



Government Property and Revenue

Addresses the damage to government properties, and lost tax/fee revenue

1. Summary

The following is documentation of the methodology used to estimate state and local government property and revenue loss due to Hurricane Florence.

Preliminary estimates for total direct and indirect impact is estimated to be \$406.1 million, \$279.0 million of which we expect to be covered by federal and private sources. This results in a total unmet impact of \$127.1 million. This unmet impact includes a potential unmet government property and revenue need of \$61.9 million. OSBM currently estimates a State tax revenue loss of \$25 million and a local tax revenue loss of \$10 million. State agency revenue loss is estimated to be \$26.9 million.

Preliminary Damage and Needs Estimate (Millions)						
Category	Direct	Indirect/ Induced	Total Impact	Federal Funding	Private Funding	Unmet Impact
Local Gov. Buildings*	\$143.5	\$0.0	\$143.5	\$49.5	\$77.5	\$16.5
State Gov. Buildings	\$179.8	\$0.0	\$179.8	\$37.5	\$97.1	\$45.2
State attractions	\$4.5	\$0.0	\$4.5	\$0.0	\$2.4	\$2.1
State Tax Revenue Loss	\$0.0	\$25.0	\$25.0	\$0.0	\$15.0	\$10.0
State Fee Revenue Loss	\$0.0	\$17.5	\$17.5	\$0.0	\$0.0	\$17.5
State Lottery Revenue Loss	\$0.0	\$9.4	\$9.4	\$0.0	\$0.0	\$9.4
Local Tax Revenue Loss	\$0.0	\$10.0	\$10.0	\$0.0	\$0.0	\$10.0
Local Fee Revenue Loss*	-	-	-	-	-	-
Subtotal	\$327.8	\$61.9	\$389.7	\$87.0	\$192.0	\$110.7
Timber	\$4.2	\$7.2	\$11.4	\$0.0	\$0.0	\$11.4
Resiliency efforts	\$0.0	\$0.0	\$5.0	\$0.0	\$0.0	\$5.0
Total	\$332.0	\$69.1	\$406.1	\$87.0	\$192.0	\$127.1

* OSBM will survey local governments in impacted counties to better determine hurricane impacts.

2. Scope

Structures in scope for the preliminary State and local government property estimates include:

- Local government facilities: excluding public utilities, Community Colleges, and public K-12 educational facilities.
- State government buildings for State Agencies and the University of North Carolina
- State attractions for the Department of Natural and Cultural Resources
- State tax revenue loss: \$ 25 million (one year)
- State fee revenue loss: \$ 17.5 million (one year)
- State Lottery lost sales: \$9.4 million (one year)
- Local tax and fee revenue loss: \$ 10 million tax per year (fees unknown)
- Timber losses on State property (Department of Agriculture and Consumer Services)

Incomplete Agency Responses: All Agencies and Universities are continuing to evaluate properties for damages and for the extent of the damage.

3. Methodology

Local Government Buildings - NC Emergency Management flood mapping data was used to estimate the damage to local government property. Local Education Agencies (schools), public universities, and State agencies that reported damage are excluded from the data. The modeling methodology is presented below:

- To produce the storm surge damage estimates, NCEM used national models to create a GIS layer of the storm surge. In conjunction with the GIS layer, NCEM used data on the elevation of the structures' first floor to determine the depth of the flooding incurred by structures. Then, NCEM translated the flood depth into damage estimates by relying on Army Corps of Engineers' formulas and estimated replacement values for buildings and contents in NCEM's statewide database of buildings. Replacement values include the value of equipment contained in the buildings. The estimate for the number of buildings affected by the storm surge only includes primary structures.
- To produce the riverine estimates, NCEM employed NOAA National Severe Storms Laboratory data to determine the amount of flooding sustained from rivers and create a GIS layer of riverine flooding. To increase precision, the GIS layer combines model calculations of precipitation accumulation with actual river gage and high-water observations. The riverine flooding GIS layer allowed NCEM to estimate the flood depth sustained by structures, and in turn the flood depth informed the loss estimate for structures and their contents (including equipment). The estimate for the number of buildings affected by flooding from rivers only includes primary structures.

Construction cost - The preliminary estimate for property damages conservatively assumes construction costs would be 10% higher than the replacement values in the NCEM database. Experience from hurricanes Matthew, Katrina, Harvey, and Superstorm Sandy suggests construction costs were 8-20% higher in the aftermath of the event due to a shortage of available construction services or an increase in the cost of raw material or labor. In addition, Hurricane Florence construction costs are likely to be driven up by the impact of tariffs on the price of lumber, steel, aluminum, and other materials, which would increase further the preliminary cost estimate.

