Orlo Vista, Orlando Community Report

Central Florida Florida Disaster Resilience Initiative Phase 1 Stage 2 2019



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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

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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 <u>Central Florida Resilience System</u> 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:
 - o Gaps and proposed solutions were discussed and recorded, and
 - Assets, hot spots (areas of concerns), and proposed resilience hubs were discussed and mapped.
- 21 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:



• 21 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



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 were completed. These listed 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.

Community Leadership

Brenda Clark served as Community Captain for Orlovista. The Community Captain Lead responsible for supervising Community Captain Brenda Clark was Community Captain Lead Lawanna Gelzer. Community Captains were responsible for holding and documenting a Community Forum, and for the completion and submission of community surveys.



Findings

All survey respondents reported that they lived in Single Family Homes.

The 21 Household *Mission Critical Function Surveys* determined that the top priority gaps in Orlo Vista were:

- Renewable vs Grid Energy
- Environmental Health & Safety
- Shelter & Evacuation Systems
- Community Commons Area Availability
- Climate Threat Mitigation & Transformation

In addition to the 23.8% of respondents, who experienced power outage, the top types of damage after Hurricane Irma reported by the 21 respondents to the Household *Housing and Emergency Services Surveys* were:

- Water damage (38.1%)
- Roof damage (28.6%)
- Unspecified "Other" Damage (28.6%)
- Water damage (14.3%)

Orlovista flooded badly during Hurricane Irma. The National Guard and Orange County personnel evacuated residents, many of whom were up to their chests in water. Orange County has begun to address the flooding issues with FEMA funds. The types of damage from Hurricane Irma that took the longest to repair were: damage to heating and cooling systems, and windows. Sewage/septic systems and roof damage often took more than six months to repair. Home insurance paid for repairs at 22.2% of the homes, and FEMA paid for repairs at 11.1% of homes. Most respondents indicated that they learned about funding sources from family and friends, television, radio, and Social Services. Social Media and Churches were also sources of information regarding funding for people with damaged homes. Although Orlovista received national attention for its extreme flooding, only 2.6% of respondents reported receiving their information from a government source.

There are many homes in Orlo Vista that were constructed prior to the building code changes that have increased hurricane wind resistance. In May 2019, there were also 6



Contamination Cleanup Sites in Orlovista: 2 Active Petroleum Cleanup Sites, 2 Pending Petroleum Cleanup Sites, and 2 Active Other Cleanup Sites.¹

Residents expressed concern about infrastructure failure at the Community Forum. Flooding, major electricity outage and septic system failure were the top concerns raised.

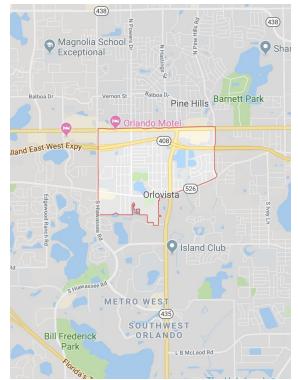
¹ Florida Department of Environmental Protection Contamination Locator Map http://prodenv.dep.state.fl.us/DepClnup/viewmap.do



Community Description

Location

Orlovista is an unincorporated place in the Orlando Metropolitan Area in Orange County, Florida. It includes Zip Codes <u>32808</u>, <u>32811</u>, <u>32818</u>, and <u>32835</u>. It has a population of 5,814 in 2,141 households. It includes Census Tracts **014701** and **014702**. It is in the Metro West neighborhood. Survey respondents reside in Census Block Groups 12095**014701**1, 12095**014701**2, 12095**014701**3, 12095**014701**4, and 12095**014702**1.



