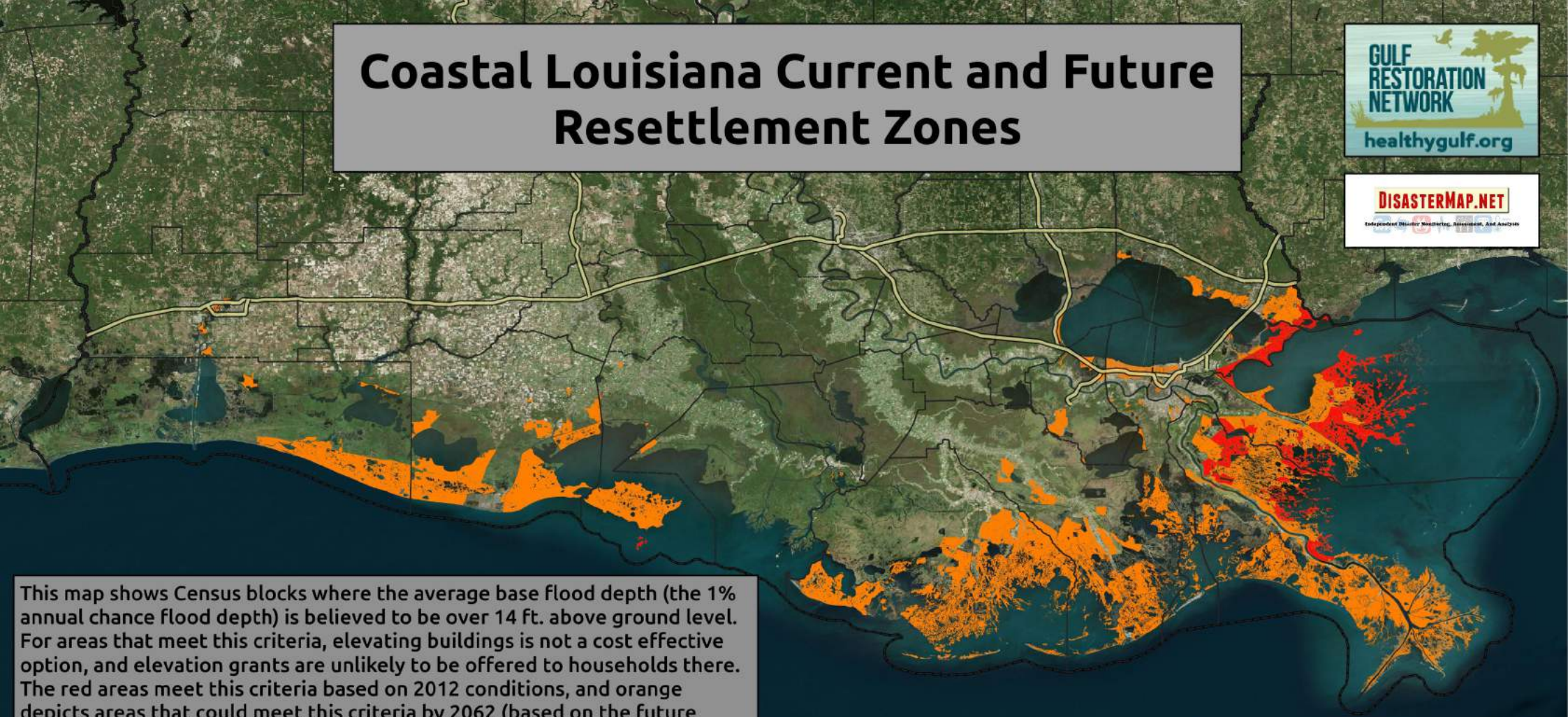


Coastal Louisiana Current and Future Resettlement Zones



This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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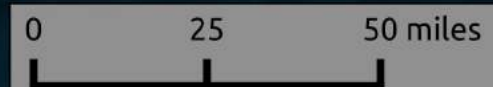
Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83

