

# **St. James Parish 2013 Backwater Data Improvements**

**Enhancements to Improve  
Parish Administration  
and  
Emergency Preparedness Efforts  
for better**

**Forecasting, Planning and Reaction  
to  
Backwater Flooding**

# LIDAR

## Light Detection and Radar

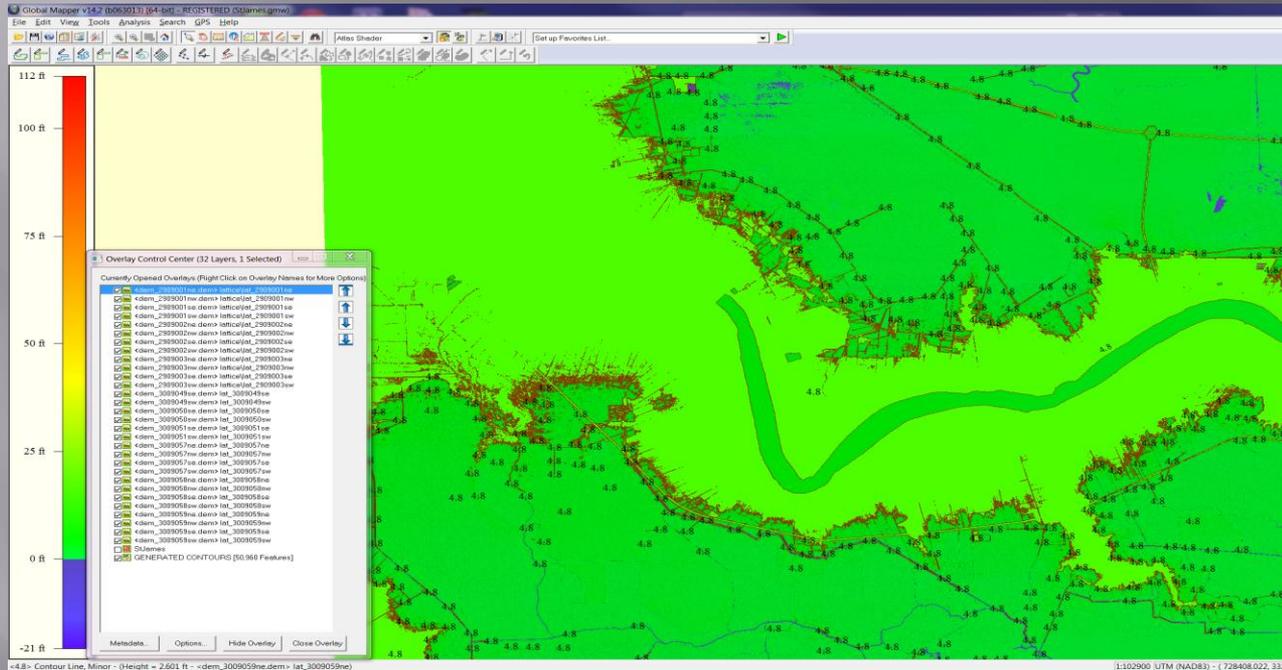


Uses light from a laser to measure different points on the surface of the earth

Airborne LIDAR sensors are used to create DEM (Digital Elevation Models) and is quite a common practice for larger areas as a plane can take in a wide swath in one flyover. Greater vertical accuracy can be achieved with a lower flyover and a slimmer swath, even in forested areas, where it is able to give you the height of the canopy as well as the ground elevation. A reference point is needed to link the data in with the WGS (World Geodetic System).

In fact, it works a lot like ordinary radar, except that these systems send out narrow pulses or beams of light rather than broad radio waves.