Map 1. Unincorporated Orlovista in Orange County



Table 1. Geography of Census Block Groups Surveyed

Colin Cari

Population 1,148

- ➤ W Colonial Drive to the North
- ➤ Old Winter Garden Road to the South
- ➤ N Pine Hills Rd to the East
- > N Kirkman Rd to the West



120950147011

Population 348

- ➤ W Robinson St to the North
- ➤ Old Winter Garden Rd to the South
- > S Kirkman Rd to the East
- > S Powers Drive to the West



Population 1,494

- > W Colonial Dr to the North
- > W Robinson Rd to the South
- > N Kirkman Rd to the East
- ➤ N Powers Dr to the West



Population 2,070

- > W Colonial Dr to the North
- > Old Winter Garden Rd to the South
- ➤ N Powers Dr to the East
- ➤ Hiawassee Rd N to the West



12095**014702**1

Population 5,460

- > Old Winter Garden Rd to the North
- > Raleigh St to the South
- > S Kirkman Rd to the East
- ➤ Hiawassee Rd S to the West



School and Legislative Districts

Orlovista is served by the Orange County Unified School District, Congressional District FL-10, State Senate District FL-11, and State House District FL-46.



Orange County Local Mitigation Strategy 2016 Identified Risks²

The Local Mitigation Strategy identifies older homes as a vulnerability:

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.³

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.⁴

⁴ Orange County Local Mitigation Strategy 2016, p. 170



² EPA EJSCREEN https://www.epa.gov/ejscreen

³ Orange County Local Mitigation Strategy 2016, p. 25

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%
Animal	Low	High	Moderate	High	Moderate 44%
Human	Moderate	Moderate	Low	High	Moderate 43%
Plant/Agriculture	Low	High	Moderate	High	Moderate 51%
Extreme Temperatures	Low	Low	Moderate	Moderate	Moderate 54%
Drought	None	Low	Moderate	High	Moderate 57%
Freezes/Winter Storms	Low	Low	Moderate	Moderate	Moderate 41%
Heat Waves	Low	Low	Moderate	Low	High 62%
Floods	Low	Moderate	Moderate	Moderate	Moderate 43%
Severe Thunderstorms	Low	Moderate	Low	Moderate	Moderate 59%
Hail	None	Moderate	Low	Low	Moderate 52%
Lightning	Low	Moderate	Low	Low	Moderate 52%
Tornados	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%



The Orange County Local Mitigation strategy includes a section on Hazardous Materials. The following excerpts explain the probability, vulnerability and Low Risk (29%) Rating for Extremely Hazardous Materials Incidents:

Facilities that store chemicals are scattered about the County and those with EHS chemicals are concentrated in the industrial areas. These areas are not as populated, but other facilities are located in more commercial and/or residential areas that may increase the chance of exposure.

Probability: There are over 200 fixed facilities that house extremely hazardous substances in Orange County. The probability of an incident occurring is high as there will continue to be hazardous materials present through the continued use of chemicals at fixed facilities and their transport to, from, through, and within Orange County and its jurisdictions. With Orange County being part of a large metropolitan area and centrally located in the State, it is a primary highway and freight passage in the region for goods that are being transported north and south on the Florida peninsula to Jacksonville or Miami, as well as east or west between Daytona Beach/Port Canaveral and Tampa. The likelihood for transportation incidents is amplified due to the number of possible encounters that can occur in a multi-modal setting. The most likely incident that may occur would involve a petroleum product spilling onto a roadway or other impermeable surface that would then require some kind of clean-up.

Other releases at fixed facilities will also continue to happen. While the number of instances will be likely be lower than the transportation incidents, the chemicals involved, such as EHS chemicals like chlorine, ammonia, sulfur dioxide, will be greater in their severity than petroleum products. The degree to which these releases or spills impact the county, either in quantity, severity, or location is an unknown variable. Continued emergency planning, accuracy for inventory reporting, and preparedness training must continue to occur to help reduce the number of occurrences.⁵

Risk: Low – 29%

Even with a high probability of incidents, minor to moderate anticipated or potential impacts, and a moderate vulnerability, the risk of hazardous materials is low. This is a result of the significant amount of mitigation measures that take place in the county to prepare for a release in advance. Training happens on a regular basis throughout the year and an exercise with a HazMat-based scenario is conducted by the Local Emergency Planning Committee (LEPC) on, at least, a bi-annual basis, if not more frequently. The specialized equipment and HazMat teams provide a consistently high level of support for responding the incidents.⁶

