



# Climate Displacement Forum

## Part 2: House-Level Retreat

October 20, 2020

Brought to you by:



# Welcome!

## *Housekeeping*



- Please mute



- Use the question function



- Session will be recorded and posted on the Climate Adaptation Knowledge Exchange – [www.CAKEx.org](http://www.CAKEx.org)



- Slides & presenter information are available for download



- Contribute to the Forum resource page



- Technology Used- during video sound will come through computer speakers only

# Part 2: Household-Level Retreat



Olga McKissic,  
H.L. Neblett Community  
Center, Inc.



Dr. Kim Mosby,  
LSU Coastal  
Sustainability Studio



Anna Weber,  
Natural Resources  
Defense Council



Fawn McGee,  
NJ DEP Blue Acres &  
Green Acres Program



# Acknowledgements



# HOUSEHOLD-LEVEL RELOCATION

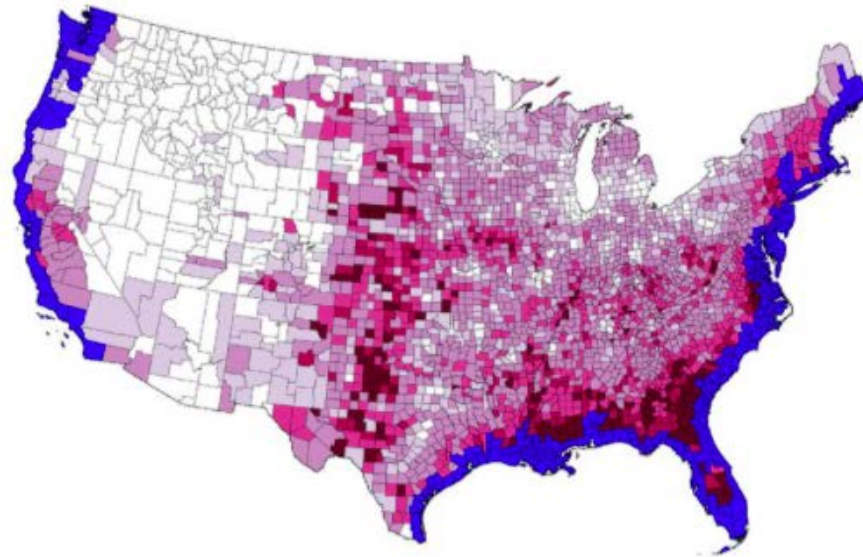
CITYLAB

## Where America's Climate Migrants Will Go As Sea Level Rises

13 million U.S. coastal residents are expected to be displaced by 2100 due to sea level rise. Researchers are starting to predict where they'll go.

By [Linda Poon](#)

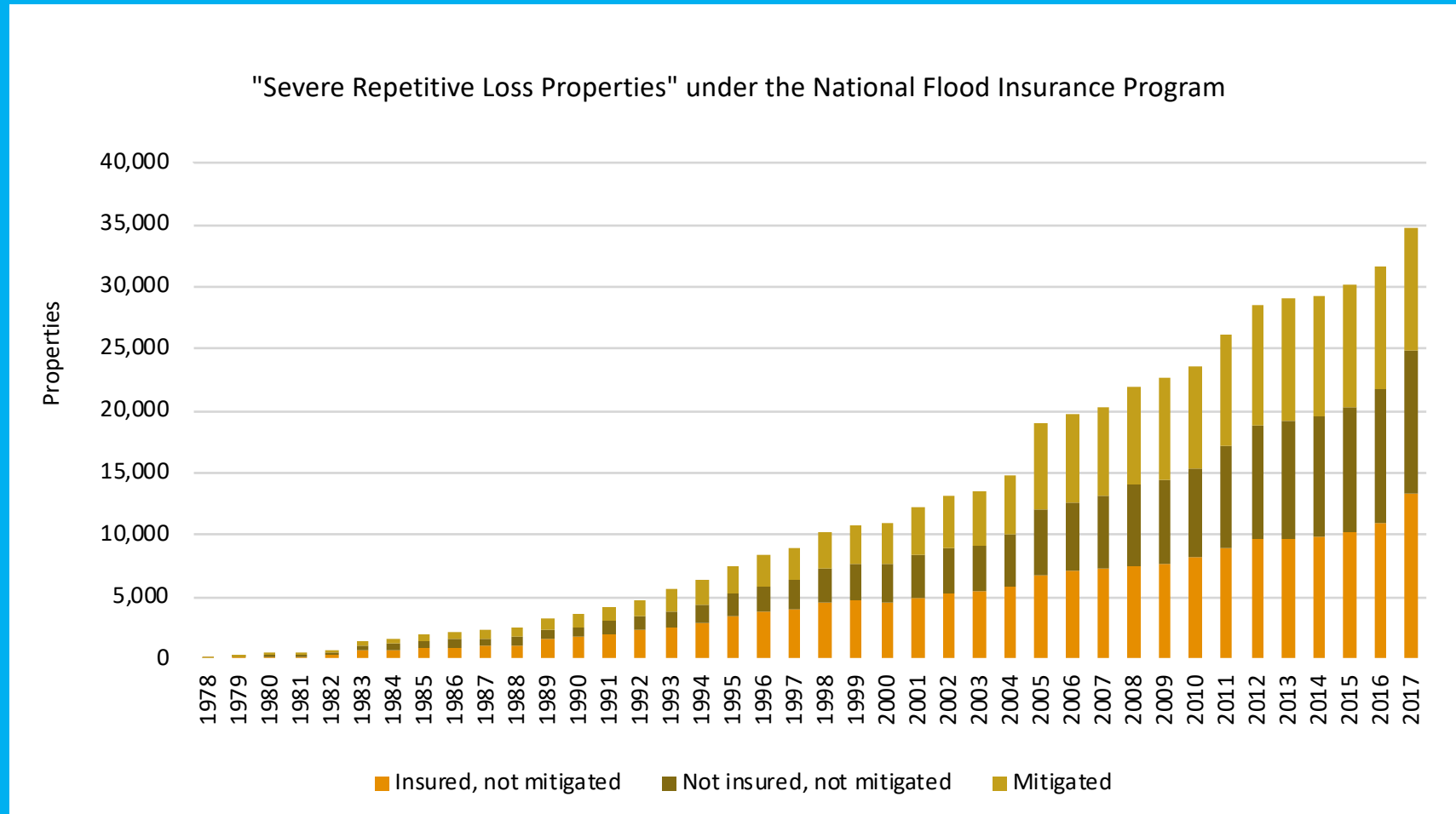
February 3, 2020, 10:06 AM EST



Sea level rise could displace some 13 million people. Here's where they might go. *PLOS One*

# FLOOD MITIGATION ISN'T KEEPING PACE

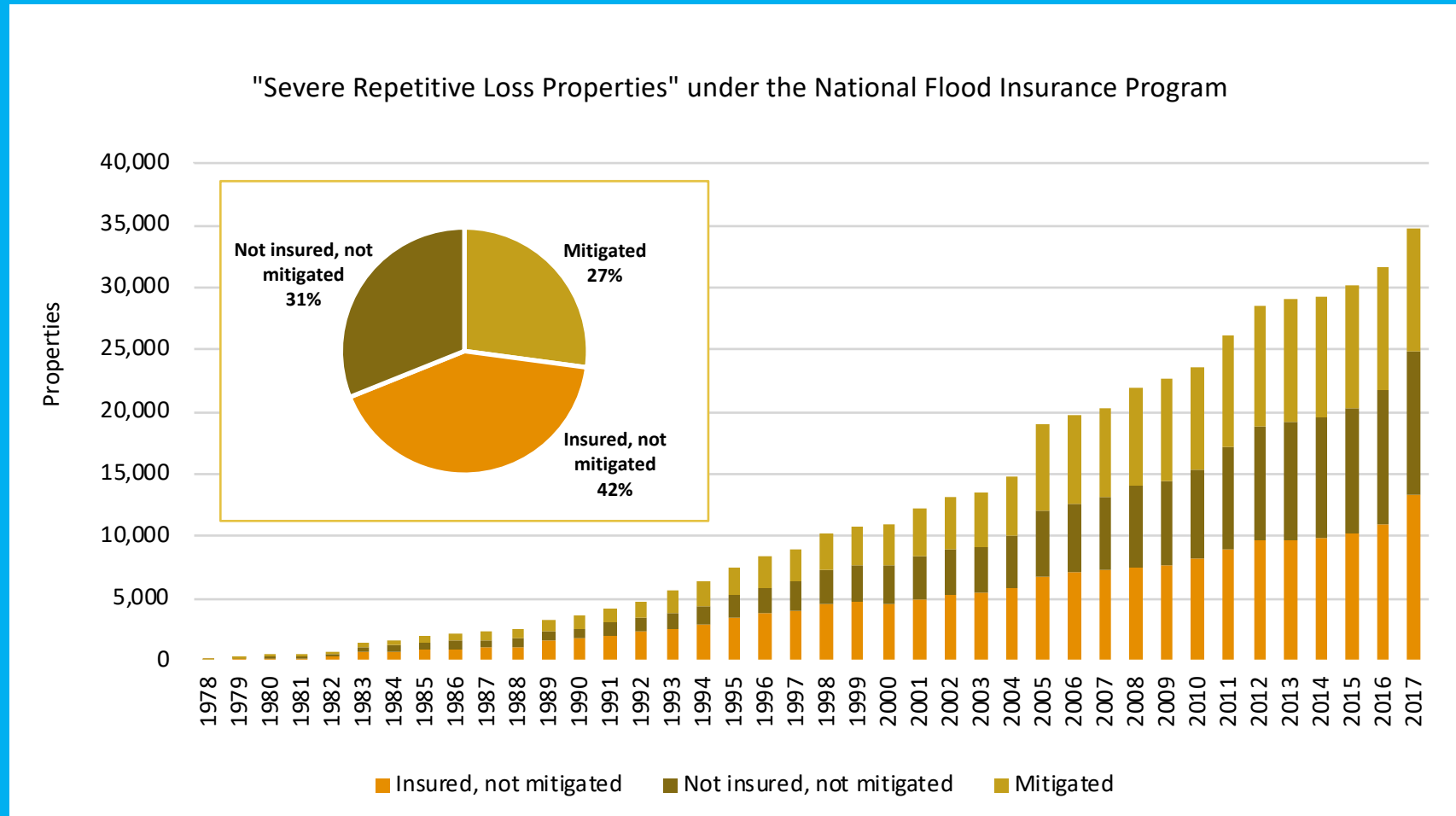
## EVEN FOR THE MOST FLOOD-PRONE HOMES



Data from FEMA, as of May 2018

# FLOOD MITIGATION ISN'T KEEPING PACE

## EVEN FOR THE MOST FLOOD-PRONE HOMES



Data from FEMA, as of May 2018

<https://www.nrdc.org/resources/losing-ground-severe-repetitive-flooding-united-states>

