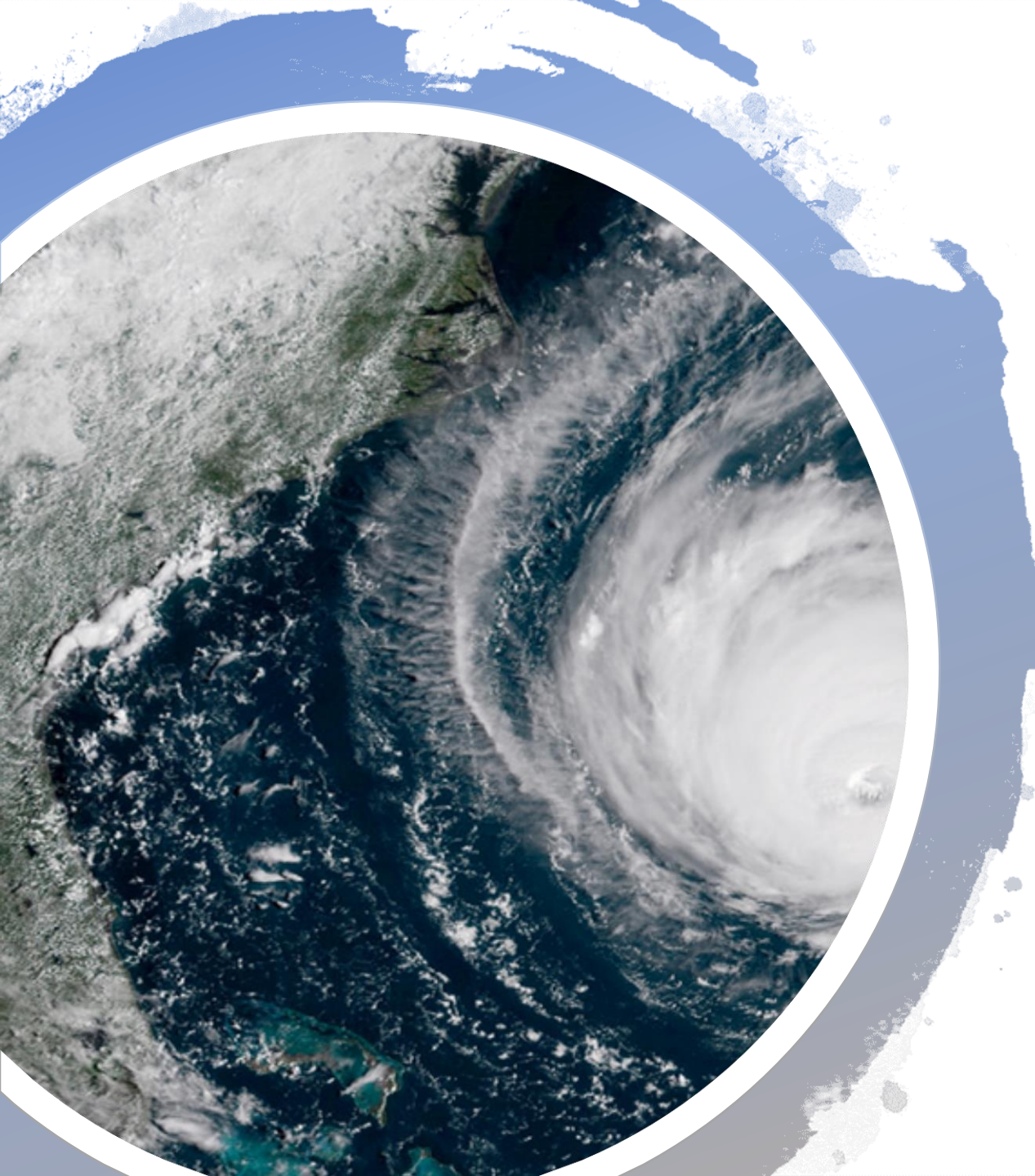




NC Agriculture's Response to Hurricane Florence

October 8, 2018





Preparations, Response, and Damage

Mr. Joe Reardon

Assistant Commissioner for
Consumer Protection

