Report of the USAHA/AAVLD Committee on Aquaculture
Chair: Lester Khoo, MS
Vice Chair: William Keleher, ME

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The Committee met on October 25, 2015 at the Rhode Island Convention Center in Providence, Rhode Island from [*enter time*]. There were 12 members and 20 guests present.

The meeting began at 12:30pm with the introduction by Lester Khoo.

Time-Specific Paper Title.
NA.

Presentations & Reports

1. **Title** Conserving the nature of America: An Agency introduction and role in disease/pathogen management
   Presenter:Dr. Joel Bader, United States Fish and Wildlife Service (USFWS)
   Summary of presentation:

Dr. Bader gave a presentation entitled as above with the aim to provide those present a better understanding of the USFWS. It is the federal resource agency tasked with conserving America's wildlife. It is housed within the Department of the Interior and has 11 different divisions including Law Enforcement (LE), Endangered Species, Migratory Birds, Refuges, Wildlife and Sport Fish Restoration, International Affairs, External Affairs, and Fish and Aquatic Conservation. Their National Fish Hatcheries system includes 70 hatcheries, 9 fish health centers, 7 Fish Technology Centers and the Aquatic Animal Drug Approval Partnership (AADAP) program. While USFWS does not have pathogen regulatory authority, they do have several tools to achieve their mission namely, science support, scientific leadership and expertise, partnerships (federal, states, tribes and non-governmental organizations) and in the most severe situations, specific regulatory authority to implement rules to protect the wildlife of the United States. He described the USFWS contributions to the National Aquatic Animal Health Plan. He also expounded on Aquatic Nuisance Task Force and how the agency ameliorates the threat of invasive species, the Lacey Act, how the Service lists injurious wildlife (and the use of listing injurious species and/or non-regulatory solutions to provide protection for America's wildlife), and the other Acts which provides the Service its authority.

The second part of his presentation was an update on the activities of the agency including:

A. National Aquatic Animal Health Plan(NAAHP) – Memorandum of Understanding (MOU – umbrella MOU and an export specific MOU) with the other agencies - the National Oceanic Atmospheric Administration and the United States Department of Agriculture. This was renewed for the next 5 years and better defines the roles of each agency in the plan (i.e. USDA-APHIS – aquacultured animals; NOAA – wild marine animals, USFWS- wild freshwater animals). The export specific MOU defines who has the authority to sign for the health certificates required for exports
B. Salamander chytrid fungus (Bsal - *Batrachochytrium salamandrivorans*)
   This pathogen is in Europe and not in the United States(US) as yet and the agency was petitioned to prevent its entry to the US. The service is evaluating which salamander species should be listed as injurious wildlife to prevent the risk of Bsal's introduction into the United States, and expects to complete and publish its evaluation this Fall. This injurious wildlife evaluation is considered a Director's priority and intend to regulated this issue through the Lacey Act this fiscal year.
C. Amphibian chytrid fungus (Bd)
   The Service received a petition in 2009 from the Defenders of Wildlife to list amphibians as injurious wildlife unless they are certified as free of *Batrachochytrium dendrobatidis* which lead to the Service publishing a Notice of Inquiry in the Federal Register on September 17, 2010, to announce a request for information on the petition. The public information period closed on December 16, 2010. It received approximately 450 comments and has reviewed

The US Fish and Wildlife Service

"Conserving the Nature of America"

An Agency Introduction and Role in Disease/Pathogen Management

Dr. Joel A. Bader
National Coordinator
Aquatic Animal Health,
Aquaculture and Technology

USAHA
Providence, RI
Oct. 26, 2015

What You Will Learn

- Our mission and who are we?
- What do we do?
- What are our authorities?
- What tools do we have to deal with disease and pathogens?

Mission of the USFWS

Conserving the Nature of America

"*.. **Work with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people***."

What is the USFWS?

- The USFWS is the United States Fish and Wildlife Service
- USFWS resides in the Department of the Interior
- Science driven Natural Resource Agency
- Made up of:
  - Law Enforcement (LE), Endangered Species, Migratory Birds, Refuges, Wildlife and Sport Fish Restoration, International Affairs, External Affairs, and Fish and Aquatic Conservation (FAC=Fisheries)
- National Fish Hatcheries System within FAC
  - Hatcheries, Diagnostic Laboratories, AADAP

  Research Centers and Natural Resource Management Offices
- The Refuge System

  560+ Refuges from Maine to Alaska,

  plus national marine monuments in Caribbean and Pacific
- LE ports of entry inspections at 18+ locations

What tools do we have to deal with disease and pathogens?

Science

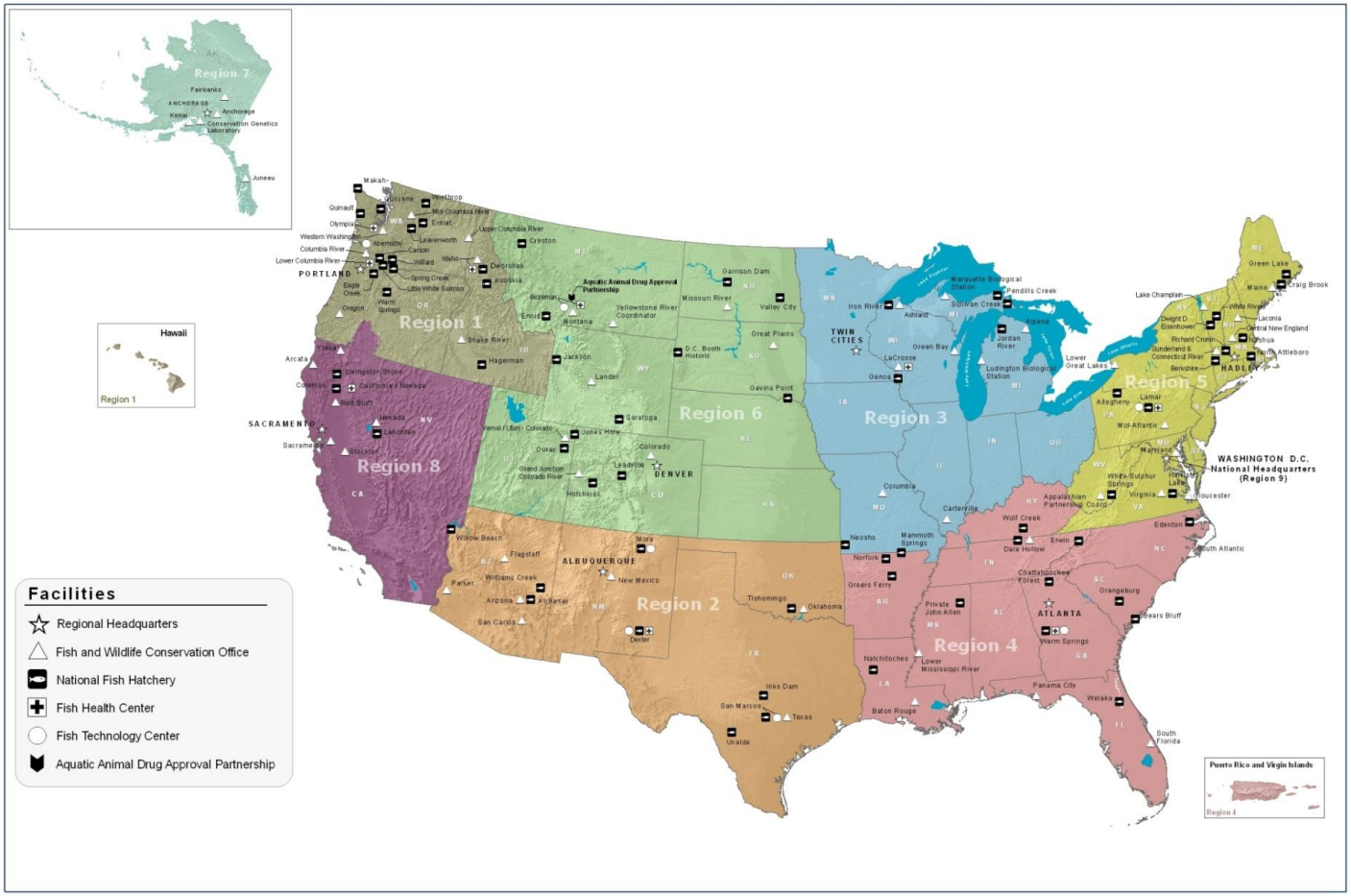
Leadership

Partnering

Authority

Science Capacity

Examples within FAC



Fish Health and Fish Technology Centers across the nation

Scientific Leadership

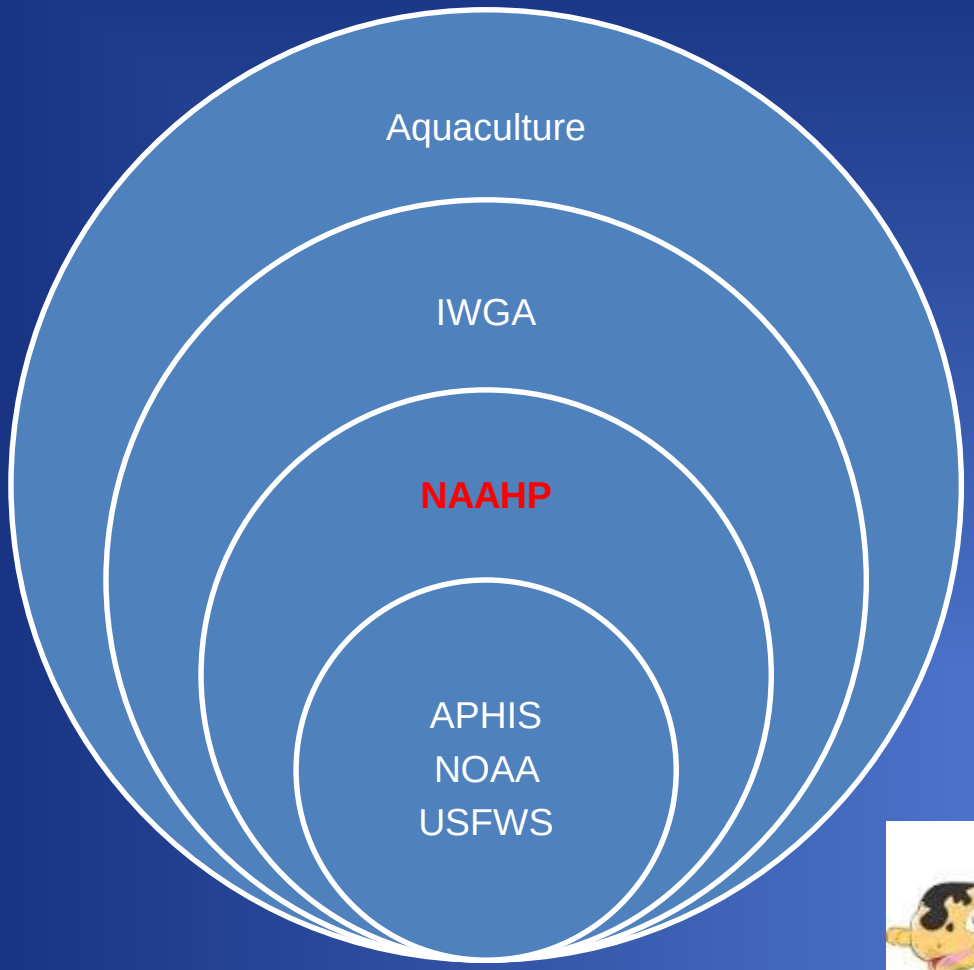
Examples within FAC:

