



# **Community Climate Equity Action Plan**

Residents  
Business Owners  
Property Owners

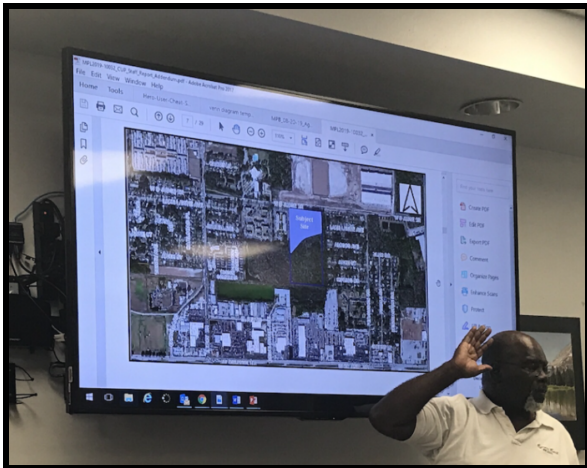
## Community Leadership

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August 2020

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Funded by Organize Florida and The Energy Foundation





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# Declaration

WE AFFIRM the right to clean air, clean water and clean land for ourselves, our children, our grandchildren and all those who will follow.

WE UPHOLD environmental justice [the **fair treatment** and **meaningful involvement** of all people regardless of **race, color, national origin, or income**, with respect to the development, implementation, and enforcement of **environmental** laws, regulations, and policies] as a means of protecting our right to clean air, clean water and clean land.

WE HONOR the worth and dignity of the residents of our communities, and assert that present conditions in our communities do not do so.

IT IS THEREFORE NECESSARY to build our Climate Action Plan on a firm foundation of inclusive and respectful process that acknowledges:

- Past violations of our right to clean air, clean water and clean land for ourselves and our progeny; and
- Past environmental injustices that have dismissed our health and safety concerns in order to support those who willfully pollute our communities while simultaneously preserving the air, the water and the land in their own communities, to profit at the expense of our health and personal economic and financial wellbeing.
- Past systemic oppression and dismissal of our concerns with respect to the development, implementation, and enforcement of laws, regulations and policies with the result of weakening the Social Determinants of Health profiles of our communities, and therefore negatively impacting our health.

The legacy of this trauma in our communities assures that this document, presenting a nascent vision of healing our communities in the face of Climate Change, is both a triumph of the human spirit, and a tribute to the tenacity and resilience of both our forbears and our neighbors.



# Dedication

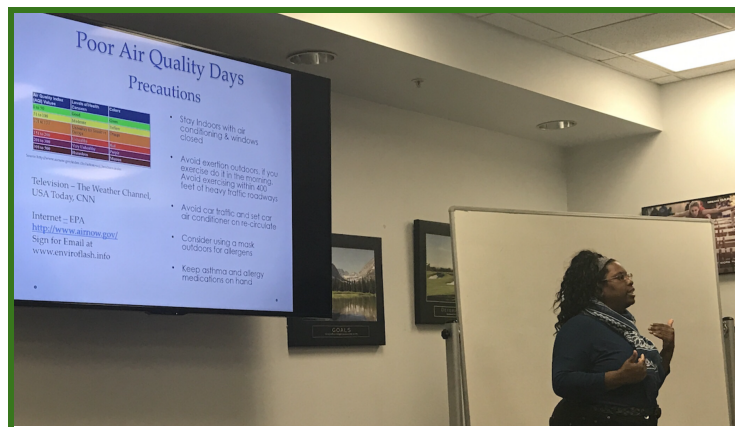
WE DEDICATE this *Climate Action Plan* to Latoya Lee, whose life was cut short in some measure due to the unhealthy places where we live, work and play.



Latoya Lee succumbed to asthma at the age of 43 years.  
She encouraged all to fight for environmental justice.



Parramore and Holden Heights door-to-door discussions about energy efficiency with distribution of energy saving kits.



Mercy Drive Community Meeting:  
Poor Air Quality Day Precautions Education



## **Will Climate Change Kill Us Before Environmental Injustice Does?**

### *An Urban Community Plans to Protect Its Most Vulnerable in the Face of Climate Change*

All aspects of community deliberation used to inform this document included discussions of service to the community and of protecting the most vulnerable among us. Therefore, each section of this Climate Action Plan includes an acknowledgement of the values discussed in the meetings from which it was crafted.

Priority focus areas identified to include in the Climate Action Plan:

- Air Quality
- Transportation
- Resilience Education and Outreach
- Heat
- More Intense Hurricanes

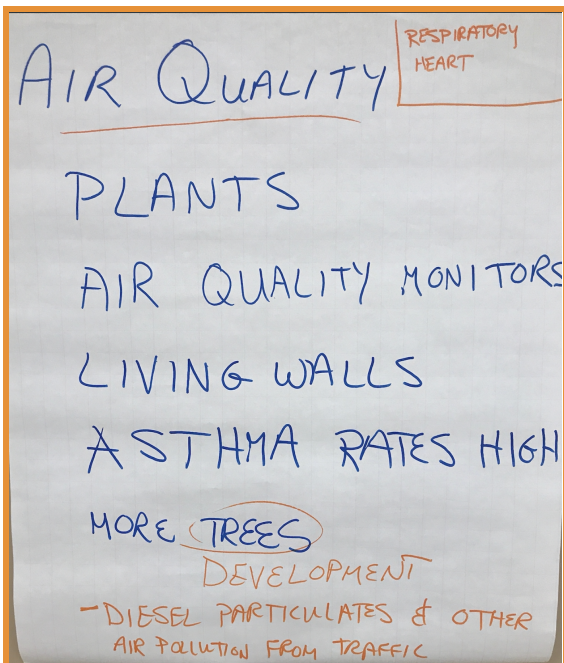
Each of the topics was evaluated and potential solutions were developed at Community Forums, a Roundtable and a Work Group Kick Off Meeting, and on Zoom meetings during the COVID pandemic. Discussions were informed by preliminary community survey results.

For each of the topics, the plan includes:

- Existing conditions
- Short Term Goals
- Intermediate Goals
- Long Term Goals
- Action Recommendations

# Air Quality

## Existing Conditions



In recent decades, the City of Orlando as well as federal, state and county authorities have routed major highways and roads through Orlando's African-American and Hispanic communities, creating high traffic volume and copious amounts of harmful air pollution in our communities. These include I-4, John Young Parkway, and the East-West Expressway (408). This has resulted in an increase in air pollution and a significant decrease in air quality. Exposure to air pollution, especially particulate matter found in diesel exhaust, can increase the occurrence of respiratory diseases, cancer, elevated blood sugar, blood vessel dysfunction, heart disease, and can ultimately result in death.<sup>1,2</sup>

Respiratory and cardiovascular conditions and diabetes are health conditions that are particularly prevalent in African-Americans. Air pollution can exacerbate current respiratory and cardiovascular conditions and it can cause them to develop in otherwise healthy people.

The SARS COV-2 coronavirus and the illness it causes, COVID-19, is an additional factor that must be considered in regard to the air quality in African-American communities. COVID-19 is having a disproportionate impact on African-American and Hispanic communities. Although there are a multitude of explanations being given for this, scientific research in Europe and the US have shown that there is a correlation between the severity of a patient's symptoms and the air quality and particulate matter concentration in the air in the patient's neighborhood. In their paper *Evaluation of the potential relationship between Particulate Matter (PM) pollution and COVID-19 infection spread in Italy*, Leonardo Setti et. al. stated that their recent literature review concluded that, "it is possible to conclude that particulate matter fractions PM<sub>2.5</sub> and PM<sub>10</sub> represent an effective carrier for viruses transport and diffusion and proliferation of virus diseases as well." Their study of the relationship of particulate matter pollution during the COVID-19 outbreak in early 2020 (PM<sub>2.5</sub> and PM<sub>10</sub>) concluded that, "the rapid COVID-19

<sup>1</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1740751/>

<sup>2</sup> <https://erj.ersjournals.com/content/17/4/733>



infection spread observed in selected regions of Northern Italy is supposed be related to PM<sub>10</sub> pollution due to airborne particles able to serve as carrier of pathogens. As already highlighted in previous studies, it is recommended to take into account PM<sub>10</sub> contribution and make policymakers aware of the need to take direct actions for pollution control.”<sup>3</sup> PM<sub>10</sub> includes dust from construction sites, which are in many of these communities due to their proximity to major roads and construction projects, such as SR 408 and the the I-4 corridor expansion. The Harvard Study *COVID-19 PM<sub>2.5</sub> A national study on long-term exposure to air pollution and COVID-19 mortality in the United States* found that, “an increase of 1 µg/m<sup>3</sup> in PM<sub>2.5</sub> is associated with an 8% increase in the COVID-19 death rate (95% confidence interval [CI]: 2%, 15%).”<sup>4</sup> Diesel emissions contain particles 2.5µm and smaller, so they comprise part of PM<sub>2.5</sub>.

As it appears this virus is here to stay, the importance of good air quality in all communities is now more paramount than ever before.

Death counts from asthma from 2015 to 2019 were very high in the zip codes where most of the participants who created this plan live. Zip codes 32805 and 32808 are in the 4th quartile and zip codes 32801 and 32807 are in the top 3rd quartile. <sup>5</sup> In all of the communities, there is a high number of elderly residents. Residents that are 65 or older comprise 14.7% of the population of 32805<sup>6</sup>, 9.93% of the population of 32808<sup>7</sup>, 20.68 of the population of 32801<sup>8</sup> and 13.28% of 32822,<sup>9</sup> which places these zip codes in the 31st - 65th percentile of zip codes in the US for elderly population.

Poverty is also prevalent in these zip codes. Those below poverty level comprise from \$23,800 in 32805<sup>10</sup> to \$53,400 in 32801.<sup>11</sup> Therefore, there is also the concern that public health issues need to be addressed because medical bills quickly eat up any income saved through energy efficiency practices, especially for those who are on a fixed income.

Specific problems include the fact that the City of Orlando rezones residential areas in and near African-American neighborhoods into industrial zones, such as [City of Orlando Ordinance](#)

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<sup>3</sup> Setti, Leonardo. March 2020. *Evaluation of the potential relationship between Particulate Matter (PM) pollution and COVID-19 infection spread in Italy*. Società Italiana di Medicina Ambientale. [http://www.simaonlus.it/wpsima/wp-content/uploads/2020/03/COVID\\_19\\_position-paper\\_ENG.pdf](http://www.simaonlus.it/wpsima/wp-content/uploads/2020/03/COVID_19_position-paper_ENG.pdf)

<sup>4</sup> COVID-19 PM<sub>2.5</sub> A national study on long-term exposure to air pollution and COVID-19 mortality in the United States. <<https://projects.iq.harvard.edu/covid-pm>>

<sup>5</sup> Florida Department of Health. Florida Health Charts Mapper.

<<http://www.flhealthcharts.com/ChartsReports/rdPage.aspx?rdReport=ChartsMaps.chartsMapper>>

<sup>6</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32805/Age-and-Sex>> ,

<sup>7</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32808/Age-and-Sex>>

<sup>8</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32801/Age-and-Sex>>

<sup>9</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32822/Age-and-Sex>>

<sup>10</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32805/Household-Income>>

<sup>11</sup> Demographic and Statistical Atlas of the US <<https://statisticalatlas.com/zip/32801/Household-Income>>

[2015-47](#) “amending the future land use designation from Residential Low Intensity to Industrial and amending subarea policy S.3.3 to allow certain vehicle access to and from the site for property located north of W.D. Judge Road, east of Mercy Drive, south of W. New Hampshire Street and west of N. John Young Parkway (Princeton Oaks)”<sup>12</sup> and [Ordinance 2020-28](#), “annexing the subject property, assigning the Industrial future land use designation and initial zoning of I-C/W for 2727 Silver Star Road, which is located north of Silver Star Road, west of John Young Parkway, and east of Clemson Road (2727 Silver Star) (Economic Development).” Additional ordinances, such as [Ordinance 2020-21](#) amend “the Growth Management Plan to Change the Future Land Use Designation from Conservation to Urban Activity Center”<sup>13</sup> in the Mercy Drive area. In the Mercy Drive area, the neighborhoods have been inundated with industrial warehouses that have a tremendous amount of diesel semi-trucks traveling to and from the warehouses. These trucks frequently drive through streets in the community, endangering the lives of children and seniors. The wetland forest that once protected this community from air pollution from a nearby highway have been largely destroyed and residents are doing what they can to save what is remaining. In the Parramore area, there is a huge problem with traffic attending special events downtown. The traffic often idles in the Parramore neighborhood, which exposes residents to carbon monoxide. Additionally, the newly built college campus downtown has a large number of students that drive, thus increasing air pollution in the Parramore area. The Holden Heights community is surrounded by an interstate highway and an expressway. The immense volume of traffic using these two major arteries constantly emits large amounts of air pollution into the community. (See the map of Diesel Particulate Matter below).

