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## ESTABLISHING AN ANIMAL DISEASE DIAGNOSTIC NETWORK

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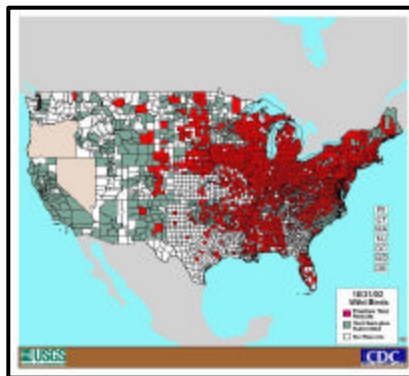
President

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### Background

United States animal disease diagnosis and surveillance would function most effectively as a shared responsibility of publicly funded state animal health laboratories, represented by the American Association of Veterinary Laboratory Diagnosticians (AAVLD), and federal animal health laboratories administered through the USDA Animal and Plant Health Inspection Service (APHIS). This partnership is essential for safeguarding the health and well being of our nation's livestock and poultry, companion animals, wildlife, zoo and exotic species, and for protecting the public health from diseases common to animals and humans. A national strategy, melding the nation's federal, state, and local resources, would be capable of responding to any type of animal health emergency, including bioterrorist events, newly emerging diseases, and foreign animal disease agents that threaten the nation's food supply and public health. As identified in the Safeguarding Review, National Research Council Report "Countering Agricultural Bioterrorism", GAO report on Foot and Mouth Disease, and many other studies, the need to develop and maintain a state-of-the-art national animal health laboratory network (NAHLN) has never been more critical.

#### Exotic Newcastle Disease United States 2002 - Present



#### West Nile Virus United States 1999 - Present

#### Foot and Mouth Disease Great Britain 2001



### What are the benefits?

Animal industries, regulatory agencies, and public health would all benefit from the activities of this network. Full implementation would provide early detection of bioterrorist events; natural or intentional contamination of our food supply; animal disease outbreaks involving agents that impact human health such as anthrax and West Nile Virus; and early recognition of newly emergent and economically important diseases such as Exotic Newcastle Disease, Foot and Mouth Disease and bovine spongiform

encephalopathy. Importantly, the NAHLN also would strengthen current state-based laboratory testing for export of animals and live animal products, ensure that testing meets international quality standards, and enhance surveillance for diseases of international concern to expand global markets.

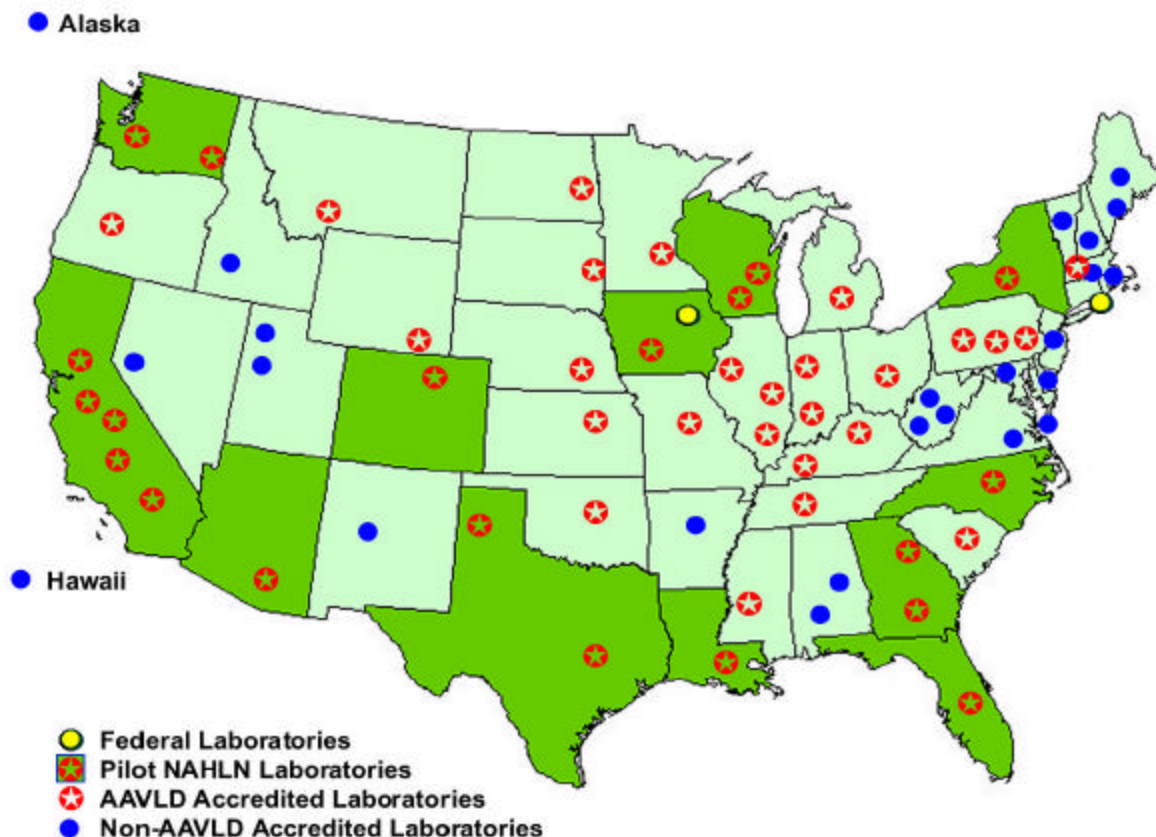
### **Establishment of the Pilot National Animal Health Laboratory Network**

