TOWN OF KILL DEVIL HILLS

Land Where Flight Began

MEMORANDUM August 14, 2023

TO: Mayor and Board of Commissioners

FROM: Debora P. Diáz, Town Manager

REF: New Business

6. Community Rating System – Cycle Visit Program Update (Attached NB-6A, NB-6B, and NB-6C)

As a part of its participation in the National Flood Insurance Program (NHIP) and the Community Ratings System (CRS), the Town established a Program for Public Information (PPI), which encourages homeowners to maintain flood insurance policies and provides citizens information on flood insurance policies, premiums, insurance in force, and coverages. Planning Director Meredith Guns' attached meeting memorandum and materials highlight the various aspects of the CRS Program, which has been historically under a 5-year review cycle; however, since the Town has improved to a Class 5 rating, the review cycle has been shortened to a 3-year cycle, with the Town's last CRS review in 2020. The following three CRS elements have been presented for your review:

A. Annual Flood Insurance Policy Update

Data on the number of Flood Insurance Policies in force as of July 2023 is highlighted. The Town's public education outreach to promote homeowners maintaining insurance coverage regardless of their flood zones has been considered highly successful.

B. Annual Program for Public Information (PPI) Plan update and annual Progress Report

The Town's PPI Committee annually reviews the PPI Plan. An Annual Evaluation Report is prepared for review by the Board of Commissioners, and has been included. With the upcoming CRS Cycle visit, the PPI Committee reviewed and updated the entire plan. As a part of the process, Staff requests adoption of the revised 2023 Floodplain and Stormwater Management Program for Public Information.

C. Progress Report for Outer Banks Regional Hazard Mitigation Plan

In May 2020, Kill Devil Hills adopted the Outer Banks Regional Hazard Mitigation Plan, a regional plan with Dare County, all its municipalities, and Currituck County. The Plan, which must be updated and adopted every five years, is required by FEMA to be eligible for public assistance after an event. Between updates, the Town reviews its Mitigation Strategies annually and reports progress to the Board of Commissioners. Attached is Annex D of the HMP (the Kill Devil Hills portion) and a 2023 progress report for the Town Mitigation Strategies.

Staff recommends approval for the revised 2023 Floodplain and Stormwater Management Program for Public Information, and a motion is in order.

Director of
Planning and Inspections
MEREDITH GUNS

Building Inspector
MARTY SHAW
CHARLES THUMAN

Code Enforcement Officer
JORDAN BLYTHE

THE TOWN OF KILL DEVIL HILLS
NORTH CAROLINA

Assistant Director of
Planning and Inspections
CAMERON RAY

Senior Planner
RYAN LANG

Zoning Administrator
DONNA ELLIOTT

PLANNING DEPARTMENT

August 14, 2023

Memorandum

To: Board of Commissioners

From: Meredith Guns, Planning Director MBG

Subject: Community Rating System – Cycle Visit Program Updates

The Town of Kill Devil Hills is in the process of a cycle visit for the Community Rating System. As you may recall the last cycle visit was in 2020. The Town improved to a Class 5 rating which offers our citizens a 25% discount on Flood Insurance. The CRS is moving from a 5-year cycle visit to a 3-year cycle visit therefore the Town is under review again. As part of the program, staff has several items to update the Board of Commissioners on prior to the cycle review.

Attached are three CRS elements for your review:

- The Annual Flood Insurance Policy Update – This material updates the Board on the number of Flood Insurance Policies currently in force as of July 2023 and some analysis of the changes since 2020. Overall the Town's public education plan for owners to keep their insurance regardless of their flood zones was successful.
- Annual Program for Public Information (PPI) Plan update and annual Progress Report – The PPI is a plan that outlines our public outreach from target audiences, messaging and existing outreach projects. The PPI is reviewed annually by the PPI committee and an Annual Evaluation Report is reviewed by the Board of Commissioners (see attached). Additionally, since this year is a CRS Cycle visit the PPI committee reviewed and updated the entire plan. Staff requests adoption of the revised 2023 Floodplain and Stormwater Management Program for Public Information.
- Progress Report for Outer Banks Regional Hazard Mitigation Plan - The Town of Kill Devil Hills adopted the Outer Banks Regional Hazard Mitigation Plan in May of 2020. This a regional plan with Dare County, all its municipalities and Currituck County which must be updated and adopted every five years. The Plan is required by FEMA to be eligible for public assistance after an event. Between updates, the Town reviews its Mitigation Strategies annual and reports progress to the Board of Commissioners. Attached is Annex D of the HMP (the Kill Devil Hills portion) and a 2023 progress report for the Town Mitigation Strategies. Overall the Town has been successful in accomplishing most of the items that are outlined.

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PLANNING DEPARTMENT

August 14, 2023

Memorandum

To: Board of Commissioners

From: Meredith Guns, Planning Director MBG

Subject: Flood Insurance Policy Update 2023

The revised FEMA Flood Maps were adopted in June 2020. As you know the Towns and County have established a public outreach encouraging home owners to maintain their flood insurance policy. As part of the Town's Program for Public Information (PPI), information regarding flood insurance policies, premiums, insurance in force, and coverages are included. This is important data to track to realize the effectiveness of our outreach and to realize the coverage that our property owners have in a flooding event. The most current data that is available is from July 2, 2023. At your last update the data was from March 2020; just before the updated maps were adopted. Staff compared the 2023 data with the 2020 (attached) data and here are some highlighted changes:

- Since March 2020 approximately 4,342 properties were removed from the Special Flood Hazard Area and are not required by law to maintain flood insurance policies.
- Since there was no AO Flood Zone in 2020, AE/AO numbers are combined for the purposes of analysis.
- Since 2020 the number of policies has decreased in the X Flood Zone by about 10%;
- Since 2020 policies in the AE Flood Zones have decreased approximately 44%;
- Since 2020 AE polices exceed the number of properties with the AE Flood Zone. Meaning that the Town's public outreach for property owners to maintain their insurance policy even when outside the SFHA was effective with the percentage of polices to properties at 589%
- Since 2020 policies in the V Zone have decreased approximately 43%, however most of our properties were removed from the VE zone. Our percentage of number of policies to number of properties within the VE zone increased, which is positive;
- Since 2015 the total numbers of Policies in Force have decreased approximately 40%, however this is still less of a percentage than the number of structures removed from the SFHA with the 2020 maps, which was 94% of the properties previously in SHHA (7,991 properties in 2019 compared to 538 properties in 2020;

- Average Coverage has increased slightly for the existing policies from approximately $256,000-257,000 to $279,000 now.

Staff will continue to use the 2020 and 2023 data to track policies still in effect with the new maps over the next several years. The 2023 data will be incorporated into the PPI in the revised plan the Board will review this evening including addressing priority audiences, topics and associated messages, review completed project(s) and incomplete project(s), create new outreach efforts, and overview outreach efforts.

Table 1: July 2, 2023

Percentage of Buildings Insured

Flood Zone	Policies	Properties	Percentage
X	1179	7,453	15.8%
AE	1138	193	589%
AO	7	107	6.5%
VE	27	238	11.3%

Table 2:

Policy Breakdown As of 7-2-2023

Structure Type	Number of Policies in Force	Premium	Insurance in Force
Single Family	1,538	$ 695,296	$ 451,885,000
2-4 Family	109	$ 28,869	$ 23,537,000
All other Residential	569	$ 71,235	$ 105,107,000
Non-residential	142	$ 188,554	$ 78,616,000
Total	2,358	$ 983.,954	$ 659,145,000

Table 3:

Pre -Firm Policies (7-2-2023)

Flood Zone	**Pre Firm**	**Premium**	**Insurance in Force**
X	209	$ 133,954	$ 65,286,000
AE	93	$ 51,031	$ 26,033,000
AO	2	$ 1,731	$ 41,6000
VE	11	$ 7,474	$ 2,953,000

Table 4:

Post -Firm Policies (3-31-15)

Flood Zone	**Post Firm**	**Premium**	**Insurance in Force**
X	970	$ 437,194	$ 296,424,000
AE	1,045	$ 340,451	$ 259,930,000
AO	5	$ 2,377	$ 1,341,000
VE	16	$ 7,000	$ 4,681,000

Table 5:

Average Coverage Policy Breakdown

Structure Type	Number of Policies in Force	Premium	Insurance in Force	Average Coverage
Single Family	1,538	$ 695,296	$ 451,885,000	$ 293,813.39
2-4 Family	109	$ 28,869	$ 23,537,000	$ 215,935.78
All other Residential	569	$ 71,235	$ 105,107,000	$ 184,722.32
Non-residential	142	$ 188,554	$ 78,616,000	$ 553,633.80
Total	2,358	$ 983,954	$ 659,145,000	$ 279,535.62

Program for Public Information (PPI)

Annual Evaluation Report

Community(s): **Town of Kill Devil Hills**

Name of PPI: **2023 Floodplain and Stormwater Management Program for Public Information**

Submitted by: **Meredith Guns, Planning Director**

Email: **meredith@kdhnc.com**

Date of Report: **August 14, 2023**

1. **Date of the annual PPI committee meeting for this evaluation:** August 8, 2023

2. **List of committee members that attended the annual PPI committee meeting above:**

Members: Willo Kelly, Jan Presgraves, Randi Eure, Frank Soles, Jenna Wienet

Staff: Meredith Guns (Planning Director), Cameron Ray (Assistant Planning Director)

3. **List the Priority audiences for your community:**

The committee did not add any target audiences in the 2023 update but reiterated the need to reach out to property owners in the AO flood zone. It is a relatively new SFHA zone to Kill Devil HIlls. The 2020 maps moved majority of properties into the X or shaded X and educating properties owners of actual flood risk is a priority (Map is not reflective of risk). Additionally, the group reiterated the need to educate long term renters about insurance opportunities.

4. **List the Topics and associated messages with the desired outcomes for each message:**

Table #8. The committee reviewed the messages in Table #8 of the revised PPI Plan and did not add to the list. The two messages added "Low Risk is not No Risk" and "Flood knows no Boundaries" were discussed about how they were incorporated into our annual outreach. "Low Risk is Not no Risk" slogan is being used by all municipalities in Dare County in a joint outreach effort to educate the public. There has been brochures and videos done using this message. Both messages are to emphasize the importance of having and maintaining flood insurance even in the "X" zone. Flood

ATTACHMENT NB-6B

maps do not regulate who floods. To also emphasize that flood maps change cyclically and property owners will be better off maintaining flood insurance.

5. List the projects in the PPI used to convey the above messages:

See Table 7. The Town will continue to implement the existing outreach program as well as implement new projects as outlined in update.

6. List which projects were implemented for this reporting period:

All projects listed in Attachment #2 were implemented. Additionally, the County CRS Group held several public meetings targeting CRS coordinators spoke to several professional groups including realtors, engineers and surveyors regarding the new flood maps and impact of flood on our area. The Town continually posted flood prevention tips and after storm recovery methods on social media. The Town posted flood awareness messages on Town Garbage trucks and the brochures. Almost all Outreach Projects listed in Table 9 were accomplished and will continue to be. Additionally, the county NC Home Owners Alliance and Outer Banks Association of Realtors sent a joint brochure titled "Important Flood Zone Information Enclosed" explaining map changes, flood risk and need for flood insurance (attached). Additionally, Dare County and the Town have implemented the *Regroup Emergency Alert System* that can send emergency information to all cell phones in the tower area as well as allow people to sign up for updated via text message and/or email for information.

7. List why some projects were not implemented (if any):

The Town will continue to reach out to the Outer Banks Visitors Bureau to provide storm preparedness information. This was not accomplished due to different focus by the OBVB to promote tourism. The Town released a public information videos specifically for the new flood maps, Flood risks, flood related construction and flood insurance. These topics were mentioned during other public outreach videos. Still want to create targeted videos on the Town Higher Regulatory Standards and how they protect properties from flooding.

8. List what progress was made toward the desired outcomes:

The committee committed to continue to educate the public through their professional interactions (surveyor, engineer, mortgage broker, insurance executive, Executive to Board of Realtors and Director of the Older Adult Services). The Committee recommended Town Staff hold annual meetings with professional groups that were held via zoom the past several years due to Covid. The Town will continue outreach as listed in the plan.

9. List what should be changed (if anything). This should include what messages, outcomes and projects should be revised or dropped and what new ones should be initiated.

The Committee did not see any messages or audiences that should be dropped. The committee wants to try to reach renters more effectively through letters to property owners and real estate companies that may reach long term renters to encourage flood insurance options for renters. The committee also wanted to add to the Dare County Emergency Management outreach to include the new flood gauges and alerts that have recently been installed by NOAA in our area.

PPI Committee Annual Meeting
August 8, 2023
12:00pm at 102 Town Hall Drive

Agenda

1. Review Revise Program for Public Information (PPI) Plan including insurance policy update (Table 2, 3 and 4)
2. Review and Revise Public Information Efforts - Table 7 In revised plan (page 10-14)
3. Review And Revise Key Messages - Table 8 (page 15-17)
4. Review Complete Project(s) and Incomplete Project(s) (page 18) and Discuss New Outreach Efforts.

Town of Kill Devil Hills
2023 Floodplain and Stormwater Management Program for Public Information (PPI)

Background

The Town of Kill Devil Hills is a small beach community located on the Outer Banks of North Carolina. The Town is approximately 5.6 square miles. It is bordered to the east by the Atlantic Ocean and to the west by the Albemarle Sound, north by Town of Kitty Hawk and south by the Town of Nags Head. The Town's primary industry is tourism with a large influx of visitors in the summer months. Kill Devil Hills is known for its family beach atmosphere and beautiful oceanfront.

Kill Devil Hills has actively participated in the Community Rating System (CRS) since October 1, 1991. The CRS is part of the National Flood Insurance Program (NFIP). It provides discounts to flood insurance premiums in participating communities. The reductions are based on community floodplain management programs, including public information activities. To keep those discounts, communities must continue to implement their programs and provide status reports to the NFIP/Insurance Services Office, Inc. (ISO) each year. The Town is currently a Class 5, which gives residents within a Special Flood Hazard Area (SFHA) a 20% discount on their premiums. In an effort to reduce insurance costs to the residents in a more substantial way and to reach more property owners through a more aggressive outreach program, the Town created a Program for Public Information (PPI).

