

“City of Havelock
RFQ Stormwater Planning”

Addendum 1

April 20, 2023

Questions Received

1. The RFQ states “isolated areas of known concerns” and “prioritized areas”, we assume McCotter Canal is one area of concern, however, can you confirm an active list or mapping of the areas of concerns.

The stormwater mapping shall take the entire City limits into account.

2. Can you confirm the status of the following projects recently funded, construction progress and how they affect the prioritized areas to be addressed in the Stormwater Planning:
 - a. Fairview Street Culvert,
 - b. Southern Terrace Debris,
 - c. Lee Drive Culvert, and
 - d. Overlap of Stormwater with the Gray Fox Piping project.

All projects are currently in the engineering, design, or bid phases.

3. Can you confirm if the MCAS Cherry Point-APZs are excluded or included in the Stormwater Planning? Coordination efforts/access restrictions if included?

Certain stormwater locations could potentially fall within an APZ. The City does not anticipate this causing any issues.

4. Given the location, can you confirm what portion if any of the Croatan National Forest is to be included in the Stormwater Planning? Coordination efforts if so?

Stormwater mapping will only involve locations within City limits, this excludes the national forest.

5. Can you confirm the use/incorporation of 2023 Comprehensive Plan Water Quality Stormwater Management targets in the Stormwater Planning efforts?

Stormwater management targets shall be included.

6. Can you confirm the use of both the NC DESIGN MANUAL and MD DESIGN MANUAL for incorporated and reference to the Stormwater Planning efforts?

Design manuals shall be referenced.

7. Can you confirm the Stormwater Planning efforts are to incorporate the CAMA Land Use Plan with buildout conditions and the Havelock Bypass (2024 completion)?

Efforts shall take the CAMA Land Use Plan and NCDOT Bypass into consideration.

8. Are there additional plans to be included in the Stormwater Planning efforts listed above? If so can you provide a list of those plans and any other special considerations to be included?

There are no additional plans at this time.

9. Can you confirm the current needs for Havelock's geodatabase and model management?

No other information available.

10. Can you confirm the availability of stormwater infrastructure plans, as-builts, and condition assessments are available or are underway?

This cannot be confirmed at this time.

11. Can you confirm if Havelock is applying for an additional \$400,000 funding on May 1, 2023 (deadline) for the final LASII funding for additional Stormwater Planning or Assessments? This would be good for design of selected solutions as well.

This cannot be confirmed at this time.

12. Can you confirm if the stormwater planning includes ear marking potential upcoming funding opportunities in addition to the current funded efforts?

This cannot be confirmed at this time.

13. Can you provide a copy of the project description, specific milestone dates (schedule of interim reports), and tasks outlined from the LASII grant application? The award and application will be a primary guide for the funding report administration requirements and proposed design approach.

See attached grant application and Letter of Intent to Fund.



CITY OF HAVELOCK RESOLUTION #22-R-06
AUTHORIZING RESOLUTION BY GOVERNING BODY OF THE APPLICANT
FILING OF STATE GRANT APPLICATION FOR THE DEVELOPMENT OF AN
AREA-WIDE STORMWATER HYDROLOGIC AND HYDRAULIC ASSESSMENT

WHEREAS, the City of Havelock has the need for and intends to conduct a study described as the development of an area-wide stormwater hydrologic and hydraulic assessment to identify areas of drainage and flooding concerns and proactively develop improvements to provide better stormwater conveyance and management; and

WHEREAS, the City of Havelock intends to request State grant assistance for the project.

NOW THEREFORE BE IT RESOLVED, by the Board of Commissioners of the City of Havelock:

1. That the City of Havelock, the **Applicant**, will submit an application to the North Carolina Division of Water Infrastructure - ARPA (American Rescue Plan Act) State Fiscal Recovery Fund for a grant opportunity with no cash match required.
2. That the **Applicant** will provide for efficient operation and maintenance of the project on completion of assessment thereof.
3. That the City Manager, Christopher W. McGee and Finance Officer, Lee Tillman, the **Authorized Officials** and successors so titled, are hereby authorized to execute and file an application on behalf of the **Applicant** with the State of North Carolina for a grant to aid in the study of or construction of the project described above.
4. That the **Authorized Officials**, and successors so titled, are hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project: to make the assurances as contained above; and to execute such other documents as may be required in connection with the application.
5. That the **Applicant** has substantially complied or will substantially comply with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the project and to Federal and State grants pertaining thereto.

ADOPTED, this the 22nd day of August 2022.

CITY OF HAVELOCK

By: 
William L. Lewis, Jr., Mayor

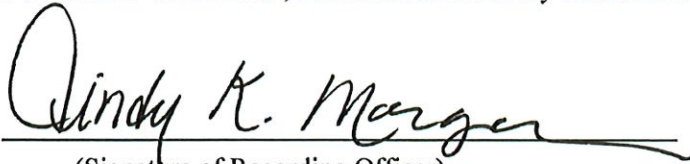
ATTEST:


Cindy K. Morgan, City Clerk

CERTIFICATION BY RECORDING OFFICER

The undersigned duly qualified and acting City Clerk of the City of Havelock does hereby certify: That the above/attached resolution is a true and correct copy of the resolution authorizing the filing of an application with the State of North Carolina, as regularly adopted at a legally convened meeting of the Board of Commissioners duly held on the 22nd day of August, 2022; and, further, that such resolution has been fully recorded in the journal of proceedings and records in my office.

IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of August, 2022.

A handwritten signature in cursive script that reads "Cindy K. Marger". The signature is written in black ink and extends across the width of the line below it.

(Signature of Recording Officer)

City Clerk

(Title of Recording Officer)



North Carolina Department of Environmental Quality
Division of Water Infrastructure
Application for Funding



(Last updated: July 2022)

1. General Information

Applicant Name City of Havelock	County Craven	Unique Entity Identifier (UEI) LVV2KTQPL6B8
Project Name Area-Wide Stormwater Master Planning	Federal Tax ID # 56-6023932	PWSID or NPDES # (if applicable) N/A

Applicant Type		Funding Amount Requested \$400,000
<input checked="" type="checkbox"/> Municipality	<input type="checkbox"/> Non-Profit Water Corporation	Total Project Cost \$400,000
<input type="checkbox"/> County	<input type="checkbox"/> Council of Government or Non-Profit Entity	
<input type="checkbox"/> Water and Sewer District	Partnering with Municipality or County for	
<input type="checkbox"/> Water and Sewer Authority	LASII Stormwater Project	
<input type="checkbox"/> Sanitary District	Other (Specify:)	

Funding Type(s) Requested

<input type="checkbox"/> Drinking Water or Wastewater Planning	<input type="checkbox"/> Construction Project
<input type="checkbox"/> Asset Inventory and Assessment (AIA)	<input type="checkbox"/> Drinking Water
<input type="checkbox"/> Merger/Regionalization Feasibility (MRF) Study	<input type="checkbox"/> Wastewater
<input type="checkbox"/> Pre-Construction Planning Grant (without construction)	<input type="checkbox"/> CWSRF Green Project: stream restoration, stormwater SCM, reclaimed water
<input checked="" type="checkbox"/> Stormwater Planning Grant (LASII)	<input type="checkbox"/> CDBG-Infrastructure (CDBG-I)
<input type="checkbox"/> Develop and Implement a New Stormwater Utility (LASII)	<input type="checkbox"/> Stormwater Construction (LASII)

CDBG-I only:	
LMI Determination Method:	LMI Percentage:
<input type="checkbox"/> ACS <input type="checkbox"/> Survey	

Acceptance of Funding Offer (for Construction Projects only)
 These questions will be used to identify the best funding fit. Funding from the American Rescue Plan Act (ARPA) and CDBG-I is available as grants, and principal forgiveness is available from the State Revolving Funds.

- I am willing to accept funding that includes federal conditions. Yes No
- I will only accept a funding offer (loan and/or grant) if a minimum of \$_____ is offered as a grant or principal forgiveness. *Enter \$0 if you are willing to accept a loan offer with no grant or principal forgiveness.*
- Because of the potential hardship related to a State Revolving Fund and/or State Reserve Program loan, this application seeks to replace the \$_____ loan awarded to the Insert Project Name (Insert project number) with grant funding. *Note: loans that have already received disbursements are not eligible.*

2. Drinking Water and Wastewater System Parameters (Not applicable for stormwater projects)

Residential Sewer Connections	Residential Water Connections	
Non-Residential Sewer Connections	Non-Residential Water Connections	
Monthly Sewer Bill per 5,000 gallons	Monthly Water Bill per 5,000 gallons	
Percentage of Utility Bills Collected and Rate Increase Percentages		
Year	Percentage of Utility Bills Collected	Rate Increase Percentage
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Applicant Contact Information**Authorized Representative Name:** Lee Tillman**Authorized Representative Title:** Director of Finance**Mailing Address Line 1:** 1 Governmental Avenue**Mailing Address Line 2:****City:** Havelock**State:** NC**Zip Code:** 28532**Physical Address Line 1:** 1 Governmental Avenue**Physical Address Line 2:****Physical Address City:** Havelock**Physical Address State:** NC**Physical Address Zip Code:** 28532**Phone Number:** 252-444-6403**Email Address:** ltillman@havelocknc.us**4. Application Preparer Contact Information****Firm Name:** Hazen and Sawyer**Contact Name:** Matthew Jones**Mailing Address Line 1:** 4011 WestChase Blvd., Suite 500**Mailing Address Line 2:****City:** Raleigh**State:** NC**Zip Code:** 27607**Physical Address Line 1:** 4011 WestChase Blvd., Suite 500**Physical Address Line 2:****Physical Address City:** Raleigh**Physical Address State:** NC**Physical Address Zip Code:** 27607**Phone Number:** 919-890-4038**Email Address:** mjones@hazenandsawyer.com**5. Engineer Contact Information**Is the engineering firm different from the application preparer? Yes No**Engineering Firm Name:****Contact Name:****Mailing Address 1:****Mailing Address 2:****City:****State:****Zip Code:****Physical Address Line 1:****Physical Address Line 2:****Physical Address City:****Physical Address State:****Physical Address Zip Code:****Phone Number:****Email Address:**

6. Project Description (see Instructions)

The City of Havelock is proposing to develop an area-wide stormwater master plan to better understand the location and extent of flooding concerns within Havelock and their likely cause, prioritize flooding concern areas, and develop stormwater improvement concepts. The goal of this master plan is to shift the City from a reactive posture, addressing stormwater conveyance limitations in response to storm events or in isolated areas of known concerns, to a proactive position, providing a more resilient City by addressing stormwater needs in a holistic and prioritized manner. Specifically, the City will conduct a review of existing information, garner input from the community on stormwater concerns, prioritize areas for further analysis, develop hydrologic and hydraulic models of the stormwater system, model projected flooding under current and future storm events, prioritize areas of flooding concerns, and identify what stormwater improvements are most likely to benefit those prioritized areas. Specific deliverables from the proposed stormwater master plan project include a report discussing master plan methodology and results, GIS data and map exhibits showing modeled flooding extents and depths, locations of prioritized areas benefiting from stormwater improvements, and summaries of those improvement concepts.

Estimated number of new connections served by Drinking Water or Wastewater construction project: N/A

For Drinking Water and Wastewater Construction, CDBG-I, CWSRF Green Projects, Pre-Construction Planning Grants:

- The proposed project is a result of an Asset Inventory and Assessment grant previously awarded by the Division.
- The proposed project is a result of a Merger / Regionalization Feasibility Study grant previously awarded by the Division.
- None of the above.

7. Additional Information for Consideration

8a. Project Budget for All Construction Projects and Drinking Water/Wastewater Pre-Construction Planning Grants only. Do *not* use for AIA, MRF, Stormwater Planning Grant (LASII), or Develop and Implement a New Stormwater Utility (LASII) projects.

1. Drinking Water/Wastewater: Costs for portions of the project that will fulfill the requirements related to rehabilitating or replacing waterlines, old infrastructure, lead service lines (DW/WW Priority Rating System Line Items 1.C, 1.C.1 or 1.D.1) must be labeled and shown separately to successfully claim points.
2. Stormwater: Costs for stormwater quality project components and costs for stormwater quantity project components (Stormwater Priority Rating System Line Items 1.A or 1.C), must be labeled and shown separately to successfully claim points.
3. All: Costs for portions of the project that will benefit disadvantaged areas (DW/WW Priority Rating System Line Items 1.E or 4.D, Stormwater Priority Rating System Line Item 4.C) must be labeled and shown separately to successfully claim points.

4. Add additional lines as needed.			
Indicate construction costs by line item (e.g., linear feet of different-sized lines, each type of stormwater control measure, each stream restoration/enhancement/stabilization reach). Include a more detailed construction cost budget if needed.	Division Funding Requested	Other Secured Funding Source(s)	Total Cost Amount
<u>Construction Costs</u>			
<i>Contingency (10% of construction costs):</i>			
<i>Construction Subtotal:</i>			
<u>Engineering Costs</u>			
Engineering Design			
Permitting			
Land Surveying Costs			
Other:			
<i>Engineering Subtotal:</i>			
<u>Administration Costs</u>			
Planning (pre-construction costs)			
Easement Preparation			
Engineering Report Preparation			
Environmental Documentation Preparation (if applicable)			
Legal Costs			
Compensation for Water/Wastewater Connection Fees and System Development Fees that will not be charged after connecting residences in disadvantaged areas (if applicable)			
Project Funding Administration (if applicable)			
Other:			
<i>Administration Subtotal:</i>			
TOTAL PROJECT COST:			
A Professional Engineer signature and seal for the estimate <i>must be provided</i> in the space to the right for the application to be considered complete.			

