

Priority Projects


The following projects were identified as high priority by the Creswell CAT. Projects are *not* listed in order of priority; they are all high-priority projects. Click the links below to jump to more details for each project:

1. [Critical Ditch Improvements](#)
2. [Floodgate Repair](#)
3. [Reduce Flooding Impacts in the 1st-4th Street Area](#)
4. [Main Street Storm Drainage System Improvement](#)
5. [Designate Emergency Shelter and Emergency Operations Center](#)
6. [Complete Water Infrastructure Asset Inventory](#)
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Project 1: Critical Ditch Improvements

PROJECT DESCRIPTION	The town lies between the Scuppernon River and U.S. Route 64. The Program application identified issues with the dike that was built to redirect water. There are several ditches that are supposed to drain to the dike, then to the Scuppernon River. The ditches are full of debris/water and need to be cleaned out to properly drain to the dike. Scuppernon Study modeling may help pinpoint specifically which ditches will provide the best flood risk reduction for the money.
LOCATION	Ditches are located throughout the town and as part of the existing dike system, including from 4th Street at Cherry Road east to 1st Street, the south end of Main Street, and south crossing Main Street near the school building, and extending from the gate valve to the Scuppernon River and other areas associated with the dike system.
SOURCE	Program application, CAT meeting, public input, Water and Sewer Superintendent Ryan Swain
SCOPING QUESTIONS	Need clarification on barriers to cleaning out ditches/which areas or types of blockage the Town or County are allowed to clean out (e.g., vegetation vs. sediment, North Carolina State Park lands).
HAZARD(S) ADDRESSED	Precipitation-based flooding, storm surge, sea level rise
SUPPORTING FUNCTION	Transportation, public health and safety, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	Town of Creswell, Private Landowners, North Carolina Department of Transportation (NCDOT)
POTENTIAL PARTNERS	Pettigrew State Park, Washington County, Soil and Water Conservation District, NCDOT
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	Streamflow Rehabilitation Assistance Program (StRAP) Grants
PROJECT ESTIMATED COST	Medium – \$50,000–\$1,000,000
ANTICIPATED BENEFIT	High – Action would have significant positive impact on the community, including reducing flooding that impacts residents.
PRIORITY RATING	High

Project 2: Floodgate Repair

<p>PROJECT DESCRIPTION</p>	<p>Repair broken hinge on the floodgate at the intersection of 1st and Palmetto Streets (Figure 8). The gate should act as a one-way valve that allows water to drain from the town to the Scuppernong River and prevent water backflow toward the town (e.g., due to southerly winds from hurricanes/storms). The broken hinge currently allows water to flow both ways and worsens flooding.</p>  <p><i>Image of broken hinge at 1st and Palmetto</i></p>
<p>LOCATION</p>	<p>Corner of Palmetto and 1st Streets</p>
<p>SOURCE</p>	<p>CAT, Water and Sewer Superintendent Ryan Swain</p>
<p>SCOPING QUESTIONS</p>	<p>Would improving the floodgate alone provide the protection needed, or does 1st Street also need to be raised to continue the function of the dike farther east? Does the current water level need to be drained to allow access to the hinge/gate for the repair?</p>
<p>HAZARD(S) ADDRESSED</p>	<p>Precipitation-based flooding, storm surge, sea level rise</p>
<p>SUPPORTING FUNCTION</p>	<p>Transportation, public health and safety, community resilience</p>
<p>TYPE OF SOLUTION</p>	<p>Structure and Infrastructure</p>
<p>ESTIMATED TIMELINE</p>	<p><1 year</p>
<p>RESPONSIBLE ENTITY</p>	<p>Town of Creswell</p>
<p>POTENTIAL PARTNERS</p>	<p>N/A</p>
<p>EXISTING FUNDING</p>	<p>None identified by the CAT</p>
<p>POTENTIAL FUNDING SOURCES</p>	<p>North Carolina Department of Environmental Quality (NCDEQ) Water Resources Development Grant Program</p>

PROJECT ESTIMATED COST	Low – About \$5,000 (Estimate provided by Water and Sewer Administrator)
ANTICIPATED BENEFIT	High – Action would have significant benefit in the town to reduce flooding to residents' homes, which impacts public health and safety, accessibility, and transportation
PRIORITY RATING	High



Figure 8. Location of floodgate.