- 9 Fish Health Centers
  - Veterinary diagnostic laboratory services
  - National Wild Fish Health Survey and Database
- 7 Fish Technology Centers
  - Applied Research-based
    - Genetics (molecular biology)
    - Nutrition
    - Cryobiology
    - Culture biology
- 1 Aquatic Animal Drug Approval Partnership (AADAP)
  - Investigational New Animal Drugs for aquaculture and Fisheries (INADs)
  - Drug efficacy testing

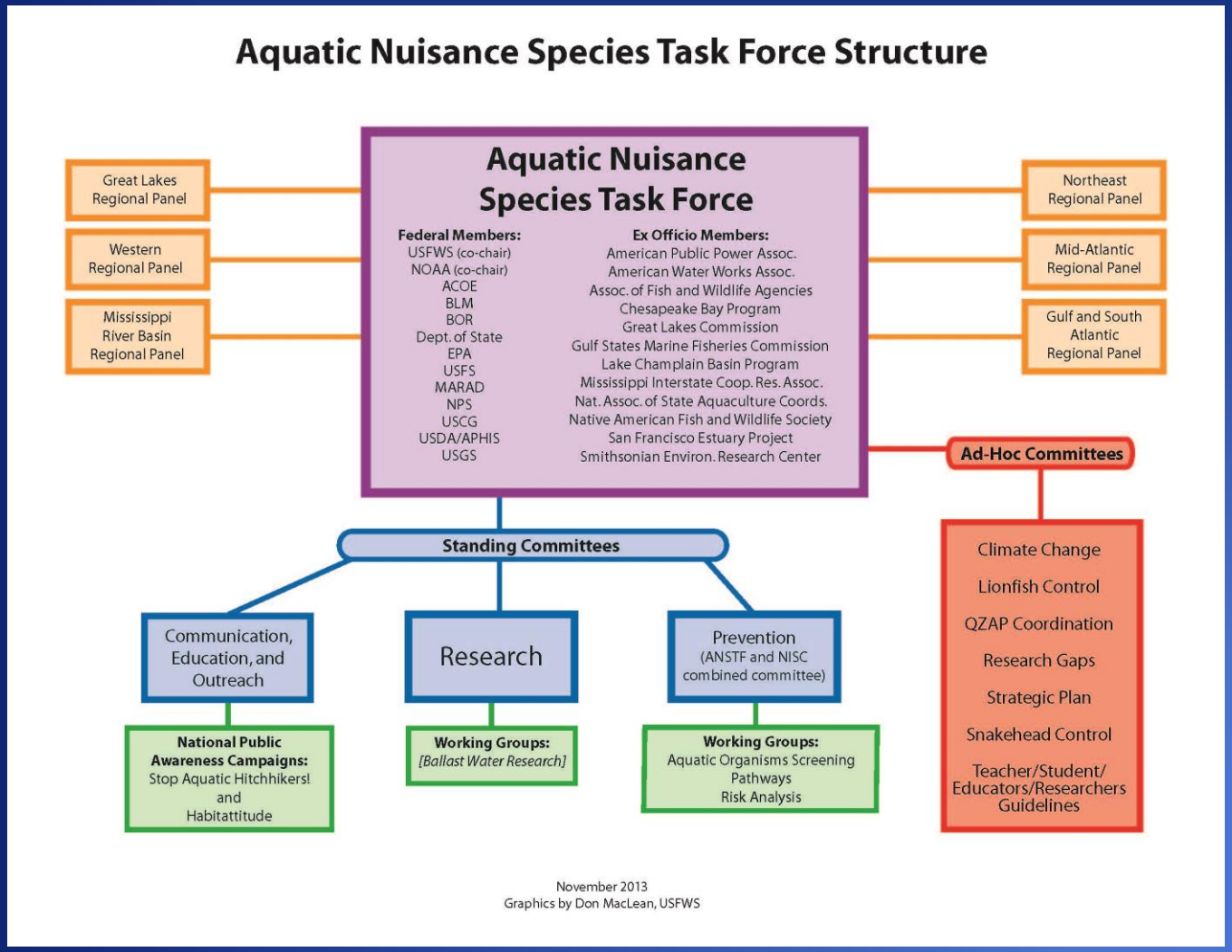
Federal and Professional Partnerships

- Ports of entry inspections at 18+ locations
  - Staffed by USFWS LE, USDA APHIS, CBP

U.S. National Aquatic Animal Health Plan



Aquatic Nuisance Species Task Force



USFWS Authority

- **16 USC 3371 – 3378**
- Prohibitions
  - it is unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants that are taken, possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving any fish, wildlife, or plants taken possessed or sold in violation of State or foreign law.
  - False labeling, falsification of records or ID of species
  - Failure to properly mark wildlife shipments
- Enforced by USFWS, NOAA NMFS, and USDA APHIS

Lacey Act: two sections

Title 16 USC § 3371-3378: (*Broad*)

- **Assistance to States with intercepting illegal importation and interstate transport of wildlife species and plants taken or possessed in violation of State, Federal, Tribal, or foreign laws**

Title 18 USC § 42: (*only for Injurious Wildlife*)

- **Prohibits importation and interstate transport of injurious wildlife**

Injurious wildlife

Federally listed Injurious Wildlife (50 CFR 16)

- "Wildlife" found through regulation or Congressional action to be injurious to the interests of human beings, agriculture, horticulture, forestry, wildlife or wildlife resources of the United States. *Lacey Act 18 USC §42.*
- The importation into the United States and interstate transportation between States, the District of Columbia, the Commonwealth of Puerto Rico, or any territory or possession of the United States of all forms of live species, gametes, viable eggs, and hybrids thereof is **prohibited**, except by permit for zoological, education, medical, or scientific purposes (in accordance with permit regulation at 50 CFR 16.22)
- Bighead carp (*Hypophthalmichthys nobilis*) most recent fish listing
- Fish, Mollusks, and Crustaceans (regulated under 16.13)

What Can We List as Injurious?

- Wild mammals
- Wild birds
- Fishes
- Reptiles
- Amphibians
- Mollusks
- Crustaceans

NO PLANTS

50 CFR 16

- 1993: all live Salmonids and their gametes, as well as dead whole uneviscerated Salmonid fish, imported into the U.S. as injurious because of pathogen risk.
- Only Salmonids deemed “healthy” are allowed except by permit.
- All live Salmonid fish and their gametes and dead, whole uneviscerated Salmonids carcasses imports into the United States must be inspected by an USFWS-certified Fish Pathologist, Fish Health Inspector, or Veterinarian, and certified as disease free. This health certificate must accompany any shipment.
- The regulations are administered and supported by USFWS HQ, the regional Fish Health Centers, and Law Enforcement.

Other USFWS Authorities

- Migratory Bird Treaty Act
- Federal Aid in Sport Fish Restoration Act and Wildlife Restoration Act
- The National Wildlife Refuge System Administration Act
- The Endangered Species Act
  - In the United States, the Convention on International Trade in Endangered Species is a multinational agreement CITES is implemented through the U.S. Endangered Species Act (ESA)

How do we protect the U.S.'s Biosecurity?

We can get progressive and find a nonregulatory solution

OR

We can list as injurious under the Lacey Act,

OR

We can do both.

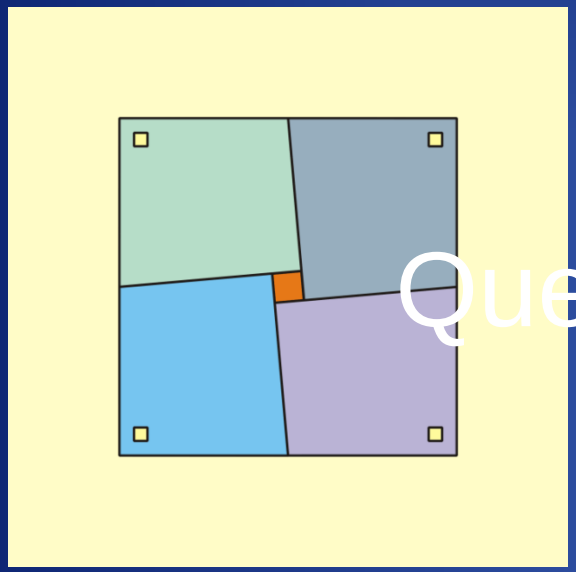
Data needed to establish invasiveness for aquatic species (pathogens) for listing are:

- Identify risk though a risk assessment analysis
- History of invasiveness (invasive species)
- Host species (pathogens)
- Host susceptibility (pathogens)
- Host range (pathogens)
- Risk of establishment (invasive species /pathogen)
- Pathways of introduction (pathogen)
- Climate Match (invasive species /pathogen):
  - Between locations where native or established and
  - Target locations (e.g., US)
- Habitat Match (invasive species /pathogen)

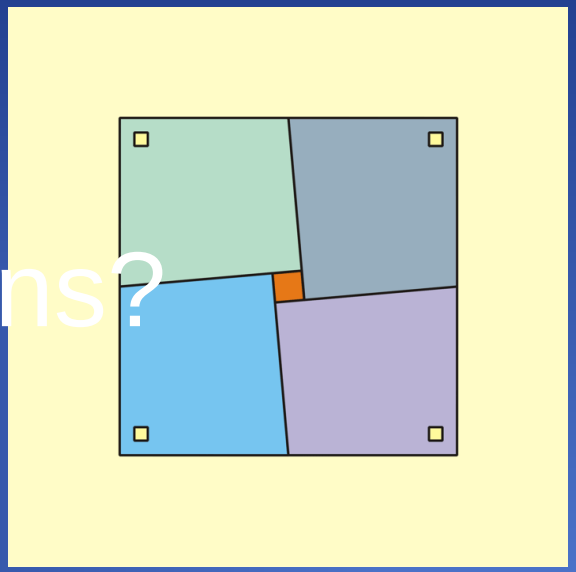
Agency Updates

- ***NAAHP MOUs***
- ***Bsal (salamander chytrid fungus)***
- ***Bd (amphibian chytrid fungus)***
- ***Risk Screening***
- ***Legislation Modernizing Injurious Wildlife***
- ***Categorical Exclusion (CatEx) under NEPA for the injurious wildlife listing under the Lacey Act***
- ***Multi-species proposed rule***
- ***Large Constrictor Snake final rule litigation***

If we work together we can solve anything

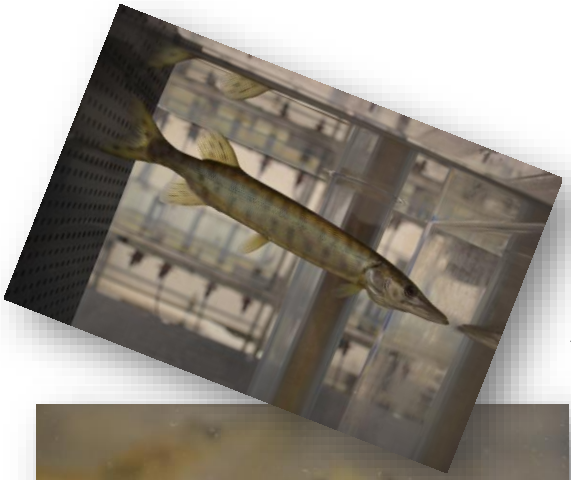


Questions?



