

Town of Belhaven

Repetitive Loss Area Analysis



DRAFT: September 24, 2021

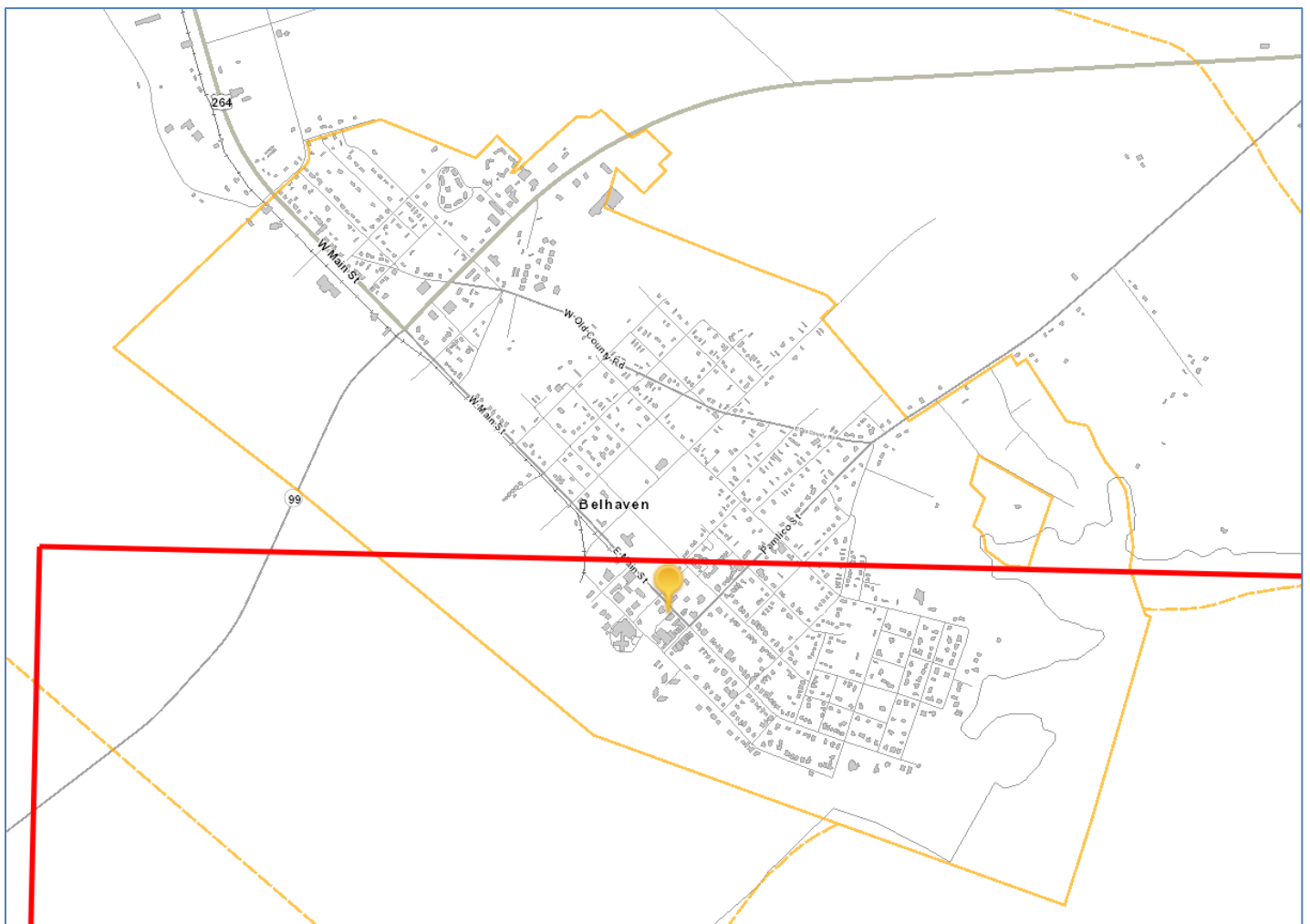


Town Flooding History & Background Info

Belhaven's Repetitive Loss Area

The Town of Belhaven spans only 2 square miles, roughly 1500 acres. The Town is bound on two sides by Pantego Creek and the Pungo River. It is also important to note that with the exception of approximately 3 acres, the Town is in an AE flood zone with a 5' elevation.

