



United States Department of Agriculture



CWD PROGRAM STANDARD REVISIONS: OVERVIEW OF CHANGES

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
CERVID HEALTH PROGRAM

Program Standards Working Group 2016 and Public Comments



Working Group Participants

- Scientific Experts
- State and Federal animal health and wildlife officials
- Farmed cervid representatives



General Changes:

- Streamlined and clarified
- Aligned definitions and terms with the CFR

Content Changes:

- Consequences of poor quality and missing samples

 - Ante mortem diagnostics

 - Sample Collection and Submission

 - Epidemiological Investigations

- Evaluation & prioritization of requests for Federal indemnity

- Biosecurity recommendations for farmed cervid facilities

Consequences of Poor Quality and Missing Samples



Missing and poor sample quality continues to be an issue that threatens the efficacy, and confidence in, the HCP

New content lists consequences that participating States may wish to implement in response

Consequences should include:

- 1) Replace missed or poor quality samples with samples from an equal number of animals of the same sex and species that resided in the herd at least as long as the missed animal.
- 2) Reduce herd status – loss, reduction, or delay in certification
- 3) Direct suspension of herd status for a designated period of time



A number of examples are given for herd status adjustments to account for poor quality, incomplete, or missing samples

Slaughter Surveillance

Language in the revised Program Standards was update to reflect the requirement in the CFR (Part 55, Subpart B, 55.23-11(3)) that all mortalities, including animals taken to slaughter, must be made available for CWD tissue sampling.



Ante Mortem Diagnostics

Who

What

Where

Why

When

How



Ante Mortem Diagnostics

Who?

✓ White-tailed deer

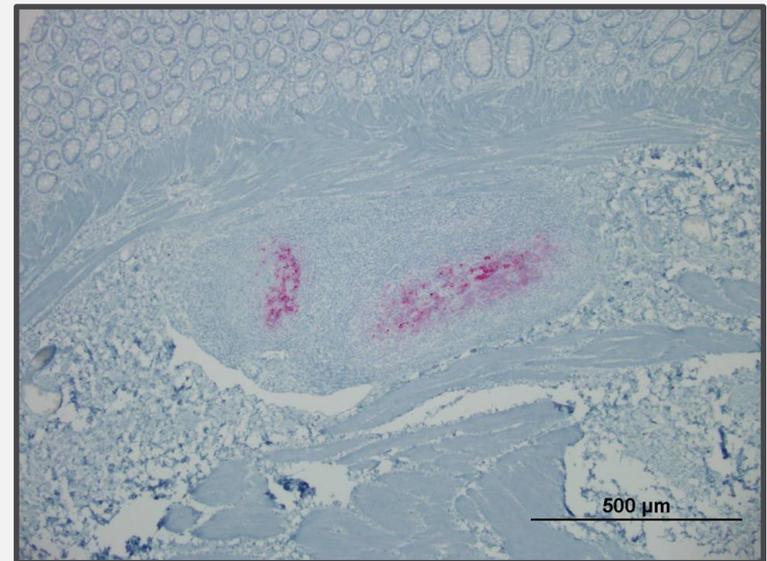
 Elk



Ante Mortem Diagnostics

What?

Rectal Biopsy
MRPLN Biopsy
by
Immunohistochemistry
(IHC)
✓ *Serial*
✓ *Whole Herd*



Ante Mortem Diagnostics

Where?

Must be outlined in the
Herd Plan

Testing timeline will also be
established in the herd plan



Ante Mortem Diagnostics

Why?

To provide producers under
trace-out quarantine with an
option to restore
business continuity
faster



Ante Mortem Diagnostics

When?

- ✓ Epi-linked herds
- ✓ CWD-exposed herds



Not routine surveillance
Not CWD-positive herds



When?

- ✓ Herd Codon 96 Genotype ratio is known
- ✓ > 50% GG ratio in herd required to utilize ante mortem diagnostics
- Genotype at codon 96 in white-tailed deer strongly influences the *incubation period* and thus the ability of an ante mortem test to detect disease
- When GG>GS>SS



Ante Mortem Diagnostics

How?