Project 3: Reduce Flooding Impacts in the 1st-4th Street Area

PROJECT DESCRIPTION	<p>The area from 4th Street at Cherry Road east to 1st Street between Main Street and Palmetto Street experiences the worst flooding impacts in the town. This project proposes to evaluate the potential solutions that could help reduce flooding impacts in this area. Possible solutions include extending the dike from 1st Street to Main Street, adding an additional pump at Palmetto Street, and/or nature-based flood risk mitigation solutions (Figure 9). This evaluation would build on initial modeling under the Scuppernong Study to determine more specifically what solutions would be most effective to create the desired flood risk reduction.</p> <p>Based on this evaluation, the Town would then seek funding to pursue the recommended solution(s).</p>
LOCATION	Palmetto Street, 1st Street, Main Street
SOURCE	Water and Sewer Superintendent Ryan Swain
SCOPING QUESTIONS	
HAZARD(S) ADDRESSED	Precipitation-based flooding, storm surge, sea level rise
SUPPORTING FUNCTION	Transportation, public health and safety, community resilience
TYPE OF SOLUTION	Structure and infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	Town of Creswell
POTENTIAL PARTNERS	NCORR; Scuppernong Water Management Study; Kris Bass Engineering
EXISTING FUNDING	None identified by the CAT, but this project was submitted for Phase 3 RCCP funding
POTENTIAL FUNDING SOURCES	North Carolina Division of Water Infrastructure (DWI) Local Assistance for Stormwater Infrastructure investments (LASII) program, Golden LEAF Foundation , FEMA Building Resilient Infrastructure and Communities (BRIC)
PROJECT ESTIMATED COST	Medium – \$100,000–\$500,000
ANTICIPATED BENEFIT	High – Action would have significant benefit in the town to reduce flooding to residents’ homes, which impacts public health and safety, accessibility, and transportation
PRIORITY RATING	High