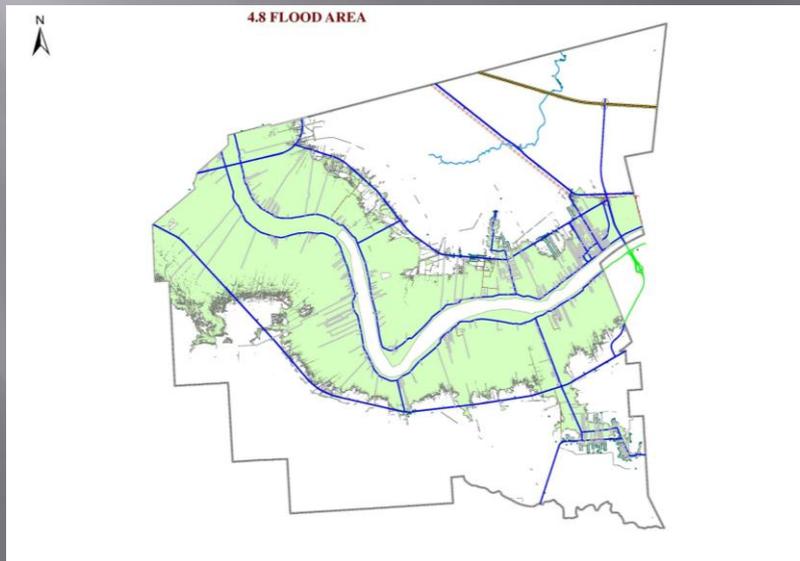
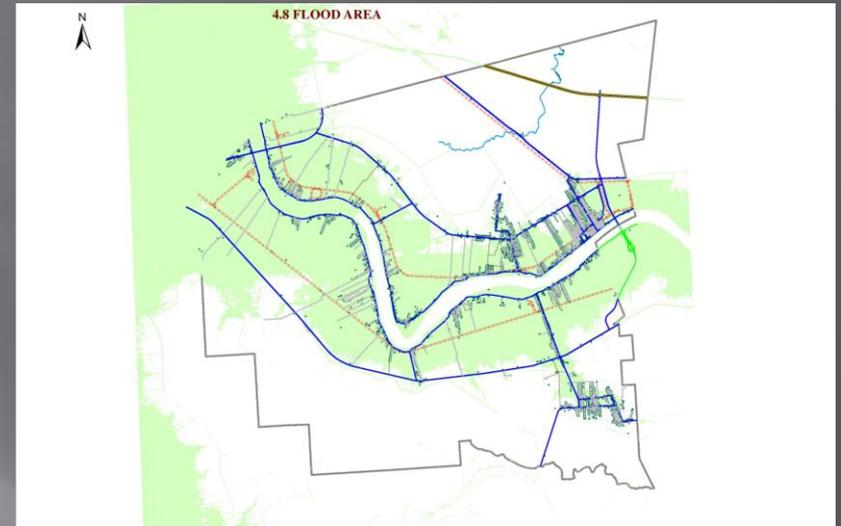
# DEM - Digital Representation of the points



Digital Elevation Points are linked to show Water Level Elevations which are useful as selector polygons to select data in GIS maps.

