



Town of Beaufort, NC

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**Board of Commissioners Work Session Meeting
4:00 PM Monday, May 22, 2023
Train Depot, 614 Broad Street, Beaufort, NC 28516**

Call To Order

Mayor Harker called the meeting to order at 4:00 p.m.

Roll Call

Elizabeth Lewis, Town Clerk, called the roll.

PRESENT:

Mayor Harker
Mayor Pro Tem Hagle
Commissioner Oliver
Commissioner Cooper
Commissioner Terwilliger

Commissioner Cooper made a motion to excuse Commissioner Hollinshed from the meeting.

The motion carried unanimously.

Agenda Approval

Commissioner Hagle made a motion to approve the agenda.

The motion carried unanimously.

Presentations

1. Sunny Day Flooding Project

Greg Meshaw, Town Engineer, explained the University of North Carolina at Chapel Hill (UNC) Institute for the Environment, the North Carolina State University (NCSU) Department of Civil, Construction, and Environmental Engineering, the UNC Department of Earth, Marine and Environmental Sciences, the Institute of Marine Sciences in Morehead City, the UNC Environment, Ecology, and Energy Program, and the UNC Department of City and Regional Planning have been participating in a study that began during March 2021. The aim of the study has been to evaluate a new sensor framework for measuring the incidence of coastal floods which captures both subterranean and land-based contributions to flooding. This study was commissioned believing that tide gauges do not account for land-based sources of coastal flooding and therefore, flood thresholds and the proxies derived from them likely underestimate the current and future frequency of

coastal flooding. Beaufort was one of the locations that the researchers chose to place a sensor and in turn, to compare data from the sensor versus that obtained from tidal gauges. He introduced Dr. Miyuki Hino and Dr. Katherine Anarde who have been actively measuring the incidence and drivers of coastal flooding in Beaufort over the past few years. They provided a detailed presentation to the Board, which highlighted data collected from the Sunny Day Flooding Sensors. *A copy of the presentation is attached and incorporated as part of the meeting minutes.*

Commissioner Oliver asked if the researchers had any suggestions to mitigate the flooding at this point.

Dr. Hino noted that Beaufort was actively exploring ways to tackle the problem and becoming more resilient. She shared more research would be helpful. She offered suggestions such as valves on the end of more storm drains, elevating roadways, adding pump systems, restoring wetlands, and additional bulkheads. It was also noted these flooding issues are specific to the area and can be considered a block by block problem.

Commissioner Hagle agreed, some areas are worse than others.

Commissioner Terwilliger had questions about trends and the depth of the water at the referenced test site.

Dr. Anarde shared she would like to test that but could not give a good answer with only two years of research. She suggested five years of monitoring would provide more accurate results. She explained the funding for their program was limited, but they were not asking for funds from the Town of Beaufort, she noted rather, support of their research was important. She asked if the data was useful to the Town; how could they make it more useful; and where is the greatest need. She explained it was the researchers job to find funding to support their science.

Commissioner Hagle suggested a list of relatively inexpensive ways to solve the flooding problems would be helpful.

Mayor Harker shared there were other hotspots in Town worth noting as potential research sites, such as 300 block of Pollock Street and other areas down Front Street.

Dr. Anarde thanked the Board for their feedback and expressed the importance of their continued support. She noted when applying for grants, letters of support from the Town of Beaufort were instrumental in their success of obtaining funding for research.

Items for Discussion and Consideration

1. April Financial Report

Christi Wood, Finance Director, provided a financial report for April 2023. She noted the Town did not receive any distributions from Carteret County in April, however a distribution of \$990,878 was received in May. She shared \$18,465 was received in April for motor vehicle tax (MVT). She noted \$151,089 was distributed for sales and use tax in May 2023, which reflected a 12% decrease from the distribution in May of 2022. She shared as of May 15, 2023, the General Fund (Unrestricted Fund Balance) was \$5,133,236.98; the Utility Fund (Unrestricted Net Position) was \$3,238,593; and the Capital Reserve balance reflected no change from the last report.

2. Beaufort Business Association Request

Nelson Owens, President of the Beaufort Business Association (BBA), provided an overview of the organization, shared several suggestions for paid parking, and requested the Town help fund the 4th of July Fireworks. His presentation and talking points are provided below:

1. Beaufort Business Association Overview

- We are currently reorganizing and rebranding the organization from Beaufort Development Association to Beaufort Business Association
 - Beaufort Businesses generate a substantial portion of the proposed \$13.7 million town budget revenue including a large portion of the property taxes and over \$2.6 million in sales tax.
 - One of my goals is for the BBA become a liaison between all Beaufort Businesses and the town, county and state.
 - I want to work with the town to investigate the NC Department of Commerce Main Street program and the relatively new state law that allows Social Districts. Most progressive small towns in NC are already participating in these programs.
 - We are fortunate to now have a town manager with experience in both of these programs.
2. Beaufort Paid Parking
- Staff Report for 2022 5/23-9/5
 - a) Staff recommends no changes for 2023.
 - b) Gross Income: \$236,893
 - c) Expenses: **\$135,929**
 - d) Net Income: \$100,964
 - Revised Numbers
 - a) Jan - Apr Employment Expenses: **\$8,353**
 - b) Sept- Dec Employment Expenses: **\$18,754**
 - c) WBD Projects (Not a direct expense - Budgeted): **\$30,474**
 - d) Revised estimated Direct Expenses: **\$78,348 - \$91,901**
 - e) Revised estimated Net Income: \$144,992 - \$158,545
3. WDB (Waterfront Business District) Projects
- Budgeted Spending Account for Business District improvements and maintenance. For the past year the account has been used for things like trash bags, mutt mitts, trash corrals, flags, electrical work for Christmas décor, Christmas décor, benches, signs, Beaufort flags. The biggest expense was the new holiday street decorations: \$17,671.19.
 - Started 2022 with a balance of 42,896.91 ended FY 2022 with balance of \$36,392.87 (Where does this money go?)
 - Started FY 2023 with a budgeted amount of \$72,550.00 as of 1/1/23 there was 48,568.03 in this account.
 - Current proposed budget has \$70,000 budgeted for FY 2024 (Shouldn't this budget reflect the parking profit amount?)
4. BBA Recommendations for Parking
- Do not waste capital on new kiosks - they are difficult for users, and expensive to maintain.
 - Start migrating to new cashless phone based systems.
 - a) Must be easy to use and pay - QR code - no app download required.
 - b) Easy to setup different Seasons/rates Prime, Shoulder, Off
 - c) Tourist friendly - Send text messages to customers to pay before giving a ticket.
 - d) Capability of business validation - discounts to local business, marketing
 - e) No new capital equipment expense required - just signage.
 - Consider extended paid parking season to include shoulder seasons April 1st through October - estimated gross revenue increase of least \$100k - probably more.
 - Also consider all year paid parking at reduced off-season rates to control expenses and parking abuse - another \$50k in gross revenue?
5. BBA Recommendations for Parking

- *Create clear and transparent guidelines on how the WBD money generated by parking is spent.*
 - a) *Parking revenue is a tourist tax should be used to improve/increase tourism.*
 - b) *Get Input from BBA on how money is spent - examples:*
 - *Fireworks*
 - *Tangible improvements to enhance tourism.*
 - *Special town projects - not included in the budget.*
- *Create a parking committee, including BBA members and town staff to address parking issues:*
 - a) *Seasons: Prime, Shoulder, Off*
 - b) *Zones: Front Street and Turner Street Retail, Off Front Street Retail, Ferry - east of 600 block*
 - c) *Rates: Current rates too low? Different rates for zones, and seasons*
 - d) *Passes: No passes on Front Street*
 - e) *Contract: Investigate contracting out parking management*
 - f) *Money: Decide how WBD money spent*

6. *Beaufort Business Association Request*

- *The July 4th fireworks have been paid for by BBA for many years.*
- *The money is generated by Business and individual donations.*
- *This years estimated cost is \$15k*
- *This year the BBA is humbly requests that the Town pay all, or at least make a substantial contribution, to the cost of fireworks from the money left in the WBD account.*

Commissioner Cooper discussed the current kiosk system and questioned how effective year-round paid parking would be for the Town. He suggested that the addition of a social district should be investigated, and the Police Chief should be involved in any conversations associated with the potential change.

Commissioner Oliver asked for clarification on the Main Street Program.

Mr. Owens explained the program allowed collaboration with the State, making it easier to obtain grants and funding for the Town's Business District. He noted that Morehead City was part of the Main Street Program and shared one of the requirements was for the BBA to have a full-time Executive Director.

Commissioner Oliver confirmed with Mr. Owens there was a paid parking system that allowed users to simply scan a QR code, rather than having to download an app on their phone.

Commissioner Hagle commented on the current parking machines, and the potential for improvements. He suggested Mr. Owens and the BBA speak with other local entities about their machines and the Main Street Program, to understand what is most effective.

Mayor Harker suggested further research and discussion on these topics.

Commissioner Terwilliger noted the current phone app for paid parking worked easily. He agreed that improvements are needed in the future, but it was nothing that could be implemented in the current year. He shared he believed parking was a financial resource to the Town, and year-round parking made sense, even if the rates were varied throughout the season. He suggested the Social District idea should be investigated by having open conversations and including vital Town staff, such as the Police Chief. Commissioner Terwilliger noted that he supported the idea of the Town's financial contribution for the 4th of July Fireworks. He suggested it be a one-third split, rather than

the Town completely funding the event, with the other contributions coming from businesses and citizen donations.

3. FY 2024 Budget

Todd Clark, Town Manager, provided an overview of the changes made to the proposed budget, as instructed by the Board at previous workshop meetings. A summary of those changes includes adjusted cost of living allowance from 5% to 6%, total increase in the amount of \$78,151.00; employee tuition reimbursement \$1,000 per year with funds to be accommodated within the Human Resources budget; and an increase to investment earnings referenced as an additional \$200,000. He shared an updated Budget Ordinance and explained how the above changes were noted in that document. He noted that parking revenue was captured under permits and fees, located in the general fund revenue. He shared Ms. Wood was updating the five-year plan document and it would be supplied at a future date. He noted several other documents that had been distributed prior to the meeting, as a follow-up to the Board's request, and will be incorporated as part of the final budget.

Commissioner Cooper asked for clarification on funding for Town of Beaufort's Fire Department, on the County side of the budget.

Fire Chief, Tony Ray, explained how the County Fire Tax District functions, as well as the role of the County Reserve account.