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<sup>12</sup> file:///C:/Users/Owner/Downloads/Minutes\_2016\_2\_8\_Meeting(516).pdf pages 8 and 9 and 10 ;

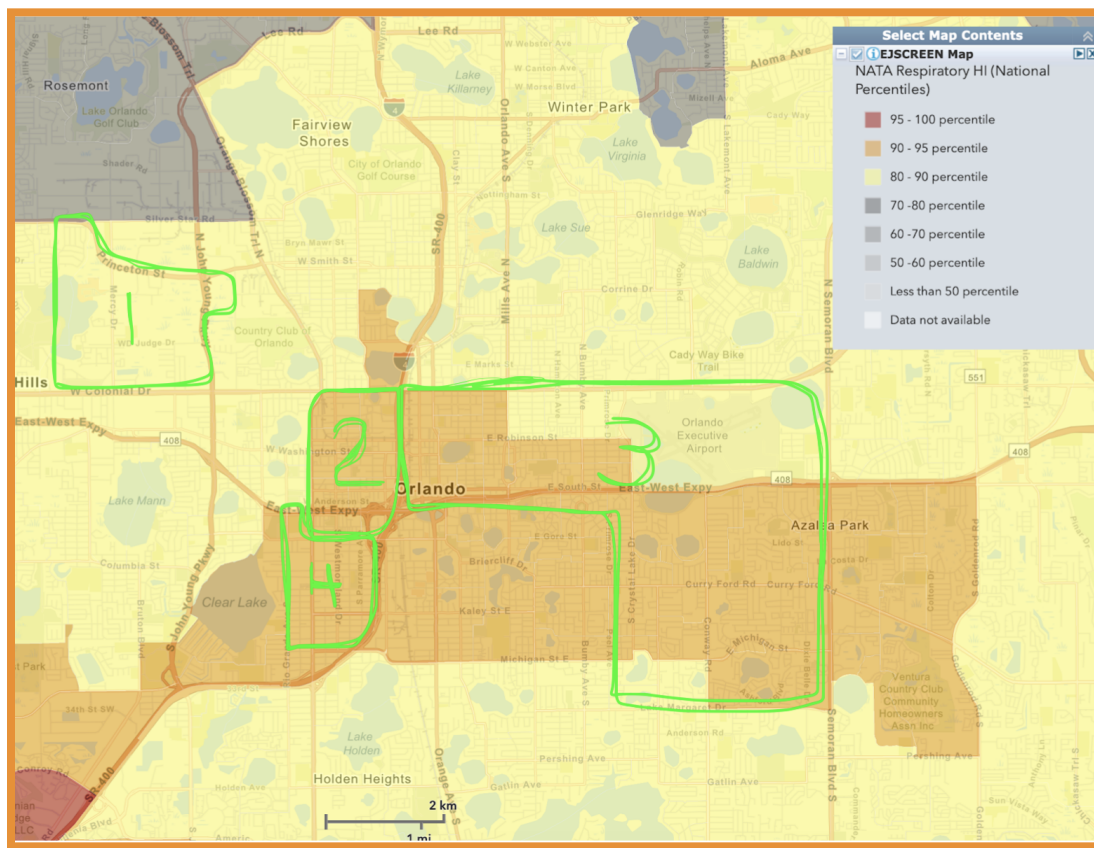
<https://orlando.novusagenda.com/agendapublic/MeetingView.aspx?MeetingID=701&MinutesMeetingID=516&doctype=Agenda>

<sup>13</sup>

<https://orlando.novusagenda.com/agendapublic/MeetingView.aspx?MeetingID=1868&MinutesMeetingID=2110&doctype=Agenda>  
agenda items Hearing/Ordinances ite number 12 (2) and 12 (5)

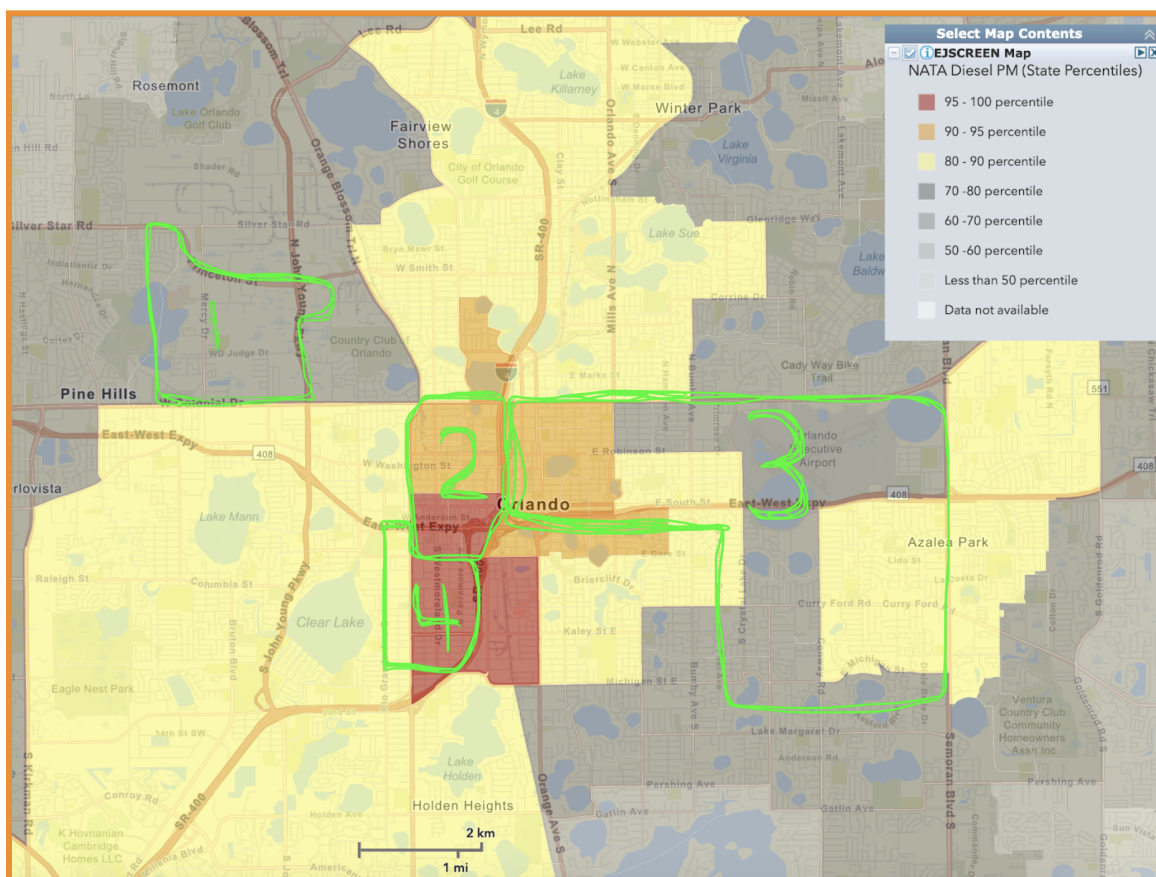


**NATA Respiratory Hazard Index National Percentiles** This map shows Mercy Drive (1) in the 80th to 90th national percentile, Parramore (2) and Holden Heights (4) in the 90th to 95th national percentile, and the Downtown Orlando area and east to Azalea Park (3) in the 80th to 95th percentile nationally.<sup>14</sup> The Respiratory Hazard Index is a ratio of exposure concentration to health-based reference concentration.



<sup>14</sup> EPA EJSCREEN <<https://ejscreen.epa.gov/mapper/>> EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

**National Percentile NATA Diesel Particulate Matter in the State of Florida.** The EPA's estimate of Diesel particulate matter level in air,  $\mu\text{g}/\text{m}^3$  places Mercy Drive (1) in the 70th-80th percentile in the state of Florida, Parramore (2) in the 90th-100th state percentile, Downtown and East to Azalea Park (3) in the 80th to 95th percentile in the state, and Holden Heights (4) in the 80th to 100th percentile in the state.<sup>15</sup>



Orange County's population is growing at the rate of approximately 750 people every week which causes a weekly increase in the amount of traffic and air pollution. Orlando is, "currently growing at a rate of 1.04% annually and its population has increased by 22.43% since the most recent census."<sup>16</sup>

<sup>15</sup> EPA EJSCREEN Mapper <<https://ejscreen.epa.gov/mapper/>>

<sup>16</sup> World Population Review <<https://worldpopulationreview.com/us-cities/orlando-fl-population>>

# Air Quality Action Plan

*Create healthy and safe communities that are free of air pollution for current residents and future generations.*

## Community Values

In the service of our community we uphold: the right to clean air, a commitment to the health and wellness of ourselves and our neighbors, and the need to reduce greenhouse gas emissions in ways that improve our air quality.

## **Existing Conditions:**

Air Pollution from nearby highway traffic  
High Asthma levels  
Rezoning residential to industrial  
Deforestation

## **Short Term Goals**

Conduct health disparity studies  
Educate about:  
respiratory health triggers,  
indoor air quality,  
factors that cause poor air quality,  
and solutions to improve air quality.

## **Intermediate and Long term Goals**

Ceasing deforestation of Orlando's remaining forests and wetlands  
  
Decreasing the routing of high numbers of diesel truck and other vehicular traffic through Orlando's African-American and Hispanic communities  
  
Planting more trees and shrubs in African-American communities,  
  
I-4 construction mitigation in the Holden Heights communities

## **Action Recommendations**

- Living walls
- Interior Air Quality monitoring
- Increase knowledge/awareness of respiratory conditions - health & triggers
- Plants around & inside buildings
- Portable Air Scrubbers
- Consumer size air scrubbers
- Address unique air quality challenges with older homes
- Vertical gardens
- Rooftop gardens
- Indoor and outdoor air monitors
- Bus shelters with living walls
- Retrofits for homes
- Urban community solar power initiative
- Increase in use of electric commercial and private vehicles

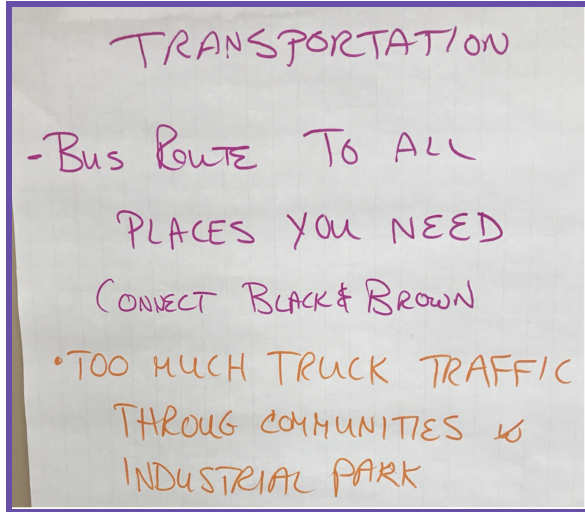
## Some Resources We Need to Take Action

Gaps	Proposed Solutions	Initial Resources Requested by the Work Group
<p>High diesel emissions from truck traffic</p> <p>High traffic proximity and volume</p> <p>High asthma rates</p> <p>Respiratory Health Issues</p>	<p>Air Quality Monitors</p> <p>Living Walls</p> <p>More Trees</p> <p>Air scrubbers</p> <p>Electric Truck Fleets</p>	<p>Extension Agents</p> <p>Public Health Educators</p> <p>Information:</p> <ul style="list-style-type: none"> <li>-air quality challenges in older homes</li> <li>-respiratory health triggers</li> <li>-Relationship between trees and diesel emissions</li> <li>-portable air scrubbers</li> <li>-air quality monitors</li> <li>-consumer sized air scrubbers</li> <li>-What have other communities done to improve poor air quality?</li> </ul>



# Transportation

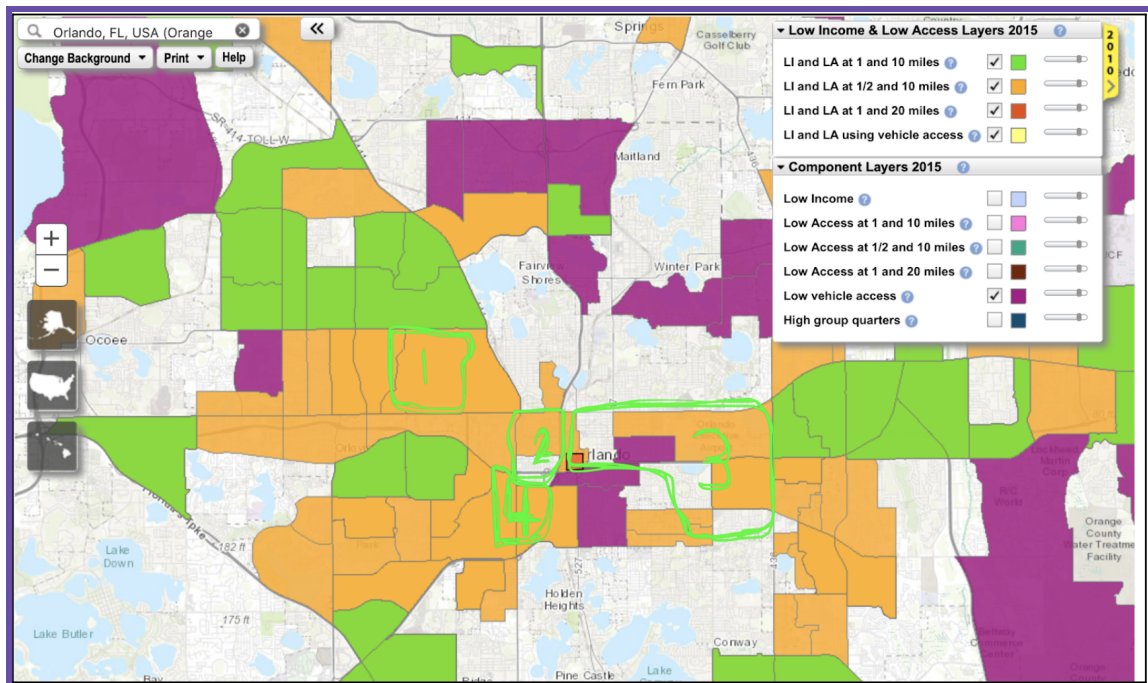
## Existing Conditions



Several underserved communities in Orange County are in food deserts. The public bus transportation system is a hub and spoke model, which does not provide direct service for people in food deserts to travel quickly to grocery stores and locations that can provide essentials for their households.