State Government Buildings - OSBM surveyed all state government and University of North Carolina agencies and campuses. This analysis revealed that state facilities were significantly under insured for building and content value and may not be insured for related damage. It is assumed that insurance may only cover 54% of reported damage. State agencies and universities are continuing to assess damages and insurance coverage and these figures should be considered preliminary.

State and Local Revenue Losses - State tax revenue losses are based on an estimated reduction in personal and business income resulting from storm-related disruptions. (See Business & Nonprofit section for detailed methodology on business disruptions.) Local tax revenue losses are based on the estimated loss in private real estate and tangible property from flooding and the effective property tax rates in storm-affected counties.

State Fee Losses - The lost state fee revenues were compiled from a survey of state agencies and universities.

State Lottery Revenue Loss - The NC Education Lottery analyzed lost sales from daily games during a 14-day hurricane period and then applied the percentage decline to recent sales activity.

Timber Losses - Timber losses were modeled by the Department of Agriculture and Consumer Services and OSBM.

Survey of Local Government Needs - OSBM will survey local governments to get a better understanding of hurricane damages to their facilities.

4. Assumptions:

- Local government property is insured at the same level as State government property (approximately 54% of replacement value).
- Government property presented in the table is all identified “government” property by the NC Emergency Management data. Education facilities and utilities were excluded. The damages reported by State agencies were also excluded. It is possible that federal property is reported within this section. Federal military property was excluded.
- State tax revenue impacts assume that individual and corporate income losses account for nearly all lost General Fund revenues. Private insurance payments to businesses with adequate business-interruption losses will compensate for an estimated one-third to one-half of income losses. Based on

analysis of sales tax data before, during, and after Hurricane Matthew, sales tax revenues are expected to rebound quickly after an initial decline.

- Local property tax revenue impacts assume that private property owners whose property suffered major damage or was destroyed will be unable to pay their FY 2018-19 property taxes. The impact range assumes that some property owners with minor-to-moderate property damage will pay less in property taxes relative to the pre-Florence value of their properties. Rebuilding efforts in storm-affected counties should largely restore the local tax base within 3-4 years. Local sales tax revenues will rebound quickly after an initial period of losses.
- Timber losses were modeled from the Department of Agriculture and Consumer Services and IMPLAN (OSBM)

5. Primary data sources

- All State Agencies and Universities
- Division of Emergency Management (property damage)
- NCDOR (tax data)
- BEA and IMPLAN (local economic data and multipliers)

6. Potential Sources of Funding for Unmet Impact

The primary source of funding for event specific losses is expected to be private insurance held by governments and private businesses. A potential \$209.9 million may be available for state and local property damages from private insurance, based on preliminary estimates. An additional \$15.0 million may be available in the form of tax revenue from business interruption insurance for business related entities. It is assumed that the federal government will also provide a significant amount of funding in the form of Federal Emergency Management Agency – Public Assistance funding is assumed be the next largest portion of funds for local government property damage. The Department of Defense may also provide funding for damaged National Guard facilities should FEMA-Public Assistance funding not be available. The final source of funds is a direct state appropriation for unmet needs.

7. State funding Recommendation for Unmet Impact

Rebuilding - \$82 million

FEMA Match – State Share - \$22 million

Provides funding for the state share of FEMA funding for public assistance. Public assistance projects could potentially include funds to University of North Carolina Campuses, State government agencies, and local government facilities impacted by the hurricane.

Emergency Repairs and Renovations Reserve - \$25 million

Provides funding to be distributed as needed to hurricane impacted facilities for items not covered by insurance or FEMA Public Assistance.

Golden L.E.A.F. Local Government Infrastructure Fund - \$25 million

Provides grant funding to local governments to repair and rebuild governmental facilities, such as emergency management services facilities, administrative facilities, courts, and libraries.

Parks and Recreation Trust Fund - \$10 million

Provides grants to hurricane impacted local governments to repair and rebuild local park facilities.

Resiliency - \$5 million

All Risk Coverage and Flood Coverage - \$5 million

Requires all State Agencies and Universities to carry all risk coverage and require flood coverage for those that are in the flood plain or have experienced a flood. The Department of Insurance shall allocate premium funding by highest risk, in the event that recommended funding is insufficient

State Risk Management – \$TBD

Requires the Department of Insurance, in conjunction with state agencies and the University of North Carolina system to undertake a risk analysis and building value analysis to look at under coverage for risk type and dollar value. For example, a replacement for Dobo Hall at UNC-Wilmington is estimated at \$59 million; the insured value was only \$32 million.