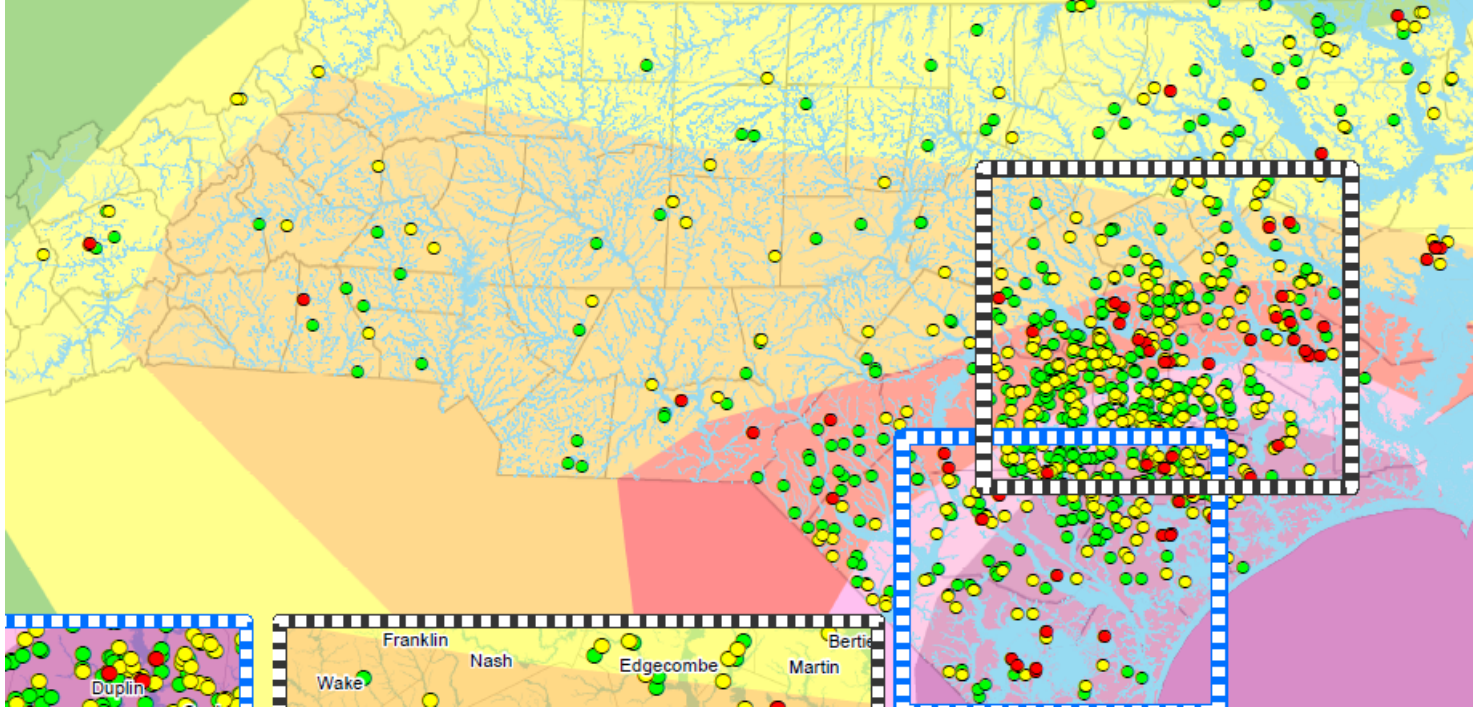
NCDA&CS

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

North Carolina Swine Farms Proximity to Floodplain with 7-Day Quantitative Precipitation Forecast (QPF)

