

Integrating Laboratory, State, and Federal Response Plans- A North Carolina Perspective

NAHLN Emergency Response Symposium

October 23, 2008



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State Veterinarian

**NC Department of Agriculture and Consumer
Services**

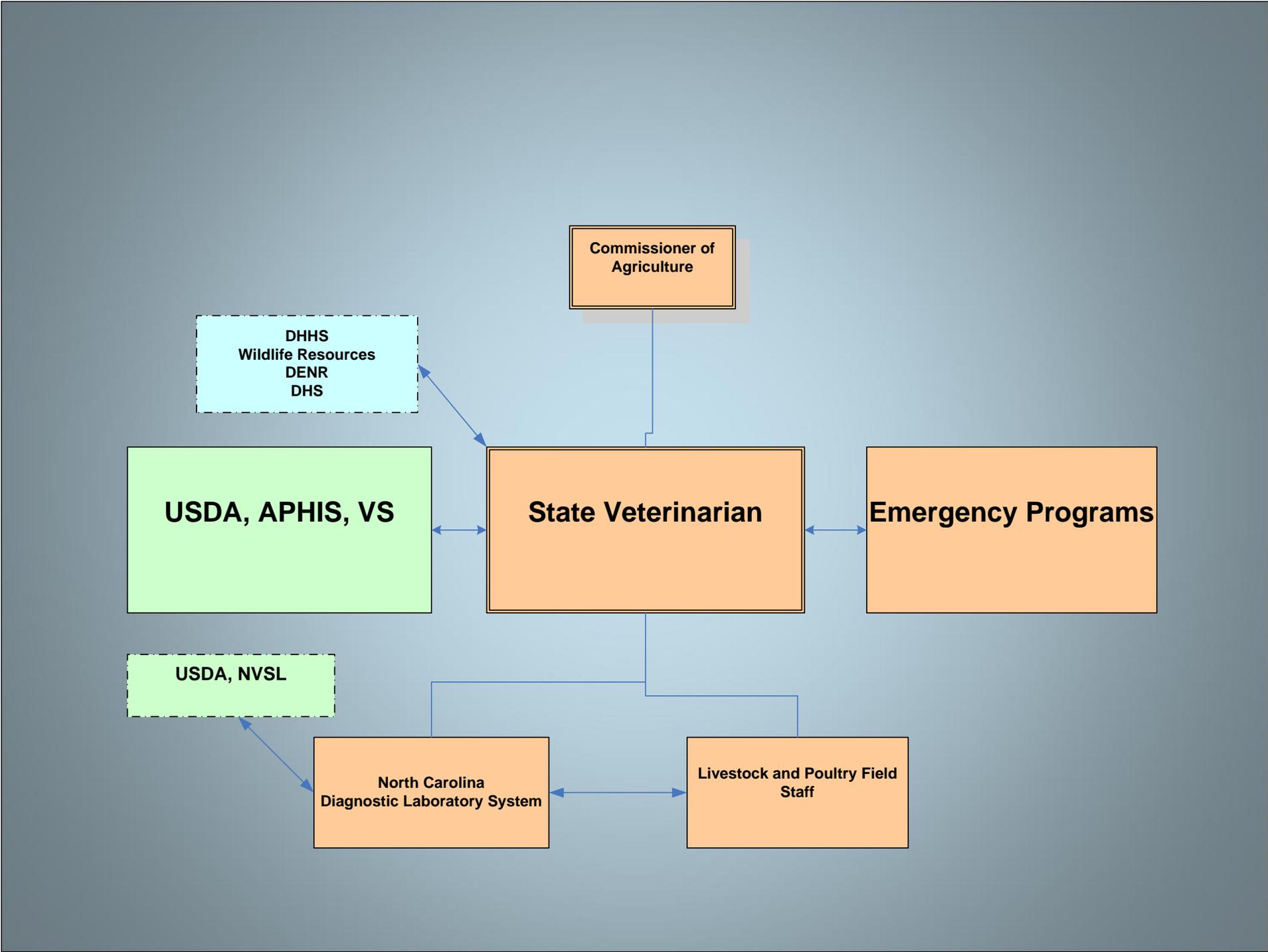
Overview

- **Background and history**
- **Principles of an effective coordinated disease response including current NC capabilities**
- **“Operation Flock Together” as a functional exercise example**
 - **Sampling**
 - **Laboratory capability**
 - **Field technology**

Disease Events/History

North Carolina has been fortunate to date as compared to other states with much larger scaled events (CA- END, MI- TB, etc.)