Mayor Harker discussed the process of adopting the FY 2024 Budget and the Public Hearing date set for June 12, 2023 at 6:00 p.m. She suggested if there were any questions or concerns that occurred between now and the next meeting, to communicate that with Mr. Clark and Ms. Wood.

There was a Board consensus to appropriate \$5,000 from the current fiscal year's budget, to help fund the 4th of July Fireworks put on by the BBA.

Mr. Clark confirmed that he and Ms. Wood would determine the best place for those funds to come from and reference it in a Budget Amendment, under Items of Consent at the June 12th Regular Meeting.

Closed Session

1. Pursuant to NCGS 143-318.11 (a) (3)

Commissioner Terwilliger made a motion to enter closed session, pursuant to NCGS 143-318.11 (a) (3).

The motion carried unanimously.

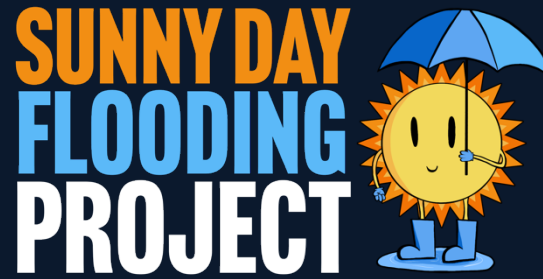
Adjourn

Commissioner Terwilliger made a motion to adjourn the meeting at 6:00 p.m.

The motion carried unanimously.

Sharon E. Harker, Mayor

Elizabeth Lewis, Town Clerk



Measuring the Incidence and Drivers of Coastal Flooding in Beaufort, North Carolina

Dr. Miyuki Hino, Assistant Professor, City and Regional Planning, UNC

Dr. Katherine Anarde, Assistant Professor, Civil & Environmental Engineering, NCSU



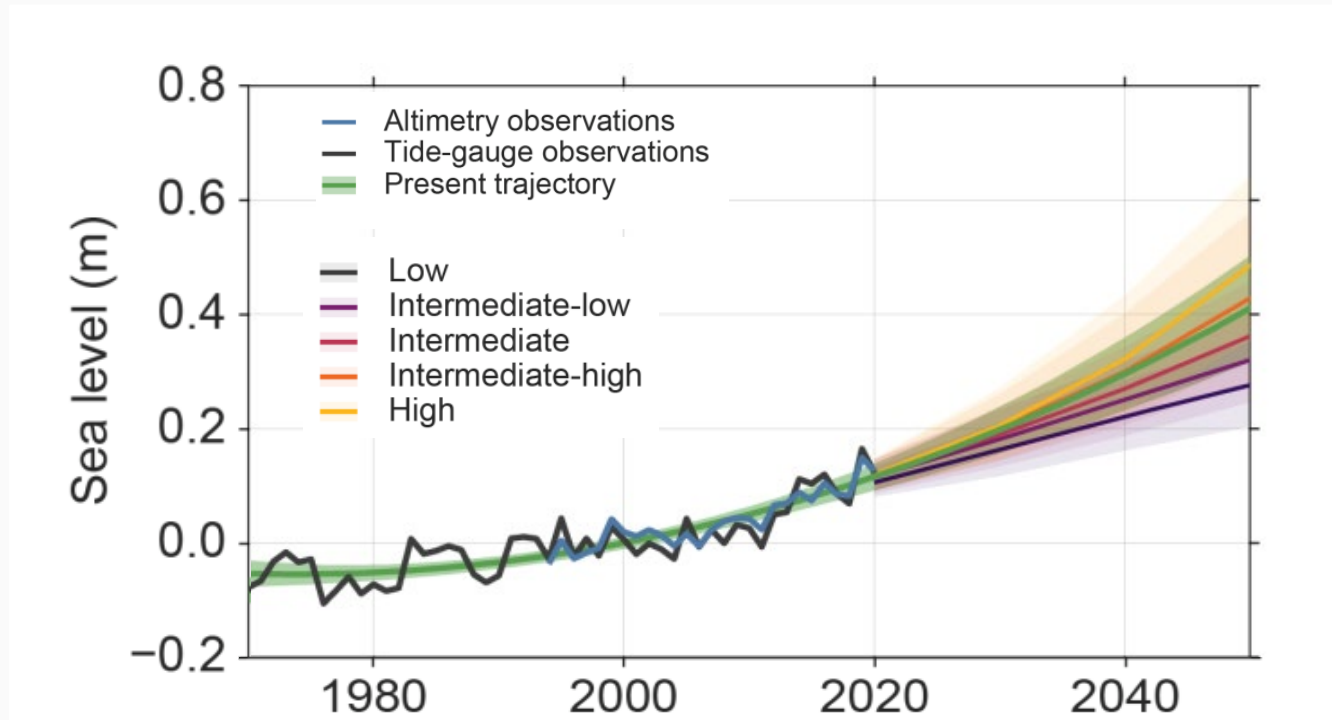
THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