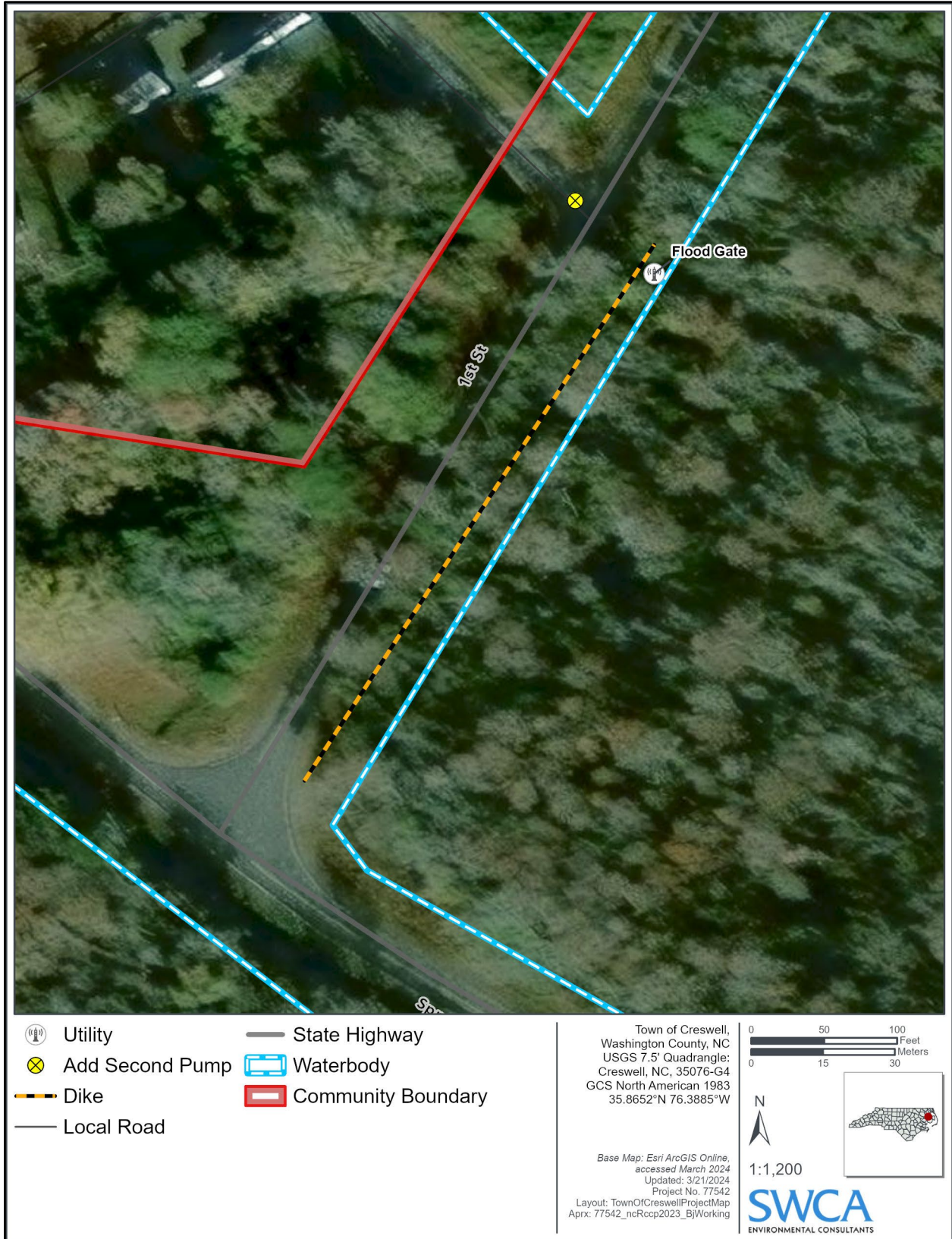


Figure 9. Location of potential second pump and dike extension.

Project 4: Main Street Storm Drainage System Improvement

PROJECT DESCRIPTION	There is a 48- to 60-inch stormwater drainage pipe that runs down Main Street (Figure 10). There are some catch basins, but they are almost completely full of dirt, limbs, etc., and only about 10 inches of free pipe remain for water flow. The Town needs to clear debris from the pipe to increase water flow throughout the system.
LOCATION	Main Street
SOURCE	Water and Sewer Administrator Ryan Swain
SCOPING QUESTIONS	Are there other parts of the stormwater system that would benefit from clearing out debris?
HAZARD(S) ADDRESSED	Transportation, public health and safety, flooding, community resilience
SUPPORTING FUNCTION	Transportation, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	<1 year
RESPONSIBLE ENTITY	Town of Creswell
POTENTIAL PARTNERS	NCORR
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	Golden LEAF Grant , Streamflow Rehabilitation Assistance Program (StRAP) (includes debris removal), DWI LASII , DWI Asset Inventory and Assessment (AIA) Grants
PROJECT ESTIMATED COST	Low – \$10,000–\$50,000
ANTICIPATED BENEFIT	High – Action would have significant benefit in the town to reduce flooding to residents’ homes, which impacts public health and safety, accessibility, and transportation
PRIORITY RATING	High



Figure 10. Location of needed storm drain cleanout.

Project 5: Designate Emergency Shelter and Emergency Operations Center

PROJECT DESCRIPTION	Designate a dedicated Emergency Operations Center (EOC) facility and Emergency Shelter. Currently there is no identified shelter to house residents in flood events. The county school building is not approved as a shelter location by the American Red Cross due to flood risk. The Pocosin Charter School was suggested by the CAT as a possible location. To pursue this project, the Town needs to identify potential locations for the facility, confirm shelter criteria that will need to be met, and then take any steps necessary to create or outfit a facility that meets the criteria.
LOCATION	To be determined – possibly Pocosin Charter School on 1st Street
SOURCE	CAT Meeting
SCOPING QUESTIONS	Confirm requirements for emergency shelters
HAZARD(S) ADDRESSED	All hazards
SUPPORTING FUNCTION	Emergency preparedness and response, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	Town of Creswell
POTENTIAL PARTNERS	Washington County, Pocosin Charter School, American Red Cross
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	NCDPS Emergency Preparedness Grants , FEMA Emergency Management Performance Grant (EMPG) Program includes funding for both sheltering and EOC FEMA Pre-Disaster Mitigation (PDM) Program FEMA Emergency Operations Center Grant Program
PROJECT ESTIMATED COST	To be determined – Could be low if an existing facility qualifies.
ANTICIPATED BENEFIT	High – This action would improve emergency preparedness and response and enhance community resilience.
PRIORITY RATING	High