The Town has produced outreach materials and distributed those materials to the entire community for many years. Special efforts were made for areas having repetitive losses, yet other areas that might benefit from specific information had not been targeted. Development of the PPI committee, these areas now receive the outreach information that will benefit them and offer additional information when needed. Areas prone to flooding (repetitive loss areas), properties adjacent to a SFHA, areas that have historic flood information regardless of Flood Zone designation, areas having insufficient insurance, as well as other target areas can now be given information that pertain directly to them through the PPI.

The Town views this program as a benefit to the entire community and with the right tools it will be a success in all areas of outreach.

PPI Focus Group Members

The Town has been fortunate to have members volunteer that have a wealth of knowledge regarding flood hazards and flood risk. The stakeholders represent insurance, real estate, banker/lender, licensed contractor, registered engineer, licensed surveyor and floodplain residents. By having these members on the committee the Town receives valuable insight from their collective expertise.

- Mike O'Steen, Michael D. O'Steen P.E., Floodplain Resident
- Doug Styons, PLS, Styons Surveying,
- Jan Presgraves, Midgett Insurance, Floodplain Resident
- Stephanie Walker, Realtor, Floodplain Resident

- Randi Eure, Senior Loan Officer, OBX Bank Mortgage Division
- Willo Kelly, Outer Banks Association of Realtors/Outer Banks Home Builders Association, Government Affairs Director
- Frank Soles, Licensed NC General Contractor and Resident.
- Jenna Wienert, Director of Older Adult Services for Dare County
- John Windley, Manager of Local Business, Kill Devil Hills Commissioner
- Meredith Guns, CFM, Planning and Inspections Department, Floodplain Manager and CRS Coordinator
- Cameron Ray, CFM, Planning and Inspection Department, Floodplain Manager

The role of the committee has been to assist in developing the PPI by providing feedback, from their perspective, on areas of the community that should be targeted for outreach, what type of messages should be delivered, by whom and how often. Members were also asked to share information on any efforts related to this work that have occurred or are occurring within the Town.

Town staff developed the agendas and facilitated meetings. Prior to setting each meeting, staff surveyed the group members for their availability to ensure that the group met the attendance requirements outlined in the new CRS Manual. It was decided lunch meetings would work best for the group. All meetings were scheduled during lunch.

The initial meeting was held on August 6, 2015 in the Commissioners Meeting Room. The agenda followed steps one-four of the seven step plan outlined in the 2013 CRS Manual, pages 330-12 through 330-14. During the meeting the committee studied the needs of the community and the different needs for individual areas within the Town as well as the Town as a whole. The committee reviewed insurance data and demographic data as well as the current flood map. The Committee established goals for the plan and developed target audiences for outreach. Furthermore, the committee began discussion of how and what outreach could be used to reach the greatest audience and discussed target areas that needed special attention.

The second meeting was held on August 26, 2015 in the Planning Department Conference Room. The agenda followed steps three through five of the seven step plan. During the meeting the committee refined the target audiences. Members reviewed the six messages of the CRS Table 330-1 and matched topics to the target audiences, developing specific messages. This work is detailed under the "Target Audiences" section of this document.

The committee informally inventoried related efforts that were already taking place in the community. They discussed how those programs and activities fit in the PPI as they are being presented now, and how they can be modified to serve the overall effort in a better way.

Based on information gathered during the first and second meetings, Town staff assembled the first draft of the Program for Public Information. The draft, which needed work before completing, was reviewed by the committee and revisions and amendments were made based on discussion and recommendations by the committee as a whole.

The final draft of the Program for Public Information, recommended by the entire committee at the meeting held on September 16, 2015, was sent to Mandy Todd, CRS Coordinator requesting any comments. The document was then presented and adopted by the Board of Commissioners, which are elected by the citizens of the Town as the final decision making body.

Goals:

1. Through the outreach materials and methods, encourage residents to adopt behaviors that improve flood hazard preparedness and decrease future flood damage.
    a. Provide relevant information to residents of the Town regarding flood hazards; place added focus on residents in special flood hazard areas and those areas that may be re-mapped to be located within the Special Flood Hazard Area.
    b. Provide detailed information to inquirers through website and publications. Encourage businesses to place brochures within sight of residents and visitors alike, to make them better informed.
    c. Provide quick response to residents after they have been flooded. Have relevant information they may need available and ready to distribute.
2. An aggressive campaign will begin in getting the information to the public using the following guidelines:
    a. Share resources with other organizations to ensure information is getting to diverse groups.
    b. Outreach is imperative. Committee members including stakeholders agreed to do outreach during community and/or business meetings. These outreaches are considered projects and should be recorded.
    c. Activities should be recorded for assurance of credits.

Since adoptions the Committee meets annually to update the PPI including the Flood Insurance data, target audiences, existing outreach projects, key massages, new program projects, and existing outreach projects, which is presented and approved by the Board of Commissioners.

Community Needs Assessment

The Town of Kill Devil Hills has many assets that make it a wonderful place to live, work and visit. From the Office of State Budget and Management, Raleigh, NC as of July 1, 2019, the Town has an estimated year round population of 7,378 residents. When the Plan was developed approximately 61% of the town is currently located within a SFHA. In 2020 the FEMA Flood maps were revised and approximately 15% of the property remain in the SFHA. However, Town Staff and the PPI committee recognize that the map change was not reflective of actual flooding hazards with the Town. The majority of homes and businesses within the Town are elevated structures or have used fill materials to elevate the land; however, the Town does have older homes and businesses built prior to the FEMA FIRMs for our area established in 1973 or the FIRMs have changed, placing existing structures in the SFHA.

The committee agreed there is a need in the OIR Zoning district, east of NC12 adjacent to the Atlantic Ocean are particularly susceptible to flood events during tropical storms, hurricanes and nor'easters. This area is more of a vacation rental district for the Town; however, some properties are owner occupied year round. Renters in the area need to know what to do in the event of a flood. Many of these properties are located in a X or Shaded X which does not reflect the risk and the committee agrees it is important to send a targeted message to these property owners.

Properties adjacent to the SFHA are also a concern, as they are subject to flooding and owners need to be aware of the potential damage flooding can cause, which is not covered under homeowners insurance. This area is significantly larger with the revise 2020 Flood maps and become a key focal point for outreach.

Additionally, professionals in the area that deal with property whether engineers, surveyors, home builders or those that finance, sell and insure structures in and out of the SFHA need to be a target audience. Real estate and construction are two of the area's largest industries and those support professions should convey flood hazards to prospective buyers and renters. Real estate agents should advise potential buyers of flood hazards.

Flood Hazards

The Town of Kill Devil Hills is exposed to flooding from hurricanes, tropical storms, nor'easter and prolonged rain events that cause groundwater to rise. The Town is relatively flat and therefore storm surge can flood large areas even if not directly adjacent to the source. Prolonged rainfall causes the very shallow groundwater table to rise above the ground on occasion. Additionally, the Town's drainage system is a variety of open and closed ditches that ultimately lead to the Atlantic Ocean or the Albemarle Sound. The drainage system can be overwhelmed during heavy rain events or supersaturated soils that will lead to flooding in low lying areas. Upgrades to the Town's drainage system have alleviated some flooding from rain events but the system still has limits during heavy rains.

In summary, the Town experiences flooding from tropical events typically in the summer months, nor'easter in the winter months and from heavy, prolonged rain events that elevate the groundwater and/or overwhelm the drainage system.

Flood Insurance Data

One readily available source for information on flood hazards is flood insurance data. The Town of Kill Devil Hills currently (as of July 2, 2023) has 2,358 active flood policies in effect. Flood insurance is required as a condition of Federal aid or mortgage or loan that is federally insured for a building located in a SFHA. Staff first had to determine how many buildings were currently located in the Town limits. Using the Dare County GIS system, staff concluded there are 7,991 buildings in the Town limits, of which 538 are in the SFHA. First, the Committee reviewed policies in force and the number of properties in the SFHA and the X zones to determine what percentage of properties in Town carry flood insurance (Table 1).

Table 1:

Percentage of Building Insured (7/2/2023)

Flood Zone	Policies	Properties	Percentage
X	1,179	7,453	15.8%
AE	1,138	193	589%
AO	7	107	6.5%
VE	27	238	11.3%

After reviewing Table 1, the committee concluded the percentage of AE and X zone properties with insurance was sufficient, particularly AE zone where the policy count far exceeds the properties int eh Zone. This indicated that property owners formal in the AE zone prior to 2020 have retained flood insurance at the same level. The committee sees this as a testament to the ongoing outreach efforts to maintain your flood insurance. VE and AO Zones properties insurance policies should be significantly higher. The recommendation was to educate the property owners through mailings and FEMA publications of the advantages of having a flood insurance policy and to inform the owners that there is risk of flooding in the SFHA.

Additional data the committee reviewed included:

Table 2:

Policy Breakdown As of 7/2/2023

Structure Type	Number of Policies in Force	Premium	Insurance in Force
Single Family	1,538	$ 695,296	$ 451,885,000
2-4 Family	109	$ 28,869	$ 23,537,000
All other Residential	569	$ 71,235	$ 105,107,000
Non-residential	142	$ 188,554	$ 78,616,000
Total	2,358	$ 983,954	$ 659,145,000

Table 3:

Pre -Firm Policies (7/2/2023)

Flood Zone	**Pre Firm**	**Premium**	**Insurance in Force**
X	209	$ 133,954	$ 65,286,000
AE	93	$ 51,031	$ 26,033,000
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Table 4:

Post -Firm Policies (7/2/2023)			
Flood Zone	Post Firm	Premium	Insurance in Force
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AE	1,045	$ 340,451	$ 259,930,000
AO	5	$ 2,377	$ 1,341,000
VE	16	$ 7,000	$ 4,681,000

Flood Insurance Assessment

The committee agreed a Flood Insurance Assessment was needed in order to evaluate the Town for areas that may need to purchase flood insurance, and the possible need for additional insurance coverage.

The Committee reviewed the policies in effect by structure type in Table 2. Staff divided the amount of coverage by the number of policies in force to determine the average amount of coverage by category. The results are shown in Table 5 with the new "average coverage" column added.

Table 5:

Average Coverage Policy Breakdown 7/2/2023				
Structure Type	Number of Policies in Force	Premium	Insurance in Force	Average Coverage
Single Family	1,538	$ 695,296	$ 451,885,000	$ 293,813.39
2-4 Family	109	$ 28,869	$ 23,537,000	$ 215,935.78
All other Residential	569	$ 71,235	$ 105,107,000	$ 184,722.32
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The committee also reviewed the information provided in Table 3 and Table 4 (Pre-Firm and Post Firm Policies in Force). It was determined that the majority of pre-firm structures in V

Zones have no mortgage and do not require flood insurance. The recommendation was to inform the property owners of the importance of flood insurance and to better explain the vulnerability of a structure that is located within a velocity flood zone.

The committee, during the annual evaluation of the PPI has assessed its flood coverage and update the information with current data each year. The number of policies continues to decrease in Town largely due to the change in the flood maps. This is of concern to the committee since the flood risk have not diminished but since flood insurance is not required in the X and Shaded X many policies are not renewed and leaves homeowner vulnerable to costly repairs due to flooding. It also is a concern to the Town to have a large portion of the tax base vulnerable. The new information will be used to update the level of coverage and consider new conclusions and recommendations after reviewing the data.

Map 1:

Repetitive Loss Properties

The Town has been very pro-active in its efforts to reduce flooding within the Town. Aggressively addressing large drainage problems which led to flooding and repetitive loss properties particularly in the Avalon Beach Subdivision and Ocean Acres Subdivision. Additionally, The Town sends a letter to all properties located within a repetitive loss area advising them of the area and what they can do to protect their property with retro fitting and grant opportunities annually. The Repetitive Loss Map was reviewed by the committee (see

Map 1) as well as insurance data including payments since 1978 (see Table 6). The committee agreed that continued targeted outreach to the Repetitive Loss Areas and the need to target properties adjacent to the SFHA.

Table 6:

Repetitive Losses

Flood Zone	Number of Buildings (current)	Losses (since 1978)	Payments (since 1978)
X	7453	258	$ 5,481,332.05
AE/AO	300	306	$ 4,472,744.76
VE	238	75	$548,180.66
Total	7,991	639	$10,502,257.47

Social and Economic Needs

Because of the aging population within the Town of Kill Devil Hills, unique methods must be considered in order to get information out. Many elderly do not use social media, which is a primary tool for disseminating information. The group agreed this was a unique situation to our small Town that must be addressed in order to make the program work effectively. The committee will hold a series of informational sessions at the Dare County Older Adult Center, the Baum Center, to reach this population. Many properties within the Town are "second homes", these properties owners are best reached by mailings.

Target Audiences

After consideration of the community assessment results, the group agreed on six target audiences that would benefit most from public information outreach (See Table 8):

Target Audience #1: Properties located within an X flood zone. Increase awareness that flood insurance is available as a preferred risk policy. Make them aware of the importance of flood insurance particularly with the large numbers of structures now located within the X zones.

Target Audience #2: Properties located within various VE and AE flood zones. Property owners in these zones are vulnerable to flood waters from several sources. Include information in regards to permit information, especially ground floor enclosures, elevating mechanical equipment, break away walls and free of obstruction requirements.

Target Audience #3: Lending and insurance companies. These professionals work with people before they purchase a structure and can offer valuable advice and information to educate property owners before they purchase. Provide them with all the information they need to promote flood insurance and inform owners of the dangers of flooding.

Target Audience #4: Short term and long term renters/vacationers. These people may be unaware of flood risks where they are staying. Long term renters need to know their insurance options. Long term renters should also be made aware of what to do in an emergency for evacuations and when to return. Additionally, tourism (short term visitor/renter) is the primary industry of our area. Dare County swells with 10 times as many people in the County in the summer months. The height of tourism season is also the height of Hurricane Season, one of our largest sources of potential flood events. It is important that we try to reach the short-term visitors with emergency management information and other protective measures by working with rental agencies and Dare County Visitor Bureau.

Target Audience #5: Older Adults. Many people retire on the Outer Banks. Their homes may be paid off and they may not carry flood insurance. It is important these people know their risk and that even though flood insurance may not be required, that they can still get a policy to cover their property.