United States Department of Agriculture

Veterinary Services



Aquatic Pathogen Testing in NAHLN Laboratories Update

Christina M. Loiacono DVM, PhD, Dip. ACVP
NAHLN Associate Coordinator

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services
National Animal Health Laboratory Network
STAS
October 25, 2015

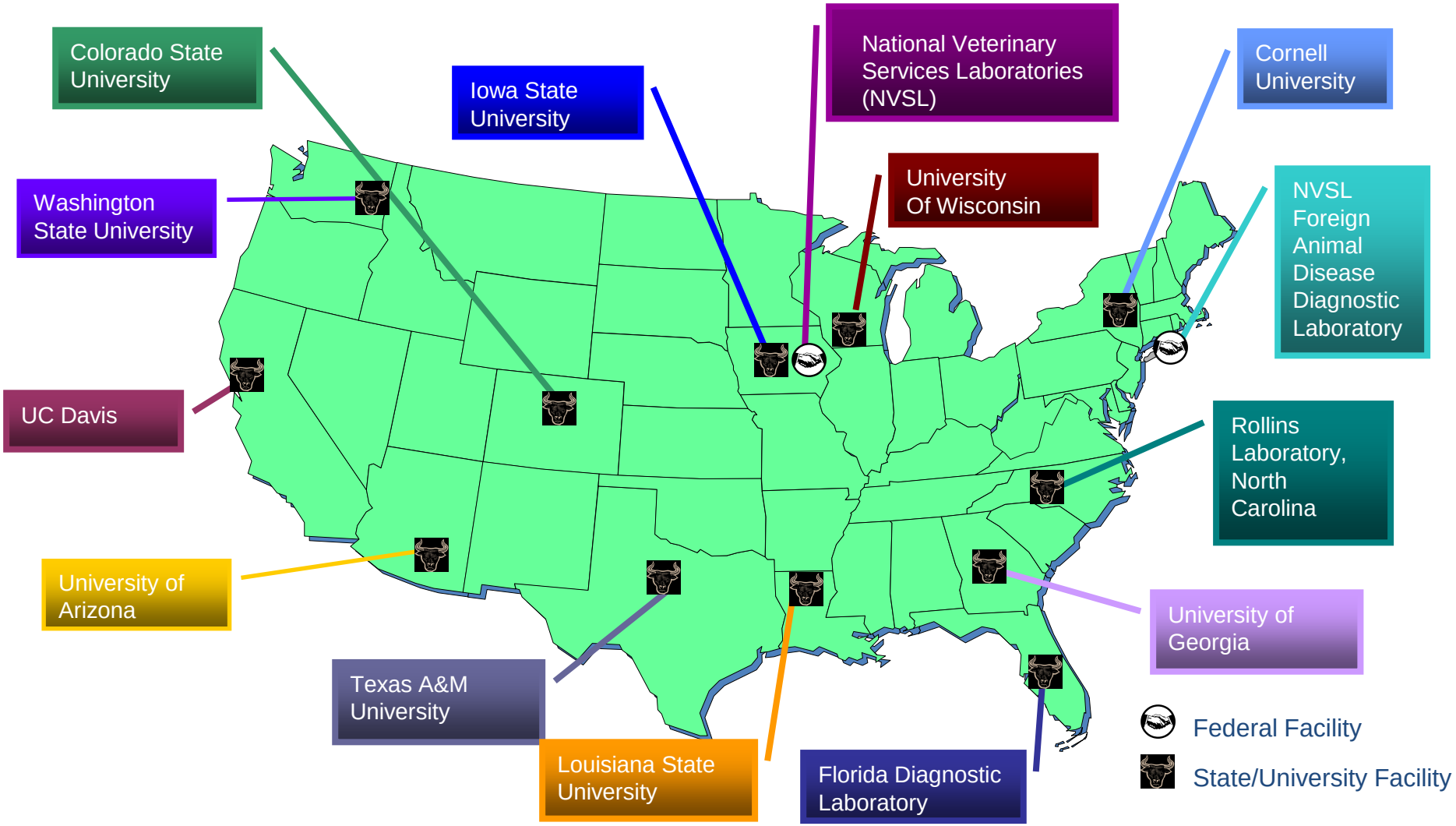
National Animal Health Laboratory Network

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

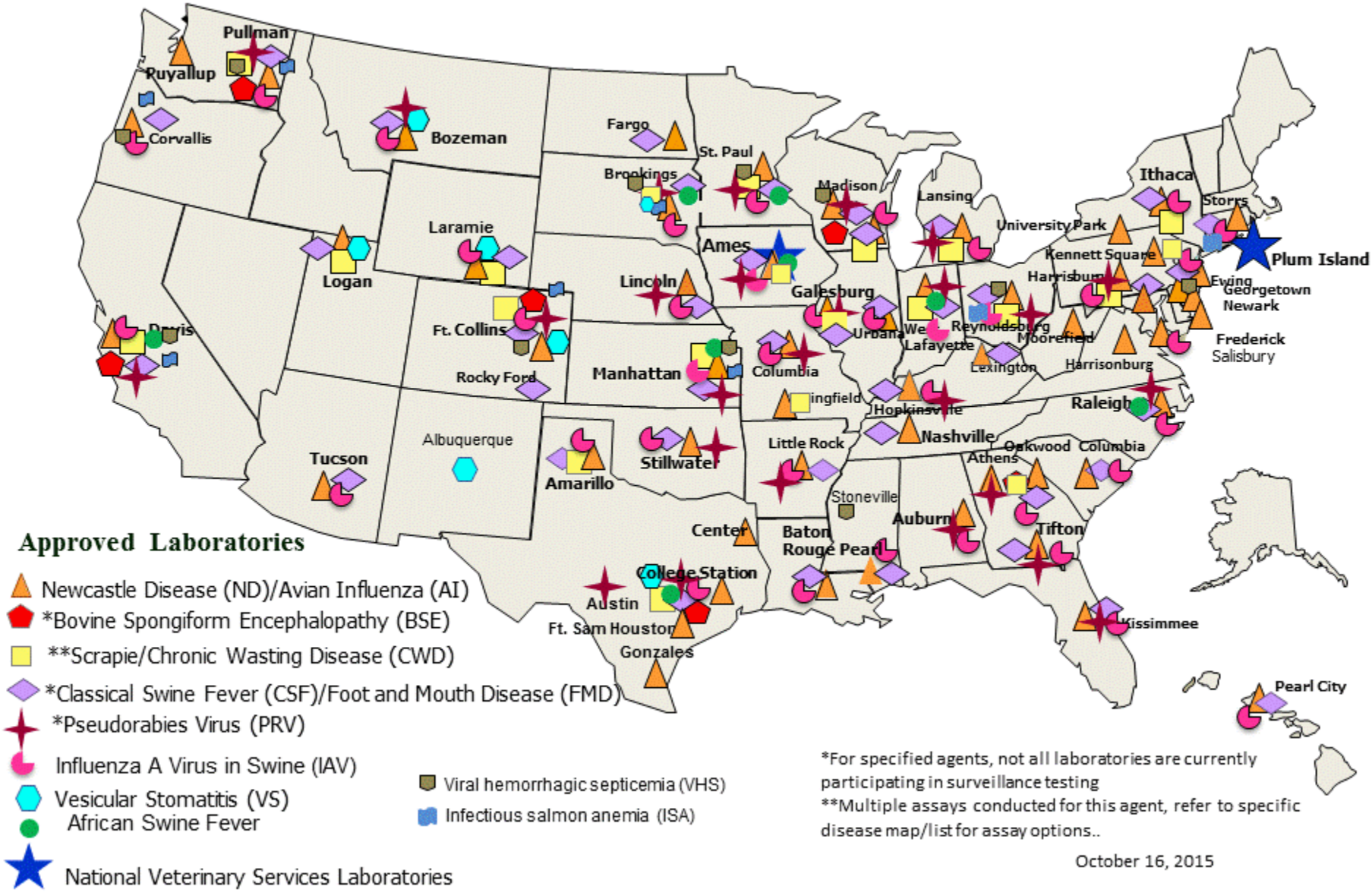
Founding Principles and Features of NAHLN