Detailed procedures given

- ✓ *Collection*
- ✓ *Submission*

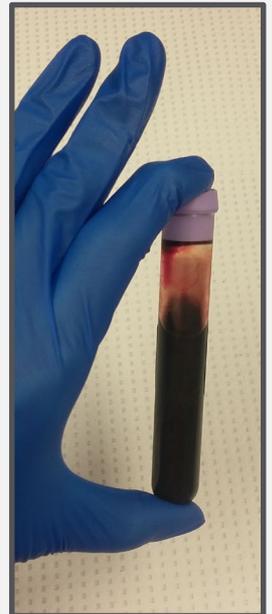


Ante Mortem Sample Collection and Submission

Fresh: *Blood* 3-5 mL whole blood in EDTA for codon 96 genetics (chilled or frozen)

Fixed: *Rectal Biopsy* 1 cm x1.5 cm [NVSL]

Fixed: *MRPLN Biopsy* 2 cm x 1cm x 1 cm (40 follicles req) [NVSL]



Ante Mortem Diagnostics

Sample Collection and Submission

- Ante mortem biopsies to be collected *only* by trained State, Federal, or accredited veterinarians and **must** be monitored by state animal health or VS representatives
- Testing must be done by NVSL at the owner's expense
- Samples must be submitted within 7 days of collection

Post Mortem Diagnostics



Sample Collection



☞ Samples should be
submitted within 7 days
of collection

HOARDING HURTS!