# HOW DOES A BUYOUT WORK?

(ON PAPER)

## STEP 1



Flooding in North Charleston, SC in 2015  
(source: Ryan Johnson on Flickr)

## STEP 2



Demolition of a home purchased via New Jersey's  
post-Sandy Blue Acres program (source: FEMA)

## STEP 3

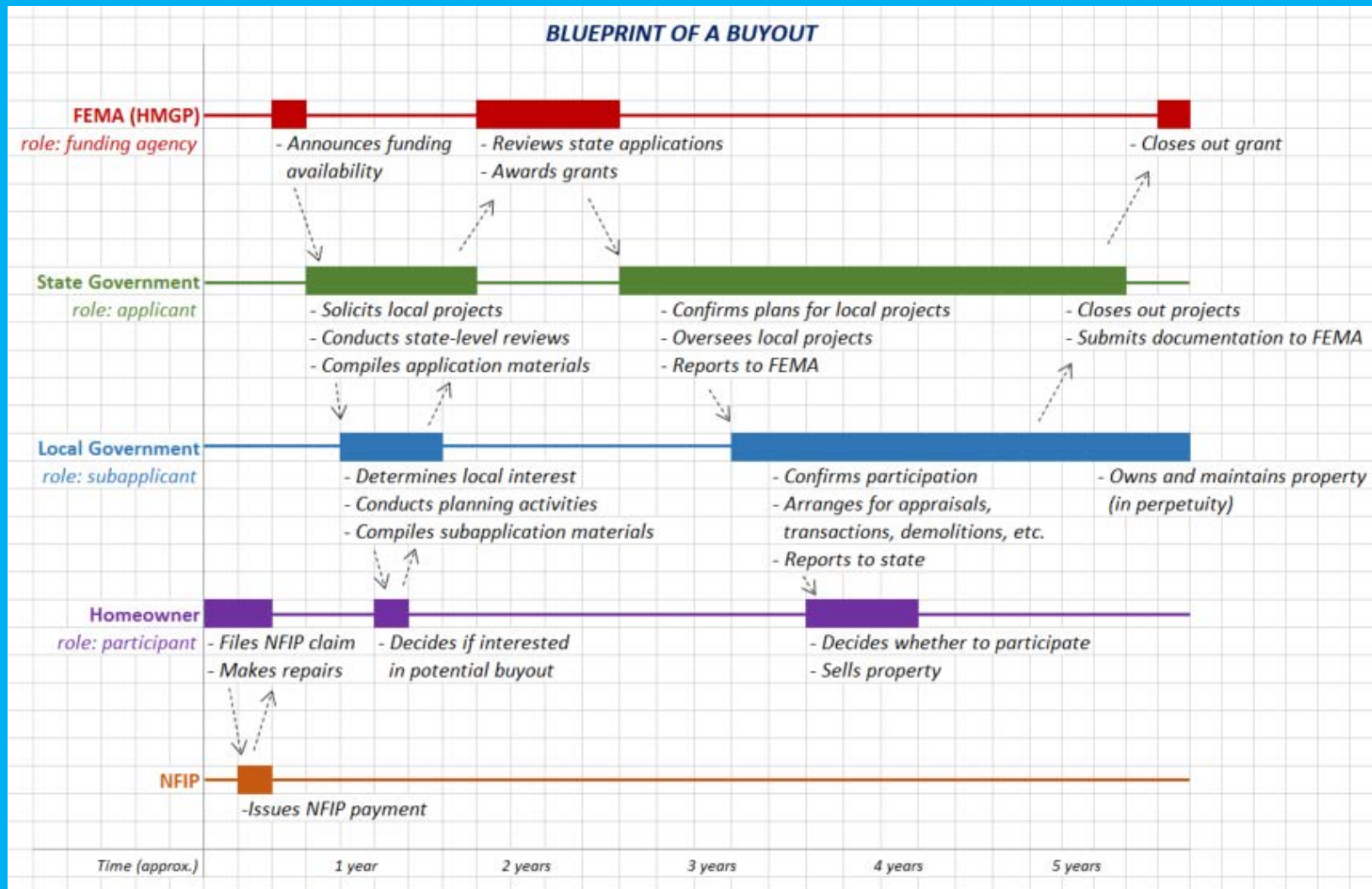


Acquired property in Crystal City, MO  
(source: FEMA)



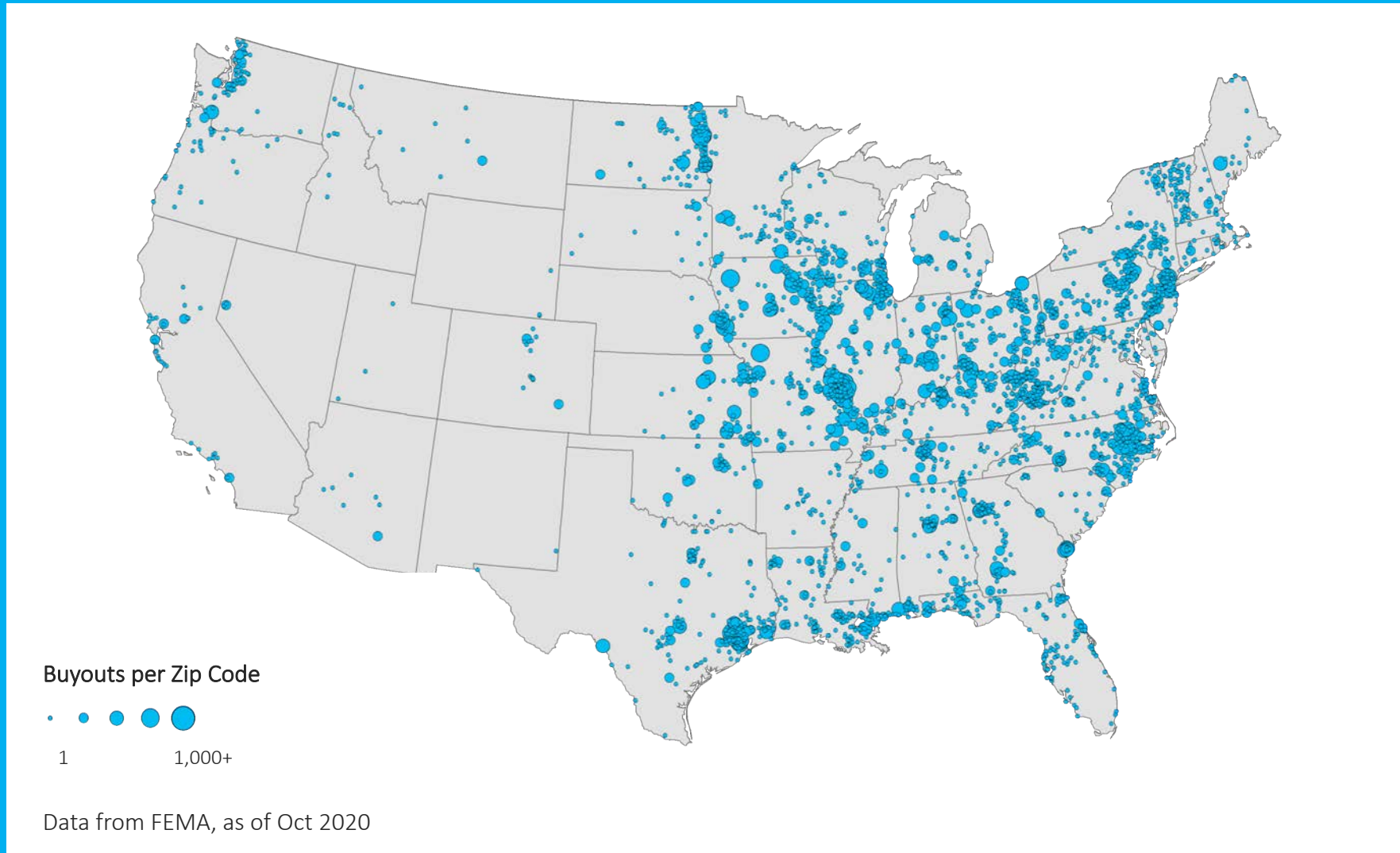
# HOW DOES A BUYOUT WORK?

