

South Apopka Community Report



Central Florida Florida Disaster Resilience Initiative Phase 1 Stage 2 2019



These materials were developed by Health Initiatives Foundation, Inc. in 2019. Surveys were conducted under the auspices of Health Initiatives Foundation, Inc.'s Florida Disaster Resilience Initiative, with funding from The Miami Foundation.

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Executive Summary

The Florida Disaster Resilience Initiative consists of 5 phases:

- 1: Elevating the Voices of Vulnerable Communities
- 2: Collaborative Systems for Preparedness & Response
- 3: Resolving Mission Critical Gaps
- 4: Establishing Communities of Opportunity with Social Equity
- 5: Building a Blue-Green Political Economy for Regeneration

This report details work undertaken in Central Florida in 2019 as part of Phase I. This phase included training for Community Captains, community forums, and surveys conducted within each participating community. This report, and the accompanying online community presence in the Central Florida Resilience System comprise the documentation of these efforts.

Information included in this Community Report was gathered using the following methods:

- Formal and informal interviews with Organization Leads located in or serving the community;
- Community Forums where:
 - Gaps and proposed solutions were discussed and recorded, and
 - Assets, hot spots (areas of concerns), and proposed resilience hubs were discussed and mapped.
- 31 Household *Mission Critical Function Surveys*: These surveys are designed to determine if the community is tending toward resilience or vulnerability. Survey respondents rated twenty six critical functions on the following scale:
 - Most Vulnerable
 - Extremely Vulnerable
 - Elevated Vulnerability
 - Not Affected
 - Resilient
 - Highly Resilient
 - Resilient and Sustainable
- 29 Household *Housing and Emergency Services Surveys*: Residents described their residence type, any damage to their home as a result of Hurricane Irma, the time taken to repair the damage, and funding sources for the repairs. This survey



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also documented where residents received information during and after Hurricane Irma, and their level of knowledge about disaster preparedness.

- Household *Skills and Equipment Inventory Surveys*. These list residents who have volunteered their services, skills, or property to be used in the community to assist their neighbors in the event of a disaster, together with their contact information. The information is confidential, and managed by the Community Captain.

Community Leadership

Mabel Stevens, a dedicated volunteer at Hope Community Center, served as Community Captain for South Apopka. As Community Captain, Mabel was responsible for holding and documenting a Community Forum; and for the completion and submission of community surveys.



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Findings

The 31 Household *Mission Critical Function Surveys* identified these top priority gaps in South Apopka and vicinity:

- Renewable vs Grid Energy
- Communications
- Agricultural Production Scale
- Psychosocial Resilience
- Climate Threat Mitigation & Transformation
-

The top types of damage after Hurricane Irma reported by the 29 respondents to the Household *Housing and Emergency Services Surveys* in addition to unspecified “Other” damage (22.6%), were:

- Water damage (19.4%)
- Electrical power outage (16.1%)
- Roof damage (16.1%)

Most survey respondents reported that they lived either in Apartments or in Single Family Homes, and that all reported damage was repaired within 6 months with one exception. The exception was a renter of a single family home with a landlord who would not affect repairs in spite of water damage with mold.

FEMA and unspecified “Other Funding Sources” were the sources of funds used by two thirds of respondents to affect repairs. The remaining respondents funded repairs with either home insurance or renter’s Insurance.

Three quarters of respondents reported that they had sufficient information to make appropriate decisions about whether they would Shelter in Place; and had sufficient information to make decisions about how to evacuate.

All but 15% of respondents indicated that they were able to get the supplies they needed to shelter in place, although several households reported that shelves were bare for a period of time before they were restocked.



Over half of the respondents knew where their nearest approved emergency shelter was, how to get to that emergency shelter, and where to get sandbags. However, there is a need for preparedness education about what to take to an emergency shelter, evacuation zones, how much water to have on hand when sheltering in place, and how to comply with a boil water order. Less than a third of respondents knew their emergency radio station, although many had battery operated radios.



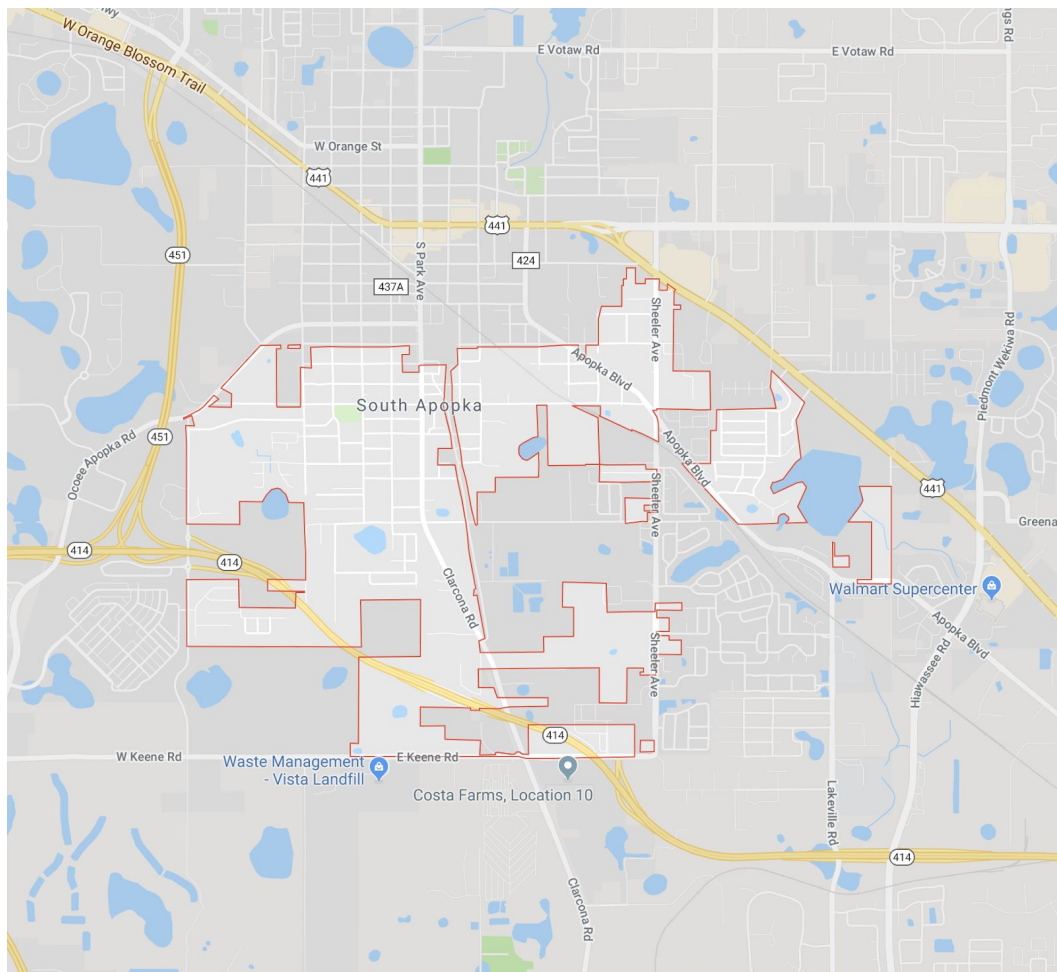
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Community Description