- ☞ Take care with sample ID
- ☞ Carefully & accurately label samples



Sample Collection

New requirements for

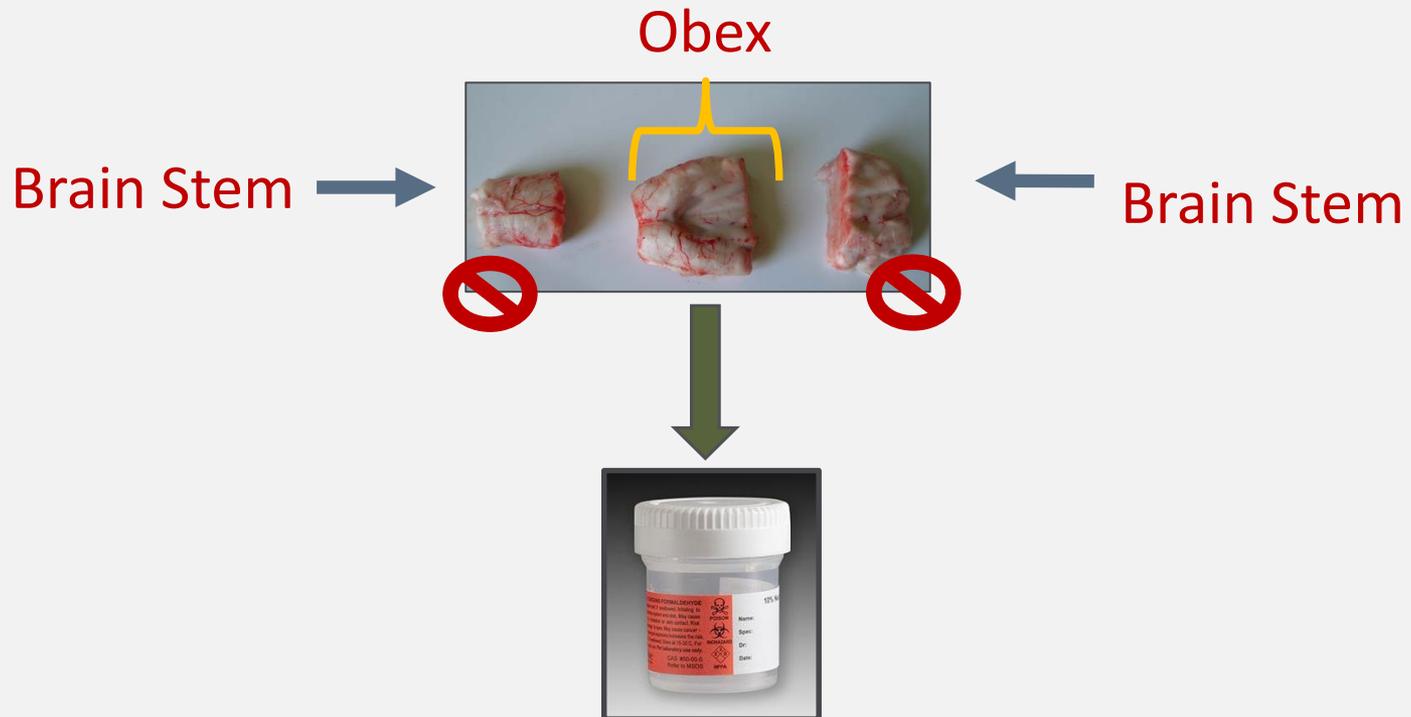
Fixed and Fresh

post mortem regulatory samples

Sample Collection and Submission

Fixed: *obex*

Place into 10% formalin jar that is clearly and appropriately labeled



Sample Collection and Submission

Fresh: *brain stem*

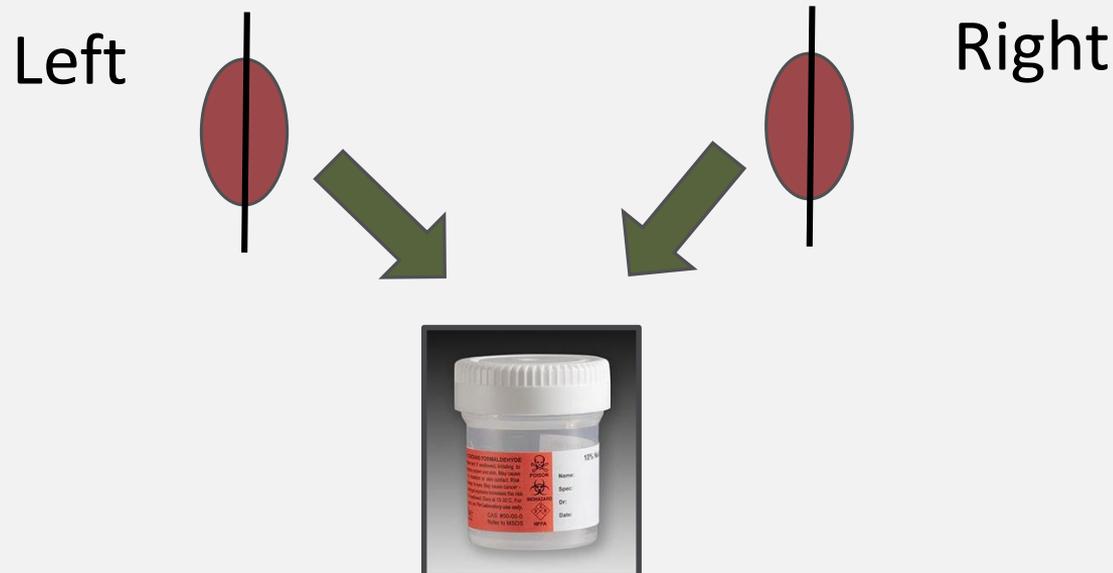
Place the pieces of brain stem into the whirl pak with the halves of the MRPLN. *Keep chilled*