Target Audience #6: Realtor/Contractors/Engineers. Contractors and engineers need to be informed about flood zone regulations and flood risk. Additionally, they are the primary contact and represent the homeowner. They need to have a great understanding both of flood zone construction and options within the flood zone for their customers.

Target Audience #7: AO Property Owners (2019) . New Flood Zone Designation in the FEMA Flood maps. Educate property owners about the flood zone designation and what risk are associated. Explain how elevation is measure in an AO. Encourage owners to maintain flood insurance.

Yearly mailings regarding the need for flood insurance are also mailed to all property owners with the Town limits.

Existing Public Information Efforts

Knowing what public information is reaching the Town of Kill Devil Hills residents (not just owners, but all residents) is a key part of developing a PPI. The program is designed to build community resilience to flooding by influencing residents to adopt behaviors to improve flood hazard preparedness and decrease future flood damage.

Table 7 contains initiatives that are in place that support the goal and CRS messages. The list was composed by Town staff.

Table 7:

Existing Outreach Project – Kill Devil Hills				
Organization		Project	Subject matter	Frequency
1	Planning Department	Annual outreach newsletter	Various flood related topics and storm protection.	Annually in September/October each year

Existing Outreach Project – Kill Devil Hills				
Organization		Project	Subject matter	Frequency
2		Repetitive loss areas property owner mailing	Flood related matters and methods to reduce risk sent to property owners within repetitive loss areas.	Annually at the start of Hurricane Season each year
3		FEMA brochures available to the public	Various flood related topics.	Year Round In office
4		Map inquiry services	Identifying flood zones and flood protection measures. Provide information on problem areas not shown on the FIRM map, special flood related hazards, flood depth data, historical flood information, and additional FIRM info not shown on FIRM maps.	
5		Elevation certificates	Maintain/Provide elevation certificates for properties within Town.	
6		FEMA technical bulletins	Provide information and guidance for building or working within a SFHA.	
7	Planning Department	Property Protection Service - Site Evaluation	Meet property owners on site to discuss how they reduce or prevent flooding. Including	As Requested

Existing Outreach Project – Kill Devil Hills				
	Organization	Project	Subject matter	Frequency
			retrofitting possibilities and site modifications.	
8	Administration Department	Facebook Page	Various flood related topics.	Year Round – post a designated topic from CRS least once monthly
9		Website		Year round – page dedicated to flood information including NC Flood Maps, Flood Smart, FEMA link, local ordinances, tips and information
10	Public Services Department	Marking and clearing drains and drainage ways	Maintaining drainage ways to protect water quality.	Year Round – the Public Services Department has a drainage maintenance schedule that is followed and documented.
11	Division of Coastal Management	Coastal and estuarine protection regulations	Permitting authority over construction in Areas of Environmental Concern.	Year Round
12	Dare County Emergency Management (DCEM)	Emergency information	Dare County serves as the Emergency Management coordinator for all municipalities within Dare County. DCEM issues public information about storms and recovery.	As Needed in event of storm

Existing Outreach Project – Kill Devil Hills				
	Organization	Project	Subject matter	Frequency
13	Dare County Emergency Management (2023)	Flood Gauge Information and alerts	Dare County Emergency Management in conjunction with NOAA has installed Flood gauges throughout Dare County. Educate the public on the gauges and live updates alerts with FIMAN.nc.gov.	Dare County has made a public information video about the Flood Gauges and how to sign up for alerts. The video link is also on the Town website.
14	Dare County Library	FEMA publication cataloged and available to the public	Various flood related topics and construction standards in a SFHA.	Year Round - Cataloged
15	Dare Water And Soil Conversation	Mark storm drains that lead to open bodies of water	Protect the environment by preventing pollution into the system.	Year Round
16	Fire Department	Hurricane warning	Fly Hurricane flags for watches and warning to inform the public.	As Needed
17	WAVY10 – Local NBC Station out of Norfolk Virginia	Hurricane Ready Kit	Make available to the public a hurricane ready kit including hurricane preparedness check list and hurricane tracking maps	Each July
18		Public Service Announcements	Post announcements regarding	As needed during storm events

Existing Outreach Project – Kill Devil Hills				
	Organization	Project	Subject matter	Frequency
			hurricane evacuations in our area, storm updates and reentry information.	
19	North Beach Sun – Local publication	Article about knowing your flood zone, storm preparedness and construction methods to protect your property	Home preparedness from wind, flooding and during a hurricane. Construction standards for Coastal communities including wind loads and flood vents.	3rd Quarter edition
20	Outer Banks Visitor Bureau	Emergency Information	Provide a link in the Outer Banks Visitor Bureau website to the Dare Emergency Management Information during storm events	During Storm Events
21		Re-entry Information	Provide Re-entry information to the public. The OBVB number is listed on the back of the Dare County Re-entry passes.	As needed after a Storm event requiring a mandatory evacuation.

There are very few non-government agencies/stakeholders that provide important flood and storm information. Our area is very small in geographically and year round population and does not have a local Red Cross or other service organization. Additionally, the Town of Kill Devil Hills does not provide shelters in the event a major event. Dare County encourages evacuation rather than shelters. The area only has one newspapers in the area that are distributed once a week. There are two online local new sources but do not specialize in emergency management. There are no local TV stations; however, the station in Tidewater, Virginia serves our area with warnings and other information regarding evacuations and reentry and other weather warnings in our areas (school closers, delay, government office closers, etc).

Projects and Initiatives

The focus of the PPI is to encourage flood preparedness best practices for the following key audiences:

- Property owners located just outside the Special Flood Hazard Area (X and Shaded X)
- Property owners located in the Special Flood Hazard Areas (AE, AO & VE)
- Short Term Renters and vacationers
- Real Estate, lending and insurance companies
- Older adults
- Contractors/Engineers

The group selected thirteen key messages that need to be disseminated to the audiences (table 8). The first six are the same as the six priority messages for the CRS. Seven were added by the group.

Table 8:

	Message	Outcome
1	KNOW YOUR FLOOD HAZARD "Know your flood zone." "All Properties are susceptible to flooding." "Visit NCfloodmaps.com."	• Increase the number of inquiries about flood zone information from property owners. • Encourage residents go to NCfloodmaps.com for more information about flood hazards in their area. • Increase the number of request for elevation certificates on file to inform public of existing structures elevation.
2	INSURE YOUR PROPERTY FOR YOUR FLOOD HAZARD "Homeowner's Insurance will not cover Flood Damage" "Town strongly encourages all residents to purchase flood insurance" FRP – "Contact you flood insurance agency before you repair"	• Increase the number of flood insurance policies throughout Town particularly in X – zones.
3	PROTECT PEOPLE FROM THE FLOOD HAZARD "Never drive in flooded roadways" "Turn around don't Drown	• Reduce number of injures and personal property damage from flood water.

	Message	Outcome
	FRP – "don't enter a building that has been flooded"	• Keep people away from flooded areas to protect public health with flooded areas and septic tank leaching. • Stop preventable accidents by staying away from standing water.
4	PROTECT YOUR PROPERTY FROM THE HAZARD "There are specific building regulations to protect your structure from flooding" FRP – "Mitigate against future flood loss by elevating mechanical equipment and using flood resistant materials"	• Decrease the number of insurance claims paid after a flood event. • Increase awareness of construction standards to protect property. • Increase inquiry about building elevations. Educate owners about elevation to further protect property or mitigate lower floors.
5	BUILD RESPONSIBLY "Obtain Permits before you develop or repair" "Work exceeding 50% of the value is considered substantial…" FRP- "Contact Planning Department to determine permit requirements for repair work"	• Decrease the number of Stop Work Orders. • Increase the number of Elevation Certificates on file. • Increase the number of permits • Bring existing nonconforming structures into compliance.
6	PROTECT NATURAL FLOODPALIN FUNCTIONS Protect natural floodplain functions "Don't dump into Town drainage systems" "Keep storm drains clear of debris and vegetation" FRP – "Proper disposal of storm debris to protect natural resources and drainage function" 2023 – "Protect our nesting turtles do not disturb nesting areas on the beach"	• Decrease landscape clippings and chemicals from being washed down. drains into our ocean and estuaries. • Protect wetlands along our estuarine shoreline.

Message		Outcome
7	HURRICANE PREPAREDNESS “Know your evacuation plan and execute it” “If you are advised to evacuate, do so promptly” 2023 - “Have a hurricane ready kit”	• Educate property owners regarding evacuation safety tips before a flood event. • Decrease the number of calls to 911 during storm events. • Encourage people to follow the evacuation plan and leave the area before the storm.
8	GENERAL PREPAREDNESS – “Inventory and photograph your home contents and put important papers and insurance policies in a safe place” “Develop an emergency plan”	• Reduce flood insurance claims. • Promote personal and property preparedness plan and checklist.
9	BUILDING TO A HIGHER STANDARD “Higher is better” ~~“Increased Elevations will decrease Flood Insurance premiums”~~	• Increase number of builders/owners to exceed minimum flood regulations including increase freeboard. • Increase number of flood mitigation projects during repairs.
10	FLOOD INSURANCE OPTIONS “Everyone can buy flood insurance”	• Educate residents of flood insurance options to increase insurance in year-round rental homes. • Increase number of flood policies in the X zone and rental insurance.
11	FLOOD RISK OUTSIDE SFHA “Don’t be Flood Foolish” (2018)	• Educate properties owners about flood risk even outside the SFHA. Emphasize the importance of having and maintaining flood insurance even in the “X” zone. • Remind property owners that fllod maps are revised cyclically and property owners will be better off maintaining current flood policy.
12	FLOOD RISK OUTSIDE SFHA “Low Risk is NOT No Risk” (2019)	• Target “X” flood zone properties to maintain flood insurance even outside SFHA
13	PROTECT PROPERTY FROM HAZARDS	• Know you flood Hazard

Message		Outcome
	"Flood knows no boundaries – Your property is subject to flooding" (2019)	• General outreach to educate even if the property has not flooded in the past does not mean it will not in future.

The overall strategy is to make information more readily available to the target audiences in a manner that will encourage each audience to adopt behaviors to improve preparedness and decrease future flood damage. Also, to be able to disseminate information in a variety of ways including, mailings, public meetings, social media, website, TV media via a series of informative videos, seminars with various local civic groups (Rotary, Chamber of Commerce, etc.), trade organizations (Outer Banks Home Builders, Outer Banks Board of Realtors etc.), and community centers (Older Adult Center).

The committee agreed that the Town of Kill Devil Hills should maintain the current programs and incentives outlined in Table 7. In addition to the committee recommends new proposed projects, developed through discussions at the committee meetings. The new projects are highlighted below:
UPDATE

- Create more videos for broadcast on GovTV (Charter Cable Channel 191) – Continuing to address the need for flood insurance by all property owners as well as storm preparedness. Another to address construction and permitting in a SFHA as well as explain substantial damage and improvement. The video will also highlight storm preparedness.
- The CRS coordinator will contact civic groups requesting to speak at their meetings regarding flood safety, general preparedness and flood insurance.
- The CRS coordinator will contact professional groups such as Outer Banks Home Builders and Outer Banks Board of Realtors requesting to speak at their meetings regarding flood zones, flood regulations, and flood insurance.
- The CRS coordinator will hold two annual presentations at the older adult center. One session at the beginning of hurricane season to provide information for storm preparedness and outline services available for the elderly. The second session to provide information and answer questions about flood zones and flood insurance.
- The Town will send a letter to all property owners adjacent to a SFHA to inform them of their risk and request that they consider protecting their property both physically and through the purchase of flood insurance.
- The Town will use the Town's Facebook page, Instagram Page and Youtube Channel to educate the public on various flood related issues including but not limited to flood zone information, flood insurance recommendations and storm preparedness.
- Town will create fliers and informational packets for distribution after a storm to help provide vital information needed for safe and speedy recovery.
- The Town will work with the Outer Banks Visitors Bureau to provide information to visitors about storm preparedness and what to do in the event of a flood.

- The CRS Coordinator will work with insurance companies and local banks to have them provide a link on their website to the Town Flood information page.
- The Town will post flood awareness on the Town garbage trucks for a four month period once a year.

All projects are summarizing with project description, messages included, audience reached and schedule of outcome in Table 9

Annual Evaluation

The PPI Committee will meet at least once a year, to evaluate the plan and incorporate any needed revisions. The evaluation will cover:

- A review of the projects that were completed
- Progress towards the desired outcomes
- Recommendations regarding projects not completed
- Changes in the target audiences;

Staff will draft an update as changes are made by the committee. The revisions will be submitted to Board of Commissioner for review and as part of the Town's annual recertification package to the Community Rating System.

Adoption

This document was approval by the Board of Commissioners on October 12, 2020.

____
Debora P. Diaz, Town Manager

______________________________ SEAL
Michael O'Dell, Town Clerk

Acronyms

AE Zone: 100 – year floodplain mapping by FEMA with base flood elevations
VE Zone: Coastal high hazard 100-year floodplain mapped by FEMA

X Zone: Areas determined to be outside of the 500 year floodplain
CFM: Certified Floodplain Manager
CRS: Community Rating System
SFHA: Special Flood Hazard Area
OP: Outreach Projects
PPI: Program for Public Information

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#1	Revised Annual Outreach Long Version	The revised annual outreach long version is a mass mailing that is sent directly to all property owners within the Town. It is a two page document that explains many aspects of flood regulations, insurance, preparedness, etc. in detail.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	All Town Property Owners	Planning Department	Mailed Early Fall Annually
OP#2	Revised Annual Outreach Short Version	The revised annual outreach short version is a mass mailing that is sent to all property owners in the Town. It is a postcard sized document that highlights important points. The committee thought a short version may attract more attention in the mail.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	All Town property Owners	Planning Department	Before hurricane season annually.