Location

South Apopka is a Census Designated Place as well as an unincorporated area in the Orlando Metropolitan Area in Orange County, Florida. It has a population of 5,613 in 1,671 households. South Apopka is in Zip Code [32703](#). South Apopka includes portions of Census Tracts **017501**, **017504**, **017600**, **017802**.¹

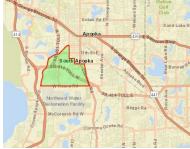

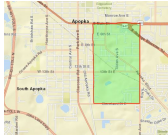


Map 1. South Apopka



¹ US Statistical Atlas <<https://statisticalatlas.com/place/Florida/South-Apopka/Overview>>

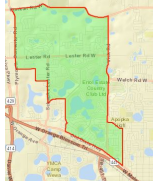


Table 1. Census Block Groups with Surveyed Households

Census Block Group	Description
 <p>120950175011</p>	<p>Population 1,853</p> <ul style="list-style-type: none"> ➤ W Michael Gladden Rd to the North ➤ W Keene Rd to the South ➤ Old Apopka Rd to the East ➤ Ocoee Apopka Rd to the West
 <p>120950175043</p>	<p>Population 5,452</p> <ul style="list-style-type: none"> ➤ Cleveland St E and Apopka Blvd to the North ➤ Apopka Vineland Rd N to the South ➤ Lakeville Rd to the East ➤ Clarcona Rd to the West
 <p>120950176001</p>	<p>Population 1,790</p> <ul style="list-style-type: none"> ➤ E Main St to the North ➤ Cleveland St E to the South ➤ Sheeler Ave to the East ➤ S Highland Ave to the West
 <p>120950176002</p>	<p>Population 974</p> <ul style="list-style-type: none"> ➤ E Main St to the North ➤ Cleveland St E to the South ➤ S Highland Ave to the East ➤ Central Ave S to the East
 <p>120950176003</p>	<p>Population 1,614</p> <ul style="list-style-type: none"> ➤ W Main St to the North ➤ W Cleveland St to the South ➤ Central Ave S to the East ➤ Bradshaw Rd S to the East



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 <p>120950178021</p>	<p>Population 10,855</p> <ul style="list-style-type: none"> ➤ Ponkan Rd W to the North ➤ Old Dixie Hwy to the South ➤ Vick Rd to the East ➤ Plymouth Sorrento Rd to the West
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School and Legislative Districts

South Apopka is served by the Orange County Unified School District. It is in Congressional District [FL-10](#), State Senate District [FL-11](#), and State House District [FL-45](#).



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Orange County Local Mitigation Strategy 2016 Identified Risks

The Local Mitigation Strategy identifies older homes as a vulnerability due to potential Lead Paint use.

Another potential vulnerability is the age of the housing structure. Well over half of all housing structures in Orange County (53.5%) were built prior to the implementation of the Florida Building Code in 1992.... This may mean an increased vulnerability as the standards developed following the devastation of Hurricane Andrew may not exist in many of these homes. There is some likelihood that many of the homes may have been brought up to the code due to renovations or other work to meet compliance. However, if they have not been, then a large number of homes may be more susceptible to many of the natural/severe weather and tropical system hazards to which Orange County is subjected to on an annual basis.²

The Quick Reference Risk and Vulnerability Assessment Summary (See Table 1) in the Orange County Local Mitigation Strategy 2016 assigns high Risk-Relative Threat to Heat Waves, Tornadoes, Sinkholes/Land-Subsidence, and Tropical Storms.³

² Orange County Local Mitigation Strategy 2016, p. 25

³ Orange County Local Mitigation Strategy 2016, p. 170



Table 2.
2016 Quick Reference Risk and Vulnerability Assessment Summary for Orlando