- Late 1990's- **Pseudorabies eradication**- Evolution of premises, movement, and laboratory test result data management (>400,000 samples annually)
- 1999- **Hurricane Floyd**- mass mortality and secondary disease impact
- 2002- **LPAI H7N2 event**- our first emergency disease response incident
- 2004- **E. coli 0157:H7 at state fair**- coordination with Public Health
- 2007- **Melamine contaminated swine feed**- USDA, FDA components
- 2008- **Drought**- secondary disease tracking and reporting, laboratory impact
- 2008- **LPAI H7N7** in mixed species backyard flock



North Carolina Veterinary Diagnostic Laboratory System (NCVDLS)

- 101 employees
- Mission: surveillance for and detection of disease at 5 Diagnostic Laboratories across NC



Challenges in Integrated Disease Response

- Prior to 2001, the State Veterinarian's field staff, diagnostic lab system, Public Health, state Emergency Management, Wildlife Resources, USDA, etc. were “stove piped”- poor communication
- Establishment of Dept. of Homeland Security with mission of assuming some of USDA's traditional roles

Remedies/Accomplishments

- 2002, Establishment of Emergency Programs division within the department
- 2000, establishment of the State Animal Response Team (SART)
- ICS training of division and department employees
- Development of laboratory response plans and exercising- still work to be done

NCDA&CS' Principles of an Effective Disease Response

- Data and information from which to make decisions
- Established and exercised response plans and Incident Command Structure (ICS)
- Accurate laboratory data with rapid turn around time
- Preexisting working relationships
- Subject matter expertise- lab and ICS level
- Seamless communication and cooperation

Data and Information Management

- Premises and producer data
- LIMS test result data integration into the ICS decision making tools
- Data flow into the USDA's Emergency Management Response System (EMRS) and NAHLN's HL7 messaging system
- Streamlined laboratory sample submission and data capture

MULTI-HAZARD THREAT DATABASE (MHTD) 4 COMPONENTS

Address  <https://www.ncmhtd.com/NCDACS/vet/industry/>



MHTD

North Carolina Department of Agriculture & Consumer Services
MULTI-HAZARD THREAT DATABASE

[MHTD](#) > [NCDA&CS](#) > [Vet](#) > [Industry Home](#)



Premises Management

If you have questions, comments or concerns, email WebMaster

1. Animal Health Programs Database

- NCDA&CS listing of farms
 - Farms also entered into national NAIS system with permission
 - More companies and backyard flocks- 16,725 as of Oct.'08
 - Allows industry partners to QC/QA and validate data

