

Veterinary Services

Aquatic Pathogen Testing in NAHLN Laboratories Update

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National Animal Health Laboratory Network
STAS
October 25, 2015



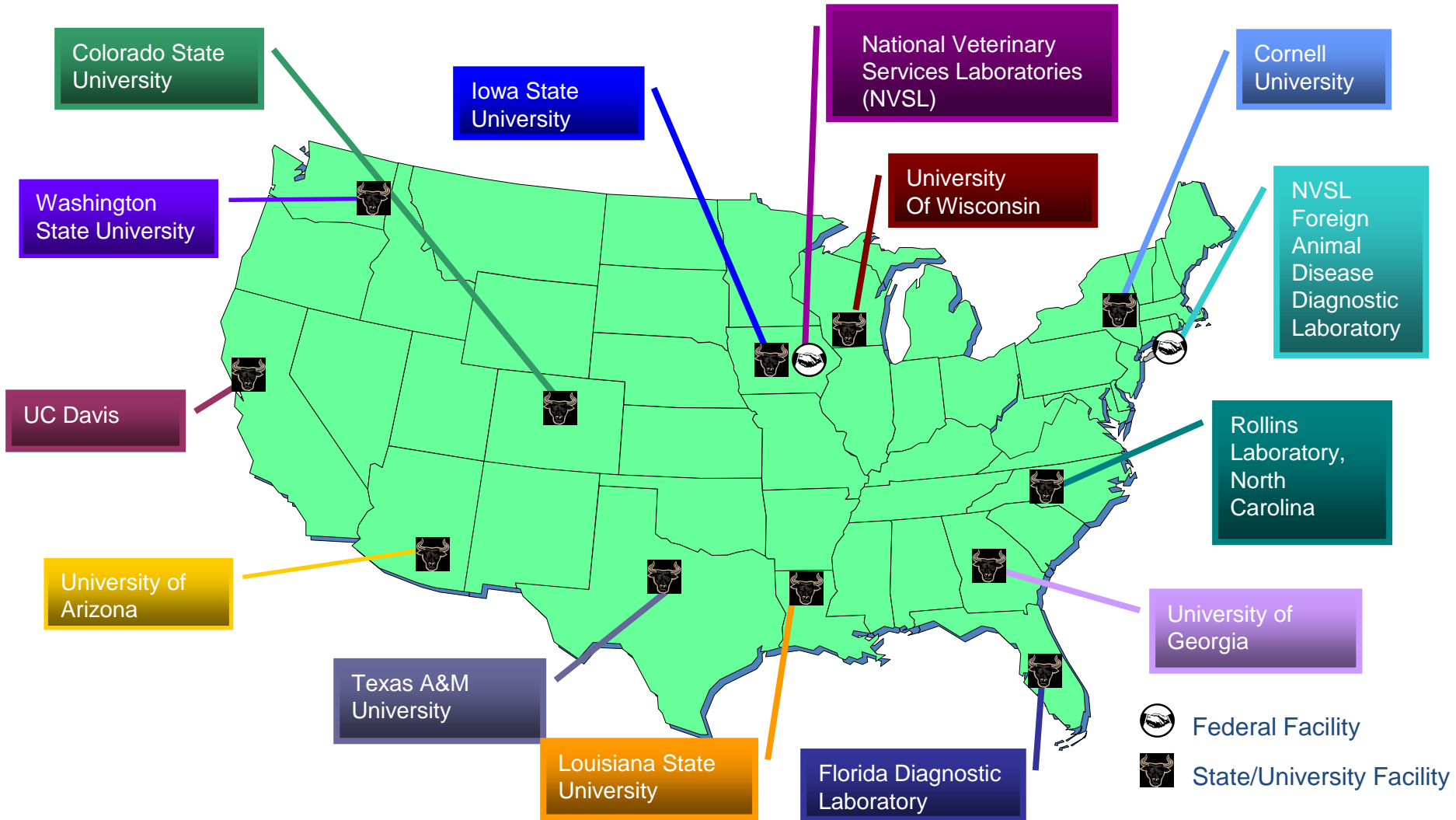
National Animal Health Laboratory Network