(IN REAL LIFE)



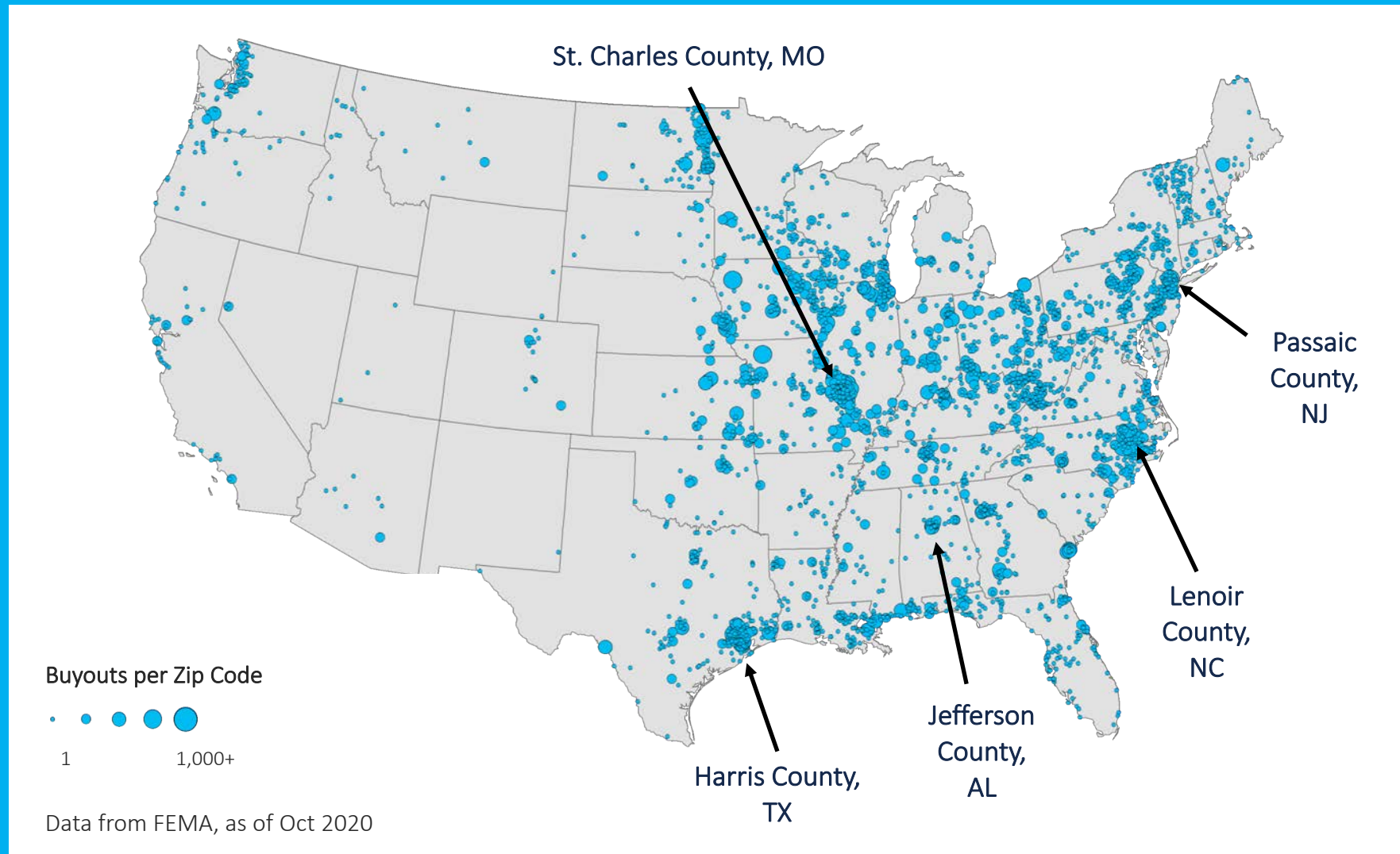
# FEMA-FUNDED BUYOUTS

## WHERE THEY HAPPEN



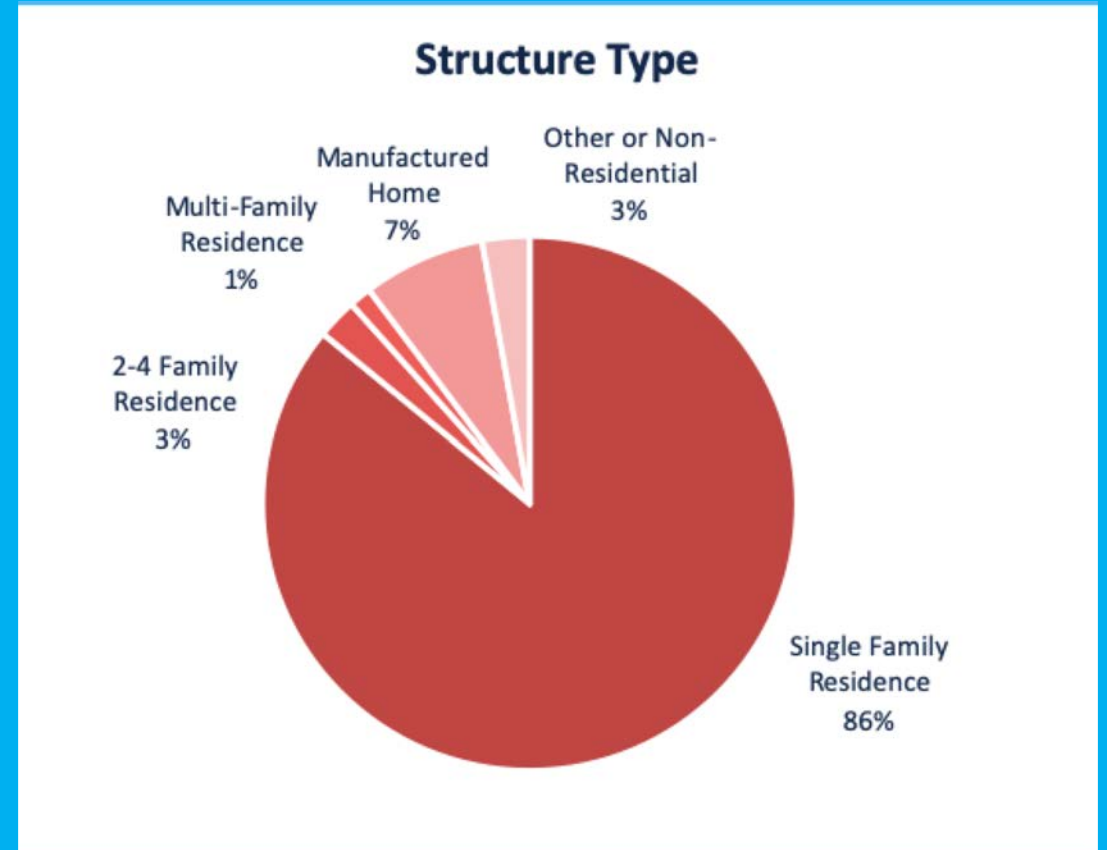
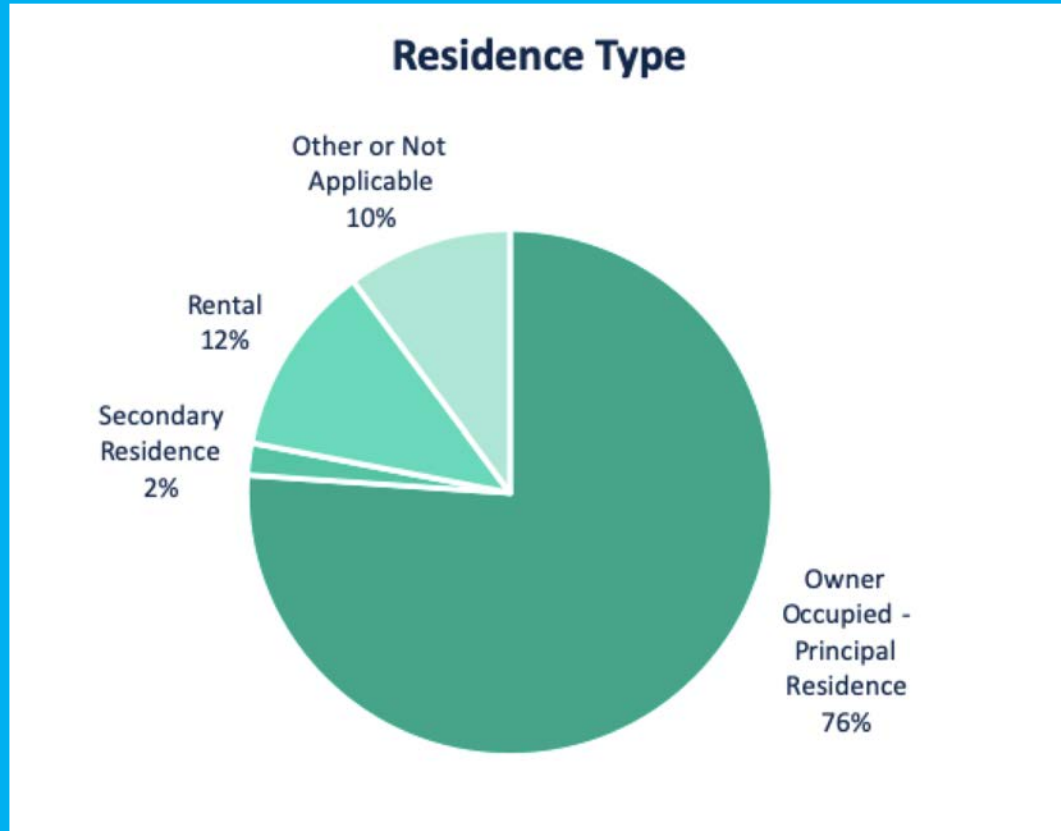
# FEMA-FUNDED BUYOUTS