For these purposes and based on flood history, the entire area of the Town has been identified as a repetitive loss area.



In the late 1990s and early 2000s, more than 300 residential properties were elevated with FEMA grant funds. At the time, this was the largest mitigation project taken on by FEMA.

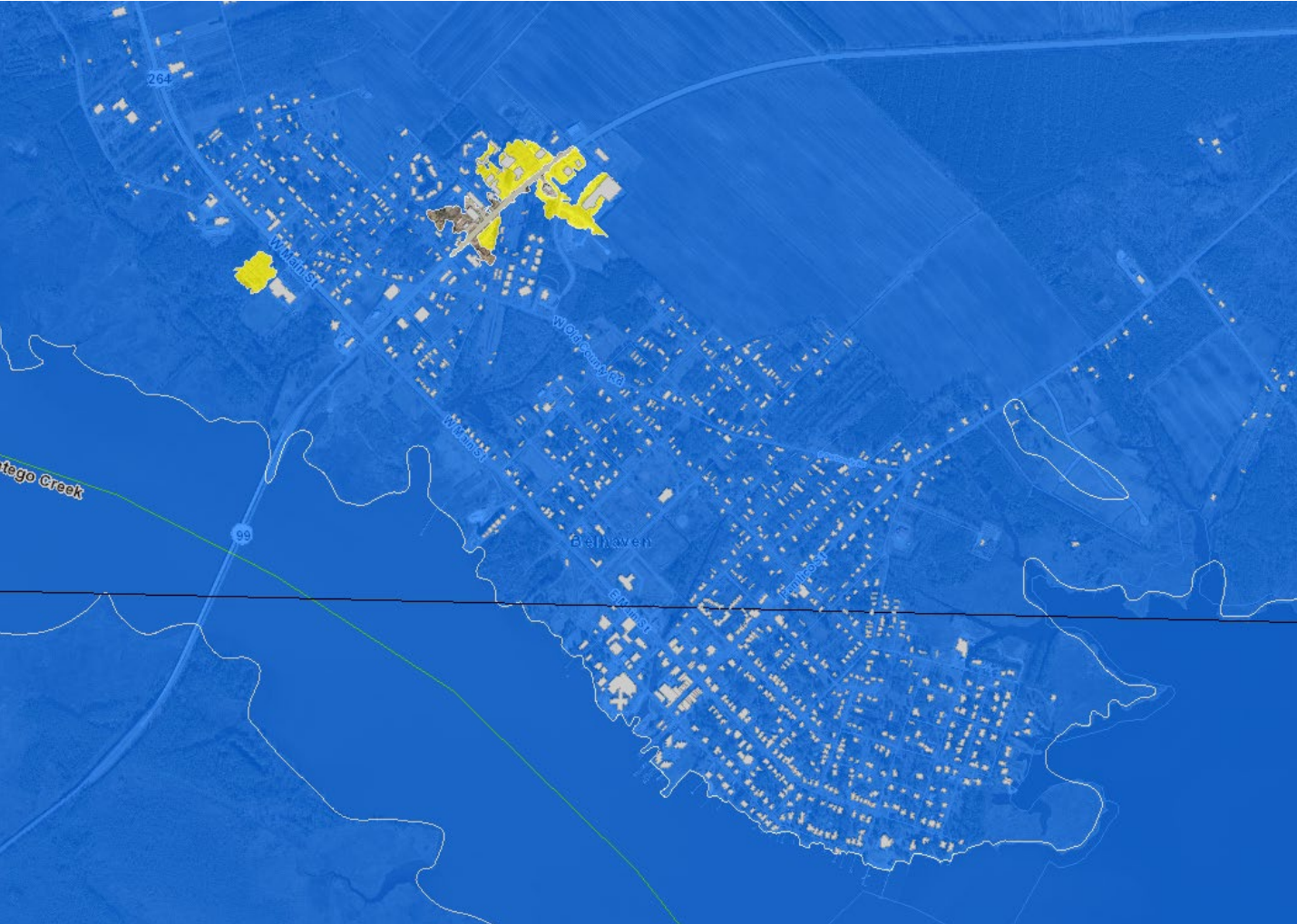
The last 10 years have seen 5 storms that causes damages and losses in Belhaven.