Valid: 2018-09-13 0800 EDT to 2018-09-20 0800 EDT

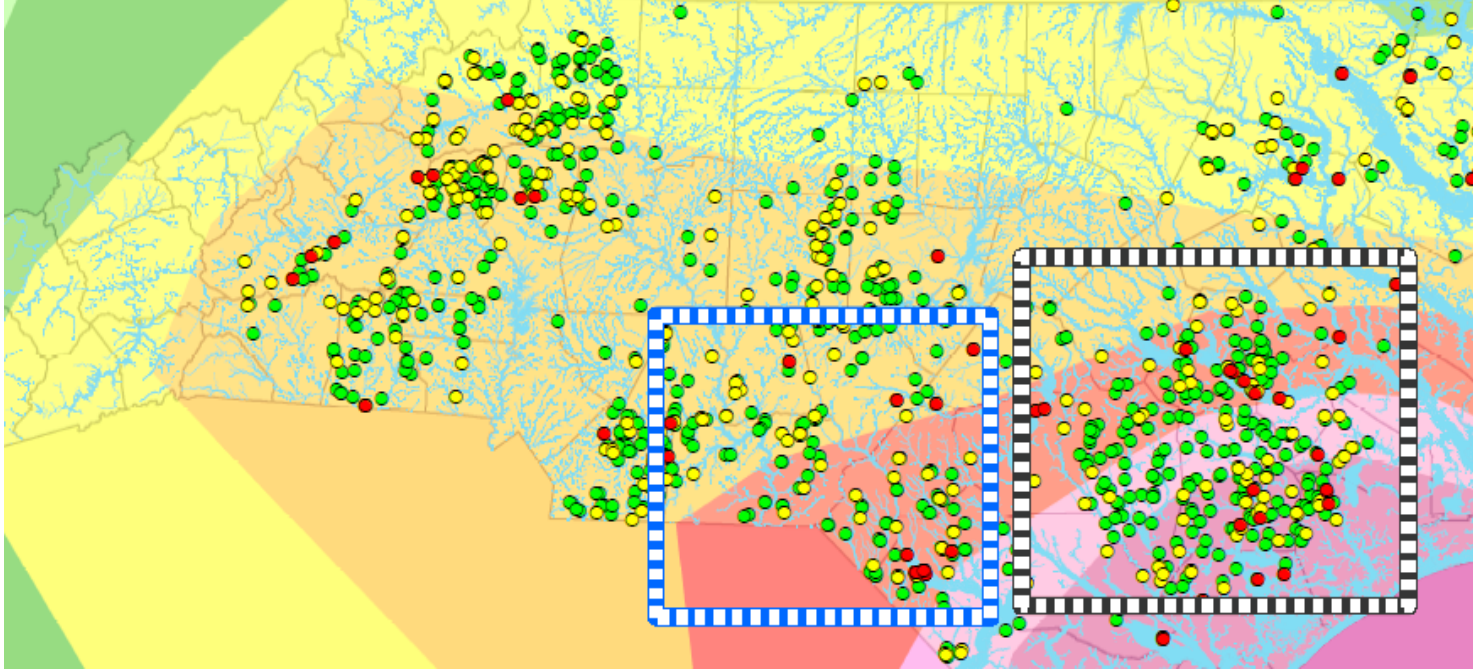


Swine Industry

- 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

North Carolina Poultry Farms Proximity to Floodplain with 7-Day Quantitative Precipitation Forecast (QPF)