## WHERE THEY HAPPEN



# FEMA-FUNDED BUYOUTS

## WHO GETS THEM



Data from FEMA, as of Oct 2020



INVESTIGATIONS

## How Federal Disaster Money Favors The Rich

March 5, 2019 · 5:00 AM ET  
Heard on All Things Considered



REBECCA HERSHER



ROBERT BENINCASA



Flooded WV residents feeling financial strain while waiting on FEMA buyout

By Lori Kersey Staff writer · Jul 14, 2018

POLICY & ETHICS

## Racial Inequalities in Housing Extend to Flood Buyout Programs

By Daniel Cusick, E&E News on February 19, 2020

SOUTHERN POLITICS

## Hell and high water: How flooding and buyouts threaten Black history

by LAURA THOMPSON March 11, 2019

THESE CHANGES  
COULD MAKE U.S.  
HOME BUYOUTS MORE  
EQUAL

SEPTEMBER 25TH, 2018

POSTED BY DANIELLE TORRENT TUCKER-STANFORD

Published: 10 September 2018

Social justice implications of US managed retreat buyout programs

[A. R. Siders](#)



October 22, 2019



Carlos Martín

Follow @carlosonhousing

## Who Are America's "Climate Migrants," and Where Will They Go?

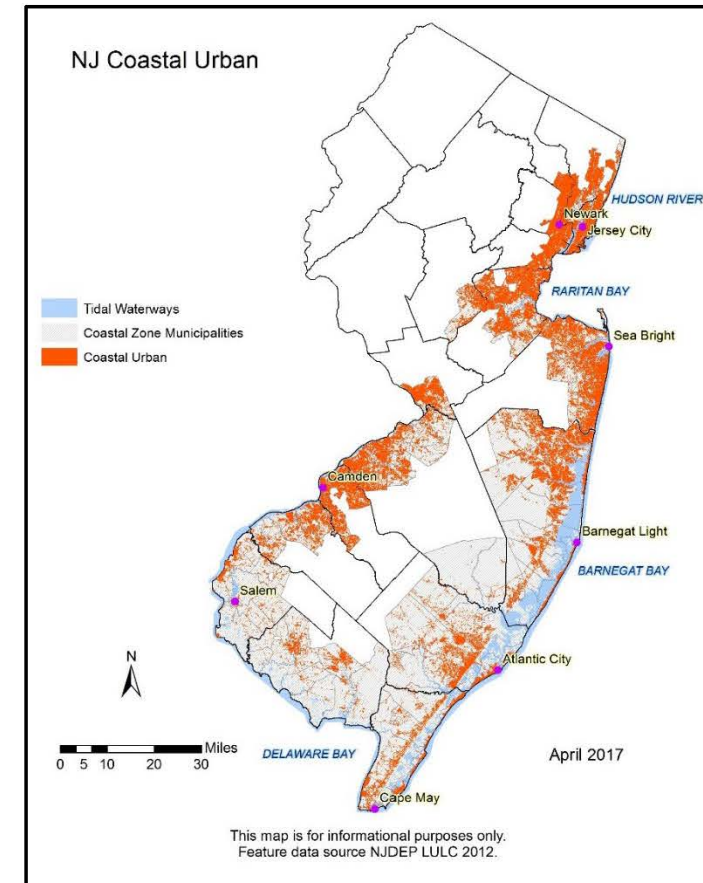
Climate migrants—people displaced by the far-reaching effects of climate change—already exist in the United States. They include homeowners wading through the [process for buyouts](#) of flood-prone homes, [families evacuating](#) during climate-exacerbated disasters, and the [families moving en masse](#) from places experiencing environmental and economic changes.

Just last year, [16.1 million people](#) globally were displaced because of weather-related disasters. More than 1.2 million of those displaced were Americans. [Journalists](#) and [policymakers](#) are paying greater attention to this issue.

Studies of US climate migration, retreat, and relocation focus on the vulnerability of starting places, the characteristics and motives of migrants, and the implementation of programs such as buyouts. But what happens to these families after they move?

# A Changing Climate

- Rising Sea Level
- Storm Intensity Increasing
- Coastal Erosion
- Development causing storm water run-off
- Sunny-day (nuisance) flooding



\*FEMA, August 4, 2004



# A Densely Populated & Flood-prone State





# October 29, 2012: Superstorm Sandy Strikes

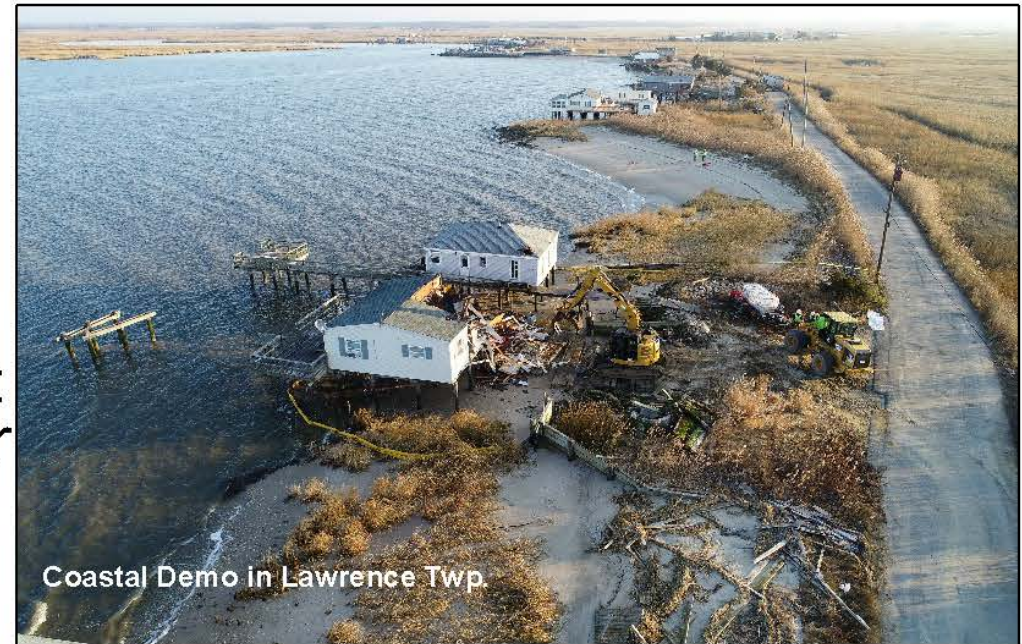
- 365,000 homes damaged
- 2.8M homes w/o power
- 100,000 downed trees
- 600 roads/tunnels closed
- 80 water/wastewater plants inoperable
- 1,400 vessels sunk/displaced
- 6.2M Cu Yds of housing materials and debris removed
- 100,000 Cu Yds of debris from waterways
- \$382M in commercial property damages



Hoboken, NJ, Oct. 2012

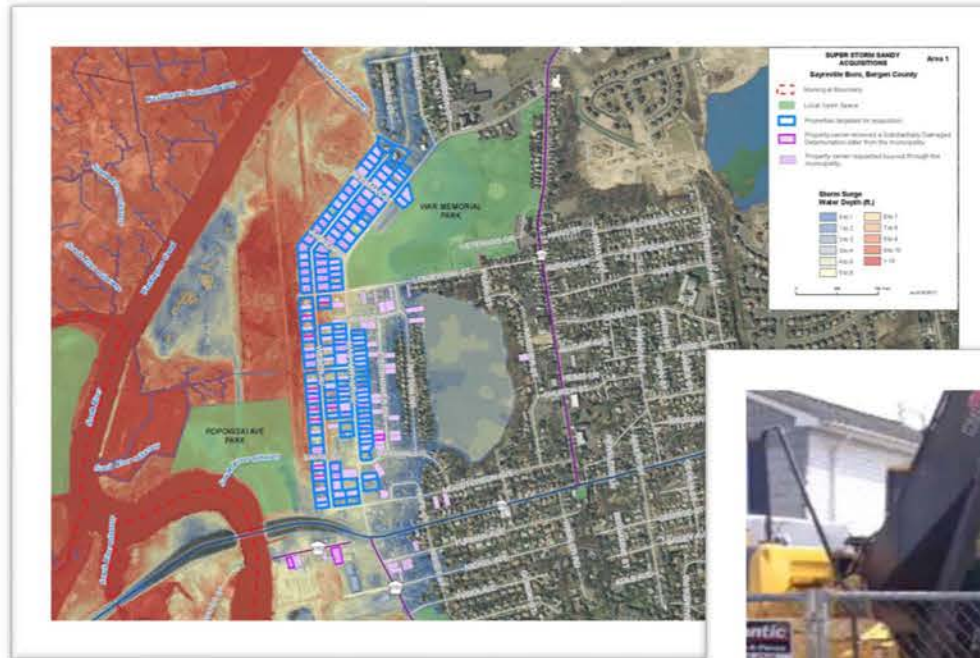
# Criteria for a Blue Acres Buyout

1. Flood damage from Superstorm Sandy or repeated flooding
2. Clusters of homes
3. Willing sellers/support of local officials
4. Opportunity for significant impact on environment, or public health, safety, and welfare
5. Repeated NFIP claims
6. Benefit-cost analysis





# Process: From Mapping to Demolition



# Blue Acres Benefits – Community

- Increases public safety by moving families out of harm's way.
- Promotes resiliency and allows flood waters to be reabsorbed through floodplain management.
- Creates open space that promotes recreation, and advances flood mitigation.