8b. Project Budget for AIA and MRF Grants, and Training and/or Rate Study Components to Drinking Water or Wastewater Projects. Do not use for Pre-Construction Planning Grants, or any type of LASII Stormwater project.	
Add additional lines as needed.	
	Division Funding Requested
TOTAL DIVISION FUNDING REQUESTED:	

8c. Project Budget for Stormwater Planning Grant (LASII) and Grant to Develop and Implement a New Stormwater Utility (LASII). Do not use for any other project type, including stormwater construction (LASII).	
1. If the application includes a request for funds to <u>both</u> Develop and Implement a New Stormwater Utility <u>and</u> other Stormwater Planning work, the budget shown below must be labeled and shown separately.	
2. Add additional lines as needed.	
	Division Funding Requested
Stormwater Master Plan - Existing Information Review and Watershed Prioritization	\$60,000
Stormwater Master Plan - Hydrologic and Hydraulic Modeling and Analysis	\$220,000
Stormwater Master Plan - Concern Area Prioritization and Improvement Concept Development	\$80,000
Stormwater Master Plan - Outreach and Master Plan Reporting	\$40,000
TOTAL DIVISION FUNDING REQUESTED FOR STORMWATER PLANNING GRANT (LASII):	\$400,000
TOTAL DIVISION FUNDING REQUESTED TO DEVELOP AND IMPLEMENT A NEW STORMWATER UTILITY (LASII):	

Certification by Authorized Representative

The attached statements and exhibits are hereby made part of this application, and the undersigned representative of the Applicant certifies that the information in this application and the attached statements and exhibits are true, correct, and complete to the best of his/her knowledge and belief. By initialing each item and signature at the end of this application, he/she further certifies that:

1. as Authorized Representative, he/she has been authorized to file this application by formal action of the governing body;
2. the governing body agrees to provide for proper short-term and long-term maintenance and operation of the approved project after its completion;
3. the Applicant has substantially complied with or will comply with all federal, state, and local laws, rules, and regulations and ordinances as applicable to this project;
4. the Applicant will adopt and place into effect on or before the completion of the project a schedule of fees and charges which will provide for the adequate and proper operation, maintenance, and administration and repayment of all principal and interest on loans (if applicable) of the project [if not applicable, initial "N/A"];
5. the Applicant has followed proper accounting and fiscal reporting procedures, as evidenced by the Applicant's most recent audit report, and that the Applicant is in substantial compliance with provision of the general fiscal control laws of the State;
6. the Project Budget for all construction projects and pre-construction planning grants provided in this application form (Section 8a, if applicable) includes all funding requested from all sources of funding proposed for this project;
7. the (Town or County), North Carolina is organized and chartered under the laws of North Carolina, or the special purpose unit of local government is incorporated under the laws of North Carolina. All officials and employees are aware of, and in full compliance with NCGS 14-234, "Public officers or employees benefiting from public contracts; exceptions." (For units of local government only. All others should initial "N/A");
- N/A 8. the Applicant acknowledges that all loans and Viable Utility Reserve grants are subject to approval by the Local Government Commission (not applicable for CDBG-I or stormwater projects);
- N/A 9. the Applicant acknowledges that if the application is for a drinking water or wastewater project and any one of the local government units involved in the project is designated as distressed by the State Water Infrastructure Authority and the Local Government Commission, the local government unit(s) must complete the viable utility requirements in NCGS 159G-45(b) by conducting an asset assessment and rate study, participate in a training program, and develop a short-term and long-term action plan considering infrastructure repair, maintenance, and management, continuing education, and long-term financial management plan. Additional conditions may be imposed on the local government(s) designated as distressed by the State Water Infrastructure Authority and/or the Local Government Commission. (Initial "N/A" if does not apply to project type or all local governments involved in the project).
- N/A 10. the Applicant acknowledges that, in accordance with G.S. 120-157.2, for local government debt to be issued greater than \$1,000,000, the local government must report to Committee Chairs, Committee Assistant, and the Fiscal Research Division of the General Assembly at least 45 days prior to presentation before the Local Government Commission (For units of local government only. All others, and CDBG-I and stormwater (LASII) applicants should initial "N/A"); and
11. if the Applicant receives a grant with American Rescue Plan Act (ARPA) State Fiscal Recovery Funds, the Applicant acknowledges and accepts the following conditions:
 - a) all ARPA project funds must be reimbursed by December 31, 2026;
 - b) project funds will not be used to pay existing debt or as a match for other federal funds;
 - c) if the project is also funded with other federal funds, the federal requirements of the other funds will apply to the ARPA funds; and
 - d) for projects receiving ten million dollars or more in ARPA funding; recipients must certify or provide plans and reports meeting federal requirements on reporting on prevailing wage rates, project labor agreements, and related information as specified in the U.S. Treasury's [Compliance and Reporting Guidance for the State and Local Fiscal Recovery Funds](#).

Completeness Checklist

In addition to this application, the following items must be included in the application package to be eligible or to successfully claim priority points. **Failure to include or properly document an item marked with * will result in an incomplete and ineligible application which will not be considered for funding.** Please initial that each item is included in this submittal. If not applicable for the project, please initial "N/A".

OR

Resolution by Governing Body of Applicant with Certification by Recording Officer * †

N/A

Resolution by Governing Body of Applicant to Develop and Implement a Stormwater Utility with a Stormwater Enterprise Fund * † [for 'Develop and Implement a New Stormwater Utility' project only; replaces "Resolution by Governing Body of Applicant with Certification by Recording Officer" above]

SN

Comprehensive Narrative to Claim Points in the Priority Rating System *

MR

Documentation to Support the Comprehensive Narratives, including maps or images as needed

N/A

Applicable Priority Rating System Form to Claim Points † [for Construction Projects and Pre-Construction Planning Grants only]

N/A

Affordability Calculator † or handwritten affordability calculations [not applicable to CDBG-I, AIA, MRF, or stormwater projects (LASII)]

N/A

Fund Transfer Certification with appropriate box checked * † [not applicable to CDBG-I or stormwater projects (LASII)]

N/A

Water & Sewer Financial Information Form † [not applicable to stormwater projects (LASII)]

N/A

Commitment of Other Funds Form, Low to Moderate Income Documentation, and Federal Compliance Documents* † [for CDBG-I applications only]

MR

Stormwater Entity Eligibility Certification Form * † [for stormwater projects (LASII) only]

N/A

Current rate sheets and NC Water & Sewer Rate Form† in effect on application deadline (for both water and sewer if the utility provides both water and sewer, or for water or sewer depending on the utility service) [not applicable to stormwater projects (LASII)]

N/A

Current stormwater fees in effect on application deadline [for stormwater projects (LASII) only if fees apply]

N/A

PE Seal on Project Budget * [for Construction Projects and Pre-Construction Planning Grants only]

* **Required** in the application package. Failure to include or properly document will result in an incomplete and ineligible application which will not be considered for funding.

† Forms and templates are available separately on the [Division's application webpage](#).

Submittal Information

All application packages must be submitted electronically at <https://edocs.deq.nc.gov/Forms/OPA-ARPA>

See Instructions on completing the form online.

Online submittal of the application package is sufficient for all applications, except for CDBG-Infrastructure applications.

For CDBG-Infrastructure applications only: in addition to submitting the application package electronically at the link above, you must send one (1) original hard copy* of the application package to:

Mailing Address† (US Postal Service only)

Division of Water Infrastructure
1633 Mail Service Center
Raleigh, NC 27699-1633

Physical Address (FedEx, UPS)‡

Division of Water Infrastructure – 8th Floor, Archdale Building
512 North Salisbury Street
Raleigh, NC 27604
919.707.9160

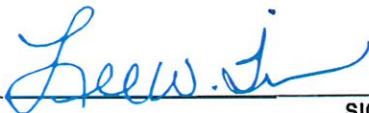
* Provide a hard copy that is bound (e.g., report cover with fasteners, plastic report combs, spiral or 3-ring binders). No paper clips, staples or binder clasps.

† Please allow two weeks for delivery if mailing via the US Postal Service.

‡ For all courier services, please use the physical address, as having a courier deliver to the mailing address will delay package delivery.

Application Signature

**Original signature is required for the application.
Application with no signature is incomplete and ineligible for consideration.**



SIGNATURE OF AUTHORIZED REPRESENTATIVE

Lee W. Tillman

Finance Officer

September 29, 2022

TYPED NAME

TYPED TITLE

DATE

***** This Entity Eligibility Certification Form MUST be included in the Application Package for Stormwater Funding from LASII *****

**Local Assistance for Stormwater Infrastructure Investments (LASII) Fund
Entity Eligibility Certification Form (Stormwater Eligibility Form)**

North Carolina General Assembly Session Law 2021-180 Section 12.14 established the Local Assistance for Stormwater Infrastructure Investments (LASII) fund to provide grants to eligible entities for projects that will improve or create infrastructure for controlling stormwater quantity and quality. Section 12.14.(d) defines an eligible entity as: “a city¹ or county that (i) documents in a form and manner as the Department may specify a stormwater quality or quantity issue and (ii) demonstrates that it would experience a significant hardship raising the revenue necessary to finance stormwater management activities within its jurisdiction based on income and unemployment data, population trends, and any other data determined relevant by the Department. A regional council of government created pursuant to Part 2 of Article 20 of Chapter 160A of the General Statutes or a nonprofit entity is also an eligible entity under this section if the regional council of government or nonprofit entity partners with a city or county.”

An applicant seeking grant funding from LASII for a stormwater construction project, stormwater planning grant, or to develop and implement a new stormwater utility must document the following items on this LASII Entity Eligibility Certification Form. Failure to adequately document the following items or to certify and include this form in the application package will result in the application being considered ineligible for funding.

1. Document a Stormwater Quality or Stormwater Quantity Issue

(Required by Session Law 2021-180 Section 12.14.(d)(i))

- A. Provide a narrative that describes the stormwater quality issue and/or stormwater quantity issue, based on historic or projected precipitation, and how the proposed project will be used to address the issue.

The City of Havelock, due to a combination of low-lying topography and aging and undersized stormwater infrastructure, has long faced distributed stormwater quantity and flooding issues. Large storm events, such as Hurricane Florence, have caused widespread roadway and structure flooding throughout the City, including inundation in areas not previously considered to be vulnerable to flooding. Distributed localized flooding also occurs during more frequent storm events, such as summer thunderstorms, particularly at shallow road culverts. Both of these historical concerns are expected to become more substantial issues under projected precipitation patterns. These flooding issues present a host of concerns, including direct property damage, damage to City infrastructure, transportation impacts, including limited access for emergency vehicles, and water quality impacts associated with flooding.

Through information gathering and area-wide modeling, the proposed stormwater master plan will allow the City to understand the location and extent of flooding and its underlying causes under a

¹ “City” means municipality and includes cities, towns, and villages.

range of historic and projected storm events. Furthermore, this project will allow the City to identify and prioritize stormwater improvements to address flooding vulnerabilities, shifting from a reactive to proactive posture and better supporting long-term resiliency for the City and its residents.

- B. Provide a map and/or narrative that identifies the location of the stormwater quality and/or stormwater quantity issue. The map and/or narrative must show or describe the watershed upstream of the location, and if possible, identify the acreage, percentage of impervious area and land use cover in the watershed upstream of the location. If providing a map, attach the map to this Certification Form.

Stormwater quantity and flooding concerns exist throughout the City of Havelock, with a primary objective of the proposed project focused on better understanding where flooding concerns exist and the underlying cause for flooding. Slocum Creek and Hancock Creek are the two main watershed within the City of Havelock, both of which discharge directly into the nearby Neuse River Estuary.

The total watershed area for Slocum Creek, which extends outside the Havelock city limits, is approximately 47-square miles. Approximately 23% of the total Slocum Creek watershed is developed land and 7% is impervious area, with most of the developed area and impervious area residing within the City of Havelock. The total watershed area for Hancock Creek, which also extends outside the Havelock city limits, is approximate 25-square miles. Approximately 13% of the total Hancock Creek watershed is developed and 3% is impervious area, with most of the developed area and impervious area within the City of Havelock.

The map enclosed with this certification form shows the boundaries of the Slocum Creek and Hancock Creek watershed in relation to Havelock city limits. The proposed project is focused on developed areas within the City of Havelock.

- C. If available, provide photographs of the stormwater quality and/or stormwater quantity issue and identification of the amount of rainfall that caused the issue, based on the nearest reliable rain gauge, news articles about the issue, or other information that clearly demonstrates the issue. Attach this information to this Certification Form, if available.

Enclosed with this Certification Form are multiple examples of past flooding events impacting the City of Havelock that would be addressed by the proposed project. An August 12, 2009, flooding event is documented within the enclosed National Weather Service report. For this event, an event total rainfall of 9.7-inches was recorded at MCAS Cherry Point, with a peak intensity of 2.97-inches per hour. Road closures and property flooding were prevalent throughout the City, as documented in the report.

A news article from the New Bern Sun Journal is enclosed regarding flood impacts to Havelock associated with Hurricane Florence, during which the City received approximately 15-inches of rainfall. Widespread road and property flooding occurred throughout the City, requiring rescue efforts in some portions to the City that were inaccessible without special equipment.

AND

2. Demonstrate that the Applicant would Experience a Significant Hardship raising the Revenue Necessary to Finance Stormwater Management Activities within its Jurisdiction. (Required by Session Law 2021-180 Section 12.14.(d)(ii))

Select the method to demonstrate significant hardship below:

- Applicant Will Rely on Item 2.A: LGU Indicators or Benefits to Disadvantaged Areas,

OR

- Applicant Will Rely on Item 2.B: Develop and Implement a New Stormwater Utility

- **Item 2.A:** For applications for Stormwater Construction (LASII) and Stormwater Planning Grants (LASII). Does not apply to applications to Develop and Implement a New Stormwater Utility.

An applicant must demonstrate eligibility by meeting either of the two criteria below (Criterion 1 or Criterion 2):

Criterion 1: At least one (1) of the five (5) five Local Government Unit (LGU) Indicators for the applicant are worse than the state benchmarks shown in the table below. The values for the LGU Indicators for all municipalities and counties in North Carolina are provided in tables on the [Division application webpage](#).

Local Government Unit Indicator		State Benchmarks for Fall 2022 Applications	Enter Value of Local Government Unit Indicator of Applicant ^{2,3}
1. Population Change	< =	4.5%	-3.41%
2. Poverty Rate	> =	14.0%	15.2%
3. Median Household Income	< =	\$56,642	\$49,893
4. Unemployment Rate	> =	7.1%	6.3%
5. Per Capita Appraised Value of Property	< =	\$125,015	\$44,326

OR

Criterion 2: The City or County as a whole does not meet Criterion 1 but is applying for stormwater projects that primarily benefit disadvantaged areas within the City’s or County’s jurisdiction. To be eligible, 75 percent or more of the project construction costs (as delineated in the Project Budget) must be used to directly benefit disadvantaged areas.

Disadvantaged areas may be subsections or pockets of a City’s or County’s jurisdiction, rather than the entire City or County. For instance, disadvantaged areas may be census block groups that meet qualifying characteristics. The targeted project area will be determined a “disadvantaged area” based on factors that shall include:

- Median household income, poverty rates, per capita appraised property values of property, and/or employment rates of the targeted project area,
- Additional factors that may qualify the targeted project area as disadvantaged, such as but not limited to demographic, historical, cultural, linguistic, socioeconomic stressors, or cost-of-living stressors may also be considered.

Use of federal or state-generated maps to demonstrate that a targeted project area is disadvantaged is encouraged. For instance, using screenshots or printouts of NC DEQ’s [Community Mapping System](#), labeling and identifying on the map the targeted project area overlapping “Potentially Underserved Block Groups” and/or “Tribal Boundaries” that appear on the online map as shaded areas (these are considered disadvantaged areas).

For Criterion 2, the proposed project is not required to be located *within* a disadvantaged area, but the project *must result in* water quality improvements within the disadvantaged area and/or reduce water quantity impacts within the disadvantaged area. Over 75 percent of the project’s construction costs must be used to provide these benefits to the disadvantaged areas to qualify under Criterion 2.

² If two or more eligible applicants are working together on the proposed project and the collaboration is necessary in order to accomplish the construction project or to accomplish the goals of the study, enter the LGU Indicator values for the most distressed of the municipalities or counties.