Address  <https://www.ncmhtd.com/NCDA/CS/vet/ahp/premisesmanagement/>

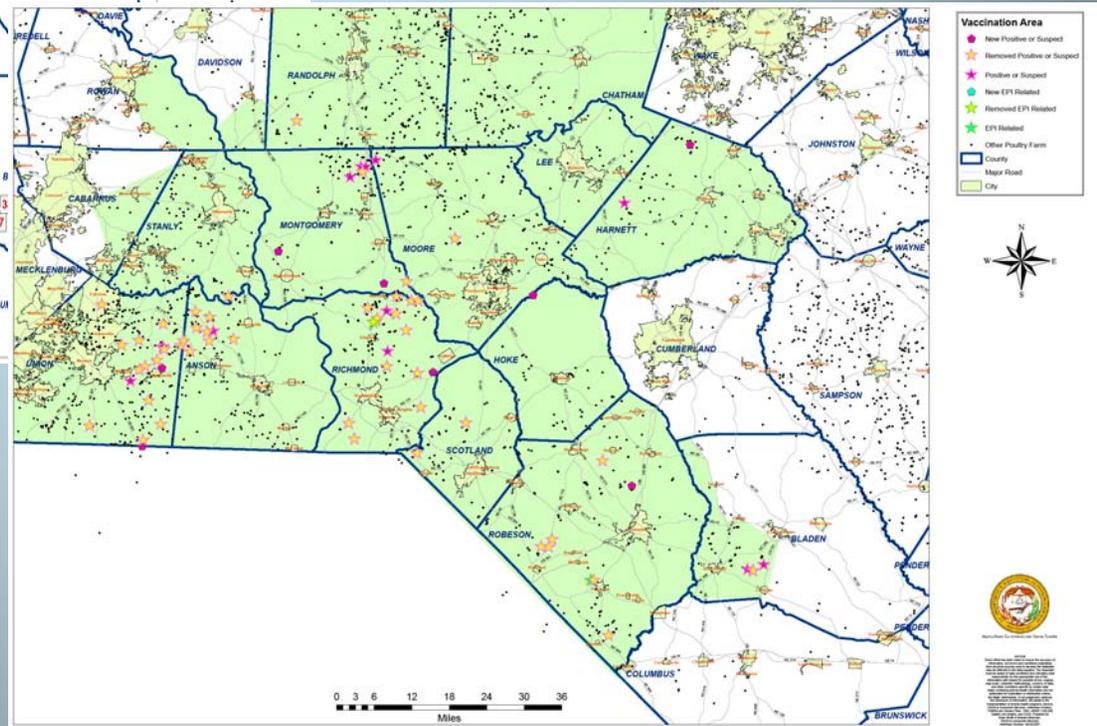
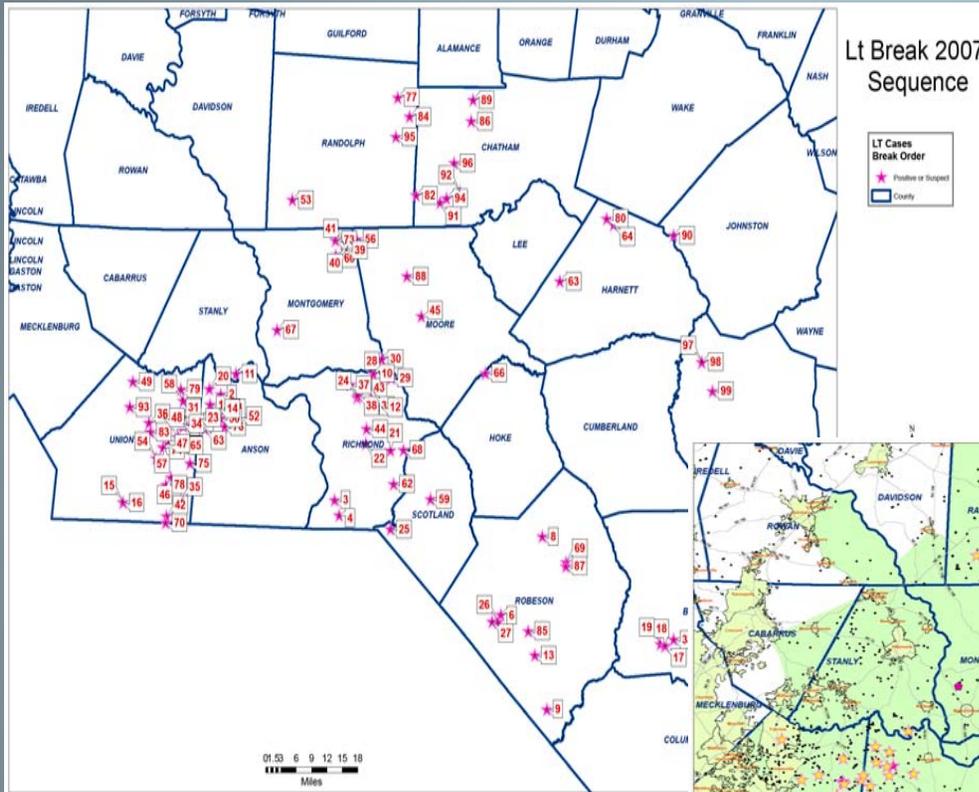
///AHP
Tue 6/26/07 | 3:14:30 PM
Welcome Daniel Madding