- Irene, 2011
- Matthew, 2016
- Florence, 2018
- Dorian, 2019
- Isaias, 2020

The repetitive loss area was identified by reviewing the RL list from previous years and noting that there were losses in all areas of the small town. The source of damaging flooding was the same for all properties, storm surge.

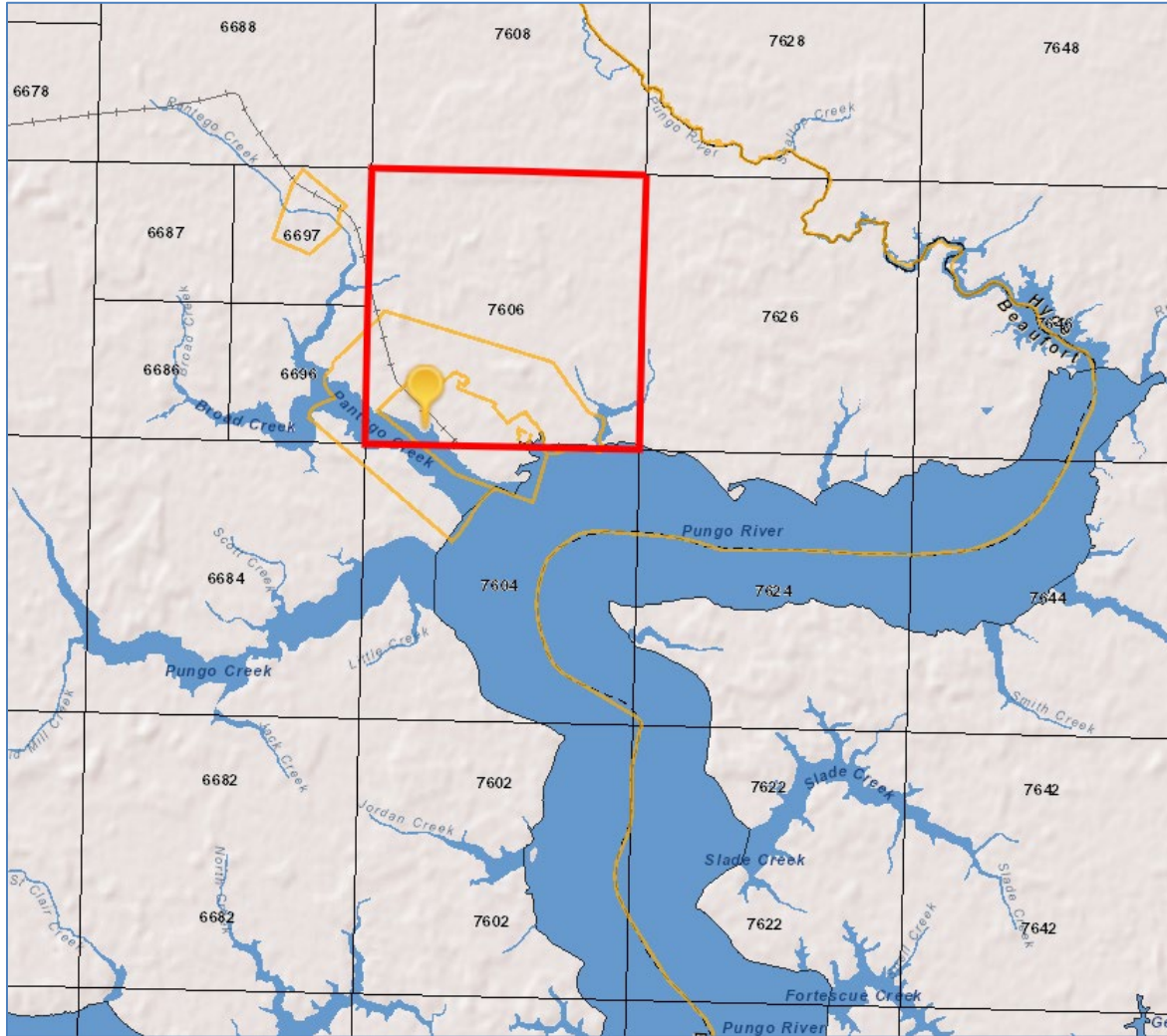
For the purposes of this report, the 2019 RL list was used. Given the change in delivery method and privacy act changes, the Town has not received the latest RL list. There are 260 properties identified on the list.