³ Please use the Local Government Unit Parameters (which supplies values for population change, poverty rate, median household income, unemployment rate, and property valuation per capita for all cities and counties in North Carolina) available on the [Division application webpage](#).

For Criterion 2, to document that the direct beneficiaries of the project are disadvantaged, provide:

- A. A narrative, with or without a map, describing the project location, areas in which project benefits are anticipated, and disadvantaged area(s).
- Example Map Documentation: Screenshots or printouts of NC DEQ's [Community Mapping System](#), or similar federal or state-generated map, with project location and areas in which project benefits are anticipated overlaid on top of Potentially Underserved Block Groups and/or Tribal Boundaries. Attach screenshots or printouts of maps to this Certification Form.
 - Narrative Documentation: Narrative must sufficiently describe disadvantaged factors of the areas where the project benefits will accrue, including median household income, poverty rates, per capita appraised property values of property, and/or employment rates of the targeted project area. Additional factors that may qualify the benefiting areas as disadvantaged, such as but not limited to demographic, historical, cultural, linguistic, socioeconomic stressors, or cost-of-living stressors.

N/A. Applicant is using Criterion 1.

B. For Criterion 2, demonstrate that 75 percent or more of the project’s construction cost (as shown in the Project Budget) will be used to benefit disadvantaged areas. Complete the Project Budget in the application and clearly label and shown costs that benefit disadvantaged areas separately from other costs.

In this Certification Form, provide the following summary:

N/A. Applicant is using Criterion 1.

Cost Estimated in the Project Budget	Division Funding Requested (Total, from Project Budget)	Portion that Benefits Disadvantaged Areas	Portion that Does Not Benefit Disadvantaged Areas
<u>Construction Costs</u>			
<i>Contingency (10% of construction costs):</i>			
<i>Construction Subtotal:</i>			

C. For Criterion 2, provide a description of how the proposed project will reduce the impact(s) of the described stormwater quality issue and/or stormwater quantity issue within the disadvantaged area. If the proposed project will address both stormwater quality and stormwater quantity issues, provide a separate description for each issue.

N/A. Applicant is using Criterion 1.

- **Item 2.B:** For applications to Develop and Implement a New Stormwater Utility (LASII). Does not apply to applications for stormwater construction and stormwater planning grants.

If the city or county does not have a stormwater utility with a Stormwater Enterprise Fund and the project purpose described in Part 1.A of this Entity Eligibility Certification Form is to develop and implement a new Stormwater Utility, the city or county will have met the requirement to demonstrate that there is a significant hardship in raising the revenue necessary to finance stormwater management activities within its jurisdiction. The grant amount for which a city or county will be eligible will be capped at different levels based on the number of LGU Indicators (from Criterion 1) that are worse than the state benchmarks.

For Item 2.B, include a Resolution by the Governing Body stating that the city or county does not currently have a Stormwater Utility with a Stormwater Enterprise Fund, but will develop and implement a stormwater utility and Stormwater Enterprise Fund during the project. See the [Division's application webpage](#) for a template resolution. The resolution must be included as part of the application package. Please also attach it to this Certification Form, or provide a statement here that the Resolution for Developing and Implementing a Stormwater Utility with a Stormwater Enterprise Fund is included with the application package.

N/A.

AND, IF APPLICABLE

- 3. Documentation that the Applicant is a Regional Council of Government created pursuant to Part 2 of Article 20 of Chapter 160A of the North Carolina General Statutes or the Applicant is a Nonprofit Entity, and that the Regional Council of Government or Nonprofit Entity is Partnering with an Eligible City or County.**

If applicable, provide the following information below:

- A. Name and address of regional council of government or nonprofit entity

N/A

- B. Name, title, and contact information for the person with the entity named above that will be the primary contact for this project

N/A

- C. Name, title, and contact information for the person with the eligible city or county that will be the primary contact for this project

N/A

- D. Copy of the executed instrument used to establish the partnership arrangement between the entity named above and the eligible city or county

N/A

Certification by Authorized Representative

The above statements and all attached exhibits are hereby made part of this LASII Entity Eligibility Certification Form, and the undersigned representative of the Applicant certifies that the information in this Form and the statements and exhibits are true, correct, and complete to the best of his/her knowledge and belief.

LASII Entity Eligibility Certification Form Signature

Please Note: Original signatures are required for each Certification Form



SIGNATURE OF AUTHORIZED REPRESENTATIVE

Lee W. Tillman

, Finance Officer

, September 29, 2022

TYPED NAME

TYPED TITLE

DATE

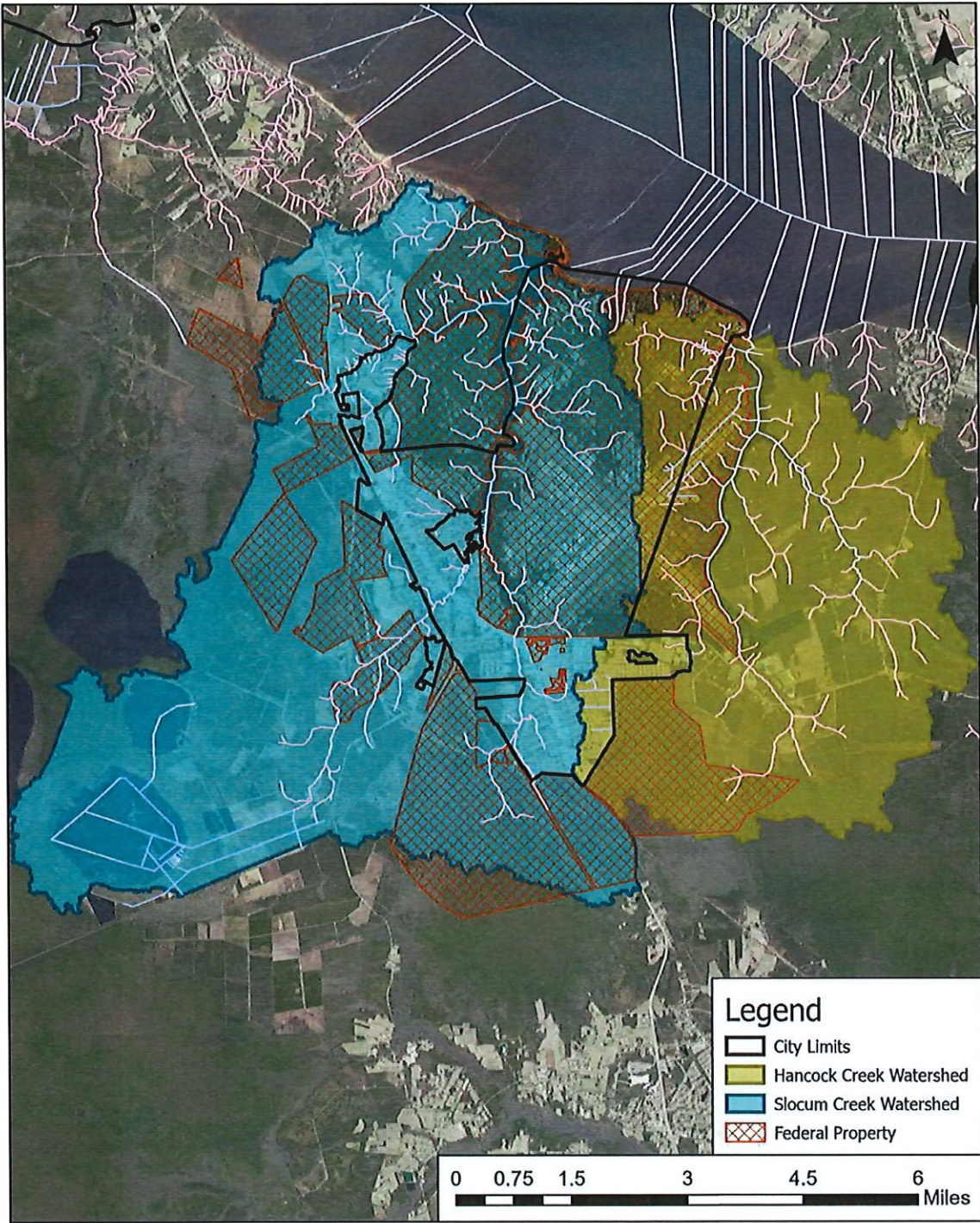
Appendices

Map of Havelock Watersheds

National Weather Service Report on August 12, 2009, Flooding in Havelock

New Bern Sun Journal Article on Hurricane Florence Impacts to Havelock

Photos Demonstrating Flooding during a Normal Heavy Rain Event



Havelock Watersheds



August 12, 2009 Havelock Flood

[Weather.gov](#) > [Newport/Morehead City, NC](#) > August 12, 2009 Havelock Flood

Newport/Morehead City, NC
Weather Forecast Office

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Event Overview

On 12 August 2009, flooding rains hit a small portion of northern Carteret and southern Craven Counties. The rains were associated with regenerative warm-topped convection along a stalled sea breeze boundary and a weak frontal boundary extending along portions of Onslow, Carteret, and Craven Counties. The convergence-locked convection over Havelock resulted in almost 10 inches of rain between noon and 4 pm. Rainfall rates were as high as 5.7 inches per hour according to measurements from the Cherry Point MCAS ASOS (see table 1). In the town of Havelock, the hardest hit area, roads were closed, water inundated into several homes and businesses, and local schools and the Cherry Point Marine Air Station locked down for several hours until the flood waters receded.

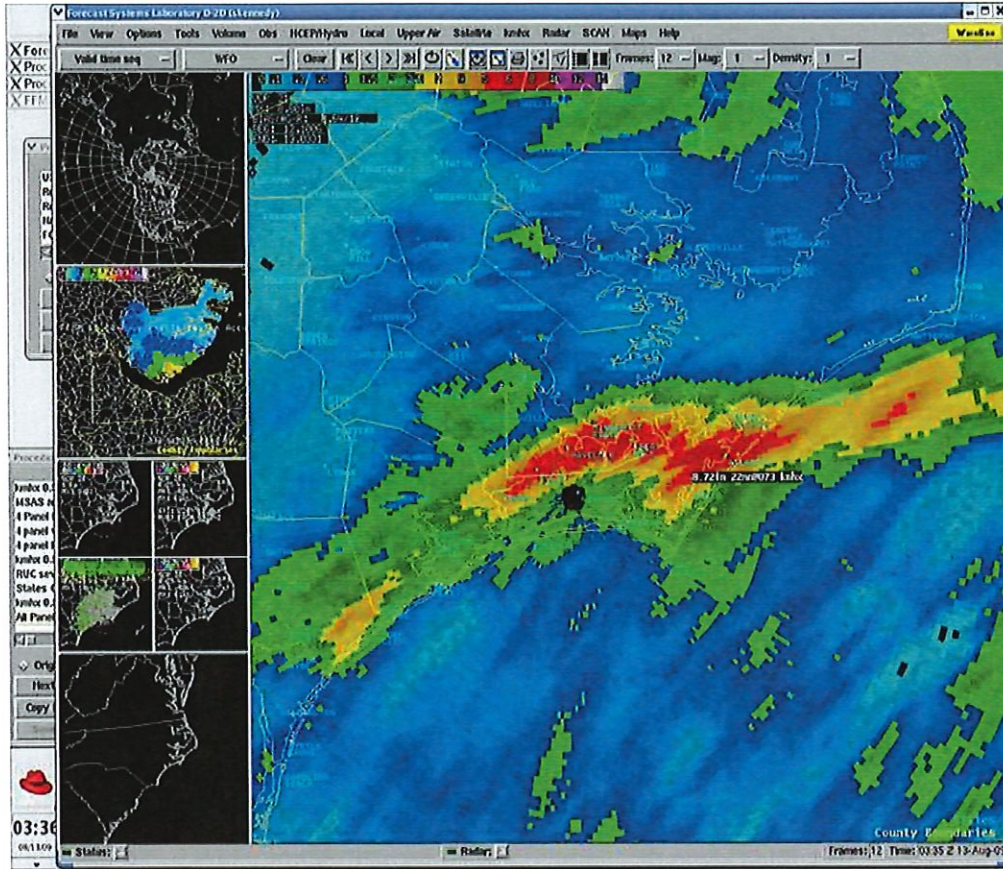


Figure 1: Morehead City (MHX) Doppler Radar storm total rainfall for August 12, 2009

Synoptic Overview

The rains were associated with an upper level trough over the Eastern U.S., digging south into the mid-Atlantic. A vorticity max on the back side of the trough moved slowly down and strengthened as it rounded the base of the trough mid morning of the 12th. Meanwhile, the right front entrance region of the upper level jet slid south out of the Ohio River Valley towards the mid-Atlantic by Wednesday morning. The position of these features put eastern North Carolina under the best support aloft.

At the surface, a weak frontal boundary lingered over the coastal plains. There was no notable change in pressure, though the gradient over the affected area strengthened slightly through the day on the 12th. The surface dewpoints were extremely moist, mainly in the mid-70's throughout the region. The precipitable water amounts were around 2.25 inches, particularly high for a non-tropical environment in mid August (see figure 2). This was the result of several days of a strong moisture feed off the Gulf of Mexico, evident by water vapor satellite imagery showing a plume of high water content over the southeast including eastern North Carolina. The 12Z MHX balloon sounding showed freezing levels around 14-15k ft supporting warm rain processes, a very efficient heavy rain producing environment.

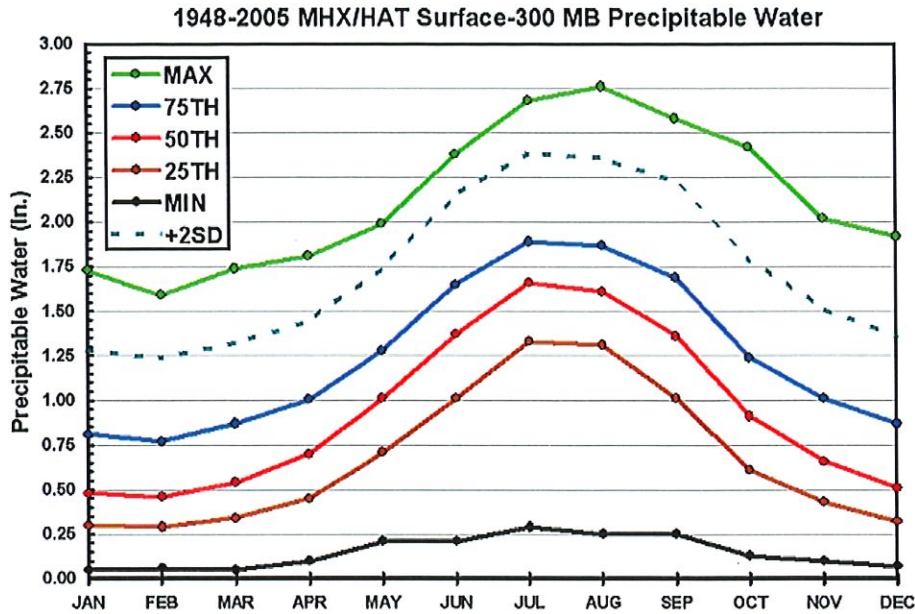


Figure 2: Climatology of perceptible water values based on MHX upper air soundings for August show that the 8/12/09 event was 2 standard deviations above normal with a value of 2.25".

