

# Flood Hazard Minimization Efforts

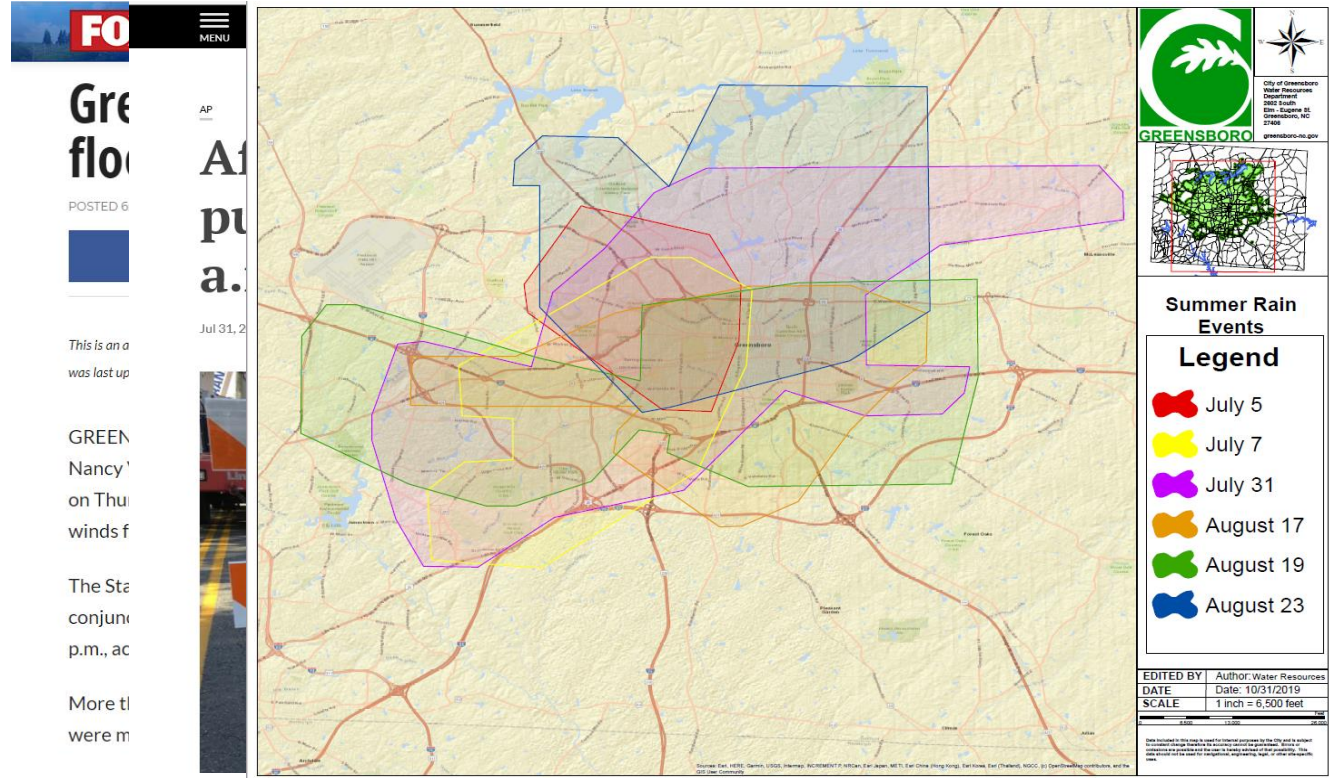


February 4, 2020

Water Resources Department

# Flood Hazards

- Hurricanes
- Historic Rains
- Historic Flooding
  - Homes
  - Roads
  - Businesses