Project 6: Complete Water Infrastructure Asset Inventory and Assessment (AIA)

<p>PROJECT DESCRIPTION</p>	<p>Apply for a NCDEQ DWI AIA Grant. The town of Creswell was included in a designated CDRZ by FEMA and was also designated as “distressed” by NCDEQ Viable Utilities Program. The Town attended training in the fall of 2023 and applied for an NCDEQ AIA grant. Funding from this grant would support the Town to inventory the existing water and/or sewer system and document the condition of inventoried infrastructure. This information could support future grant eligibility and future projects to address stormwater and wastewater/sewer infrastructure issues, such as those described in Project 7 and 8. Some basic information to support the AIA grant application is listed below.</p> <ul style="list-style-type: none"> • Wastewater Collection System Upgrades (Program Project 7) <ul style="list-style-type: none"> ○ 1. Benefits ○ 1.i. Challenges ○ The top challenge with this system is large amounts of infiltration and inflow, which causes a need for increased pumping and puts strain on the system. The system also processes water from Tyrrell County. ○ Another challenge with the system is that it does not allow for growth in the Town. The capacity of the current system only allows for Industrial development in the area. To continue to sustain and grow the town, the system needs rehabilitation/replacement. ○ 2. System Management ○ 2A. Asset management team: Ryan Swain (Water and Sewer Superintendent) • Drinking Water System Improvements (Program Project 8) <ul style="list-style-type: none"> ○ 1. Benefits ○ 1.i. Challenges ○ The drinking water in the town has a brown tint, which causes concern for the quality and safety of the drinking water. Although the water passes the required tests, further testing and investigation may be required to determine the cause of the discoloration. ○ 2. System Management ○ 2A. Asset management team: Ryan Swain (Water and Sewer Superintendent)
<p>LOCATION</p>	<p>Town-wide</p>
<p>SOURCE</p>	<p>Meeting with NCDEQ Viable Utilities Department and NCORR.</p>
<p>SCOPING QUESTIONS</p>	<p>Identify top three challenges with water infrastructure systems, identify asset management team. Identify prior planning documents to use for grant application. Work with Albemarle Commission and NCORR for grant application support.</p>
<p>HAZARD(S) ADDRESSED</p>	<p>Flooding, water quality</p>
<p>SUPPORTING FUNCTION</p>	<p>Community resilience, public health and safety</p>
<p>TYPE OF SOLUTION</p>	<p>Structure and Infrastructure</p>
<p>ESTIMATED TIMELINE</p>	<p>1 year (Application for AIA assistance grant is due April 30, 2024)</p>
<p>RESPONSIBLE ENTITY</p>	<p>Town of Creswell</p>
<p>POTENTIAL PARTNERS</p>	<p>NCDEQ Viable Utilities Department NCORR</p>
<p>EXISTING FUNDING</p>	<p>None identified by the CAT</p>
<p>POTENTIAL FUNDING SOURCES</p>	<p>NCDEQ's DWI AIA Grant</p>
<p>PROJECT ESTIMATED COST</p>	<p>About \$150,000</p>

ANTICIPATED BENEFIT	High – This project would have significant benefit to the town and help to identify critical information to move other projects forward that will help public health and safety and build community resilience.
PRIORITY RATING	High

