CWD HERD CERTIFICATION PROGRAM TRAINING

APHIS VETERINARY SERVICES

Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE
CWD Herd Certification Training

Introduction
The goal of the CWD Herd Certification Program is to provide a consistent, national approach to control the incidence of CWD in farmed cervids and prevent the interstate spread of CWD in farmed cervids.
CWD susceptible species listed in the CFR may not move interstate without being HCP certified.
HCP HISTORY

- Rule published establishing the HCP: 2006
- Interim rule became effective: 2012
- Working group evaluation of the HCP: 2016
- Working group summary was made available for public comment: 2016
- Revised program standards became effective: 2019

- Development began for APHIS VS Cervid Health Program: 2003
- Revised rule proposal published: 2009
- The final rule became effective: 2014
- Working group summary issued at the United States Animal Health Association (USA HA) meeting: 2016
- Revised HCP program standards were made available for public comment: 2018
THE CFR

Code of Federal Regulations (CFR) Parts 55 (Control of CWD) and 81 (CWD in Deer, Elk, and Moose)

Items in the CFR are considered legally binding
CWD Herd Certification Program (HCP) participation is voluntary by States

The HCP is a cooperative effort

The program is Federal in origin, but the States oversee and administer it within their state.
The CWD Herd Certification Program (HCP)

PROGRAM AUTHORITY

While APHIS can implement regulations for participants in the HCP, there are limitations to Federal authority over captive cervid herds.

- **APHIS does not have the authority to require HCP participation**
- **APHIS cannot force herd owners to depopulate their herds**
- **APHIS does not have the authority to require herds that do not participate in the HCP to comply with HCP criteria**
Questions
CWD Herd Certification Program Training

Voluntary State Participation

Requirements
The CWD Herd Certification Program (HCP)

Program Participants

Twenty-eight states participate in the HCP.
(shaded green below)

FY 21 Enrolled & Certified

Deer 1,519 Herds 1,212 Herds

Elk: 302 Herds 265 Herds

Mixed Species: 138 Herds 97 Herds
STATE PARTICIPATION

STATES MUST HAVE THE LEGAL AUTHORITY TO:

- Quarantine and restrict intrastate movement
- Require prompt reporting of CWD
- Have a signed MOU with APHIS
# State Participation

## Annual Reports

Due each year by August 1st

<table>
<thead>
<tr>
<th>CWD sample and test number</th>
<th>Species</th>
<th>Number of animals</th>
<th>Submit reports on DIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWD test results</td>
<td>Herd type</td>
<td>Quarantined herds</td>
<td>Number of animals inspected</td>
</tr>
<tr>
<td>Depopulated herds</td>
<td>Herds released from quarantine</td>
<td>Herd plans in place</td>
<td>Positive herds</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>CWD trace investigations</td>
</tr>
</tbody>
</table>
STATE PARTICIPATION

Program Reviews

- Help states identify HCP issues
- Help states improve program compliance
STATE PARTICIPATION

Participating States must meet the minimum HCP requirements, however they can implement rules and regulations that go beyond those of the HCP.
Questions
THE CWD PROGRAM STANDARDS

The CWD Program Standards
What are they?
What is their function?
Part 55.21 of the CFR states that herds need to be “…in compliance with the CWD Herd Certification Program Standards”

The requirements in the CWD Program Standards are NOT optional.
DESCRIPTION

The CWD Herd Certification Program Standards provide detailed descriptions of acceptable methods for complying with the legal requirements in 9 CFR parts 55 and 81.
The CFR specifically lists individual species that were considered susceptible to CWD at the time of writing. These species are regulated under APHIS interstate movement requirements. Reindeer, sika deer, and muntjac are susceptible to CWD. However, adding reindeer and muntjac to the list would require amending the CFR. At this time, they may move interstate without being in the HCP.
States must enforce HCP requirements

- Investigate CWD-suspects
- Designate CWD-affected herds
- Prohibit commingling
- Restrict animal movement
- CWD testing and official ID
- State CWD program coordination
- Monitor and enforce quarantines
- Report out of state traces
- Herd inventories
- Herd Plans
- Epidemiology investigations
Questions
HERD ENROLLMENT
Owner Participation