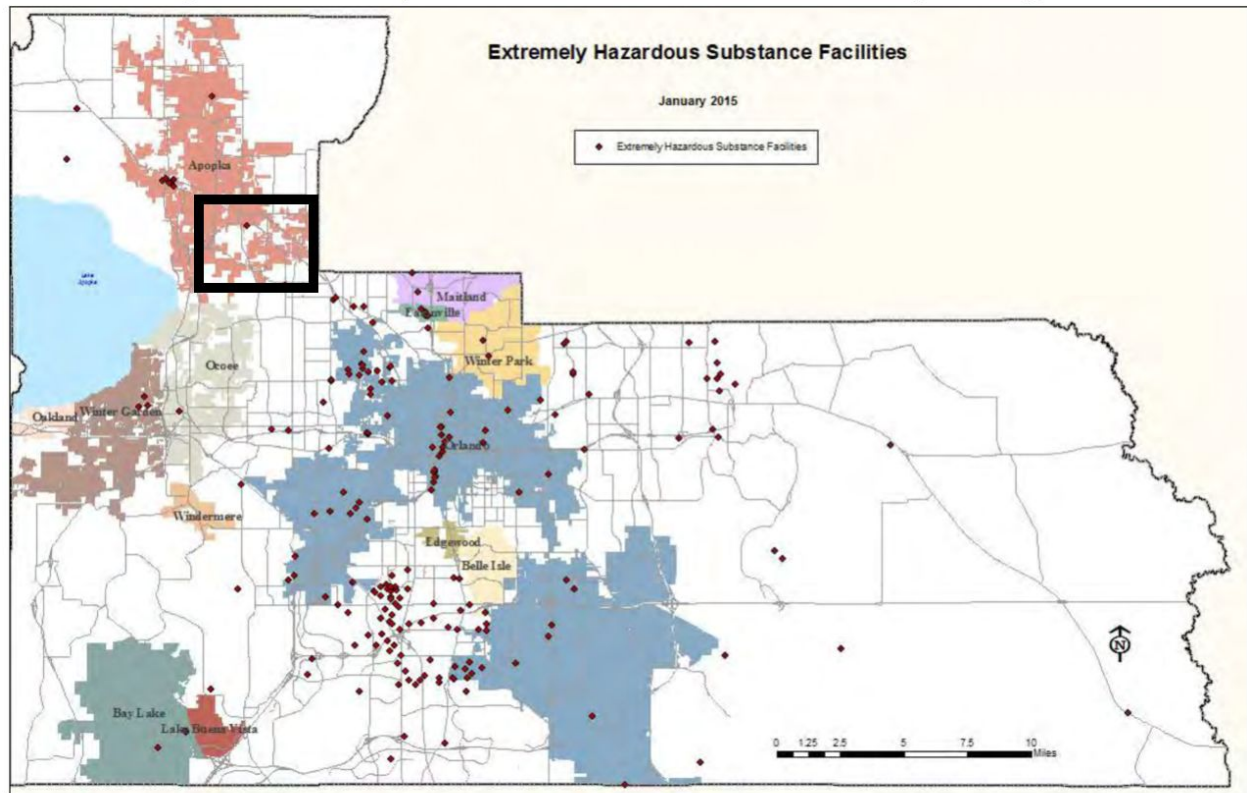
Risk and Vulnerability Assessment Summary					
Hazard Name	People	Property	Environment	Program Operations	Risk – Relative Threat
Diseases and Pandemic	Low	High	Moderate	High	Moderate 48%
<i>Animal</i>	Low	High	Moderate	High	Moderate 44%
<i>Human</i>	Moderate	Moderate	Low	High	Moderate 43%
<i>Plant/Agriculture</i>	Low	High	Moderate	High	Moderate 51%
Extreme Temperatures	Low	Low	Moderate	Moderate	Moderate 54%
<i>Drought</i>	None	Low	Moderate	High	Moderate 57%
<i>Freezes/Winter Storms</i>	Low	Low	Moderate	Moderate	Moderate 41%
<i>Heat Waves</i>	Low	Low	Moderate	Low	High 62%
Floods	Low	Moderate	Moderate	Moderate	Moderate 43%
Severe Thunderstorms	Low	Moderate	Low	Moderate	Moderate 59%
<i>Hail</i>	None	Moderate	Low	Low	Moderate 52%
<i>Lightning</i>	Low	Moderate	Low	Low	Moderate 52%
<i>Tornados</i>	High	High	Moderate	High	High 71%
Sinkholes/Land-subsidence	Low	High	Low	Moderate	High 62%
Hazardous Materials	Moderate	Low	Low	Moderate	Low 29%
Terrorism/CBRNE	High	High	Low	High	Moderate 32%
Tropical Systems	High	High	High	High	High 67%
Wildfires	Low	High	Low	High	Moderate 52%



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Map 2. South Apopka (shown in rectangle) with Location of Extremely Hazardous Substance Facility.⁴

South Apopka is within the black rectangle.



Source: E-Plan – Emergency Response Information System, 2013 Chemical Inventories

⁴ Orange County Local Mitigation Strategy 2016, p. 82
<<https://orlando.novusagenda.com/AgendaPublic/AttachmentViewer.ashx?AttachmentID=70336&ItemID=41681>>



Demographics

South Apopka has among the highest community concentrations of minorities, poverty and low educational achievement. Census Block Groups **0176002**, **0176003**, and **0175011** are the three Census Block Groups surveyed that have most concentrated minority populations, poverty, linguistic isolation, and lack of education. These geographies are bordered by:

- E Main St to the North, Cleveland St E to the South, S Highland Ave to the East, and Central Ave S to the East in Census Block Group **0176002**
- W Main St to the North, W Cleveland St to the South, Central Ave S to the East, and Bradshaw Rd S to the East in Census Block Group **0176003**
- W Michael Gladden Rd to the North, W Keene Rd to the South, Old Apopka Rd to the East, and Ocoee Apopka Rd to the West in Census Block Group **0175011**.