Sample Collection and Submission

Fixed: *medial retropharyngeal lymph nodes (MRPLN)*

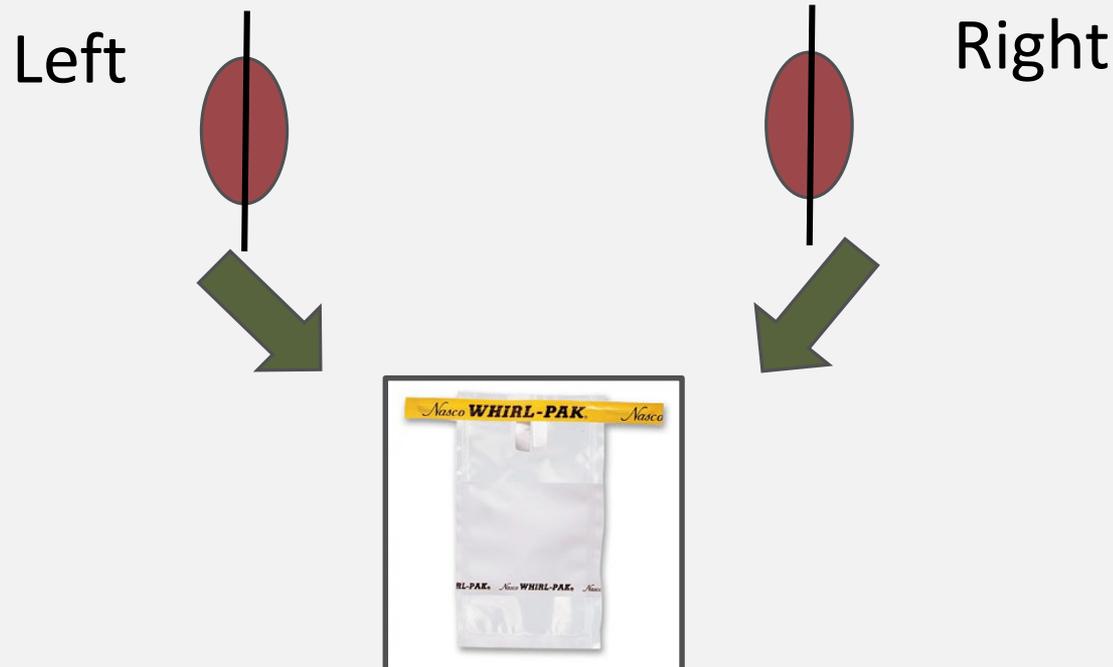
Longitudinally cut (1/2 of left, 1/2 of right) and place in the 10% formalin jar with the obex



Sample Collection and Submission

Fresh: *medial retropharyngeal lymph nodes (MRPLN)*

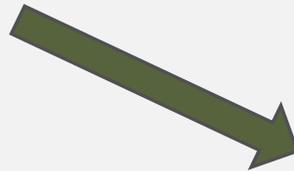
Place 1/2 of left, 1/2 of right of each LN that was not placed in formalin into a labeled whirl-pak. *Keep chilled*



Sample Collection and Submission

Fresh: ***official ID and skin***

Place the ear or other skin (~ 1" X 1") with official ID ***attached*** into the whirl pak with the MRPLN & brain stem





Sample Labeling

Date of collection

Producer name

Species

Type of specimen

Official ID

Sample ID number (what is assigned on the NVSL 10-4)

Epidemiological Investigations

Classification of animals and herds

1) *CWD-Positive Herd:*

Where CWD-positive animal resided at time of diagnosis.

2) *Epidemiological-Linked Herd:* a herd where the CWD-exposed animal(s) have resided with a CWD-positive animal within 5 years prior to the diagnosis of CWD in the positive herd or from the identified date of entry of CWD into the positive herd and have since moved to or through other herds. An Epi –Linked herd can be a Trace-back Epi-linked, Trace- forward Epi-linked or Pass-through Epi-linked.