Scenario	2012	2062
People in Resettlement Zone	1,940	357,591
Houses in Resettlement Zone	1,036	116,319

Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing



Belle Chasse, Alliance, and Braithwaite Current and Future Resettlement Zones



Legend

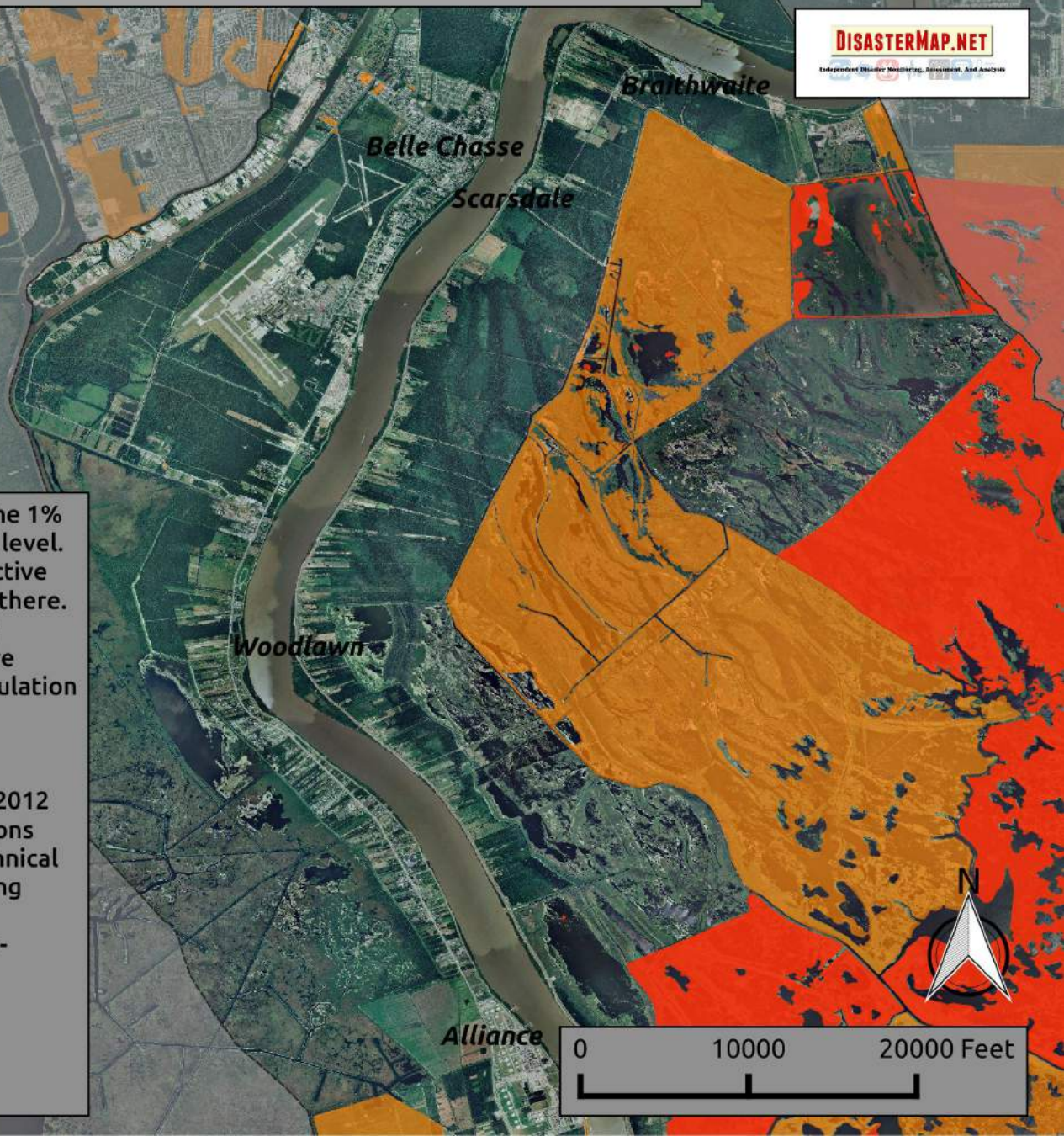
- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