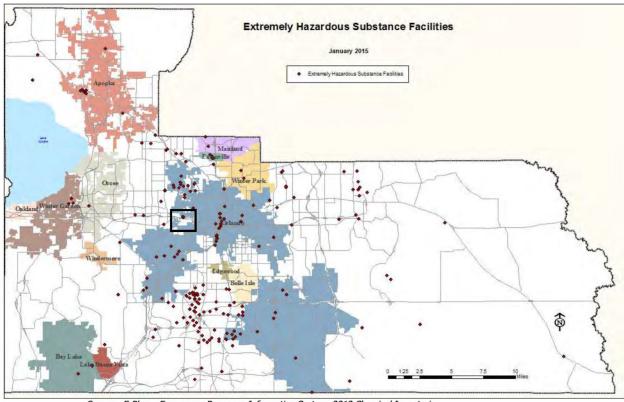
⁶ Orange County Local Mitigation Strategy 2016, p. 86



⁵ Orange County Local Mitigation Strategy 2016, p. 83

Map 2. Orange County Local Mitigation Strategy 2016 Map of Extremely Hazardous Facilities in Orange County, FL.

Black rectangle surrounds the Orlovista area.



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



Demographics

The minority population in the four Census Block Groups surveyed ranged from 54% to 86%. The low income population in each Census Block Group ranged from 32% to 68%. The percentage of linguistically isolated residents is very low, with the percentage between 2% and 10%. ⁷ (Data in the following table is from the EPA EJSCREEN tool, which uses Census data and American Community Survey data.)

Table 3. Percent of Population for Demographic Indicators

Indicator I------ Census Block Group------I

	120950147011	120950147012	120950147013	120950147014	120950147021
Minority Population	86%	84%	81%	72%	54%
Low Income Population	68%	32%	66%	54%	40%
Linguistically Isolated Population	2%	5%	2%	10%	10%
Population with Less Than High School Education	20%	13%	22%	15%	9%
Population under Age 5	8%	0%	5%	3%	10%
Population over Age 64	11%	26%	6%	9%	9%

⁷ EPA EJSCREEN: Environmental Justice Screening and Mapping Tool https://www.epa.gov/ejscreen



Environmental Health Concerns

The following table summarizes environmental indicators in Orlovista Census Block Groups surveyed (see Table 4). In addition there are many homes constructed prior to the 1960's, which appear in the table below as the lead paint indicator.⁸ Note that in addition to possibly having lead paint, homes of this age are particularly vulnerable to wind damage, as they were constructed prior to changes in Florida's building code that were designed to make homes better able to withstand hurricanes. Census Block Groups 120950147011 is in the 81st percentile in the US for Lead Paint Indicator.

Air quality indicators of elevated NATA Diesel Particulate Matter, NATA Air Toxics Cancer Risk, and NATA Respiratory Hazard Index are in the 80th to 90th percentile in the US. The Traffic Proximity, calculated from daily traffic count divided by distance to road ranges from the 57th percentile in the US to the 93rd percentile in the US, with both Census Block Groups 120950147013 and 120950147014 in the 93rd and 90th percentile in the US respectively.

Proximity to Superfunds and to Facilities with Required Risk Management Plans is over the 80th percentile with only one exception: Census Block Group 120950147021 for Superfund Proximity, which is in the 78th percentile.

⁸ EPA EJSCREEN: Environmental Justice Screening and Mapping Tool https://www.epa.gov/ejscreen



Table 4. Percentile in the US for Environmental Indicators

Indicator I------ Census Block Group ------I

	1 Gensus Block Group				
	120950147011	120950147012	120950147013	120950147014	120950147021
NATA Diesel Particulate Matter (ug/m3)	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	70-80th Percentile in US
NATA Air Toxics Cancer Risk (risk per MM)	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US
NATA Respiratory Hazard Index	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US	80-90th Percentile in US
Traffic Proximity and Volume (daily traffic count/distance to road)	87th Percentile in US	79th Percentile in US	93rd Percentile in US	90th Percentile in US	57th Percentile in US
Lead Paint Indicator (% pre-1960s housing)	81st Percentile in US	53rd Percentile in US	49th Percentile in US	50th Percentile in US	26th Percentile in US
Superfund Proximity (site count/km distance)	84th Percentile in US	81st Percentile in US	82nd Percentile in US	80th Percentile in US	78th Percentile in US
Proximity to facilities w Required Risk Management Plans (facility count/km distance)	84th Percentile in US	83rd Percentile in US	84th Percentile in US	85th Percentile in US	86th Percentile in US
Hazardous Waste Proximity (facility count/km distance)	40th Percentile in US	38th Percentile in US	36th Percentile in US	26th Percentile in US	41st 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.