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#3	Messages on Water Bills	The Town mails quarterly water bills to all active accounts in sealed envelopes. This is a good opportunity to have a short message in regards to flood either be printed on the bill itself or stuffed in the envelope with the bill. Message will vary year to year.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	All active water accounts for entire town including businesses.	Water Department	One message per customer per quarter. Four messages total per property per year.
OP#4	Open House Breakfast	Town will host an open house breakfast for industry professionals (builders, mortgage lenders and realtors) to listen to a presentation regarding flood topics and ask questions. The committee thought this was a valuable resource in the past and should be conducted again.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Target Audience #3: Lending and insurance companies. Target Audience #6: Realtor/Contractor/ Engineer	Planning Department	Early Spring annually

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#5	Enrichment Speaking	Town staff will give short presentation to local groups and organizations in regards to specific flood topics.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Target Audience #3: Lending and insurance companies. Target Audience #5: Older Adults Target Audience #6: Realtor/Contractor/ Engineer and Civil Organizations	Planning Staff	Town will request to speak to each organization annually. Specifically Rotary Clubs, Older Adult Center, Home Builders, Board of Realtors.

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#6	Brochure/Technical Bulletin Distribution	The Town has an array of informational material for people to take with them. This information will also be distributed to and by industry professionals. Technical Bulletins are provided for information and guidance for building within a SFHA.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones. Target Audience #3: Lending and insurance companies. Target Audience #4: Short term renters/vacationers. Target Audience #5: Older Adults. Target Audience #6: Realtor/Contractor/ Engineer All visitors to the Planning and Inspections Department	Members of PPI Committee and Town Staff	Continuous

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#7	Facebook /Instagram Updates YouTube Videos	The Town will periodically post information on its Facebook and Instagram page to address specific topics individually.	1, 2, 3, 4, 5, 6, 7, 8 , 9, 10, 11, 12, 13	Everyone who "likes" the Town Facebook Page or follows the town on Facebook currently has 20,683 followers on (maximum range of 85,000 people reached) and Instagram 4,170 followers YouTube 1,460 subscribers Targeted post and about hurricane preparedness, how to get emergency information and updates and safety during and after a storm during Hurricane Preparedness Week.	Administration Department	Continuous

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP#8	Website Information	The Town's new website features an entire portion entirely dedicated to flood information. This page will provide additional information or more detailed information on flood topics with links to outside agencies that are covered in our brochures and mailings.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Everyone that visit or are directed to our webpage. Potential links to our page from stakeholders will increase this audience.	Administration Department	Year Round – Dedicated page for Flood and insurance information
OP#9	Public Information Video #1: Topics Flood Insurance, Storm Preparedness and more for GOVTV, You Tube, Website and Dare County Library	Create an informational video that covers NFIP, know your types of floods, flood zone, flood insurance, storm preparedness and general preparedness.	1, 2, 3, 4, 6, 7, 8 , 10, 11,12, 13	Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones. Target Audience #4: Short term renters/vacationers. Target Audience #5: Older Adults.	Administration Department	Continuous

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP #10	Public Information Video #2: Main Topics Construction with SFHA, Elevation Certificates, for GOVTV, You Tube, Website and Dare County Library	Create an informational video that covers NFIP, Construction within SFHA, Elevation Certificates, Flood Zone information, Substantial Damage Substantial Improvements regulations, Storm Preparedness and more	1, 3, 4, 5 , 6, 7 , 8, 9, 11,12,13	Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones. Target Audience #3: Lending and insurance companies. Target Audience #4: Short term renters/vacationers. Target Audience #5: Older Adults. Target Audience #6: Realtor/Contractor/ Engineer		
OP #11	Repetitive Loss Mailing	The Town will mail a letter and map in regards to Repetitive Loss Areas which addresses mitigation and retrofitting as well as grant information.	1, 2, 4, 5 , 7 , 8, 9, 11, 12, 13	Target Audience #2: Properties located within various VE and AE flood zones.	Planning Department	Mailing in Fall annually

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP #12	X-Zone Mailing	The Town will mail a letter to all properties in the X zone that border a SFHA.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Target Audience #1: Properties located within an X flood zone that border a SFHA.	Planning Department	Annually
OP #13	NFIP Signs on Trash Trucks	The Town will advertise the NFIP on garbage trucks for at least one quarter annually.	1	General Public that travel on Town streets.	Public Services Department	Quarterly
OP #14	Map Inquiry Service	Identifying flood zones and flood protection measures. Provide information on problem areas not shown on the FIRM, special flood related hazards, flood depth data, historical flood information, and additional FIRM info not shown on FIRM.	1, 4, 5, 11, 12, 13	Visitors to the department and/or callers (directed to the maps online).	Planning Department and KDH Website	Year Round inquiries and web visits
OP #15	Elevation Certificates Retention	Require/Maintain/provide elevation certificates on file for properties within the SFHA	1, 4	General public inquires	Planning Department	Year Round inquiries

Table 9:

PPI Projects and Initiatives **Outreach Projects (OP)**						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP #16	Property Evaluation Services	Meet property owners on site to discuss how they can reduce or prevent flooding. Including retrofitting possibilities and site modifications.	1, 2, 3, 4, 5, 6, 9, 11, 12 13	Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones. Target Audience #3: Lending and insurance companies.. Target Audience #5: Older Adults. Target Audience #6: Realtor/Contractor/ Engineer Any property owners within the Town that request the service	Planning Department	Year Round inquiries
OP #17	Provide FEMA Publications at Regional Library	Provide ten required FEMA publications outlined in LIB Activity 350	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	Library patrons- General	Planning Department to provide to library	Publications are available year round during regular library hours and online.
OP #18	Mark Storm water Drains that lead to open water	Dare county Water and Soil Conservation mark targeted storm drains that lead to open water	6	General public and property owners near storm drains	Dare County Soil and Water	Remark as needed.

Table 9:

PPI Projects and Initiatives **Outreach Projects (OP)**						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP #19	Hurricane Warning Flags	Town Fire Department (centrally located on the main road) will fly hurricane watch/warning flags to announce an impending storm	3, 7, 8	All citizens and visitors in Dare County that travel along US158 by the Fire Department	Fire Department	As needed when hurricane is approaching.
OP #20	North Beach Sun Publication	Town request to partner with North Beach Sun to include flood information and hurricane preparedness in the newspaper annually. The paper is sent to every house hold in Dare County.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	General public and all residents with mailing address in Dare and Currituck County	Town and North Beach Sun Partnership	Summer or Fall edition
OP #21	Wavy10	Serves as local network station to disseminate public safety announcements for Dare County and Kill Devil Hills and provide Hurricane Ready kits.	3, 4, 7, 8	General Public	Private Industry	At the beginning of hurricane season and PSA as needed.
OP #22	Outer Banks Visitors Bureau	Work with OBVB to provide emergency information via the Dare County Emergency Management. Partner with DCVB to help provide flood and safety information before and after the storm.	3, 4, 7, 8	Target Audience #4: Short term renters/vacationers.	Private Industry	
OP #23	Link to our Flood Website by local realtors/	Work with various professional organizations to request a link to the town's Flood page on their business webpage.	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11,12,13	General public with much further reach by linking to private business webpages.	Planning	Provide link as soon as possible.

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
	lenders/ engineers/ contractors			Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones. Target Audience #3: Lending and insurance companies. Target Audience #4: Short term renters/vacationers. Target Audience #6: Realtor/Contractor/Engineer		
OP #24	Cleaning and Maintain drainage ways	Town maintains drainage ways to prevent flooding from a blockage and protect natural drainage way.	6	Properties along drainage ways	Public Services	Public Services maintains a ditch maintenance schedule
OP #25	Letter from Mayor and Board of Commissioner	The Town's elected officials want the public to understand the importance of flood protection, insurance and safety. A letter from the mayor on behalf of the Board of Commissioners to be included with all mailings and information presented to the public.	1, 2, 3, 4, 9, 10, 11, 12, 13	Kill Devil Hills property owners and Target Audience #1: Properties located within an X flood zone that border a SFHA. Target Audience #2: Properties located within various VE and AE flood zones	Planning	With Town mailings.

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
OP #26 OP #26 Cont.	Damage Assessment Team	After a storm event the Town has a Damage Assessment Team composed of Planning staff and local volunteers. The volunteers are trained in determining damage including substantial damage regulations. The volunteers are also informed of permit requirements and mitigation efforts. The team also reinforces safety after a storm particularly if flooding is obvious. This information is relayed to the property owners and citizens during assessment. The volunteers are is called together before a storm or annually for training.	3, 4, 5,6, 8, 9	Targeted – Storm effected areas	Planning	Annual Training and Post Event
FRP #1	Door Hanger	The Town will distribute information to flooded properties after an event to educate them on the recovery and permitting process.	2, 3, 4, 5, 6	Properties effected by storm event	Planning Staff	Post Event

Table 9:

PPI Projects and Initiatives Outreach Projects (OP)						
Proposed Project		Description	Messages (Table 8)	Audiences Reached	Assignment	Schedule
FRP# 2	Media Information Pre and Post Storm	Media Packet prepared for media release	1, 2, 3, 4, 5 , 6, 7, 8 , 9, 10, 11, 12, 13	General public via public broadcasts	Planning	As needed in storm events

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Community Rating System
Activity 510 (Floodplain Management Planning)

Progress Report on Implementation of Credited Plan

Date this Report was Prepared:	Meredith Guns, Planning Director
Name of Community:	Town of Kill Devil Hills
Name of Plan:	Outer Banks Regional Hazard Mitigation Plan
Date of Adoption of Plan:	May 27, 2020 (KDH Adoption) June 10, 2020 (FEMA Approval)
5 Year CRS Expiration Date:	June 9, 2025

1. How can a copy of the original plan or area analysis report be obtained:

The Outer Banks Hazard Mitigation Plan can be reviewed at the Planning and Inspection Department of the Town of Kill Devil Hills and online at:
https://drive.google.com/file/d/1B0WbV-0aNltZbyMcxO1XTw23WLf-v7e8/view

2. Describe how this progress report was prepared and how it was submitted to the governing body, released to the media, and made available to the public:

Town staff reviewed Annex D of the Outer Banks hazard Mitigation Plan. Annex D is the Town of Kill Devil Hills specific threats and Mitigation Strategies. Staff prepared an annual progress report for the Board of Commissioners. The Report was a published agenda item at the August 8, 2023 Board of Commissioners meeting. The meeting was advertised in the local newspaper of record, posted on the Town bulletin Board, distributed electronically including the Town's social media sites. The meeting is live streamed on the Town's YouTube channel and on demand after the meeting. The support documentation for the agenda item was provided on the Town website.

3. Provide a description of the implementation of each recommendation or action item in the action plan or area analysis report, including a statement on how the project was implemented or not implemented during the previous year:

***See Attached* Mitigation Strategies 2023 updated spreadsheet.**

ATTACHMEMT NB-6C

4. Discuss why any objectives were not reached or why implementation is behind schedule:

There were only three strategies that were not accomplished. KDH10- Relocation – expedite permitting for relocation of Repetitive loss structures. This was not complete because no permit request was made to relocate a repetitive loss structure. KDH11- Acquisition of repetitive loss structure was not complete due to lack of funding and lack of interest by the property owner for acquisition. However, Dare County does assist in grants for relocation or mitigation of repetitive loss structures. KDH13 Open Space preservation was incomplete due to lack of funding for new open space, however the Town has maintained existing open space for many years.

5. What are the recommendations for new projects or revised recommendations?

No new Mitigation Strategies were developed, however expansion of existing mitigation strategies were including specifically the Town coordination with Dare County Emergency Management for emergency preparedness, response and recovery.

Annex D Town of Kill Devil Hills

D.1 PLANNING PROCESS

The table below lists the HMPC members who represented the Town of Kill Devil Hills.

Table D.1 – HMPC Members

Representative	Agency/Department	Position or Title
Meredith Guns	Planning & Inspections	Planning Director
Cameron Ray	Planning & Inspections	Senior Planner
Doug Styons	Citizen	Business owner, Citizen, licensed land surveyor, stakeholder on KDH PPI Committee & Damage Assessment Team member
Mike O'Steen	Citizen	Local business owner, Professional Engineer, stakeholder for KDHPPI Committee
Skip Jones	Citizen	Local business owner, Licensed Contractor, former President Homebuilders Association, stakeholder for KDH PPI Committee

D.2 COMMUNITY PROFILE

Geography

The Town of Kill Devil Hills is a barrier island community in Dare County. It is neighbored by Kitty Hawk to the north and Nags Head to the south. To the west of Kill Devil Hills is Colington Creek and the unincorporated community of Colington. Kill Devil Hills comprises a total land area of 5.62 square miles.

According to data from the U.S. Fish and Wildlife Service's National Wetlands Inventory, there are approximately 69 acres of wetlands in Kill Devil Hills, primarily forested/shrub wetland.

Figure D.1 shows a base map of the Town of Kill Devil Hills.

Figure D.1 – Location Map, Town of Kill Devil Hills

Source: U.S. Census Bureau

Population and Demographics

Table D.2 provides population counts and growth estimates for the Town of Kill Devil Hills as compared to the Region overall. Table D.3 provides demographic information for Kill Devil Hills as compared to the Region.

Table D.2 – Population Counts, Kill Devil Hills, 2010-2017

Jurisdiction	2000 Census Population	2010 Census Population	2017 ACS Population Estimate	Total Change 2010-2017	% Change 2010-2017
Region Total	48,157	57,467	60,659	3,192	5.55%
Town of Kill Devil Hills	5,897	6,683	6,978	295	4.41%

Source: US Census Bureau Decennial Census 2000, Decennial Census 2010; American Community Survey 2013-2017 5-Year Estimates

Table D.3 – Racial Demographics, Kill Devil Hills, 2017

Jurisdiction	White, %	Black, %	Asian, %	Other Race, %	Two or More Races, %	Persons of Hispanic or Latino Origin*, %
Region Total	91.0	3.5	0.5	2.2	2.7	5.7
Town of Kill Devil Hills	90.4	1.8	0.7	5.0	2.1	12.2

Source: US Census Bureau, American Community Survey 2013-2017 5-Year Estimates
*Persons of Hispanic origin may be of any race, so also are included in applicable race categories

Asset Inventory

The following tables summarize the Critical Infrastructure and Key Resources (CIKR) and high potential loss facilities identified in IRISK for the Town of Kill Devil Hills. Critical facilities, which include a subset of identified assets form the CIKR dataset as well as facilities identified by the HMPC, are shown in Figure D.2 on the following page and summarized in Table D.6. The County provided information is not included in IRISK vulnerability assessments. Note that the IRISK counts are by building; where a critical facility identified by IRISK comprises a cluster of buildings, each building is counted and displayed.

