

SECTION 2B: VULNERABILITY OF RESIDENTIAL & COMMERCIAL PROPERTIES

This subsection assesses the structural vulnerability of residential and commercial properties by jurisdiction in terms of the dollar values of property at risk from key hazards, in partial fulfillment of the following FEMA requirement:

Requirement §201.6(c)(2)(ii)(A): The plan should describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area.

Numbers, types and characteristics of existing residential, commercial and critical service facilities and infrastructure are referenced in Appendix C.

Since the last update of the LMS in 2020, there has been significant growth in residential and commercial property spending throughout the State of Florida. Specifically, there was \$16 billion in 2015, up from \$12.6 billion in 2014, in non-residential starts (The Associated General Contractors of America - <https://www.agc.org/sites/default/files/Files/Advocacy/FL.pdf>, 2022). Also, according to ConstructConnect, there was a \$4.1 billion increase (16.8%) in non-residential construction over 2016 ([https://www.constructconnect.com/hubfs/Industry%20Snapshot%20Packages%20\(PDF\)/Construction_Industry_Snapshot_Package-June_2023.pdf](https://www.constructconnect.com/hubfs/Industry%20Snapshot%20Packages%20(PDF)/Construction_Industry_Snapshot_Package-June_2023.pdf)). However, there is still a cloud of uncertainty in the marketplace. Higher demand for housing, more occupancy in apartments, and retail are providing lifts to the industry. According to the Property Appraiser's Comparison of Taxes Levied (<http://www.pbcgov.com/papa/pdf/tax/Palm%20Beach%20County%20Table%201%20-%20Comparison%20of%20Taxes%20Levied.pdf>), there was a 4.25% increase in FY16 over FY15. Based on the information obtained, the LMS expects that the Florida real estate markets will continue to improve in the near term.

The following observations are offered with regard to future facilities:

- Developable coastal areas of the County are substantially built out. Future development in these areas will likely be replacement and upgrading of existing facilities.
- Development in the Coastal High Area is strictly limited by local ordinances and codes which tend to meet or exceed those recommended by the State of Florida.
- Future growth throughout the County is guided by the managed growth tiers which consider hazard vulnerability.
- Nearly the whole County is potentially vulnerable to isolated flooding during excessive rain events, even areas outside Special Flood Hazard Areas. Repetitive flood loss properties are widely scattered - not clustered - as the County has only one (1) river and no significant elevation variations.
- All new residential, commercial and critical service facilities will be built to meet or exceed South Florida Building hurricane standards. Several local developers are now building Category 5 type structures.

- Wildfire mitigation practices are being promoted for development in the wildland-urban interface areas.
- Palm Beach County and many local jurisdictions are currently undertaking Vulnerability Assessments and are actively planning to change or have changed codes and ordinances to address natural hazards. This planning effort has been invigorated by the grant funding provided by the State of Florida via Resilient Florida, § 380.0935, Fla. Stat. (2021), and the CRS Program.

The following pages provide assessments of the dollar values of existing properties at risk as of this writing, by hazard, by jurisdiction.

Methodology for Assessing Vulnerability of Existing Structures

It was decided to use local property appraisal databases, Geographic Information System (GIS) capabilities, and hazard environment profiles as the basis for identifying and quantifying property and dollars at risk from key hazards.

Analyses of the types and numbers of existing buildings in PBC are complicated by the County's size, diversity, highly variable and incompatible databases, and inconsistent record keeping practices. The primary data source is the Property Appraiser Database (PAPA). The PAPA database is not well suited for purposes of vulnerability assessments, but it continues to be the best data available.

A comprehensive profile of PBC's built environment is contained in the Special Appendix. It describes the residential, commercial, industrial, government, education, healthcare, religious, and other building stocks.

The paragraphs below provide a brief summary of existing residential and commercial properties.

Residential Units

According to Property Appraiser data, there are an estimated 597,300 residential parcels and 681,915 structures in PBC. The residential housing stock is well distributed throughout the eastern portion of the County. Forty-six (46) percent of residential units reside in the unincorporated areas of the county. The seven (7) municipalities of West Palm Beach, Boca Raton, Boynton Beach, Palm Beach Gardens, Jupiter, Wellington and Delray Beach collectively have about 34% of PBC's residential units.

The overwhelming majority of residential structures (75.6%) are of CB Stucco construction. Less than 5% have exterior walls composed of wood in the form of wood siding, wood frame stucco, or board batten. The remaining structures are constructed of a variety of other materials. The PAPA database consists of approximately 25 categories, many of which have a multiplicity of variations.