NC STATE
UNIVERSITY

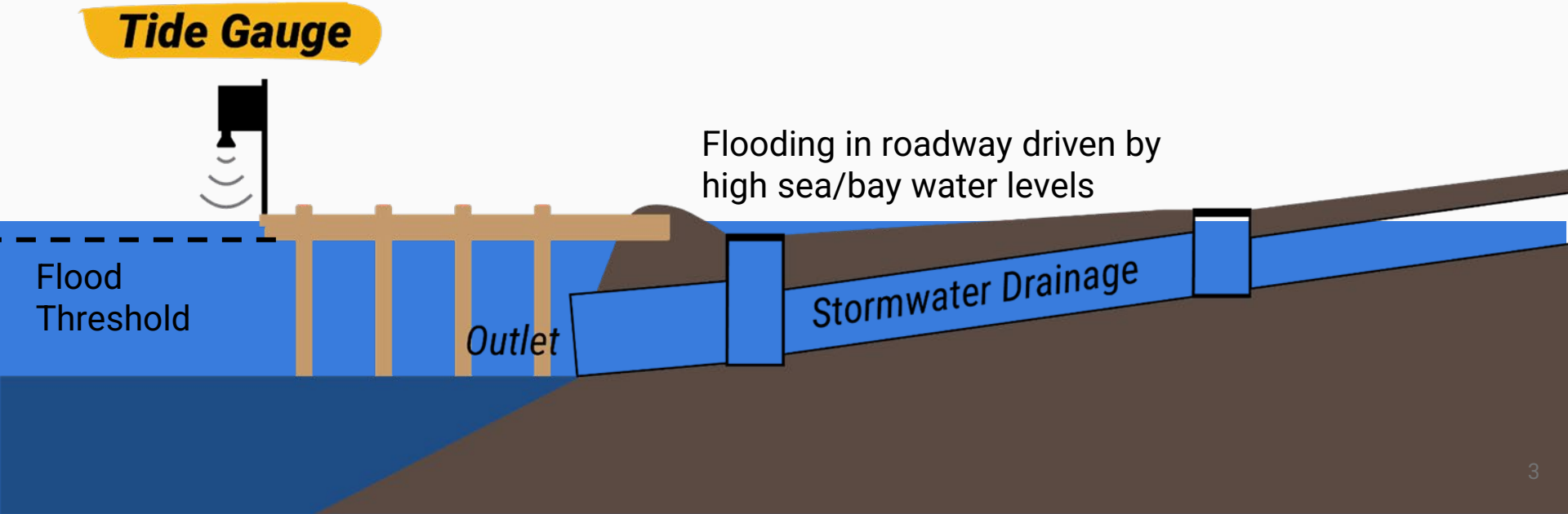
Town of Beaufort
Monday, May 22

Sea level rise is projected to increase flood frequency

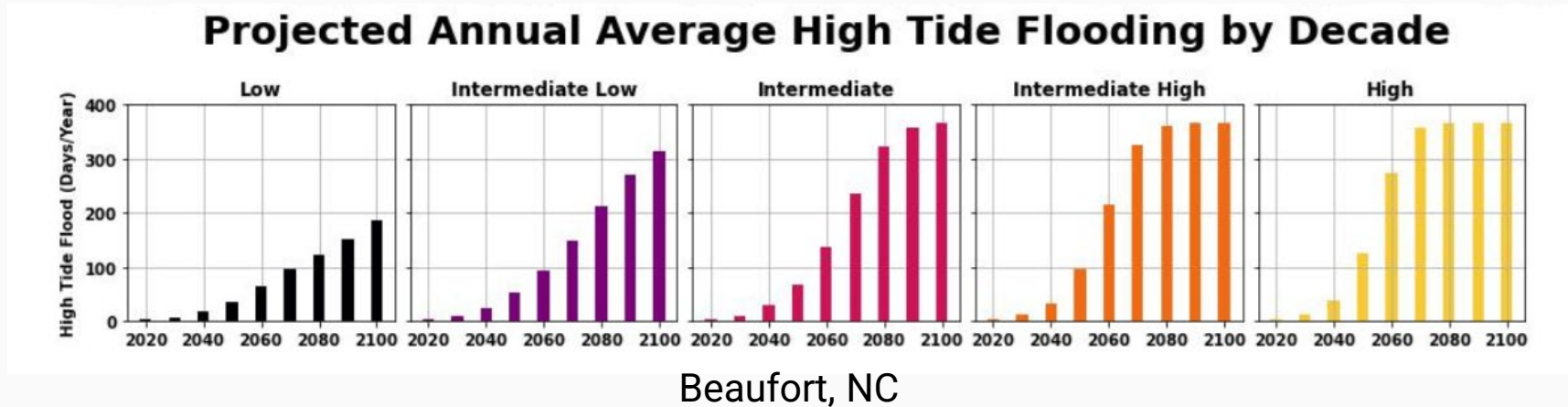
NOAA projections for the Southeast: ~15 in from 2020-2050



Tide gauge data are used to estimate flood frequency



High tide flood frequencies are accelerating on the Atlantic coast



The water level thresholds used to classify high-tide floods “provide more consistent national coastal flood metrics,” but are not intended to “supplant knowledge about local flood risk.”