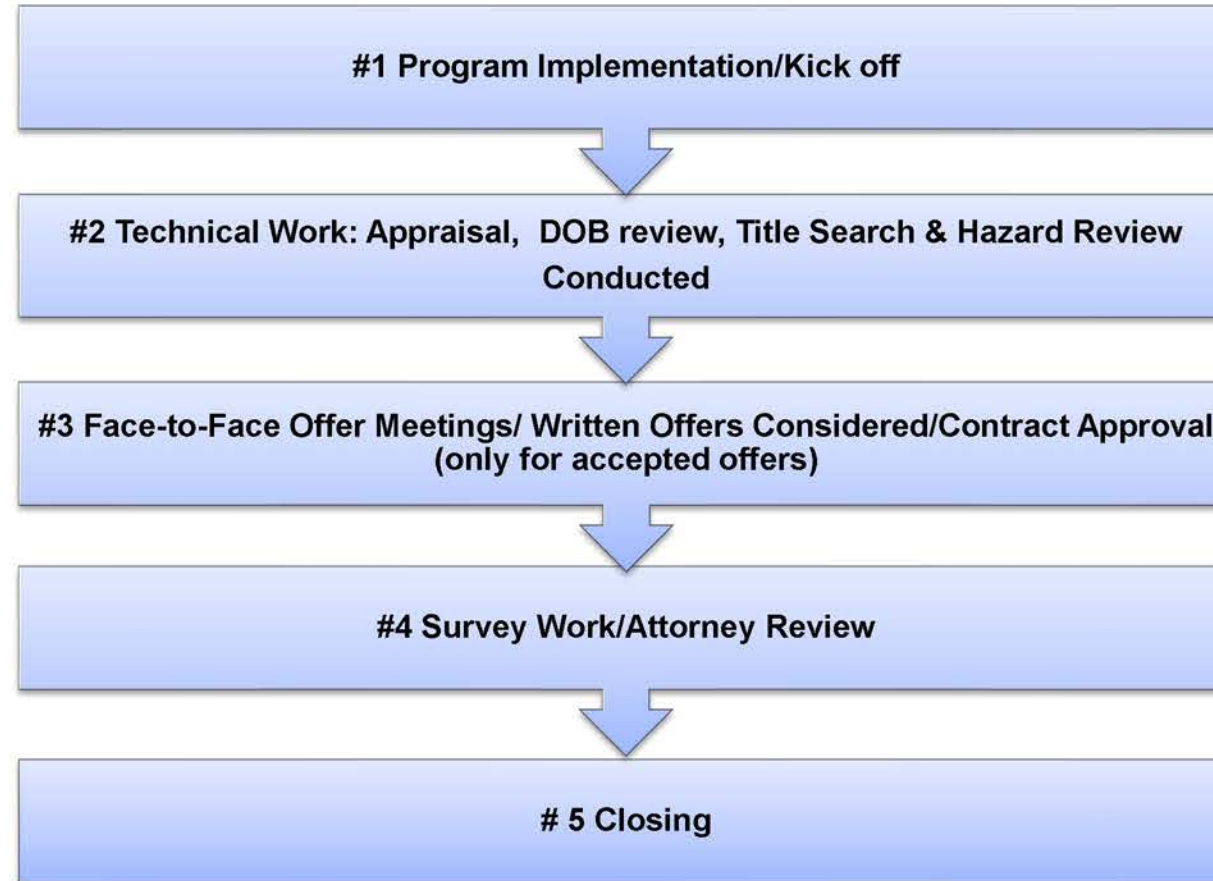


# Blue Acres Benefits – Individual

- Provides an option to move out of harm's way.
- receive pre-storm value for the home (unless they purchased the property after Superstorm Sandy).
- There is no realty transfer fee.
- There is no gross income tax on the sale of the property.
- There is no commission to a realtor.



# 5 Steps to A Blue Acres Closing



# Blue Acres Program: Innovations

- **Appraisal Appeal Process:** Instituted an offer appeal process to address homeowner concerns.
  - **Dedicated Mortgage Team:** Forged relationships with lenders: FHA, Freddie Mac, Fannie Mae, NJ Housing and Mortgage Finance Agency and NJ Division of Banking and Insurance.
  - **Tenant Relocation Team:** Relocate displaced Tenants. Units must meet Housing Quality Standard for both occupancy and habitability. Decent, safe and sanitary and “outside of the flood prone areas”.
- 
- Successfully negotiated with 35 lenders resulting in \$5.7m in mortgage forgiveness for 73 homeowners





# NJDEP Blue Acres Buyout Program

**1995-2012:** Purchased 300 homes pre-Sandy

**2013:** Blue Acres designated as State's Sandy buyout program to use federal funding to move families from harm's way.

**June 2019:** Governor Murphy signs constitutional measure creating a stable source of annual funding for Blue Acres.

**Sept. 2020:** More than 730+ properties closed since 2013.

## Current funding:

FEMA HGMP: \$185M

HUD CDBG-DR: \$100M

State bond funds: \$15M+



**1096 OFFERS**



**731+ CLOSINGS**



**690 DEMOLITIONS**



**\$5.7M in DEBT FORGIVENESS**

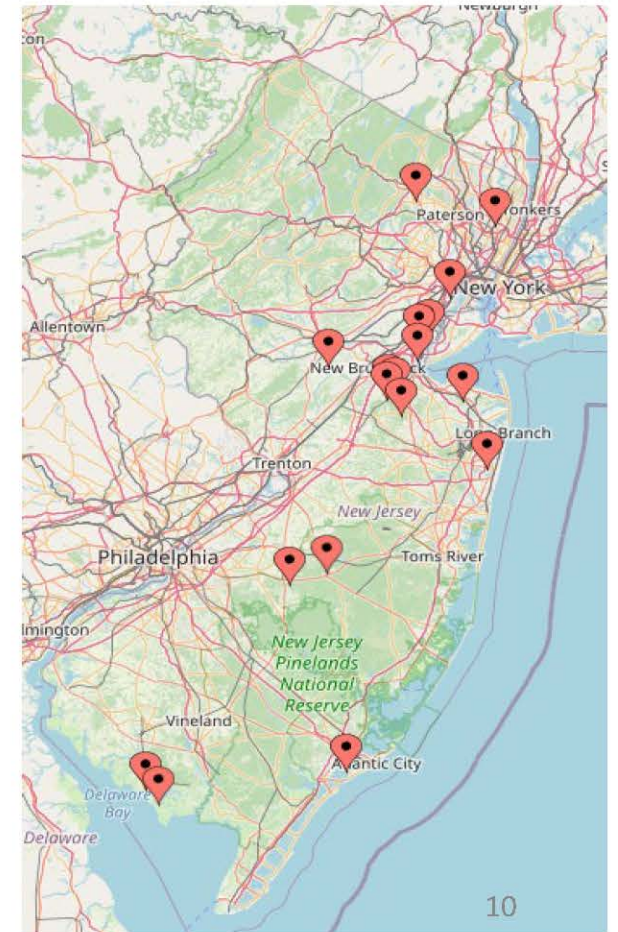


**48 TENANT RELOCATIONS**



**19 MUNICIPALITIES/10 COUNTIES**

National Adaptation Forum Series-Climate Displacement,  
Relocation & Managed Retreat-Household-Level Retreat





# Keys to Success

- Empower a dedicated and skilled team
- Engage local government officials to build consensus and support
- Build strong IT capabilities
- Create a strong partnership with FEMA & HUD through early and close collaboration
- Give homeowners hands-on service




# Frameworks of Recovery:

## The Intersection of Policy & Household Decision-Making after Hurricane Katrina

Kim Mosby, PhD  
LSU Coastal Sustainability Studio  
[kmosby4@lsu.edu](mailto:kmosby4@lsu.edu)

National Adaptation Forum Webinar Series:  
Climate Displacement, Relocation, & Managed Retreat  
Part 2: Household-level Retreat  
October 20, 2020

# Agenda

- ▶ Introduction
  - ▶ Theoretical Perspectives
  - ▶ Literature Review
  - ▶ Research Design & Methods
  - ▶ Findings
  - ▶ Discussion
  - ▶ Conclusion
- 