We have summarized the Property Appraiser Residential Dwelling Data in the following tables:

Table 2B-1

Summary Table of Property – Palm Beach County Property Appraiser’s Office

Community	Count of Parcels	# of Buildings	# of Buildings as a % of Total	Total Reconstruction Cost NEW
Atlantis	1257	1258	0.21	\$399,981,431
Belle Glade	2652	2970	0.48	\$496,529,014
Boca Raton	40185	40287	6.57	\$19,964,099,864
Boynton Beach	31119	31192	5.09	\$6,650,514,883
Briny Breezes	479	480	0.08	\$18,179,859
Cloud Lake	50	61	0.01	\$9,661,877
Delray Beach	30303	30710	5.01	\$10,276,710,164
Glenridge	80	101	0.02	\$19,283,454
Greenacres	14679	14746	2.4	\$2,841,052,447
Gulf Stream	655	690	0.11	\$894,186,466
Haverhill	631	660	0.11	\$133,956,671
Highland Beach	4142	4149	0.68	\$3,620,235,629
Hypoluxo	2105	2112	0.34	\$595,591,883
Juno Beach	3016	3028	0.49	\$1,740,632,593
Jupiter	28848	28890	4.71	\$11,649,796,446
Jupiter Inlet Colony	222	223	0.04	\$129,621,875
Lake Clarke Shores	1456	1460	0.24	\$360,165,922
Lake Park	2552	2603	0.42	\$467,589,981
Lake Worth Beach	11647	12426	2.03	\$1,961,122,068
Lantana	4109	4230	0.69	\$851,355,465
Loxahatchee Groves	1192	2053	0.33	\$295,156,783
Manalapan	301	329	0.05	\$583,778,501
Mangonia Park	607	613	0.1	\$84,732,224
North Palm Beach	7393	7409	1.21	\$2,817,401,557
Ocean Ridge	1396	1412	0.23	\$994,718,068
Pahokee	1089	1187	0.19	\$185,920,089
Palm Beach	8799	9248	1.51	\$13,063,763,774
Palm Beach Gardens	27132	27214	4.44	\$11,488,441,948
Palm Beach Shores	939	942	0.15	\$632,556,798
Palm Springs	7433	7643	1.25	\$1,264,413,163
Riviera Beach	14676	14822	2.42	\$5,673,253,164
Royal Palm Beach	13757	13777	2.25	\$3,085,166,841

South Bay	670	698	0.11	\$114,227,539
South Palm Beach	1899	1899	0.31	\$848,834,974
Tequesta	3256	3324	0.54	\$1,439,134,104
Unincorporated PBC	261346	270041	44.04	\$70,346,177,011
Village of Golf	166	189	0.03	\$119,276,256
Wellington	21375	23032	3.76	\$7,659,878,225
West Palm Beach	41263	43104	7.03	\$13,061,162,304
Westlake	1929	1929	0.31	\$483,316,062
Grand Total	596805	613141	99.99	\$197,321,577,377

Table 2B-2

Residential Structures by Exterior Wall Type in PBC

Exterior Wall Type	# of Buildings	# of Buildings as a % of Total
MSY: CB STUCCO	523,498	85.38
WSF: STUCCO	27,167	4.43
WSF: WOOD SIDING	22,934	3.74
Data Not Available	9,194	1.5
MSY: PRECAST PNL/REIN. CONC	8,467	1.38
Aluminum	4,485	0.73
WSF: VINYL/STL/ALUM	4,383	0.71
MSY: CONC. BLOCK	3,340	0.54
WSF: BRICK	2,355	0.38
WSF: CEMENT FIBER SIDING	1,458	0.24
WOOD SIDING	1,247	0.2
CONCRETE BLOCK STUCCO	1,204	0.2
WSF: PLYWD/STL/ALUM SHTH	1,040	0.17
OPEN POSTS OR COLUMNS	501	0.08
Plywood siding	397	0.06
MSY: VINYL/STL/ALUM	369	0.06
WSF: PREFAB PNL	158	0.03
ALUMINUM/STEEL SIDING/PANELS	134	0.02
Hardboard siding	128	0.02
WSF: WOOD SHINGLE	101	0.02
Vinyl Siding	99	0.02
CONCRETE BLOCK	95	0.02
WOOD FRAME STUCCO	82	0.01

PLYWOOD	56	0.01
WSF: COMP OR HARD BD	38	0.01
NONE	29	0
WSF: STONE	22	0
Stucco siding	21	0
VINYL SIDING	20	0
ADOBE/HOLLOW CLAY BLK	19	0
PREFAB PANEL, STEEL/ALUMINUM	17	0
GLASS	12	0
MSY: CEMENT FIBER SIDING	12	0
MSY: WOOD SIDING	7	0
SANDWICH PANEL, STEEL/ALUMINUM	7	0
LOG	6	0
Masonry Veneer	6	0
Wood Single/Shake	5	0
CEMENT FIBER SIDING/SHINGLES	5	0
MSY: CONC. SIP FORMING	5	0
MSY: BRICK	4	0
BRICK, BLOCK BACKUP	3	0
PRECAST PANELS	2	0
BRICK VENEER	2	0
REINFORCED CONCRETE	2	0
WSF: LOG VENEER	1	0
Cement fiber siding	1	0
WOOD SHINGLES/SHAKES	1	0
CEADAR/REDWOOD	1	0
STONE, BLOCK BACKUP	1	0
Grand Totals	613,141	99.96