Contamination Cleanup Sites

There are 6 Contamination Cleanup Sites in Orlovista: 2 Active Petroleum Cleanup Sites, 2 Pending Petroleum Cleanup Sites, and 2 Active Other Cleanup Sites.⁹

Active Petroleum Cleanup Sites include:

- > ALL TRANSMISSION WORLD at 102 KIRKMAN RD, ORLANDO, FL 32811; Facility Id: 8512892 Watch This Site Documents
- ➤ ORLANDO GROCERY at 6435 OLD WINTER GARDEN RD, ORLOVISTA, FL 32811; Facility Id: 8513228 Watch This Site Documents

Pending Petroleum Cleanup Sites Include:

> DISCOUNT AUTO AIR at 501 WILMER AVE, ORLANDO, FL 32808; Facility Id: 9201934

Watch This Site Documents

➤ JONES PROPERTY at 6046 OLD WINTER GARDEN RD, ORLANDO, FL 32835; Facility Id: 9102680 Watch This Site Documents

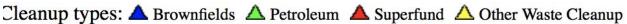
Active Other Cleanup Sites Include:

- ➤ Oak Hill Cleaners at 6650 Old Winter Garden Rd, Orlando, FL 32835; Facility Id: ERIC 5007 Watch This Site Documents
- ➤ Total Valet & Wardrobe Services at 5036 W Colonial Dr, Orlando, FL 32808; Facility Id: ERIC_5025 Watch This Site Documents

⁹ Florida Department of Environmental Protection Contamination Locator Map http://prodenv.dep.state.fl.us/DepClnup/viewmap.do



Map 3. Contamination Locator Map¹⁰





¹⁰ Florida Department of Environmental Protection Contamination Locator Map http://prodenv.dep.state.fl.us/DepClnup/welcome.do



Surveying Completed

Twenty one Mission Critical Function Surveys and 21 Housing and Emergency Services Surveys were collected in Orlovista. They were collected in the Census Block Groups indicated below.¹¹

Table 5. Number of Respondents to Surveys by Census Block Group

Census Block Group	# Mission Critical Functions Surveys	# Housing Surveys
12095 014701 1	2	2
12095 014701 2	4	4
12095 014701 3	10	10
12095 014701 4	2	2
12095 014702 1	3	3
Total	21	21

¹¹ EPA EJSCREEN



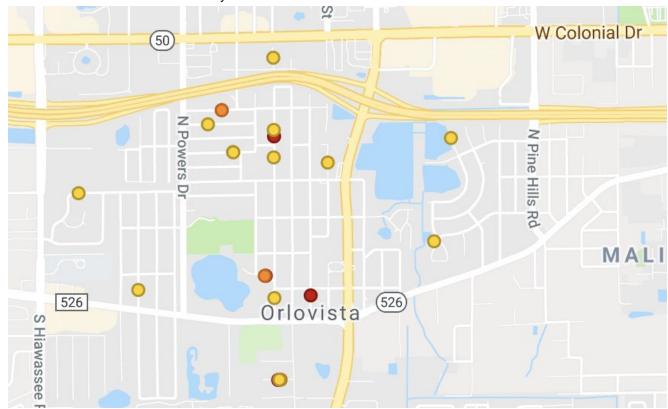
Mission Critical Functions Surveys:

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

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 4. Vulnerability Scores of Respondents in Orlovista