# Impact from Major Hurricanes



New Orleans, LA 2005



Key Largo, FL 2017



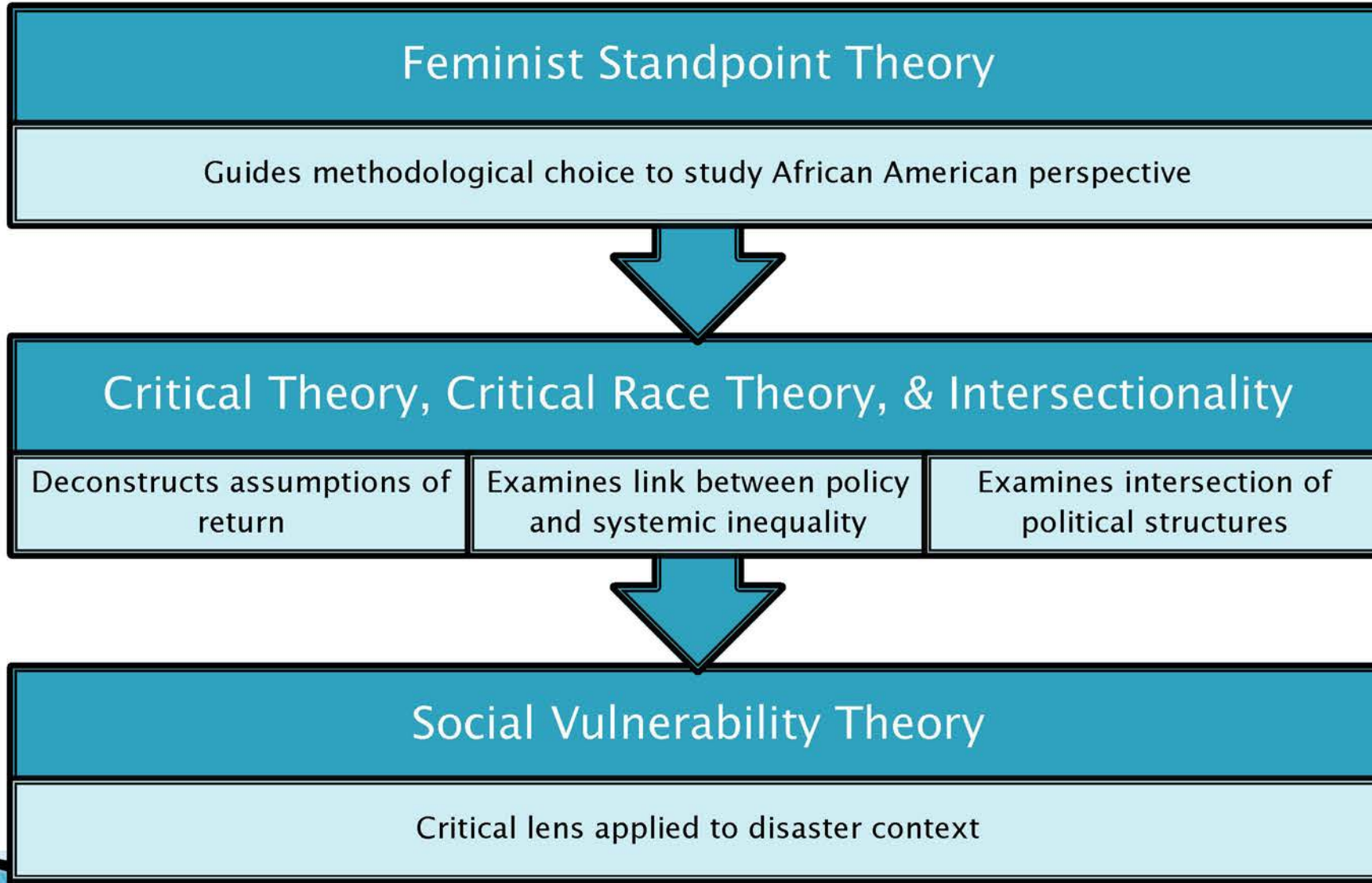
Longs, SC 2018



Houston, TX 2017



# Theoretical Perspectives



# Literature Review

- ▶ Impact of disaster
  - “Race maps closely with pollution, vulnerability, and unequal protection” (Bullard & Wright, 2012, p. 232).
- ▶ Recovery & Continued Vulnerability
  - Aid critical but follows existing lines of power (Pais & Elliot, 2008)
- ▶ Hurricane Katrina’s Impact on New Orleans
  - African Americans: 67% of pop. but 73% of impacted
  - Mental & physical health impacts (Adeola & Picou, 2014)
- ▶ Recovery Planning & Policy
  - Limited citizen participation (Nelson et al, 2007)
  - Neoliberal policies exacerbated inequality (Gotham, 2015)

# Research Design & Methods

- ▶ Design: Qualitative Case Study
- ▶ Methods: Content Analysis & Interviews
- ▶ Sampling: Purposive, Max. Variation, Snowball
- ▶ Research Question:

How do African Americans displaced by Hurricane Katrina frame challenges to return to post-Katrina New Orleans? (Mosby, 2020).

	2011	2016
Returned	5	4*
Displaced	9	7*†
Relocated	3	3
Total	17	14

\*Participant could not be contacted in 2016.

†Participant contacted, but scheduling conflicts prevented follow-up interview.



# Findings: Pushes & Pulls of Place





# Perceptions of Race, Gender, & Class



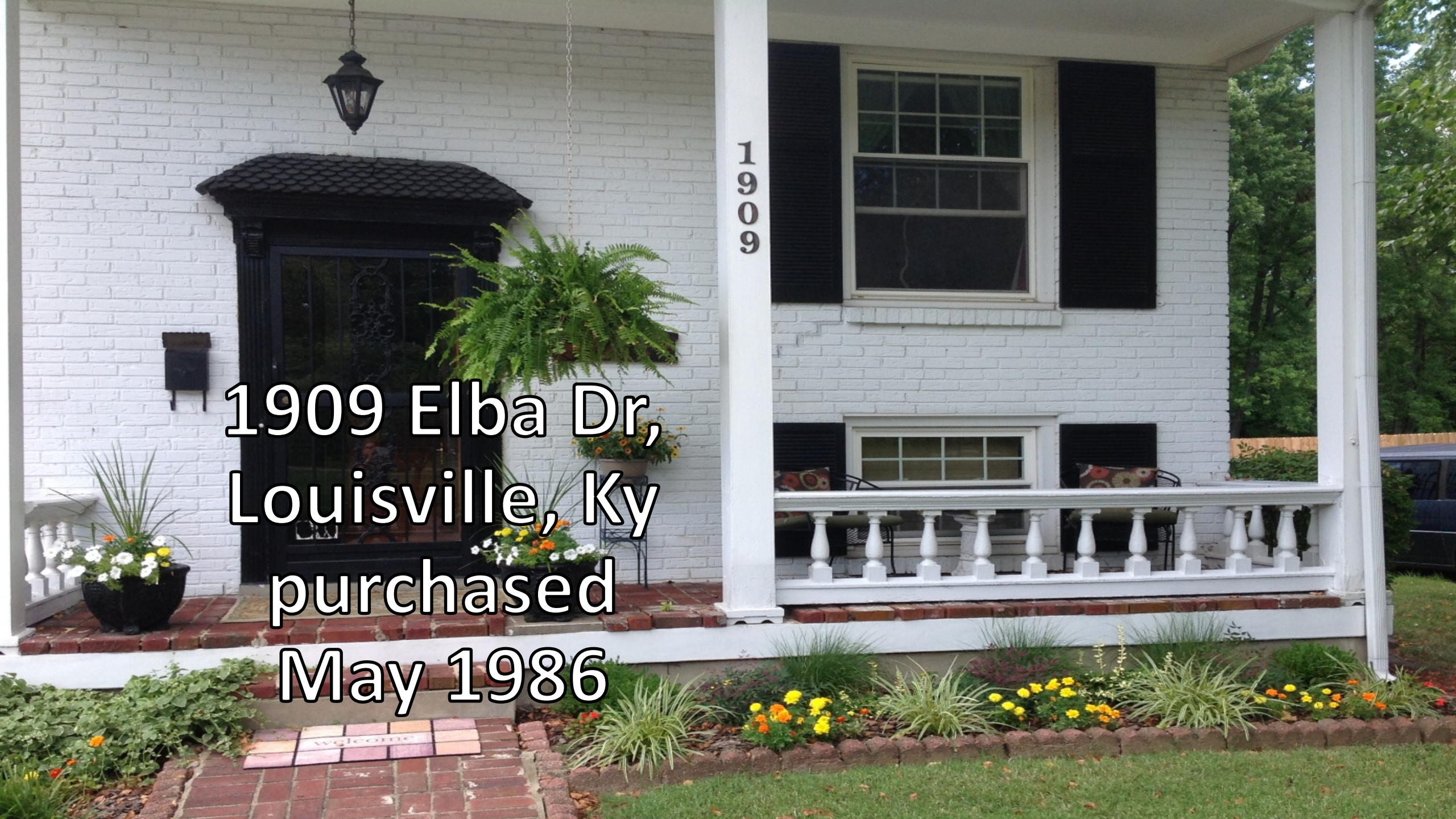
# Lessons for the Future



# Questions?

Kim Mosby, PhD  
LSU Coastal Sustainability Studio  
[kmosby4@lsu.edu](mailto:kmosby4@lsu.edu)