Commercial Properties

Property Appraiser data indicates that there are approximately 27,113 commercial parcels with 93,663 commercial structures countywide. The cost of reconstruction for those structures is estimated at \$42B. These data are summarized as follows:

Table 2B-3

Palm Beach County Property Appraiser commercial parcels, buildings, and reconstruction costs

Building Structure	Count of Parcels	# of Buildings	Total Reconstruction Cost "NEW"
APARTMENTS	153	565	\$226,498,080
APARTMENTS - SENIOR	57	153	\$1,329,093,560
APARTMENTS - TOWNHOUSE	63	270	\$553,246,390
APARTMENTS HIGH RISE	86	153	\$3,699,189,600
APARTMENTS LOW RISE	888	2621	\$5,061,719,820
ARENA	17	23	\$87,923,040
AUDITORIUM	46	51	\$269,096,950
AUTO DEALER/F-SERVICE	121	216	\$616,123,240
AUTO SERVICE GARAGE	448	537	\$375,476,240
BANK/MAIN OFFICE	47	47	\$129,475,590
BAR/TAVERN	44	47	\$15,388,390
BARNS	39	74	\$30,410,320
BIOTECH RESEARCH DEVELOPMENT	4	6	\$172,006,720
BOWLING ALLEY	5	5	\$14,085,300
CAR WASH - AUTOMATIC	72	73	\$49,702,780
CAR WASH - MANUAL	22	24	\$8,239,920
CAR WASH SERVICE STATION	57	57	\$9,304,850
CINEMA/THEATER	23	24	\$173,332,550
CLUBHOUSE	1677	2167	\$992,227,670
COCKTAIL LOUNGE	12	14	\$19,208,770
COLD STORAGE	30	43	\$58,659,580
COLLEGES / UNIVERSITY	10	122	\$658,731,450
COMM SHOPPING CENTER	245	548	\$2,342,567,430
COMMERCIAL CONDO (INCOME USE)	0	0	
COMMERCIAL MIXED USE	11	12	\$70,977,350
CONDO COMMON ELEMENT	0	0	
CONDO FEE SIMPLE	0	0	
CONVENIENCE FOOD MKT	367	368	\$236,839,720
CORRECTIONAL	2	4	\$30,139,470

COUNTRY CLUB	31	45	\$146,786,010
COUNTRY CLUB/W GOLF CRSE	121	224	\$845,982,300
CULTURAL FACILITIES	16	19	\$98,166,370
DAY CARE CENTER	234	290	\$252,099,040
DEPARTMENT STORES	24	24	\$35,629,100
DISCOUNT DEPT STORE	159	200	\$715,504,050
DOG/HORSE TRACK	1	2	\$16,414,430
DORMITORY	75	164	\$333,007,570
DOWNTOWN ROW TYPE	171	244	\$1,046,322,160
DRUG STORE FREESTANDING	100	100	\$264,292,780
EDUCATION/RELIGIOUS	324	695	\$1,079,198,920
EFFICIENCY APARTMENT	57	145	\$16,144,880
FRANCHISE FOOD	311	324	\$246,440,290
FUNERAL HOME	47	52	\$62,196,790
FURNITURE STORE	38	41	\$153,218,070
GARAGE STORAGE	160	248	\$40,144,950
GOLF COURSE (INCOME USE)	0	0	
GOVERNMENTAL	134	221	\$1,782,197,490
GUARDHOUSE	192	203	\$20,232,410
GYMNASIUM	75	76	\$224,258,040
HANGAR	12	117	\$203,031,120
HEALTH CLUB	22	22	\$144,274,160
HEAVY MANUFACTURING	4	8	\$29,201,760
HOME IMPROVEMENT	18	18	\$159,774,850
HOSPITALS	21	53	\$2,632,788,020
HOTEL- HI RISE	72	75	\$1,366,681,390
HOTEL/MOTEL BUSINESS	81	162	\$78,923,130
HOTEL/MOTEL LO RISE	40	70	\$177,357,780
KWIK LUBE	22	22	\$9,803,760
LIBRARY	16	16	\$62,929,450
LIGHT MANUFACTURING	211	269	\$480,881,430
LUMBER STORAGE	0	0	
MEDICAL OFFICE BLDG	482	537	\$1,482,595,150
MEGA WAREHOUSE DISCOUNT	6	6	\$79,392,190
MINI WAREHOUSE	178	881	\$1,528,926,670
MOBILE HOME PARID (INCOME USE)	0	0	
NEIGHBORHOOD BANK	294	310	\$334,940,740
NURSING HOME	145	209	\$1,386,297,480
OFFICE BLDG L/R 1-4S	2074	2412	\$6,231,224,970
OFFICE CONDOMINIUM	0	0	