**The Food Desert Map** below shows areas with Low Income and Low Access to food and nutrition sources with colors indicating distance to food sources. Low vehicle access is also shown in purple. Most of the residents contributing to this Climate Action Plan and responding to the Survey live in areas that are orange,

which means there is both Limited Income and Limited Access to food within ½ to 10 miles. Portions of Downtown Orlando and East to Azalea Park also have low vehicle access.<sup>17</sup>



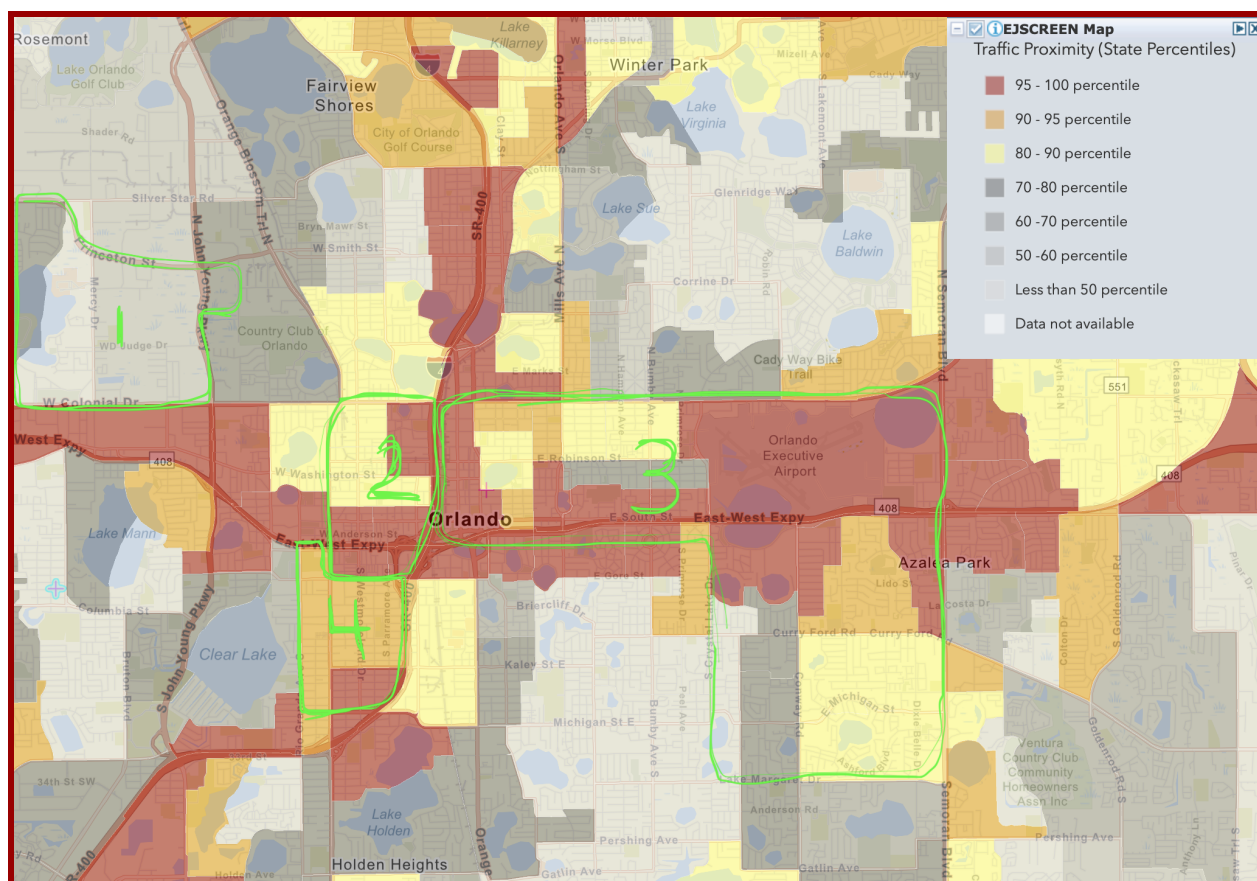
<sup>17</sup> USDA Food Access Research Atlas

<<https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas.aspx>>



This presents a challenge for the elderly and the most vulnerable. The hub and spoke system also increases the risk of exposure to many more people during the Coronavirus pandemic than a dedicated route from food deserts to grocery stores would, potentially increasing exposure to positive cases from other geographies routed through the hub. Poor communication about service changes during last minute preparations as Hurricane Dorian approached, leaving workers who were required to serve shoppers, stranded as they themselves shopped for their hurricane needs. Those stranded during worsening conditions required assistance from faith groups to obtain transportation to safety. The traffic around and through African American and Hispanic communities in Orange County has resulted in high traffic volumes accompanied by vehicle emissions that contribute to greenhouse gases and local air pollution. This accelerates climate change and contributes to negative health outcomes.

**Traffic Proximity Map** This map of the state percentile of traffic proximity shows portions of Mercy Drive (1) in the 50th - 80th percentile in the state. Parramore (2) and Holden Heights (3) have portions from the 80th to the 100th percentile in the state, Downtown Orlando east to Azalea Park (3) range from the 80th to 100th percentile, and Holden Heights, Orlando Traffic Proximity ranges from the 90th to 95th percentile in Florida.<sup>18</sup>



<sup>18</sup> EPA EJSCREEN Mapper <<https://ejscreen.epa.gov/mapper/>>

# Transportation Action Plan

*Support health and quality of life by reducing emissions from traffic and providing public transportation in ways that support a better quality of life.*

## Community Values

We uphold the right to clean air, the right to access healthy food, and the right of the disabled to access public transportation.

## **Existing Conditions:**

Residents would use bus service if it were free, closer to home, more frequent or faster.

The public bus transportation system does not provide direct service for people to travel quickly to grocery stores.

The traffic around and through African American and Hispanic communities contributes to greenhouse gases and local air pollution.

## **Short and Intermediate Term Goals**

**Be priority communities to get electric bus service based on air quality.**

**Resolve emergency transportation problems experienced during Hurricane Dorian.**

## **Long Term Goals**

A transportation system that includes reduction of emissions from traffic in ways that support a better quality of life by:

- reducing vehicular traffic,
- reducing emissions from traffic,
- meeting the needs of the most vulnerable, and
- addressing community concerns related to hurricanes.

## **Action Recommendations During Hurricanes**

- LYNX needs to report accurate information to the public. We need to have a reliable Point of Contact there.
- Coordination between city and county and coordination with EMS on deconflicting contradictory information.
- County needs to suspend toll roads sooner.
- An established way the county suspends tolls and suspends transportation, and communicates it. We need to know where reliable updates can be accessed real time and have a reliable point of contact.

## Some Resources We Need to Take Action

Gaps	Proposed Solutions	Initial Resources Requested by the Work Group
<p>-Bus routes that get people to the places where they need to go routinely, especially for people in food deserts to be able to do their grocery shopping.</p>	<p>-A bus route that unifies the Black and Brown communities, and enables access to food shopping and to other essential needs</p> <p>-Find more transportation options that have low emissions (electric buses in our communities)</p> <p>-Obtain large Sprinter vans to transport elderly and disabled</p> <p>-More bus service and extended hour service</p>	<p>Subject Matter Experts or Points of Contact Needed:</p> <ul style="list-style-type: none"> <li>• County Communications/City Communications</li> <li>• FDOT (Florida Department of Transportation)</li> <li>• US Transportation (Communications Division)</li> <li>• Edward Johnson</li> </ul> <p>Information Needed: Bus schedules: Which buses run in the minority communities?</p> <p>More availability to move elderly/disabled to shelters (pets/homeless)</p>

# Resilience Education and Outreach

## Existing Conditions

Central Florida is experiencing impacts of climate change. These include more intense hurricanes and heat waves. Residents of underserved communities are often unaware of resources and technology that could increase the health and safety of their families during these extreme weather events. Residents have reported that due to inadequate infrastructure and priority policies, the underserved communities are the first to lose power and the last to have it restored during extreme weather events. This compromises the ability of residents to cool their homes, recharge their phones, and to receive information about relief resources.

The cost of living in Central Florida is very high for low wage essential workers, making housing and healthcare unaffordable for many. There are many Asset Limited Income Constrained Employed (ALICE) Households in Orange County, as household costs are well above the poverty level. Fully 54% of the households in Orlando are either ALICE households or below poverty level.<sup>19</sup>

Hunger relief, basic mobile health care and education about technology that can decrease energy costs while improving quality of life are needed year round. In addition, households in underserved communities need assistance assembling hurricane kits and becoming informed about hurricane preparedness.

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<sup>19</sup> ALICE in Orange County. United Way  
<[https://www.hfuw.org/wp-content/uploads/2020/05/20\\_ALICE\\_Orange-County-FL-3-31-2020.pdf](https://www.hfuw.org/wp-content/uploads/2020/05/20_ALICE_Orange-County-FL-3-31-2020.pdf)>

# Resilience Education and Outreach Action Plan

*Create a legacy of  
inclusive mutual  
support in diverse  
communities.*

## Community Values

This work group, composed of elders in service of community, strongly upholds the values of intergenerational mentorship, the transforming power of knowledge, and community cohesion in support of health and safety.

## **Existing Conditions:**

Residents of underserved communities are often unaware of resources and technology that could increase the health and safety of their families during extreme weather events.

Cost and lack of property ownership are barriers to energy upgrades.

## **Short Term Goals**

- Establish a resilience center
- Secure commitments from volunteers
- Create initial service offerings. Initial offerings will center around education.

## **Long term Goals**

Create or procure a deployable & replicable response vehicle (with subsequent fleet expansion).

### **Outside of hurricane season:**

education, preparedness and demonstration of energy efficient and alternative energy products.

### **During hurricane season:**

a mobile pop-up Resilience Hub that could go to the locations where it is most needed. The unit would be available for community events, could provide mobile health care (vitals and others) capabilities and hunger relief.

## **Action**

## **Recommendations**

- Secure commitments from volunteers
- Find knowledgeable speakers
- Create trainings for outreach volunteers.