Based on the last visit which occurred in 2012, the Town would have had 222 RL structures. New information released on February 2, 2021, tells us the Town now has 260 RL claims.



RL Area Relative to Flood Source

Source: FRIS.NC.GOV



Repetitive Loss Area Analysis Process

The RLAA planning process incorporated requirements from Section 510 of the 2017 *CRS Coordinator's Manual*. The planning process also incorporated requirements from the following guidance documents: 1) Federal Emergency Management Agency (FEMA) publication *Reducing Damage from Localized Flooding: A Guide for Communities*, June 2005; and 2) CRS publication *Mapping Repetitive Loss Areas* dated August 15, 2008.

Most specifically, this RLAA included all five planning steps included in the 2017 *CRS Coordinator's Manual*:

Five Planning Steps

Step 1	Advise all the properties in the repetitive loss areas that the analysis will be conducted and request their input on the hazard and recommended actions.
Step 2	Contact agencies and organizations that may have plans or studies that could affect the cause or impacts of the flooding. The agencies and organizations must be identified in the analysis report.
Step 3	Visit each building and collect basic data.
Step 4	Review alternative approaches and determine whether any property protection measures or drainage improvements are feasible.
Step 5	Document the findings. A separate analysis report must be prepared for each area.

Step 1

All Belhaven residents were notified in writing of the analysis. The letter was included in the monthly utility bills that are sent to all citizens and businesses in the Town. The letter and survey follow.



Town of Belhaven

"Birth Place of the Intracoastal Waterway"

August 27, 2021

Dear Belhaven Resident:

As part of the Town of Belhaven's participation in the National Flood Insurance Program's (NFIP) Community Rating System (CRS), Town staff is evaluating properties that have experienced repetitive flood damage. This analysis will include the review of all previous flood data and studies conducted within the Town's special flood hazard area (SFHA).

The repetitive loss analysis involves the collection of the following property level data elements:

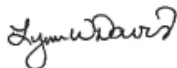
- Building permit records (including application and associated records)
- Structure and site elevation information (elevation certificate if available)
- Tax ID and lot and parcel number
- Building property value on record (assessed value, replacement value or both)
- Land property value on record
- Building codes/floodplain development regulations exceeding minimum standards
- Historical flood event information (when events occurred, amount of damage to property, etc.)

In addition, the Town staff and its contractor will visit properties to survey the flood risk and to take photographs. Property owners are encouraged to provide any relevant flooding information. The survey crews will be looking at the type and condition of the foundation, drainage patterns on the lot and whether the outside mechanical equipment is elevated.

The results of the repetitive loss area analysis will include a review of alternative approach for property protection measures or drainage improvements where feasible. Once the analysis is complete, a copy of the report can be obtained from Town Hall, on the Town's website (www.townofbelhaven.com) or by calling 252-943-3055.

You can help us perform this analysis by completing and returning this questionnaire online at or returning this hard copy to Town Hall by September 15, 2021.

Regards,



Lynn Davis, CFM, CZO
Town Manager & CRS Coordinator
ldavis@townofbelhaven.com

LINK TO SURVEY: <https://forms.gle/QA3uSukjCrd9Td629>

WAS THERE FLOODING IN YOUR AREA?

Flood Protection Questionnaire – Belhaven, NC

You are receiving this survey because you reside in an area with a history of repeated flooding or a repetitive loss area. Any information you can provide us will help the Town determine the source of flooding in your neighborhood and what measures can be taken to prevent future flood or minimize damages.

Name: _____ Email: _____

Property Address: _____

1. How many years have you occupied the home/building at this address? _____
2. Do you rent or own this home/building? Rent Own
3. What type of foundation does the home/building have?
 Slab Crawl Space Other
4. Has this home/building or property ever been flooded? Yes No
5. In what year(s) did it flood? _____
6. What do you feel was the cause of the flooding? Check all that affect your home/building.
 Storm drain failure Drainage from nearby property Overflowing ditch
 Storm Surge from the river Standing water next to home/building
7. How did the water enter your home/building? _____
8. How deep did the water get (in feet)?
 Yard Only: _____ft Crawl Space: _____ft Over first floor: _____ft
 Water kept out of house by sandbagging or other protective measures
9. What was the longest timeframe that water stayed in the house/building?
 _____Hours or _____days
10. Have you installed any flood protection measures on the property?
 Sump pump waterproofed the outside walls re-graded yard to reduce water
 Moved things above flood levels backup power/generator Onsite drainage
 Elevated utilities, water heaters, etc. Other: _____
11. Did any of the measures check in item 10 work? If so, which ones? If not, do you know why they failed?