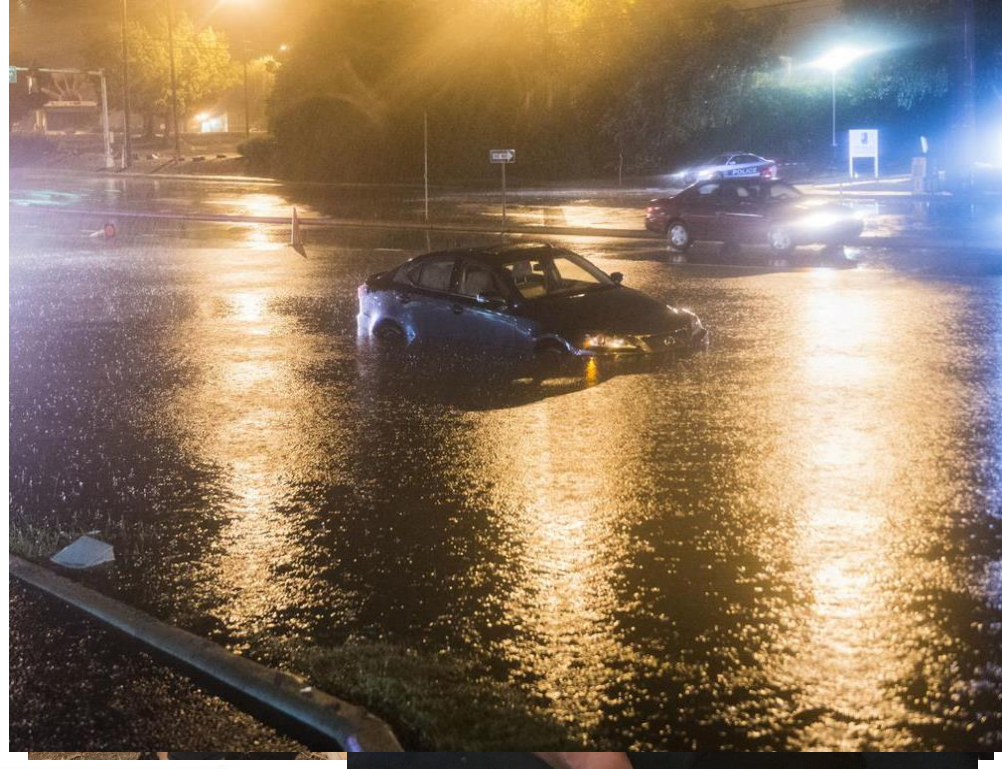




# Hazard Mitigation

## Overview

- Property Acquisitions/Improvements
  - FEMA Grant Support
  - Stormwater Utility \$
- Floodplain Modeling
- Stream Bank Repairs
- Infrastructure Improvements
  - Bigger pipes
  - Larger culvert
- Challenges & Opportunities



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# Property Acquisition Program

## Prioritization Criteria:

- Public safety need
- Is property in the floodplain
- Does the property owner have flood insurance
- Frequency and severity of flood damage
- Is there a cost-effective engineering solution
- Total cost of past flood damage repairs or claims
- Property owner cooperation (we don't want to force people out of their homes)
- Other items

Row #	Importance Factor	Property Address
1	5	Public Safety / Evacuation: 1- Property owner could self evacuate during flooding 3- Property owner would need to be rescued during flooding 5- Removing structure would alleviate need for public assistance
2	5	Property Location: 1- Not in SFHA 3- within 1% SFHA 5- In Floodway
3	5	Frequency of Flood Damage: 1- No flood damage to date 3- One incident of flood damage 5- Two or more incidents of flood damage
4	5	Recurrence Interval of Storm when Property Floods: 1- 100 year or more storm 3- 10 year to 100 year storm 5- 10 year storm or less
5	5	Total Collective Costs of Past Flood Damage Repairs or Claims: 1- Less than \$25,000 3- \$25,000 - \$100,000 5- Greater than \$100,000
6	4	Storm Sewer System Upgrade: 1- Minor upgrade to existing system will improve flooding 3- Upgrade of existing system is likely cost prohibitive*

# FEMA Grant Support

## Grant Project

- Get outside help to go after currently available funding from FEMA to remove or improve Repetitive Loss Structures (RL & SRL).
- Flood Mitigation Grant Program's Advance Assistance grant application
- Community Rating System



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# Infrastructure Improvements

## Watershed Studies & Models

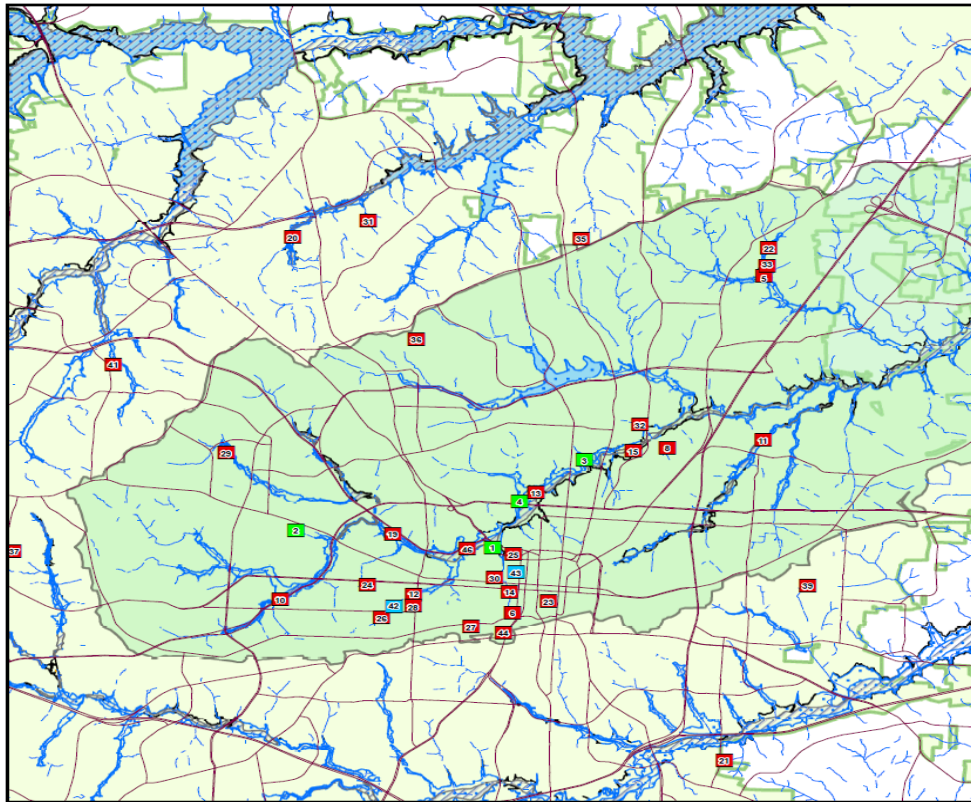
- Future conditions analysis
- Alternatives to reduce risk

## Stream Projects

- Stabilization & Restoration

## Pipes & Culverts

- Bigger pipes
- Bigger culverts





# Challenges and Opportunities

- **Challenges:**

- Climate change
  - More frequent/severe storms
- New flood maps
  - More structures in floodplain
- Regulations

- **Opportunities:**

- More protective regulations
- Green infrastructure
- Quantity control



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