Tide gauges are not intended to capture all sources of flooding

Tide gauges *do not* capture:

- **Flooding from rainfall**
- **Flooding from high groundwater**



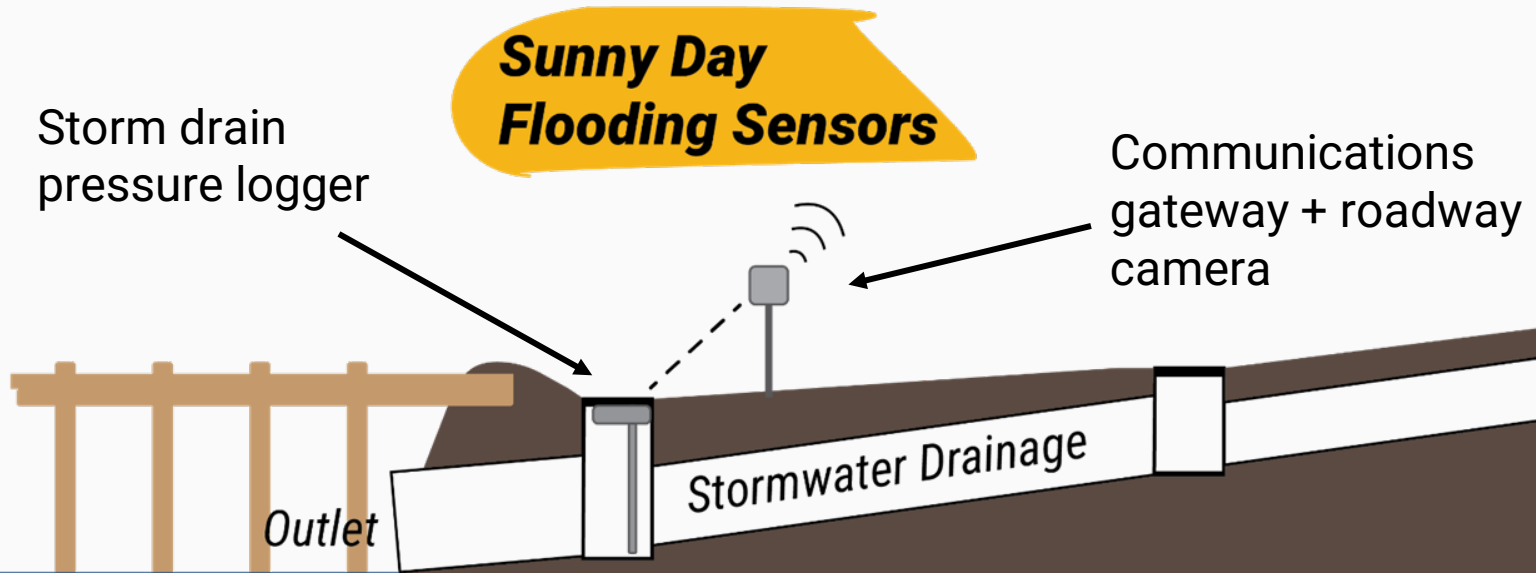
Tide Gauge



Flood
Threshold

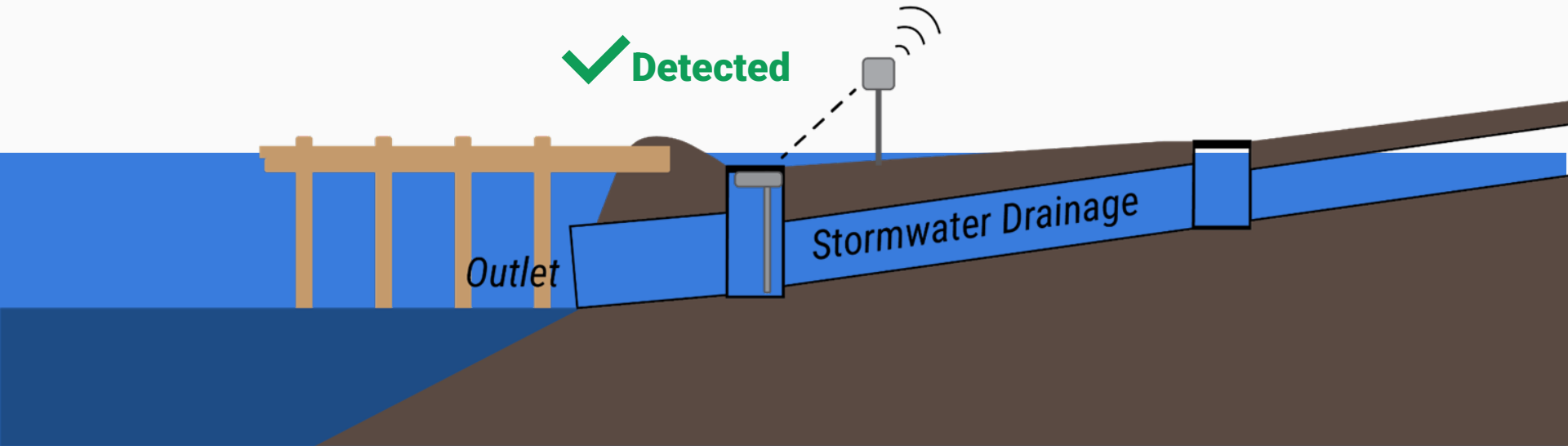