12. Do you have flood insurance? Yes No
13. Do you have an elevation certificate for your home/building? Yes No
14. Are you interested in mitigating your flooding issues through grant programs and/or floodproofing actions? Yes No
15. Include any additional information and comments you may have about flooding in your area:

Please help the Town by completing this survey and returning it to Town Hall, 315 E. Main Street.



Sign up for emergency alerts by texting [JOIN TOBNC](https://www.townofbelhaven.com) to 30890

Step 2

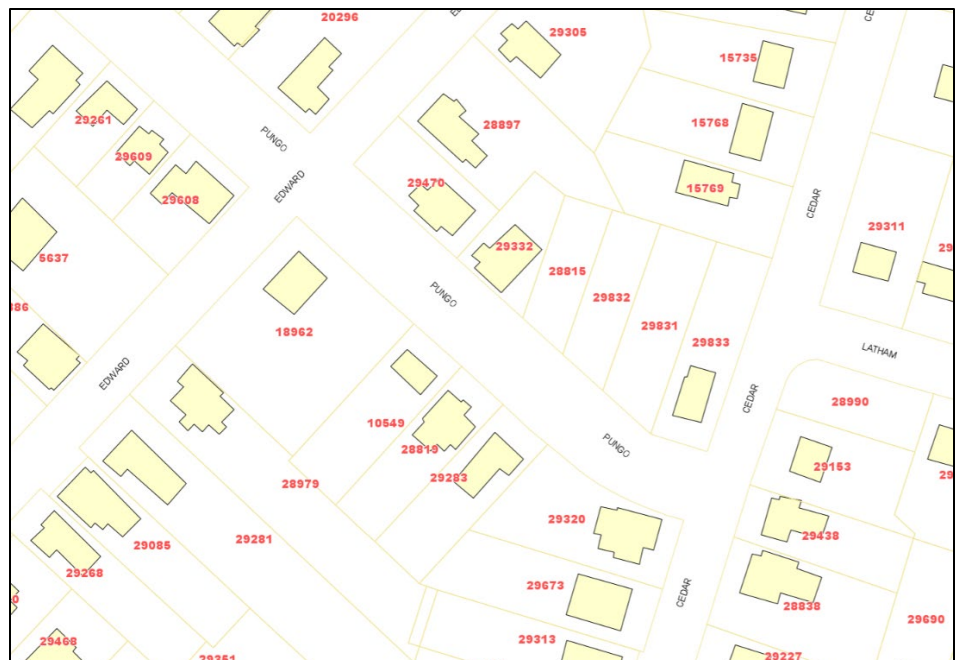
A number of local and regional plans exist to address hazards and mitigation. Each of these plans was referenced to see what, if any, recommendations or actions pertained to flooding and loss prevention in Belhaven. Agencies contacted about these plans include: CAMA, Moffatt & Nichol, International Economic Development Council, MidEast Commission, and Holland Consulting.

- Pamlico Sound Regional Hazard Mitigation Plan (adopted 2020)
- Albemarle-Pamlico National Estuary Partnership (APNEP) Comprehensive Conservation and Management Plan (2012-2022)
- Pamlico Peninsula Resilient Regions Report (April 2016)
- Hurricane Matthew Resilient Redevelopment Plan: Beaufort County (May 2017)
- Hurricane Matthew Resilient Redevelopment Plan: Northeast Region (August 2017)
- Beaufort County CAMA Land Use Plan (October 2009)
- Moffatt & Nichol Wynne's Gut Flood Mitigation Plan (2014)

Step 3

The RL list for Belhaven identifies 260 structures. During the months of July-September, each property was visited and reviewed to identify property information including mitigation status, overall condition of home, and visible drainage patterns.

Beaufort County's GIS system and tax records were also used for this property research.



