



Transportation

Addresses the physical damage and state revenue implications of the transportation infrastructure

1. Summary

The following is documentation of the methodology used to estimate transportation needs due to Hurricane Florence.

Preliminary estimates are based on a combination of windshield (initial) estimates, detailed site inspections, and historical data from prior similar events. The preliminary total impact is estimated at \$434.8 million with an unmet impact of \$136.9 million after expected federal and private funding is account for. The total Department of Transportation highway and bridge system need is estimated at \$260 million, \$195 million of which we expect to be covered by Federal sources of funding, resulting in an unmet highway and bridge system need of \$65 million. The Department will utilize the cash balance of the Highway Fund to cover the unmet needs of this event. Transit system needs are fully reimbursed by FEMA and FTA funds. Rail system damage of \$1.1 million is reimbursed at a 50% rate by users, resulting in an unmet rail need of \$550,000. Damages related to Ports is covered entirely by insurance minus a \$100,000 deductible. Nine Aviation systems are reporting damages with four of them reporting direct damage estimates of \$4 million and \$260,000 of indirect damages. The remaining five systems' damages are to be determined. Aviation facilities are submitted by other government entities directly to their reimbursement sources resulting in no direct effects to DOT. Damages for non-system (local) roads have also been estimated to be \$56.9 million, \$42.7 million of which we expect to be covered by Federal sources of funding, resulting in an unmet local transportation need of \$14.2 million.

Preliminary Damage and Needs Estimate (Millions)						
Category	Direct	Indirect	Total Impact	Federal Funding	Private Funding	Unmet Impact
State bridges & roads	\$260.0	\$0.0	\$260.0	\$195.0	\$0.0	\$65.0
Public transportation	\$1.7	\$0.0	\$1.7	\$1.7	\$0.0	\$0.0
Rail & rolling stock	\$1.1	\$0.0	\$1.1	\$0.0	\$0.6	\$0.5
Ports	\$54.0	\$0.0	\$54.0	\$0.0	\$53.9	\$0.1
Aviation	\$4.0	\$0.3	\$4.3	\$0.0	\$4.0	\$0.3
State revenue impact	\$0.0	\$6.8	\$6.8	\$0.0	\$0.0	\$6.8
Subtotal	\$320.8	\$7.1	\$327.9	\$196.7	\$58.5	\$72.7
Non-system (local) roads	\$56.9	\$0.0	\$56.9	\$42.7	\$0.0	\$14.2
Resiliency efforts	\$0.0	\$0.0	\$50.0	\$0.0	\$0.0	\$50.0

Total	\$377.7	\$7.1	\$434.8	\$239.4	\$58.5	\$136.9
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2. Scope

Structures in scope for transportation estimates include:

- Bridges, tunnels, and roads, including sidewalks
- Public transit, including bus systems
- Rail and rolling stock
- Ports and airports
- Non-system (local) road estimates are shown here for illustrative purposes.

3. Methodology

Transportation damage costs related to infrastructure owned by the North Carolina state system were assessed. Estimates were developed by the NC Department of Transportation based on initial assessments of damage, including information obtained from contractors deployed for emergency response and repair. Cost estimates are based on estimated quantities, historic unit costs, and engineering judgments.

Item	Location	Cost
Major NC state highways	Statewide	\$260,000,000
DMV	Declared Emergency Counties	\$72,776
Public transportation	Declared Emergency Counties	\$1,700,000
Rails	Declared Emergency Counties	\$1,100,000
Non-system (local) roads	Declared Emergency Counties	\$56,948,026
Aviation (direct costs only)	Declared Emergency Counties	\$3,990,000
Ports	Wilmington/Morehead City	\$54,000,000

4. Assumptions

- Non-system (local) road estimates were calculated based on prorated DOT-reported damages by county.

5. Primary Data Sources

- DOT
- Moody's Credit Outlook (October 2018)

6. Potential Sources of Funding for Unmet Impact

The Department of Transportation estimates reimbursements from FHWA/FEMA for the highway system and public transportation totaling \$196.7 million. Public transportation has also received a grant of \$340,000 from the Federal Transit Authority (FTA). Airports, ports, and public transportation use a combination of federal grants and private insurance to return their systems to pre-Florence conditions. Ports will receive an estimated reimbursement primarily from private insurance of \$53.9 million after paying a \$100,000 deductible. Aviation will be covered by private insurance in the amount of \$4 million. The rail system is required by state law to receive 50% of their damage estimate as reimbursement from the Short Line Railroad. Their current reimbursement estimate is \$550,000.

7. State Funding Recommendation for Unmet Impact

Rebuilding - \$79 million

State Match for Federal Funds - \$65 million (Highway Fund)

Utilizes the existing cash balance of the Highway Fund to provide the required state match of \$65 million. This match will draw down \$195 million in federal funding.

Match for Local Government Assistance – \$14 million (General Fund)

Provides grants to local governments for repair of non-system (local) road damage and other similar projects.

Resiliency - \$50 million

Building Smarter and Stronger Resilient Roads - \$50 million (General Fund)

Provides funds to help leverage federal grants for designing roads, bridges, pipes, and other transportation structures to better mitigate the effects of extreme weather events. This mitigation should minimize transportation system and local property damages in future events. Initial potential projects include upgrades of eastern sections of I-40, southern sections of I-95, US 70 (future I-42), and US 421.