Valid: 2018-09-13 0800 EDT to 2018-09-20 0800 EDT



Poultry Industry

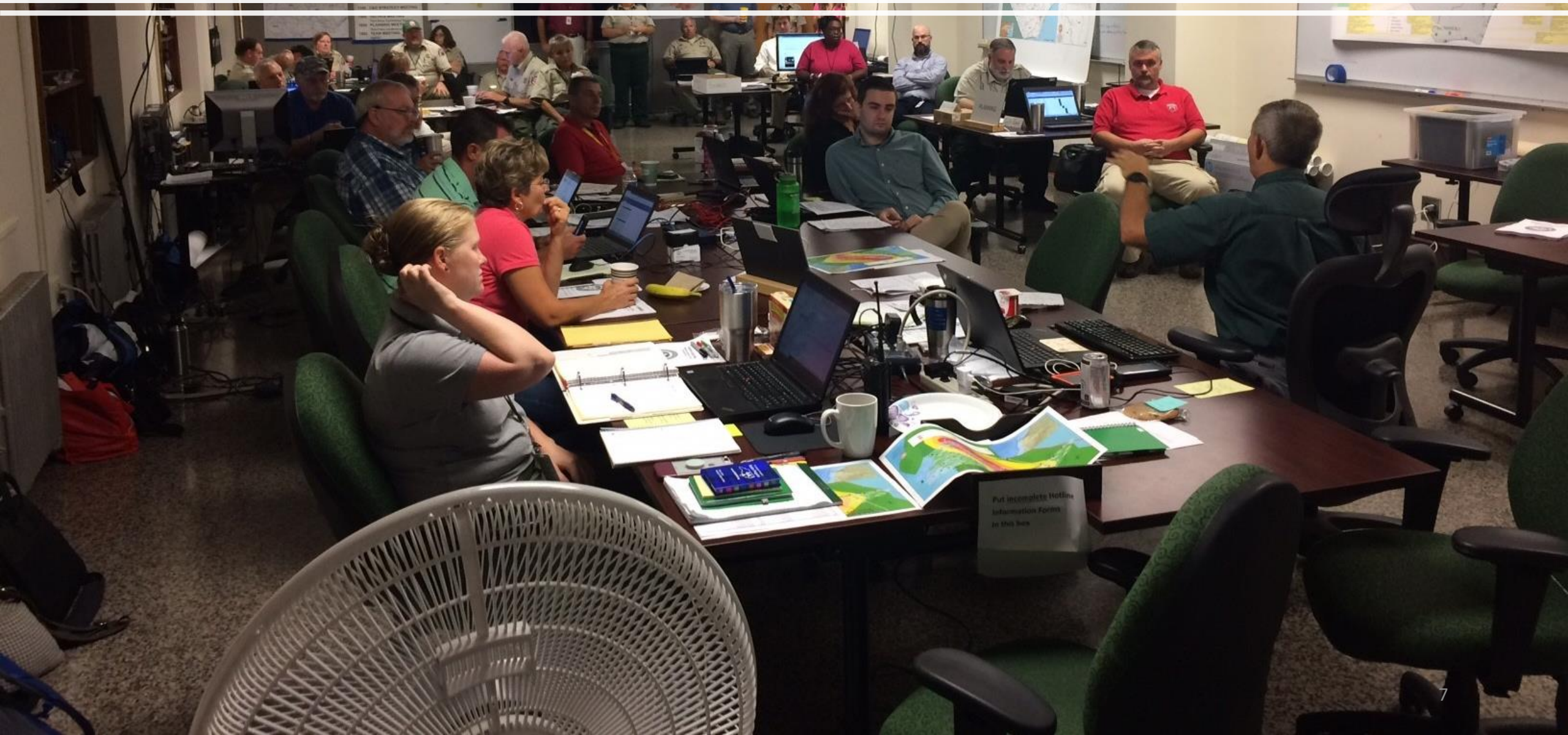
- Industry partners contacted daily in preparation of storm
- Approximately 1.5 million birds were moved before the storm – either to slaughter or to other farms
- Feed was positioned on farms before storm
- Generators were prepared before storm