# CREATE BOUNDARY SHAPEFILE

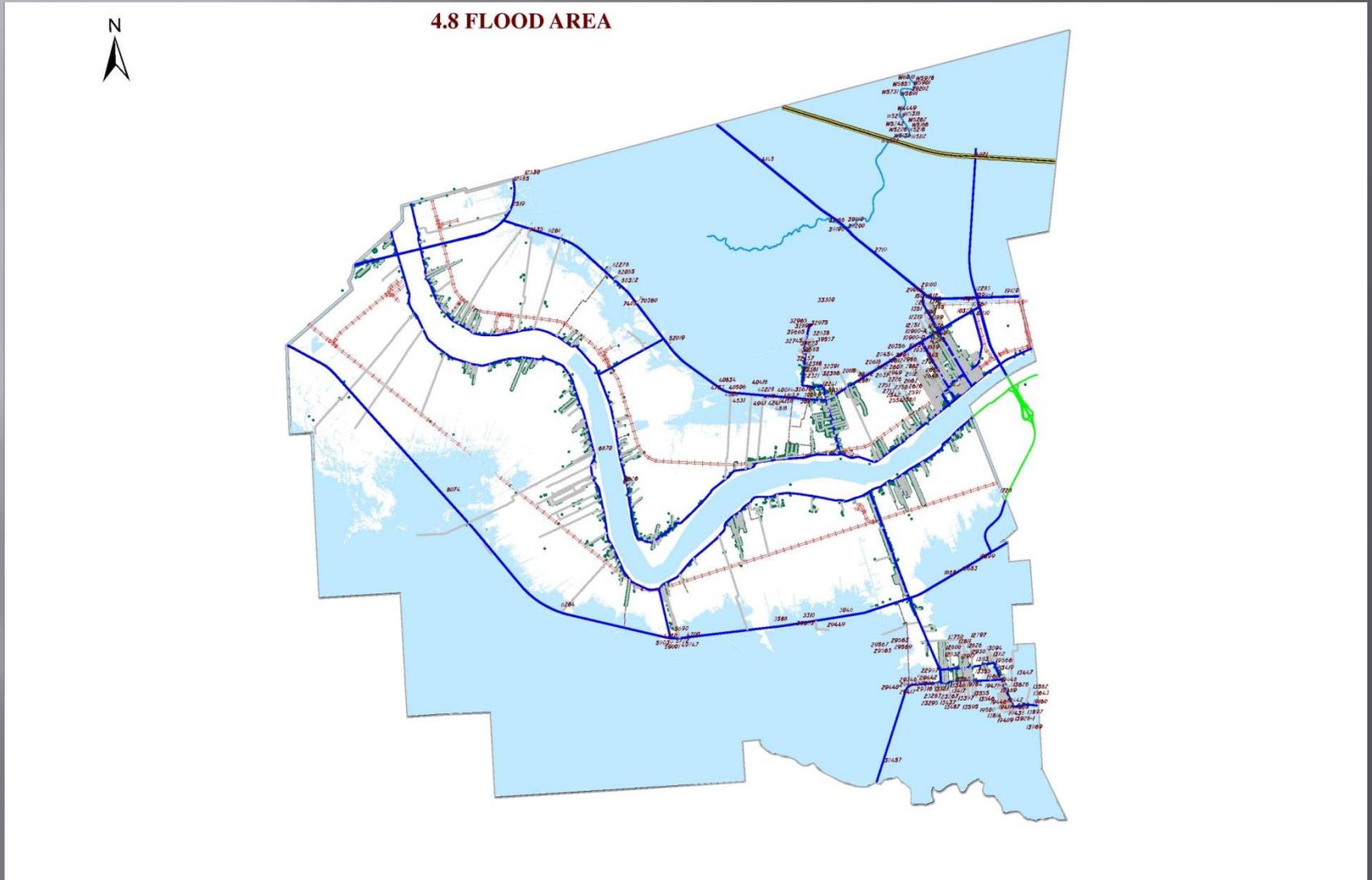
Polygon Shape files created  
From Water Levels



Shape File is clipped to Erase the  
area outside St. James Parish

# Flood Elevation Map at 4.8

( Isaac Water Level)



# FLOODED ADDRESSES

Created selection set shows addresses inside of the flooded areas.