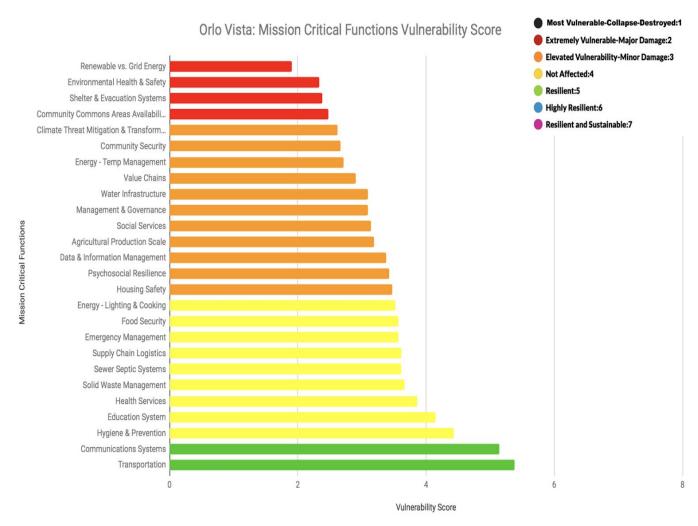
Note that the average Vulnerability Score, indicated by point color, across the 26 domains was between 2 and 4 for Orlovista residents surveyed.





Average Mission Critical Function Ratings for Each Function: The categories with the lowest average ratings are considered to be the most vulnerable functions. Four categories received the rating of Extremely Vulnerable ranking (2): Renewable vs Grid Energy, Environmental Health and Safety, Shelter and Evacuation Systems, and Community Commons Area Availability. The three lowest ranked categories with the Elevated Vulnerability-Minor Damage (3) ranking were: Climate Threat Mitigation & Transformation, Community Security, and Energy-Temperature Management. The functions ranked the highest, and therefore regarded to be the most sustainable were Communications Systems and Transportation.

Graph 1.



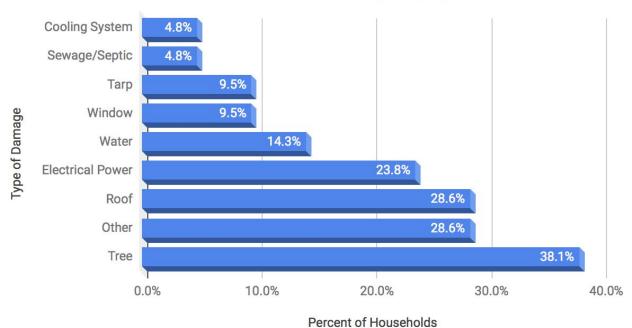


Housing and Emergency Shelter Survey

Type of damage to homes after Hurricane Irma: Fully 38.1% of respondents experienced tree damage; 28.6% experienced roof damage, 23.8% reported electrical damage, and 14.3% experienced water damage. Although 23.8% reported roof damage, only 9.5% reported tarps on their roofs.

Graph 2.



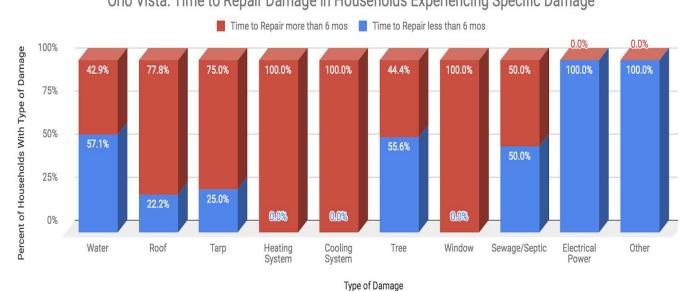




Time to complete repairs after Hurricane Irma: The bar graph below shows that all reported electrical power damage or loss and unspecified "Other" damage was repaired in less than 6 months. More than half of the homes experiencing water and tree damage were also repaired in less than 6 months. All respondents reporting heating system, cooling system and window damage also reported that it took over 6 months to complete repairs. Half of the households with Sewage/Septic system damage took more than 6 months to affect repairs. Slightly more than three quarters (77.8%) of those with roof damage and three quarters (75.0%) of those with tarps on their roofstook more than 6 months to complete repairs.

Graph 3.