Scattered showers began developing throughout the morning, with little overall organization or coverage in any one area. The focus for thunderstorms became more defined as the front shifted south slightly, and stalled along the southern or Crystal Coast region by mid morning. The convection began to produced periods of heavy rainfall, but forecasters noted a high bias of 0.6-0.75 (assumes radar is overestimating) when monitoring earlier storms. As the seabreeze developed around noon, surface convergence can be noted along a line from Onslow to Carteret Counties, with light northwest winds over the majority of the area, and southwest over the Crystal Coast. The western edge of this line of convection shifted slightly, preventing training and significant flooding over Onslow or western Carteret Counties. The central and eastern end of the convection lingered over southern Craven and eastern Carteret Counties from around noon through 5 pm before sliding south and offshore.

Radar showed heavy rains developing along the seabreeze boundary, with localized rates as high as 3 inches per hour, and averaging 1 to 2 inches per hour elsewhere. A flood advisory was issued at 218 pm for Craven and Onslow Counties as radar event total quantitative precipitation estimates (QPE) of 2 to 4 inches were observed. The flood advisory was upgraded to a flood warning around 3 PM for both Craven and Onslow Counties as radar indicated rainfall amounts totaling 3 to 5 inches with excessive rainfall rates around 4 inches per hour. The warning included wording for event total rainfall amounts upwards of 8 inches. Another flood warning was issued at 349 pm for eastern Carteret County. Doppler radar indicated an event total rainfall for Havelock around 7 inches, though ASOS and other unofficial readings of 8 to 10 inches were reported (see figure 3).

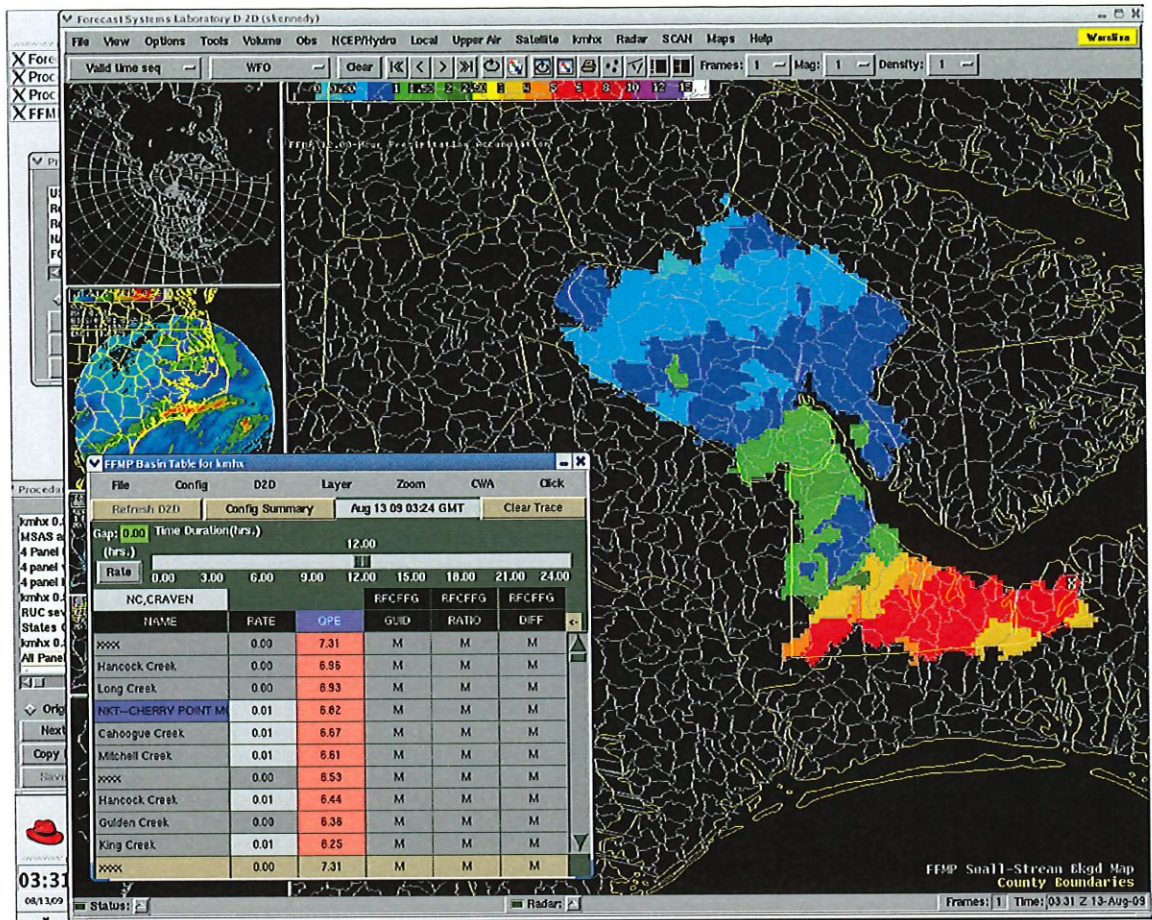


Figure 3: Flash Flood Monitoring and Prediction (FFMP) based primarily on radar data indicated storm total rainfall amounts around 7 inches over the Havelock area.

Table 1.

NKT ASOS

Cherry Point MCAS

August 12 Precipitation Observations

Time Recorded (Z)	Time Recorded (EDT)	Rainfall (inches)	Rainfall Rates (inches per hour)
1654	11:54 PM	0.00	
1709	12:09 PM	0.18	0.72
1716	12:16 PM	0.57	3.34
1723	12:23 PM	1.09	4.45
1733	12:33 PM	1.32	1.38
1740	12:40 PM	1.44	1.02
1750	12:50 PM	1.94	3.00
1754 (Hourly Total)	12:54 PM	2.21	2.21
1804	1:04 PM	0.47	2.82
1830	1:30 PM	2.02	3.58
1846	1:46 PM	3.11	4.09
1854 (Hourly Total)	1:54 PM	3.49	3.49
1946	2:46 PM	2.52	2.90
1954 (Hourly Total)	2:54 PM	2.93	2.93
1958	2:28 PM	0.30	4.50

2003	3:03 PM	0.68	5.70
2054 (Hourly Total)	3:54 PM	1.02	1.02
2101	4:01 PM	0.00	0.00
2154 (Hourly Total)	4:54 PM	0.03	0.03
2254 (Hourly Total)	5:54 PM	0.02	0.02
Event Total Rainfall	9.70"	Event Average Rainfall Rate	2.97" per hour

Table 2

COCORAHS PRECIPITATION REPORTS

Station Number	Location	Precipitation
NC-CR-4	HARKERS ISLAND 4.8 NNE	6.03
NC-CR-20	HARKERS ISLAND 3.2 NE	4.57
NC-PM-2	ORIENTAL 2.1 WSW	3.96
NC-CR-18	NEWPORT 2.0 WSW	3.50
NC-CN-12	Havelock 2.7 S	8.98
		Notes: My home was an Island with water 3 inches from entering my front door. We had a 4 hour thunderstorm with intense lightning and heavy rain. Water was anywhere from 6 inches to 3 feet deep everywhere in my neighborhood. There were fire ants, leeches and critters I have never seen before on my front porch. 8 inches of this rain fell in a three hour period, the most I,ve seen in my 70 years of life.
NC-CN-1	Havelock 3.1 NW	5.11
		Notes: Radio stations reported 10 inches somewhere in this town and with unknown measuring devices. some street flooding noted on USMCAS Cherry Point. rain here at 3 pm was heavy enough to overload our gutters and downspouts.

MHX started receiving calls around 3 pm of heavy rain and ponding of water on local roads in the Havelock area. Critical in warning decision during this event was the near real-time observations from the Cherry Point MCAS ASOS (NKT), which validated the anomalous rainfall rates and amounts indicated by the radar. The flood warning was extended through the evening hours, to account for the slow receding of the flood waters though the rain had ended around 5 pm. A survey of the impacts was conducted by the hydrology focal point along with local law enforcement on the 13th, and determined that the flooding was localized to the eastern portions of Havelock and the grounds of Cherry Point MCAS. What prevented this event from becoming a more significant flooding situation was the combination of dry antecedent conditions and a well channeled drainage system ending along the Slocum Creek. However, due to excessive rainfall rates and rainfall totals of almost 10 inches in less than 4 hours, minor flooding to businesses and some apartments did occur.

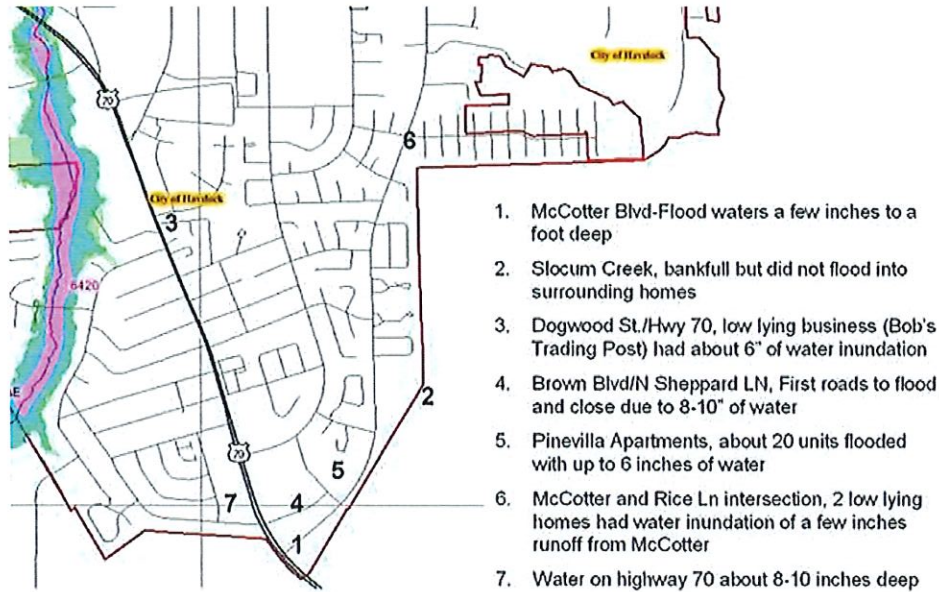


Figure 4: North Carolina State Floodplain Mapping inundation map for Havelock. Locations and extent of flooding listed.

Table 3. <u>Event Flood Impacts</u>	<u>Time</u>	<u>Location</u>
CRAVEN COUNTY		
Water inundates from culverts into roads at end of 'C' St and 6th St.	2-3 PM	Cherry Point MCAS
'C' Street was completely closed due to flooding toward the Roosevelt end that made it impassable.	3-4 PM	Cherry Point MCAS
A parking lot off 6th Street (near the 'G' Street intersection) flooded so quickly that many cars were under water just sitting the parking lot.	3-4 PM	Cherry Point MCAS
Brown BLVD Closed, minor flooding	245 PM	Havelock
Water starting to flood Slocum Shopping Center	245 PM	Havelock
Most of McCotter BLVD under water upwards of a foot, worse conditions at intersection with Tarheel Rd and Rice LN	400 PM	Havelock
Shepard Street flooded, water up to the houses	415 PM	Havelock
Pinevilla Apartments on Brown and McCotter flooded with as much as 6 inches of water	430 PM	Havelock
8-10 inches of water on Highway 70 across from Hardees near McCotter and Shepard Rd	400 PM	Havelock

Damage Pictures from Havelock in Craven County
 Photos courtesy of: Havelock Police Department







Case Study Team:

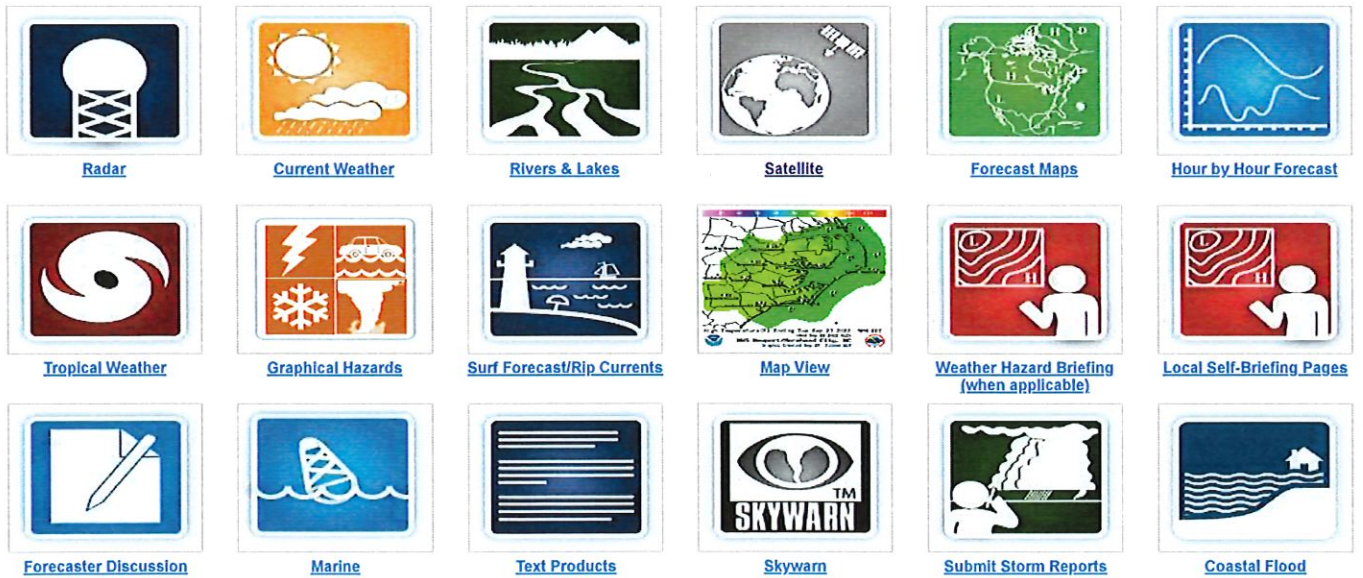
Sarah Jamison

Mark Willis

Brian Cullen

Bob Frederick

Scott Kennedy



Sun Journal

TO HIT HAVELOCK

Mayor: 'Everything we do as a city has major damage'

Ken Buday Sun Journal

Published 12:41 p.m. ET Sept. 17, 2018 | Updated 12:44 p.m. ET Sept. 17, 2018

Havelock city officials worked Monday to help the city to recover from what is being described as one of the worst storms to ever hit the area.

As of Monday morning, the majority of city homes and businesses were still without power, some roads were closed and the western part of the city was under a boil water advisory for a major broken water main that occurred on Sunday after Hurricane Florence roared ashore with 90 mph winds early Friday morning.