- 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

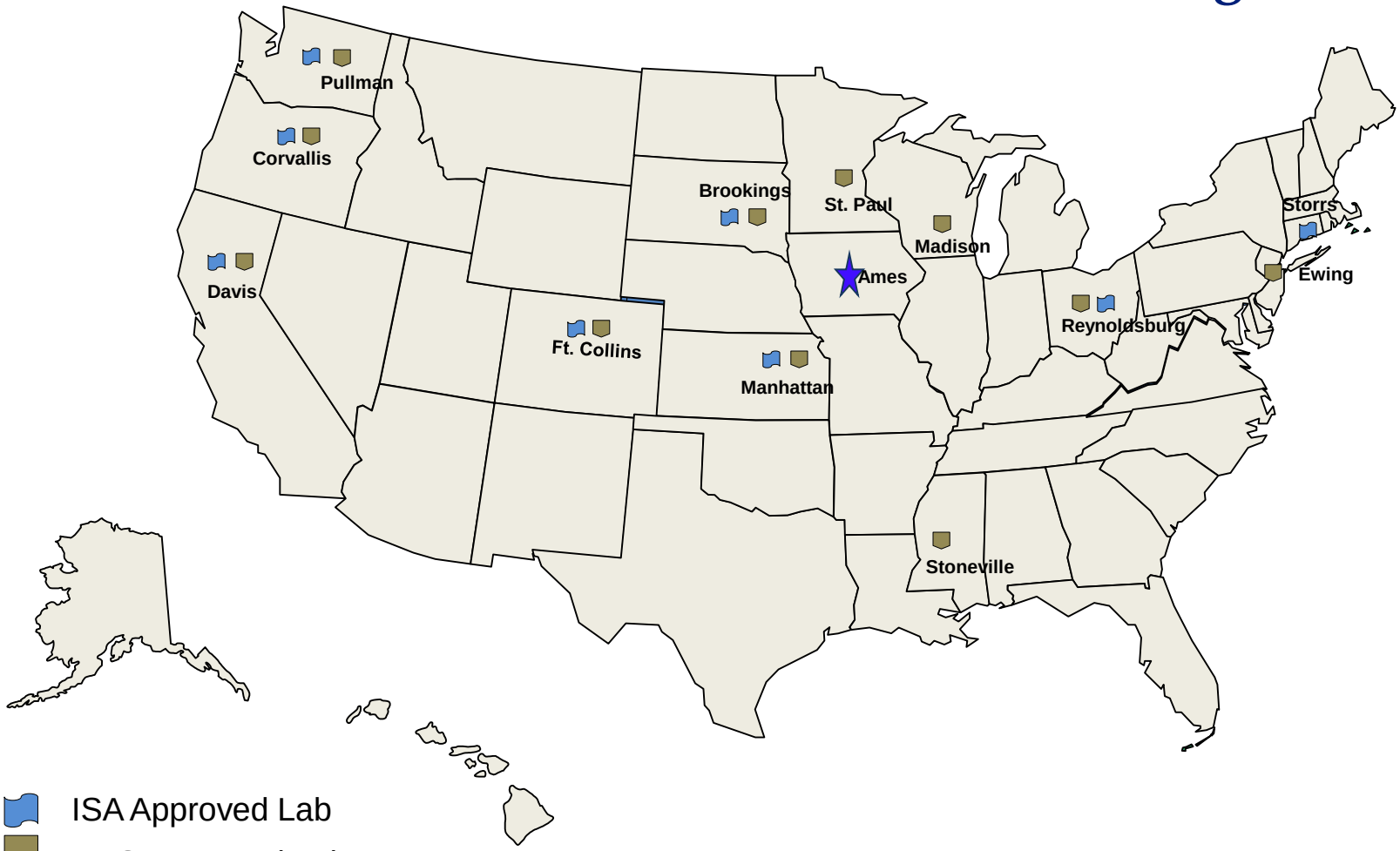


National Animal Health Laboratory Network (NAHLN)



United States Department of Agriculture

Laboratories Approved to Conduct ISAV or VHSV Surveillance Testing



ISA Approved Lab

VHS Approved Lab

NVSL Lab Site

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

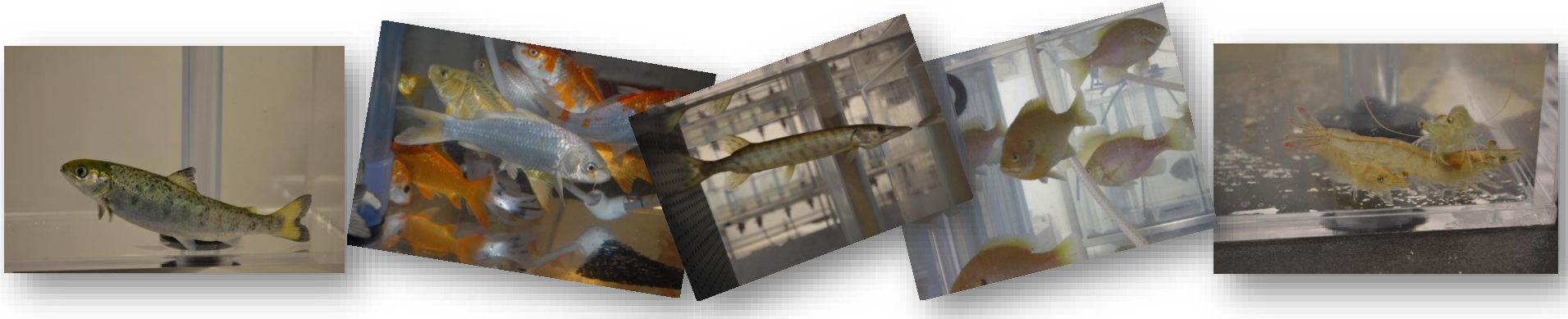
Phase 3

- 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?



United States Department of Agriculture

Veterinary Services

Aquaculture/ Aquatic Animal Health Program

Kathleen H. Hartman, MS, DVM, PhD
Aquaculture Program Leader
U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Veterinary Services
October 25, 2015

Program Activities Overview

(as described in FY15 Business Plan https://www.aphis.usda.gov/animal_health/downloads/vsbp/5_year_business_plan_aquaculture.pdf)

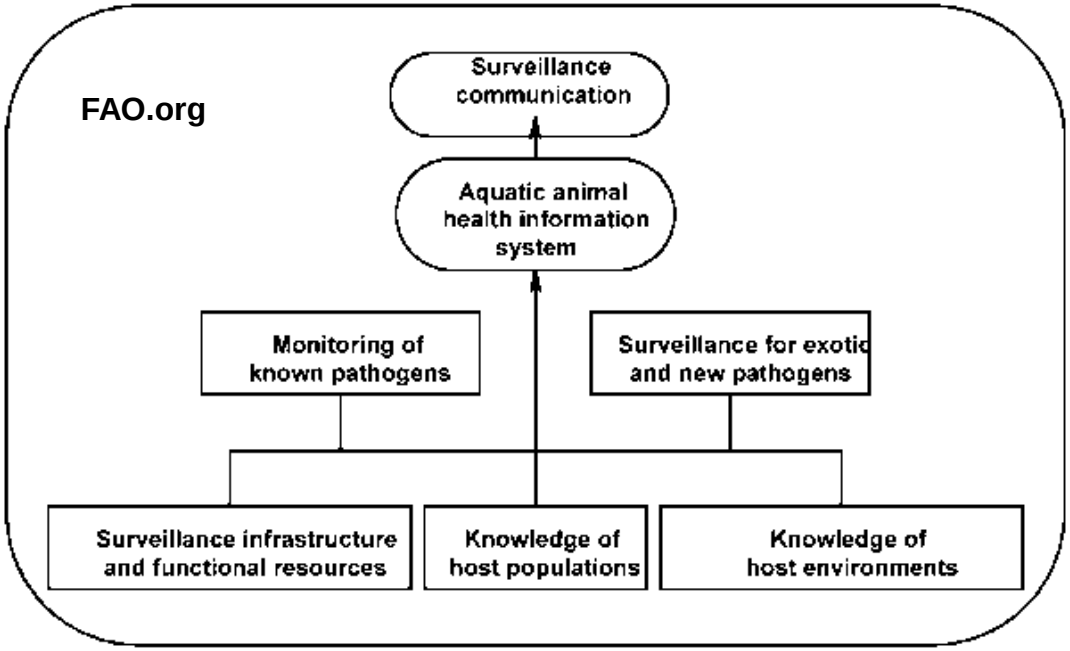
- National Aquatic Animal Health Plan (NAAHP)
- Comprehensive and integrated surveillance (CIS)
- Import/Export update
- Program Projects
- Commercial Aquaculture Health Program Standards (CAHPS)

National Aquatic Animal Health Plan

- Renewal of two MOUs with USFWS and NOAA NMFS
  - NAAHP commitment
  - Export coordination
- Aquatic Laboratory Network
  - Phase 1 completed
- Commercial Aquaculture Health Program Standards
- SCS/Core One Database
  - Database structure completed for aquatic animal entries

Comprehensive and Integrated Surveillance (CIS) - Aquaculture

- CIS plan for aquaculture completed
- Elements incorporated into CAHPS



Import/Export Update

- Electronic certificates
  - Veterinary Export Health Certificate System (VEHCS) pilot completed
- One certificate exists for ornamental fish being exported to Canada
- Discussions on going for complete electronic certificates

Aquaculture Program Projects

- Multi-agency ISAV surveillance in the Pacific NW
  - Sample collection completed
  - All tests negative to date
- East Coast Regional Shellfish Management
- Aquaculture Ag-Econ
  - Bait/sport fish survey

United States Department of Agriculture

COMMERCIAL AQUACULTURE PROGRAM STANDARDS (CAHPS)

CAHPS Concept

- Model framework for aquatic animal health
- NAAHP implementation - for aquaculture
- Science-based
- Needs-based (voluntary)
- Strengthened through State, Tribal, and Federal collaboration
  - Available to private and public aquaculture

Domestic Aquaculture Challenges

- Global concerns
  - Foreign animal disease
  - Emerging animal disease
  - Competition
- Movement of live animals
  - Interstate
  - International
- NAAHP implementation

Aquaculture

- **Aquaculture** - The farming of aquatic animals with some sort of intervention in the rearing or farming process
  - **Commercial Aquaculture - <u>The business</u> of farming aquatic animals <u>for sale or trade</u>, with some sort of intervention in the rearing or farming process**
    - Culture and production of healthy animals for sale and trade
    - Demonstrate health status of animals to minimize obstacles for animal movement
    - Get more trade for less production costs