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Table 3. Percent in for Demographic Indicators

Indicator	Census Block Group					
	0175011	0175043	0176001	0176002	0176003	0178021
Minority Population	70%	55%	60%	93%	99%	51%
Low Income Population	73%	33%	55%	61%	69%	20%
Linguistically Isolated Population	7%	3%	6%	7%	16%	4%
Population with Less Than High School Education	23%	15%	11%	35%	43%	12%
Population under Age 5	3%	4%	4%	3%	6%	8%
Population over Age 64	7%	12%	6%	14%	9%	15%

⁵ EPA EJSCREEN: Environmental Justice Screening and Mapping Tool <<https://www.epa.gov/ejscreen>>



Environmental Health Concerns

The NATA Air quality Indicators for Diesel Particulate Matter, Air Toxics Cancer Risk, and Respiratory Hazard Index are in the range of the 50th to the 70th percentile in the US for all Census Block Groups surveyed. The highest concentrations of homes built before 1960, and therefore showing in elevated percentiles for Lead Paint Indicator, are the three Census Block Groups in Census Tract **017600** (**0176001**, **0176002** and **0176003**) These geographies are bordered by:

- E Main St to the North, Cleveland St E to the South, Sheeler Ave to the East, and S Highland Ave to the West in Census Block Group **0176001**
- E Main St to the North, Cleveland St E to the South, S Highland Ave to the East, and Central Ave S to the East in Census Block Group **0176002**
- W Main St to the North, W Cleveland St to the South, Central Ave S to the East, and Bradshaw Rd S to the East in Census Block Group **0176003**.⁶

Table 4. Percentile in the US for Environmental Indicators

Indicator	Census Block Group					
	0175011	0175043	0176001	0176002	0176003	0178021
NATA Diesel Particulate Matter (ug/m3)*	<50th Percentile in US	50-60th Percentile in US	50-60th Percentile in US	50-60th Percentile in US	50-60th Percentile in US	50-60th Percentile in US
NATA Air Toxics Cancer Risk (risk per MM)*	<50th Percentile in US	60-70th Percentile in US	50-60th Percentile in US	50-60th Percentile in US	50-60th Percentile in US	50-60th Percentile in US
NATA Respiratory Hazard Index*	50-60th Percentile in US	60-70th Percentile in US	60-70th Percentile in US	60-70th Percentile in US	60-70th Percentile in US	60-70th Percentile in US
Traffic Proximity and Volume (daily traffic count/distance to road)	55th Percentile in US	32nd Percentile in US	63rd Percentile in US	46th Percentile in US	54th Percentile in US	35th Percentile in US
Lead Paint Indicator (% pre-1960s housing)	36th Percentile in US	14th Percentile in US	58th Percentile in US	64th Percentile in US	53rd Percentile in US	30th Percentile in US
Superfund Proximity (site count/km distance)	65th Percentile in US	69th Percentile in US	64th Percentile in US	64th Percentile in US	66th Percentile in US	77th Percentile in US
Proximity to facilities w Required Risk Management Plans (facility count/km)	93rd Percentile in US	98th Percentile in US	93rd Percentile in US	93rd Percentile in US	90th Percentile in US	91st Percentile in US

*The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: <https://www.epa.gov/national-air-toxics-assessment>.

⁶ EPA EJSCREEN: Environmental Justice Screening and Mapping Too and Overview of Environmental Indicators! <<https://www.epa.gov/ejscreen>>



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Contaminated Sites: The Florida Department of Environmental Protection Contamination Locator map does not have any reported Superfund Sites, Brownfield Sites, Petroleum Cleanup Sites or Other Cleanup Sites. All Census Block Groups are in the 64th through 77th percentile range in the US for Superfund Proximity.⁷ Proximity to facilities with Required Risk Management Plans is elevated, with all Census Block Groups between the 90th and the 98th percentile in the country. The “Proximity to facilities with Required Risk Management Plans” is the Count of RMP (potential chemical accident management plan) facilities within 5 km (or nearest one beyond 5 km), each divided by the distance in kilometers. The Orange County Local Mitigation Strategy states that:

There are 213 fixed facilities in Orange County that hold chemicals that are designated as Extremely Hazardous Substances (EHS). These facilities can be found in almost all of the jurisdictions in Orange County, including: Apopka, Bay Lake, Eatonville, Lake Buena Vista, Maitland, Ocoee, Orlando, Winter Garden, Winter Park, and across the Unincorporated County. Releases of chemicals have the potential to occur at each of these facilities. The County conducts a hazards analysis of each facility every other year to determine the chemical’s vulnerability zone radius and the approximate population in any critical facilities located within that zone that would need to evacuate. Critical facilities include schools, hospitals and other medical facilities, fire stations, and police stations. This information is provided to the individual facility, first responders, the LEPC, and the SERC/State.⁸

⁷ Florida Department of Environmental Protection Contamination Locator Map
<<http://prodenv.dep.state.fl.us/DepClnup/viewmap.do>>

⁸ Orange County Local Mitigation Strategy 2016, p. 81



Surveying Completed

Thirty one Mission Critical Functions Surveys and twenty nine Housing and Emergency Services Surveys were collected in South Apopka in the Census Block Groups indicated in Table 5. Residents of the Marsden Meadows public housing complex and the Taylor Apartments were among those surveyed. One respondent was homeless.

Table 5. Number of Respondents by Census Block Group

Census Block Group	Mission Critical Functions Survey	Housing & Emergency Services Surveys
120950175011	8	14
120950175043	1	1
120950176001	3	4
120950176002	15	8
120950176003	3	1
120950178021	1	1
TOTAL	31	29