## Resilience Education and Outreach

### Mobile Energy Education and Response Gaps and Solutions

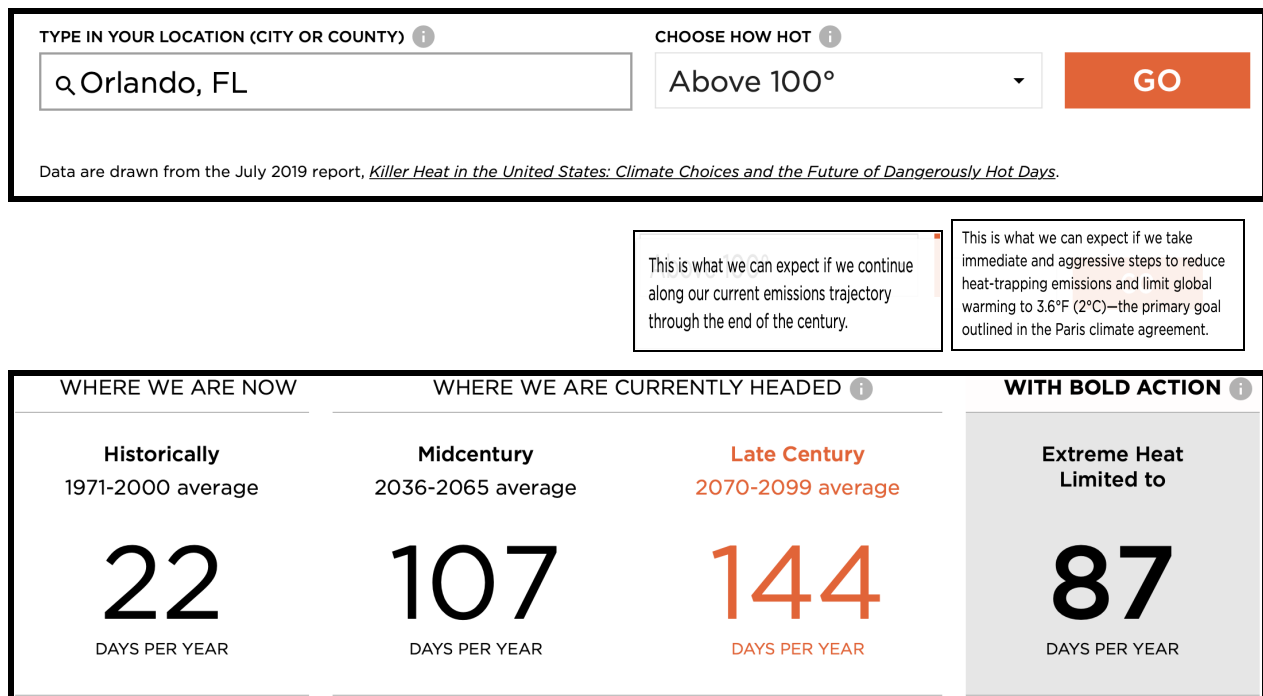
Gaps	Proposed Solutions	Initial Resources Requested by the Work Group
<p>“People don’t know what’s out there.” in relation to energy efficiency and resilience resources</p> <p>Elderly Without Air Conditioning</p> <p>High Energy Bills</p> <p>Poor infrastructure causes “Last on First off Power” in bad weather</p> <p>Information, Wifi, Recharging Stations, Mental Health Support after hurricanes</p>	<p>Research and educate about options</p> <p>Solar window AC unit</p> <p>Retrofits</p> <p>Preparedness</p> <p>High efficiency heating and cooling systems</p> <p>High Efficiency water heaters</p> <p>Installing solar power</p> <p>Replacing appliances with energy efficient models</p> <p>Upgrading home insulation</p> <p>Changing light bulbs to energy efficient models</p>	<p>Subject Experts Needed: Renewable Energy Product Vendors</p> <p>Information Needed: Available products</p> <p>How people are doing similar things elsewhere</p>

# Heat

## Existing Conditions

Specific communities are suffering disproportionately during heat waves and power outages. In Mercy Drive, the deforestation of 170 acres with subsequent paving over of wetlands has created heat island conditions. In past hurricanes, elderly residents in Parramore and other African American communities in Orlando have become trapped and have suffered in the heat on the upper floors of apartments without elevator back up generators. Power outages in African American communities in Orlando occur with even minor storms, and these communities tend to be the first to have outages and are among the last to have it restored. There are over 100 households in Parramore and Holden Heights that do not have air conditioning.

**Heat Projections for Orlando** from the Union of Concerned Scientists show that without bold action to reduce greenhouse gas emissions, Orlando could experience 107 days per year of temperatures above 100 °F by Midcentury.<sup>20</sup>



<sup>20</sup> Extreme Heat and Climate Change: How Often will you Endure Extreme Heat Where You Live?  
<<https://www.ucsusa.org/resources/killer-heat-interactive-tool?location=orlando--fl>>

# Heat Action Plan

*Provide for the isolated and the most vulnerable during heat waves and power outages.*

## Community Values

We value our elders, our isolated community members, and all of our neighbors who do not have air conditioning.

## **Existing Conditions:**

Specific communities are suffering disproportionately during heat waves and power outages.

Residents are concerned about worsening heat waves.

Our communities tend to be the first to lose power and among the last to have it restored.

Residents want to learn more about high efficiency heat and air conditioning systems.

## **Short Term Goals**

Find speakers and subject experts who are knowledgeable about:

- solar window AC units,
- inexpensive window treatments,
- landscaping modifications

to prevent high temperatures that lead to heat stroke and other health impacts from the heat.

## **Intermediate and Long term Goals**

Increase trees and shrubs in neighborhoods

Secure air conditioning for the most vulnerable and require back up generators for apartment buildings.

Create energy microgrids in underserved neighborhoods that can function when the grid is down.

Retrofits with high efficiency heat and air conditioning systems

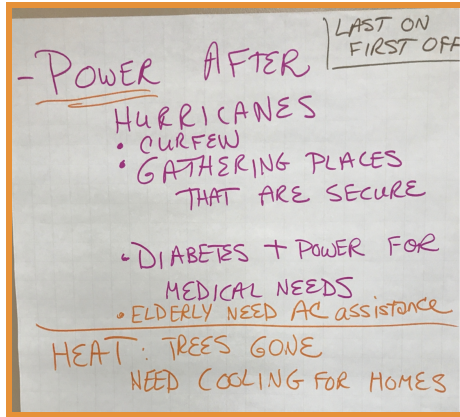
## **Action Recommendations**

- Explore the possibility of using Neighborhood Association funds to provide air conditioners for Senior Citizens.
- Require back-up generators for elevators in buildings with the elderly on the upper levels.
- Explore solar powered alternatives that can provide light, refrigeration, air conditioning, or power small appliances.
- Help the elderly in deforested areas in Mercy Drive with weatherization and energy efficiency needs to keep their energy bills down.

Gaps	Proposed Solutions	Initial Resources Requested by the Work Group
<p>“People don’t know what’s out there.” in terms of energy efficiency</p> <p>Elderly Without Air Conditioning High Energy Bills</p> <p>Poor infrastructure causes Last on First off Power in bad weather</p> <p>Information, Wifi, Recharging Stations, Mental Health Support after hurricanes</p>	<p>Research and educate about options</p> <p>Solar window AC unit</p>	<p>Subject Experts Needed: Renewable Energy Product Vendors</p> <p>Information Needed:How people are doing similar things elsewhere</p>

# More Intense Hurricanes

## Existing Conditions



There is scientific consensus that planetary warming caused by human activities is creating conditions that are likely to result in changes to the rapid formation and intensification of hurricanes along with increasing hurricane strength.<sup>21</sup> The consensus among experts on tropical cyclones is that “the incidence of high-category events will increase, and that storms will precipitate more.”<sup>22</sup>

Respondents to surveys about the Hurricane Irma experience conducted in Parramore, Downtown Orlando, Mercy Drive, and Holden Heights in 2019 by the Central Florida Disaster Resilience Initiative reported loss of power, although the prevalence of power outages varied from 33% of respondents in Downtown Orlando<sup>23</sup> to 57% of respondents in Parramore. Many residents stated that the dollar value of their repairs were below their insurance deductible, so repairs were delayed or often paid for with the help of family and friends. In Parramore, for example, home insurance only paid for 33% of repairs and FEMA claims only paid for 11% of claims.<sup>24</sup> Homes with tarps on their roofs, homes with roof damage without tarps and tree damage often took over 6 months to repair. Water damage was common.<sup>25,</sup>

<sup>26</sup>

During the power outage associated with Hurricane Irma, an apartment complex in Parramore had elderly residents trapped on the upper floors, and the community came together to help carry

<sup>21</sup> Seneviratne, S.I., N. Nicholls, D. Easterling, C.M. Goodess, S. Kanae, J. Kossin, Y. Luo, J. Marengo, K. McInnes, M. Rahimi, M. Reichstein, A. Sorteberg, C. Vera, and X. Zhang, 2012: Changes in climate extremes and their impacts on the natural physical environment. In: *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 109-230.

<sup>22</sup> <https://yaleclimateconnections.org/2019/07/how-climate-change-is-making-hurricanes-more-dangerous/>

<sup>23</sup> Downtown Orlando Community Report

<<http://reacttoolkit.net/wp-content/uploads/2019/08/Downtown-Orlando-8.11.2019.pdf>>

<sup>24</sup> Parramore Community Report

<http://reacttoolkit.net/wp-content/uploads/2019/08/Parramore-Community-Report-8.8.2019.pdf>

<sup>25</sup> Mercy Drive Community Report

<http://reacttoolkit.net/wp-content/uploads/2019/08/Mercy-Drive-8.12.2019.pdf>

<sup>26</sup> Holden Heights, Orlando Community Report

<http://reacttoolkit.net/wp-content/uploads/2019/08/Holden-Heights-Orlando-8.11.2019.pdf>



the elderly downstairs due to the oppressive heat. Strong people had to carry the elderly down the stairs on their backs, and neighbors served food to the people who were able to get outside. Although the situation placed lives in danger, when Hurricane Dorian approached, management at the apartment posted a notice that there was no generator in the event of power outage and residents remained on the upper floors at their own risk. The Magnolia Towers Apartments in Downtown Orlando serve as a shelter, so residents there feel well prepared for hurricanes. Central Florida Disaster Resilience Initiative participants provided for their communities. Iglesia Episcopal Jesus de Nazaret managed a shelter with mental health support and food distribution prior to and during Hurricane Dorian. Parramore had a pop-up Resilience Hub with hurricane supplies that served Parramore and Holden Heights.

# Hurricane Action Plan

*Coordinated community preparedness and response in parallel with and sometimes in cooperation with existing emergency preparedness and response efforts.*

## Community Values

Health and safety of all in the face of disasters with support for our most vulnerable

## **Existing Conditions:**

The Central Florida Disaster Resilience Initiative (CFL DRI) conducted community forums, serious games and surveying in multiple underserved communities in 2019 and coordinated community Hurricane Dorian Response.

## **Short Term Goals**

Distribution of information about the impact of COVID-19 on hurricane preparedness, and training of new participants in coordination procedures and tools.

## **Intermediate and Long term Goals**

Coordinated action that addresses the needs of the most vulnerable and assures that those experiencing the greatest impacts can communicate their needs to the appropriate leaders and officials.

## **Action Recommendations**

- Establish a liaison between the county Emergency Operation Centers (EOCs) and the communities.
- Improve communications with LYNX
- Establish emergency procedures for flooding
- Schedule meetings between community leaders and key municipal leaders
- Develop a low cost hurricane preparedness kit model and means to fulfilment
- Address the need for shared resources and co-storage of inventoried resources, and link it to the goal of establishing Resilience Hubs in Community Centers.
- Budget ahead of time for hurricane season
- Secure funding for evacuation, transportation and housing for communities
- Fund more training and a community directed budgeting process for 2020 and future years
- Education program for communities to understand the impact of higher category hurricanes

## Community Process

Community Meetings took place in September and October in:

Parramore and Holden Heights

Mercy Drive

Downtown Orlando & East to Azalea Park

The purpose of the Community meetings was to educate about climate change and efforts to reduce emissions; determine the climate change related impacts of most concern to residents and the solutions they thought were appropriate in their neighborhoods; and to begin surveying that was then augmented by door to door surveying. Community meetings named and framed the climate change issue in ways that residents related to based on survey responses and discussions at community meetings. Framing questions that readily lead to discussion of emissions reduction were:

- Does someone in your household have allergies, asthma or respiratory issues?
- Do you use public transportation or have concerns about traffic?
- Do you want to save on energy?

The Central Florida Resilience System was used to support communications. Community Dashboards reflected activities as they occurred and Work Groups posts provided information about planning efforts.

The Roundtable took place in November. It brought residents from the four community groups together to determine what issues they had in common and to decide what work groups would be created. There was consensus on important issues, including:

- Protecting health and safety of the most vulnerable in the face of poor air quality
- Solar power and off the grid solutions are needed, especially for the elderly
- Community Centers are needed as Emergency Shelters and Resilience Hubs equipped with solar/hybrid systems so they can serve the community during and after disasters
- Not enough green space

Three Work Groups were formed: Air Quality, Mobile Resilience Education and Response, and Transportation. The Air Quality Work Group included residents concerned about lack of green space and about respiratory health. The Mobile Resilience Education and Response Work Group included residents concerned about solar power and off the grid solutions and hurricane response concerns. The Transportation Work Group included residents concerned about public

transportation for vulnerable populations and public transportation issues just before and during hurricane response.

There was a Work Group Kick-off in January. A representative from the Department of Health was invited to address air quality, which had emerged as the most important issue across communities at the Roundtable. After the presentation, Work Groups identified their overarching visions, and their goals over different time frames in breakout sessions.

Although another Roundtable was scheduled to review the drafts that the work groups had created, the COVID pandemic changed those plans. In order to comply with social distancing and the subsequent lockdown with curfews, a draft was assembled from the materials Work Groups had submitted. The draft was sent to Community Captains for review prior to a Zoom call to discuss it. A second draft was distributed back to the Work Groups that incorporated comments from the Zoom call.

As this Climate Action Plan final draft is being completed, members of our Work Groups are fighting COVID, and deaths are being mourned in the circles of friends and families not only in our Work Groups, but also in the families that responded to our surveys.

## Survey Results



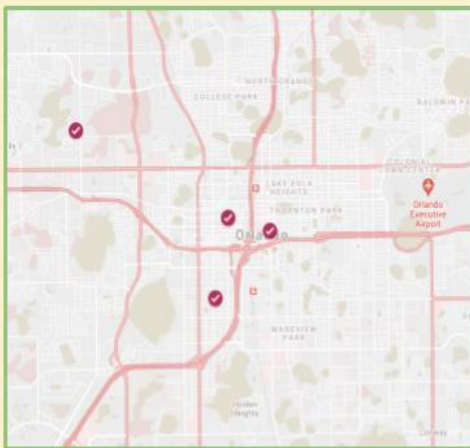
### Community Climate Action Survey in 4 Communities in the Orlando Metropolitan Area



Encuesta comunitaria de  
acción climática en 4  
comunidades del  
Área Metropolitana de Orlando

The majority of survey respondents were from zip codes  
32801, 32805, 32808, and 32807.  
La mayoría de los encuestados provenían de los códigos postales  
32801, 32805, 32808 y 32807.