Empire and Port Sulphur Current and Future Resettlement Zones



Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 10000 20000 Feet

Houma and Thibodaux Current and Future Resettlement Zones



Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83

Thibodaux

Schriever

Theriot

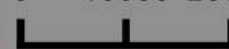
Houma

Point-Aux-Chenes

Theriot



0 10000 20000 Feet



Myrtle Grove and Pointe la Hache Current and Future Resettlement Zones

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Legend

Parish Outlines

Base Flood Depth over 14 ft (2012)

Base Flood Depth over 14 ft (2062)

Base Imagery from Bing

Myrtle Grove

Pointe la Hache

Port Sulphur

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 10000 20000 Feet



New Orleans, Kenner, and Metairie Current and Future Resettlement Zones



Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83

Kenner

Metairie

New Orleans



0 10000 20000 Feet



New Orleans East Current and Future Resettlement Zones



Legend

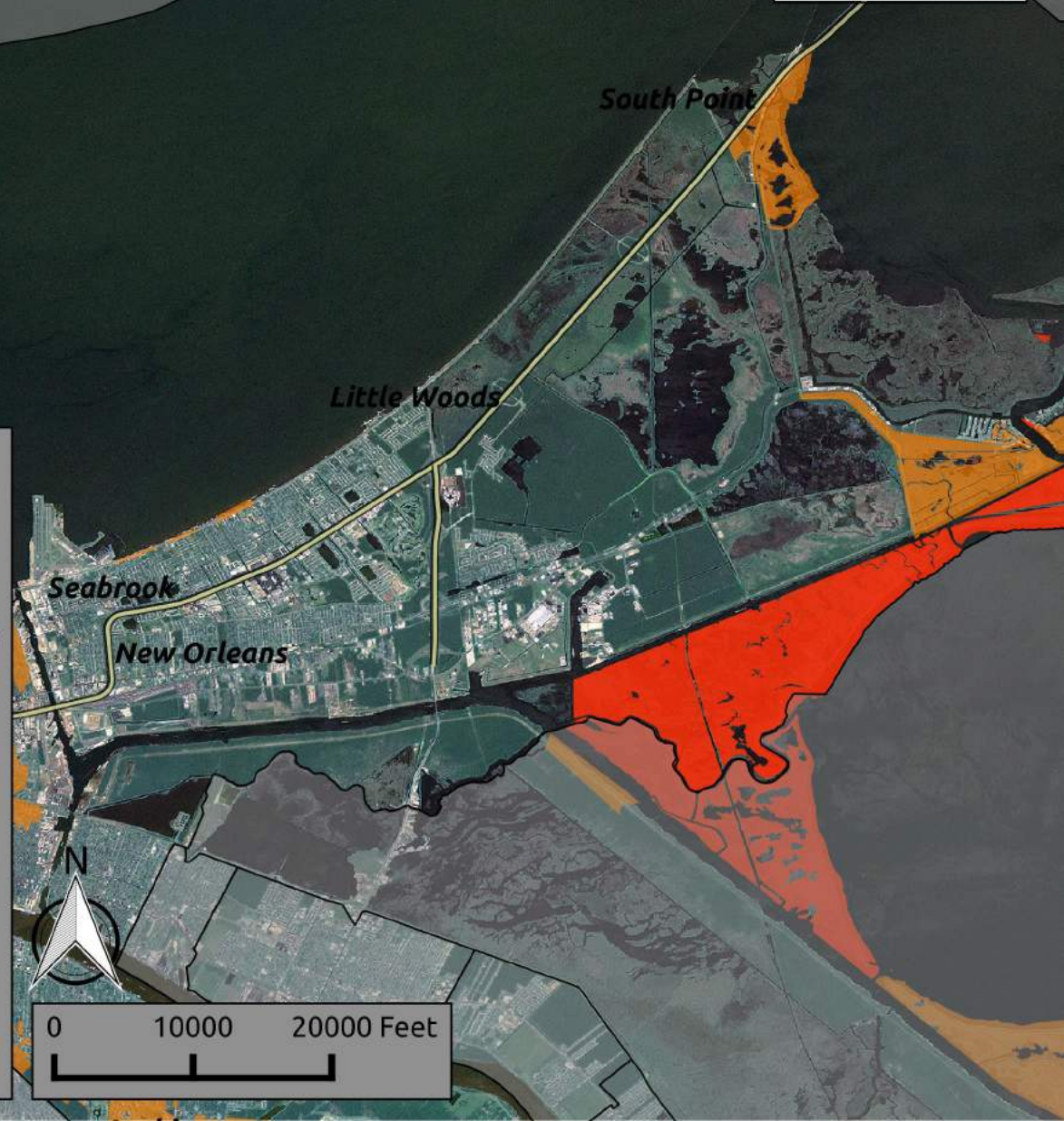
- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