OFFICE H-R 5ST	88	102	\$3,074,220,720
OFFICE/WAREHOUSE	378	443	\$1,354,555,620
PARKING GARAGE/DECK	139	151	\$2,061,281,720
POLICE/FIRE STATIONS	116	135	\$249,666,010
PREFAB AGR STORAGE	4	4	\$2,396,110
PREFAB WAREHOUSE	4	4	\$736,490
PRIVATE CLUB	14	30	\$94,827,980
RACETRACK	0	0	
RADIO/TV TRANSMITTER BLD	11	12	\$5,593,430
RADIO/TV/ PIC STUDIO	4	4	\$32,329,070
RAIL/BUS/AIR TERMINAL	17	29	\$207,499,140
REGIONAL SHPMALL/CNT	3	15	\$271,959,900
RELIGIOUS	666	740	\$1,066,421,070
RESIDENTIAL 1 FAMILY	0	0	
RESIDENTIAL 2 FAMILY	0	0	
RESIDENTIAL 3 FAMILY	0	0	
RESIDENTIAL 4 FAMILY	0	0	
RESIDENTIAL BARNS	3	4	\$3,096,360
RESORT HOTEL	16	36	\$1,169,441,920
RESTAURANT	371	394	\$387,364,740
RETAIL CONDOMINIUM	0	0	
RETAIL DRIVE-UP	0	0	
RETAIL MULTI OCCUP	216	255	\$408,513,210
RETAIL SINGLE OCCUP	1031	1095	\$724,279,750
SCHOOL	224	765	\$3,874,999,900
SERVICE STATION NO BAYS	102	107	\$34,786,490
SERVICE STATION W/BAYS	40	40	\$13,313,050
SFR CONVERT TO COMM	387	443	\$124,647,310
SKATING RINK	3	4	\$19,322,110
SOCIAL/FRATERNAL HALL	71	86	\$47,163,620
STADIUM	3	5	\$96,937,900
STRIP SHOPPING CNTR	829	1009	\$1,593,349,520
SUPER REG SHOPMALL	4	7	\$1,230,064,810
SUPERMARKET	124	140	\$636,511,640
TECHNICAL MANUFACTURING	23	37	\$403,955,980
TELECOMMUNICATION EQUIPMENT	23	29	\$70,955,830
TRUCK TERMINAL	0	0	
VETERINARY CLINIC	63	71	\$70,135,570
WAREHOUSE DISCOUNT STORE	9	9	\$77,775,750
WAREHOUSE DISTRIBUTION	193	232	\$1,746,218,940

WAREHOUSE SINGLE TENANT	2	2	\$1,312,570
WAREHOUSE STORAGE	3074	4558	\$3,933,444,450
Grand Totals	18769	27725	\$66,086,003,160

Number & Assessed Values of Residential & Commercial Property at Risk

Deriving an accurate estimate of residential property values at risk from hazards is complicated by multiple factors. However, the Property Appraiser does calculate the estimated cost of reconstruction based upon its knowledge of the building and its construction, as well as estimated costs of construction. This value is provided the RCN (“reconstruction value new”) which is used above.

The methodology used to estimate the value of residential property at risk involved a number of compromises using best available data. Parcel data was extracted from the Property Appraiser database. It was sorted by jurisdiction and hazard boundaries. A derived factor for land values was backed out of loss estimates to concentrate only on improved parcels.

Estimating the Value of Property Contents

Based on analyses of property records, values for residential contents at risk are assumed to be approximately 80% of the appraised value of the structure. Values for commercial contents and inventory at risk are assumed to be 175% of the appraised value of the structure. A countywide summary of property values at risk, including contents, is presented at the end of this Section.

Critical Facilities

For the purpose of the LMS, critical facilities are defined as any facility that would have a major negative effect on a large percentage of the population of a community if impacted. Considerations include the nature of the service (s) provided to the community or negative impact that would occur to that same community if the facility became damaged, destroyed, or non-functional. These facilities include but are not limited to law enforcement and fire rescue facilities, schools, government facilities, utility facilities, sea ports and airports, hospitals, and other critical medical facilities, shelters, adult living facilities, etc. [For security reasons and their sensitive nature, critical facility listings are excluded from publicly distributed copies of the LMS plan.](#) A list is maintained by DEM and made available to authorized personnel.