NC Agriculture’s Response to Hurricane Florence

October 8, 2018
Preparations, Response, and Damage

Mr. Joe Reardon
Assistant Commissioner for Consumer Protection
NCDA&CS
Coordination with Partners

- NCEM
  - Executive Order 52
- DEQ
  - Assistance locating approved landfills for deceased farm animals
- Local and National Animal Groups
  - Prepared potential needs and offers for local, state, and national partners for animal rescue, evacuation, and sheltering
- NC Cooperative Extension
  - Discussed potential staging areas for hay and other donations
• Industry partners contacted daily in preparation of storm
• 20,000 hogs were either moved to facilities in other states, transported to slaughter, or movement to NC reduced.
• Many commercial farms lowered lagoon levels in accordance with DEQ regulations
• Facility generators and automatic feeders were pre-filled ahead of the storm
Industry partners contacted daily in preparation of storm

Approximately 1.5 million birds were moved before the storm – either to slaughter or to other farms

Feed was positioned on farms before storm

Generators were prepared before storm
Livestock and Equine

• NC Horse Council identified stabling options and developed emergency transportation contacts
• NCDA&CS Veterinary Division worked with SC, VA, and GA to waive transportation restrictions for horses
• Cattle industry compiled possible hay sources and needs
Agriculture Incident Management Team
Farm Infrastructure

- State roads leading to farms were flooded or washed out
- Farm roads flooded or washed out
- Fencing, equipment and materials.
<table>
<thead>
<tr>
<th>Commodity</th>
<th>Production Loss</th>
<th>Total Estimated Loss</th>
<th>Estimated Job Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flue-Cured Tobacco</td>
<td>$314M</td>
<td>$769M</td>
<td>11,772</td>
</tr>
<tr>
<td>Sweet Potatoes</td>
<td>$180M</td>
<td>$497M</td>
<td>13,967</td>
</tr>
<tr>
<td>Corn</td>
<td>$84M</td>
<td>$232M</td>
<td>6,522</td>
</tr>
<tr>
<td>Soybeans</td>
<td>$202M</td>
<td>$486M</td>
<td>4,623</td>
</tr>
<tr>
<td>Cotton</td>
<td>$135M</td>
<td>$338M</td>
<td>4,608</td>
</tr>
</tbody>
</table>
Commercial Forestry

- $69M in production loss / $153M Total Estimated Loss
- 3,445 Estimated Jobs Impacted
- 1.2 million acres with impact
- Jones, Onslow, Craven and Carteret Counties with greatest impact
Wind Damage

• Most Damage Came From Flooding
• Wind Damage to Farm Buildings and Crops Did Account for Some Loss
Nurseries

• $30M Production Loss / $64M Total Estimated Loss
• 1,097 estimated jobs impacted
Livestock and Research Stations
Assistance with Locating Animals
Livestock Feed Assistance
Helping People
• Over 180 buildings were impacted

• 30 (17%) buildings flooded - does not equal drowning

• 22 (73%) of buildings that flooded were NOT in any recognized floodplain

• Over 40 buildings (>22%) had access cut off due to flooded roads

• Estimated 5,500 commercial swine mortality
Commercial Poultry

- Over 370 commercial poultry houses were impacted
- **238 poultry houses were flooded**
- **179 (75%)** of the buildings flooded were **NOT** in any recognized floodplain
- 4 poultry houses were destroyed by wind
- Estimated **4.2 million** commercial poultry mortality
- **$63 million estimated economic loss**
- Response and assessment was slow due to flooded farms and roads
The Mortality Management Program

- 63 commercial poultry farms participating
- NCDA&CS contractors are:
  - Subject Matter Experts
  - Carbon Delivery
  - Clean Out/Hauling
The Mortality Management Program

After the flood waters have receded.
The Mortality Management Program

Using a spreader wagon to spread dry material on top of wet litter to begin drying process.
Carbon material is added and worked-in until the wet litter/dry carbon mixture will stand up.
The Mortality Management Program

From a stack at the end of the house the material can be loaded and taken directly to outside windrows where the base is already formed and capping material is staged.
The Mortality Management Program

Windrows in the process of being capped.

Capped and actively composting with temps in the 140° - 150° F range.
The Mortality Management Program

Aerial View of On-Farm Compost Windrows

Success!
NCDA&CS
Recovery Request

Mr. David Smith
Chief Deputy Commissioner
NCDA&CS
NC Farmer Recovery Reinvestment Program (FRRP)

Need: Immediate

- Incentive program for NC farmer to continue business
- Assistance with underinsured and uninsurable crops, livestock, and poultry losses
- Intent of use must be to continue agriculture operation

Total $250 million
FEMA Contract Reimbursement (Mortality Management Program)

Need: Immediate

Human and environmental health concern

Covers composting, carbon source, landfill, transportation, & tipping fees

Total: $20 million
Hay Relief

• Detrimental to winter feeding
• Purchase, delivery, and drop off sites needed
• Total: $3 million
Soil and Water Conservation Division
Pasture Renovation and Lagoon Management Expenses

- Conservation/Cover crop overseed
- Reduces soil erosion, sedimentation & pollution
- Hose drag systems or pump-and-haul techniques

Total: $3 million
Stream Debris Removal and Restoration

• Drainage network in eastern North Carolina

• Vegetative storm debris, stream bank erosion & sediment deposition

Total: $10 million
Agricultural Pond Repair

Repair and Retrofit

Benefits to farmer and the environment

Total: $5 million
Emergency Conservation Program (ECP) Supplemental Funds

Covers 75% of eligible costs

25% match requirement

Total: $7.5 million
Non-Field Farm Road Repair

- Repair of existing access roads
- Off secondary roads-almost or completely washed away
- Not covered by ECP

Total: $1 million
BMP / Renovation

- Repair of conservation structures
- Still quantifying damages with field assessments
- Total: $2 Million
NC Forest Service: Reforestation Funding Program Initiative

- Establishment of timber stands in damaged counties
- Damage to tree planting projects within the past 5 years-prolonged floodwater exposure

Total: $2.5 million
NCDA&CS Departmental Facilities

Structural Damage to various state buildings

Total: $6 million