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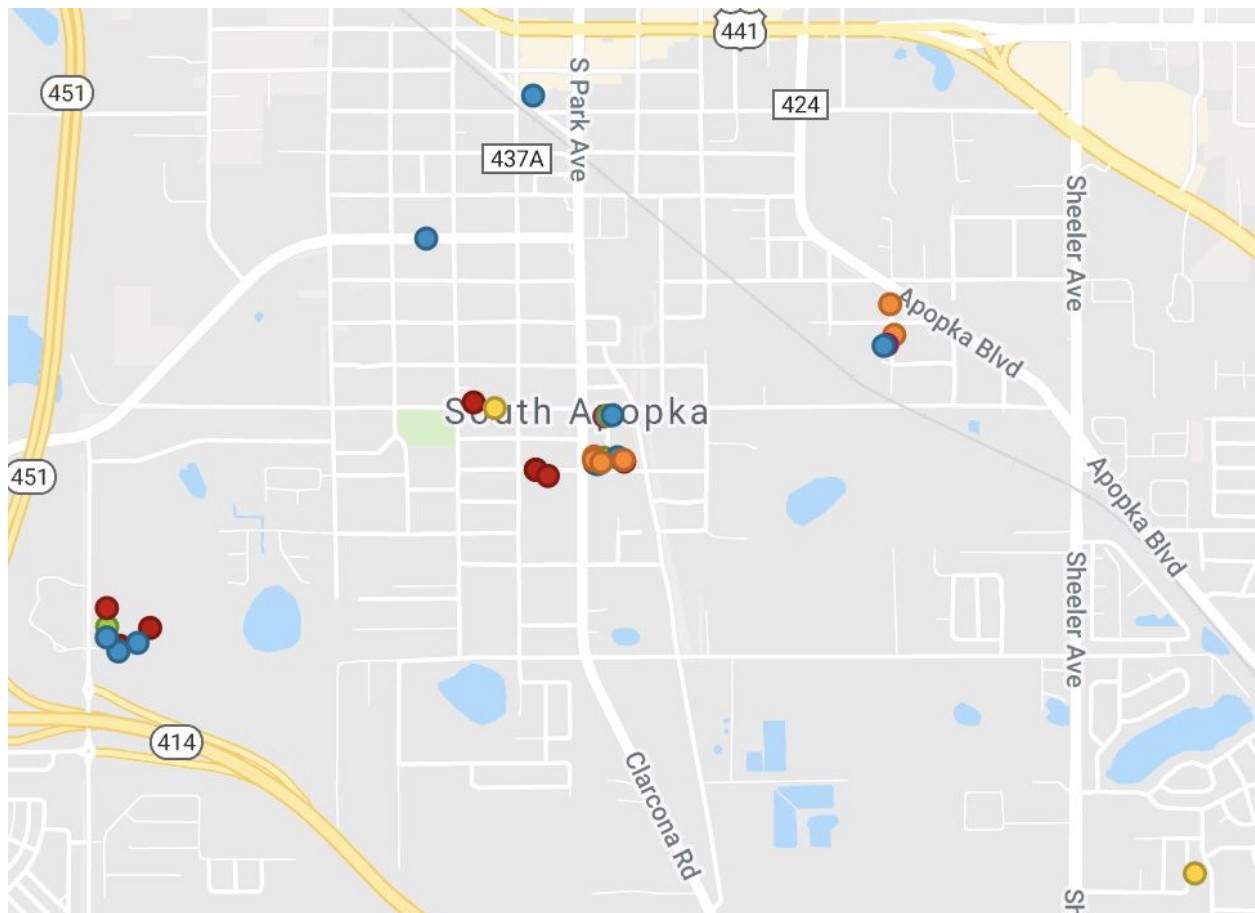
Mission Critical Functions Surveys

Mission Critical Function Surveys are designed to determine if the community is tending toward resilience or vulnerability. Respondents rated twenty six societal functions on the following scale:

- Most Vulnerable-Collapse-Destroyed:1
- Extremely Vulnerable-Major Damage:2
- Elevated Vulnerability-Minor Damage:3
- Not Affected:4
- Resilient:5
- Highly Resilient:6
- Resilient and Sustainable:7

Map 3. Household Vulnerability Scores of Respondents in South Apopka

Note that the average Household Vulnerability Scores, indicated by point color, across the 26 domains was between 2 and 6 for South Apopka residents surveyed.