Poultry Management ADMINISTRATION SEARCH REPORTS DATA 4324 Poultry Farms

Administration
Premises Search
Species Management
Tools

Farm Details [+]	
Name	VANCE MURPHY FARM
Status	NONE
Farm Type	BROILER
Premises Type	COMMERCIAL
Production Type	COMMERCIAL
Capacity	88000
Houses	4
Premises Details [+]	
State ID	550618653
National ID	
Premises Type	FARM
Address	6170 POTTERS HILL ROAD
Owner Details [+]	
Owner Name	CASE FARMS/ GOLDSBORO
Owner Contact Name	ROBERTSON, SAM
Contact Details [+]	
Contact Name	MURPHY, JR., ZEB VANCE

2. Comprehensive GIS (geospatial) database



3. Web based applications

For data collection and Emergency Response

Address: <http://www.ncagrgis.com/foodrecall/processform.asp> Go

Castleberry's Recall Data Collections

Your Information

Items denoted by '*' are required for form submit.

Your Name/Title: *

Select County: *

Location Visit Date: * Use MM/DD/YYYY Format

Location Information

Items denoted by '*' are required for form submit.

Castleberry's Food Recall Daily Data

Location Name: *

Address:

City:

County: *

Zip:

Was product offered for sale at time of visit?
 Yes (If yes, please enter number of cans removed)
 No

cans removed from sale:
(Please enter only a valid number, no character values
For example enter '2' not '2 cans on shelf'
Please put comments into the Comments field below.)

Supplier:

Disposed of Or held?
 Disposed
 Held
 NA

Comments:

Address: <https://www.ncmhtd.com/NCDAACS/StateFair/ApplyForPermit.aspx?id=26> Go

Application for Animal Contact Exhibit Permit

Date:

Exhibit name:

Exhibit owner

Name:

Business name:

Phone:

Cell Phone:

Email address:

Mailing address

We will mail your acknowledgement to

Street

P.O. Box

City

State

Zip

Physical address

Same as mailing address

Street

City

State

Zip

Food Firms Tracking Database: Inspections Information - Windows Internet Explorer

Address: <http://localhost/dotnet/FoodFirms/InspectionsInformation.aspx>

FTFD: Inspections Information

Home Back Add New Firm Search for Firm # Greetings Brandon Peele (Admin)

Locate Firm

Step One
Select First 2 Digits of Firms ID #:

Step Two
Select Firm ID #: | Fridy's Bakery..... | Winston Salem

Enter Inspection Data Details

ID#: Company: Status:

Inspector: Inspection District:

Firm Code: | Retail Bakeries

Inspection Level: # of Inspections:

Violation: No Yes # of Violations:

Last Date: Last Insp Code: | Not Assigned

Next Date: Next Insp Code: | State Inspection

Comment:

NCDA-FDA Seafood:

FDA INSP: Date: FDA CFN:

List INSP: Date:

Local intranet 100

4. Google earth viewer



INDUSTRY PREMISES MANAGEMENT

INDUSTRY PREMISES MANAGEMENT

Industry Home
Wed 10/31/07 | 9:27:03 PM
Welcome Daniel Madding

Species Management
Administration
Data Conflicts

2D 3D
+
-
Road
Aerial
Hybrid

Summerlins Crossroads
Pink Hill
Leon
Kenansville
Petersburg Crossing
Beulaville
Jacksons Store
Quinns Store
Register
NC 1001
2.5 miles