New Orleans East Landbridge Current and Future Resettlement Zones



Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 10000 20000 Feet

Orleans Parish Current and Future Resettlement Zones

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Scenario	2012	2062
People in Resettlement Zone	21	92,560
Houses in Resettlement Zone	12	49,674

Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



Plaquemines Parish Current and Future Resettlement Zones



Scenario	2012	2062
People in Resettlement Zone	425	5,984
Houses in Resettlement Zone	187	2,793

Legend

Parish Outlines

Base Flood Depth over 14 ft (2012)

Base Flood Depth over 14 ft (2062)

Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

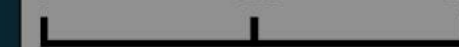
Flood depth data provided by the Louisiana Coastal Protection and Restoration Authority and is based on the analysis conducted for the 2012 Coastal Master Plan. A full description of the data along with limitations and uncertainties can be obtained from 2012 Coastal Master Plan technical appendices (specifically the Surge/Wave and Risk Assessment Modeling Reports), which can be downloaded here: <http://coastal.la.gov/a-common-vision/2012-coastal-master-plan/cmp-appendices/>

Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 12.5 25 miles



Terrebonne Parish Current and Future Resettlement Zones



Scenario	2012	2062
People in Resettlement Zone	1	18,243
Houses in Resettlement Zone	1	6,915