Table D.4 – Critical Infrastructure & Key Resources by Type

Jurisdiction	Food and Agriculture	Banking and Finance	Chemical & Hazardous	Commercial	Communications	Critical Manufacturing	EM	Healthcare	Government Facilities	Nuclear Reactors, Materials and Waste	Postal and Shipping	Transportation Systems	Energy	Emergency Services	Water	Total
Town of Kill Devil Hills	1	11	0	249	4	45	0	12	10	1	0	29	4	1	5	372

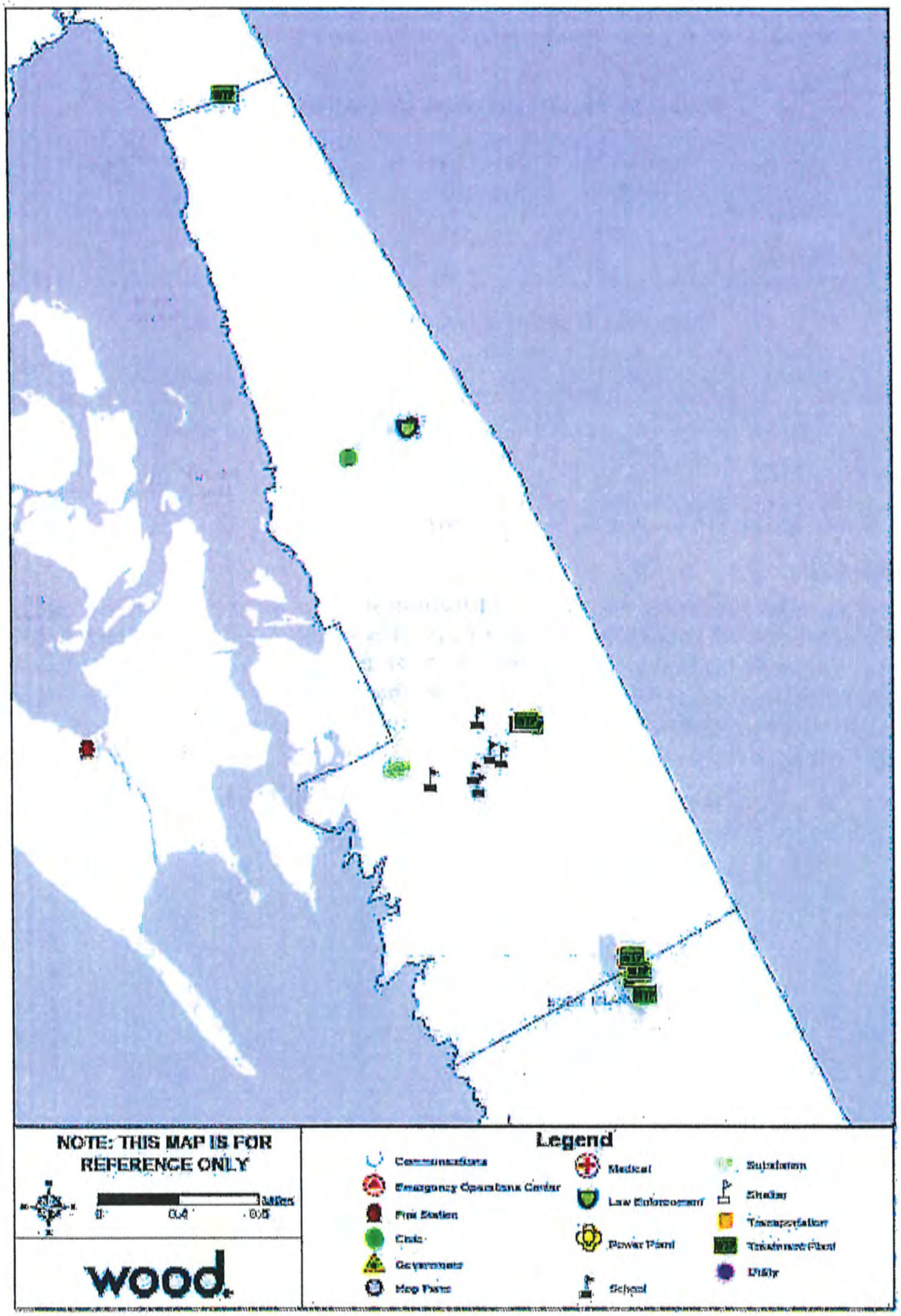
Source: NCEM Risk Management Tool

Table D.5 – High Potential Loss Facilities by Use

Jurisdiction	Residential	Commercial	Industrial	Government	Agricultural	Religious	Utilities	Total
Town of Kill Devil Hills	40	28	0	3	0	0	2	73

Source: NCEM Risk Management Tool

Figure D.2 – Critical Facilities, Town of Kill Devil Hills



Source: NCEM IRISK Database, HMPC input, GIS Analysis

Table D.6 – Critical Facilities List, Town of Kill Devil Hills

Facility Type	Count
Fire Station	1
Police Station	1
School	6
Substation	2
Treatment Plant	6
Total	**16**

Source: NCEM IRISK Database, HMPC input, GIS Analysis

To supplement the asset inventory and provide a clearer picture of the current asset exposure in the Town of Kill Devil Hills, current parcel data was evaluated to identify recent development not included in NCEM's IRISK database. Per this assessment, since IRISK data was compiled the Town of Kill Devil Hills' building value exposure has increased by 9.6 percent.

Recent Improved Parcels		IRISK Buildings		Percent Change	
Count	Value	Count	Value	Building Count	Building Value
416	$93,552,200	5,972	$974,106,060	7.0%	9.6%

Source: County parcel data, retrieved November 2019; IRISK database building footprints

Note: This information is not incorporated into the risk assessment, which was prepared using IRISK. However, this summary of recent development provides some context to understand the degree to which the IRISK exposure and vulnerability numbers differ from current conditions.

There are two listings on the National Register of Historic Places for the Town of Kill Devil Hills. These sites are listed in the table below.

Table D.7 – Historic Properties

Ref#	Property Name	Status Date	Category	City
66000071	Wright Brothers National Memorial	10/15/1966	District	Kill Devil Hills
99000062	Sam's Diner	1/27/1999	Building	Kill Devil Hills

Source: National Parks Service, National Register of Historic Places, October 2018

Housing

The table below details key housing statistics for Kill Devil Hills as compared to the Region overall.

Table D.8 – Housing Statistics, Kill Devil Hills, 2010-2017

Jurisdiction	Housing Units (2010)	Housing Units (2017)	Housing Units Percent Change (2010-2017)	Owner-Occupied, % (2017)	Vacant Units, % (2017)	Median Home Value (2017)
Region Total	**47,945**	**49,616**	**3.5%**	**74.5**	**49.6**	**$285,000**
Town of Kill Devil Hills	6,617	6,433	-2.8%	58.5	54.3	$240,200

Source: U.S. Census Bureau 2010 Decennial Census, American Community Survey 2013-2017 5-Year Estimates
Note: Owner-Occupied and vacant-unit measures are reported as a percent of the total number of housing units.

Economy

The following tables present key economic statistics for Kill Devil Hills as compared to the Region overall.

Table D.9 – Employment Statistics, Kill Devil Hills, 2017

Jurisdiction	Population in Labor Force	Percent Employed* (%)	Percent Unemployed* (%)	Percent Not in Labor Force* (%)	Unemployment Rate (%)
Region Total	47,945	49,616	3.5%	74.5	49.6
Kill Devil Hills	4,288	70.7	5.3	24.1	7.0

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

Note: This table reports only the civilian labor force. The labor force in armed services accounted for 0.6% of the population 16 and over across the region. *Population employed, population unemployed, and Population not in labor force are reported as a percent of the total population aged 16 years and older.

Table D.10 – Percent of Employed Population by Occupation, Kill Devil Hills, 2017

Occupation	Management, business, science and arts (%)	Service (%)	Sales and Office (%)	Natural Resources, Construction, and Maintenance (%)	Production, transportation, and material moving (%)
Region Total	30.6	18.7	27.8	14.0	8.9
Kill Devil Hills	28.3	26.4	25.1	12.5	7.7

Source: U.S. Census Bureau, American Community Survey 2013-2017 5-Year Estimates

Land Use and Future Development

The Town of Kill Devil Hills Planning and Inspections Department is responsible for land-use planning for the Town. The Town is currently reviewing the new 2019 CAMA Land Use Plan Update as of January 2020. The draft of this plan is available and information from it was used for this assessment of future development.

Current Land Use

Since the County has island geography and narrow strips of land, much of the development is located around the main transportation corridors, US 158 and NC 12. The Town classifies their land into eight different categories. These categories are shown below with their total acreage in Table D.11. Acreages have been rounded to the nearest whole number as have percentages.

Table D.11 – Land Use, Town of Kill Devil Hills

Land Use	Total Acres	Percent of Town (%)
Commercial	199	6
Industrial	33	1
Office and Institutional	596	19
Mixed Use	6	1
Multi-Family Residential	97	3
Single Family Residential	1,154	37
Recreational	87	3
Total Developed	*2,172*	*70*
Vacant/ Unimproved	941	30
Total	**3,113**	**100**

Source: Town of Kill Devil Hills 2019 CAMA Land Use Plan Update

Recreational parcels include public parks, open space, and public beach access. Undeveloped land falls under the vacant/unimproved category. Most of the Town is developed (70%) with 37 percent of land classified as single family residential.

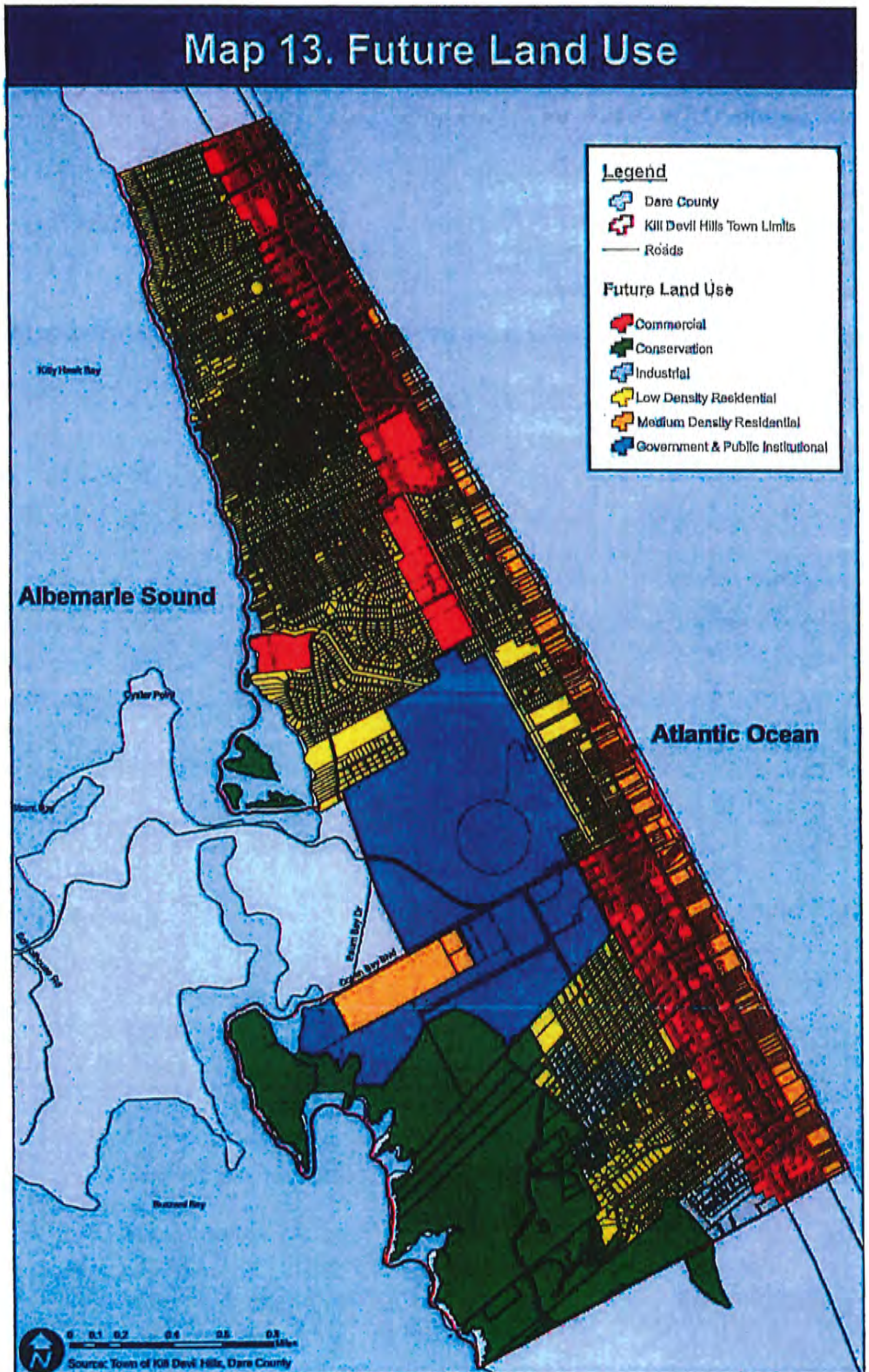
Future Development

Even though 30 percent of land in the Town is deemed vacant/unimproved, there is not much vacant land available for development. However, re-development of some lots is an option when considering future development. Development will most likely continue to locate around the transportation corridors and will continue at a consistent pace. Future development within the Town will use a new classification system with five classes. These classes are

- Commercial
- Residential
- Conservation
- Industrial
- Government and Public Institutional

Figure D.3 shows the future land use of the Town of Kill Devil Hills as envisioned in the 2019 CAMA Land Use Plan Update.