## Climate Action Survey - Encuesta de acción climática



The Community Climate Action Survey was taken by 153 residents of 4 communities in Orange County, Florida to inform work groups comprised of residents engaged in Climate Action Planning. Preliminary results were provided to work groups throughout their planning process in Downtown Orlando, Parramore, Holden Heights and Mercy Drive.

153 residentes de 4 comunidades en el condado de Orange, Florida, tomaron la Encuesta de acción sobre el clima comunitario para informar a los grupos de trabajo compuestos por residentes que participan en la planificación de la acción climática. Se proporcionaron resultados preliminares a los grupos de trabajo a lo largo de su proceso de planificación en el centro de Orlando, Parramore, Holden Heights y Mercy Drive.



## Household Summary - Resumen del hogar

- Approximately 92% of respondents feel that greenhouse gas reduction is important, and are in favor of conservation measures to achieve it.
- The top 3 climate change impacts of concern are Air Quality, Flooding and Severe Rainstorms, and Heat Waves
- Approximately a third of respondents have converted to LED bulbs, and 20 to 30% of respondents would like to implement more energy savings strategies and to learn more about options.
- Cost and lack of property ownership were the primary reasons that energy conservation measures had not been taken.
- Aproximadamente el 92% de los encuestados considera que la reducción de gases de efecto invernadero es importante y está a favor de las medidas de conservación para lograrlo.
- Los 3 principales impactos del cambio climático son la calidad del aire, las inundaciones y tormentas severas, y las olas de calor
- Aproximadamente un tercio de los encuestados se han convertido a bombillas LED, y del 20 al 30% de los encuestados quisieran implementar más estrategias de ahorro de energía y aprender más sobre las opciones.
- El costo y la falta de propiedad fueron las razones principales por las que no se habían tomado medidas de conservación de energía.

## Community Summary - Resumen de la comunidad

- Respondents are in favor of local biomass energy production and a variety of renewable energy sources.
- More people would use public transportation if it were free, if it were closer to their home, or if the buses ran more frequently.
- Safer bike lanes, more bike lanes and trails, and more bicycle parking would motivate respondents to ride a bike more often.
- Los encuestados están a favor de la producción local de energía de biomasa y una variedad de fuentes de energía renovables.
- Más personas usarían el transporte público si fuera gratis, si estuviera más cerca de su hogar o si los autobuses circularan con mayor frecuencia.
- Los carriles para bicicletas más seguros, más carriles y senderos para bicicletas y más estacionamiento para bicicletas motivarían a los encuestados a andar en bicicleta con más frecuencia.

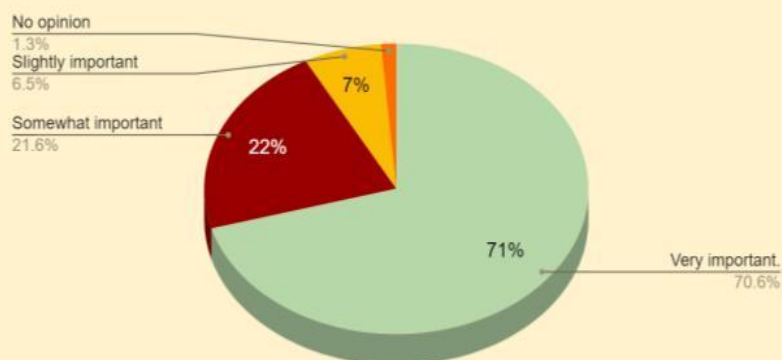
➤ How important is it to reduce greenhouse gas emissions?

➤ ¿Qué tan importante es reducir las emisiones de gases de efecto invernadero?

Greenhouse gases are primarily carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>). As the levels of these gases increase in the atmosphere, more heat from the sun's rays are trapped, contributing to global warming.

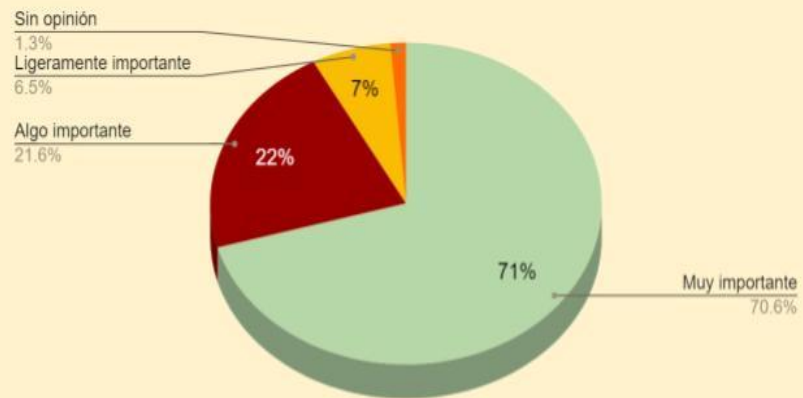
Los gases de efecto invernadero son principalmente dióxido de carbono (CO<sub>2</sub>) y metano (CH<sub>4</sub>). A medida que aumentan los niveles de estos gases en la atmósfera, queda atrapado más calor de los rayos del sol, lo que contribuye al calentamiento global.

How important is it that your community reduces greenhouse gas emissions?



Most respondents (92.2%) felt that reducing greenhouse gases was "Very or Somewhat Important," while a few (7.8%) responded "slightly important" or had no opinion.

¿Qué tan importante es que el centro de Orlando reduzca las emisiones de gases de efecto invernadero?



De todos los encuestados, la mayoría (92.2%) sintió que esto era "Muy o algo importante", mientras que unos pocos (7.8%) respondieron "ligeramente importante" o no tenían opinión.

How would you like to see the City of Orlando prioritize greenhouse gas reduction strategies? ¿Cómo le gustaría ver a la Ciudad de Orlando priorizar las estrategias de reducción de gases de efecto invernadero en el centro?	
Priority Rank (Rango de prioridad)	Greenhouse Gas Reduction Strategy - Las estrategias de reducción de gases de efecto invernadero
1	Water conservation - Conservación del agua
2	Conservation of forest and agricultural lands - Conservación de tierras forestales y agrícolas
3	Waste reduction - Reducción de desperdicios
4	Forestry practices that enhance carbon sequestration - Prácticas forestales que mejoran el secuestro de carbono
5	Solar panel installation on residential and commercial buildings Instalación de paneles solares en edificios residenciales y comerciales
6	Bicycle/pedestrian infrastructure - Infraestructura para bicicletas / peatones
7	Local renewable energy generation (i.e. wind and biomass power) Generación local de energía renovable (es decir, energía eólica y biomasa)
8	Electric buses - Autobuses eléctricos
9	Wildfire prevention - Prevención de incendios forestales
10	Electric Vehicle charging infrastructure - Infraestructura de carga de vehículos eléctricos
11	Upgrades for residential and commercial building - Mejoras para edificios residenciales y comerciales
12	Promoting Energy Efficiency in New Construction - Fomento de la eficiencia energética en nuevas construcciones

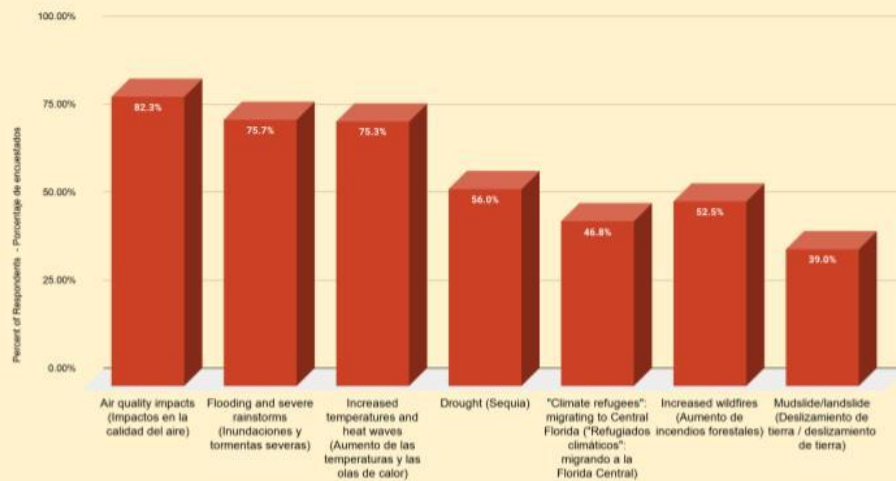


How concerned are you about the future impacts of the following potential climate related hazards?

¿Qué tan preocupado está por los impactos futuros de los siguientes peligros potenciales relacionados con el clima?

Increased Temperatures and Heat Waves	Increased Wildfires	Flooding and Severe rainstorms	Mudslides or Landslides	Drought	Climate Refugees Migrating to Central Florida	Air Quality Impacts
Temperaturas aumentadas y Olas de calor	Aumento de incendios forestales	Inundaciones y tormentas severas	Deslizamientos de tierra o deslizamientos de tierra	Sequía	Clima Refugiados Migrando a Central Florida	Calidad del aire Impactos

Percent of Respondents Extremely or Very Concerned About Potential Impacts of Climate Change  
Porcentaje de encuestados extremadamente o muy preocupados por los posibles impactos del cambio climático



More than three quarters of all respondents were extremely or very concerned about air quality, heat, flooding and severe storms. More than half were concerned about drought and wildfires.

Más de las tres cuartas partes de todos los encuestados estaban extremadamente o muy preocupados por la calidad del aire, el calor, las inundaciones y las tormentas severas. Más de la mitad estaban preocupados por la sequía y los incendios forestales.



In terms of priority, how would you rank the following strategies  
to reduce emissions from energy consumption?  
En términos de prioridad, ¿cómo clasificaría las siguientes estrategias para  
reducir las emisiones del consumo de energía en el centro de Orlando?

Supplying  
renewable energy  
to buildings so  
they use cleaner  
energy

Suministro de  
energía renovable  
a los edificios para  
que utilicen energía  
más limpia.

Making buildings  
more energy efficient  
so they use less  
energy

Hacer que los  
edificios sean más  
eficientes  
energéticamente para  
que usen menos  
energía

Encouraging  
solar panel  
installation on  
buildings

Fomentar la  
instalación de  
paneles solares en  
edificios

Encouraging local  
biomass energy  
production

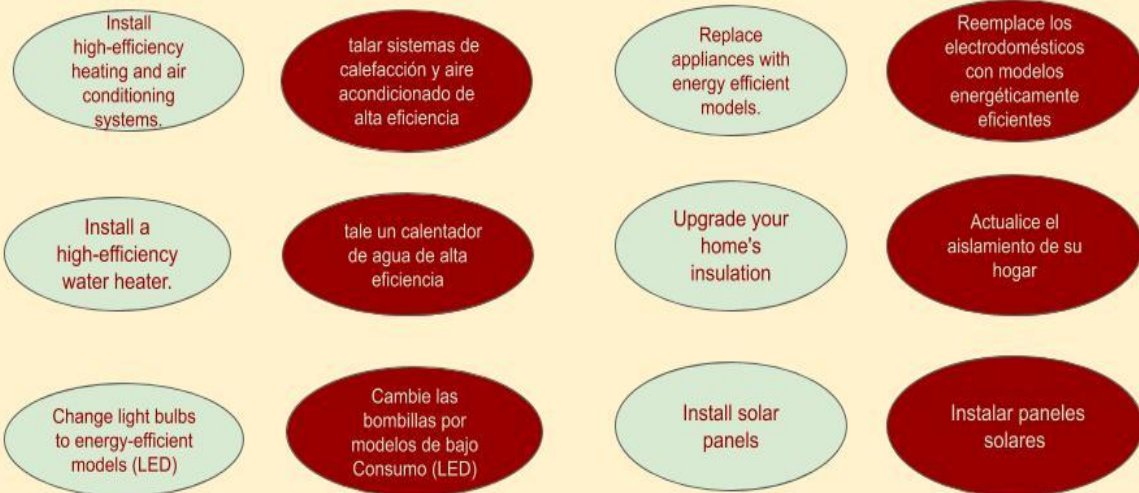
Fomentar la  
producción local de  
energía de  
biomasa.

In terms of priority, how would you rank the following strategies  
to reduce emissions from energy consumption?