Project 7: Wastewater Collection System Upgrades

PROJECT DESCRIPTION	The Town’s Program application noted issues with the public sewer system, and in conversation with Water and Sewer Superintendent Ryan Swain, he confirmed the system faces a huge amount of infiltration and inflow. They pump about 35,000 gallons per day, but with even 1 inch of rain, that rate goes up to about 100,000 gallons per day. The system also processes wastewater from a separate collection system that services parts of Tyrrell County. This project would be a full system upgrade, which would involve the replacement of septic and pump tanks. The system is a Septic Tank Effluent Pumping (STEP) system, which means the treatment plant only processes gray water, and all solids are contained in a septic tank. This limits economic development options on lands serviced by the system.
LOCATION	Town-wide and areas serviced in Tyrrell County
SOURCE	Program application, conversation with Water and Sewer Superintendent Ryan Swain
SCOPING QUESTIONS	What are the most critical upgrades that are needed to the sewer system? (This could be determined through the AIA study outlined in Project 6 above)
HAZARD(S) ADDRESSED	Flooding, public health and safety
SUPPORTING FUNCTION	Public health and safety, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	Town of Creswell
POTENTIAL PARTNERS	NCDEQ Viable Utilities Department
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	NCDEQ DWI AIA Grant , NC DWI State Wastewater and Drinking Water Reserve Programs ,
PROJECT ESTIMATED COST	High – \$1,000,000–\$3,000,000
ANTICIPATED BENEFIT	High – This action would improve resilience of the wastewater collection system and enhance public health and safety and could create new opportunities for economic development if the system can be upgraded to process solids.
PRIORITY RATING	High

Project 8: Drinking Water Quality Improvements

PROJECT DESCRIPTION	Many residents complain about the brownish color of the drinking water in Creswell and avoid drinking it. This project involves the Town researching and pursuing options to determine the cause of the observed water discoloration. One option could include pursuing funding to ice pig the water lines to improve clarity and water quality for the Town. Water and Sewer Superintendent Ryan Swain previously obtained a quote and presented this idea to the Town Board.
LOCATION	Town-wide but possibly more of an issue in some areas than others
SOURCE	Resident feedback, Water and Sewer Superintendent Ryan Swain
SCOPING QUESTIONS	What tests would be needed to determine the extent and cause of the water discoloration and which households are affected? Would this temporarily impact water services throughout the town? Are there any risks to conducting ice pigging?
HAZARD(S) ADDRESSED	Flooding, public health and safety
SUPPORTING FUNCTION	Public health and safety, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	Town of Creswell
POTENTIAL PARTNERS	NCDEQ Viable Utilities Department
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	NCDEQ Viable Utilities Program NC DWI Drinking Water State Revolving Fund
PROJECT ESTIMATED COST	Medium to High – quote for ice pigging water lines was \$75,000. Overall upgrades likely \$1,000,000–\$3,000,000.
ANTICIPATED BENEFIT	High – Action would improve public health and safety and build community resilience.
PRIORITY RATING	High

Project 9: County School Buildings Flood Risk Reduction

PROJECT DESCRIPTION	The Program application stated that flooding roadways and water damage to buildings impact the local County schools. This project involves exploring flooding issues at the school complex and developing policies, plans, or projects to mitigate them. The County is in the process of decommissioning these school buildings at the time of this report, so the fate of the buildings is unknown, but if they will continue to be used, then flood risk reduction steps should be explored.
LOCATION	High school building: Middle Street between 6th and 7th Streets, and elementary school building at the intersection of Middle and 7th Streets.
SOURCE	Program application, CAT meeting, Water and Sewer Superintendent Ryan Swain
SCOPING QUESTIONS	
HAZARD(S) ADDRESSED	Flooding, public health and safety
SUPPORTING FUNCTION	Public health and safety, community resilience
TYPE OF SOLUTION	Structure and Infrastructure
ESTIMATED TIMELINE	1–5 years
RESPONSIBLE ENTITY	To be determined – Depending on the future of the school buildings
POTENTIAL PARTNERS	Washington County, Pocosin Charter School
EXISTING FUNDING	None identified by the CAT
POTENTIAL FUNDING SOURCES	To be determined once project is better defined.
PROJECT ESTIMATED COST	To be determined once project is better defined.
ANTICIPATED BENEFIT	To be determined – Depending on the future of the school buildings
PRIORITY RATING	High