Figure D.3 – Town of Kill Devil Hills Future Land Use Map



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Source: Town of Kill Devil Hills 2019 CAMA Land Use Plan Update

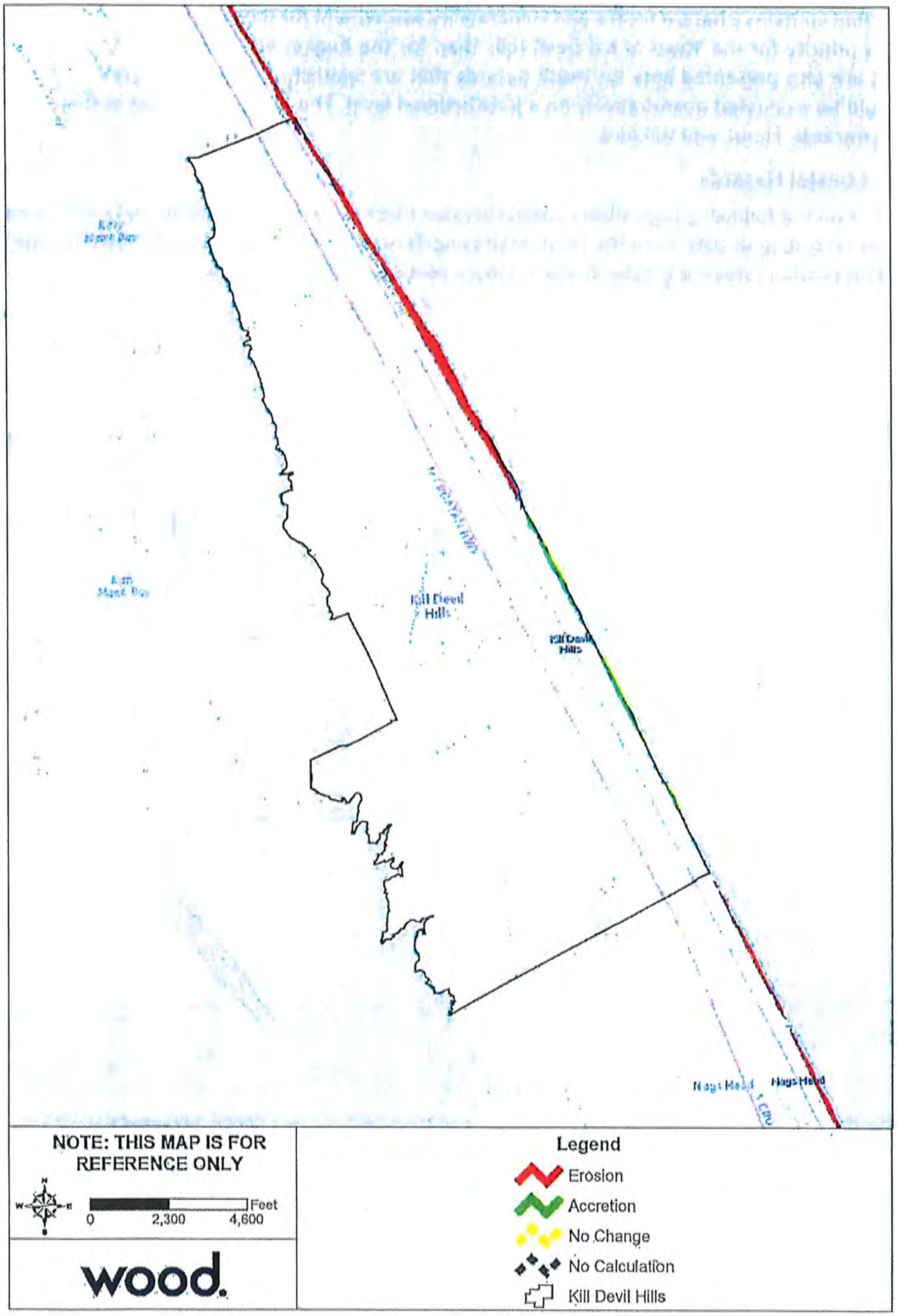
D.3 RISK ASSESSMENT

This section contains a hazard profile and vulnerability assessment for those hazards that were rated with a higher priority for the Town of Kill Devil Hills than for the Region as a whole. Risk and vulnerability findings are also presented here for those hazards that are spatially defined and have variations in risk that could be evaluated quantitatively on a jurisdictional level. The hazards included in this section are: Coastal Hazards, Flood, and Wildfire.

D.3.1 Coastal Hazards

Figure D.4 on the following page shows coastal erosion rates along the Town of Kill Devil Hills oceanfront coastline according to data from the DCM 2019 Long-Term Average Annual Erosion Rate Update Study. Long-term erosion rates are greater in the northern portions of Kill Devil Hills.

Figure D.4 – Erosion Rates, Town of Kill Devil Hills



Source: North Carolina Division of Coastal Management

D.3.2 Flood

Table D.12 details the acreage of the Town of Kill Devil Hills total area by flood zone on the effective DFIRM. Per this assessment, nearly 65 percent of the Town falls within the mapped 1%-annual-chance floodplains and the remainder is within the 0.2 percent annual chance floodplain.

Table D.12– Flood Zone Acreage in the Town of Kill Devil Hills

Flood Zone	Acreage	Percent of Total (%)
Zone A	13.36	0.4%
Zone AE	2,090.81	57.7%
Zone VE	260.48	7.2%
Zone X (500-year)	1,255.87	34.7%
Total	**3,620.52**	--

Source: FEMA Effective DFIRM

Figure D.5 reflects the effective mapped flood hazard zones for the Town of Kill Devil Hills, and Figure D.6 displays the depth of flooding estimated to occur in these areas during the 1%-annual-chance flood.

To supplement the IRISK assessment of property at risk from the 1% annual chance flood event in Section 4 and provide a clearer picture of the current property at risk in the Town of Kill Devil Hills, recent development not included in IRISK was analyzed using GIS to determine additional exposure to flood risk. Improved parcels in contact with the SFHA were considered at risk to the 1 percent annual chance flood. The count and total value of these parcels are summarized below. Note that this assessment does not account for the degree of exposure, so the result is a maximum exposure estimate for the modeled 1 percent annual chance flood. According to this assessment, over 13 percent of recent development in the Town of Kill Devil Hills is located in or near the SFHA.

Table D.13 – Recent Development at Risk to Flood, Town of Kill Devil Hills

Recent Development at Risk		Percent of Total Recent Development	
Count of Parcels	Value of Parcels	Percent of Parcels	Percent of Values
55	$20,722,600	13.2%	22.2%

Source: Parcel data retrieved November 2019; FEMA 2006 DFIRM

This assessment does not evaluate flood impacts or provide damage estimates. However, this summary of recent development in or near the floodplain provides some context to understand the degree to which the IRISK exposure and vulnerability numbers differ from current conditions.

Table D.14 provides building counts and estimated damages for Critical Infrastructure and Key Resources (CIKR) buildings by sector and flood event in the Town of Kill Devil Hills. Table D.15 provides counts and estimated damages for High Potential Loss Properties in the Town of Kill Devil Hills.

Table D.14 – Critical Facilities Exposed to Flooding, Town of Kill Devil Hills

Sector	Number of Buildings at Risk	Estimated Damages
Banking and Finance	2	$20,256
Commercial Facilities	62	$1,584,322
Communications	1	$629
Critical Manufacturing	10	$215,316
Healthcare and Public Health	1	$1,363
Transportation Systems	7	$41,453
All Categories	**83**	**$1,863,339**

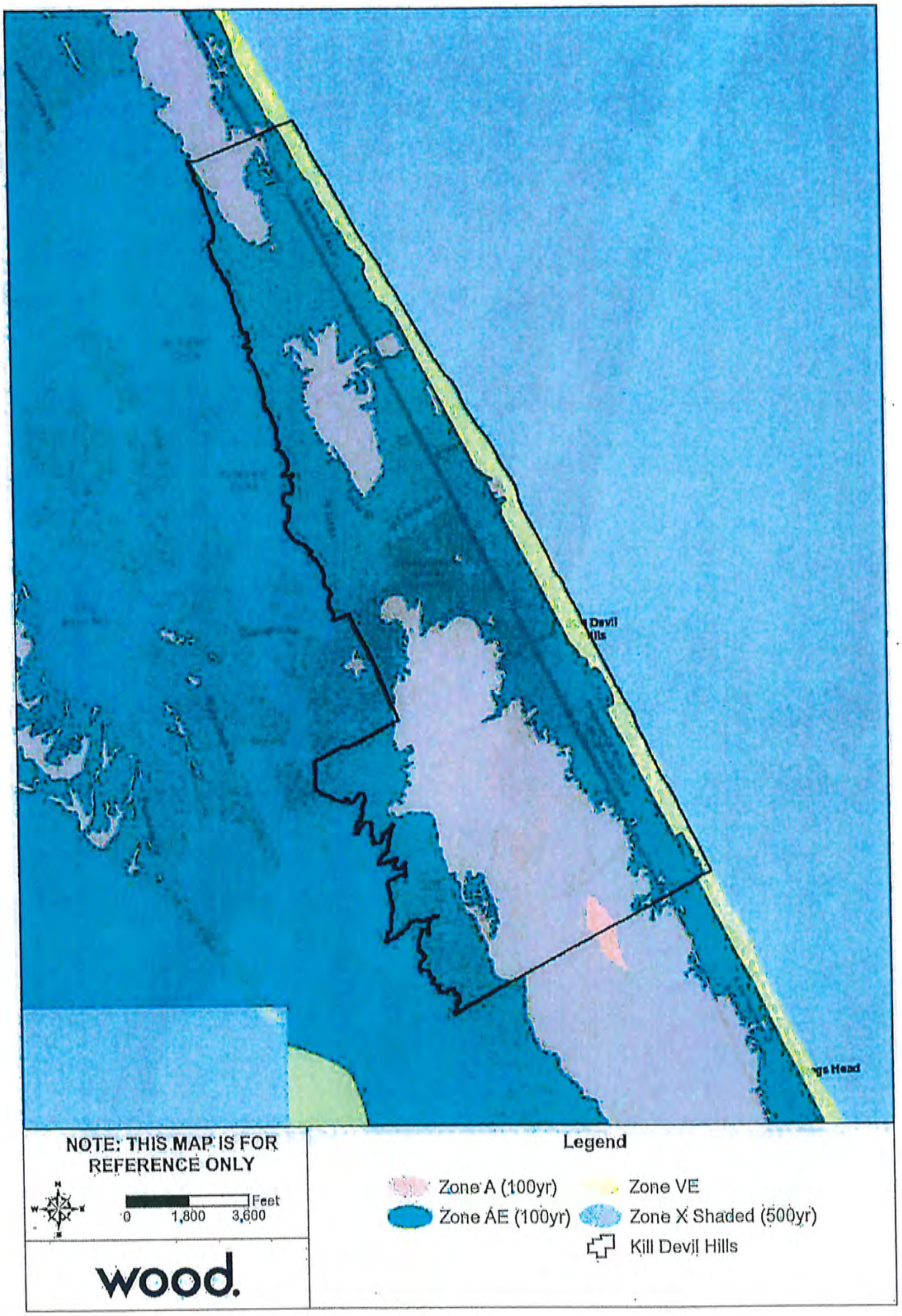
Source: NCEM Risk Management Tool

Table D.15 – High Potential Loss Properties Exposed to Flooding, Town of Kill Devil Hills

Category	Number of Buildings at Risk	Estimated Damages
Commercial	1	$315,960
Residential	31	$4,305,887
All Categories	**32**	**$4,621,847**

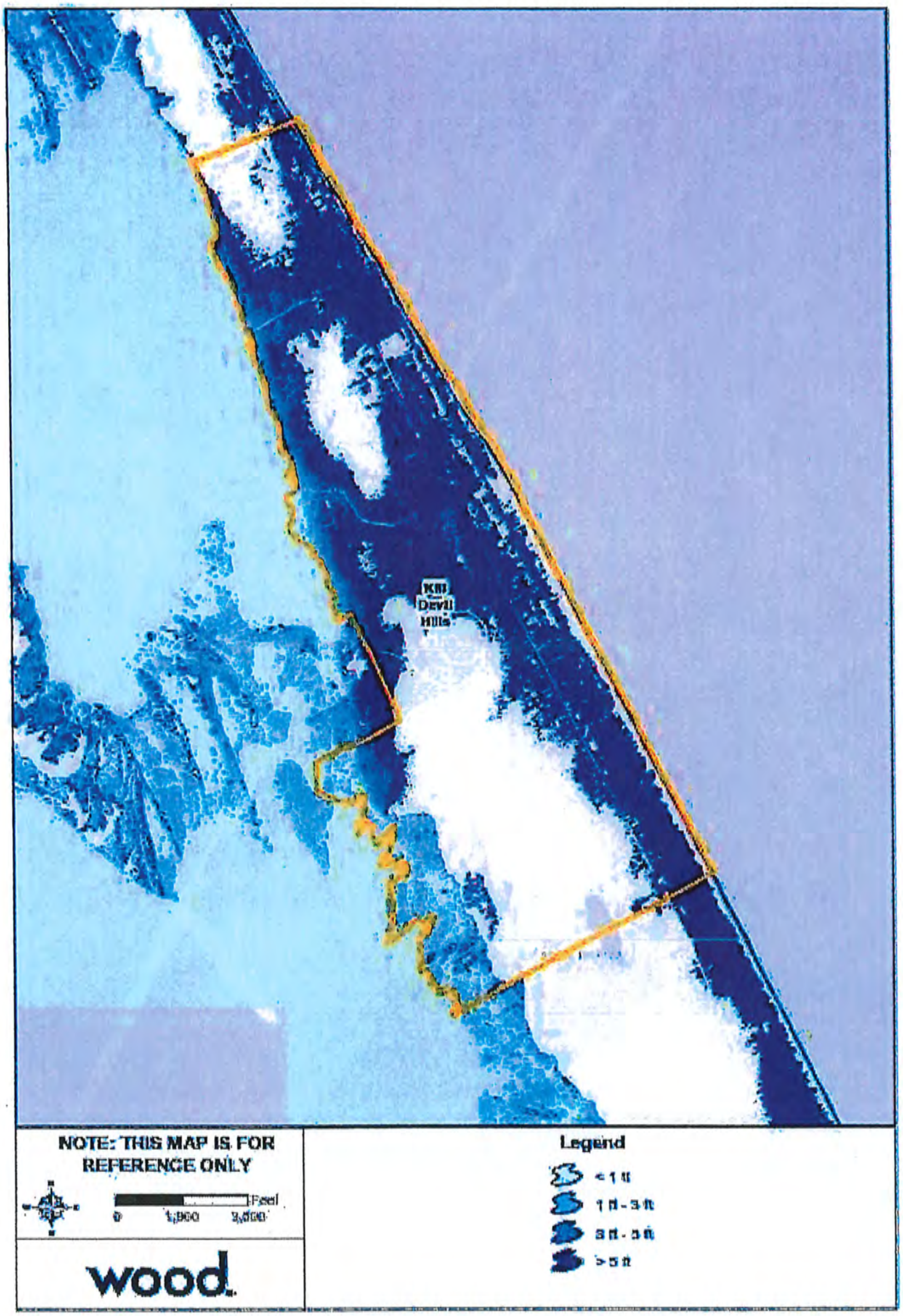
Source: NCEM Risk Management Tool

Figure D.5 – FEMA Flood Hazard Areas, Town of Kill Devil Hills



Source: FEMA Effective DFIRM

Figure D.6 – Flood Depth, 1%-Annual-Chance Floodplain, Town of Kill Devil Hills



Source: FEMA Effective DFIRM

D.3.3 Wildfire

Table D.16 summarizes the acreage in the Town of Kill Devil Hills that falls within the Wildland Urban Interface (WUI), categorized by housing density. Areas in the WUI are those where development may intermix with flammable vegetation. Over 44 percent of the Town of Kill Devil Hills is not included in the WUI.