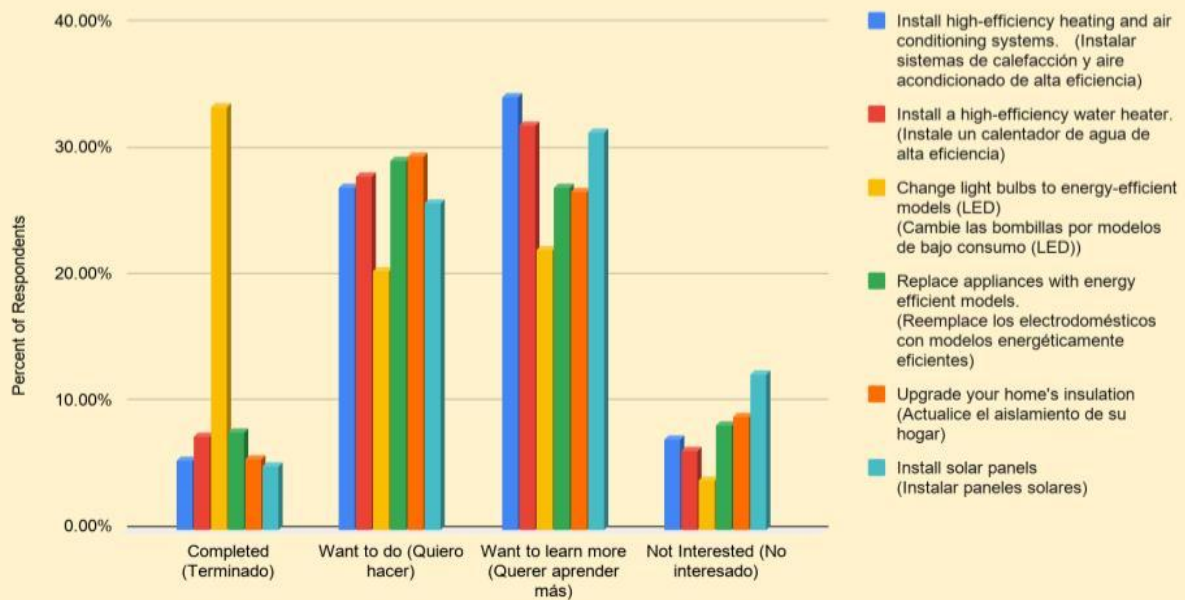
En términos de prioridad, ¿cómo clasificaría las siguientes  
estrategias para reducir las emisiones del consumo de energía?

Priority Rank (Rango de prioridad)	Energy Reduction from Energy Consumption Strategy (Estrategia de reducción de energía a partir del consumo de energía)
1	Encouraging local biomass energy production (Fomentar la producción local de energía de biomasa.)
2	Supplying renewable energy to buildings so they use cleaner energy (Suministro de energía renovable a los edificios para que utilicen energía más limpia.)
3	Encouraging Local Wind Production (Fomentar la producción eólica local)
4	Encouraging solar panel installation on buildings (Fomentar la instalación de paneles solares en edificios)
5	Making buildings more energy efficient so they use less energy (Hacer que los edificios sean más eficientes energéticamente para que usen menos energía)

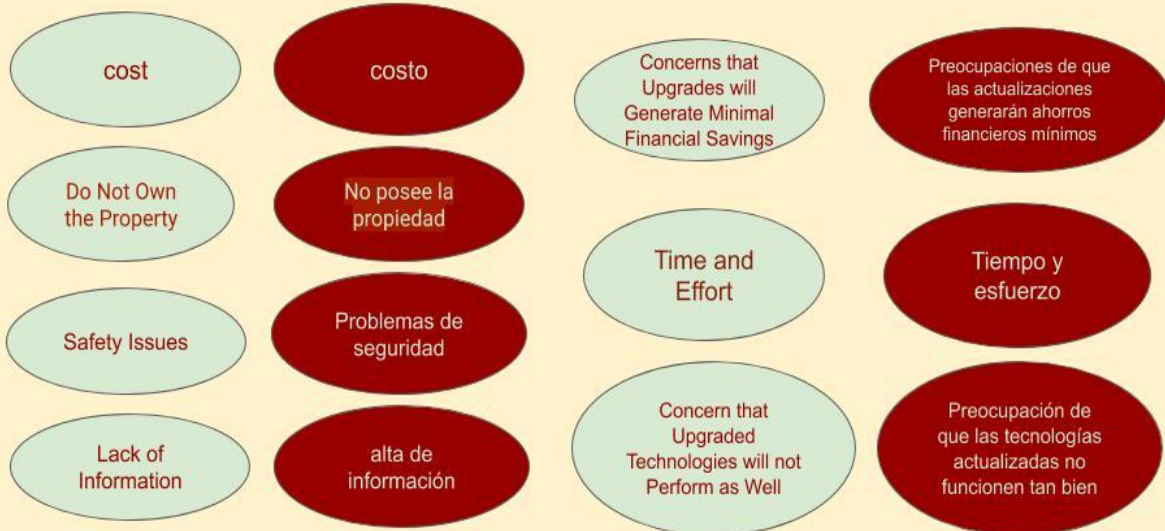
What have you done (or do you want to do) to reduce energy use at your residence?  
 ¿Qué ha hecho (o quiere hacer) para reducir el uso de energía en su residencia?



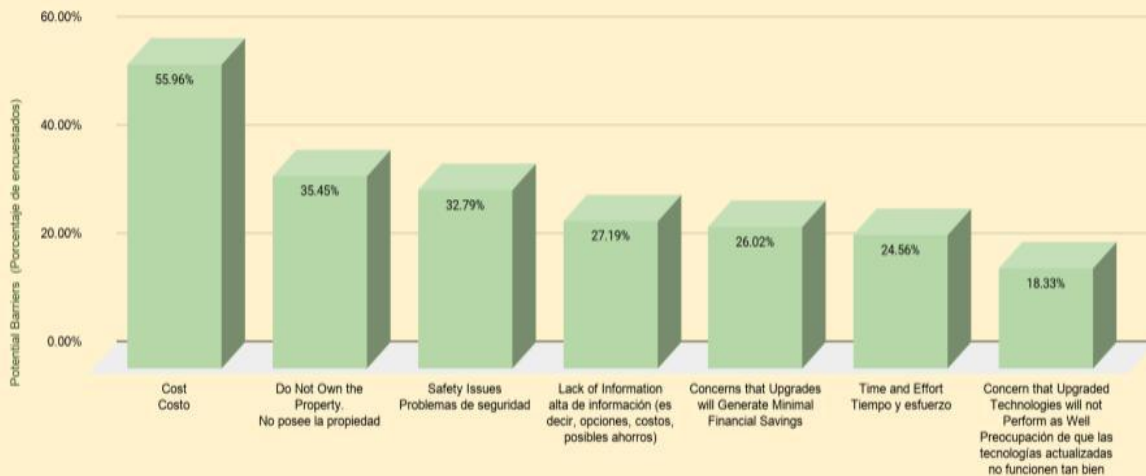
What have you done (or do you want to do) to reduce energy use at your residence?  
 (¿Qué ha hecho (o quiere hacer) para reducir el uso de energía en su residencia?)



What are some barriers that would keep you from completing energy upgrades?  
¿Cuáles son algunas barreras que te impedirían completar las actualizaciones de energía?



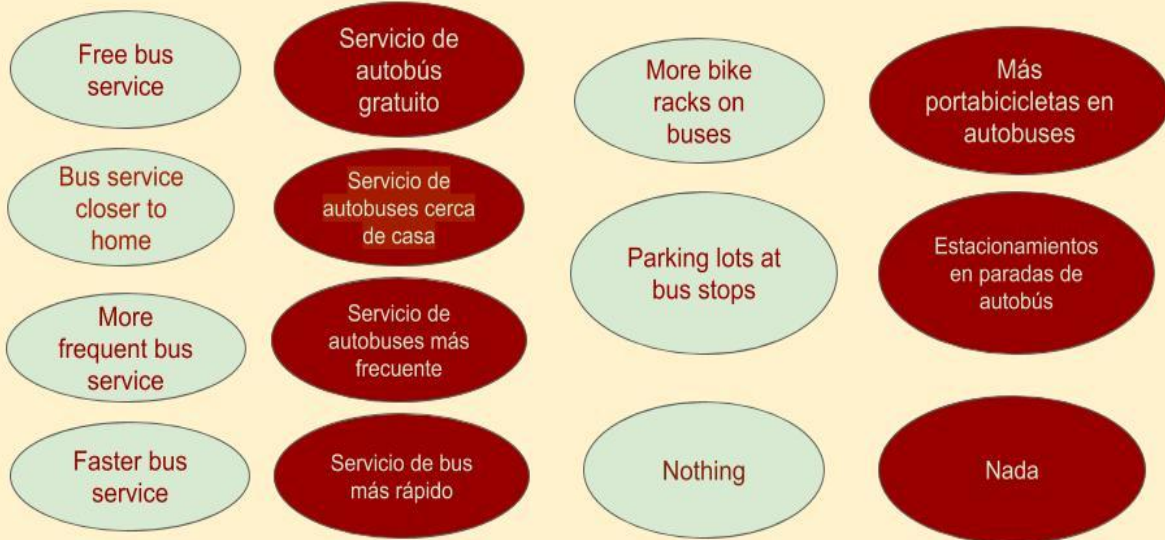
What are some barriers that would keep you from completing energy upgrades? (Barriers respondents selected as MOST IMPORTANT) ¿Cuáles son algunas barreras que te impedirían completar las actualizaciones de energía? (Barreras encuestadas seleccionadas como MÁS IMPORTANTES)



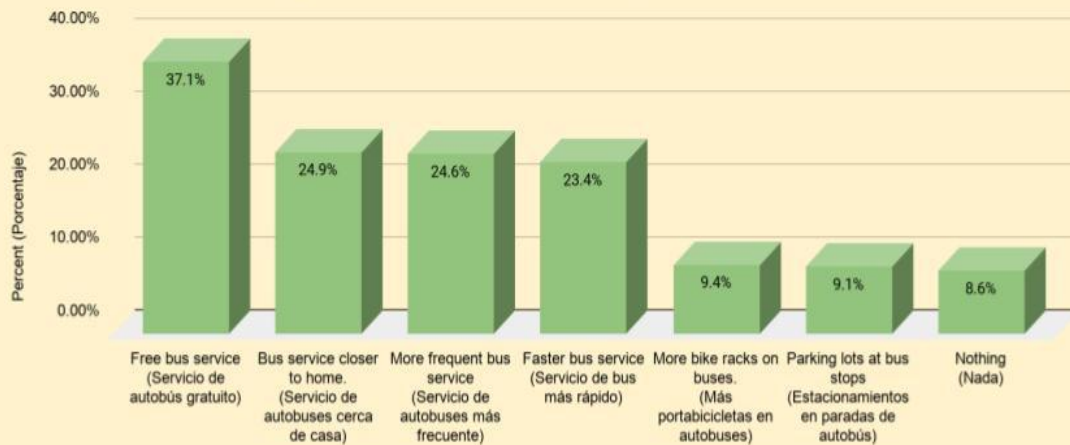
The most significant barrier to completing energy upgrades was cost. Not being the owner of the property, concerns over safety issues, lack of information, time and effort required, and concerns about savings generated and technological performance were other barriers.



What would encourage you to use public transit?  
¿Qué te animaría a usar el transporte público?



What would encourage you to use public transit?  
¿Qué te animaría a usar el transporte público?

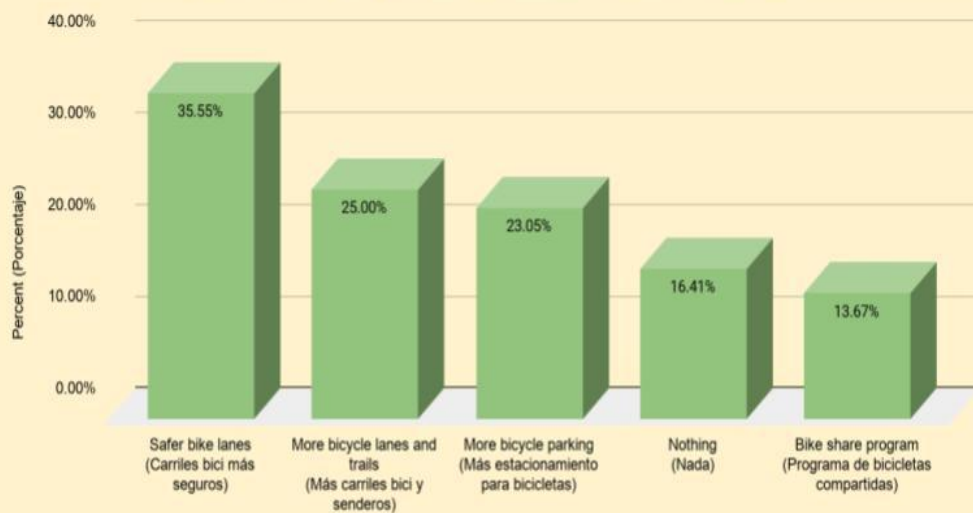


Respondents listed bus services that are free or convenience-related as the most important items that would encourage them to use public transportation: service closer to their homes, more frequent service, and faster service.

What would encourage you to ride a bike more often?  
 ¿Qué te animaría a andar en bicicleta con más frecuencia?



What would encourage you to ride a bike more often?  
 ¿Qué te animaría a andar en bicicleta con más frecuencia?



Most of the respondents (73%) would be encouraged to ride a bike more often if there were safer bike lanes, more of them (and trails), with more bicycle parking available.