Legend

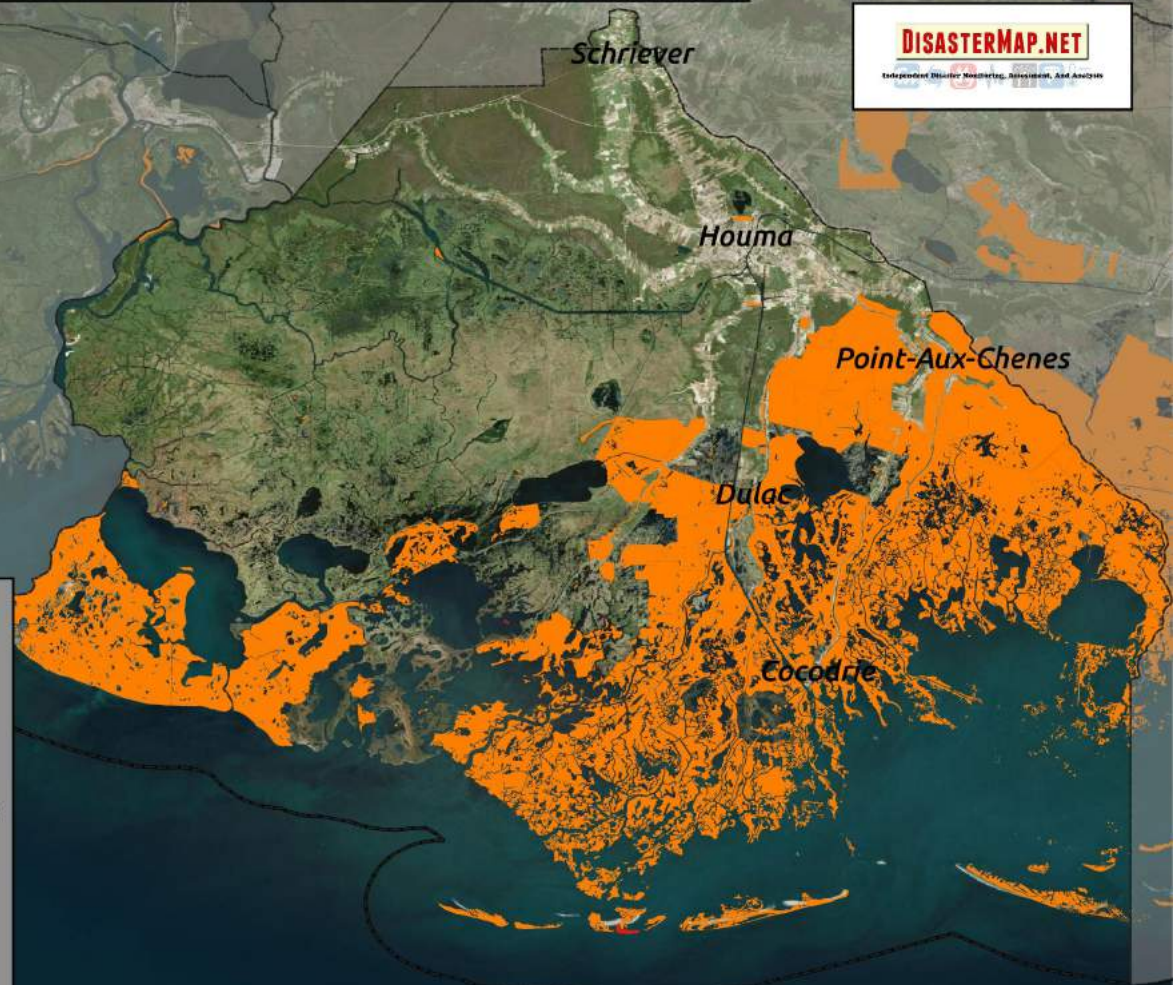
- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



Theriot, Montegut, and Cocodrie Current and Future Resettlement Zones

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Legend

Parish Outlines

Base Flood Depth over 14 ft (2012)

Base Flood Depth over 14 ft (2062)

Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 10000 20000 Feet



Buras, Triumph, Boothville, and Venice Current and Future Resettlement Zones



Legend

- Parish Outlines
- Base Flood Depth over 14 ft (2012)
- Base Flood Depth over 14 ft (2062)
- Base Imagery from Bing

This map shows Census blocks where the average base flood depth (the 1% annual chance flood depth) is believed to be over 14 ft. above ground level. For areas that meet this criteria, elevating buildings is not a cost effective option, and elevation grants are unlikely to be offered to households there. The red areas meet this criteria based on 2012 conditions, and orange depicts areas that could meet this criteria by 2062 (based on the future without action, least optimistic scenario). The table lists the total population and total number of houses in these areas.

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Population and housing data from 2010 US Census Summary File 1.

Coordinate Reference System: NAD83



0 10000 20000 Feet

UNDERSTANDING RESETTLEMENT ZONE MAPS

A COMPANION DOCUMENT

INTRODUCTION

Louisiana's coast faces the highest rate of land loss in the world. People living along the coast can see the changes, and some communities are moving north to prepare for sea level rise. As sea levels rise and coastal land loss continues, our state and federal governments must offer options to the communities facing these threats. Communities need resources for voluntary buyouts from their homes and assistance with floodproofing and elevation. Without this assistance, our neighborhoods and homes will be left vulnerable or unlivable.