Microsoft
Virtual Earth

© 2006 Microsoft Corporation © 2006 NAVTEQ
© 2006 Earthstar Geographics, LLC

Detailed description: The image shows a screenshot of a web-based GIS application. The main area is an aerial satellite view of a region in North Carolina. Numerous blue circular icons with a magnifying glass are scattered across the map, representing industry premises. A single yellow star icon is also present. The map includes labels for various locations such as Summerlins Crossroads, Pink Hill, Leon, Kenansville, Petersburg Crossing, Beulaville, Jacksons Store, Quinns Store, Register, and Hadley. Road numbers like 11, 24, 50, 111, 241, and 41 are visible. The interface includes a top navigation bar with the title 'INDUSTRY PREMISES MANAGEMENT', a user greeting 'Welcome Daniel Madding', and the date/time 'Wed 10/31/07 | 9:27:03 PM'. On the left, there is a menu with 'Species Management', 'Administration', and 'Data Conflicts'. A control panel on the left side of the map allows switching between '2D', '3D', 'Road', 'Aerial', and 'Hybrid' views. A scale bar at the bottom right indicates '2.5 miles'. Copyright information for Microsoft, NAVTEQ, and Earthstar Geographics is at the bottom.

Identify Specific Farm



**FARM INFO
NORMALLY
DISPLAYED**

Established and Exercised Response Plans and ICS Structure

- Pre-identified assignments
- Match individual's skills to specific tasks
- Include key laboratory, USDA-APHIS, industry, CVM, and other agency personnel within the structure
- ICS Training- 200 level or higher
 - Field staff 44 employees
 - Diagnostic lab 41 (25 Rollins and 16 branch lab)

DRAFT 5/04/06

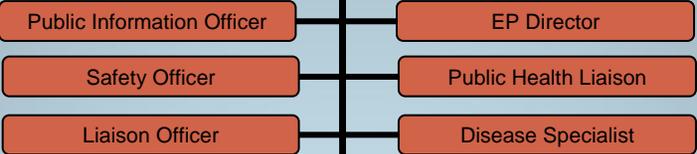
DRAFT
North Carolina
Response and Containment Plan for
Highly Pathogenic Avian Influenza