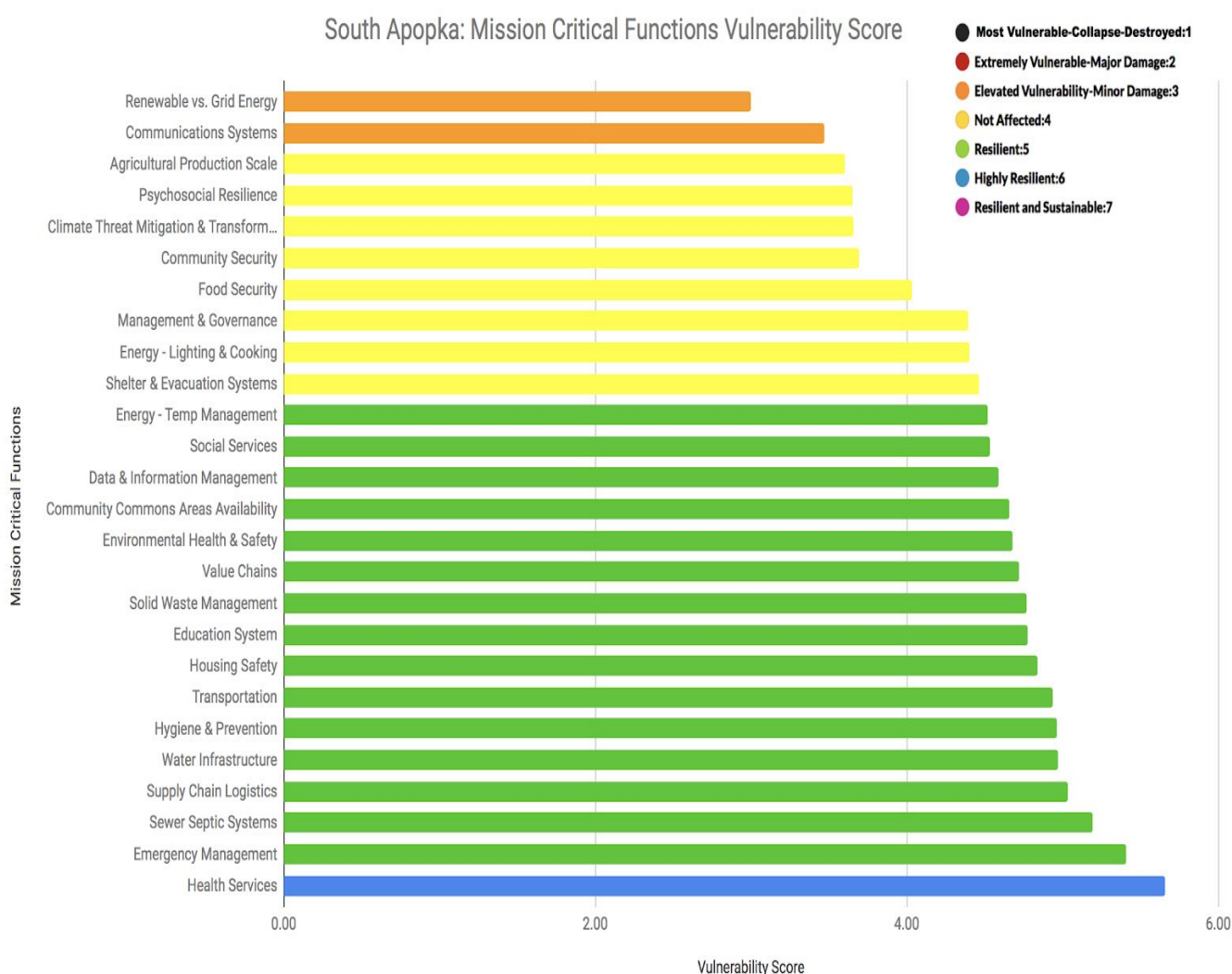


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Average Mission Critical Function Ratings for Each Function

The categories with the lowest average rating were ranked “Elevated Vulnerability” because they rounded to the number 3. The two functions with “Elevated Vulnerability” average scores in South Apopka were “Renewable vs. Grid Energy” and “Communications Systems.” The function “Health Services” had the highest average score. It was ranked “Highly Resilient.”

Graph 1.



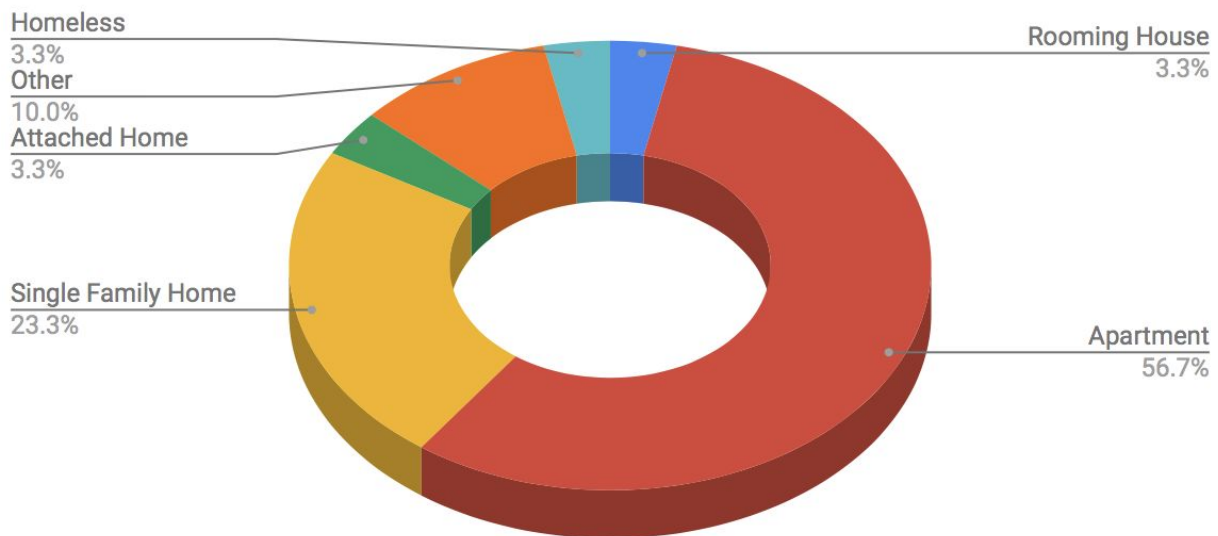
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Housing and Emergency Shelter Survey

Type of Homes: Most survey respondents reported that they lived either in Apartments (56.7%) or in Single Family Homes (23.3%). Respondents to the Housing and Emergency Shelter Survey reported that they were living in: Apartments (56.7%), Single Family Homes (23.3%), unspecified “Other” circumstances (10.0%), a Rooming House (3.3%) and a homeless situation (3.3%).

Graph 2.

