizes of family homes for reported permits, as well as the construction costs to show the potential increase in vulnerability of structures to the various hazards assessed in this risk assessment. The increase in vulnerability can be attributed to the higher construction costs that would

⁵ <http://www.calhounport.com/about/impact.php>

SECTION 3: REGIONAL PROFILE

be factored into repairing or replacing a structure using current market values. Permits are reported annually in September and the data includes that for the years of 2008 and 2009 if available to demonstrate growth.

Table 3-5. County Residential Building Permits⁶

Caldwell County				Gonzales County			
Year	Buildings	Units	Construction Cost	Year	Buildings	Units	Construction Cost
1990	8	8	\$375,130	1990	0	0	\$0
1995	53	61	\$2,870,342	1995	4	4	\$371,760
2000	57	57	\$2,825,910	2000	3	3	\$483,905
2005	37	37	\$2,896,744	2005	9	9	\$599,500
2008	48	48	\$4,578,093	2008	2	2	\$293,210
2009	13	108	\$5,770,180	2009	no data reported		
Calhoun County				Kendall County			
Year	Buildings	Units	Construction Cost	Year	Buildings	Units	Construction Cost
1990	39	39	\$1,787,550	1990	78	78	\$9,461,033
1995	71	71	\$4,422,519	1995	57	58	\$5,834,994
2000	65	68	\$5,855,995	2000	278	278	\$57,800,826
2005	94	96	\$11,216,397	2005	214	214	\$27,026,445
2008	86	86	\$11,655,970	2008	79	79	\$13,385,539
2009	No data reported			2009	34	34	\$4,750,507
Cibolo (City of)				Refugio County			
Year	Buildings	Units	Construction Cost	Year	Buildings	Units	Construction Cost
1990	No data reported			1990	1	1	\$30,000
1996	96	96	\$9,124,508	1995	1	1	\$49,400
2000	94	94	\$9,697,814	2000	1	1	\$135,000
2005	30	30	\$4,196,500	2005	12	12	\$1,655,348
2008	445	445	\$91,164,621	2008	2	2	\$240,000
2009	355	355	\$77,837,737	2009	No data reported		
DeWitt County				Victoria County			
Year	Buildings	Units	Construction Cost	Year	Buildings	Units	Construction Cost
1990	4	4	\$236,284	1990	107	107	\$11,640,765
1995	9	9	\$468,500	1995	172	172	\$15,384,481
2000	10	10	\$498,500	2000	167	167	\$18,335,495
2005	4	4	\$689,930	2005	123	123	\$14,933,516

⁶ <http://censtats.census.gov/cgi-bin/bldgprmt/bldgdisp.pl>

SECTION 3: REGIONAL PROFILE

DeWitt County				Victoria County			
Year	Buildings	Units	Construction Cost	Year	Buildings	Units	Construction Cost
2008	0	0	\$0	2008	4	4	\$1,011,493
2009	No data reported			2009	No data reported		