Outlet

Stormwater Drainage



Sunny Day Flooding Sensors

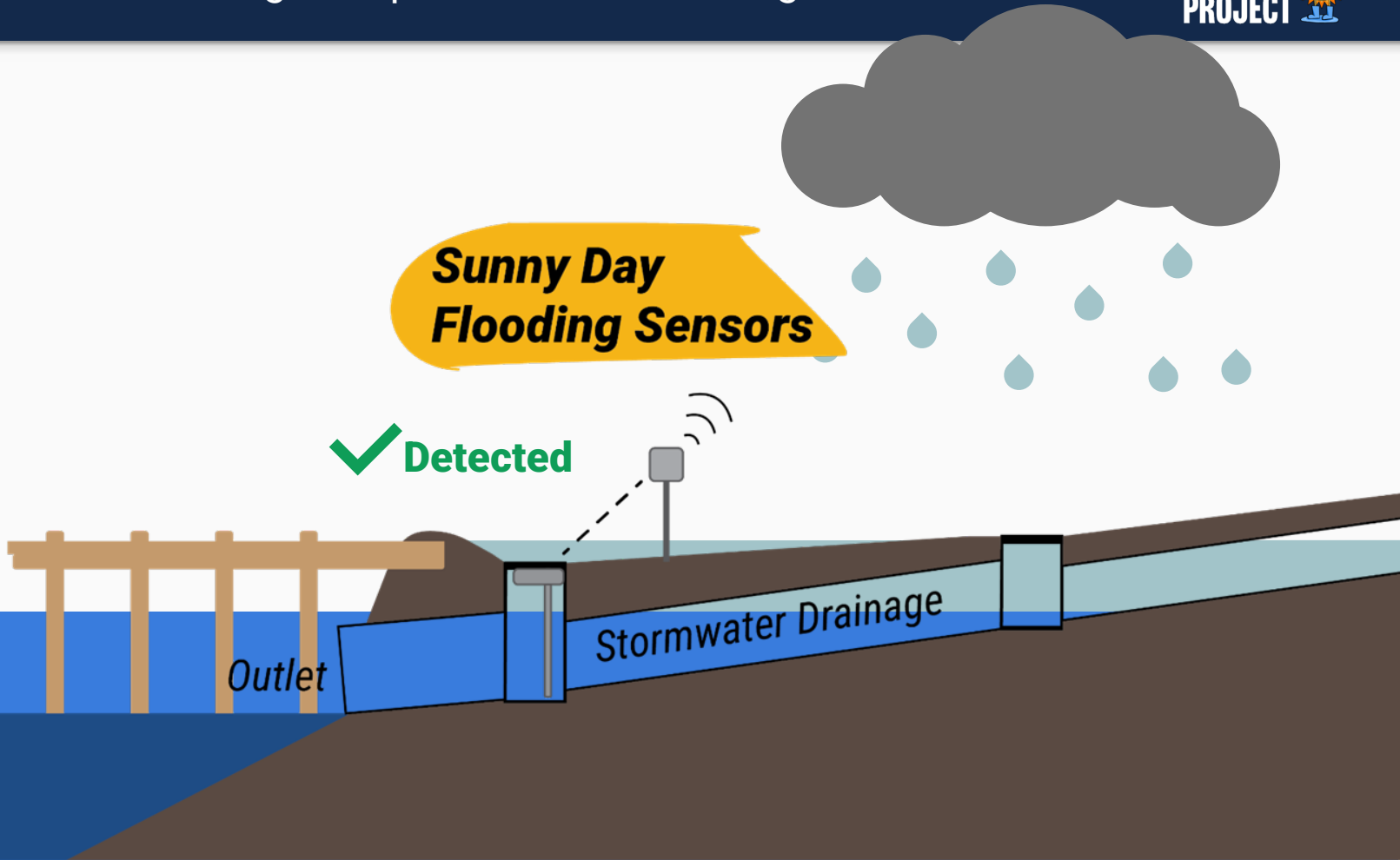
✓ Detected



A new sensor for measuring multiple causes of flooding...from land

**Sunny Day
Flooding Sensors**

✓ Detected



Sensor has been deployed on Front St. since spring 2021