**Appendix A:**  
**Community Meeting Notes**

## **Community Meeting Notes**

### **Parramore and Holden Heights Community Meeting Notes**

#### **Parramore and Holden Heights Peabo Day Care**

Nov 8, 2019

#### **Infrastructure and Walkability**

- There is flooding, particularly where there is construction. Parramore Ave floods from Church to Kaley
- Suburban design is not working in the urban area. It is not walkable. There are no sidewalks in much of Parramore. There is no room for sidewalks in much of Parramore, or there is a sidewalk on only one side of the street. (Ex. Lee at Robinson)
- Isn't it illegal not to have sidewalks? The disabled need to be able to get around.
- There is a light pole in the middle of the sidewalk on Westmoreland between South St. and Anderson, and one on Carter St. between Westmoreland and Parramore
- There is a Health Center in Parramore at Amelia near the OCPS Center for Excellence, where there is considerable flooding to Kaley even after very little rain falls

#### **Air Quality & Public Health Issues**

- Zip code 32805 has the highest level of asthma in the state. Respiratory illness is high.
- Elderly
- 'We need to protect public health, because any savings on energy can be eaten up by health care expenses if we don't address the air quality issues.'
- The dumpsters on Piedmont fill with rain that could breed mosquitoes; and the adjoining homes deal with insects/bugs and rats.
- For a project, homes could have air quality monitors and have a low income budget plus whatever incentives have been used for energy efficiency upgrades and renewable energy.

#### **Traffic Issues**

- An example of a building that has greenery that can help with air quality is the New Medical facility on Highland & Orange
- Special events have terrible traffic congestion with cars idling  
The New enter (408 at the ramp toward Tampa)  
The downtown campus has student car traffic. They are not bike riders.
- Orange County is growing 1,500 people every 2 weeks. Traffic volume will be increasing.

#### Traffic Emissions Solution: Trees

- Find out the best species for filtering/absorbing/sequestering pollutants
- Near the bus station terminal there is brick with pavement and no greenery and there are a lot of emissions from traffic there
- The community needs more trees. The setbacks are not wide enough for trees on residential lots. For example, on Benson there is only 5 ft of grass from the curb. Trees would block sight lines.
- More trees in parks and community centers
  - Recreational areas could use more trees to help filter the air.
  - Trees around the lakes: Lake Dot up by Colonial, Carver, and Cherokee
  - Identify where more trees can be placed at recreation centers
- Young trees can sequester 13lb of carbon dioxide/year
- Arbor Day event with free trees of the species with the best air quality improvement

#### Traffic Emissions Solution: Living Walls

- Under highways on the pillars
- Modular living walls with plants that improve air quality
- See China Green City example in Lijiang
- Government LEED Bronze buildings upgraded to a higher standard incorporating green walls and air filtering plants in their design. New buildings to be LEED Gold or Platinum

#### Traffic Emissions Solution: Yard Beautification Program-will help with heat

- Find out the best plants to improve air quality and the ones that can remove contaminants from the soil
- Inform people to raise any vegetable gardens due to lack of testing for residential property for soil contaminants (particularly near the Superfund, Brownfield and petroleum spill areas). Find a subject expert who knows which plants are best to remove pollutants from the air and contaminants from the soil.

### **Energy**

#### Desire for Solar

- Exposing people to batteries that charge with solar energy will give people the experience of not having to buy batteries, and to see the advantage of solar
- Residential solar farm: Can the Piedmont dumpster site be used for a solar farm when the dumpster operation moves to the airport? Other locations in the community?
- Community intellectual capital: Mr. Johnson has knowledge and experience with installing solar panels

#### Energy Efficiency

- About 500 older homes in Parramore don't have central AC. These homes need efficient window units. Energy efficient ACs/portable units/solar?
- Solar panels-what can 1 or 2 panels do to reduce energy cost?
- Energy efficient ceiling fans
- Do a study with energy efficiency and beautification on 10 homes
  - Plant species that filter pollutants most efficiently in landscaping
  - Study the indoor air quality difference for asthmatics

- Home air quality monitoring devices

## Mercy Drive Community Meeting Notes

Hal Marston Community Center Friday, October 18, 2019

The City of Orlando Municipal Planning Board Website was consulted for maps and planning documents.

### **Deforestation and Air Quality:**

- Developers sought federal government permits in July and State permits in August to enable them to continue deforestation and paving over the wetlands in the Mercy Drive Community in order to develop natural lands.
- 170 acres have been deforested (permitted removal of over 2,500 trees), 60 more acres have been permitted for deforestation, and there are two additional developers, including the Don Mealey Subaru Dealership that would like to deforest further acreage
- Save the Wekiva River and its Headwaters also tried to save 22 acres by Antioch Manor from deforestation
- There is an effort to build Fern Grove Senior Housing. The publicity is that there will be affordable housing for seniors. There are concerns:
  - It is unlikely that there will actually be affordable housing. Parramore Oaks, by the same developer, has 18 affordable units of the approximately 400 units constructed. The majority are market rate. College students compete with local residents for the 18 affordable units there.
  - The parcel under consideration will likely have traffic through the Mercy Drive community in Phase II, which is currently land locked. Traffic would likely be directed through Amigos, Archer or Kiplinger, streets where there are dead ends and children play safely in the streets.
- The Subaru dealership wants to deforest the wetland forest of the Little Wekiva River's Headwaters, which is located less than a mile north of its existing dealership to expand.
- Gentrification continues in the "Packing District," with deforestation of 110 acres to build a tennis center. This is near the Walmart. The "Packing District" will have eateries and a shopping area as well as a tennis center.
  - Tennis is not a cultural value in the community. Mercy Drive is a diverse community. It is not only African American.
  - Residents say they would prefer:
    - A library: "There is a library on Raleigh Street, why can't we have one?"
    - A Teen Center

- Convert it into a Conservation Area with instruction about wetlands
  - Policy concern: It is cheaper to deforest natural wetlands and pave them over than it is to do infill development, converting previously developed property to a new use. Therefore, there is a deforestation incentive for developers.
- Residents say they do not want 4 and 5 story buildings on their streets. Multiple residents in the neighborhood participated in the filing of an appeal.

#### **Environmental Health and Safety Concerns discussed**

- Flooding due to altered hydrology: The industrial park site was “dewatered,” elevated, and paved with an impervious surface. Water now flows down the slope, toward Mercy Drive Homes. There are both surface water and groundwater issues.
- Sink holes: The altered hydrology (by “dewatering” the industrial park lot) may be related to land subsidence that is suddenly occurring in the neighborhood. The land has been settling for a long time, and residents are accustomed to what that is like, but one resident says her property was condemned due to a sinkhole that developed recently, and another is beginning to see odd depressions on her property.
  - Policy Concern: The resident called due to the odd subsidence in the yard, and personnel arrived to examine the land. There was no disclosure of results, and no report given to the resident. The house was condemned, and there is not **a clear process of accountability when there is a sink hole.**
- Mosquitoes: There are more mosquitoes with the trees gone. More chemical spraying is now needed in the community. Mosquitoes carry diseases. The community must cooperate to report mosquitoes when they see them.
- Possible radiation from the 6 Communications Towers: Silver Star Communications Tower is upcoming. This is the 6th 5G Communication Tower constructed within 1 mile of Mercy Drive. There is a concern about potential radiation from the multiple exposures
- Traffic Safety and Diesel Emissions: Semi-truck and dump truck traffic, especially at Ferguson and WD Judge is a safety concern, and an emissions and air quality concern. There are 700 truck trips/day associated with the new industrial park.
- Increased Heat due to deforestation: The trees provided cooling in the neighborhood.
  - Discussion about the possibility of using Neighborhood Association funds to provide air conditioners for Senior Citizens

## **Downtown Orlando and East to Azalea Park**

### **Downtown Orlando Community Meeting Notes 11.14.2019**

Magnolia Park Neighborhood

Tower residents feel safe

2 took in family during hurricane Irma

1 went to Puerto Rico and got stuck there for 3 months

Needs:

- Information
- More gatherings like these
- Shelters
  - Special Needs
  - Kid friendly shelters
  - Shelters for the homeless: When the homeless tent city was evacuated to take people to the shelter, the homeless knew there was a shelter. The problem was that they didn't want to leave their things behind because all of their belongings were there in tents. They need storage for their things if they have to evacuate. They need to be assisted to pack their belongings and
  - evacuate with dignity.
- Pets: one family had a dog that had 10 puppies as Hurricane Dorian approached
- Kid friendly items in hurricane kits
  - Food
  - Medicine
  - Pets
  - Teddy bear
  - Juice boxes
  - First aid
  - Band aids
- Personal items
  - Medicine
  - Wipes
  - Insect Repellent
  - Insulation
  - Important Papers
  - Solar flashlight(s)
- Inexpensive Hurricane Kits: Many hurricane prep items can be purchased at Dollar Tree



### Unique or Special Needs

- Electricity & power
  - Azalea Park was without power for a week after Hurricane Irma.
  - Magnolia Towers has its own generator system
- The church had difficulty stocking the food pantry due to high demand
- If you lose the contents of the fridge it's expensive
- One resident has an electric generator built with car batteries

1 person had children that couldn't prepare for the hurricane because they had to work

1 person had to return to work immediately after the storm passed, so the grandmother had to watch the children

### Problems with the curfew policy:

- Orange County always lifts the curfew first due to the theme parks. It is too quick, because the people who evacuated are typically in Seminole Co or Osceola County, and they can't leave their homes due to the curfews in those counties to get to work in Orange County.(Orange County shouldn't force employees to go back to work while the other counties are still on curfew.)

### Medical Concerns:

- Diabetics
- People on chemo (3 in this group)
- Dialysis patients

People have to go back to work, but there isn't a place for the kids because the schools aren't open.

Many people go to hotels during the hurricane, but some hotels in the Orlando city limits are on lower lying land.

### Hurricane shelter needs

- Dealing with fear
- The Episcopal Church had a shelter at the Canterbury Convention Center for people with mental health needs. There were 12 to 13 families with bipolar or other easily triggered conditions. There was a staff that included a Deacon, volunteers, and mental health counselors.

## Transportation

- Half of the group doesn't have a car
- Residents say they can't count on public transportation
- Magnolia Towers has private transportation for medical appointments
- The nearest Publix is not in the city. A private bus service takes people to
  - Walmart
  - Publix
  - Target
  - TJ Max
  - Dollar Tree
  - 250
- The bus goes to Michigan St
- There is a Monday 10am - 1pm drop off
- Westminster on different days than to Colonial
- You have to go away from downtown for many needs. Public Transportation can take you to
  - the shopping strip on Michigan St
  - Social Security Office near the airport
  - Bus #13 goes straight to the airport, and to the VA
  - Bus #3 can be used for shopping
  - Bus #15 and #7 are used by Magnolia Towers residents
- Magnolia Towers residents can walk to the movie theater
- **There aren't electric buses yet**

3 or 4 people present have family that lives nearby

Several have family in Puerto Rico

## El Centro de Orlando Notas Reunión de la Comunidad 11/14/2019

Magnolia Park Barrio  
residentes torre se Sienten seguros

Tomo 2 en La Familia Durante el huracán Irma  
1 were un Puerto Rico y quedo atascado Alli Durante 3 meses

### Necesidades:

- Información
- Más encuentros Como ESTOS
- refugios
  - Necesidades Especiales
  - Refugios adecuadas Para los niños
  - Los refugios para las Personas sin hogar: Cuando El cit tienda sin hogar FUE evacuado un Llevar a la gente al refugio, las Personas sin hogar SABIAN Que habia ONU refugio. El era Problema Que No Quieren Dejar SUS Cosas, Porque Detrás de Todas SUS pertenencias a Estaban alli en tiendas de campaña. Necesitan De Almacenamiento párrafo SUS Cosas Que Tienen si evacuar. Tienen Que Ser Asistida para empacar SUS pertenencias y
    - evacuar con dignidad.
- Animales de Compañía: Una Familia tenia ONU Perro que tenia 10 cachorros Medida Que se acercaba el huracán Dorian
- Artículos adecuadas para Los Niños en los kits de huracanes
  - Comida
  - medicina
  - Mascotas
  - oso de peluche
  - cajas de jugo
  - Primeros Auxilios
  - curitas
- Cosas Personales
  - medicina
  - toallitas
  - Repelente de insectos
  - Aislamiento
  - Documentos Importantes
  - linterna Solar (s)

- Los kits de Bajo Costo De Huracán: Muchos Artículos de Preparación De huracanes se pueden comprar en Dollar Tree

#### Necesidades Especiales o Únicos

- Poder electrico
  - Azalea Park pecado FUE electricidad Durante Una semana DESPUÉS del huracán Irma.
  - Magnolia Torres Tiene Su propio Sistema de generador
- La Iglesia tenia Dificultad Para El Almacenamiento De La Despensa de Alimentos DEBIDO a la alta demanda f
- Si pierde el contenido de la nevera es caro
- Un residente Tiene Un generador electrico Integrado con Baterías de coche

1 persona tenian Niños Que No podian prepararse para el huracán DEBIDO una cola tenian Que Trabajar

1 Persona Tuvo Que volver al TRABAJO INMEDIATAMENTE Despues de la Tormenta Paso, Por Lo Que El geandmother Tuvo que ver a los Niños

#### Problemas con la Política de toque de queda:

- Condado de Orange de siempre Levanta El Toque de Queda En Primer LUGAR DEBIDO a los Parques Temáticos. ES DEMASIADO RAPIDO, Porque Las Personas Que evacuaron ESTÁN tipicamente en Seminole Co O Condado de Osceola, y no pueden salir de Sus casas DEBIDO una los toques de queda en ESOs Condados to go A Trabajar en el Condado de Orange. (Condado de Orange No se Dêbe Forzar a Los Empleados a Volver al Trabajo, MIENTRAS Que Los Otros Condados ESTÁN todavía en el toque de queda.)