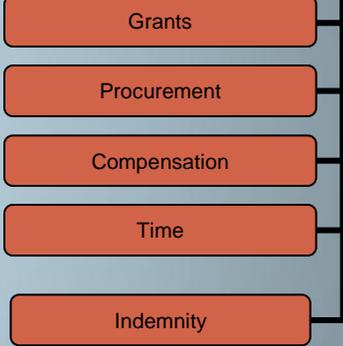
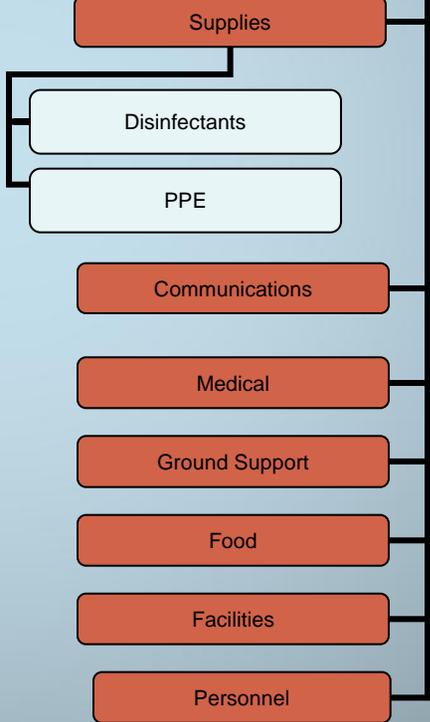
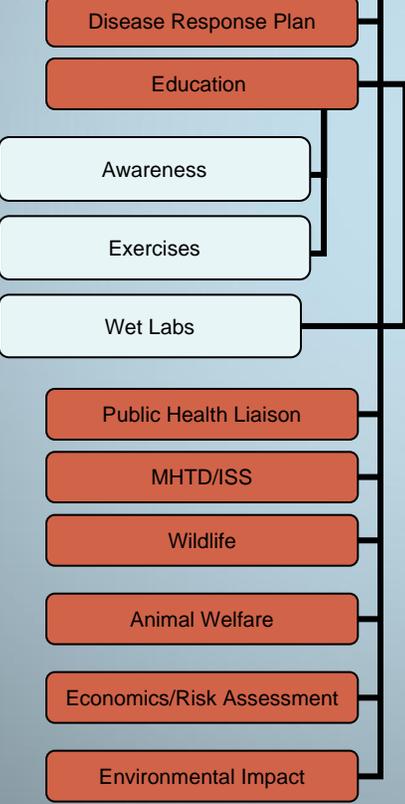
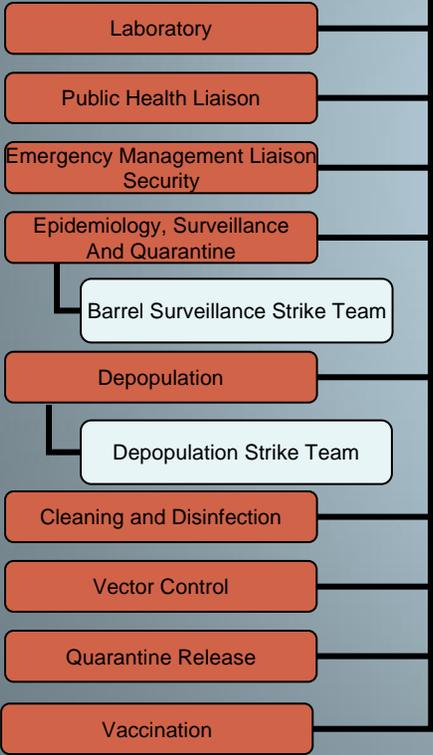
**North Carolina Department of Agriculture
And Consumer Services**

Avian Influenza ICS

Incident Commander



Operations Section Chief Planning Section Chief Logistics Section Chief Finance Section Chief



Pre- existing Working Relationships

- USDA, APHIS Area and Regional offices
- NVSL, NAHLN
- State Emergency Management
- Public Health, DENR, Wildlife Resources Commission
- Industry
- Private veterinary practitioners, CVM
- Cooperative Extension Agents



**Veterinary
Response Corps
Private and Public
Veterinarians and
Technicians**

**AI Strike Team Training
Industry, Public
Veterinarians and animal
technicians**



Trainings in North Carolina by NCDA&CS

- Poultry Strike Team Training
 - Began March 2006
 - June 2006, March 2007
 - Participants:
 - NCDA&CS, NCSU, USDA, military, industry, PH, Other
 - 90 outside participants (some repeats)

Poultry Strike Team Training Participant Breakdown

- NCSU 17
- Veterinary Division 22
- USDA 6
- PH 5
- Military 6
- Industry 24
- Department of Corrections 9

“Operation Flock Together” Partners



USDA/CSREES

\$30,000.00



USDA/APHIS/VS

\$93,000.00



IN-KIND
NCDCA&CS AND
PARTNERS

\$60,000.00



FEDERAL PARTNERS

- **United States Department of Agriculture
APHIS, VS**
- **USDA, APHIS, NVSL/NAHLN**
- **USDA, APHIS, Wildlife Services**

STATE PARTNERS

- NC Department of Agriculture and Consumer Services
- NC Department of Crime Control and Public Safety, Division of Emergency Management
- NC Department of Environment and Natural Resources: Waste Management, Water Quality, and Forest Resources Divisions
- NC Department of Health and Human Services, Division of Public Health
- NCDHHS, DPH, NC State Laboratory of Public Health, Bioterrorism and Emerging Pathogens Unit
- NC Wildlife Resources Commission
- SC Department of Health & Environmental Control