- Formed in 2002
- Purpose
 - Early detection
 - Rapid response
 - Appropriate recovery
- Is a **partnership** between:
 - USDA (APHIS and NIFA)
 - AAVLD
 - NAHLN Laboratories

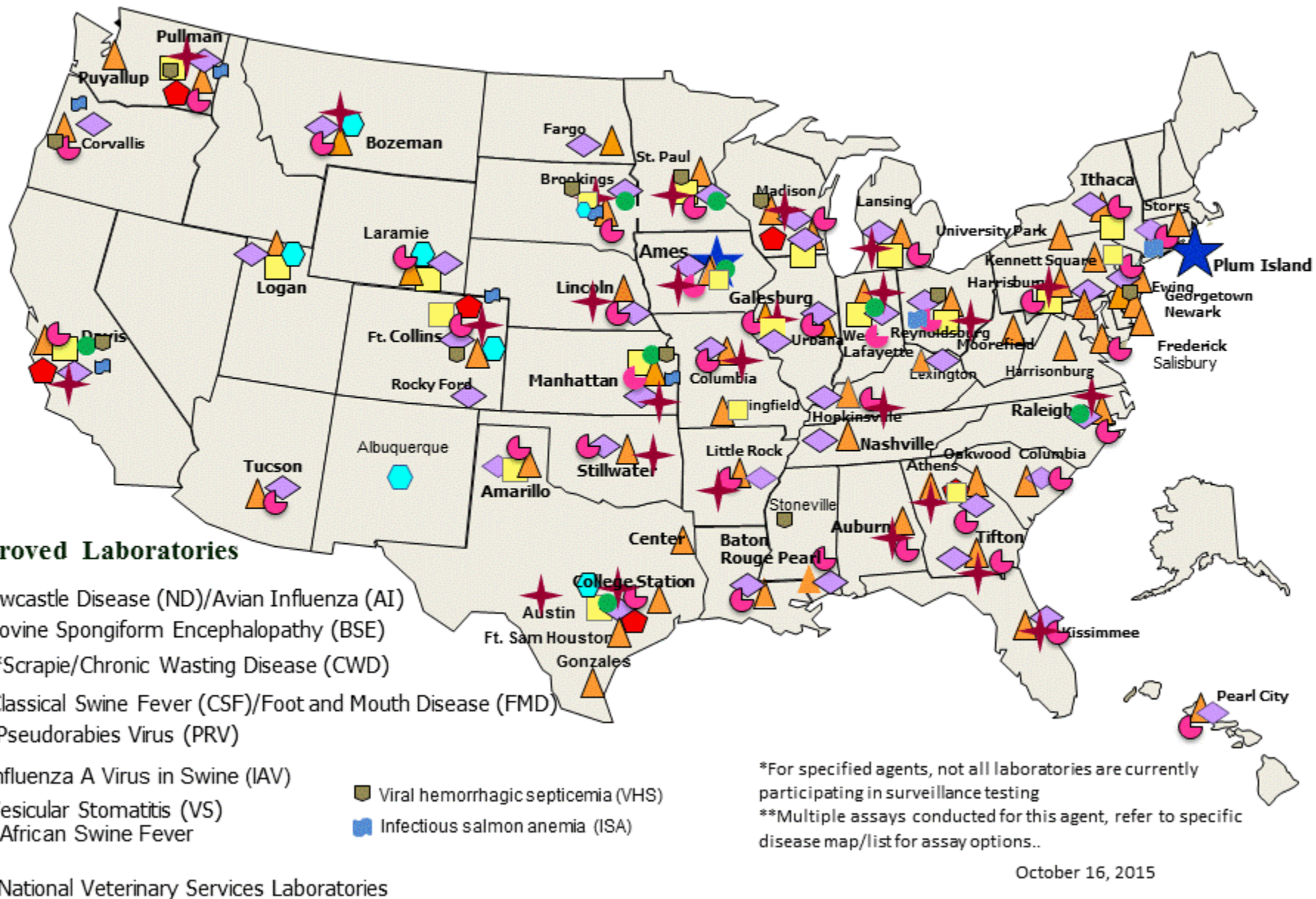
Founding Principles and Features of NAHLN