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

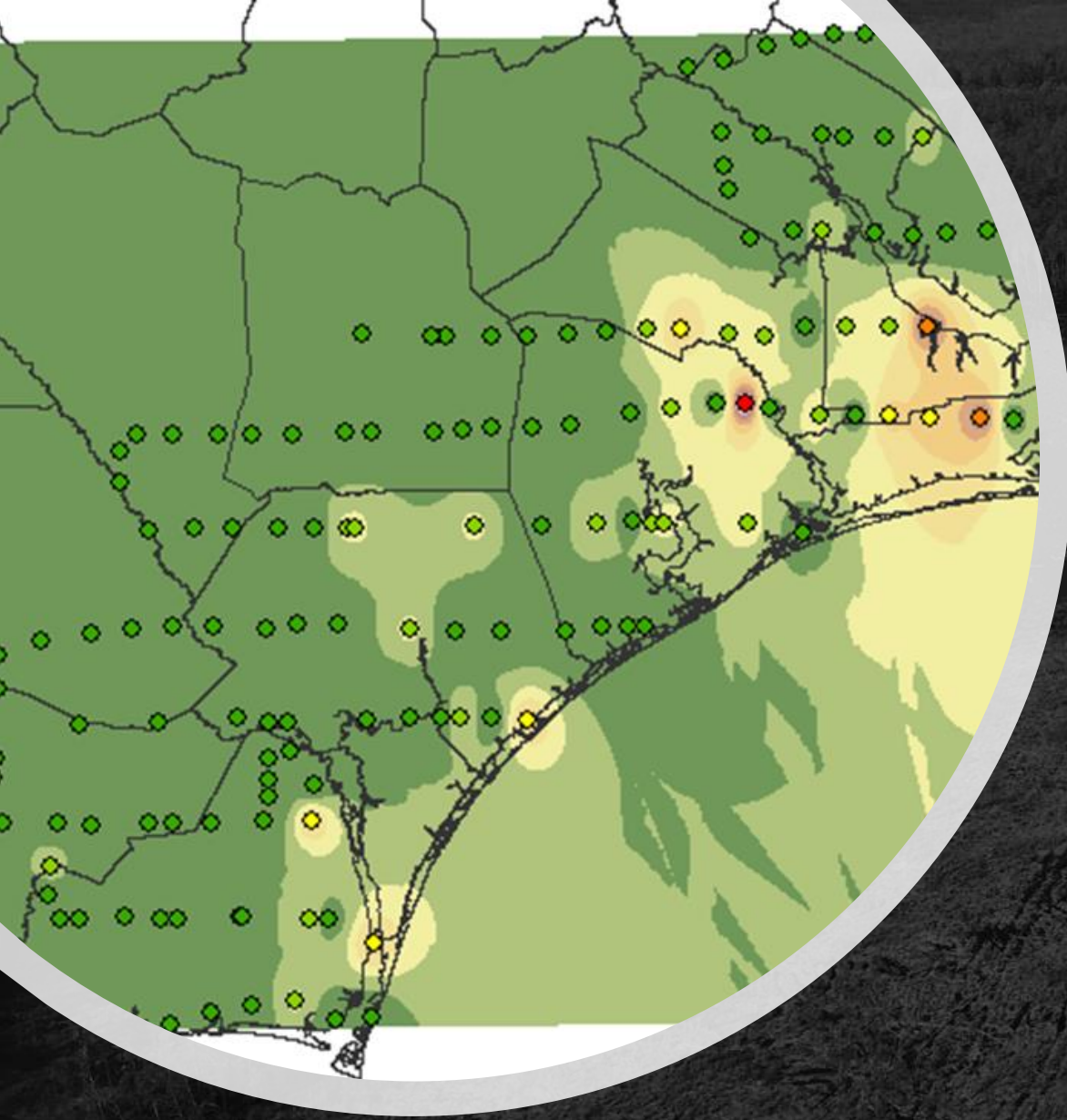
- State roads leading to farms were flooded or washed out
- Farm roads flooded or washed out
- Fencing, equipment and materials.





Crop and Economic Loss

Commodity	Production Loss	Total Estimated Loss	Estimated Job Impact
Flue-Cured Tobacco	\$314M	\$769M	11,772
Sweet Potatoes	\$180M	\$497M	13,967
Corn	\$84M	\$232M	6,522
Soybeans	\$202M	\$486M	4,623
Cotton	\$135M	\$338M	4,608



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



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

Wind Damage

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



Commercial Swine

- 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.