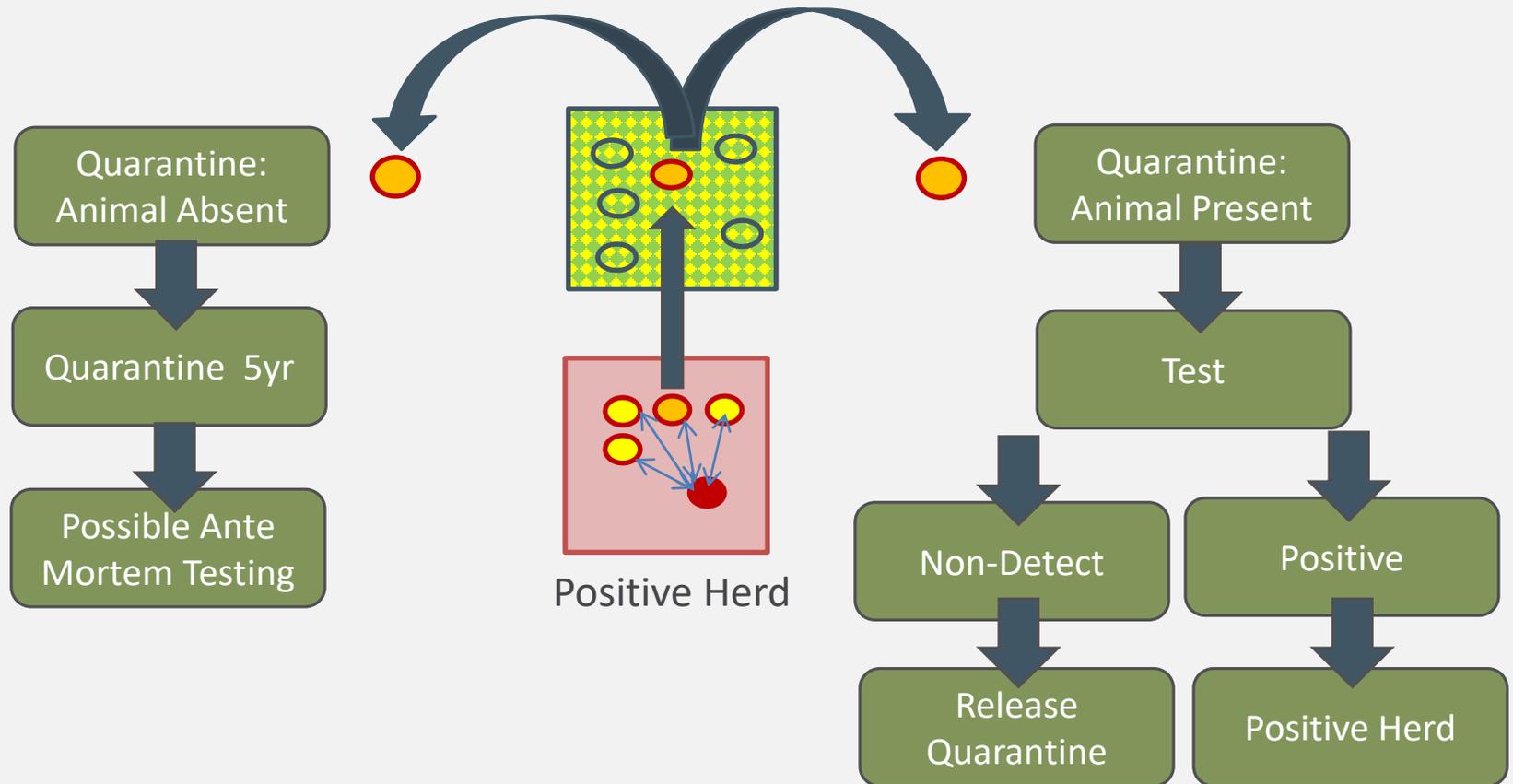
Epidemiological Investigations

- ✦ *Response options* are given for all types of herds
- ✦ Required CWD Epidemiology Investigation and Report *templates* are provided in **Appendix VI**



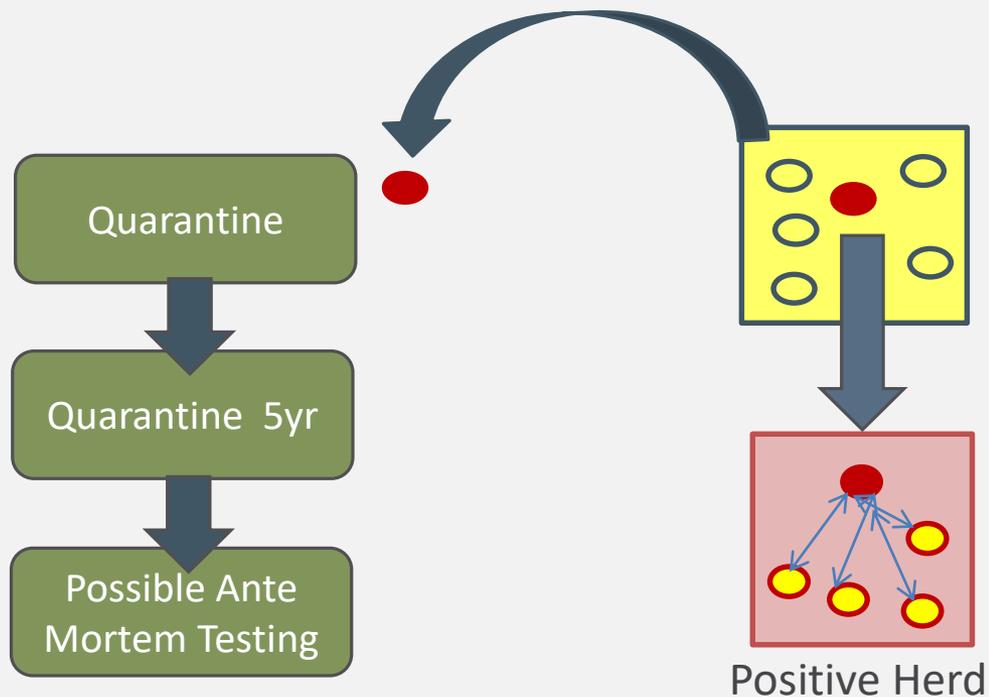
Trace-forward Herd (Epi-linked Herd)