Table D.16 – Wildland Urban Interface Acreage, Town of Kill Devil Hills

Housing Density	Total Acreage	Percent of Total Acreage
Not in WUI	*1,610.5*	*44.4%*
LT 1hs/40ac	12.0	0.3%
1hs/40ac to 1hs/20ac	25.1	0.7%
1hs/20ac to 1hs/10ac	37.0	1.0%
1hs/10ac to 1hs/5ac	46.1	1.3%
1hs/5ac to 1hs/2ac	230.6	6.4%
1hs/2ac to 3hs/1ac	945.1	26.0%
GT 3hs/1ac	724.5	20.0%
Total	**3,630.9**	

Source: Southern Wildfire Risk Assessment

Figure D.7 depicts the WUI for the Town of Kill Devil Hills. The WUI is the area where housing development is built near or among areas of vegetation that may be prone to wildfire. Figure A.10 depicts the Fire Intensity Scale, which indicates the potential severity of fire based on fuel loads, topography, and other factors. Figure D.9 depicts Burn Probability based on landscape conditions, percentile weather, historical ignition patterns, and historical prevention and suppression efforts. Data is not available on past acreage burned at the jurisdictional level.

Potential fire intensity is highest in the southwestern part of the Town of Kill Devil Hills. Much of this area falls outside the WUI; however, the eastern and northern fringes of this area contain the highest areas of risk in the Town, where housing, moderate to high fire intensity, and burn probability overlap.

Table D.17 provides building counts and estimated damages for Critical Infrastructure and Key Resources (CIKR) buildings by sector at risk to wildfire hazard.

Table D.18 summarizes the High Potential Loss Properties exposed to wildfire in the Town of Kill Devil Hills.

Table D.17 – Critical Facilities Exposed to Wildfire, Town of Kill Devil Hills

Sector	Number of Buildings at Risk	Estimated Damages
Banking and Finance	2	$1,468,711
Commercial Facilities	45	$32,245,983
Communications	1	$155,900
Critical Manufacturing	18	$6,392,358
Emergency Services	1	$849,456
Energy	1	$6,629,744
Food and Agriculture	1	$393,798

Sector	Number of Buildings at Risk	Estimated Damages
Government Facilities	7	$37,339,799
Healthcare and Public Health	4	$8,902,119
Transportation Systems	10	$4,818,293
Water	2	$1,423,735
All Categories	**92**	**$100,619,896**

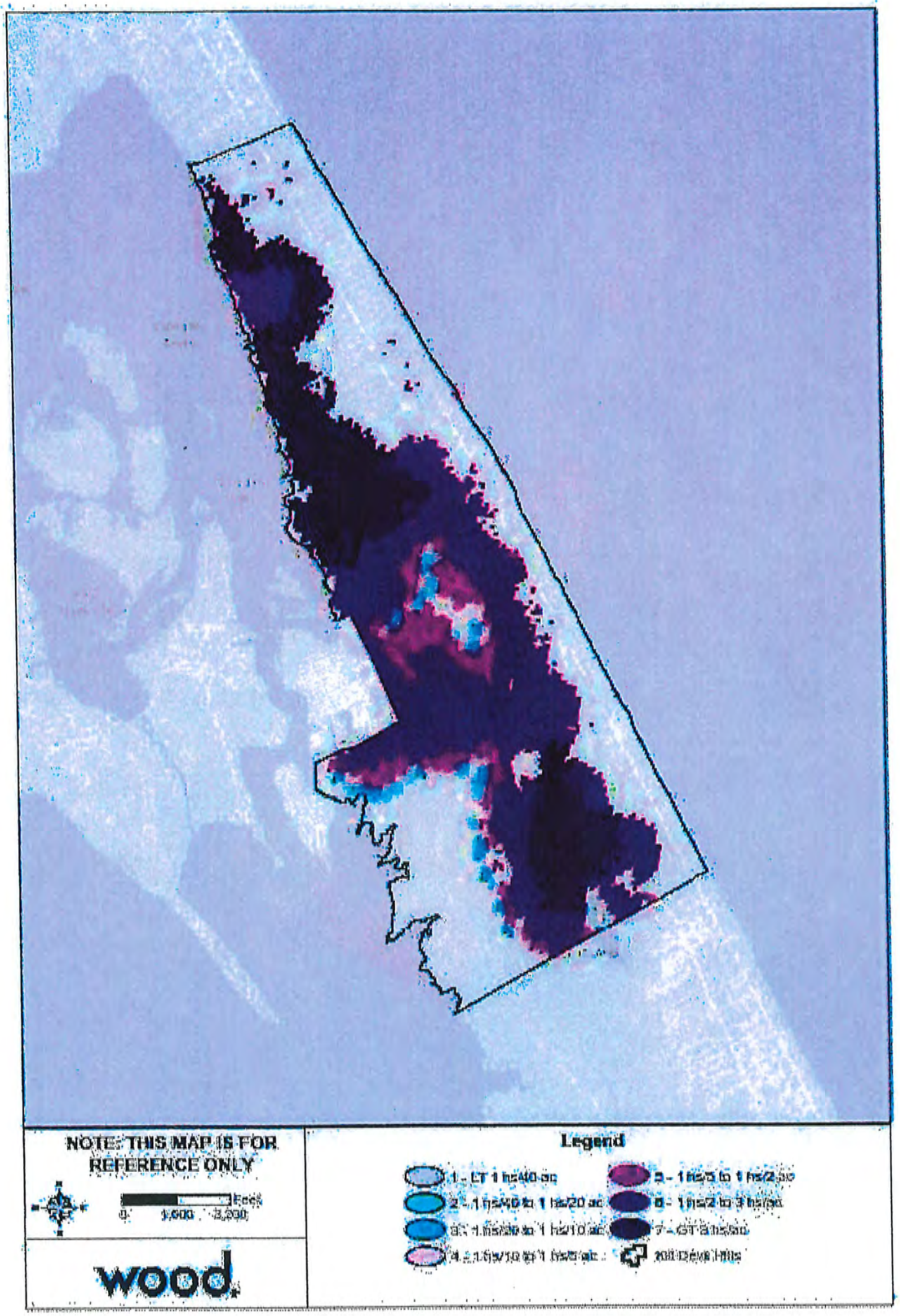
Source: NCEM Risk Management Tool

Table D.18 – High Potential Loss Properties Exposed to Wildfire, Town of Kill Devil Hills

Category	Number of Buildings at Risk	Estimated Damages
Commercial	6	$19,631,741
Government	2	$35,173,607
Residential	11	$3,736,456
Utilities	1	$6,629,744
All Categories	**20**	**$65,171,548**

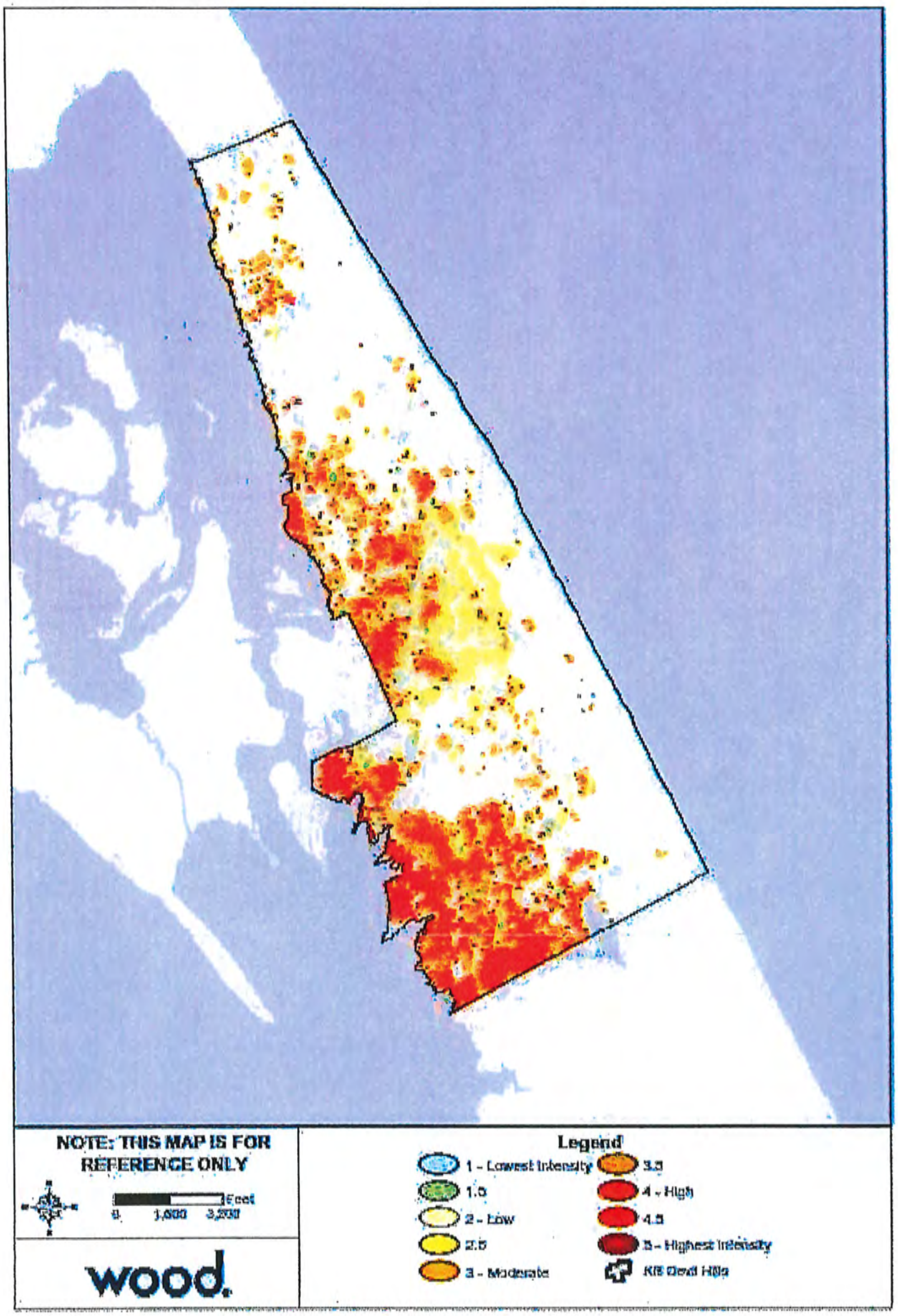
Source: NCEM Risk Management Tool

Figure D.7 – Wildland Urban Interface, Town of Kill Devil Hills



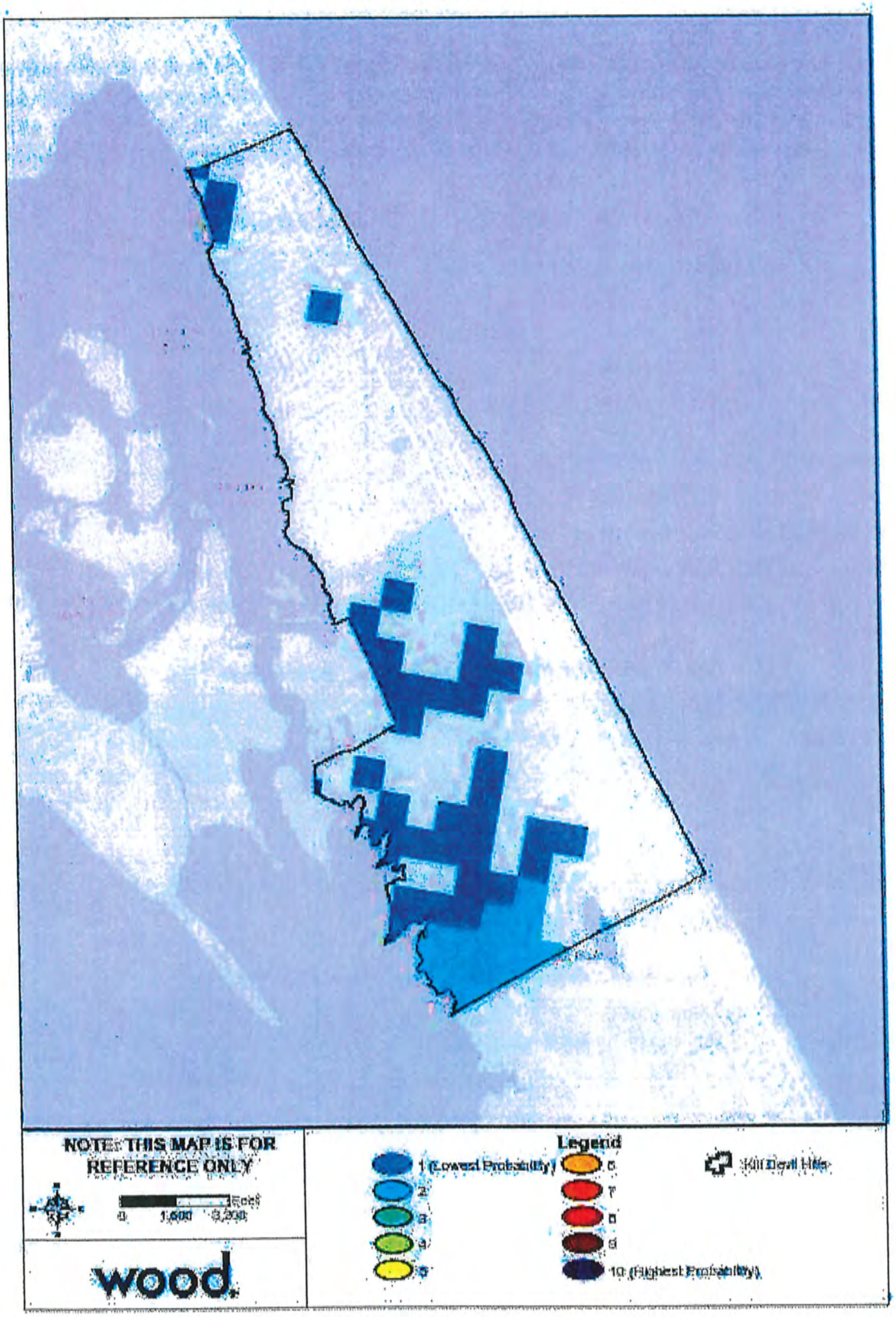
Source: Southern Wildfire Risk Assessment

Figure D.8 – Fire Intensity Scale, Town of Kill Devil Hills



Source: Southern Wildfire Risk Assessment

Figure D.9 – Burn Probability, Town of Kill Devil Hills



Source: Southern Wildfire Risk Assessment

D.4 CAPABILITY ASSESSMENT

D.4.1 Overall Capability

Details on the tools and resources in place and available to the Town of Kill Devil Hills were provided by the Town's HMPC representatives and are summarized in Section 5 Capability Assessment. Based on that information and using the scoring methodology detailed in that section, Kill Devil Hills has an overall capability rating of Moderate. The Town's Self-Assessment of key capability areas is summarized in Table D.19 below.