According to the state of Louisiana, if an area would flood more than 14 feet during a 100 year storm event that area is deemed unsafe and is not considered a resilient community. The state calls these areas "Resettlement Zones."

To ensure that communities are prepared for the future and understand where predicted "Resettlement Zones" will be, Gulf Restoration Network has created a series of maps.

On our maps, the areas that are considered "Resettlement Zones" after 2012 are in **RED**. The areas that are predicted to become "Resettlement Zones" by 2062 are in **YELLOW**.

Under the state's Coastal Master Plan, Louisiana's "Resettlement Zones" are recommended to receive funds for "Voluntary Acquisition" or buy outs. Yet, as of October 2016 no funds have been made available for these voluntary buyouts. **Communities most at risk from sea level rise and flooding deserve assistance from our state and federal decision makers.**

"RESETTLEMENT MAP" REPORT DEFINITIONS

- ◆ **CPRA** - Louisiana Coastal Protection and Restoration Authority. CPRA is a state government agency in charge of comprehensive protection of Louisiana's coast. CPRA's Coastal Master Plan is intended to create plans for restoration and protection of the coast.
- ◆ **OCD** - Office of Community Development. OCD is an office of the State of Louisiana government's Division of Administration. They are responsible for helping our communities plan home elevations, and planning with our local parish's how to spend federal money coming into the state.
- ◆ **LASAFE** - Louisiana's Strategic Adaptations for Future Environments is a project prepared by the state of Louisiana's Office of Community Development Disaster Recovery Unit. This project is going to plan how to spend millions of dollars coming to Louisiana from the US government to help our communities elevate and flood proof homes.
- ◆ **CMP** - Coastal Master Plan. A plan that the state of Louisiana, under CPRA, is required to updated every 5 years. The 2017 Coastal Master Plan will be released in January 2017 and approved by the legislature in April 2017. This plan includes both "nonstructural" and "structural" flood protection plans.
- ◆ **Non-structural Protections** - Home elevations and floodproofing of individual homes and small businesses, or voluntary purchasing of homes by the state or federal agencies.

UNDERSTANDING THE DATA BEHIND THE MAPS

To discover what areas are Resettlement Zones, and areas that will be Resettlement Zones in the future, GRN and DisasterMap.net created maps using two sources of information. We used population and housing information from the 2010 Census and flood depth information from CPRA. The flood data is the same from CPRA was used to make the “Flood Risk and Resilience Viewer.”

The CPRA information used to make the maps is a future possible sea level rise scenario called “Future Without Action - Less Optimistic.” This information presents Louisiana’s coast as if no additional major flood protection or coastal restoration projects are done and assumes high land loss and high sea level rise. It also predicts significantly higher flood risk in the future.

HOW WERE THE MAPS MADE?

- ◆ **Step 1:** We found the areas that meet the resettlement criteria - the areas that have 14 ft. flood levels or more.
- ◆ **Step 2:** We outlined the Resettlement Zones for each parish.
- ◆ **Step 3:** We created maps of the Resettlement Zones. The resulting maps show all Census blocks that are Resettlement Zones and include the housing and race.
- ◆ **Step 4:** To make sure the flood zones were accurate, we compared the map to the CPRA flood maps online in the Flood Risk and Resilience Viewer.
- ◆ **Step 5:** We found the total number of houses and people in the Resettlement Zones.



RESULTS

Table 2: Estimated number of people, houses, and blocks in Resettlement Zones

	Now (2012)	Less Optimistic Sea Level Rise Scenario (2062)
People	1,940	357,591
Community Members that Identify as Black	299	100,557
Community Members that Identify as Hispanic	84	41,052
Community Members that Identify as White	1,379	218,271
Houses	1,036	116,319

New Orleans is at risk of severe flooding within 50 years. If nothing is done to protect our coast, many communities will be in the Resettlement Zone. Areas south of Houma, parts of the Chenier Plain, and many vibrant neighborhoods in Gentilly, Lakeview, Metairie and Kenner are all predicted to be Resettlement Zones by 2062.