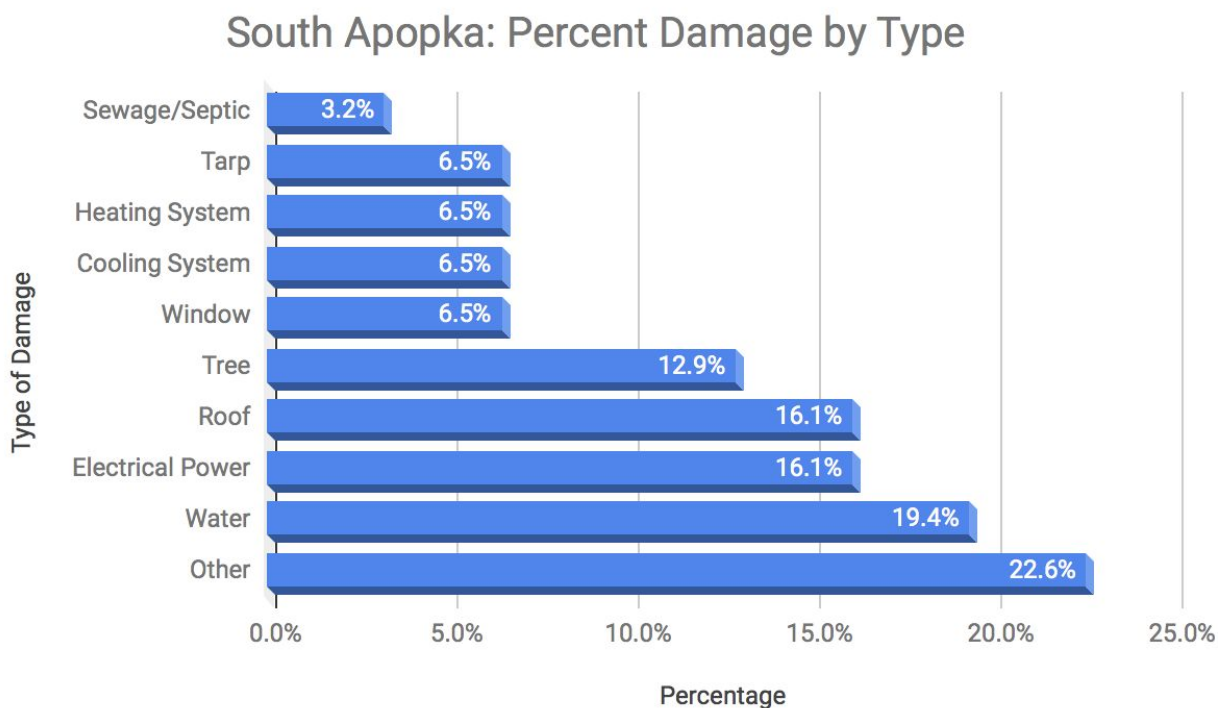
South Apopka: Survey Respondents' Reported Home Types



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Type of damage to homes after Hurricane Irma: Of the 29 respondents to the Housing and Emergency Shelter Survey, 19.4% reported water damage and 16.1% reported electrical power failure. Roof and tree damage were reported by 16.1% and 12.9% of respondents respectively. Although 16.1% of respondents had roof damage, only 6.5% reported that they had tarps on their roofs.

Graph 3. Housing and Emergency Shelter Survey Damage Reported



Time to complete repairs after Hurricane Irma: All respondents reported that they were able to repair the damage to their homes within 6 months, with the exception of one renter whose home was damaged prior to Hurricane Irma, and whose landlord had not repaired damage since.

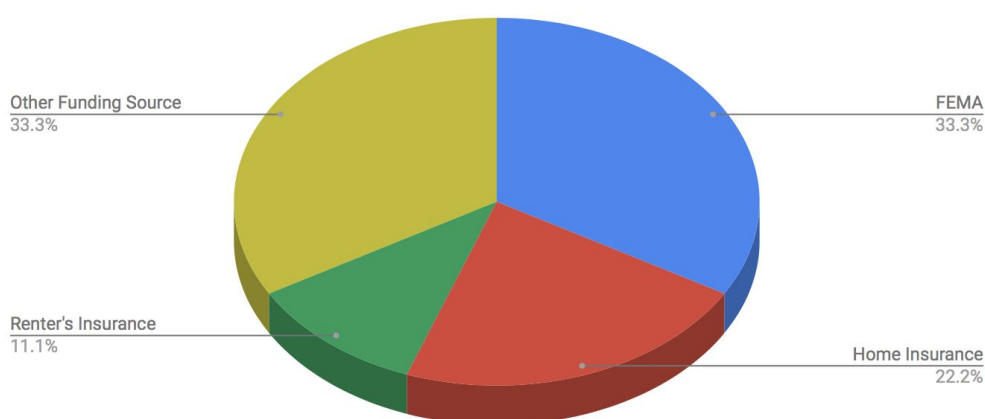
Source of Information for the Disabled: Parents of a disabled child said, “They sent stuff in the mail for our handicapped daughter, so we got a flyer about handicapped shelters from the ESE program and Lighthouse program mailing list.”

Funding Repairs: FEMA (33.3%) and unspecified “Other Funding Sources” (33.3%) were the sources of funds used by most respondents to affect repairs. The remaining respondents funded any repair necessary with home insurance (22.2%) or Renter’s Insurance (11.1%).

One disabled respondent said, “I had to pack up and leave. They pulled up the carpet and brought fans in. I’m disabled. I had to throw away 5 rooms of furniture. I didn’t apply for funding. I was afraid my income would go up and they would stop my disability benefits.”

Graph 4.

South Apopka: Repair Funding Source - Hurricane Irma Recovery



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Preparedness Questions

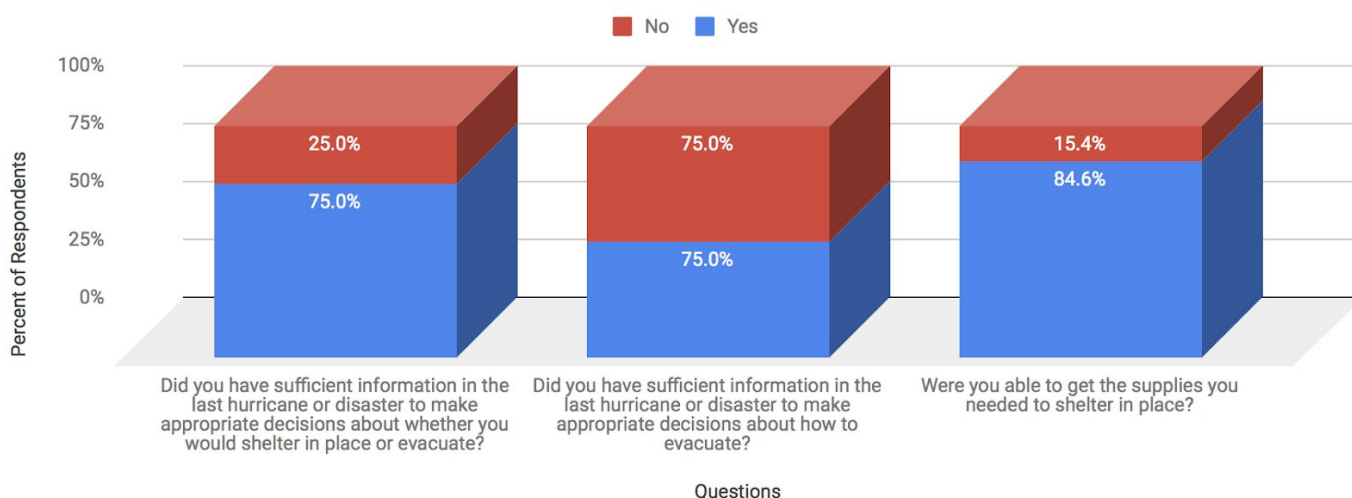
Securing Information and Supplies: Almost all respondents (21 of 28) had sufficient information to make appropriate decisions about whether they would Shelter in Place, and had sufficient information to make decisions about how to evacuate. Although 22 of 26 respondents indicated that they were able to get the supplies, they needed to shelter in place.