- Quality standards
- Competency of laboratory personnel
- Standardized protocols and equipment
- Adequate biosafety/biosecurity
- Secure electronic communications and reporting
- Assessment of preparedness through scenario testing

The original 12 NAHLN laboratories



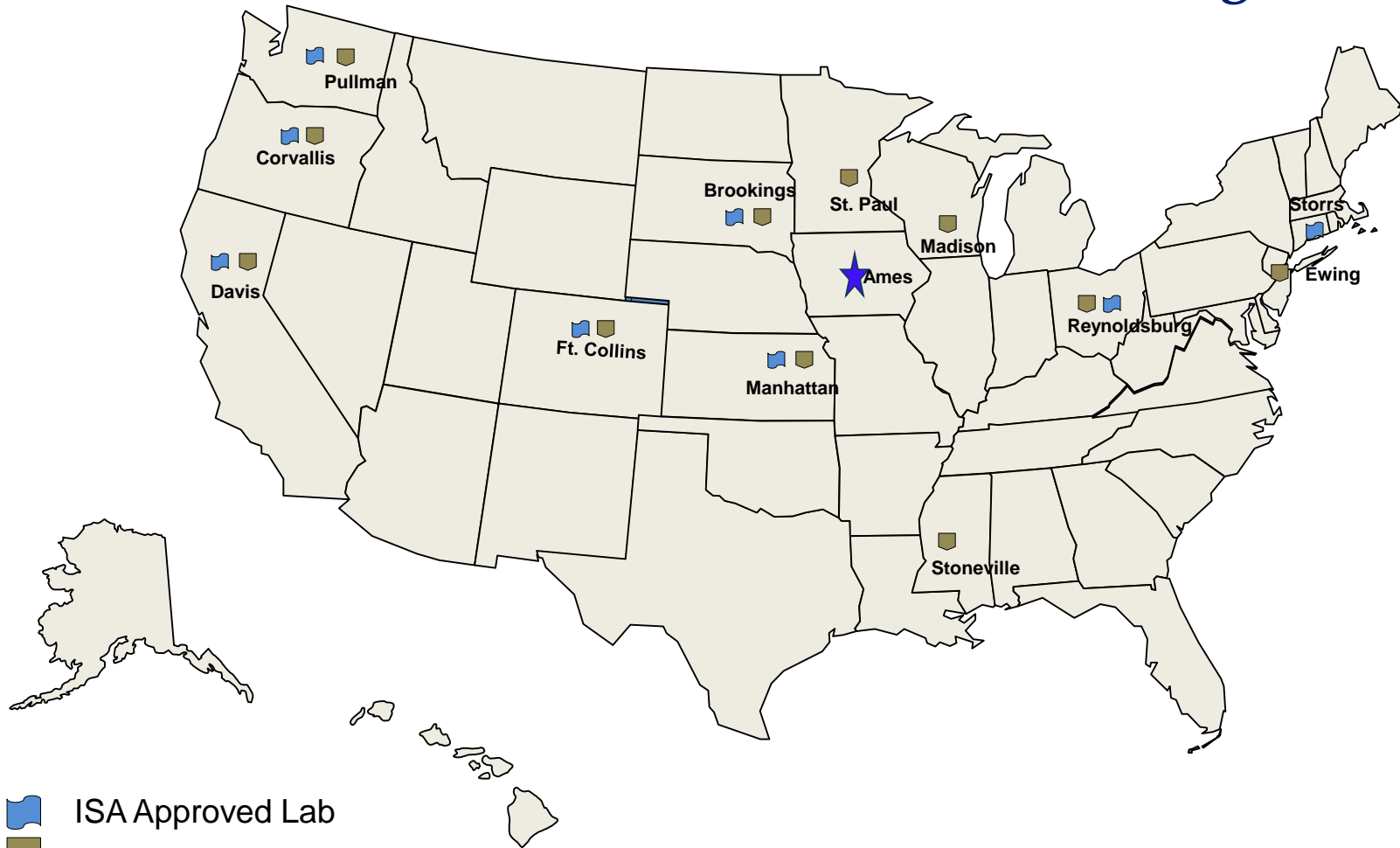
National Animal Health Laboratory Network (NAHLN)