#### Las Preocupaciones médicas:

- Los diabéticos
- La gente en Chem (3 En Este grupo)
- Los Pacientes en diálisis

La gente Tiene Que Volver al Trabajo, Pero No Es Un Lugar Para Los Niños Porque Las Escuelas no estan abiertas.

Mucha gente va a los hoteles Durante el huracán, Pero algunos adj Hoteles en los Límites de la Ciudad de Orlando ESTÁN Mintiendo inferiores de la tierra.

#### Las Necesidades de Alojamiento de huracanes

- Tratar con el miedo

- La Iglesia Episcopal tenia ONU Refugio en el Centro de Convenciones de Canterbury Para Las Personas Con Salud Eran needs. There mentales de 12 a 13 Familias con Condiciones bipolares or other facilmente desencadenados. Hubo ONU personales Que INCLUYE Una Deacon, Voluntarios y consejeros de salud mental.

## Transporte

- La mitad del grupo no Tiene Un coche
- Los residentes Dicen que no pueden Contar Con El Transporte público
- Magnolia Torres Tiene Salón Transporte Privado Para Las Citas Médicas
- El Publix más Reservas Cercano No Está en la Ciudad. Un servicio de bus privado Lleva a la gente una
  - Walmart
  - Publix
  - Objetivo
  - TJ Max
  - Arbol de dolares
  - 250
- El Autobús Que Va un Mighigan St
- Hay Un 10 am de lunes - 13:00 Dejar
- Westminster en Diferentes Días Que colonial
- Tienes Que ir Lejos del Centro para los muchas needs. En Transporte público PUEDE Llevar una
  - La Tira de compras en Michigan St
  - Oficina de Seguridad Social cerca del aeropuerto
  - Bus # 13 va Directamente al aeropuerto ya la VA
  - Bus # 3 Se Puede Como utilizar para ir de compras
  - Autobus # 15 y # 7 utilizados hijo por los residentes de la magnolia Torres
- Magnolia residentes Torres pueden caminar a la sala de cine
- **autobuses heno Eléctricos todavía no**

3 o 4 personas Presentes Tienen Familia Que Vive en los alrededores

Tienen algunos adj familia en Puerto Rico

## **Appendix B**

### **Roundtable 1 and Work Group Kick-off Notes**



## Roundtable 1 Notes

Roundtable 1 was bilingual (English/Spanish). It was the first meeting that had representatives from each of the four communities. Community Captains presented the climate change concerns and proposed solutions that were voiced at their community meetings. Some preliminary survey results that expressed the priorities of residents were presented to guide the formation of work groups. Gap and Solution charts are only presented for the Work Groups below. A complete set will be in the Final Report. n.

### Air Quality Work Group

The concept reported back was that emissions need to be reduced, and this Work Group will investigate options that are relevant in their neighborhoods.

#### Air Quality Gaps and Solutions Discussion (5 in Work Group)

Gaps	Proposed Solutions	Initial Resources Requested by Work Group
High diesel emissions from truck traffic  High traffic proximity and volume  High asthma rates  Respiratory Health Issues	Air Quality Monitors  Living Walls  More Trees  Air scrubbers	Extension Agents Public Health Educators  Information: -air quality challenges in older homes  -respiratory health triggers  -Relationship between trees and diesel emissions  -portable air scrubbers  -air quality monitors  -consumer sized air scrubbers  -What have other communities done to improve poor air quality?

### Mobile Energy Education and Hurricane Response

The concept reported back was a mobile unit to be used outside of hurricane season for education about energy efficiency and renewable energy, and during hurricane season as a mobile pop-up Resilience Hub that could go to the locations where it is most needed. The unit would be available to educate people at community events, and would serve as a mobile Resilience Hub. The preliminary thinking is that it would be a mobile hot spot, have computers in it, have small demonstration displays about renewable energy solutions and energy efficiency.

### Mobile Energy Education and Response Gaps and Solutions Discussion (7 in Work Group)

Gaps	Proposed Solutions	Initial Resources Requested by Work Group
<p>“People don’t know what’s out there.”</p> <p>Elderly Without Air Conditioning</p> <p>High Energy Bills</p> <p>Poor infrastructure causes Last on First off Power in bad weather</p> <p>Information, Wifi, Recharging Stations, Mental Health Support after hurricanes</p>	<p>Research and educate about options</p> <p>Solar window AC unit</p> <p>Retrofits</p>	<p>Subject Experts Needed: Renewable Energy Product Vendors</p> <p>Information Needed: Available products</p> <p>How people are doing similar things elsewhere</p>

### Transportation Work Group

The concept reported back was that this Work Group will examine reduction of emissions from traffic, transportation concerns of the elderly and most vulnerable, and transportation concerns related to hurricanes.

### Transportation (2 in Work Group)

Gap	Proposed Solutions	Initial Resources Requested by Work Group
<p>-Bus routes that get people to the places where they need to go routinely, especially for people in food deserts to be able to do their grocery shopping.</p>	<p>-A bus route that unifies the Black and Brown communities, and enables access to food shopping and to other essential needs</p> <p>-Find more transportation options that have low emissions</p>	<p>Subject Matter Experts Needed: County Communications/City Communications</p> <p>FDOT (Florida Department of Transportation)</p> <p>US Transportation (Communications Division)</p>

	-Obtain large Sprinter vans to transport elderly and disabled	<p>Edward Johnson</p> <p>Information Needed:</p> <p>Bus schedules: Which buses run in the minority communities?</p> <p>More availability to move elderly/disabled to shelters (pets/homeless)</p>
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## Work Group Kick-Off Meeting Work Group Reports

January 30, 2020

### Air Quality Work Group Report Back

**What is the over-arching goal for air quality in your communities?** (Example of a very broad over-arching goal: To provide a healthy and safe community with low greenhouse gas emissions that is free of air pollution.)

To provide a healthy and safe community with low greenhouse gas emissions that is free of air pollution.

Holden Heights: Traffic measures; more trees; complete phases at one time rather than start, stop, start, stop; proper drainage; road sweeping; I-4 construction mitigation

Parramore: more plants, proper drainage to get rid of standing water, I-4 construction mitigation, truck traffic

Mercy Drive: protect forest

**What is the short term goal (within 1 yr)?** (This might involve education, partner recruiting, obtaining resources, identifying products, etc.)

1. Have trees planted
2. Consistent road sweeping
3. Education
4. Recruiting neighbors
5. Identify & procure products

The concept reported back was that emissions need to be reduced, and this Work Group will investigate options that are relevant in their neighborhoods.

#### Notes

- Contact UF Extension Group regarding living walls
- Interior Air Quality monitoring - Orange County
- Increase knowledge/awareness of respiratory conditions - health & triggers
- Outside plants around & on the building - need to do more research

- Relationship between trees and diesel exhaust - US Forest
- Portable Air Scrubbers - India & China
- Consumer size air scrubber
- Unique air quality challenges with older homes

(Additional Work Group text inserted into climate Action Plan submitted via email.)

Members of the Air Quality Work Group cooperated with 100 Black Women of Central Florida on an Environmental Justice Collaborative Problem Solving Grant Application that would allow residents of Parramore, Holden Heights to address the health effects of air quality in their communities. See the abstract of the grant narrative on the following page. Recipients will be notified in September.

## **EPA Environmental Justice Collaborative Problem Solving Grant**

### **Project Summary page**

Project Title: *Helping Low-Income Families Identify & Address Health Effects of Hazardous Air Pollutants*

Project Location: Parramore, Holden Heights, and Mercy Drive neighborhoods in Orlando, Florida in Orange County; zip codes 32801, 32804, 32805, and 32808.

Applicant Information: 100 Black Women Orlando Chapter, 815 Hills St., Lawanna Gelzer, LawannaGelzer@aol.com

Environmental Statute(s): Clean Air Act, Section 103(b)(3)

Project Type(s) - Air Quality and Respiratory Disease investigation, survey, monitoring, and public education related to the statute above

Brief Description of Applicant Organization: The National Coalition of 100 Black Women - Central Florida Chapter's mission is to advocate for Black Women through national and local actions and strategic alliances to promote leadership development and gender equality in the areas of health, education and economic empowerment. It is committed to addressing issues that affect our families, communities and each other. Key ongoing projects/activities in which it is involved include forums on topics of concern in the community, many of which are health related.

List of Project Partners: Community Empowerment Project (community organization), Save the Wekiva River and Headwaters, Inc. (local environmental non-profit), Bruce Antone (Florida House of Representatives, 46th district), University of Central Florida (academia), Unitarian Universalist Justice Florida (faith)

Project Abstract: The main objective of the proposed project is to mitigate the negative health impacts of air pollution. Activities will include: surveying regarding prevalence of asthma and symptoms of respiratory disease, monitoring and mapping air quality and traffic volume, and providing education and outreach to empower residents both to make personal decisions and to participate in civic engagement that will reduce the severity of asthma, the prevalence of symptoms of respiratory disease, and the exposure to air pollution in three low income historic African American communities. Residents live in census block groups: 120950104001, 120950104002, 120950105001, 120950105002, 120950116001, 120950120001, 120950185001, 120950185002, 120950187002, 120950187003, 120950189001, 120950189002, 120950189003, and 120950189004. Outputs will include a survey report, maps of traffic count and air quality monitoring results, public health outreach and education, and an air quality monitor lending library. The outcomes include informed citizens, reduced exposure to air pollution, and lower prevalence of asthma and symptoms of respiratory disease.

Will you need to develop a QAPP for your project? Yes

## **Resilience Mobile Work Group Report Back Form**

January 30, 2020

### **What is the over-arching goal for the Mobile Education & Resilience Hub Work Group?**

(Goal Expressed at first Work Group Meeting: a mobile unit to be used outside of hurricane season for education about energy efficiency, and during hurricane season as a mobile pop-up Resilience Hub that could go to the locations where it is most needed. The unit would be available for community events.)

1. Mobile health care (vitals and others) capabilities
2. Hunger relief
3. Education & relief

**What is the short term goal (within 1 yr)?** (This might involve education, partner identification and recruiting, obtaining resources, identifying products, identifying the people you reach, describing what will be done after a disaster, etc.)

- Establish center and initial service offerings
- Start services
- education

### **What is the intermediate term goal (within 2 years)**

- Survey to make improvements & tailoring
- Address emerging needs
- Expand services
- Relief

### **What is the longterm goal (more than 2 years)?**

- Deployable & replicable response
- Expand fleet



## Transportation Work Group Report Back Form

January 30, 2020

**What is the over-arching goal for the Transportation Work Group?** (The over-arching goal should include the concerns from the first Transportation Work Group: reduction of emissions from traffic, transportation concerns of the elderly and most vulnerable, and transportation concerns related to hurricanes.)

A transportation system that includes reduction of emissions from traffic in ways that support a better quality of life by: reducing vehicular traffic, reducing emissions from traffic, meeting the needs of the most vulnerable, and addressing community concerns related to hurricanes.

**What is the short term goal (within 1 yr)?** (This might involve education, partner identification and recruiting, obtaining resources, identifying existing public transportation services, identifying interested residents, training people, etc.)

Meet with:

➤ LYNX communications officer about:

Media coverage of bus service available was wrong. Labor Day service was honored instead of ramping it back up. Geography greatly affected: Kissimmee/Osceola area. Kissimmee: Buses were irregular.	LYNX needs to report accurate information to the public. We need to have a reliable Point of Contact there.
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➤ Orange County & City of Orlando Resilience Officers about:

Some communities are split between city and county, and information at jurisdictional boundaries is sometimes conflicting. This creates confusion.	Coordination between city and county and coordination with EMS on deconflicting contradictory information.
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➤ County Expressway Authority or FDOT about the Turnpike about:

Delayed toll suspension.	County needs to suspend toll roads sooner. As soon as the tolls were suspended, families moved around quicker to do other things.
Mobility was an issue for poor families. The bus routes for some families were cancelled, and the bus service was irregular.	An established way the county suspends tolls and suspends transportation. and communicates it. We need to know where reliable updates can be accessed real time and have a reliable point of contact.

**What is the intermediate term goal (within 2 years)**

Resolve the emergency problems documented in our Hurricane Dorian After Action Report.

Speak with Manny Soto (City of Orlando EMS) & Orange Co EMS

## **Work Group Contributors**

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