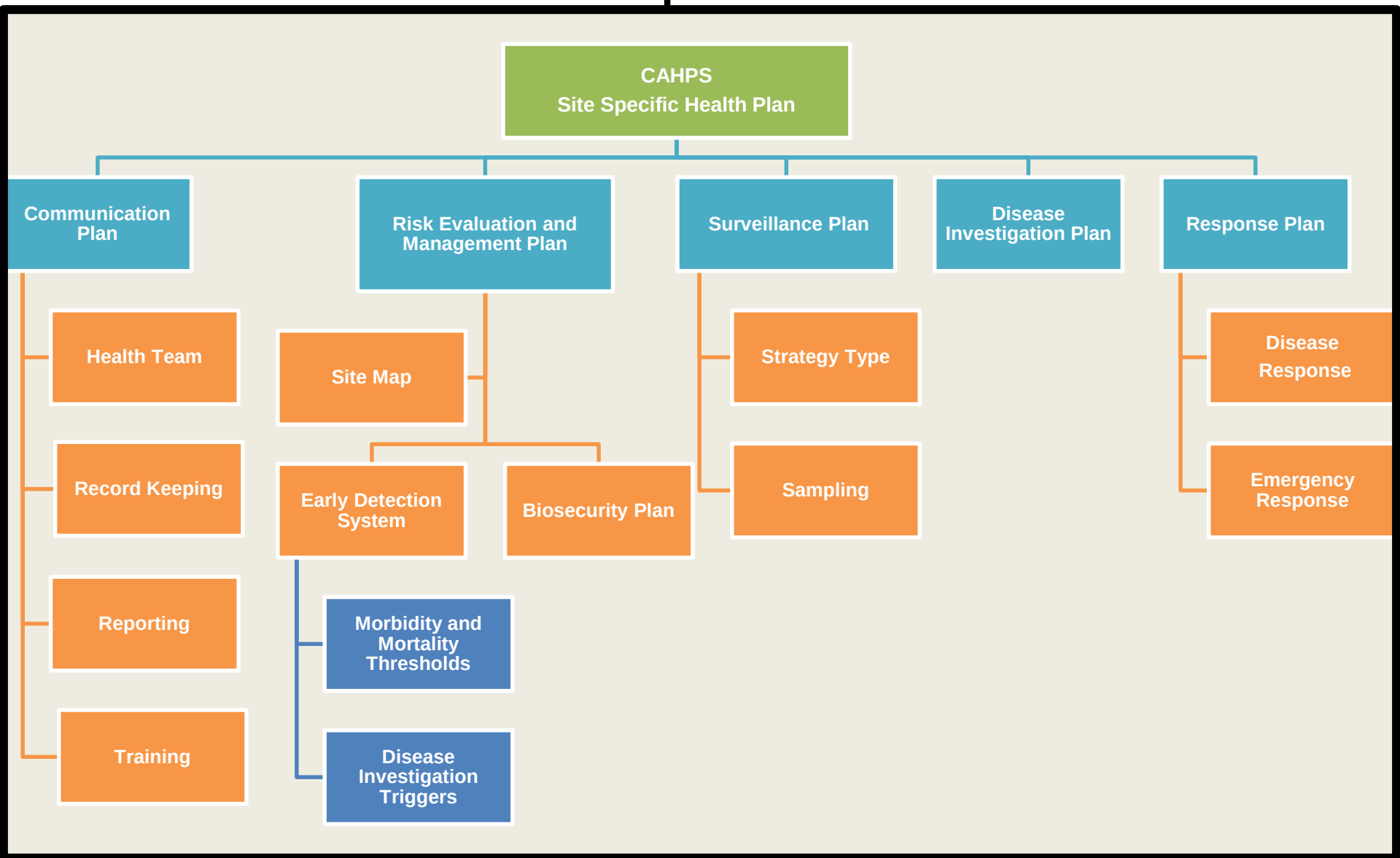
Principles of CAHPS

1. **Aquatic animal health team**
   - The knowledge & skills
2. **Risk evaluation**
   - The science & method
3. **Surveillance**
   - The strategy & approach
4. **Investigation and reporting**
   - The process & protocols
5. **Response**
   - What we do when things happen

Aquatic Animal Health Team

- Producer/manager, veterinarians, AFS certified professionals, laboratorians, extension agents & other subject matter experts
- RELATIONSHIP
- Assists with Site-Specific Health Plan

CAHPS Site Specific Health Plan



Risk Evaluation

- Risk Identification
  - Species specific pathogens of concern and nearby species
  - Identify pathways- where, how and when

- Risk Characterization
  - Degree of risk
  - Scope of risk
  - Impact of risk- exotic vs. endemic pathogens

Risk Management

- Risk Mitigation
  - Strategies
    - Early disease detection systems (EDDS)
      - Training and management
      - Establish site specific thresholds
    - Biosecurity
      - How to mitigate risks

Surveillance

- Define purpose and surveillance boundaries
  - Establish disease or pathogen status
  - Establishment, compartment or zone

- Types & Strategies
  - Observational
  - Pathogen specific
    - OIE and/or State specific
    - Detect or refute presence of pathogen
    - Depends on power of diagnostic assays
  - Risk based
    - Systematic collection of data to detect disease or not
      - Can use historical data
    - Probability of pathogen introduction

Investigation & Reporting

- Disease investigation
  - Health team sets mortality/morbidity threshold
  - Determine cause(s) of mortality/morbidity

- Reporting
  - OIE, national and state lists
    - NLRAD
  - Appropriate officials

Response

- Contingency Planning
- Continuity of business
- Pathogen and impact of pathogen
  - Treat? Vaccinate? Depopulate?
- Debrief for lessons learned
  - What went wrong?
  - How to fix

CAHPS and Beyond

- Establishment (E)
  - Single site with lower risk because of surveillance and biosecurity
- Compartment (C)
  - Single site with higher standard of biosecurity and even lower risk
- Zone (Z)
  - Region around site with surveillance partners
  - Claim disease “free” status

Why CAHPS?

- Improve and verify health of commercially farmed aquatic animals
- Demand from international markets and trading partners:
  - Improved aquatic animal disease detection
  - Improved reporting
  - Improved control infrastructure
  - Improved aquatic animal health verification

Impact of Principles

- Animals are lower risk for specific pathogens because of surveillance and biosecurity
- We know what we know because we know it

Potential CAHPS Benefits: Short and Long-term

- Minimize potential for catastrophic infectious diseases of economic significance
- Reduce hurdles for interstate movement of live aquatic animals
- Enable international export of live aquatic animals

CAHPS Outreach and Communication

- Coordinated by NAA and APHIS
- Stakeholder meetings
  - AA, PNFHPC, NWFHFC, AFWA, AVMA, National Assembly, IWG-A, USTFA
- Discussion Groups
  - Bait and sport fish producers, subject matter expert calls

Thank You. Questions?

http://www.aphis.usda.gov/animalhealth/aquaculture

VS.SPRS.Feedback@aphis.usda.gov

Practical Approaches to Implementing Aquaculture Biosecurity Programs & Meeting OIE Standards & Regulations

A. David Scarfe *PhD, DVM, MRSSAf, CertAqV*
Aquatic Veterinary Associates, LLC
USDA-APHIS-VS (NAHERC)
Bartlett, IL USA

USAHA/AAVLD Annual Meeting; Aquaculture Committee
October 25, 2015 – Providence, RI

Overall Objective:

Outline approaches for ensuring disease prevention, control & eradication that meet:

- Complex and hard to understand International Standards (OIE Code & Manual)
- National or other regulatory requirements – & certifying disease freedom

Biosecurity: more than … … good hygienic practices, quarantine, etc.

2

Necessary Biosecurity End-points

- Standardized, scientifically sound & practical
- Encompass disease prevention, control & eradication
- Promote business continuity, in particular:
  - Fit routine production systems
  - Economical, practical, efficient & effective
  - Producer, veterinary & government incentives/rewards (government / industry collaboration & cost-sharing)
- Meet regulatory requirements & International Stds.

3

To be effective, Biosecurity end-points should be:

- Applicable to:
  - *Any* infectious & contagious disease
  - *Any* type of operation or unit (from the farm to nation)
- Have practical, implementable outcomes & a evidence-based process, that is:
  - Consistent with OIE Code/Manual approaches
  - Meets regulatory requirements

4

Where did the concepts originate?

International Aquatic Veterinary Biosecurity Consortium
(many are OIE Collaborating Centers)

the Center for Food Security & Public Health
Iowa State University
Veterinærinstituttet National Veterinary Institute
UPEI University of Prince Edward Island
OIE
World Aquatic Veterinary Medical Association
FAO
30th World Veterinary Congress 2011

2009 – 2012 Conferences, Workshops & Publications

International Aquaculture Biosecurity Conference

5 Norway, Chile, S. Africa & Czech Republic

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A Standardized Approach for Meeting National and International Aquaculture Biosecurity Requirements for Preventing, Controlling, and Eradicating Infectious Diseases

DUŠAN PALIĆ[1], A. DAVID SCARFE[2], and CHRISTOPHER I. WALSTER[3]
[1]*Faculty of Veterinary Medicine, Ludwig-Maximilians University, Munich, Germany*
[2]*OVA-CAP Veterinary & Consulting Services/Aquatic Veterinary Associates LLC, Bartlett, Illinois, USA*
[3]*The Island Veterinary Associates, Stafford, United Kingdom*

6

Core Principles Encompassed in OIE Code/Manual

- Farmed fish, amphibian, mollusc & crustacean diseases
- Utilizes hazard identification & risk analysis
- Addresses disease prevention & control
- Involves disease diagnosis, surveillance & notification
- Allows disease-free certification to expedite trade & movement

7

The Primary Focus of Biosecurity

To ensure that an *epidemiological unit* is not diseased/infected …

… and remains that way.

Prevention! … Control! … Eradication!

8

Epidemiological Units: from a Farm to a Nation

Epidemiologic Unit—a defined population of animals, separated to some degree from other populations, in which infectious and contagious diseases can be transmitted

- Establishment
- Compartment
- Zone
- Region
- Country

9

Common to *all* Programs

For the prevention, control & eradication of infectious & contagious diseases

- Identify disease *Hazards & Risks* (hazard & risk identification)
- Identify *Critical Control Points* (for disease entry / escape)
- Establish *Mitigating Actions* for all Critical Control Points (risk management)
- Determine *Disease Status / Freedom* (what's there?)
- Develop *Contingency Plans* (what if?)
- Monitor progress & *Audit* implementation
- *Certify* Biosecurity Levels / Disease Freedom

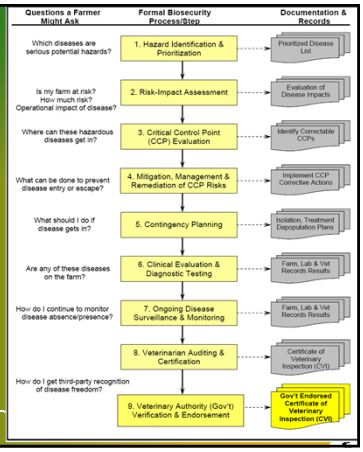
All needs to be document in Biosecurity Plan

10

Integrating Biosecurity Requirements

into an **Implementable Plan** for any **Epidemiologic Unit** (EpiUnit)

- Establishment (a farm)
- Compartment (1 mgmt syst)
- Zone (contiguous farms)
- Region (state/province)
- Country



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Applying the Concepts

Capture site-specific elements in a written Biosecurity Plan & maintain records

12

For Illustration Purposes: An Epidemiological Unit

- Located in the Midwest
- 300,000 lbs. ($1.5M) annual production
- Integrated production - sells live fish, larvae & fillets (interstate & international)
- Imports breeding stock
- Uses deep well groundwater
- ~500 visitors / year
- 50 employees

NO BIOSECURITY PLAN

** HIGH RISK for disease outbreak

13

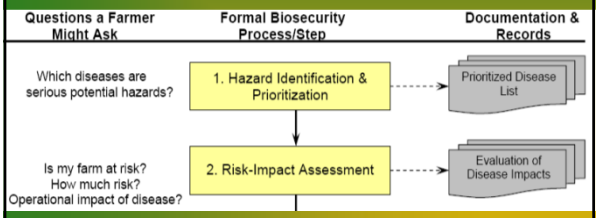
Reduce the approach to practical & pertinent questions