UNIVERSITY PARTNERS

- **North Carolina State University: Poultry Science & College of Veterinary Medicine**
- **North Carolina Cooperative Extension**
- **Clemson University, Livestock-Poultry Health Program**

LOCAL PARTNERS

- **Alexander County Emergency Services Department**
- **Alexander County Health Department**
- **Alexander Branch of the Catawba Valley Chapter of the American Red Cross**
- **Frye Regional Medical Center**
- **Sampson County Public Safety Department**
- **Sampson County Health Department**
- **Sampson Regional Medical Center**
- **Wake Forest University Baptist Medical Center**

INDUSTRY PARTNERS

- North Carolina Farm Bureau
- Johnson Breeders
- North Carolina Poultry Federation
- Mountaire Farms
- Allen's Hatchery
- Nash Johnson and Sons
- Braswell Foods
- Perdue Farms
- Carroll's Turkeys
- Prestage Farms
- Goldsboro Milling Company
- Townsends
- ISE Newberry
- Tyson

SAMPLE COLLECTION



SAMPLE ENTRY AT LAB

**SAMPLES SUBMITTED WITH
PAPER FORMS**



**SAMPLES SUBMITTED USING
BAR CODES**



Crossroads of New Technology and Disease Containment- NC UNIT



Decon and EMS: Local Partner Support

ALEXANDER COUNTY FIRE



ALEXANDER Co. Fire and EMS



HUMAN SUPPORT TRAILERS

PPE ON ROLLING SHELVES



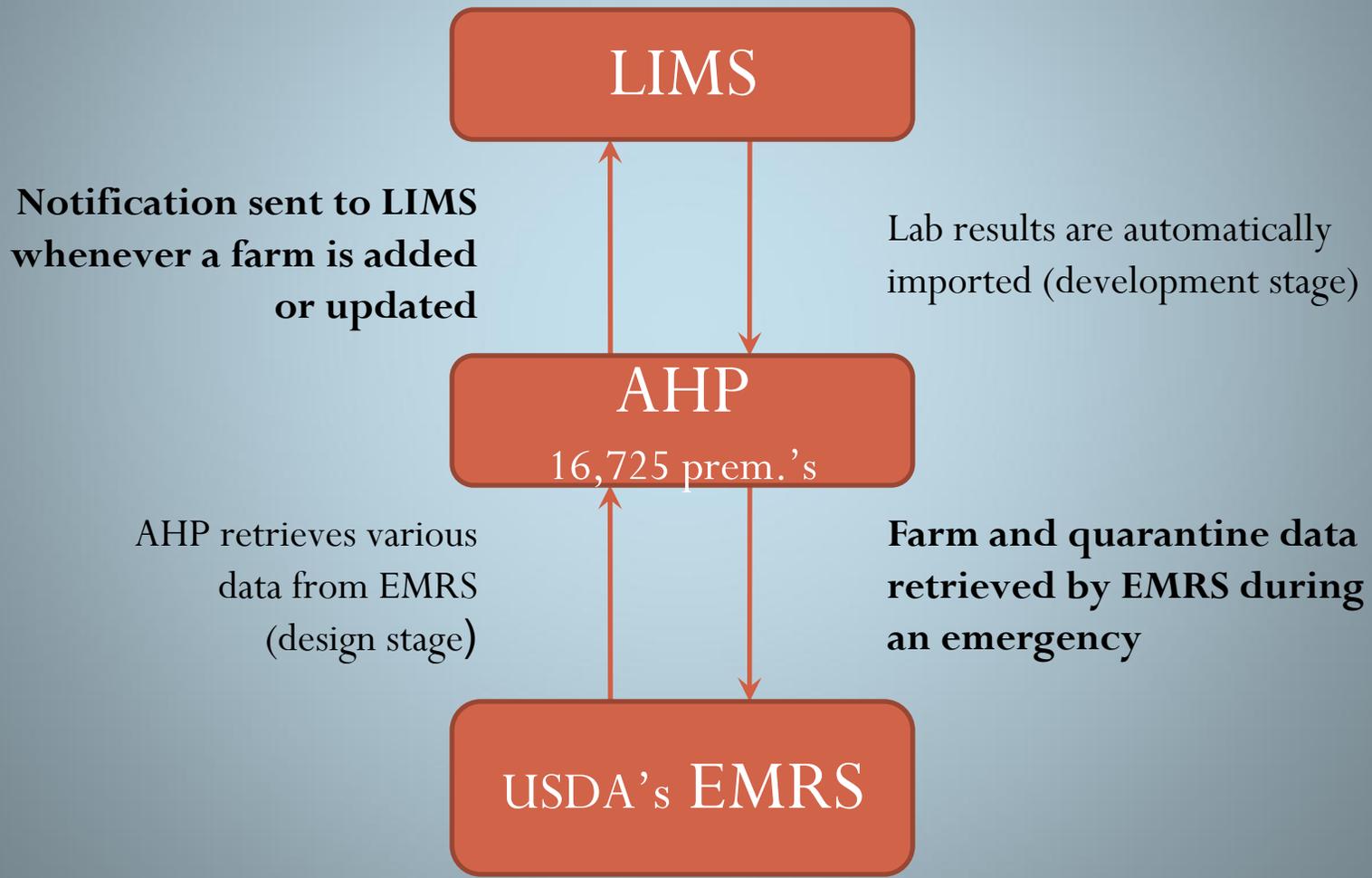
TARPS KEEP STOCK STABLE



Lessons Learned/Outcomes

- Sample accession data process needs streamlining
- Current Rollins Laboratory BSL3 and supporting storage areas is insufficient to respond to a large scale HPAI outbreak in NC
- Electronic lab result reporting capability is needed
- Additional PCR testing equipment is needed

AHP Database-LIMS Integration



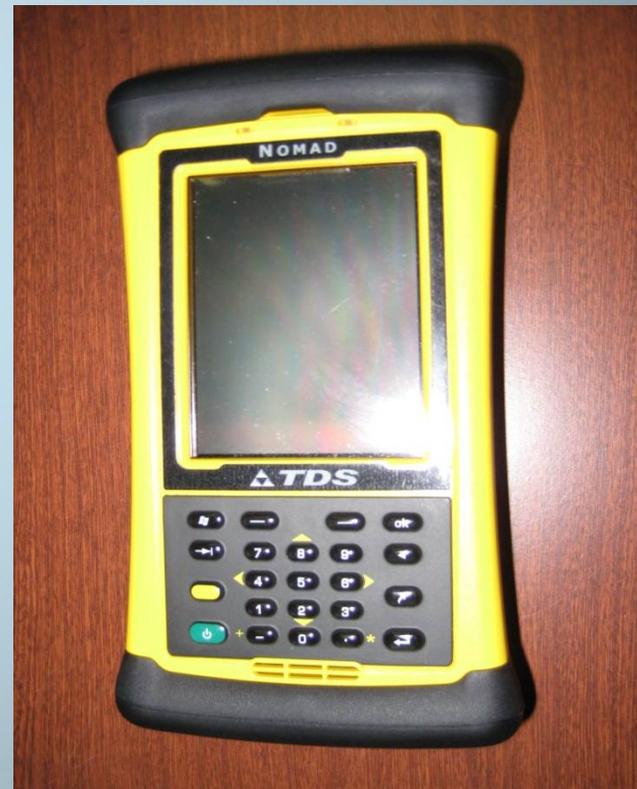
FIELD DATA COLLECTION

FUTURE GOAL

TOUGHBOOK



NOMAD HANDHELD UNIT



Summary

- Emergency disease response is a collaborative effort
- Planning and exercising prior to an event is crucial
- Pre-existing relationships are critical
- Continued enhancement of real time laboratory test result data sharing with ICS planners is needed
- Federal NVSL, NAHLN, and APHIS support (\$\$\$ and decision making) drives the process



Questions/Comments?

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