Any herd(s) where an animal from a CWD-positive herd resided in the last 5 years

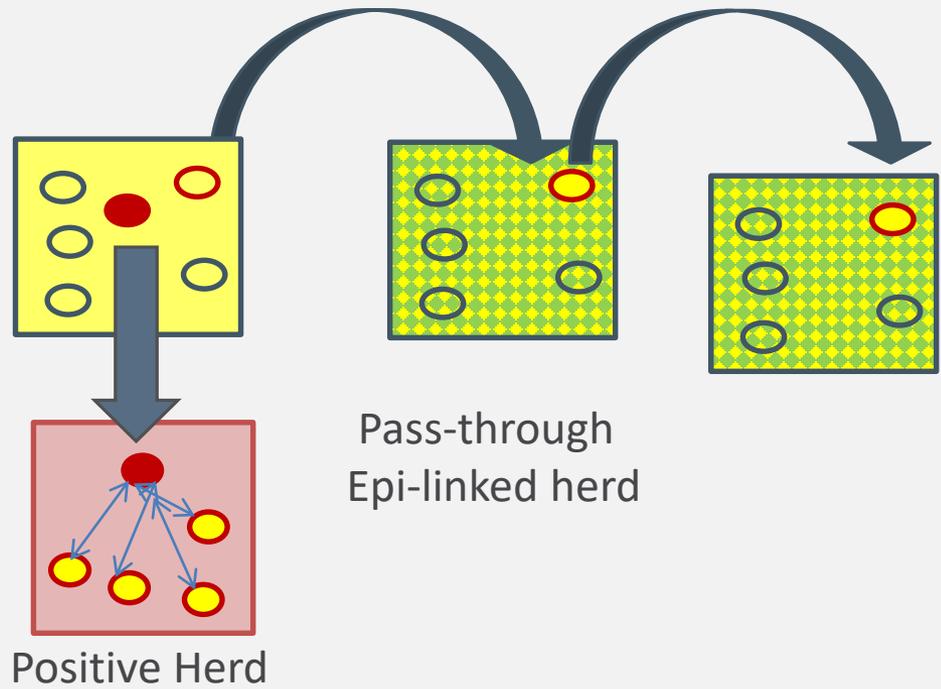


Trace Back Herd (Epi-Linked Herd)

Any herd(s) where the CWD-positive animal resided in the last 5 years



Pass-through (Epi-linked Herd)