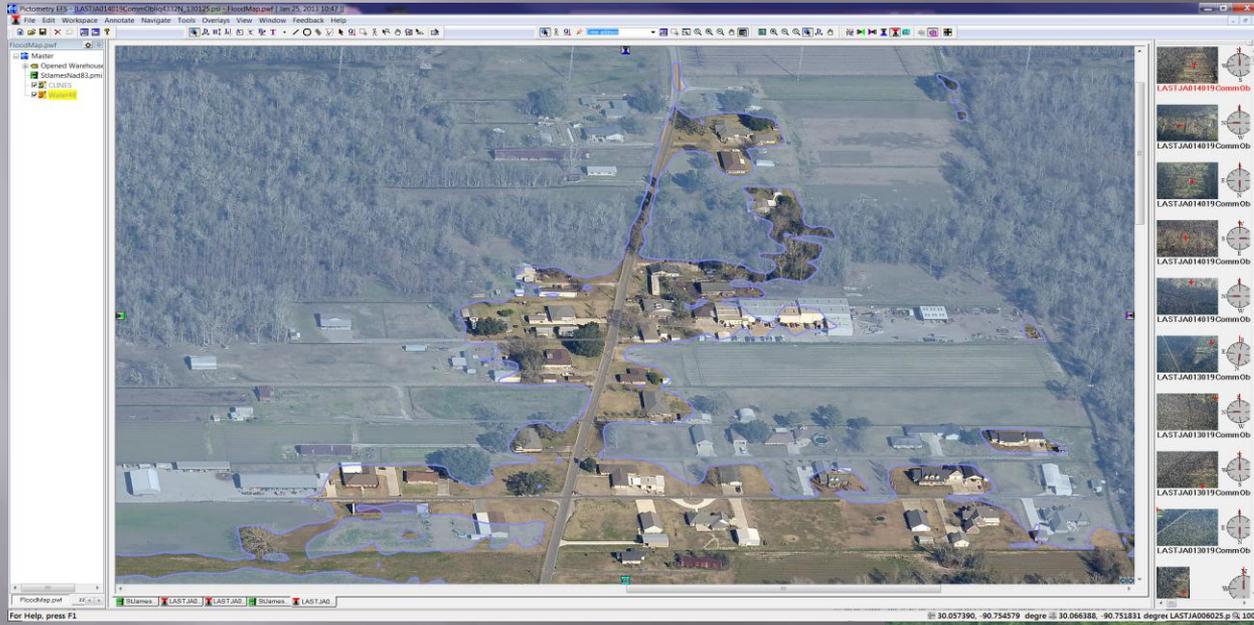


Grand Point Area

Gramercy Area

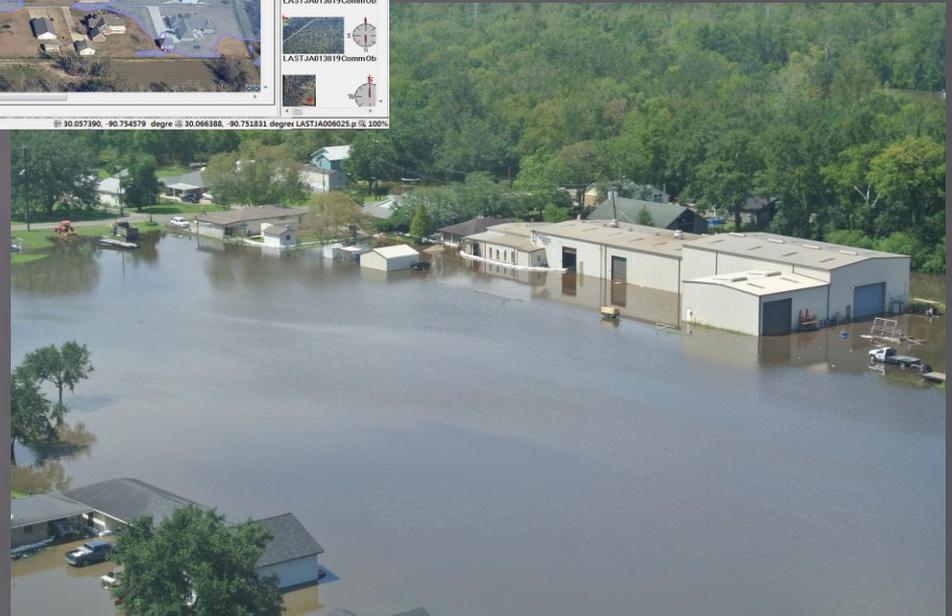


# COMPARISON

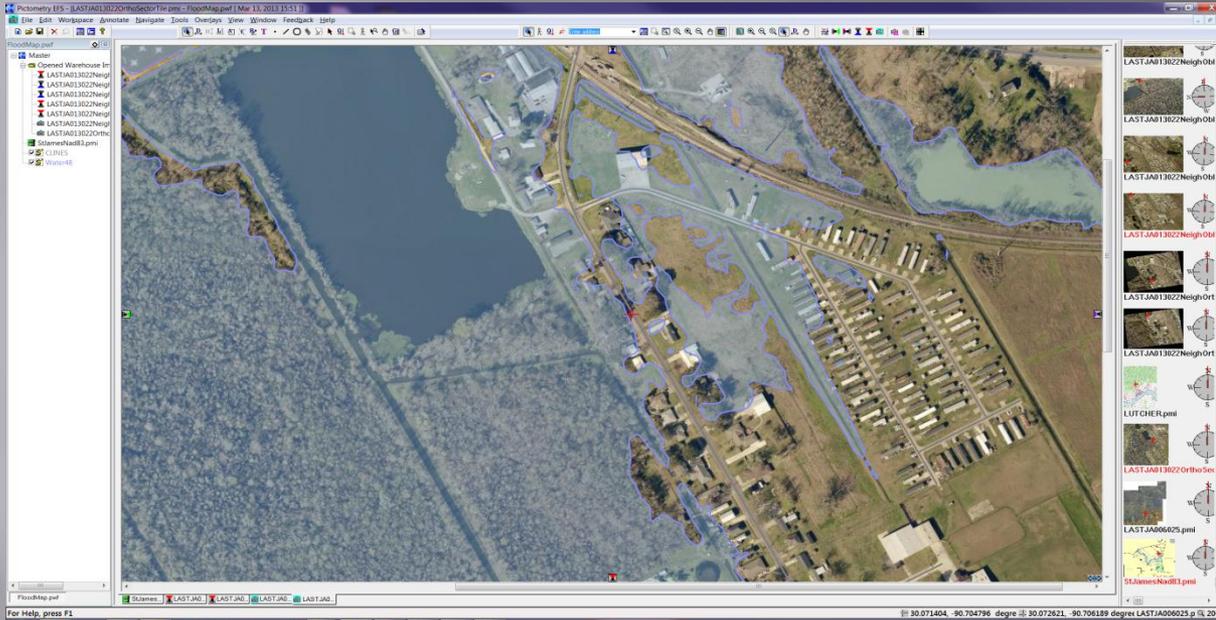


Mapped Water Level  
Overlaid in  
Pictometry

Actual Floodwater during  
Hurricane Isaac



# COMPARISON



Mapped Water Level  
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Actual Floodwater during  
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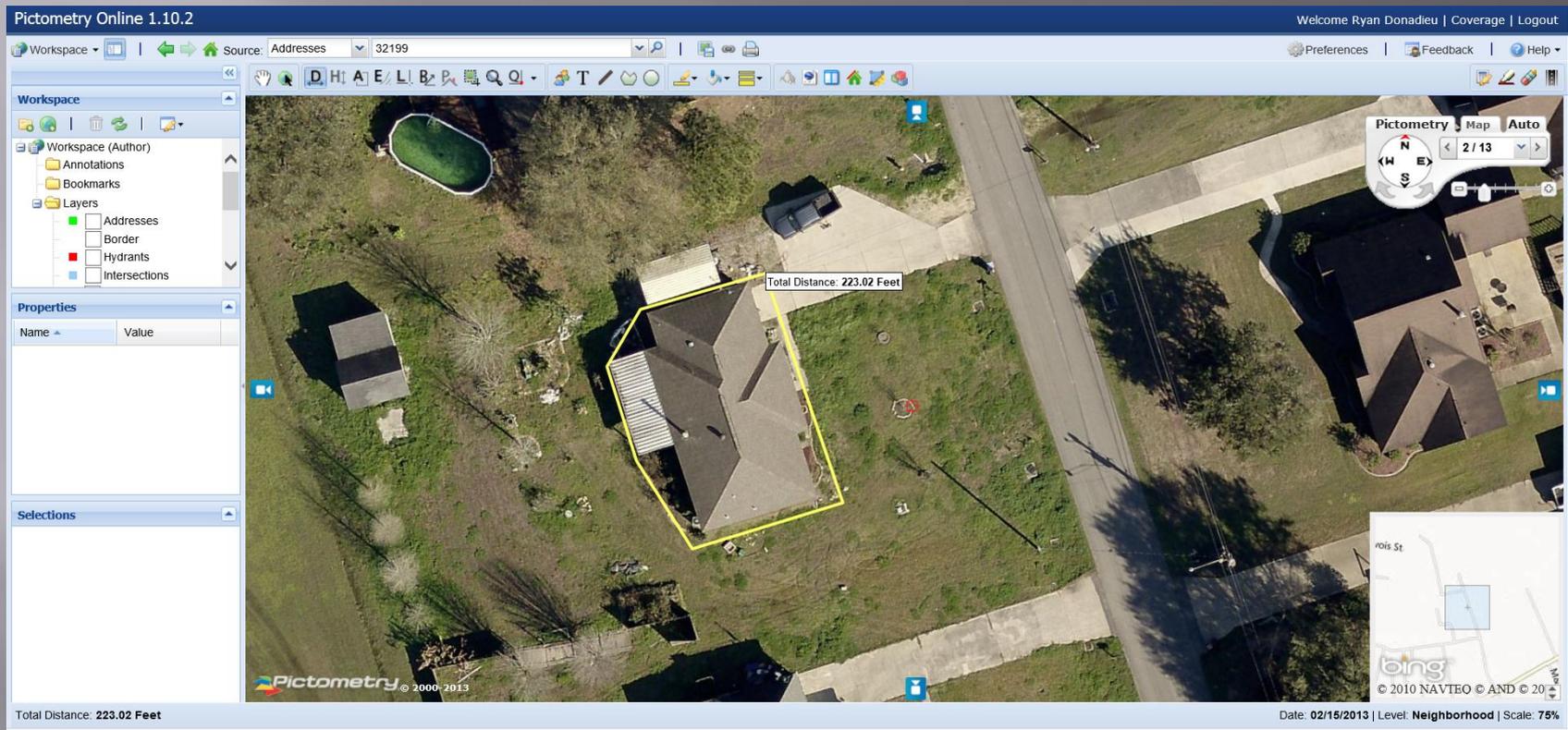
# CREATED REPORTS

Created reports showing residents in the affected flooded area

- Data collected in GIS map is exported to create a report.
- Report list of affected residents by street.