Ask:

1. How do you reach an end-point
2. How do you document activities?

14

Identify Disease Hazards & Risks



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Application: Disease Hazards & Risks

- Which important diseases are present or can potentially affect the farm (Epi-Unit)?
- What might be the impacts on the farm?
  - Decreased production, increased costs
  - Negative product demand & price
  - Regulatory restrictions
- Create prioritized list of diseases the EpiUnit is at risk for, based on severity of potential impact

16

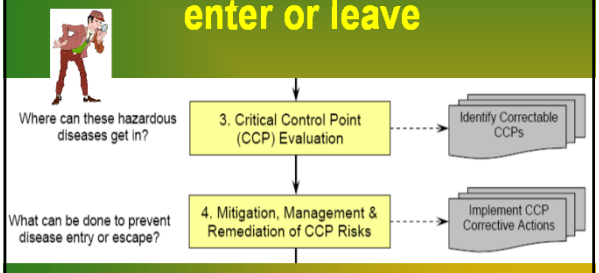
Application: Identifying Hazardous Diseases & Risk Levels

EpiUnit (farm); site-speific; Semi-quantitative (score 1-5)

Disease Hazards	Risk Level	Impact	Score
VHS	High (5) (Endemic, Regulated, Lethal)	High (5)	(25)
Streptococcus iniae	High (4) (Ubiquitous, Unregulated, High Morbidity/Mortality	Moderate (3)	(12)
ISA	None (0) (Regulated, High Morbidity – but not known in Tilapia)	Moderate (3)	(0)
EUS	Low (1) (Exotic, Regulated, Lethal)	High (5)	(5)

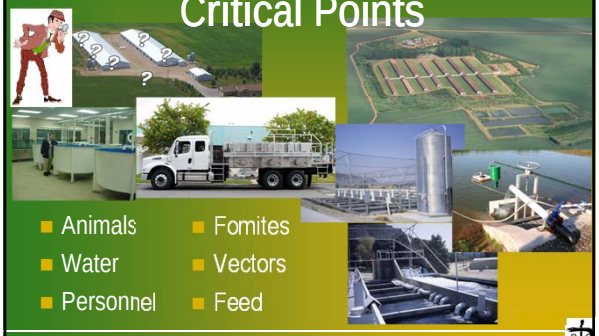
17 *Document in Biosecurity Plan*

Determine & Mitigate Critical Points where can disease can enter or leave



18 *Document in Biosecurity Plan*

Application: Determine Critical Points



- Animals
- Water
- Personnel
- Fomites
- Vectors
- Feed

19 *Document in Biosecurity Plan*

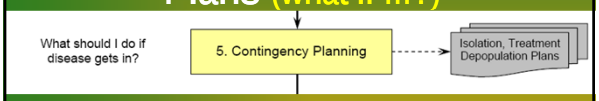
Application: Mitigating Critical Points

What actions will rectify critical points where disease can enter or leave?

✓Animals; ✓Water; ✓Personnel; ✓Fomites; ✓Vectors; ✓Feed

20 *Document in Biosecurity Plan*

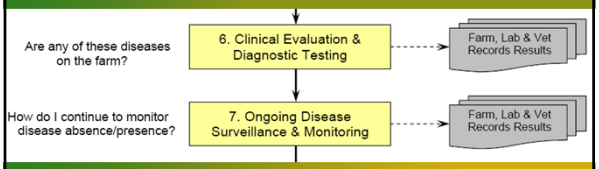
Preparing for the Possibility: Developing Contingency Plans (what if …?)



- Communicating / reporting disease outbreak
- Isolating (quarantine) epidemiologic unit parts
- Re-evaluating & correcting Critical Control Points
- Implement recovery - depopulation / treatment / vaccination (business continuity ……)

21 *Document in Biosecurity Plan*

So what is there? Veterinary Diagnostics, Surveillance & Monitoring



22 *Document in Biosecurity Plan*

Application: Clinical & Lab Diagnostics

Is the disease present or absent?

- On-farm veterinary clinical evaluation & sampling of all populations
- DX lab confirmation
- Full epidemiological evaluation & diagnostic interpretation

23 *Document in Biosecurity Plan*

Application: Ongoing Surveillance & Monitoring

Periodic disease presence / absence evaluation

- ✓ Changing conditions
- ✓ Fixed time intervals

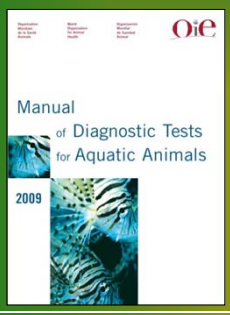
- Appropriate veterinary clinical evaluation & sampling of all populations
- DX lab confirmation
- Full epidemiological evaluation & diagnostic interpretation

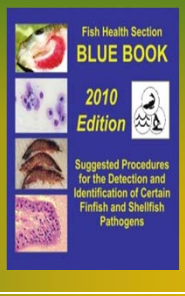
24 *Document in Biosecurity Plan*

Where to find Diagnostic Services

25 www.AquaqVetMed.info

Standardized DX Assays





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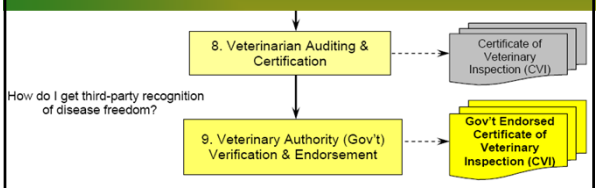
Confirmation: Auditing & Disease Status Certification



27 *Document in Biosecurity Plan*

Application: Audit / Certify

Audits	Certification
Periodic site visits to verify:	Issue certificate to validate:
✓ Processes are in place	✓ Processes are in place
✓ Examine documentation	✓ Level of biosecurity
✓ Assist correcting deficiencies	✓ Disease status of operation
✓ Look for clinical disease	

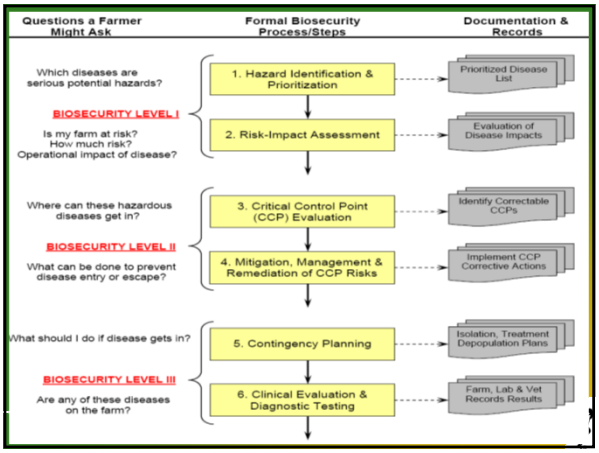
28 *Document in Biosecurity Plan*

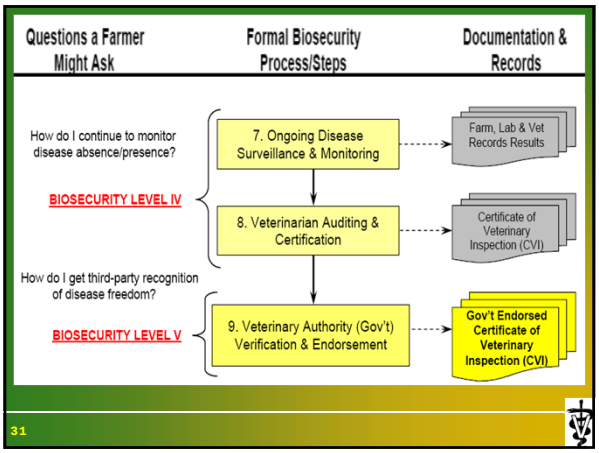
IVAB Consortium Certified Biosecurity Levels

A progressive process based on Audits

- ABC Level I – Committed to developing site-specific plan; decision – deciding disease hazards/risks
- ABC Level II – Risk analysis, CCP evaluation & mitigation evaluation complete, diagnostics started
- ABC Level III – CCP/risk management & contingency plan in place; diagnostics complete
- ABC Level IV – Full audit complete; disease-free/SPF
- ABC Level V – Government Agency endorsement

29 *Document in Biosecurity Plan*





Workforce Training & Other Resource Needs

- Training
  - Licensed/accredited veterinarians
  - Vet Techs & paraveterinary field service personnel
- Diagnostic laboratory system
- Supportive recognition
  - Farm compliance registry & certification
  - Auditor credentialing
- Governmental (regulatory) personnel & infrastructure

32

Training Programs

Tentative International Aquatic Veterinary Biosecurity Consortium Initiatives

- Web-based (webinars) expanding on specific Biosecurity steps
- Aquatic Veterinary Biosecurity Manual Publication
- Additional symposia & workshops

33

Typical Training Workshops

- 3-day Training Workshops for veterinarians, producers & gov't employees
  - Day 1 – theory & process
  - Day 2 – table-top exercises & scenario modeling
  - Day 3 – on-farm exercise
- Competency & Implementation Certification (tentative)
  - Veterinarians & trainers completing IAVBC workshops
  - Farms actively implementing IAVBC programs

34

Existing Training Materials

the Center for Food Security & Public Health
IOWA STATE UNIVERSITY®

- Web-based & classroom
- Publications & manuals
- Veterinary school curriculum
- Other language translation

www.cfsph.iastate.edu/

35

US National Veterinary Accreditation Program

Private Practitioners Performing Regulatory Functions

NVAP Aquatic Veterinary Modules

#13 Regulations & Certification

14 Reportable Diseases

15 Disease Prevention & Biosecurity

36 www.aphis.usda.gov/animal_health/vet_accreditation/aast.shtml

Similar Programs Elsewhere

- ✓Australia/NZ & Canadian Veterinary Accreditation
- ✓EU- Official Veterinarians

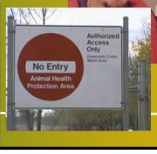
Evaluated by OIE

Performance of Veterinary Services (PVS) Tools

37

Need more information?

Contact - dscarfe@ameritech.net



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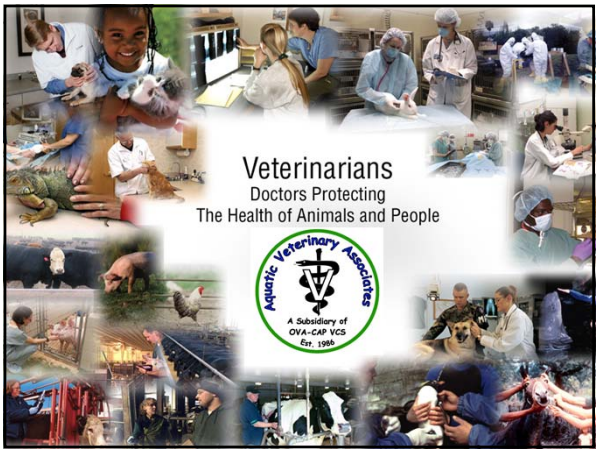


the information, as well as other information we acquired. However, the Service has prioritized completion of other injurious wildlife evaluations at this time, such as salamander chytrid fungus, because of the goal of preventing that fungus's entry into the United States.