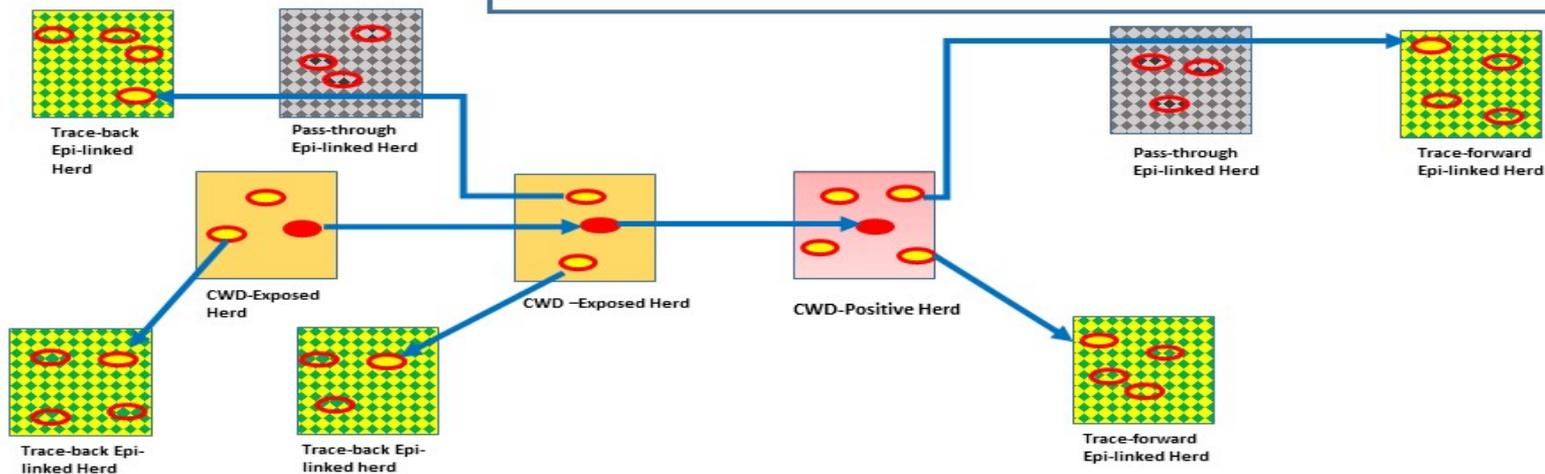
- CWD-Positive Animal* – eligible for indemnity
- CWD-Exposed Animal* – eligible for indemnity
- Undefined Status Animal ("exposed to exposed") – ineligible for indemnity unless deemed CWD-Suspect*
- CWD-Positive Herd*
- CWD-Exposed Herd*
- Epi-linked Herd
- Pass-through Herd Epi-linked

*see definitions - Code of Federal Regulations, Part 55B

Arrows are in the direction of animal movement

Steps to take following a positive CWD test result (see Program Standards for more details):

1. Identify CWD Exposed animals and place those herds on movement restrictions and suspended HCP status pending the epi investigation.
2. Conduct an epi investigation to determine if a source can be identified. All movements into and out of the trace herds (including free-ranging cervids) within 60 months of diagnosis should be investigated (See Program Standards Part B and Appendix III: CWD Epidemiology Investigation and Report Template). If a source is identified, then release any herds/animals that are not epi-linked.
3. If indemnity funds are available, consider the risk of the situation and discuss the option of euthanasia and testing of CWD Exposed animals with the owner. If no funds are available, the owner may elect to euthanize and test as a business decision to allow for movements to resume.
4. Develop herd plans for those herds that will remain under quarantine (see Program Standards Part B (5)). Based on the epi investigation, time under quarantine may be reduced at State discretion. Quarantine release will occur upon completion of the herd plan. HCP status will be determined by State officials and APHIS based on surveillance history and compliance.



Evaluation & Prioritization: Requests for Federal Indemnity



- Availability of funds
- Herd size (as related to availability of funds)
- Herd status (CWD-positive >whole herds with exposed or suspects)
- Type of herd (breeding>hunt preserve)



- HCP status (enrolled and compliant> not enrolled or non-compliant)
- CWD status of surrounding area (not detected in wildlife>not detected in wildlife)
- Cervid density in local area (high>moderate>low)
- Value of post mortem testing to inform epi and decision making

Biosecurity Recommendations for Farmed Cervid Facilities

Procedures to *reduce* the risk of introducing CWD and other diseases to a farm



Biosecurity Recommendations for Farmed Cervid Facilities

Prevent direct contact between cervids and wildlife:



- *Wild cervids*
- *Birds*
- *Feral hogs*
- *Other animals*

Biosecurity Recommendations for Farmed Cervid Facilities

Prevent indirect contact with potentially contaminated objects or materials



- *Feed and Hay*
- *Humans*
- *Vehicles*
- *Equipment*