ST_LABEL	ADDRESS	COMMUNI	TENANT_NAM	TENANT_PHO
Admiral's Landing St				
	2587	Paulina	John Doe	225-555-8695
	2591	Paulina	John Doe	225-555-8696
	2626	Paulina	John Doe	225-555-8697
	2650	Paulina	John Doe	225-555-8698
	2651	Paulina	John Doe	225-555-8699
	2660	Paulina	John Doe	225-555-8700
	2661	Paulina	John Doe	225-555-8701
	2662	Paulina	John Doe	225-555-8702
	2671	Paulina	John Doe	225-555-8703
	2681	Paulina	John Doe	225-555-8704
	2699	Paulina	John Doe	225-555-8705
	2711	Paulina	John Doe	225-555-8706
	2761	Paulina	John Doe	225-555-8707
	2787	Paulina	John Doe	225-555-8708
	2831	Paulina	John Doe	225-555-8709
	2841	Paulina	John Doe	225-555-8710
	2871	Paulina	John Doe	225-555-8711
	2885	Paulina	John Doe	225-555-8712
	2895	Paulina	John Doe	225-555-8713
	2905	Paulina	John Doe	225-555-8714
	2917	Paulina	John Doe	225-555-8715
	2937	Paulina	John Doe	225-555-8716
	2963	Paulina	John Doe	225-555-8717
	2999	Paulina	John Doe	225-555-8718
Airline Hwy 61 Hwy				
	1094-1	Gramercy	Mary Jane	225-555-8718
	19120	Gramercy	Mary Jane	225-555-8719
	2719	Gramercy	Mary Jane	225-555-8720

# APPLICATION



A proactive plan utilizing LIDAR data and GIS Mapping of St. James Parish to show affected homes within a forecasted water level allows estimated sandbag quantities. Thus provides better preparation and mobilization of materials prior to a disaster.