Comments on the ability to get the supplies needed to shelter in place included:

- “The shelves were bare, but we bought before.”
- “Long lines”
- “Ace was open for a while, then it closed before the hurricane.”
- “Walmart was picked bare.”
- “Water was hard to find.”

Graph 5. Respondents’ Ability to Find Information and Supplies

South Apopka: Preparedness Resources



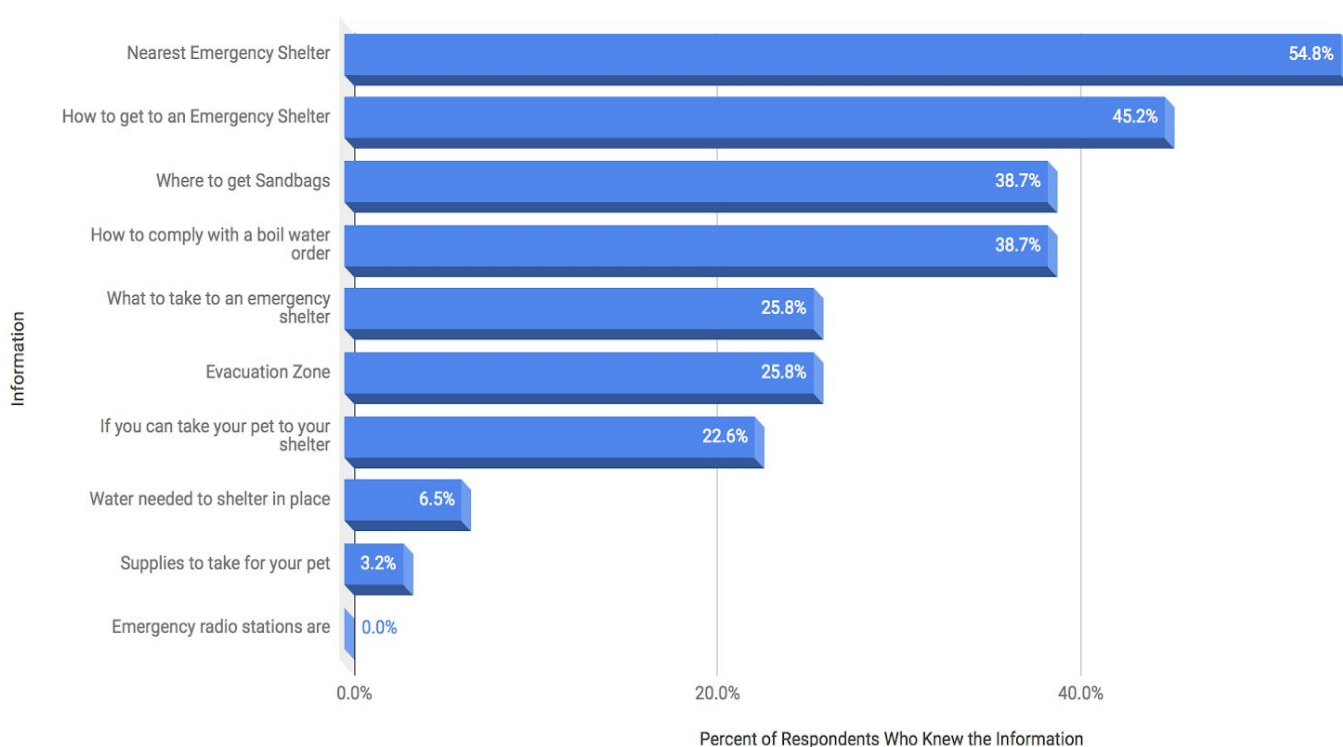
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Preparedness Knowledge: Over half of the respondents knew where their nearest approved emergency shelter was, how to get to that emergency shelter, and where to get sandbags. Only 3.1% of respondents knew what to take with them to an emergency shelter. Only a third of respondents knew their evacuation zone. Slightly more (37.5%) knew how much water to have on hand when sheltering in place, and only 40.6% knew how to comply with a boil water order. Less than a third (31.3%) knew their emergency radio station, although many had battery operated radios.

Regarding getting to a local shelter, one resident said, “I knew where it was but couldn't drive and I can't see at night.” Another said, “I have no car and would have to go to North Park.”

Graph 6. Percent of Respondents Aware of Preparedness Information

South Apopka: Preparedness Knowledge



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Community Forum Report

South Apopka

Hope Community Center, February 9, 2019

Community Captain: Mabel Stevens

Turn Out: 6 (based off forum pictures)

Due to a lack of community involvement, concern of safety, and possible danger of flooding there were only 5 possible hubs identified.

Map Report

GREEN	Proposed Resilience Hubs
BLUE	Proposed Storage Locations
YELLOW	Community Assets
RED	Hot Spots (problem areas-like flooding or infrastructure problems)

Color	Location
	Philis Wheatley Elementary
	John Bridges Community Center
	New Destiny Christian Center
	St. Paul A.M.E Church
	Victory World Outreach Church.



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