“I’ve lived in Havelock my whole life and I’ve never seen a storm do that much damage,” Havelock Mayor Will Lewis said. “I’ve never seen so many trees down with power lines spaghetti-strapped around them.”

Lewis said damage every aspect of city services, including recreation fields and buildings.

“Everything we do as a city has major damage,” he said.

He said crews did not have an exact number of homes or businesses damaged during Hurricane Florence. He said not only were multiple trees down, but that areas in eastern Havelock such as McCotter and Webb boulevards and the Foxcroft and South Forest areas had significant flooding.

“We had places flood that had never flooded before,” Lewis said. “In Foxcroft, we had to have the National Guard go through and rescue people in trucks. I was talking to the driver of one of their large trucks with the big tires, and they had water up the windshield, so that’s about 8 feet of water in that area.”

He said that despite all the damage, he’s seen the good in the city’s residents.

“One thing about this is it has shown how the community of Havelock is so generous,” he said. “We’ve had all kinds of church groups and organizations helping out. Everywhere you go you see citizens helping other citizens, so if you’re having a hard time, tell someone. Don’t be afraid to reach out to your neighbors or to one of these organizations. You can get help.”

Sun Journal

“But no one is completely cut off,” said Lauren Wargo, Havelock’s public information officer.

She said a portion of Fontana Boulevard between West Main Street and Roosevelt Boulevard was closed because flood waters rushed over the bridge near the Ford dealership.

“We have to wait on engineers from DOT (Department of Transportation) to inspect the bridge,” she said. “N.C. 101 is open, but people will have to access it through Cunningham Boulevard near city hall.”

For those cleaning up, she stressed that yard debris, appliances, and household or construction debris must be separated into three distinct piles for pickup. She said the city was working with Waste Industries to get trash services back up and running, but that residents should expect some delays. She also said the city was getting plenty of calls about when power would be restored, but she said residents should contact their utility companies for that information.

She also said the city was working to get food to residents of the hardest hit areas of the city, such as at the Pine Villa apartments off Brown Boulevard.

By later Monday, some businesses were starting to open, including Walmart, but lines were long and supplies were expected to be limited.

Lewis said Hurricane Florence delivered a powerful punch to Havelock, one that would require a lengthy recovery time.

“It’s going to be a long road,” he said. “We’re going to be after this a long time.”

**Photos Demonstrating Flooding
during a Normal Heavy Rain Event**



Flooding between apartment buildings located along Brown Boulevard, between Webb Boulevard and McCotter Boulevard



Yard and structure flooding in a residential area of Havelock during a normal heavy rain event

*Stormwater Planning Study Narrative
City of Havelock
Area-Wide Stormwater Master Plan*

Project Description & Narrative:

The City of Havelock is proposing to develop an area-wide stormwater master plan to better understand the location and extent of flooding concerns within Havelock and their likely cause, prioritize flooding concern areas, and develop stormwater improvement concepts. The goal of this master plan is to shift the City from a reactive posture, addressing stormwater conveyance limitations in response to storm events or in isolated areas of known concerns, to a proactive position, providing a more resilient City by addressing stormwater needs in a holistic and prioritized manner. Specifically, the City will conduct a review of existing information, garner input from the community on stormwater concerns, prioritize areas for further analysis, develop hydrologic and hydraulic models of the stormwater system, model projected flooding under current and future storm events, prioritize areas of flooding concerns, and identify what stormwater improvements are most likely to benefit those prioritized areas. Specific deliverables from the proposed stormwater master plan project include a report discussing master plan methodology and results, GIS data and map exhibits showing modeled flooding extents and depths, locations of prioritized areas benefiting from stormwater improvements, and summaries of those improvement concepts.

1. Noted
2. Flooding issues in Havelock are primarily caused by direct rainfall onto developed areas within the City, which leads to distributed localized flooding at road crossings and other locations, and overflows from canals and channels throughout the City. Water within these channels originates from runoff within the City itself, and upstream areas, which are primarily US Forest Service property.
3. The purpose of the proposed study is to better understand and delineate flooding concern areas. Historical flooding observations have included localized flooding at road crossings, long distances of overbank flooding, and neighborhood-scale flooding.
4. Please see the attached Havelock Watersheds map.
5. The City of Havelock does not currently have a stormwater utility or stormwater enterprise fund.
6. The City of Havelock does not collect revenue solely to pay for stormwater work.
7. Evaluations of City stormwater expenditures have estimated annual expenditures between \$150,000-\$200,000, with sometimes significant further variability due to specific stormwater needs.
8. The City of Havelock does not currently have an NPDES MS4 permit but does have a stormwater management plan in association with the Neuse River Program.
9. The proposed planning project does not include construction.
10. Please see the enclosed narrative for a detailed description of the proposed stormwater planning activity and goals. Hydrologic and hydraulic modeling efforts will consider the potential impacts of increased runoff rates and volumes due to new development and changing storm characteristics. This project will allow the City to better plan for those future changes and

ensure City stormwater infrastructure provides adequate level of service now and into the future.

11. No formal public input sessions have been held for this specific project; however, City staff regularly gather input from the community regarding flooding concerns. Outreach activities are planned as part of the proposed project to gather additional input and share results of the study with the community.

Project Description & Narrative:

1. Statement of the top three (3) stormwater-related challenges facing the applicant in the next five (5) years

The three primary stormwater challenges facing the City of Havelock (City) over the course of the next five years consist of aging infrastructure, distributed localized flooding during frequent storm events, and area-wide flooding during large storm events, all of which are exacerbated by the low-lying topography of the City.

Stormwater conveyance infrastructure across Havelock consists of roadside swales with culvert pipe crossings, conventional pipe networks, canals, and streams throughout the City. Much of the stormwater infrastructure was constructed in association with original land development activities prior to 1980, with isolated new development and redevelopment activities. The condition of the stormwater infrastructure is deteriorating over time and most of it was designed for standards that are no longer reflective of current storms. This project will help determine where this aging infrastructure may be affecting stormwater conveyance capacity and prioritize associated improvements.

Havelock experiences distributed localized flooding in association with routine storm events; however, in the absence of an area-wide stormwater modeling effort, the extent and cause of these flooding issues is unclear. Limited topographic relief and frequent interchange between open channel flow and closed pipes are certainly contributing factors to flooding concerns. This localized flooding can cause structural damage and limit ingress and egress options through different areas of the City.

During large storm events, such as Hurricane Florence, area-wide flooding can occur throughout Havelock, again exacerbated by limited topographic relief. These flooding events cause area-wide structural damage and traffic disruptions. Please see the photos included in the appendix. Without an area-wide stormwater model, planning for anticipated impacts under various storm scenarios is constrained to general assessments and historical knowledge of past storm impacts.

A challenge Havelock faces that spans all three of these issues is the need to prioritize stormwater improvements that will assist in addressing aging infrastructure, distributing localized flooding, and area-wide flooding. The proposed project will develop an area-wide stormwater master plan to better understand the location and extent of flooding concerns and their causes. The proposed project will include a report discussing master plan methodology and results, GIS data and map exhibits showing modeled flooding extents and depths, locations of prioritized areas benefiting from stormwater improvements, and summaries of those improvement concepts. This information will allow the City to prioritize flooding concern areas and develop stormwater improvement concepts which will be incorporated in the City's budget and plan for capital improvements.

2. A detailed description of the proposed planning study, the goals that study is intended to meet, a concise scope of work for the proposed study, and the deliverables that are expected.

The objective of the Havelock Area-Wide Stormwater Master Plan is to evaluate the City's existing stormwater infrastructure, better understand the location and extent of flooding concerns and their likely cause, prioritize flooding concern areas, and develop stormwater improvement concepts.

The City's initial step will be to solicit feedback from City staff, stakeholders, and the public on when and where flooding has occurred in the past and the severity. This feedback will be solicited through a public workshop, along with a mapping tool that will allow stakeholders to indicate on a map where flooding has occurred. Another useful source of information will be City flood complaint data, 911 flood rescue calls, and Waze flooding reports. The compiled information will then be compiled into a GIS dataset to show the areas with reported flooding and where the City will need to focus its efforts.

Based on the identified flooding areas, the City will prioritize neighborhoods and watershed areas within the City into three tiers:

- **Tier 1 Localized Known Deficiencies** - Noted areas of flooding that can be defined by a particular structure, pipe segment, intersection, or street.
- **Tier 2 General Area-Wide Deficiencies** - General areas where flooding has been observed or where anticipated land development may stress the capacity of stormwater infrastructure.
- **Tier 3 Other City Areas** - Areas served by city stormwater infrastructure without known or anticipated issues and not otherwise captured in Tiers 1 and 2.

These tiers will define the level of analysis or hydraulic modeling needed for the concern area. Tier 1 and Tier 2 areas may require detailed hydrologic and hydraulic models while Tier 3 areas may be subjected to more generalized analysis.

Because the City does not currently have an area-wide stormwater model, this stormwater master planning effort will seek to represent hydrologic and hydraulic conditions within the City based upon available existing information and provide a platform for more detailed future localized assessments as new data are collected in the future. The first step in developing the hydrologic and hydraulic models will be to gather and evaluate the City's GIS data, including LiDAR topography, watersheds, impervious data, pipe and streams/open-channels, and outfalls. Site visits will be conducted to evaluate existing conditions and fill data gaps with basic field measurements. For the hydrologic model, watersheds will be delineated to the necessary resolution based on the topography and layout of stormwater infrastructure. For the hydraulic model, a LiDAR-based digital elevation model (DEM) will serve as a primary input for modeling hydraulics of overland flows, supplemented by pipe elevations and dimensions and open-channel dimensions where information is available. Any assumptions regarding stormwater infrastructure will be recorded such that they can be revised and updated in the future as additional or better information becomes available. The model will then be used to simulate the City's established design storms, historical storms, and projected future storms. The results of the model will be used to determine which pipes or conveyances have limited capacity and the location and extent of associated flooding.

The hydraulic model will be used to evaluate potential improvements. These improvements may include modifications of existing conveyance structures (pipes or channels), new conveyance infrastructure, storage, control structures, and other features. For each of the feasible concepts, metrics will be

developed including the cost, impact on residents, level of service achieved, traffic impacts, and estimated operations and maintenance requirements. These projects will then be prioritized based on these metrics and ranked for future detailed design efforts and implementation.

Specific deliverables from the proposed stormwater master plan project include a report discussing master plan methodology and results, GIS data and map exhibits showing modeled flooding extents and depths, locations of prioritized areas benefiting from stormwater improvements, and summaries of those improvement concepts.

Category 1 – Project Purpose

Line Item 1.A – Link between challenges and how the study will help address the challenges

Stormwater: 0 – 5 points

This area-wide stormwater master plan will help address all three of the key stormwater challenges facing Havelock: aging infrastructure, distributed localized flooding during frequent storm events, and area-wide flooding during large storm events. Past efforts to address these three key challenges have tended to be reactive. For example, a localized hydrologic and hydraulic model will be developed to support a culvert upsizing in response to observed flooding during a major storm. This study will allow the City to be proactive in understanding the nature and extent of flooding and stormwater conveyance issues and prioritize improvements accordingly. By developing a hydrologic and hydraulic model for prioritized areas of the City, distributed localized flooding and area-wide flooding can be evaluated across historical storm events, current design storms, and projected future storm events without relying only upon past flooding reports and observations. Additionally, review of existing information and field visits will identify areas where stormwater infrastructure may be reaching the end of its design life and hydrologic and hydraulic modelling efforts will identify areas that may be especially vulnerable to flooding when subjected to pipe or channel failures resulting from aging infrastructure.

Line Item 1.B – How the study will be used to develop and prioritize future projects that address the challenges

Stormwater: 0-3 points

The area-wide stormwater master plan will allow Havelock to be proactive in addressing all three of the key stormwater challenges facing the City. A primary objective of the proposed stormwater master plan is the identification and prioritization of projects that will address flooding concerns within the City. This study will allow the City to prioritize stormwater improvements based on quantitative metrics like flood volumes addressed, project cost, and potential co-benefits. Development of these projects within a formal framework based on technical analyses will also support justification to the public for stormwater improvements, assist in funding efforts, and will be incorporated in the City's budget and plan for capital improvements.

Line Item 1.C – Study will investigate new procedures to implement, add to, or make improvements to at least (1) of the six (6) Stormwater Minimum Control Measures

Stormwater: 2 points

The City of Havelock is not required to maintain a municipal NPDES Stormwater permit. The City informally implements some elements of the six Minimum Control Measures. This study will investigate advancing elements that the Town may be able to implement in the future.

Line Item 1.D – Study is a collaborative effort with other local government units which is necessary in order to accomplish the goals of the study

Stormwater: 3 points

There are no applicable points for this line item.

Line Item 1.E – Study will evaluate potential projects that will benefit: a subwatershed that is impaired as noted on the most recent final version of the Integrated Report; specific classified waters; Nutrient Sensitive Waters such that the project will achieve at least 35% reduction in both Total Nitrogen (TN) and Total Phosphorus (TP); or a NC Natural Heritage Program natural area

Stormwater: 2 points

The City of Havelock largely drains to the Neuse River Estuary (AU ID 7434, AU Number 27-(104)b, Class SB; Sw, NSW) which is classified as Nutrient Sensitive Waters (NSW) and has a TMDL for total nitrogen. The Neuse River Estuary, which is classified as SB; Sw, NSW, and does not meet Chlorophyll a water quality standards.

The stormwater improvements developed as part of this study will be evaluated for both quantity and quality performance and to meet the goals of the Neuse River TMDL for nutrient removal. Please see the attached map.

Line Item 1.F – Study will evaluate nature-based stormwater solutions to address the identified stormwater quality or stormwater quantity issue

Stormwater: 2 points

Nature-based solutions compliant with NCGA Session Law 2021-180 Section 12.14.(h) will be among the improvement concepts considered in the area-wide stormwater master plan. Two specific areas where nature-based solutions will be considered are incorporation of stormwater controls that detain and infiltrate stormwater to reduce the hydrologic strain on downstream stormwater infrastructure, and the use of natural features and processes to improve the capacity and resiliency of vegetated channels that are prevalent throughout Havelock.

Line Item 1.G – Study will investigate the applicability of an innovative stormwater project to address stormwater quality or stormwater quantity, or as described I the “Innovative Stormwater Program FAQs” section of the current NC Land and Water Fund Innovative Stormwater Program Manual to address stormwater quality

Stormwater: 2 points

There are no applicable points for this line item.

Line Item 1.H – Study will evaluate potential projects that will address flooding, sea level rise, or other environmental changes with the goal to decrease vulnerability to future conditions

Stormwater: 1 point

The proposed stormwater master plan is primarily focused on addressing flooding through hydrologic and hydraulic modeling to understand the causes and extent of flooding and development of

improvement concepts to alleviate flooding. The hydrologic and hydraulic models developed through this study will be used to evaluate historical storms and projections for future storms to understand how those projections may affect flood vulnerability throughout the City and associated prioritization of improvements. The modeling and analysis efforts proposed herein are critical to decreasing vulnerability to future storms as they provide the tools needed to consider these future conditions. Storm analyses will consider present conditions, 2040 projections, and 2075 projections.