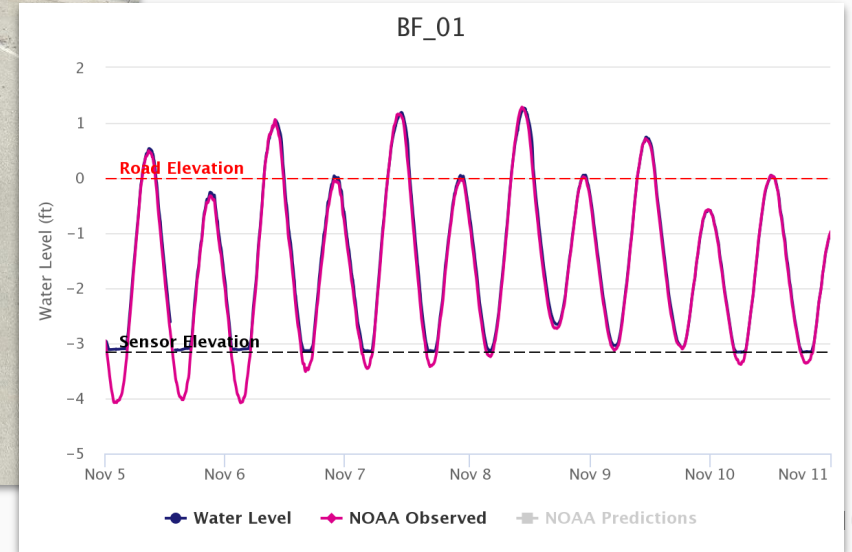
Real-time camera

Real-time water levels

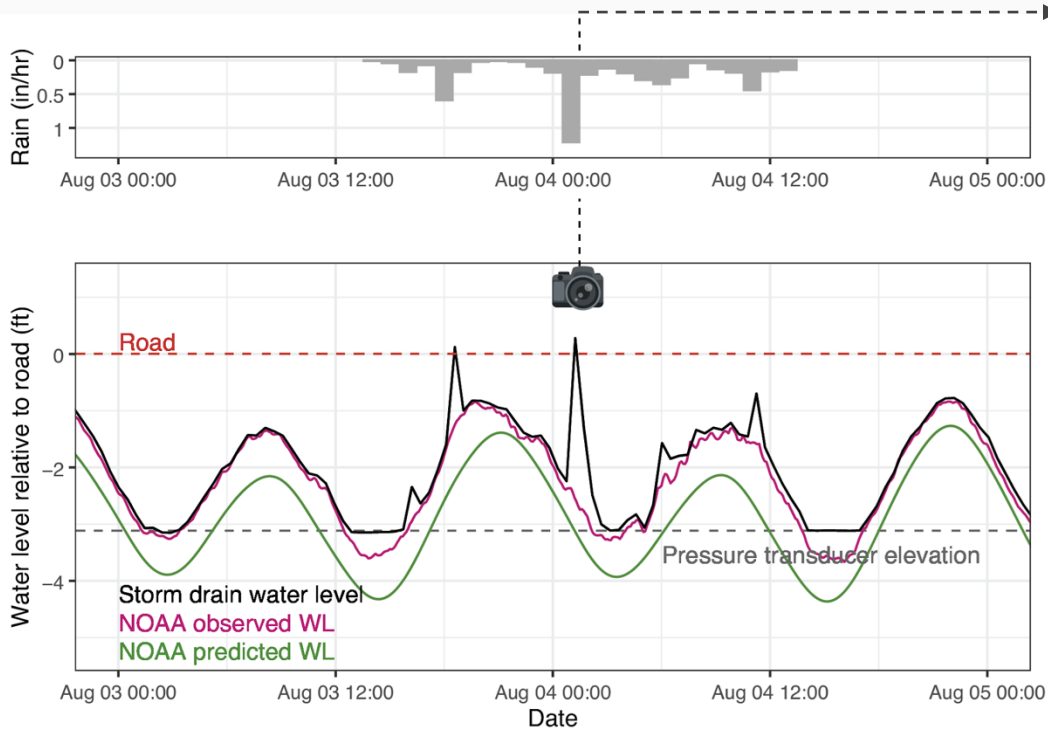


We have also partnered with local officials and community members in Carolina Beach, New Bern, and Sealevel to deploy sensors in those towns.