ALL MAPS HAVE LIMITATIONS

It is important to remember that all research and analysis has limitations and uncertainties. Some of our limitations include the information sources, not knowing future population, and understanding all the possibilities for our coastal areas. Even with these uncertainties, we were able to use the available data to highlight the resettlement problem and to provide an early estimate of the magnitude of this problem for coastal Louisiana.



First, it's hard to predict the future -

1. It is difficult for scientists to predict flooding in a specific place during a specific year at a specific depth. Due to the unpredictability of hurricanes and other disasters, it is difficult to know how many people and homes will be in areas of coastal Louisiana.
2. The 2010 Census population and housing numbers is a snapshot that cannot predict how many more or less people will live on our coast in the future.

Second, the two sources of information are also from two different years -

1. This means that there could be very small differences in our information. However, the population number is still the same in our flood maps and we have done our best to predict flood zones in the future.

Third, CPRA has recommended a more in-depth study for each area of our coast.

1. The information used in this research is for a broader, regional use of coastal Louisiana than for highly detailed, specific locations. This means that your specific house cannot be found on our maps. You need to look at future maps created by CPRA and OCD to determine if your home is in the Resettlement Zone. For example, the current flood conditions show a large Census block with 1,446 people in St. Tammany parish's Resettlement Zones. But only a small area within the block has a flood depth of at least 14 ft. The entire block of over a thousand people may not need to be included in the Resettlement Zone.
2. All flood predictions are estimations. We can never know if a big storm, for example, will change how an area floods in the future. This means that the CPRA can have up to 25% uncertainty in its estimated flood depth. In other words a flood depth of 14 ft may actually be somewhere in the range of 10.5 ft. to 17.5 ft.
3. Finally, there some communities that are not declared as Resettlement Zones because they are below the 14 foot elevation cut-off. It is important to remember that 14 feet is the maximum level of elevation for homes under CPRA and OCD recommendations. This means that some communities will voluntarily relocate since their flood risk is high. For example, Braithewaite, on the east bank of Plaquemines, is not included in the resettlements zones because the predicted flood level is less than 14 ft. Braithewaite has flooded twice in the last decade, including very severe flooding during Hurricane Isaac in 2012. However, most of this community has already resettled.



While the exact numbers and values may be *uncertain*, the reality is still that the Resettlement Zones will impact many people, neighborhoods and communities if nothing is done to protect our coast.

CONCLUSION

From the very edges of the Gulf all the way into the greater New Orleans area, many people will need to make decisions about whether they want the state to help them relocate.

Currently, 1,940 people and 1,036 houses are located areas where the flood depth is already 14 ft. or greater. **This means almost 2,000 people live within Resettlement Zones.**

Scientific predictions were made looking 50 years into the future using the 2012 flood risk results from the 2012 Coastal Master Plan. Assuming no major actions are taken to battle land loss and sea level rise, **357,591 people and 116,319 houses will be in Resettlement Zones across coastal Louisiana by 2062.**



These numbers are because in the future our most populated areas are at risk of becoming Resettlement Zones; including areas south of Houma and the Chenier Plain as well as parts of the Greater New Orleans region like Metairie, Kenner, Lakeview and Gentilly.

Considering the challenges we face, we need Governor Edwards to do everything he can to protect our communities. While continuing to pursue wetlands restoration and other structural protections in the Master Plan, the state must also provide funding for efforts that will make people safer sooner, including floodproofing, elevation and voluntary buyouts.

ACKNOWLEDGEMENTS

Disastermap.net created these maps with funding from Gulf Restoration Network. Gulf Restoration Network staff then worked diligently to translate the technical report into this document for the public. Andrea Galinski of CPRA provided the flood depth datasets from the 2012 Coastal Master Plan. All GIS based data processing and data analysis was completed in QGIS.