The United States has responded quickly and appropriately to new public health threats by creating and funding a comprehensive public health laboratory response network (LRN) coordinated through the Centers for Disease Control. A similar comprehensive, coordinated, and modernized federal and state animal health laboratory network has been urgently needed to address the same emergent biological and chemical threats to animal agriculture and the security of our food supply. Critical features of the network should include:

- A secure communication, reporting and alert system
- Standardized, rapid diagnostic techniques
- Modern equipment and experienced personnel trained in the detection of emergent, foreign, and bioterrorist agents
- A training, proficiency testing, and quality assurance system to ensure that all laboratories meet quality standards
- Federal and state facility upgrades to meet biocontainment requirements
- Periodic scenario testing of the NAHLN and the associated response network

In 2002, President Bush signed HR3448 into law as the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. This law, in section 335, authorizes the Secretary of Agriculture to develop an agricultural early warning surveillance system enhancing the capacity and coordination between state veterinary diagnostic laboratories and federal and state facilities and public health agencies, and provides authorization for Congress to appropriate funding to the NAHLN. In May, 2002, approximately \$15M in emergency supplemental funds was provided to establish a pilot NAHLN involving 12 State/University diagnostic laboratories (states designated by darker shading below). The mandate for this pilot network was to develop expanded diagnostic capacity and surveillance programs for eight high priority foreign animal diseases considered to be bioterrorist threats. These diseases included Foot and Mouth Disease, Rinderpest, Lumpy Skin Disease, Contagious Bovine Pleuropneumonia, Classical Swine Fever, African Swine Fever, Avian Influenza, and Exotic Newcastle Disease.

Over the past 8 months, the pilot NAHLN laboratories have developed critical infrastructure for the network, including facility upgrades to meet level 3 biosafety standards. A steering committee that includes stakeholders in the agricultural animal health community, including the American Association of Veterinary Laboratory Diagnosticians, USDA, federal and state laboratories in the NAHLN, and state laboratories currently not in the pilot program, oversees this effort. With additional representation from the Centers for Disease Control and State Public Health Laboratory Directors, the NAHLN steering committee has established policy and procedures for inclusion of state veterinary diagnostic laboratories in the public health LRN, and subsequently in the Food Emergency Response Network implemented through the Food and Drug Administration and the Food Safety Inspection Service. The information technology committee of the NAHLN is working closely with other federal partners to develop an electronic network that will provide instantaneous notification of disease outbreaks, nationwide surveillance data, analysis of disease trends, and detection of new syndromes that may be the first indication of an emergent disease threat. Our shared vision is a truly integrated and seamless animal, food, and public health laboratory network throughout the United States.



### What is needed?

Though the initial pilot program funding provided critical startup costs, they fall far short of developing a true national network that will effectively provide surveillance for zoonotic and foreign diseases, bioterrorist agents, and newly emergent diseases like West Nile Virus. The map above indicates the location of all additional AAVLD accredited and non-accredited state laboratories in the United States. It is critical that the pilot network be expanded to include these laboratories, providing representation for all states and all agricultural animal producing areas in the country.

Federal funding to continue the pilot program and address these deficiencies is critically needed. Both additional startup costs (estimated at \$85M if all state laboratories are included), and continuing funding (estimated at \$22M annually for a nationwide network) are required to expand and maintain a comprehensive, coordinated, and modernized NAHLN. Effectively countering the threat we face from intentional introduction of disease agents into our food chain at any level demands that we continue to develop an enhanced laboratory network based on the foundation provided by the pilot NAHLN.

**NAHLN**  
**A State and Federal Partnership to Safeguard Animal Health**