United States Department of Agriculture

Laboratories Approved to Conduct ISAV or VHSV Surveillance Testing



October 16, 2015

NAHLN Restructure

- New Structure
 - NAHLN Coordinating Council published a concept paper in 2012
 - Several major changes
 - Lab designations : Level 1, Level 2, Level 3, Affiliate, Specialty
 - Reassessment
 - Annual reassessment for funding distribution and number of labs per level
 - Every 3 years full network assessment to update capacity and evaluate use of matrix
- Implementation
 - New structure will begin in 2016 with checklist process
 - Funding adjustments will be made with 2016 funding cycles – March 2016 (APHIS) and June 2016 (NIFA)

NAHLN restructure

- Level 1
 - Large testing capacity
 - Fully accredited
 - BSL3 facilitates
 - LIMS/messaging
 - Trainers
 - Test development and validation
- Level 2
 - Similar, but reduced capacity
 - Provisionally accredited
 - No BSL requirements
- Level 3
 - Surveillance testing
- Affiliate Labs
 - Publically funded that occasionally perform NAHLN related-testing
- Private Labs
 - Specific, needed capability to perform testing
 - Relationship with NAHLN lab and SAHO
 - Written, approved plan to avoid conflicts of interest
- Reference Labs provide
 - Oversight
 - Training
 - SOPs
 - Reference material
 - Proficiency testing



The plan

Phase 1

NAHLN Methods Technical Working Group (MTWG) will review and approve the SOPs for ISAV and VHSV testing. Existing NAHLN laboratories will be invited to participate in Phase 1 by including ISA and VHS in their NAHLN testing capabilities, taking part in proficiency testing and reporting results as indicated in the SOPs.

Phase 2

The APHIS Aquatic Animal Health Program along with NAHLN will invite other Federal and State non-NAHLN laboratories (e.g., U.S. FWS Fish Health Laboratories) and private aquatic animal health testing laboratories to consider applying for NAHLN approval and test for the approved aquatic diseases using standardized requirements.

Phase 3

Aquatic animal pathogens identified in the National Aquatic Animal Health Plan and the recently developed Commercial Aquaculture Program Standards will be considered for addition to the NAHLN disease testing list. The NAHLN Coordinating Council will evaluate and approve these prior to being added to the aquatic animal pathogen group within the NAHLN scope. The NAHLN MTWG will review the associated SOPs.



NAHLN Laboratory Qualification Checklist For Membership of a Veterinary Diagnostic Laboratory

- Annual renewal
- Agree to meet requirements of the NAHLN
 - Quality Management
 - Foreign Animal Disease (FAD) Assays and Investigations
 - Sample Handling
 - Communication and Reporting
 - Administrative and Financial Requirements
- Request any changes to disease/agent approvals
- Signatures needed from State (SAHO, etc.) and Federal representative (DD or AD)