Category 2 – System Management

Line Item 2.A. – At least one person working for or with the applicant is designated as responsible for stormwater management and provides at least 0.5 Full Time Equivalent (FTEs) on stormwater management activities

Stormwater: 1 point

There are no applicable points for this line item.

Line Item 2.B – Status of implementing results of previous planning study or studies

Stormwater: 1 point

A planning study focused on Havelock's stormwater needs was previously completed in March of 2018. The goal of the study was to characterize the City's conceptual-level stormwater needs and evaluate potential program funding options. The study identified a few general representative stormwater improvement projects, but did not include any modeling or detailed evaluations or prioritization. A recommendation from this past study was to develop a prioritized list of stormwater needs and improvements, which will be accomplished through this proposed project.

Line Item 2.C – Level of applicant's staff involvement in planning project development and implementation

Stormwater: 1 point

Patrick Lee, Director of Public Works for the City of Havelock, and Lee Tillman, Director of Finance, have been engaged in the development of this planning project and will be engaged during implementation. Patrick's regular responsibilities include gathering input on stormwater conveyance and flooding concerns and developing and implementing improvements to address those concerns. In the development of the proposed project, Patrick advised that an area-wide stormwater master plan would provide valuable context and insight to assist in addressing the City's stormwater concerns and improving local stormwater infrastructure. Lee Tillman provided additional input regarding how the proposed stormwater master plan could assist the City in planning for future stormwater expenditures. Patrick, Lee, and other City staff will be involved in the execution of the proposed stormwater master plan, providing input throughout the process, particularly during collection of input on flooding concerns, review of modeling results in comparison to institutional knowledge and historical observations, and evaluation of identified stormwater improvements with regards to feasibility and alignment with City objectives. Chad Ives, Director of Information Technology for Havelock, maintains the City's GIS data and will assist in providing and evaluating the data needed for the stormwater master plan. Patrick, Lee, and Chad have all engaged in past stormwater planning efforts within the City discussed in this narrative. Patrick, Lee, Chad, and other City staff will utilize the results of this study to better communicate with the public the nature of stormwater concerns and lead implementation of future stormwater improvements that originate with this study.

Line Item 2.D – Applicant has already adopted a stormwater management plan for the study area or by the completion of this project will have adopted a stormwater management plan for the study area

Stormwater: 4 points

The City of Havelock adopted a stormwater management plan for the overall City in 2001. The stormwater management plan is documented in Chapter 53 of the Havelock ordinances at: https://codelibrary.amlegal.com/codes/havelock/latest/havelock_nc/0-0-0-1482#JD_53.01

The City has developed an updated stormwater management plan, which was reviewed by NCDEQ over the summer of 2022. Adoption and implementation of the updated stormwater management plan is expected by March of 2023.

Line Item 2.E – Stormwater Utility and Stormwater Enterprise Fund

Line Item 2.E.1 – Applicant has a Stormwater Utility and Stormwater Enterprise Fund

Stormwater: 4 points

There are no applicable points for this line item.

Line Item 2.E.2 – Applicant has a Resolution to Develop and Implement a Stormwater Utility with a Stormwater Enterprise Fund

Stormwater: 5 points

There are no applicable points for this line item.

Category 3 – Affordability

Line Item 3.A – Population

Line Item 3.A.1 – Population is less than 10,000

Stormwater: 2 points

There are no applicable points for this line item.

Line Item 3.A.2 – Population is greater than or equal to 10,000 but less than 20,000

Stormwater: 1 point

The City of Havelock is claiming 1 point for this line item. The population of Havelock is 17,759 as of 7/1/2021 based on the Office of State Budget and Management.

Line Item 3.B – Local Government Unit (LGU) Indicators

Local Government Unit Indicator		State Benchmarks for Fall 2022 Applications	Applicant to Enter Value of Local Government Unit Indicators ^{1,2,3}
1. Population Change	< =	4.5%	-3.41%
2. Poverty Rate	> =	14.0%	15.2%
3. Median Household Income	< =	\$56,642	\$49,893
4. Unemployment Rate	> =	7.1%	6.3%
5. Per Capita Appraised Value of Property	< =	\$125,015	\$44,326

Line Item 3.B.1 – 1 out of 5 LGU indicators worse than state benchmark

Stormwater: 2 points

There are no applicable points for this line item.

Line Item 3.B.2 – 2 out of 5 LGU indicators worse than state benchmark

Stormwater: 4 points

There are no applicable points for this line item.

Line Item 3.B.3 – 3 out of 5 LGU indicators worse than state benchmark

Stormwater: 6 points

There are no applicable points for this line item.

Line Item 3.B.4 – 4 out of 5 LGU indicators worse than state benchmark

Stormwater: 8 points

The City of Havelock is claiming 8 points for this line item. The City of Havelock has 4 out of 5 LGU indicators worse than the state benchmark. Please see the table below as well as the LGU Indicator Calculator.

Local Government Unit Indicator		State Benchmarks for Fall 2022 Applications	Applicant to Enter Value of Local Government Unit Indicators
6. Population Change	< =	4.5%	-3.41%
7. Poverty Rate	> =	14.0%	15.2%

8. Median Household Income	< =	\$56,642	\$49,893
9. Unemployment Rate	> =	7.1%	6.3%
10. Per Capita Appraised Value of Property	< =	\$125,015	\$44,326

NC Division of Water Infrastructure Fall 2022 LGU Indicator Calculator for Stormwater Funding Eligibility									
Updated 8/9/2022. This tool can be used by Applicants to determine how many Local Government Unit (LGU) indicators exceed state benchmarks, which partially determines eligibility for stormwater funding from th									
Enter your local government unit parameters and service area coverage as shown below. Select local government(s) in your service area.									
	Area #1	Area #2	Area #3	Area #4					
Select LGU from dropdown menu ->	Havelock, City of								
Enter name of LGU (if not listed above) ->					Total:				
LGU Coverage (% of service area)	100%				100%		State	Worse than	
Population:	19,927						Benchmarks are:	State	Benchmark?
Population Change	-3.41%				-3.41%	<=	4.48%	Yes	
Poverty Rate	15.2				15.2	>=	14.0	Yes	
Median Household Income	\$49,893				\$49,893	<=	\$56,642	Yes	
Unemployment Rate	6.3				6.3	>=	7.1	No	
Total Appraised Value of Property	\$883,277,962								
Calculated Prop. Val. per Capita	\$44,326	\$0	\$0	\$0	\$44,326	<=	\$125,015	Yes	
								# of LGU Indicators worse -> than State Benchmark	4

Line Item 3.B.5 – 5 out of 5 LGU indicators worse than state benchmark

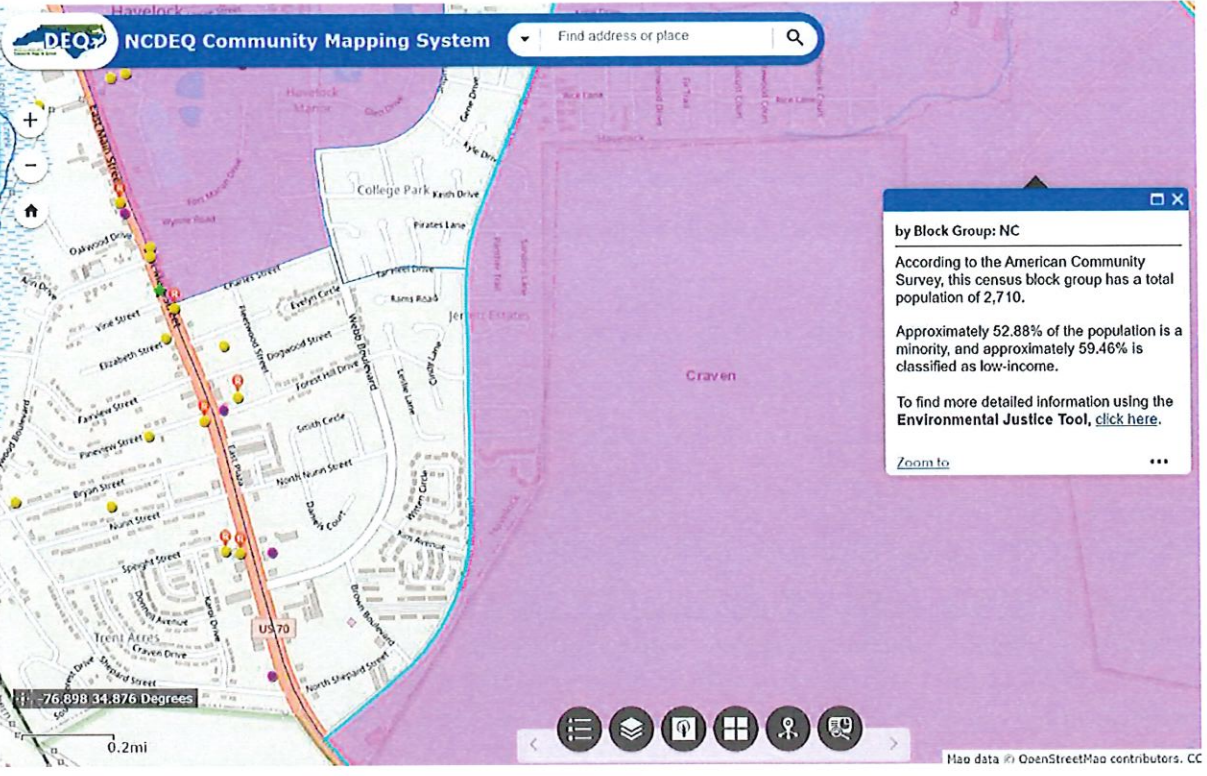
Stormwater: 10 points

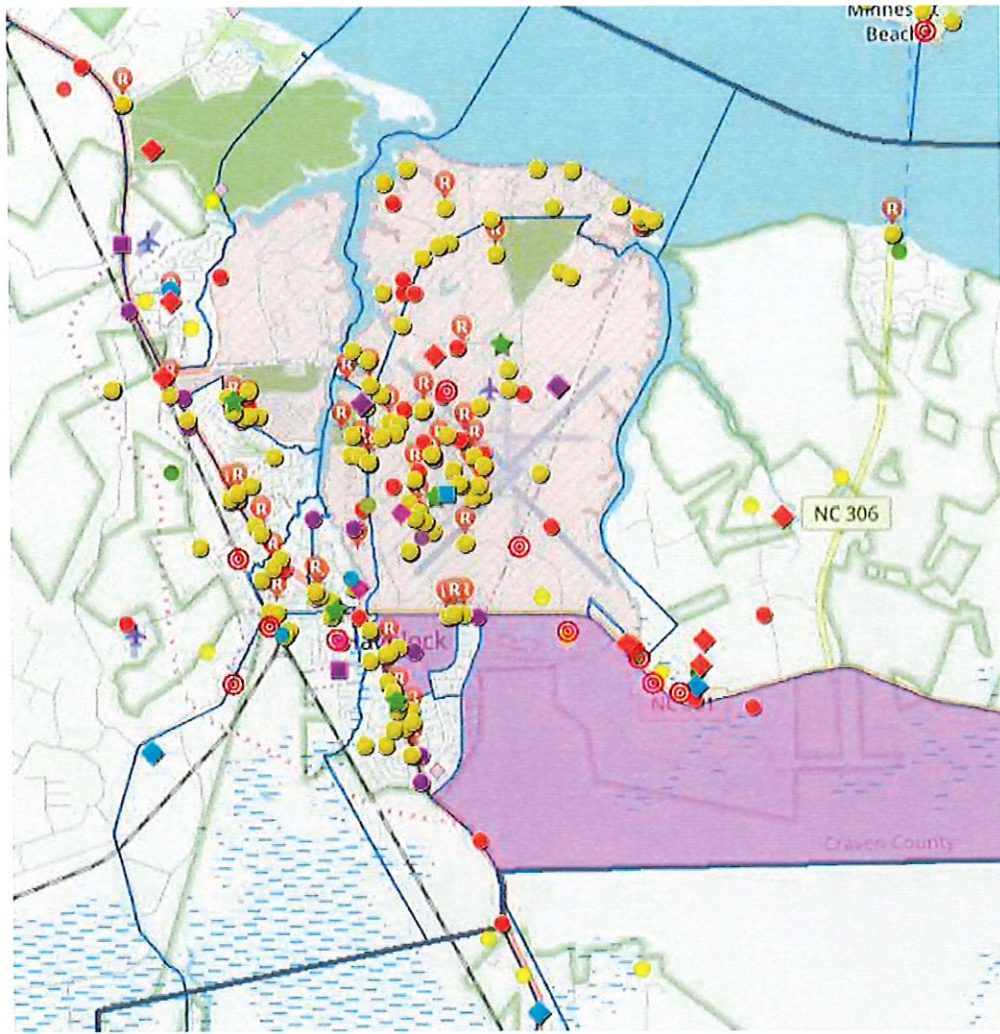
There are no applicable points for this line item.

Line Item 3.C – Study benefits disadvantaged areas

Stormwater: 8 points

The proposed project will benefit disadvantaged areas. The City of Havelock’s stormwater system serves the entire City limits. Based on the affordability calculator (reference Line Item 4.B.5 above), 4 out of the 5 local government unit indicators are worse than the state benchmarks. Additionally, the NCDEQ Community Mapping System shows the area served by this project consists of significant disadvantaged and potentially underserved areas. See the map included below showing disadvantaged areas within the City of Havelock on the NCDEQ Community Mapping System. One hundred percent of the of the proposed planning project will benefit disadvantaged areas.