Property Summary

Tax Year: 2021

REID	29261	PIN	7605-88-6943	Property Owner	
Location Address		Property Description		Owner's Mailing Address	BELHAVEN NC 27810

Administrative Data		Transfer Information		Property Value	
Plat Book & Page		Deed Date	11/6/1996	Total Appraised Land Value	\$9,600
Old Map #	NONE	Deed Book	001059	Total Appraised Building Value	\$27,455
Market Area	BELH	Deed Page	00707	Total Appraised Misc Improvements Value	
Township	Town of Belhaven	Revenue Stamps		Total Cost Value	\$37,055
Planning Jurisdiction	BEAUFORT	Package Sale Date		Total Appraised Value - Valued By Cost	\$37,055
City	TOWN OF BELHAVEN	Package Sale Price		Other Exemptions	
Fire District		Land Sale Date		Exemption Desc	
Spec District		Land Sale Price		Use Value Deferred	
Land Class	SINGLE FAMILY RES	Improvement Summary		Historic Value Deferred	
History REID 1		Total Buildings	1	Total Deferred Value	
History REID 2		Total Units	0	Total Taxable Value	\$37,055
Acreeage	0.23	Total Living Area	1,180		
Permit Date		Total Gross Leasable Area	0		
Permit #					

Building Summary

Card 1 470 E PUNGO ST

Building Details		Building Description		Building Total & Improvement Details	
Bldg Type	RESIDENTIAL	Year Built	1898	Grade	C-10
Units	1	Effective Year	1960		90%
Living Area (SQFT)	1180	Additions	3	Percent Complete	100
Number of Stories	1.00	Remodeled	1960	Total Adjusted Replacement Cost New	\$76,263
Style	OTHER	Interior Adj		Physical Depreciation (% Bad)	AVER 64%
Foundation		Other Features		Depreciated Value	\$27,455
Frame				Economic Depreciation (% Bad)	0
Exterior	ALUM, VINL			Functional Depreciation (% Bad)	0
Const Type	GABLE			Total Depreciated Value	\$27,455
Heating	AIR-NO-DUCT			Market Area Factor	1
Air Cond	WINDOW UNIT			Building Value	\$27,455
Baths (Full)	1			Misc Improvements Value	
Baths (Half)	0				
Extra Fixtures	0				

Total Plumbing Fixtures 3

Bedrooms 3

Floor PINE

Roof Cover MODULAR METAL

Roof Type

Main Body (SQFT) 700

Total Improvement Value \$27,455

Assessed Land Value

Assessed Total Value

Addition Summary

Story	Type	Code	Area
1.00	PORCH SCREEN FINISHED	FSP	100
1.00	PORCH OPEN FINISHED	FOP	32
1.00	FINISHED UPPER STORY	FINU	480

Building Sketch



Photograph



Misc Improvements Summary

Card #	Unit Quantity	Measure	Type	Base Price	Eff Year	Phys Depr (% Bad)	Econ Depr (% Bad)	Funct Depr (% Bad)	Common Interest (% Good)	Value
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No Data

Total Misc Improvements Value Assesed:

Land Summary

Zoning	Soil Class	Description	Size	Rate	Land Adjustment	Land Value
R		RESIDENTIAL-FF	50.00 BY THE UNIT PRICE	\$600	DEPTH FACTOR-54.07 MARKET ADJUSTMENT-59.18	\$9,600

Total Land Value Assesed: \$9,600

Ownership History

Owner Name	Deed Type	% Ownership	Stamps	Sale Price	Book	Page	Deed Date
Current	DEED	100	0		001059	00707	11/6/1996

Step 4

The repetitive loss properties were identified on a map of the town. Mitigation strategies were listed on the RL spreadsheet. From FEMA's *Developing a Repetitive Loss Area Analysis*, six mitigation categories were identified:

1. Preventive
2. Property protection
3. Natural resource protection
4. Structural projects
5. Public information
6. Emergency services