D. Risk Screening

The Service has developed three rapid screening tools, known as Ecological Risk Screening Summaries, Fish Risk Assessment Model, and Risk Assessment Mapping Program to help determine which species pose a high, low, or uncertain risk of invasion. It allows the use the most current scientific methods and databases to quickly gather and more efficiently analyze data. The Service has already performed hundreds of ecological risk screenings on aquatic animal species. The Service is providing the public with some of the summaries that synthesize the results of the screenings. Some of the reports are available on our website, which was created to serve a partnership with industry and the Association of Fish and Wildlife Agencies relating to animals not known to be imported. An additional website is planned, which will include summaries for species being imported.

More reports will be published as they are finalized. Many of these reports are for species that are not yet in trade or in the wild in the United States. If importers are contemplating using these species, these reports can provide the live-animal-industry and the public with technical assistance as to whether the species would pose a high or low risk of invasiveness. Thus, industry could make an informed decision to refrain from importing high-risk species. Knowledge of both low- and high-risk species will provide industry, States, and consumers with valuable knowledge for deciding which species are more responsible choices to acquire and use. In addition, State natural resource and conservation agencies can use the summaries to aid their management decisions for potentially invasive species and to work with industry on their own agreements for risky species in their jurisdictions.

The National Aquaculture Association has expressed concern with some aspects of the screening process. Based on those concerns, the Service has pursued and completed peer review per OMB policies for influential science. In June 2013, the Service signed a Memorandum of Understanding with the Pet Industry Joint Advisory Council (PIJAC) and Association of Fish and Wildlife Agencies (AFWA) to help prevent future ecological invasions caused by trade in live animals. It is expect that other parties to join the MOU.The MOU focuses on aquatic, nonnative species not yet in trade in the U.S. and, therefore, should not affect the current economic status of the trade industry. The Service will provide technical assistance to the industry characterizing imported aquatic animals with their risk potential as invasive species. The Service also welcomes risk assessment for particular species of concern from partners and stakeholders. The Service is working with States, industry, and others through the Invasive Species Committee of the Association of Fish and Wildlife Agencies. Given numerous requests from aquacultural interests to States regarding the potential importation of African Longfin Eel (*Anguilla mossambica*), this committee is currently evaluating this species.

E. Legislation Modernizing Injurious Wildlife

While control and management of invasive species is vital, prevention is widely viewed as the most cost-effective means to avoid and minimize harm. The Service views the injurious wildlife provision of the Lacey Act is one of the strongest tools available to the Department of the Interior to manage the risks of invasive species within the trade pathway. Previous Congresses have introduced bills that would amend the injurious wildlife provisions of the Lacey Act, such as S. 1153 in the Senate and H.R. 996 in the House of Representatives in the 113th Congress. Earlier sessions of Congress have also introduced legislation, showing the interest by Members in this issue. S. 1153 would have significantly amended the injurious wildlife listing process, and would have given the Secretary of the Interior additional authorities to prevent the importation of, and interstate commerce in, wildlife pathogens and harmful parasites. In testifying about the bill at a hearing on July 16, 2014, Fish and Wildlife Service Deputy Director Guertin indicated support for the intent and purpose of the bill. However, Deputy Director Guertin raised concerns about provisions that would undermine Fish and Wildlife Service's ability to implement and enforce the law's prohibitions on importation and interstate transport of injurious wildlife, such as a broadening of exemptions under newly created Injurious I and II categories for listing wildlife. Legislation may be introduced in this session of Congress but the Service has not received any updates on the status of an updated bill that could be introduced into this Congressional session.

F. Categorical Exclusion (CatEx) under National Environmental Protection Act (NEPA) for the injurious wildlife listing under the Lacey Act:

The CatEx will allow the Service to list species more efficiently by allowing the Service to expedite the environmental review process for proposals that typically do not require more resource-intensive Environmnental Assessments (EAs) or Environmental Impact Statements (EISs). Branch of Aquatic Invasive Species (BAIS) published the proposed CatEx in the

Federal Register in July 2013, reviewed and addressed the more than 5,000 public comments, and composed a draft final notice. The Service, coordinating through the Department, has received approval from the Council on Environmental Quality for the new categorical exclusion under NEPA for future injurious wildlife listings. The Service will publish a final notice in the *Federal Register* that the new categorical exclusion takes effect upon publication. Target to the *Federal Register* is by late October.

G. Multi-species proposed rule:
BAIS has prepared a multi-species proposed rule to list 10 freshwater fish (Amur sleeper, crucian carp, Eurasian minnow, European perch, Nile perch, Prussian carp, roach, stone moroko, wels catfish, and zander) and 1 crayfish (yabby) as injurious species. All species have a high climate match in parts of the United States, a history of invasiveness outside their native ranges, and, with one exception (zander in Spiritwood Lake, North Dakota), are not currently found in U.S. ecosystems. The Ecological Risk Screening Summaries to obtain climate-matching and other information. This is the first rule the Service is proposing since it has signed a Memorandum of Understanding with Pet Industry Joint Advisory Council (PIJAC) and Association of Fish and Wildlife Agencies (AFWA) in 2013, which outlines an agreement regarding the voluntary refrain from importation of species not yet in trade in the United States. The draft rule, environmental assessment, and economic analysis are under review with the Service. The USFWS anticipates being able to publish a proposed rule for public comment and peer review by end of October 2015. Publication of a final rule is expected in 2016.

H. Large Constrictor Snake final rule litigation:
In 2010, BAIS published a proposed rule to list nine species of large constrictor snakes as injurious species. In 2012, four species were listed (Burmese and two other pythons, plus the yellow anaconda). In 2014, the Service reopened the comment period on the five remaining constrictor snakes (reticulated python, green anaconda, Beni anaconda, DeSchauensee's anaconda, and boa constrictor). In March, the Service published the final rule to list the reticulated python and the three anacondas, but withdrew the proposal to list the boa. As soon as the second final rule published, the plaintiffs, the United States Association of Reptile Keepers (USARK), for the lawsuit against the first final rule filed an amendment to add the four newly listed species to their challenge. On May 12, 2015, the U.S. District Court for the District of Columbia (Judge Randolph Moss) granted USARK's motion for a preliminary injunction finding that the plaintiffs were likely to prevail on the merits of the case that the Service lacks authority to prohibit interstate transport of species listed as injurious wildlife under Title 18 of the Lacey Act. Department of Justice's decision to appeal is pending. In the meantime, specific members of USARK may transport two species of large constrictors listed in 2015, the reticulated python and green anaconda, across state lines in the Continental U.S. except into Florida and Texas.

The complete text (pdf of his presentation) of this presentation is included at the end of the report.

2. **Title Practical Approaches to implementing Aquaculture Biosecurity Programs and Meeting OIE Standards and Regulations**
Presenter::Dr. David Scarfe, Aquatic Veterinary Associates

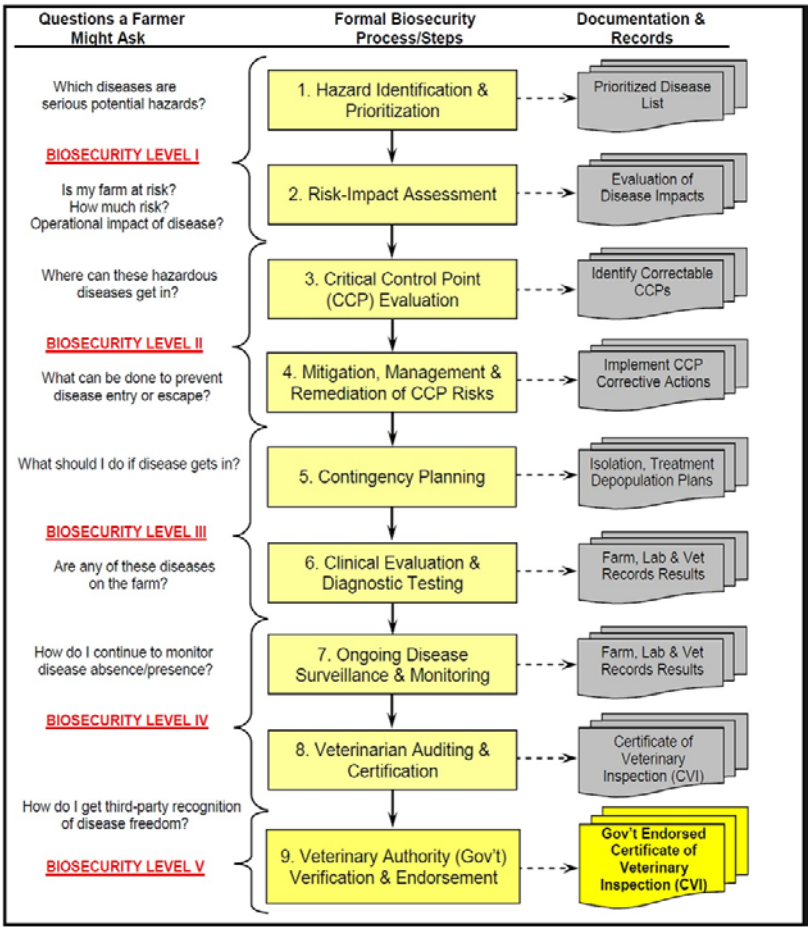
Summary of presentation:

The abstract of Dr. Scarfe's presentation is as below:

Facing progressively increasing risks and impacts of disease on aquaculture productions in all countries, over more than a decade at numerous conferences, symposia and workshops, a large number of individuals have discussed and debated what procedure that should be incorporated into biosecurity programs. A key feature has been determining which procedures will meet International Standards (i.e. processes and procedures in OIE Codes & Manuals) and National regulations. In balancing these requirements with practical approaches that aquaculture producers can implement, and are effective and useful for all stakeholders around the world (from producers to governmental regulators), the following were recognized as priorities for all biosecurity programs:

a) be practical and economic;
b) focus only on infectious and contagious diseases;

c) include procedures that address disease prevention, control and eradication in definable epidemiological units;
d) be based on well-established, sound scientific-justifiable veterinary procedures;
e) incorporate internationally accepted standards in the OIE Code and Manual; and,
f) involve public-private partnerships and collaboration between producers, aquatic veterinarians and paraveterinary professionals, and governmental regulators.