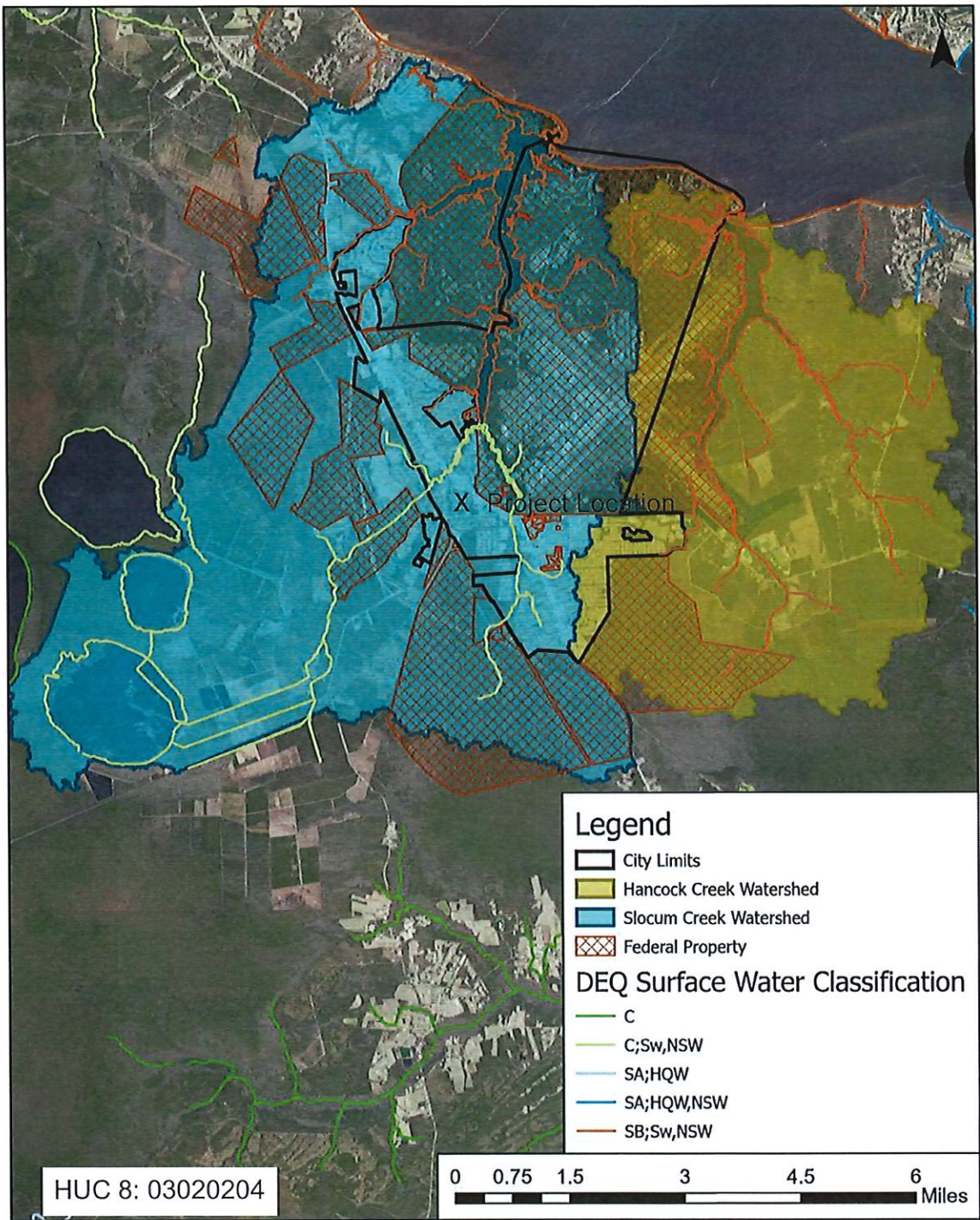
Appendices

Map of Havelock Watersheds

National Weather Service Report on August 12, 2009, Flooding in Havelock

New Bern Sun Journal Article on Hurricane Florence Impacts to Havelock

Photos Demonstrating Flooding during a Normal Heavy Rain Event



Havelock Watersheds



August 12, 2009 Havelock Flood

[Weather.gov](#) > [Newport/Morehead City, NC](#) > August 12, 2009 Havelock Flood

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Event Overview

On 12 August 2009, flooding rains hit a small portion of northern Carteret and southern Craven Counties. The rains were associated with regenerative warm-topped convection along a stalled sea breeze boundary and a weak frontal boundary extending along portions of Onslow, Carteret, and Craven Counties. The convergence-locked convection over Havelock resulted in almost 10 inches of rain between noon and 4 pm. Rainfall rates were as high as 5.7 inches per hour according to measurements from the Cherry Point MCAS ASOS (see table 1). In the town of Havelock, the hardest hit area, roads were closed, water inundated into several homes and businesses, and local schools and the Cherry Point Marine Air Station locked down for several hours until the flood waters receded.

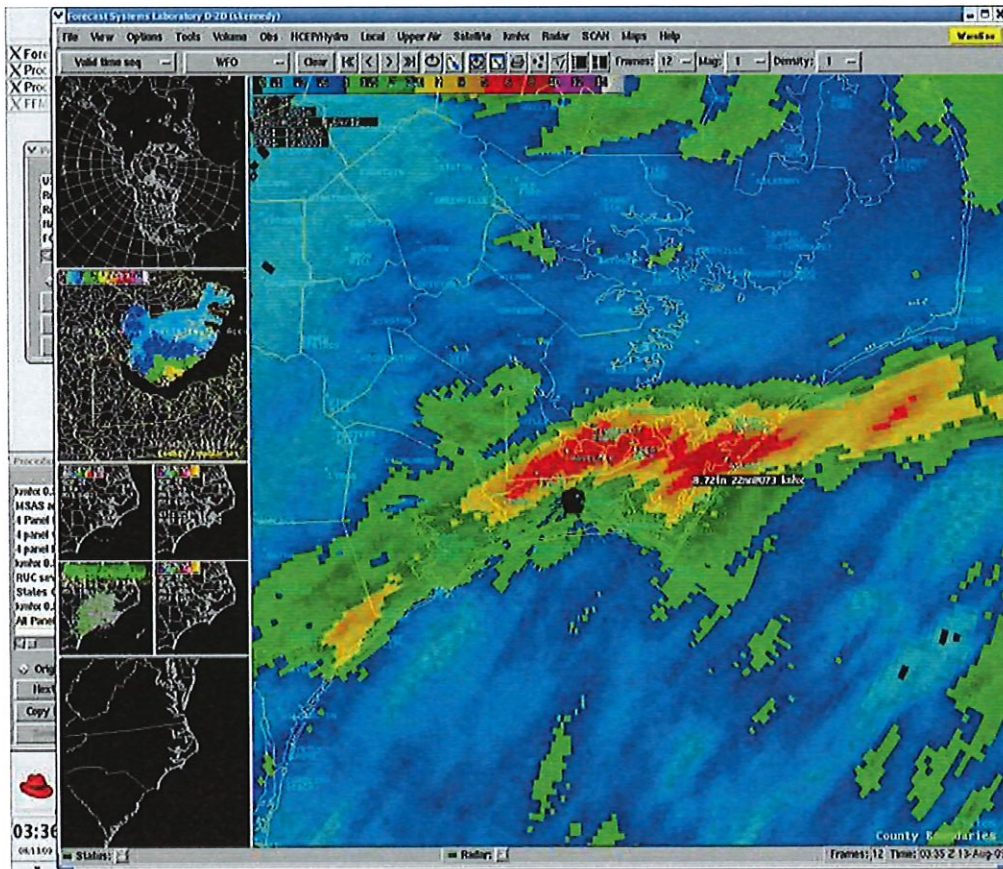


Figure 1: Morehead City (MHX) Doppler Radar storm total rainfall for August 12, 2009

Synoptic Overview

The rains were associated with an upper level trough over the Eastern U.S., digging south into the mid-Atlantic. A vorticity max on the back side of the trough moved slowly down and strengthened as it rounded the base of the trough mid morning of the 12th. Meanwhile, the right front entrance region of the upper level jet slid south out of the Ohio River Valley towards the mid-Atlantic by Wednesday morning. The position of these features put eastern North Carolina under the best support aloft.

At the surface, a weak frontal boundary lingered over the coastal plains. There was no notable change in pressure, though the gradient over the affected area strengthened slightly through the day on the 12th. The surface dewpoints were extremely moist, mainly in the mid-70's throughout the region. The precipitable water amounts were around 2.25 inches, particularly high for a non-tropical environment in mid August (see figure 2). This was the result of several days of a strong moisture feed off the Gulf of Mexico, evident by water vapor satellite imagery showing a plume of high water content over the southeast including eastern North Carolina. The 12Z MHX balloon sounding showed freezing levels around 14-15k ft supporting warm rain processes, a very efficient heavy rain producing environment.

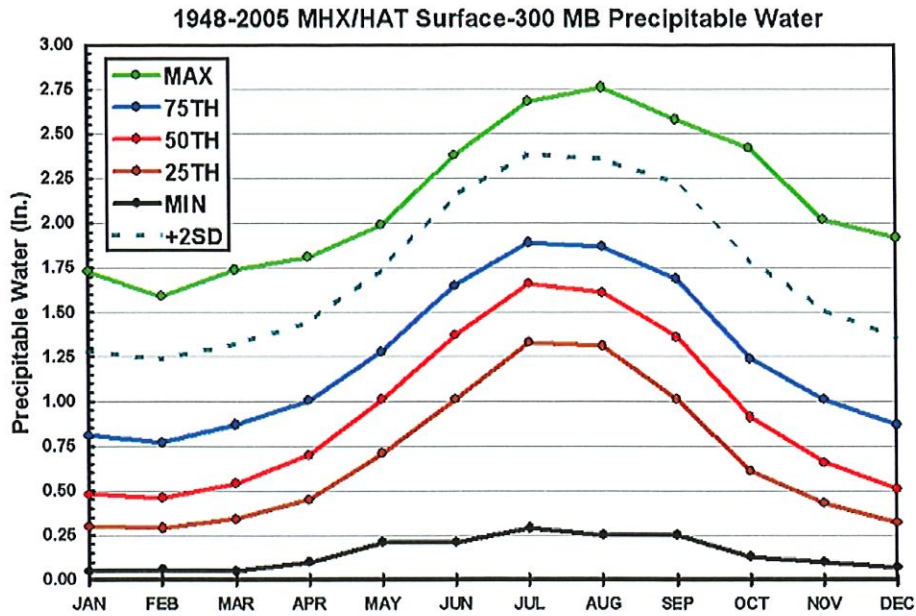


Figure 2: Climatology of perceptible water values based on MHX upper air soundings for August show that the 8/12/09 event was 2 standard deviations above normal with a value of 2.25".

Scattered showers began developing throughout the morning, with little overall organization or coverage in any one area. The focus for thunderstorms became more defined as the front shifted south slightly, and stalled along the southern or Crystal Coast region by mid morning. The convection began to produced periods of heavy rainfall, but forecasters noted a high bias of 0.6-0.75 (assumes radar is overestimating) when monitoring earlier storms. As the seabreeze developed around noon, surface convergence can be noted along a line from Onslow to Carteret Counties, with light northwest winds over the majority of the area, and southwest over the Crystal Coast. The western edge of this line of convection shifted slightly, preventing training and significant flooding over Onslow or western Carteret Counties. The central and eastern end of the convection lingered over southern Craven and eastern Carteret Counties from around noon through 5 pm before sliding south and offshore.

Radar showed heavy rains developing along the seabreeze boundary, with localized rates as high as 3 inches per hour, and averaging 1 to 2 inches per hour elsewhere. A flood advisory was issued at 218 pm for Craven and Onslow Counties as radar event total quantitative precipitation estimates (QPE) of 2 to 4 inches were observed. The flood advisory was upgraded to a flood warning around 3 PM for both Craven and Onslow Counties as radar indicated rainfall amounts totaling 3 to 5 inches with excessive rainfall rates around 4 inches per hour. The warning included wording for event total rainfall amounts upwards of 8 inches. Another flood warning was issued at 349 pm for eastern Carteret County. Doppler radar indicated an event total rainfall for Havelock around 7 inches, though ASOS and other unofficial readings of 8 to 10 inches were reported (see figure 3).

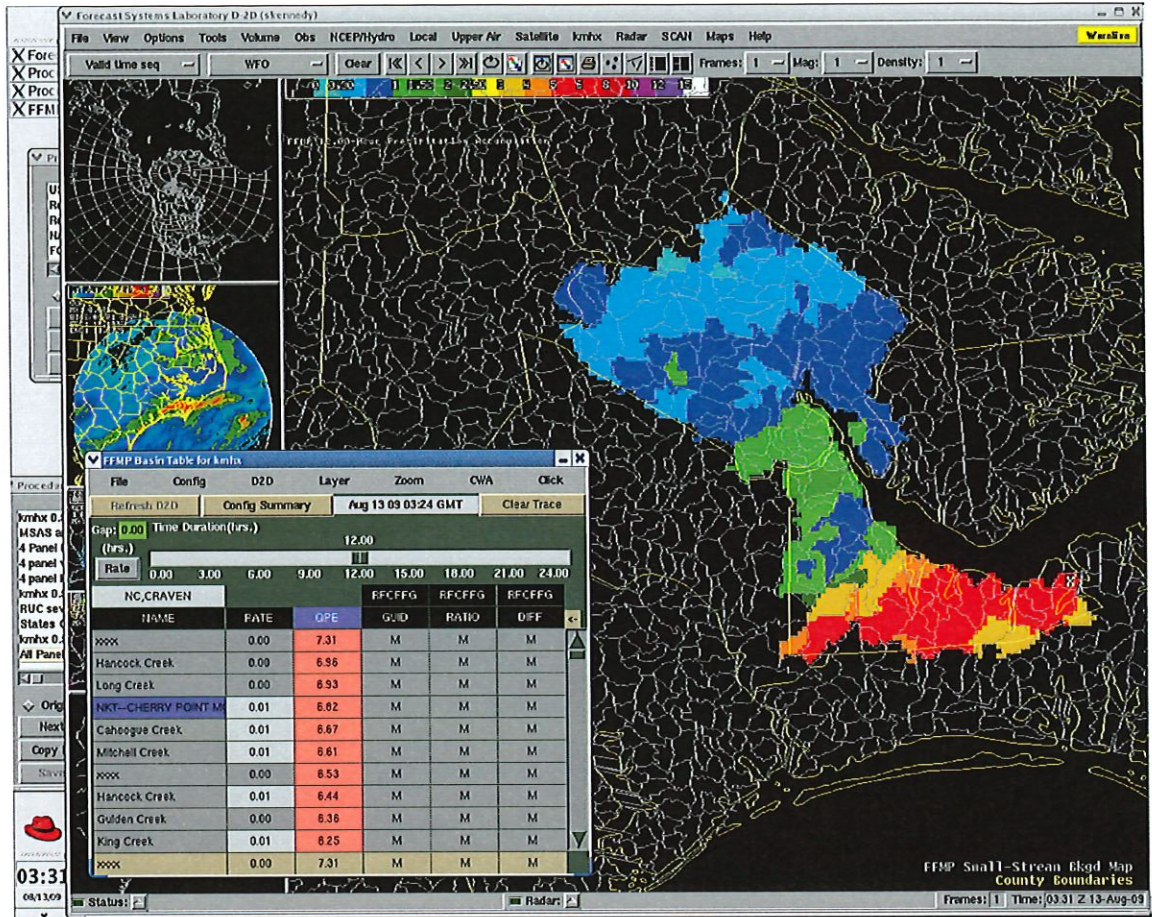


Figure 3: Flash Flood Monitoring and Prediction (FFMP) based primarily on radar data indicated storm total rainfall amounts around 7 inches over the Havelock area.

Table 1.