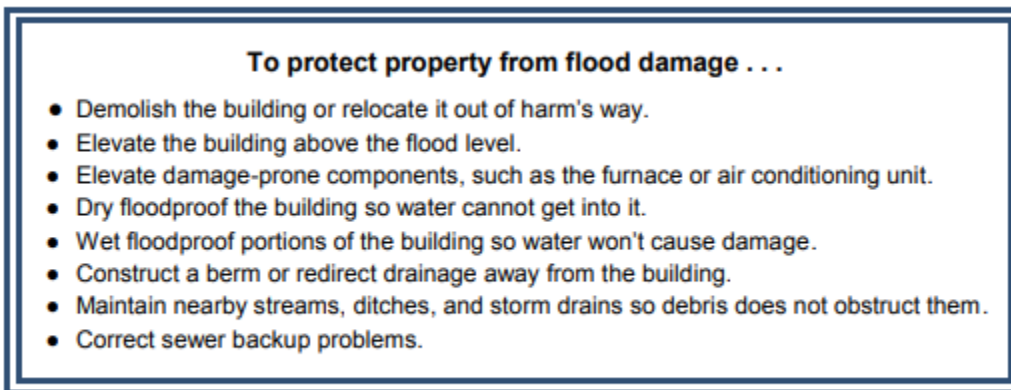


Figure 360-1. Typical property protection measures.

Each of the 6 mitigation categories can be applied throughout the repetitive loss area.

The Town of Belhaven can enhance and improve mitigation efforts throughout the SFHA by promoting the flood insurance requirement and maintaining the drainage system to ensure obstructions don't contribute to flooding. The availability of public information about flooding and flood hazards will be improved and utilized with routine mailings to all residents within the SFHA, availability of FEMA and Flood Hazard documents on the Town's website and public spaces, and by working with local real estate agents to ensure they understand the challenges in the SFHA.

Preventive Activities are designed to prevent flooding and flood damages from getting worse. The Town's Flood Damage Prevention Ordinance was written with this purpose in mind. A periodic review of the FDPO will ensure that the latest flood data is considered and protection levels are appropriate for the special flood hazard area. A new FIRM was adopted in 2020. The base flood elevation in most of the SFHA dropped from 7' to 5'. The newly adopted FDPO set the regulatory flood protection level at 7' (2' freeboard).

The Town is currently engaged with the Mideast Commission and RK&K Engineers in a Resilient Coastal Communities grant. This grant effort will identify opportunities for improving resiliency in the community. Preventive activities will be identified in this 4-phase grant program.

Identification of drainage easements and new drainage maps are current activities being undertaken by the Town. This will allow the Town to continually improve its preventive activities within the SFHA.

Property Protection Measures are most often activities that are taken on by the property owners. Examples of property protection measures include structural elevations or retrofitting a building. More than half of the homes on the RL list have been elevated to at least 5', the current BFE. Properties on the RL list that have not been elevated have been identified for future elevation funding programs.

Recommendations from the Town's building inspector to property owners include relocating duct work into the ceiling or attic when replacing HVAC units. Many of the community loss claims are for replacement of ductwork that is below the required protection level, even though the electrical and mechanical units are above the regulatory flood elevation.

Natural Resource Protection are non-structural measures to protect areas that may be environmentally sensitive or naturally aid in flood prevention. The Community Rating System rewards and encourages preservation and protection of natural areas for this reason. The Town's recreation fields are strategically located near sensitive areas as open space. The Resilient Communities grant program mentioned above will also consider opportunities for natural flood ways to be utilized in recreation like rain gardens.

CAMA, coastal area management area, wetlands are protected by federal regulations. The Town protects and preserves those areas along the rivers and creeks according to the federal guidelines. The local CAMA agent works with the town to consult on projects that may impact those areas.

Structural Projects are generally more large scale mitigation projects and include construction of levees, reservoirs, and channel alterations. The Town has actively been seeking grant funding for a \$2.5 million pump and gate system on Wynne's Gut to mitigate "sunny day" flooding impacting Main Street businesses and more than 40 homes.

It is anticipated that RK&K, through the Resilient Coastal Communities grant program, will identify other structural projects to help prevent widespread flooding in the SFHA.

Public Information consists of educating the citizens and property owners in the community about the hazards and methods of protection from floodwaters and flood damages.

The Town held a Flood Protection Seminar with the local Rotary Club in August, 2021. The event included local insurance providers, a surveyor, FEMA, realtors, and a local meteorologist. The Town's building inspector and certified floodplain manager were also present to address questions from participants. The event was well-received and will be held annually. This is only one example of how the Town is actively working with residents to inform them of flood damage prevention and flood hazard safety.

The Town's website, town hall, and local public library are also stocked with current pamphlets and information (in Spanish, too) for citizens to learn more about prevention.

The Town Manager is a CFM and responds to questions from realtors, insurance companies, and citizens as it pertains to education and public information regarding their property and the SFHA.