# PLANNING

Structure Type, Approximate Linear Footage for Protection, Estimated Quantities of Sandbags

Elevations to determine Flood Hazard and are Colored to show variations

	A	B	C	D	E	F	G	H	I	J	K	L
	ST_LABEL	ADDRESS	COMMUNITY	High Hazard	TENANT_NAME	Level	Approximate Linear Footage	Structure Type	Accessory Linear Ft	1' Sandbag	2' Sandbag	Accessory 1'
149	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	4.4	171	HOUSE		684	1368	0
150	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	4.6	171	HOUSE		684	1368	0
151	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	4.8	171	HOUSE		684	1368	0
152	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	5	171	HOUSE		684	1368	0
153	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	5.2	171	HOUSE		684	1368	0
154	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	5.4	171	HOUSE		684	1368	0
155	Admiral's Landing St	2841	Paulina		LOGAN LOUQUE JR	5.6	171	HOUSE		684	1368	0
156	Admiral's Landing St	2861	Paulina		NOLAN DEROCHE, JR	5.2	266	HOUSE		1064	2128	0
157	Admiral's Landing St	2861	Paulina		NOLAN DEROCHE, JR	5.4	266	HOUSE		1064	2128	0
158	Admiral's Landing St	2861	Paulina		NOLAN DEROCHE, JR	5.6	266	HOUSE		1064	2128	0
159	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	3	208	HOUSE	226	832	1664	904
160	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	3.2	208	HOUSE	226	832	1664	904
161	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	3.4	208	HOUSE	226	832	1664	904
162	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	3.6	208	HOUSE	226	832	1664	904
163	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	3.8	208	HOUSE	226	832	1664	904
164	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	4	208	HOUSE	226	832	1664	904
165	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	4.2	208	HOUSE	226	832	1664	904
166	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	4.4	208	HOUSE	226	832	1664	904
167	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	4.6	208	HOUSE	226	832	1664	904
168	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	4.8	208	HOUSE	226	832	1664	904
169	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	5	208	HOUSE	226	832	1664	904
170	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	5.2	208	HOUSE	226	832	1664	904
171	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	5.4	208	HOUSE	226	832	1664	904
172	Admiral's Landing St	2871	Paulina		Lloyd Dicharry Jr.	5.6	208	HOUSE	226	832	1664	904
173	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	4.4	222	HOUSE		888	1776	0
174	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	4.6	222	HOUSE		888	1776	0
175	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	4.8	222	HOUSE		888	1776	0
176	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	5	222	HOUSE		888	1776	0
177	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	5.2	222	HOUSE		888	1776	0
178	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	5.4	222	HOUSE		888	1776	0
179	Admiral's Landing St	2885	Paulina		Dorrie Dicharry Oubre	5.6	222	HOUSE		888	1776	0
180	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	4.6	234	HOUSE		936	1872	0
181	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	4.8	234	HOUSE		936	1872	0
182	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	5	234	HOUSE		936	1872	0
183	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	5.2	234	HOUSE		936	1872	0
184	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	5.4	234	HOUSE		936	1872	0
185	Admiral's Landing St	2895	Paulina	*	LARRY BABIN	5.6	234	HOUSE		936	1872	0
186	Admiral's Landing St	2905	Paulina		JOSEPH HYMEL	4.6	249	HOUSE	111	996	1992	444

Addresses Highlighted are Known Flood Hazards or High Risk from Isaac or previous storms

# SPECIAL CONSIDERATIONS



Homes may still be in danger even if they are at higher elevations than the forecasted flood level.

This plan does not account for drainage backup, which may occur in areas of higher elevations and may flood as a result.



Areas such as Vacherie that are protected by our levee system and shown at low levels and are not as prone to flooding due to protection from the parish levee. These areas are planned for in the event of levee failure or topping.