State	Laboratory Name	Currently Approved testing	Specific request to add disease programs
CA	California Animal Health & Food Safety Laboratory	AI/END, BSE, CSF(pcr), FMD, PRV(gB/g1), Scrapie/CWD, SIV(pcr,VI)	ISA(rt-pcr), VHS(rt-pcr)
CO	Colorado State University Veterinary Diag. Laboratory - Fort Collins (Main)	AI/END, BSE, CSF(pcr), CWD(elisa), FMD, PRV, Scrapie/CWD, SIV(matrix), VSV	ISA(rt & conv.pcr), VHS(rt-pcr)
CT	Connecticut Veterinary Medical Diagnostic Laboratory	AI/END, CSF(pcr), FMD, SIV(pcr,seq)	ISA(rt & conv.pcr), VHS(rt-pcr)
IN	Purdue University Animal Disease Diagnostic Lab	AI/END, CSF(pcr), FMD, PRV, Scrapie/CWD, SIV(all)	VHS(rt-pcr/vi)
KS	Kansas State Veterinary Diagnostic Laboratory	AI/END, CSF(pcr),FMD, PRV(gB/g1), Scrapie/CWD, SIV(all)	ISA(rt-pcr), VHS(rt-pcr)
MN	University of Minnesota Veterinary Diagnostic Lab	AI/END, CSF(pcr), CWD(elisa), FMD, PRV(gB/g1), Scrapie/CWD, SIV(all)	VHS(rt-pcr/vi)
MS	Mississippi Veterinary Research & Diagnostic Laboratory (Branch)	New lab - NO APPROVALS	VHS(rt-pcr/vi)
NJ	New Jersey Dept of Agriculture	AI/END, CSF(pcr), FMD, Scrapie/CWD, SIV(matrix)	VHS(rt-pcr/vi)
OH	Ohio Department of Agriculture	AI/END, CSF(pcr), FMD, PRV(gB/g1), Scrapie/CWD, SIV(all)	VHS(rt-pcr/vi)
OR	Oregon State University Veterinary Diagnostic Lab	AI/END, CSF(pcr), FMD, SIV(pcr/vi)	ISA(rt-pcr), VHS(rt-pcr/vi)
SD	SD Animal Disease Research and Diagnostic Lab	AI/END, CSF(pcr), FMD, PRV(gB/g1), SIV(all)	VHS(rt-pcr/vi)
WA	Washington Animal Disease Diagnostic Laboratory - Pullman (Main)	AI/END, BSE, CSF(pcr), CWD(elisa), FMD, PRV, Scrapie/CWD, SIV(all)	ISA(rt & conv.pcr), VHS(rt-pcr/vi)
WI	Wisconsin Veterinary Diagnostic Laboratory - Madison (Main)	AI/END, BSE, CSF(pcr), CWD(elisa), FMD, PRV, Scrapie/CWD, SIV(matrix)	ISA(rt & conv.pcr), VHS(rt-pcr/vi)

Progress Update

Phase 1

- NAHLN Methods Technical Working Group and other aquatic subject matter experts reviewed and approved SOPs for ISAV and VHSV testing.
- Existing NAHLN laboratories were invited to participate in Phase 1 by including ISA and VHS in their NAHLN testing capabilities.
- Proficiency tests have been provided
 - Working with NAHLN for PT registration through the NAHLN Portal
 - Identified need for labs to hold permits for shipping VHSV virus isolation PTs.
- Data will be presented to the NAHLN Coordinating Council

PT Results

- ISAV PT (RT- real time PCR)
 - 8 labs have taken the PT
 - All 8 have now successfully passed

- VHSV PT (VI)
 - 8 labs have taken the PT
 - 5 have successfully passed
 - 3 working towards becoming PT'd

- VHSV PT (RT- real time PCR)
 - 11 labs have taken the PT
 - 8 have successfully passed
 - 3 working towards becoming PT'd



Progress Update

Phase 2

Pending implementation of NAHLN restructure:

- Federal and State non-NAHLN laboratories (e.g., U.S. FWS Fish Health Laboratories)
- Private aquatic animal health testing laboratories



Progress Update

Phase 3

- Including more aquatic pathogen assays



The Future of Aquatic Pathogen Testing in NAHLN Laboratories

- Expansion of membership
 - Includes private labs (2016)
- Quality management training
- Including more aquatic pathogen assays

Questions?