Emergency Services consists more of communicating threats and warnings that mitigation. Following Hurricane Florence in 2018, the Town added a citizen notification system to its toolbox. Citizens can easily sign up for telephone calls, emails, and texts. There is also an app available for current warnings and messages related to emergencies. Every new applicant for utility service is automatically added to the system. Citizens are notified of storm warnings, road closures due to flooding, and provisions of shelter and other resources.

Inspections of individual properties have identified specific strategies that will lower the flood risk and damages to property.

The Flood Damage Prevention Ordinance addressed many of the protection measures noted in Figure 360-1 above. Homes that are undergoing substantial improvements or new construction are all required to meet to the specifications for building in the SFHA in the FDPO.

The Town of Belhaven receives floodwaters from storm surge. The Town sits at sea level, so there is little that can be done to prevent floodwaters from this source. Although, in 1989 the US Army Corps of Engineers did draw a preliminary plan that proposed the construct a dike and floodgate system around the perimeter of the town.

A breakwater was constructed and is maintained by the US Army Corps of Engineers. This helps, but does not prevent storm surge. As mentioned previously in the report, a majority of the homes in Belhaven have been elevated to at or above the base flood elevation.

The Town's priorities for ways to address flooding and prevent flood damage in Belhaven consist of 3 tenets:

- Education
- Preparation
- Loss Prevention

Education

The Town actively works to educate its citizens about flood hazards and damage prevention. Notices in monthly utility bills, information on website, and flood seminars are all tools used to educate citizens in the SFHA.

Loss Prevention

Most of the structures in the town are elevated to above the base flood elevation. Town ordinances require protection and elevation of structures, including accessory buildings, to the base flood elevation plus 2', to 7'. Beaufort County includes the town's residences in grant applications for elevation programs.

Preparation

Longtime citizens are veterans at storm preparations. Storm threats create a flurry of activity throughout the town.

The Town has an emergency operations plan that includes actions to prepare, not only town buildings but, the town itself for flooding. This preparation includes sandbagging and making supplies available to residents, blocking streets that become impassable, setting up an emergency operations center, and communication with citizens about storm preparedness.

Step 5

Belhaven is uniquely situated along Pungo Creek, the Intracoastal Waterway, and Pantego Creek. The source of damaging floodwaters comes from storm surge related to hurricanes, tropical storms, and nor'easters in the Atlantic Ocean and Pamlico Sound.

The repetitive loss area analysis shows that there are 260 structures with repetitive losses in the special flood hazard area. Of those, more than half are mitigated, mostly through elevation projects. Forty-five (45) percent of the properties have been mitigated. Sixty-one (61) percent of the properties on the RL list are insured.

Recommendations:

To be implemented by: Town of Belhaven

Potential Funding sources: FEMA, Flood Insurance and Small Business Administration Loans, City Funds, and Staff Time

- Adopt the Repetitive Loss Area Analysis created for the Town of Belhaven in accordance with the process detailed in the CRS Coordinator's Manual, 2017.
- Encourage the owners of repetitive loss structures and properties to pursue one or more mitigation measures.
- Continue to assist interested property owners in applying for mitigation grants.
- Continue to improve the drainage within the Town of Belhaven and encourage the continued maintenance of drainage easements.
- Continue to work on activities listed in the National Flood Insurance Program - Community Rating System (CRS).
- Continue public information activities, such as coordinating outreach projects, updating the city website to reflect relevant and up-to-date information, and assisting with flood protection advice that help residents learn about and implement mitigation measures.

To be implemented by residents of Belhaven

Potential Funding sources: FEMA grants (HMGP, PDM, FMA), Flood Insurance, Small Business Administration Mitigation Loans

- Review the flood mitigation measures listed in this report and implement the recommendations that are appropriate such as: raising the elevation certain structures, creating barriers to floodwaters, dry flood-proofing homes, and obtaining flood insurance.

- Stay current with what the Town of Belhaven is doing in regards to flood protection
- Purchase or maintain flood insurance policies on the home (if a homeowner) and/or on the contents (homeowners and renters). More information can be found at www.floodsmart.gov.
- Stay informed of the changes being made to the NFIP
<https://www.fema.gov/flood-insurance>

Next Steps

RLAA will be presented to the Belhaven Board of Aldermen on October 11, 2021 at 6PM.