In focusing on these principles, the International Aquatic Veterinary Biosecurity Consortium (IAVBC) has tested the procedures in Figure 1 with stakeholders at several conferences and workshops in Norway, South Africa, Chile, and elsewhere, that involve an integrated approach for developing, implementing, auditing and certifying effective aquaculture biosecurity program. At the core of a biosecurity program is defining an epidemiologic unit (EpiUnit), a well-defined geographical population of animals, on which all biosecurity steps or processes will be implemented.

Figure 1. Integrated steps for developing, implementing, auditing and certifying an effective biosecurity program intended to prevent, control and possibly eradicate disease in any epidemiological unit (a defined population of animals, separated to some degree from other populations, in which infectious and contagious diseases can be easily transmitted – e.g. a tank/pond, farm, state/province, zone, region or country).

The complete text (pdf of his presentation) of this presentation is included at the end of the report.

3. Title: Aquaculture/ Aquatic Animal Health Program
Presenter: Dr. Kathleen Hartman, United States Department of Agriculture – Animal and Plant Inspection Service, Veterinary Services (USDA-APHIS-VS)

Summary of presentation:
Dr. Hartman provided the update on the activities of the USDA-APHIS-VS as well as providing those in attendance information on the Commercial Aquatic Health Program Standards.

As part of the update, she spoke of the 5 year business plan for that is updated yearly which can be view on the web

(https://www.aphis.usda.gov/animal_health/downloads/vsbp/5_year_business_plan_aquaculture.pdf.) The highlights of the activities included the renewal of the MOUs with USFWS and NOAA. The agency is commitment to the NAAPH has been reinvigorated with the signing of the MOUs. The agency has completed Phase 1 of integrating aquatics into the National Animal Health Laboratory Network (NAHLN) and the details of which was provided by Dr. Christina Loiacono who presented after Dr. Hartman. Dr. Hartman provided updates of the efforts of Import/Export Division who have completed the pilot of the Veterinary Export Health Certificate System (VEHCS). This includes an almost completely electronic certificate of export of ornamental fish to Canada and there are ongoing discussions for completely electronic certificates. She reported that the Surveillance Collaboration Services – Core One database structure for aquatic animal entries has been completed. Also completed is the Comprehensive and Integrated Surveillance (CIS) plan for aquaculture and elements of plan have been incorporated into the CAHPS. Sample collection for the multi-agency Infectious Salmon Anemia Virus surveillance in the Pacific Northwest and all tests are negative. She also reported on the efforts of Dr. Lori Gustafson (Center for Epidemiology and Animal Health) and Dr. Christa Speekman (Import/Export) who worked with the East Coast Shellfish Management to try to integrate shellfish into CAHPS. She also reported on the collaboration with University of Arkansas-Pine Bluff (UAPB) on aquaculture-agriculture economics project. A graduate student under Dr. Carole Engle a bait/sport fish survey to determine the economic burden of these bait/sport fish producers from 13 states for interstate commerce. The results of this will be published in December and will be reported at Aquaculture America 2016. There are thoughts of utilizing a similar type survey for salmon and trout producers. She then provided details on CAHPS including

a. The concept of CAHPS (i.e. that is model framework for aquatic animal health; it implements portions of NAAPH; it is science based; it is needs based (voluntary); and is empowered and strengthen by partnerships with State, Tribal and Federal entities).
b. These standards will assist in:
    1. The culture and production of healthy animals for sale and trade;
    2. Demonstrating the health status of animal to minimize obstacles for animal movement which
    3. Increase trade for less production costs
c. Principles of CAHPS which are:
    1. Aquatic animal health team – which has the knowledge and skills and varies in composition depending on the needs of the individual producer; assists in the development of a site-specific health plan which is composed of 1. Communication plan, 2. Risk evaluation and Management plan; 3. Surveillance Plan, 4. Disease Management Plan and 5. Response plan
    2. Risk evaluation
        i. Identification and characterization
        ii. Management – mitigation
    3. Surveillance
        i. Defining the purpose and surveillance boundaries – i.e. establishing disease or pathogen status for establishment, compartment or zone
        ii. Types and strategies – it is observational, pathogen specific and risk based
    4. Investigation and Reporting which includes disease investigation based on the mortality/morbidity threshold set by the aquatic animal health team and including the reporting to appropriate authorities.
    5. Response – what to do when things do not go according to plan and to close the gaps
        i. Contingency planning
        ii. Continuity of business
        iii. Pathogen and impact of pathogen – determine if need to treat, vaccinate or depopulate
        iv. Debriefing

She also provided the reasoning behind CAHPS as well as the benefits of producers/stakeholders implementing the standards,

The complete text (pdf of her presentation) of this presentation is included at the end of the report.

4. **Title** Aquatic Pathogen Testing in NAHLN Laboratories Update

Presenter: Dr. Christina Loiacono, United States Department of Agriculture Animal Plant Health Inspection Service (USDA-APHIS)

Summary of presentation

Dr. Loiacono provided a brief review of the history of the National Animal Health Laboratory Network (NAHLN), its purpose and the partnership role between USDA (APHIS & National Institute of Food and Agriculture[NIFA]), the AAVLD, and the NAHLN laboratories. A review of the founding principles and features of NAHLN including quality standards, personnel competency, standardized protocols and equipment, biosafety/biosecurity considerations, security of electronic communications and reporting, and assessment of preparedness through scenario testing were covered. Several slides were shown which presented the state of NAHLN laboratories. The original 12 NAHLN laboratories were presented then compared to the current expanded number of NAHLN laboratories covering swine, avian, bovine and aquatic pathogens. Laboratories approved to test for ISAV and VHSV under the NAHLN were shown.

There was discussion of the NAHLN including a new structure covered in a 2012 concept paper put out by the NAHLN Coordinating Council. Several major changes were proposed including lab designations (level 1-3, affiliate, & specialty), reassessments (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). It is anticipated that implementation will occur in 2016 with checklist process with funding adjustments to be made in 2016 funding cycles. Under the NAHLN restructure, lab designations will have the following:

Level 1	Level 2	Level 3	Affiliate Lab	Private Lab	Reference
Large test capacity	Similar Level 1 reduced capacity	Surveillance testing	Publically funded	Specific, needed capability	Oversight
Fully accredited	Provisionally accredited		Occasion. perform NALHN rel. testing	Rel. w/ NAHLN lab & SAHO	Training
BSL3 facilities	No BSL requirements			Written, approved plan to avoid COI	SOP's
LIMS/messaging					Reference material
Trainers					Proficiency testing
Test dev & validation					

Under the new structure plan, there will be three phases: 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. 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. 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.

The NAHLN laboratory qualification checklist for membership of a veterinary diagnostic laboratory will require an annual renewal along with an agreement to meet the requirements of the NAHLN including quality management, foreign animal disease (FAD) assays and investigations, sample handling, communication and reporting, and administrative and financial requirements. The applicant will have to request any changes to the disease/agent approvals and obtain signatures needed from the state (SAHO, etc.) and federal representative (DD or AD). A list of current NAHLN labs was presented along with their specific request for aquatic pathogens (Infectious Salmon Anemia Virus[ISAV] & Viral Hemorrhagic Septicemia Virus [VHSV]) to be added to their disease programs.

A progress update was provided on each phase. Under Phase I, NAHLN Methods Technical Working Group and other aquatic subject matter experts reviewed and approved SOP's for ISAV and VHSV testing. Existing NAHLN labs were invited to participate in Phase I including ISA and VHS in their NAHLN testing capabilities. Proficiency tests have been provided which included working with the NAHLN for PT

registration through the NAHLN portal along with identifying the need to lab to have permits for shipping PT virus. Data will be presented to the NAHLN Coordinating Council. Results were provided from the PT testing. 8 labs took part in ISAV PT (RT-real time PCR) with all passing successfully. 8 labs took part in the VHSV PT (VI) with 5 successfully passing and 3 working towards becoming PT'd. 11 labs took part in the VHSV PT (RT-real time PCR) with 8 successfully passing and 3 working towards becoming PT'd.

Under Phase II, there is pending implementation of the NAHLN restructure including the incorporation of Federal and state non-NAHLN labs (e.g. USFWS Fish Health Labs) and private aquatic animal health testing laboratories. Phase III will include more aquatic pathogen assays. The future of aquatic pathogen testing in NAHLN labs will include the expansion of membership including private labs (2016) as well as quality management training and more aquatic pathogen assays.

The complete text (pdf of her presentation) of this presentation is included at the end of the report.

[*If you are including the full text, indicate Name and content of presentation, followed by "thecomplete text of this presentation is included at the end of this report." Please include a copy of the paper.*]

Committee Business:
In response to the presentation on CAHP, a motion from the floor for a resolution to help in the implementation of this program was made by Dr. David Scarfe and was seconded by Dr. Anne Lichtenwalner. After discussion, the motion passed unanimously.

The committee also discussed the issue of which pathogens might be the added to the list of current pathogens to be included in NAHLN testing besides Infectious Salmon Anemia and Viral Hemorrhagic Septicemia. This included the process(s)/criteria by which these pathogens may be selected. Committee members are encouraged to provide feedback to Drs. Loiacono or Hartman or to the chair/co-chair.

OTHER NOTES:

UNITED STATES ANIMAL HEALTH ASSOCIATION
October 22 - 28, 2015; Providence, Rhode Island

RESOLUTION NUMBER: _____(numbered by Comm. on Resolutions)

SOURCE: COMMITTEE ON AQUACULTURE

SUBJECT MATTER: Commercial Aquaculture Health Program Standards

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BACKGROUND INFORMATION:

Commercial Aquaculture Health Program Standards (CAHPS) was initiated by the National Aquaculture Association and developed with the United States Department of Agriculture. It sets forth a model framework for the health of commercially farmed aquatic animals. The CAHPS recognize and build on current activities and existing guidelines for health of aquatic animals and aim to establish uniform standards for U.S. farmed aquatic animal health and movement. The goal of CAHPS is to provide uniform standards for U.S. commercially farmed aquatic animal health and movement and a template for known national aquatic animal health status. Implementation of CAHPS will provide leverage for APHIS in trade negotiations.

The USAHA applauds the efforts of the United States Department of Agriculture, Animal Plant and Inspection Service for working with the National Aquaculture Association to develop Commercial Aquaculture Health Program Standards (CAHPS). We believe that the program will be a tremendous benefit to commercial aquaculture especially with regards to trade both nationally and internationally. The effectiveness and success of the program requires the cooperation of not only industry but also State and Federal entities. The USAHA would enjoin these entities including the US Fish and Wildlife Service and the National Oceanic Atmospheric Administration to adopt/participate in these efforts.

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RESOLUTION:

The USAHA encourages APHIS to ensure sufficient funds are available in the FY 18 Aquaculture Health Line to implement the CAHPS program.