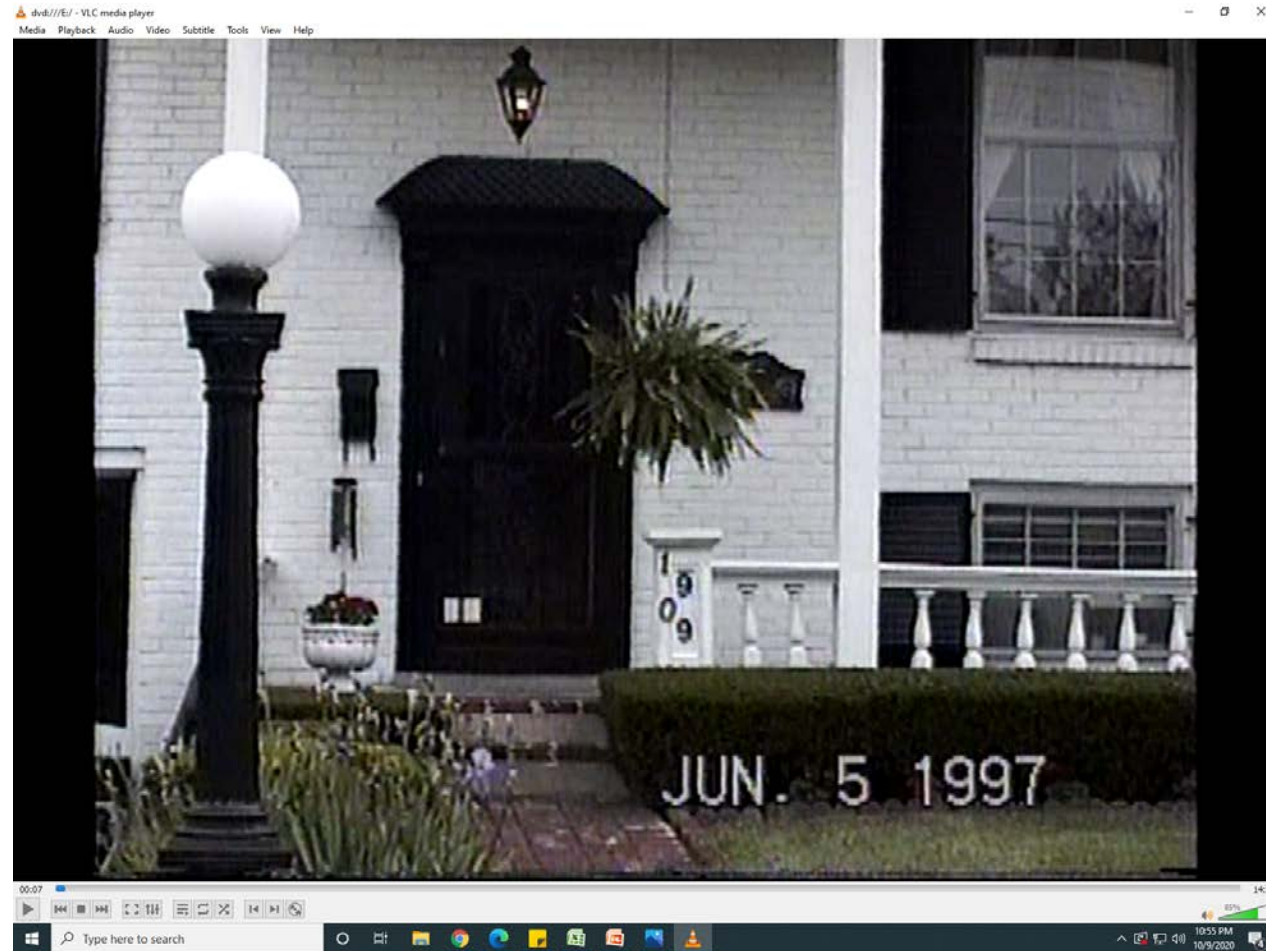




1909 Elba Dr,  
Louisville, Ky  
purchased  
May 1986



# March 1, 1997 Flood



# Still working on it in June.....



**Both city and county adopted the Louisville/Jefferson County Flood Plain Management Plain in February 2001.**



# Sept 22, 2006 Flood & August 4, 2009

- **In 2006** (computer was in 2013 flood, lost video), we experienced the same amount of water entering our home as in 1997, **18-20 inches**. **Metropolitan Sewer District (MSD)** of Louisville started working on a plan to reduce and or eliminate flood waters in our neighborhood. As a good faith effort, we **received a stipend** to pay for our insurance and deductible to help restore our homes.
- **August of 2009**, was **another major flood event in Louisville**, our neighborhood was **spared with only minor effects**, I filed a flood claim only for my laundry room flooring.

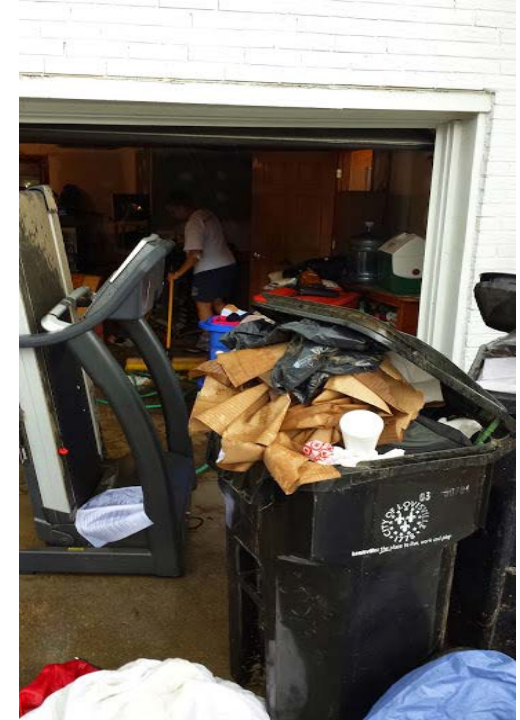
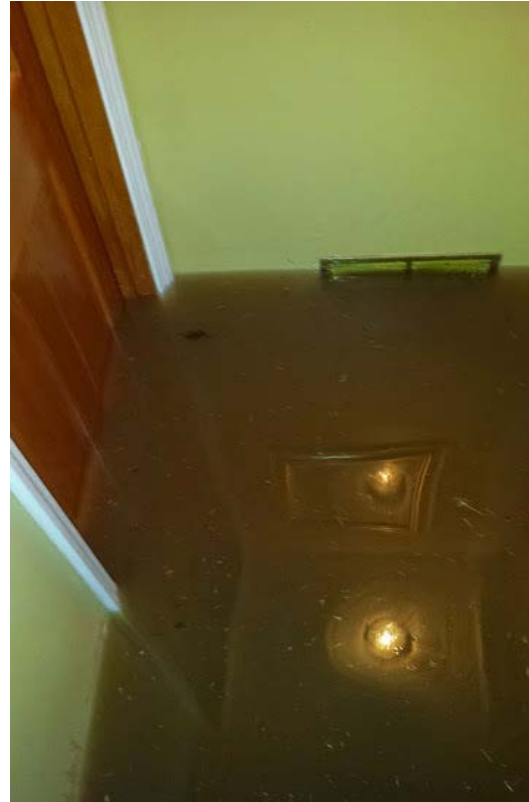
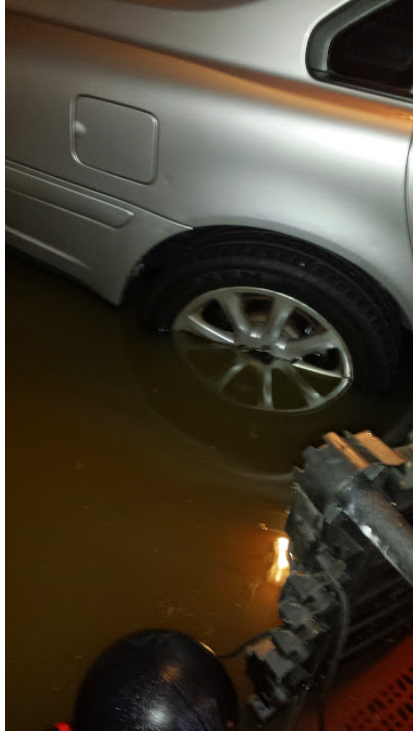
# Buechel Retention Basin



The **Buechel Retention Basin** has been certified to the Environmental Protection Agency (EPA) as substantially complete, being able to utilize the full benefit of the first two large cells. **The third, and largest, cell was currently under construction** and expected to be completed during the **summer of 2014**, potentially holding 55 billion gallons of water.



**October 5, 2013 Flood**  
**18-20 ins. of water...became a candidate for**  
**a FEMA buyout**





# April 3, 2015 Flood

## 18-20 ins of water

- Show video.....

April 4, was going to be moving day. Sold my house on March 28. Garage and the lower level were packed with boxes to load into the moving van, early Saturday morning.





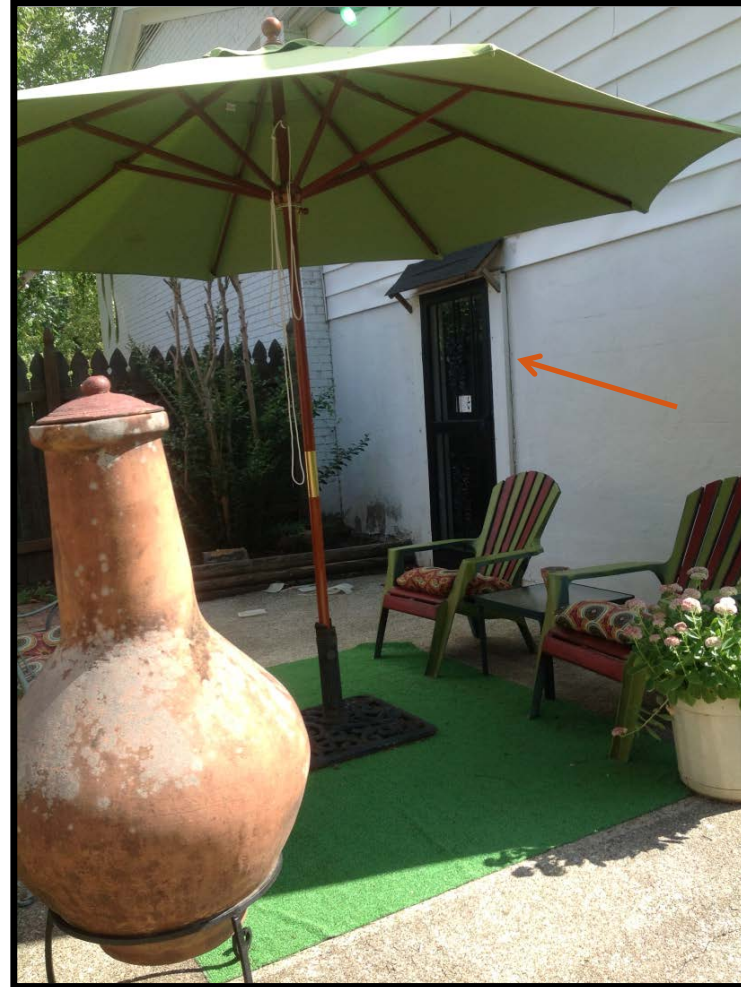
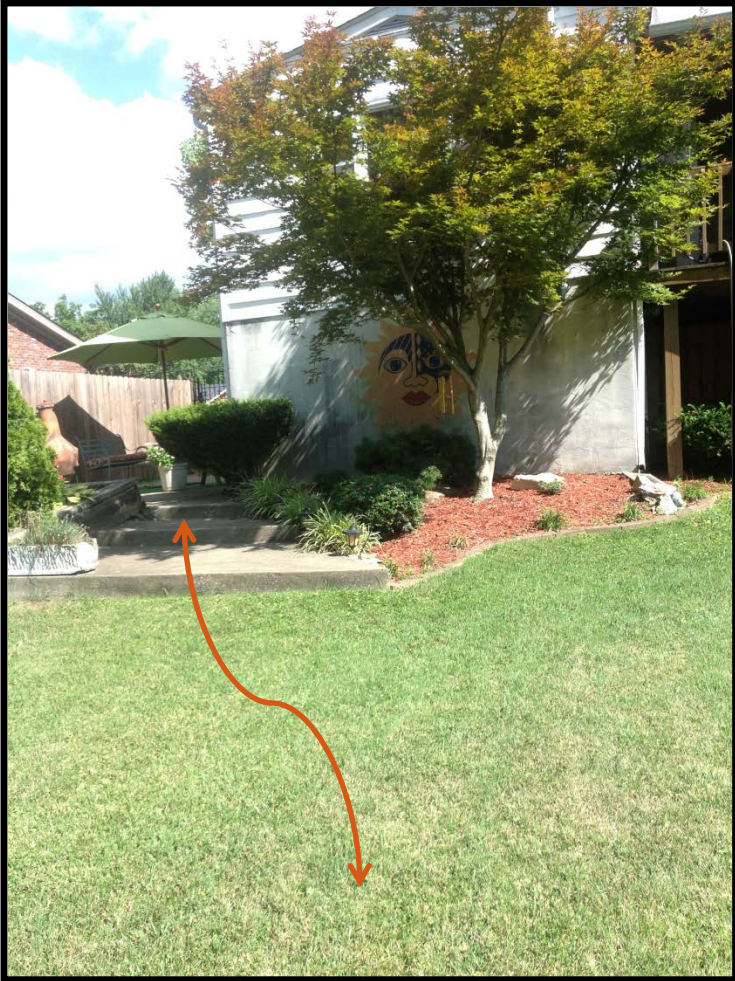
1997, 2006, 2009, 2013, 2015, 2018