Sunny-day floods in Beaufort are captured well by the NOAA tide gauge

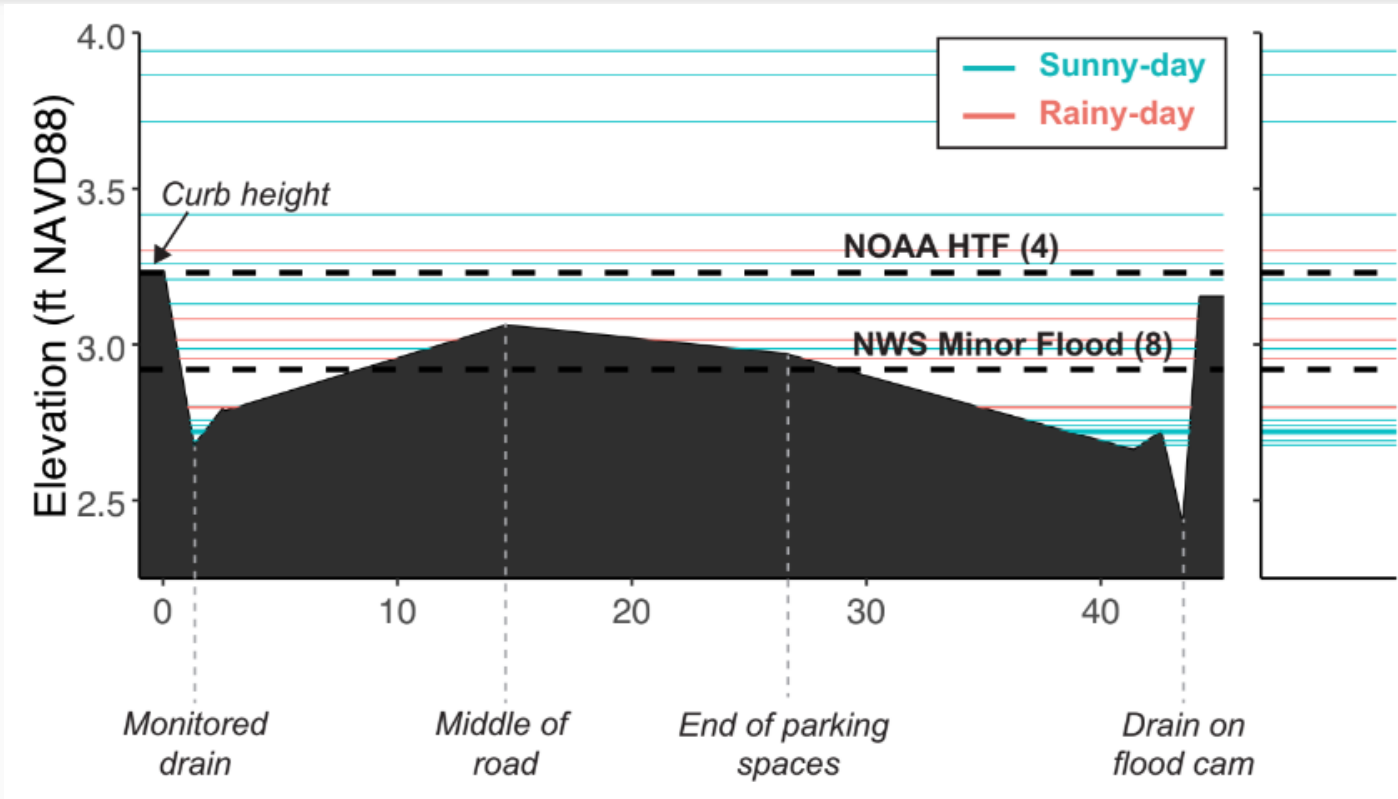


Flooding also occurs during rain events at mid-tide: not captured by tide gauge



(Source: SuDS camera)

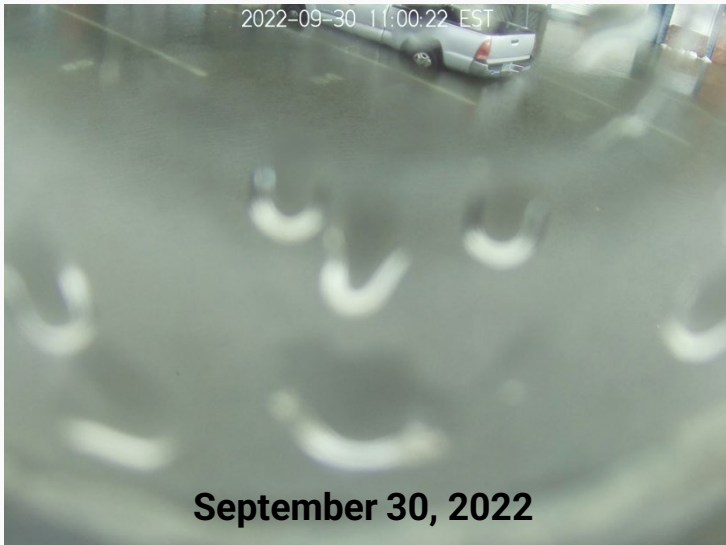
We detected floods (standing water on Front St.) 24 times in 5 months in 2021



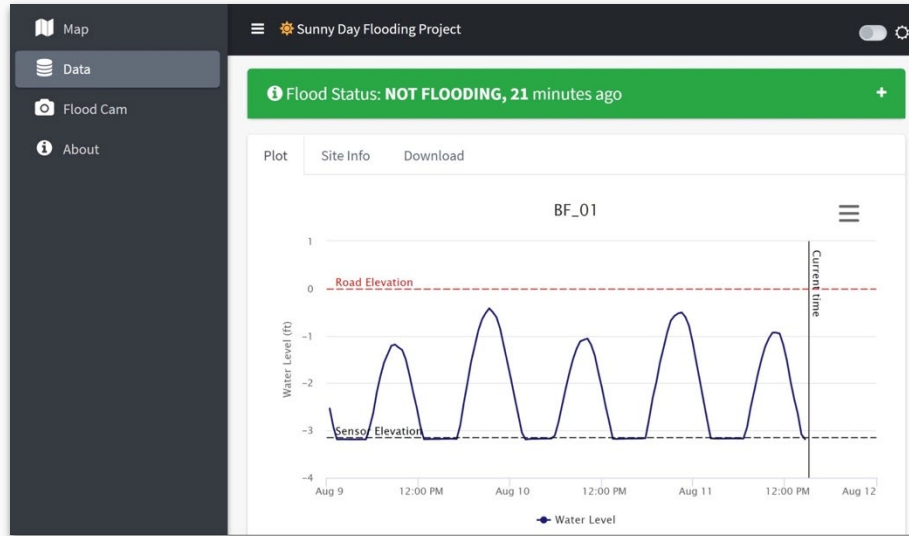
Results were published in April in the journal *Water Resources Research*
The paper is free to download: <https://doi.org/10.1029/2022WR032392>

Preliminary data from 2022 show a similar frequency

- Our **preliminary** data show **45** instances of water on the road in 2022 due to full storm drains, but we had significant sensor outages last summer.
- Using NOAA tide gauge data suggests **20** additional floods occurred while we were offline. These were confirmed through camera images.



All of our data are publicly available in real time



sunnydayflood@gmail.com



[@sunny_day_flood](https://twitter.com/sunny_day_flood)



Research in Progress!



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

NC STATE
UNIVERSITY

Web App:

go.unc.edu/sunny

Next steps, questions, and feedback

- Are there other ways that we can make this data more useful to the town? We would like to continue the flood monitoring and could set up more regular presentations, short reports, or more public-facing content.
- We've previously discussed deploying additional sensors in Beaufort; we are exploring funding opportunities for doing so.
- Any other feedback or questions for us?