Table D.19 – Capability Self-Assessment, Kill Devil Hills

Capability Area	Rating
Plans, Ordinances, Codes and Programs	High
Administrative and Technical Capability	High
Fiscal Capability	Moderate
Education and Outreach Capability	High
Mitigation Capability	Limited
Political Capability	Moderate
Overall Capability	Moderate

D.4.2 Floodplain Management

The Town of Kill Devil Hills joined the NFIP as a regular participant in May 1973. The following tables reflect NFIP policy and claims data for the Town categorized by structure type, flood zone, Pre-FIRM and Post-FIRM.

Table D.20 – NFIP Policy and Claims Data by Structure Type

Structure Type	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
Single Family	3,140	$2,091,007	$760,149,000	1,070	$9,576,424.18
2-4 Family	117	$57,539	$23,242,100	79	$867,378.65
All Other Residential	805	$269,993	$140,290,500	81	$3,838,609.45
Non-Residential	202	$427,137	$102,113,500	106	$3,976,238.39
Total	**4,264**	**$2,845,676**	**$1,025,795,100**	**1,336**	**$18,258,650.67**

Source: FEMA Community Information System, accessed December 2019

Table D.21 – NFIP Policy and Claims Data by Flood Zone

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	3,423	$1,956,447	$814,882,400	752	$8,680,332.85
A Zones	0	$0	$0	9	$32,705.03
V01-30 & VE Zones	80	$335,716	$20,841,600	130	$835,996.23
B, C & X Zone					
Standard	526	$437,635	$115,276,400	394	$7,887,110.09
Preferred	232	$114,078	$74,690,000	51	$822,506.47
Total	**4,261**	**$2,843,876**	**$1,025,690,400**	**1,336**	**$18,258,650.67**

Source: FEMA Community Information System, accessed December 2019

Table D.22 – NFIP Policy and Claims Data Pre-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	422	$539,560	$88,932,800	355	$5,894,728.34
A Zones	0	$0	$0	7	$28,278.33
V01-30 & VE Zones	24	$89,955	$5,364,200	101	$622,515.63
B, C & X Zone	97	$121,974	$26,300,900	209	$3,461,887.59
Standard	75	$111,413	$18,795,900	201	$3,369,452.76
Preferred	22	$10,561	$7,505,000	8	$92,434.83
Total	**543**	**$751,489**	**$120,597,900**	**672**	**$10,007,409.89**

Source: FEMA Community Information System, accessed December 2019

Table D.23 – NFIP Policy and Claims Data Post-FIRM

Flood Zone	Number of Policies in Force	Total Premium	Insurance in Force	Number of Closed Paid Losses	Total of Closed Paid Losses
A01-30 & AE Zones	3,001	$1,416,887	$725,949,600	393	$2,777,768.79
A Zones	0	$0	$0	1	$3,212.24
V01-30 & VE Zones	56	$245,761	$15,477,400	21	$195,561.92
B, C & X Zone	661	$429,739	$163,665,500	236	$5,247,728.97
Standard	451	$326,222	$96,480,500	193	$4,517,657.33
Preferred	210	$103,517	$67,185,000	43	$730,071.64
Total	**3,718**	**$2,092,387**	**$905,092,500**	**651**	**$8,224,271.92**

Source: FEMA Community Information System, accessed December 2019

D.5 MITIGATION STRATEGY

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
Prevention									
KDH1	Drainage System Maintenance - Continue mowing draiange ditches and conduct normal maintenance and storm event driven maintenance	Flood, Hurricane & Tropical Storm, Coastal Hazards	2.2	High	Public Services, NCDOT	General Fund	Annually	Carry Forward	Continue to maintain ditches and other storm water systems to reduce/eliminate standing water. This is constantly updated and prioritized quarterly.
KDH2	Erosion and Sediment Control - Continue to enforce local and state regulations	Flood, Coastal Hazards	3.2	High	Planning Department	General Fund	Annually	Carry Forward	Review and Enforcement of State Sedimentation regulations and staff serving as S&E inspector
KDH3	Maritime Forest Environmental Zoning District - Continue to enforce the Maritime Forest Environmental Zoning District	Wildfire	3.2	High	Planning Department	General Fund	Annually	Carry Forward	Action modified. Participate in control burn of the marsh and other portion of Maritime forest to prevent forest fires.
KDH4	Flood Response - Coordinate efforts to expedite reconstruction and rebuilding efforts in coopoeration with Dare County Emergency Management staff.	Flood, Hurricane & Tropical Storm, Coastal Hazards, Winter Storm	3.1	High	Planning Department	General Fund	1-3 years	Carry Forward	In state of Emergency, offer no cost permits for damage repair and work with Dare County to coordinate mitigation grants.
KDH5	Fire Protection - Implement Water Systems Master Plan	Wildfire	3.3	High	Public Services, Water Department	Water Fund	1-5 years	Carry Forward	Continue replacing waterlines in accordance with the Water Master Plan. Require flow test for new development sites.
KDH6	Storm water Management - Continue to implement the storm water management plan. Local Planning and Regulations.	Flood, Coastal Hazards	3.3	High	Public Services	General Fund	6 months	Carry Forward	Development of regulatory requirements for maintenance. Develop regulations for onsite storm water management at large single family dwelling. Maintain and use staff BMP inspection certificates.
KDH7	Map Information - Maintain updated flood map information for citizens and customers. Map Erosion areas annually to help inform the public of high erosion areas.	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.1	High	NC Division of Emergency Management, Planning Department	NC Division of Emergency Management	1 year	Carry Forward	Maintain current and historic flood maps. Provide education information to citizens annually. Map erosion prone areas to better regulate development.
KDH8	Continue to participate in CRS	Flood, Hurricane & Tropical Storm, Coastal Hazards	3.3	High	Planning Department	General Fund	Annually	Carry Forward	Work to increase score in CRS program specifically for public outreach and education
KDH9	Add freeboard to the Flood Damage Prevention Ordinance for development in and outside the SFHA	Flood, Hurricane & Tropical Storm, Coastal Hazards	3.1	High	Planning Department	General Fund	1 year	New	Update the Flood Damage Prevention Ordinance in conjunction with updated flood maps.
Property Protection									
KDH10	Relocation - Expedite permitting for the relocation of repetitive loss situations	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.2	Medium	Planning Department	General Fund	3-5 years	Carry Forward	Incomplete
KDH11	Acquisition - Encourage repetitive loss properties to consider acquisition as a possible solution	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.2	Low	Planning Director, Board of Commissioners	NC Division of Emergency Management, FEMA	5+ years	Carry Forward	Incomplete by lack of funding
KDH12	Critical Facilities Protection - Take appropriate actions to prevent and/or minimize damages to critical facilities. Use generators or other forms of redundant power to ensure that critical facilities and infrastructure remain operational.	All	2.1/2.2	High	Police, Fire & Rescue, Public Works, NC Dominion Power	General Fund	1-3 years	Carry Forward	Utilize shutters on windows in municipal buildings. Test and fuel alternative power sources and install alternative energy sources on all Town buildings.
Natural Resource Protection									

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
KDH13	Open Space Preservation - Support efforts to preserve natural areas	Flood, Hurricane & Tropical Storm, Coastal Hazards, Severe Weather	3.3	High	Planning Department	General Fund	3-5 years	Carry Forward	Incomplete due to lack of funding
KDH14	Wetlands Protection - Continue to utilize the zoning ordinance and the Land Use Plan to protect wetlands, implement and enforce CAMA AEC regulations and refer applicants to US Army Corps of Engineers for Section 404 wetlands.	Flood, Hurricane & Tropical Storm, Coastal Hazards	3.2	High	USACE, Planning Department, NCDEQ	General Fund	Annually	Carry Forward	Protect wetlands and look into living shorelines in public esturarine areas.
KDH15	Reservoirs - 1. Continue protection efforts concerning the Fresh Pond. 2. Maintain liaison with NC Division of Coastal Management concerning the development of the Kill Devil Hills Land Use Plan	Flood, Hurricane & Tropical Storm, Coastal Hazards, Winter Storm	3.1	High	Planning Department, CAMA	General Fund	1 year	Carry Forward	Updating CAMA Land Use Plan and Maintain AEC at Fresh Pond
KDH16	Surface Water Quality - Preserve surface water quality and enhance water quality through storm water management and zoning.	Flood, Hurricane & Tropical Storm, Coastal Hazards	3.2	High	Planning Department, Public Services	General Fund	3-5 years	Carry Forward	Continue to maintain storm water system and improve run off. Follow Town Storm water Master Plan to reduce dependency on NCDOT Ocean Outfalls for drainage.
				Structural Projects					
KDH17	Dune and Beach Maintenance - Continue ongoing beach nourishment efforts	Flood, Hurricane & Tropical Storm, Coastal Hazards	3.2	High	Planning Director, Board of Commissioners	General Fund	Monitor Annually, nourish every 5 years	Carry Forward	Initial Beach Nourishment Project completed in 2016. Ongoing stabilization and re-nourishment in accordance with the adopted Shore Protection Project Maintenance Plan.
				Emergency Services					
KDH18	Hazard Warning - Facilitate evacuation	All	1.1	High	Dare County Control Group	General Fund	Annually	Carry Forward	Utilize the Regroup Emergency Alert System to the fullest potential for all hazards and emergency information.
KDH19	Health and Safety Maintenance - Develop ongoing protocols to assure the maintenance of critical public services	All	2.1	High	Police, Fire & Rescue, Public Works, Dare County Emergency Management	General Fund	Annually	Carry Forward	Conduct annual training session with all emergency response departments. Develop a plan for action. Develop a multi-jurisdictional response plan.
KDH20	Emergency Services - Hurricane Exercises	Hurricane & Tropical Storm	2.1	High	Planning Department	General Fund	1 year	New	Continue to participate in countywide emergency operation hurricane exercises. Update local plan accordingly.
				Public Education & Awareness					
KDH21	Hazard Recovery - Coordinate efforts to expedite recovery.	All	1.1	High	Planning Department, Board of Commissioners	General Fund	1 year	Carry Forward	Work with Dare County Emergency Management on information dissemination after an event and develop a website for post hazard information
KDH22	Insurance - Maintain outreach efforts and continue making flood insurance available to the Town's residents	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.1	High	Planning Department, Town Clerk	General Fund	1 year	Carry Forward	Update materials and distribute to property owners and residents and specialty groups
KDH23	Compile and maintain current information in the Kill Devil Hills Floodplain Management Library	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.1	High	CRS Coordinator	General Fund	Annually	Carry Forward	Scan current and past flood maps; scan elevation certificates for future reference and future property owners; scan building permits
KDH24	Outreach Projects - Initiate outreach projects to inform the public on Town and County initiatives that will reduce hazard related losses of property and life	All	1.1	High	Planning Department, Dare County Emergency Management	General Fund	1 year or Annually	Carry Forward	Provide printed educational materials for citizens regarding hazards. Create videos for hazard awareness and safety. Post education and prevention techniques on website.

Action #	Action Description	Hazard(s) Addressed	Goal & Objective Addressed	Priority	Lead Agency / Department	Potential Funding Source	Implementation Timeline	2020 Status	2020 Implementation Status Comments
KDH25	Circulate brochure specifically on NFIP	Flood, Hurricane & Tropical Storm, Coastal Hazards	1.1	High	Planning Department	General Fund	Annually	Carry Forward	Work to increase score in CRS program specifically for public outreach and education
KDH26	Conduct contractors meeting	All	3.1	High	Planning Department	General Fund	1 year	Carry Forward	Work to increase score in CRS program specifically for public outreach and education
KDH27	Outreach Projects - Hold annual outreach meeting for citizens to discuss hazards and how to protect themselves. Hold annual outreach to engineer and developers on how to construct to a higher standard to prevent damage.	All	1.1	High	Planning Department	General Fund	1 year	New	Schedule annual meeting to discuss hazards and prevention
KDH28	Create educational brochure on the dangers of extreme heat and cold and steps the public can take to protect themselves	Extreme Heat, Winter Storm	1.1	Medium	Planning Department	General Fund	1-2 years	New	Develop education program
KDH29	Mitigation education	All	1.1	Medium	Planning Department	General Fund	2-3 years	New	Develop mitigation possibilities and present to governing board annually