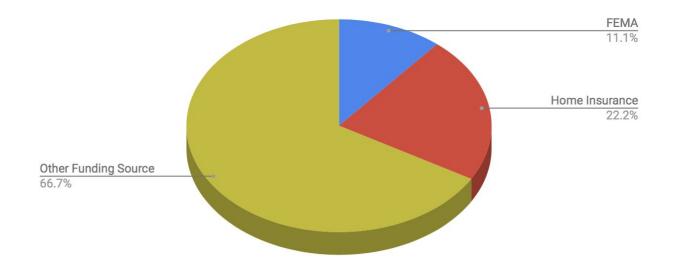
Orlo Vista: Time to Repair Damage in Households Experiencing Specific Damage





Funding Repairs: 42.9% percent of survey respondents indicated how they funded repairs. Home insurance paid for repairs at 22.2% of the homes, and FEMA paid for repairs at 11.1% of homes. The remaining 66.7% of respondents funded their repairs from other sources.

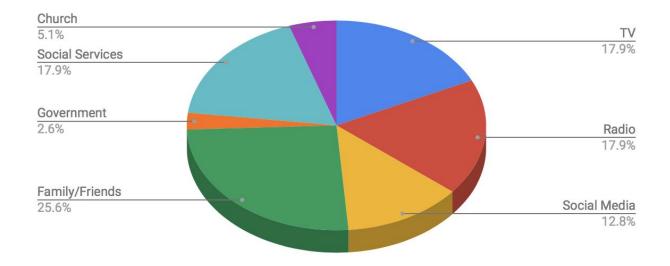
Orlo Vista: Funding Source to Repair Damage from Hurricane Irma





Sources of Information Reported by Respondents Most respondents (25.6%) indicated that they learned about funding sources from family and friends. Television (17.9%), radio (17.9%), and Social Services (17.9%), Social Media (12.8%) and Church (5.1%) were also sources of information regarding funding for people with damaged homes. Although Orlovista received national attention for its extreme flooding, only 2.6% of respondents reported receiving information from a government source.

Orlo Vista: Source of Information During Recovery from
Hurricane Irma





Community Identified Gaps and Solutions

Gaps	Solutions
-Communications problems when power is out	-Solar and generator power
- Information on residents' opinions to inform decision-making	-Have another meeting when Surveys are Complete
-Lack of knowledge about Environment	-Neighborhood meeting & tour On environmental impacts And issues
-Infrastructure failures: flooding, major Electrical outage, septic failures	
-No Evaluation Centers the community	



Appendix: Community Forum Handouts



Basic Disaster Supplies Kit

To assemble your kit, store items in airtight plastic bags and put your entire disaster supplies kit in one or two easy-to-carry containers such as plastic bins or a duffel bag.

A basic emergency supply kit could include the following recommended items:

- <u>Water</u> one gallon of water per person per day for at least three days, for drinking and sanitation
- Food at least a three-day supply of non-perishable food
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert
- Flashlight
- First aid kit
- Extra batteries
- Whistle to signal for help
- Dust mask to help filter contaminated air and plastic sheeting and duct tape to <u>shelter-in-place</u>
- Moist towelettes, garbage bags and plastic ties for personal sanitation
- Wrench or pliers to turn off utilities
- · Manual can opener for food
- · Local maps
- Cell phone with chargers and a backup battery



Additional Emergency Supplies

Consider adding the following items to your emergency supply kit based on your individual needs:

· Prescription medications

- Non-prescription medications such as pain relievers, anti-diarrhea medication, antacids or laxatives
- Glasses and contact lense solution
- Infant formula, bottles, diapers, wipes, diaper rash cream
- · Pet food and extra water for your pet
- Cash or traveler's checks
- Important family documents such as copies of insurance policies, identification and bank account records saved electronically or in a waterproof, portable container
- · Sleeping bag or warm blanket for each person
- Complete change of clothing appropriate for your climate and sturdy shoes
- Household chlorine bleach and medicine dropper to disinfect water
- · Fire extinguisher
- Matches in a waterproof container
- Feminine supplies and personal hygiene items
- · Mess kits, paper cups, plates, paper towels and plastic utensils
- · Paper and pencil
- · Books, games, puzzles or other activities for children