NKT ASOS

Cherry Point MCAS August 12 Precipitation Observations

Time Recorded (Z)	Time Recorded (EDT)	Rainfall (inches)	Rainfall Rates (inches per hour)
1654	11:54 PM	0.00	
1709	12:09 PM	0.18	0.72
1716	12:16 PM	0.57	3.34
1723	12:23 PM	1.09	4.45
1733	12:33 PM	1.32	1.38
1740	12:40 PM	1.44	1.02
1750	12:50 PM	1.94	3.00
1754 (Hourly Total)	12:54 PM	2.21	2.21
1804	1:04 PM	0.47	2.82
1830	1:30 PM	2.02	3.58
1846	1:46 PM	3.11	4.09
1854 (Hourly Total)	1:54 PM	3.49	3.49
1946	2:46 PM	2.52	2.90
1954 (Hourly Total)	2:54 PM	2.93	2.93
1958	2:28 PM	0.30	4.50

2003	3:03 PM	0.68	5.70
2054 (Hourly Total)	3:54 PM	1.02	1.02
2101	4:01 PM	0.00	0.00
2154 (Hourly Total)	4:54 PM	0.03	0.03
2254 (Hourly Total)	5:54 PM	0.02	0.02
Event Total Rainfall	9.70"	Event Average Rainfall Rate	2.97" per hour

Table 2

COCORAHS PRECIPITATION REPORTS

Station Number	Location	Precipitation
NC-CR-4	HARKERS ISLAND 4.8 NNE	6.03
NC-CR-20	HARKERS ISLAND 3.2 NE	4.57
NC-PM-2	ORIENTAL 2.1 WSW	3.96
NC-CR-18	NEWPORT 2.0 WSW	3.50
NC-CN-12	Havelock 2.7 S	8.98
		Notes: My home was an Island with water 3 inches from entering my front door. We had a 4 hour thunderstorm with intense lightning and heavy rain. Water was anywhere from 6 inches to 3 feet deep everywhere in my neighborhood. There were fire ants, leeches and critters I have never seen before on my front porch. 8 inches of this rain fell in a three hour period, the most I,ve seen in my 70 years of life.
NC-CN-1	Havelock 3.1 NW	5.11
		Notes: Radio stations reported 10 inches somewhere in this town and with unknown measuring devices. some street flooding noted on USMCAS Cherry Point. rain here at 3 pm was heavy enough to overload our gutters and downspouts.

MHX started receiving calls around 3 pm of heavy rain and ponding of water on local roads in the Havelock area. Critical in warning decision during this event was the near real-time observations from the Cherry Point MCAS ASOS (NKT), which validated the anomalous rainfall rates and amounts indicated by the radar. The flood warning was extended through the evening hours, to account for the slow receding of the flood waters though the rain had ended around 5 pm. A survey of the impacts was conducted by the hydrology focal point along with local law enforcement on the 13th, and determined that the flooding was localized to the eastern portions of Havelock and the grounds of Cherry Point MCAS. What prevented this event from becoming a more significant flooding situation was the combination of dry antecedent conditions and a well channeled drainage system ending along the Slocum Creek. However, due to excessive rainfall rates and rainfall totals of almost 10 inches in less than 4 hours, minor flooding to businesses and some apartments did occur.

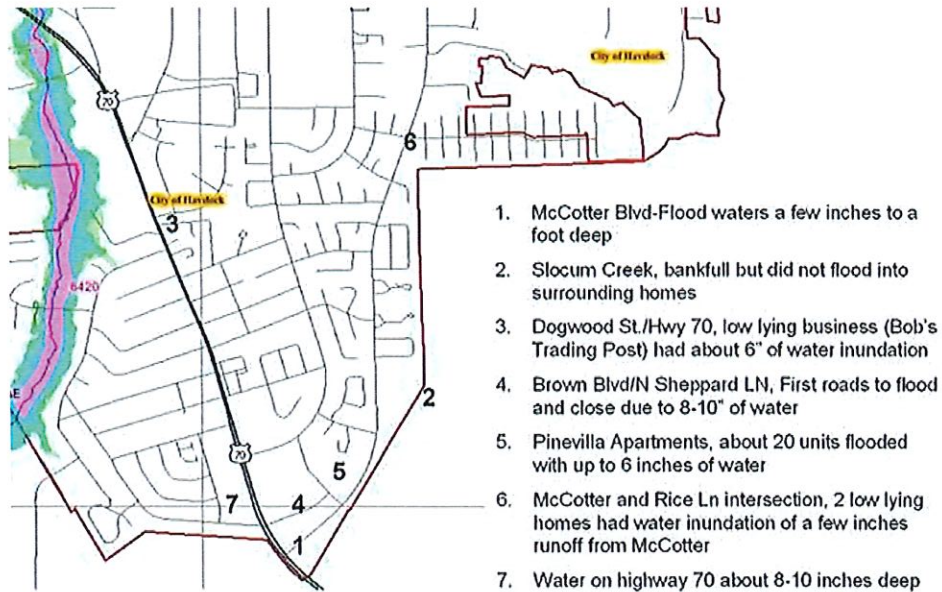


Figure 4: North Carolina State Floodplain Mapping inundation map for Havelock. Locations and extent of flooding listed.

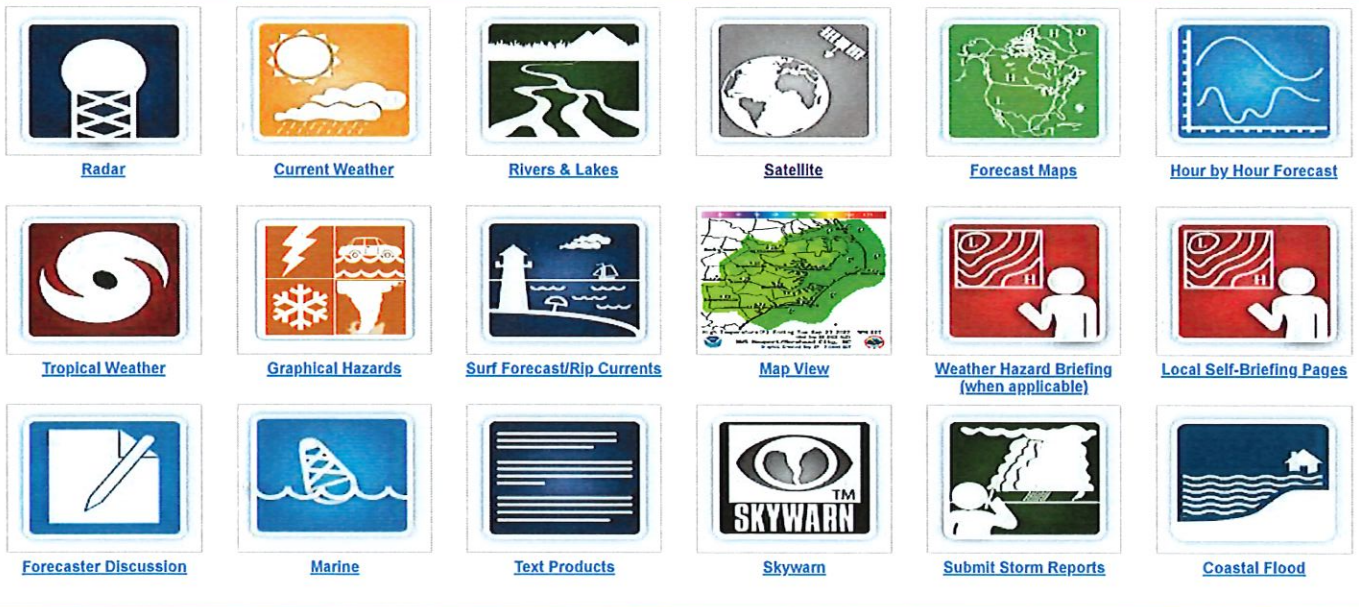
Table 3. <u>Event Flood Impacts</u>	<u>Time</u>	<u>Location</u>
CRAVEN COUNTY		
Water inundates from culverts into roads at end of 'C' St and 6th St.	2-3 PM	Cherry Point MCAS
'C' Street was completely closed due to flooding toward the Roosevelt end that made it impassable.	3-4 PM	Cherry Point MCAS
A parking lot off 6th Street (near the 'G' Street intersection) flooded so quickly that many cars were under water just sitting the parking lot.	3-4 PM	Cherry Point MCAS
Brown BLVD Closed, minor flooding	245 PM	Havelock
Water starting to flood Slocum Shopping Center	245 PM	Havelock
Most of McCotter BLVD under water upwards of a foot, worse conditions at intersection with Tarheel Rd and Rice LN	400 PM	Havelock
Shepard Street flooded, water up to the houses	415 PM	Havelock
Pinevilla Apartments on Brown and McCotter flooded with as much as 6 inches of water	430 PM	Havelock
8-10 inches of water on Highway 70 across from Hardees near McCotter and Shepard Rd	400 PM	Havelock

Damage Pictures from Havelock in Craven County
 Photos courtesy of: Havelock Police Department





Case Study Team:
Sarah Jamison
Mark Willis
Brian Cullen
Bob Frederick
Scott Kennedy



Sun Journal

TO HIT HAVELOCK

Mayor: 'Everything we do as a city has major damage'

Ken Buday Sun Journal

Published 12:41 p.m. ET Sept. 17, 2018 | Updated 12:44 p.m. ET Sept. 17, 2018

Havelock city officials worked Monday to help the city to recover from what is being described as one of the worst storms to ever hit the area.

As of Monday morning, the majority of city homes and businesses were still without power, some roads were closed and the western part of the city was under a boil water advisory for a major broken water main that occurred on Sunday after Hurricane Florence roared ashore with 90 mph winds early Friday morning.

“I’ve lived in Havelock my whole life and I’ve never seen a storm do that much damage,” Havelock Mayor Will Lewis said. “I’ve never seen so many trees down with power lines spaghetti-strapped around them.”

Lewis said damage every aspect of city services, including recreation fields and buildings.

“Everything we do as a city has major damage,” he said.

He said crews did not have an exact number of homes or businesses damaged during Hurricane Florence. He said not only were multiple trees down, but that areas in eastern Havelock such as McCotter and Webb boulevards and the Foxcroft and South Forest areas had significant flooding.

“We had places flood that had never flooded before,” Lewis said. “In Foxcroft, we had to have the National Guard go through and rescue people in trucks. I was talking to the driver of one of their large trucks with the big tires, and they had water up the windshield, so that’s about 8 feet of water in that area.”

He said that despite all the damage, he’s seen the good in the city’s residents.

“One thing about this is it has shown how the community of Havelock is so generous,” he said. “We’ve had all kinds of church groups and organizations helping out. Everywhere you go you see citizens helping other citizens, so if you’re having a hard time, tell someone. Don’t be afraid to reach out to your neighbors or to one of these organizations. You can get help.”

Sun Journal

“But no one is completely cut off,” said Lauren Wargo, Havelock’s public information officer. She said a portion of Fontana Boulevard between West Main Street and Roosevelt Boulevard was closed because flood waters rushed over the bridge near the Ford dealership.

“We have to wait on engineers from DOT (Department of Transportation) to inspect the bridge,” she said. “N.C. 101 is open, but people will have to access it through Cunningham Boulevard near city hall.”

For those cleaning up, she stressed that yard debris, appliances, and household or construction debris must be separated into three distinct piles for pickup. She said the city was working with Waste Industries to get trash services back up and running, but that residents should expect some delays. She also said the city was getting plenty of calls about when power would be restored, but she said residents should contact their utility companies for that information.

She also said the city was working to get food to residents of the hardest hit areas of the city, such as at the Pine Villa apartments off Brown Boulevard.

By later Monday, some businesses were starting to open, including Walmart, but lines were long and supplies were expected to be limited.

Lewis said Hurricane Florence delivered a powerful punch to Havelock, one that would require a lengthy recovery time.

“It’s going to be a long road,” he said. “We’re going to be after this a long time.”

**Photos Demonstrating Flooding
during a Normal Heavy Rain Event**





Flooding between apartment buildings located along Brown Boulevard, between Webb Boulevard and McCotter Boulevard



Yard and structure flooding in a residential area of Havelock during a normal heavy rain event

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
SHADI ESKAF
Director



NORTH CAROLINA
Environmental Quality

March 23, 2023

Mr. Lee Tillman, Director of Finance
City of Havelock
1 Governmental Avenue
Havelock, NC 28532

Subject: Stormwater Planning Grant Letter of Intent to
Fund
City of Havelock
Area-Wide Stormwater Master Planning
September 2022 Application Cycle
Project No.: SRP-SW-ARP-0047

Dear Mr. Tillman:

The Division of Water Infrastructure (Division) has reviewed your application for a Stormwater Planning Grant, and the State Water Infrastructure Authority (SWIA) has approved your project as eligible to receive a grant. The Local Assistance for Stormwater Infrastructure Investments (LASII) grant from the American Rescue Plan Act (ARPA) will be one hundred percent of eligible project costs up to a maximum of \$400,000. Projects funded from ARPA must meet applicable federal law and guidance for the ARPA funds.

The first milestone is the submittal of a preliminary project scope that includes a cost estimate and schedule for each major task by June 1, 2023. Please email this to Jason Robinson at jason.t.robinson@ncdenr.gov. Upon review of this information, we will issue the grant agreement and information package for your signature and approval.

All costs incurred prior to March 3, 2021, are not eligible for ARPA funds and the Division will make no reimbursements for ARPA funds after December 31, 2026.

Please note that work conducted prior to the receipt of the grant offer may later be determined to be ineligible, so please contact us if you desire to proceed before receipt of the grant offer. Some items included in the application may not be eligible for funding.

This project included a commitment that by completion of this project your governing body will have adopted a stormwater management plan for the study area. This completed plan and documentation of adoption must be submitted to the Division by July 1, 2026.

Upon detailed review of the project during the funding process, it may be determined that portions of your project are not eligible for funding.



North Carolina Department of Environmental Quality | Division of Water Infrastructure
512 N. Salisbury Street | 1633 Mail Service Center | Raleigh, North Carolina 27699-1633
919.707.9160

Mr. Lee Tillman, Director of Finance

March 23, 2023

Page 2 of 2

Engineering Services Procurement

The Uniform Guidance 2 CFR 200.317 through 2 CFR 200.327 gives minimum requirements for procurement, with 2 CFR 200.319(b) addressing engineering services procurement guidelines. ARP-funded projects must also adhere to North Carolina State law, specifically NC General Statute 143-64.31, Article 3D Procurement of Architectural, Engineering, and Surveying (A/E) Services. NCGS 143-64.32 cannot be used to exempt Recipients from a qualification-based selection for A/E. The State provides applicable certification forms that must be completed prior to receiving funds for any engineering services covered under this funding offer.

Upon receipt of your letter of intent to fund, please fill out the attached Federal ID & Unique Entity ID (UEI) form and email it to Pam Whitley at pam.whitley@ncdenr.gov. If you choose to decline this funding, the Authorized Representative as declared in the application must directly contact the Division project manager via email or letter on the applicant's letterhead.

We look forward to working with you on this project. If you have any questions, please contact Jason Robinson at jason.t.robinson@ncdenr.gov or by phone at (919) 707-3887.

Sincerely,



Jon Risgaard, Chief
State Revolving Fund Section

EC: Matthew Jones, Hazen and Sawyer (via email)
Jason Robinson (via email)
LASII Project File (COM_LOIF)