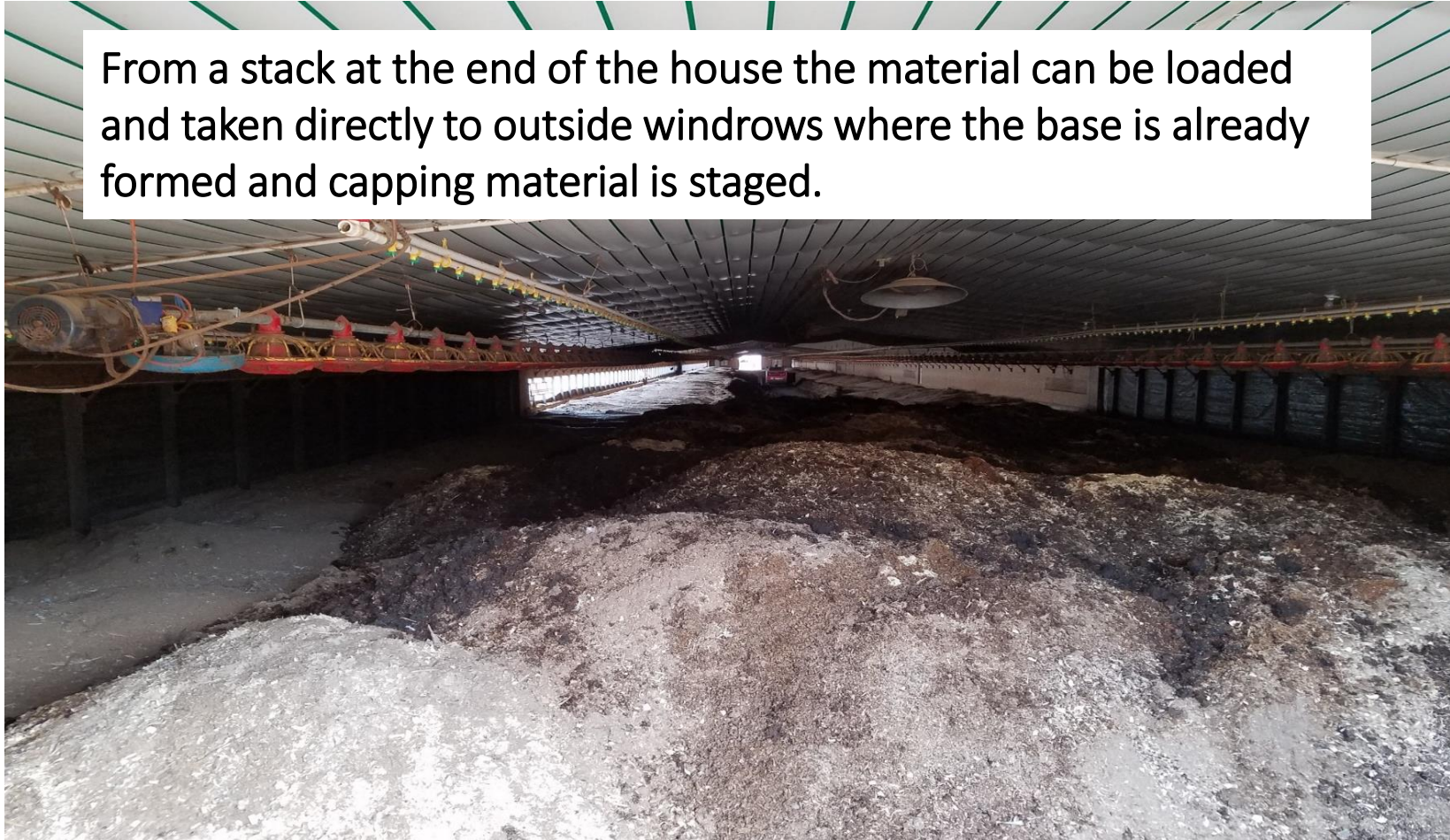
The Mortality Management Program



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





NCD&CS Recovery Request

Mr. David Smith
Chief Deputy
Commissioner
NCD&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