**This is the back of our bi-level home....the creek rises and covered the complete backyard on every flood event.**

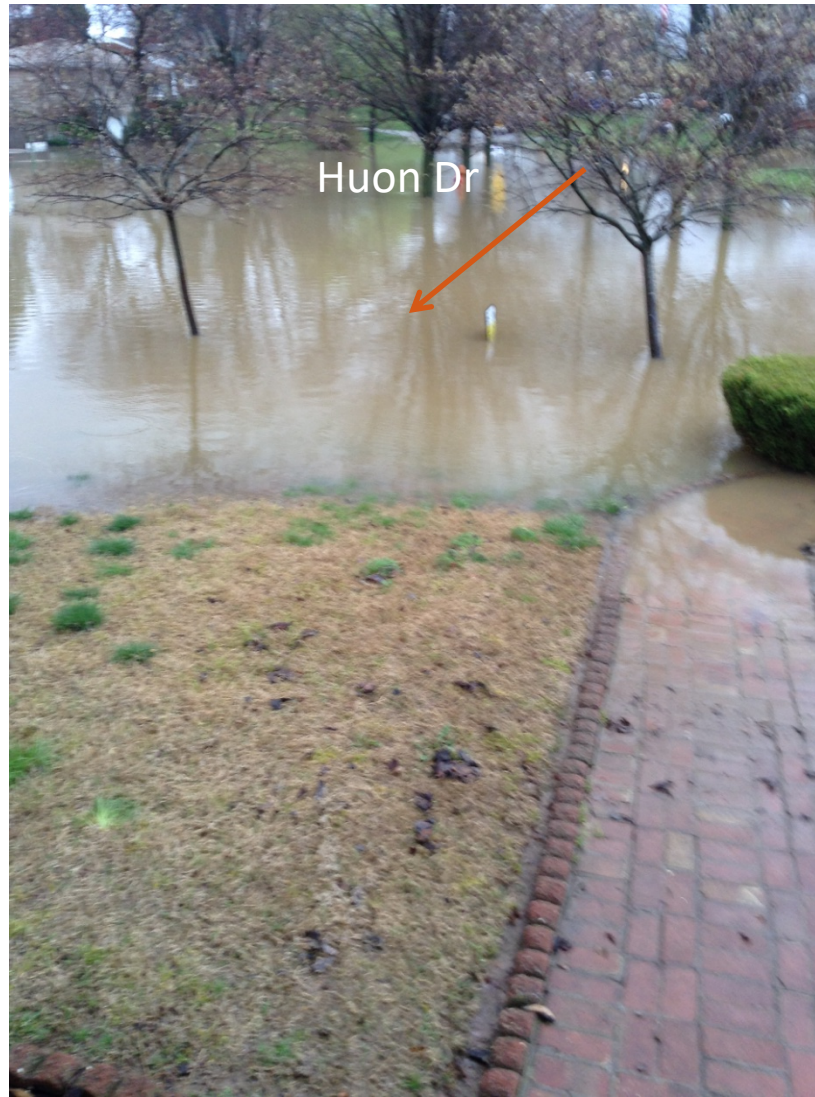


The flood waters travelled from the creek to the backyard into this lower level door





Flood waters in the front, flowed down the hill (Huon Dr) and from the backyard into my front yard and driveway





MSD invested over \$200M in 11 retention basins since the 1997 flood, this being one of the largest, holding approx.80 million gallons of flood waters....this is what it looked like while our neighborhood was flooded.

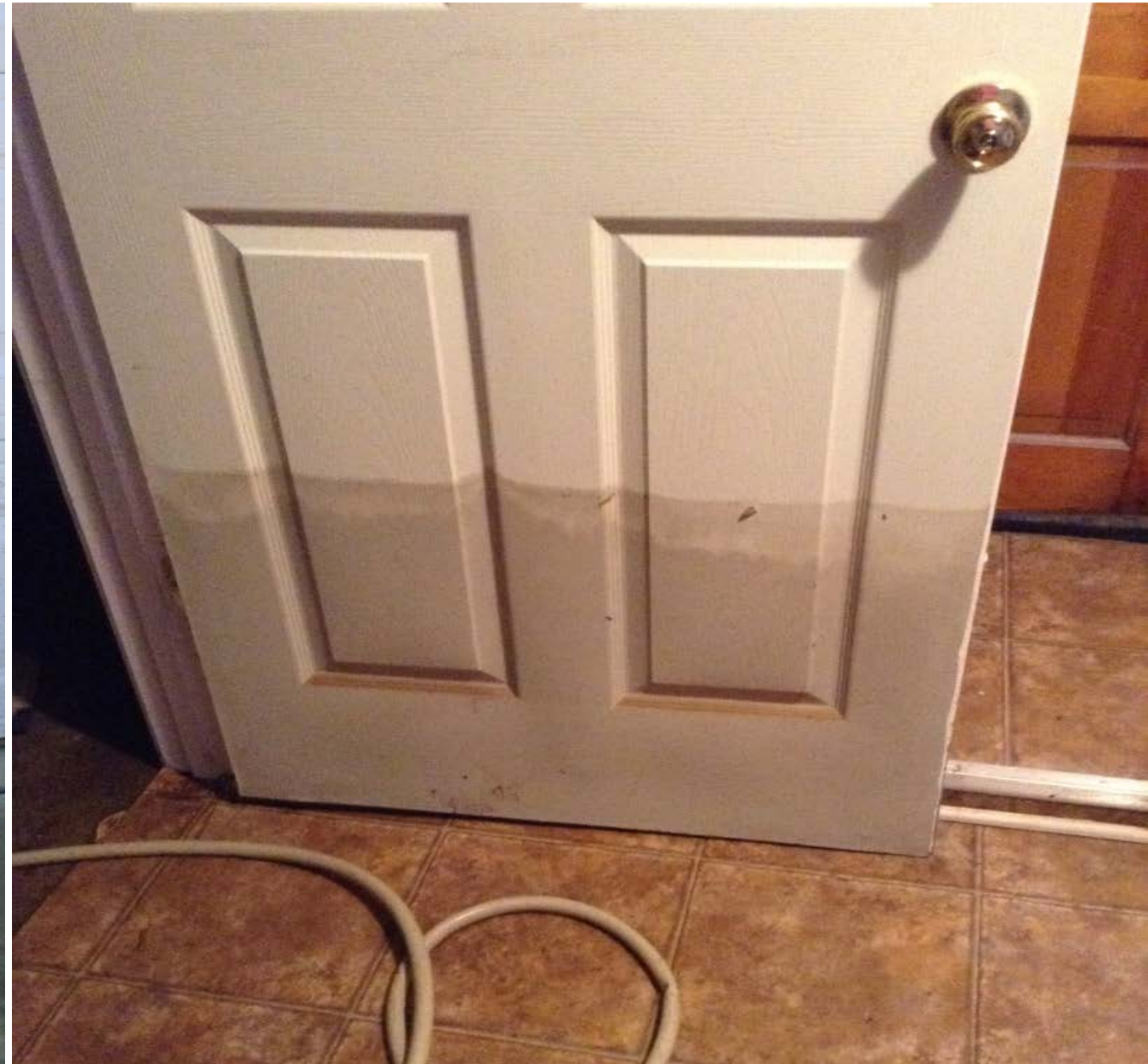




# Thank God for Family!!



# Garage Door.....Laundry Room Door







Officejet Pro 6830

U 4G/Y27 5/S/14  
N USA+AA7277  
U 4G/Z37 6/S/14  
N USA+AA7277



GLASS  
HANDLE WITH CARE

LIQUID IN GLASS  
4 UNITS









The waters flows in from the front and the back, and then flows out within 2-4 hrs





After the April 2015 flood, I did not replace drywall this time, just stapled plastic over openings and painted the floor... Flood Mitigation Meetings started in June 2015, hosted by the City of Louisville and MSD....I pressed them both and FEMA for action. Letters were written to Kentucky Senator Mitch McConnell and Congressman John Yarmuth for assistance in addressing the arduous delay of FEMA with a Severe Repetitive Loss (SRL) property owner.



Oct 13, 2016...first house to be demolished on Elba Dr...there was hope



## Another flood event took place on Feb. 24, 2018

- Addressed the MSD board on 2/26/18 concerning the **5<sup>th</sup> major flood** in my home and demanded that something had to be done.....a **FEMA grant submitted in Jan 2016** was approved on March 22, 2018 and a fair market value was offered on my home and was accepted. Closing was on Nov. 9, 2018.....**My home was demolished on July 25, 2019**







# Standing on the property of 1909 Elba Dr. (1997-2019 Flood Era)





# Questions?





# Thanks for joining us!

## ***Upcoming Sessions:***

October 22 Part 3: Community-wide Protection, Relocation & Expansion

October 29 Part 4: Migration & Receiving Communities

November 5 Part 5: Policy Considerations at Multiple Scales



# You're invited to a virtual discussion!

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Group: National Adaptation Forum

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