Requirements for Enrollment:

- Accurate records
- Each animal must have official ID by 12 months of age
- All animals must have two forms of ID incl. official
- Adequate fencing
- Must have a premises ID
- Passes initial inspection
OWNER PARTICIPATION

No commingling

- No direct contact with other cervids
- No shared equipment, pasture, or water sources
- No movement of fawns to and from bottle feeding operations
New Animals

- Must be of equal or greater status or status is reduced

- Herds can be initiated with HCP certified animals and have certified status
OWNER PARTICIPATION

Animal Identification

All animals over 12 months of age

Two unique forms are required

One form must be official

Official ID must be approved by APHIS

ID must be linked to that animal and herd in a State database

Two forms are required for interstate movement regardless of age
OWNER PARTICIPATION

**Fencing**

- **Minimum of 8 feet tall**
- **Compliant with any state requirements**
- **Must be structurally sound**
- **Must be maintained**
- **Must be adequate to keep deer in and out**

Compliant with any state requirements
OWNER PARTICIPATION

Record Keeping

- Complete Inventory-current
- All IDs
- Age, Sex, Species
- Animal Origin
- Animal Disposition
- Date of Birth
- Date of Death
- Sale info including name & address
STATE RESPONSIBILITIES FOR HERD ENROLLMENT:

Site inspection:
Adequate fencing
Ensure two forms of ID

Evaluate animals for CWD clinical signs

Conduct initial physical inspection to confirm animal IDs and inventory

Enrollment date must be assigned: The date the herd officially enrolled

Provide a certificate of enrollment to owner with date
STATE RESPONSIBILITIES FOR HERD ENROLLMENT

Initial inspection must include must not be done sooner than 12 months prior to HCP enrollment.
Questions
CWD Herd Certification Training

Herd

Advancement & Certification

Cennification
HERD STATUS, ADVANCEMENT, AND CERTIFICATION

- Status, certification, and advancement of a herd is dependent on compliance with HCP requirements
- Must be compliant for 5 yrs and thereafter to maintain certification
- Lack of compliance should result in a reduction of status or program removal
HERD INVENTORIES & INSPECTION
STATE RESPONSIBILITIES FOR ADVANCEMENT & CERTIFICATION

ANNUAL SITE INSPECTIONS

Performed by:

- State Official
- APHIS employee
- Accredited Vet

11-13 months after the last annual inspection

Inspect fencing to ensure it is acceptable - 8’, sound, good repair

Visual inspection of the herd for signs of CWD
STATE RESPONSIBILITIES FOR ADVANCEMENT & CERTIFICATION

ANNUAL RECORDS REVIEW

Performed by:
State Official/Staff

Verify all sampling requirements are met. If not, document and take appropriate action.

Records are examined for completeness and reconciled with previous year.

If issues are discovered, corrective action should be taken.
STATE RESPONSIBILITIES FOR ADVANCEMENT & CERTIFICATION

PHYSICAL HERD INSPECTIONS

Conducted no more than 3 years after the last complete physical inventory

Same inspection items as annual inspection PLUS:

Performed by:
State Official
APHIS employee
Accredited Vet

Visual verification of ALL IDs and compared to herd inventory

Any ID that cannot be visually inspected will need some sort of restraint to confirm
Escapes must be reported to the state immediately upon discovery.
Questions
CWD SURVEILLANCE & SAMPLING
Suspected CWD Cases

- Neurological signs or wasting

- Report immediately to a State representative, accredited veterinarian, APHIS employee

- Suspects should be euthanized and tested
OWNER RESPONSIBILITY

Animal Mortalities

Deaths of animals > 12 mo of age must be reported to state immediately

Must appropriately dispose of carcasses

Animals > 12 mo of age must be tested for CWD incl slaughter and hunt preserves under same ownership

Must arrange for the correct collection of usable and appropriate CWD samples

Must submit samples within 7 days of death
STATE RESPONSIBILITY

Animal Mortalities

- Confirm that 100% of mortalities over 12 months of age are being tested
- Enforce consequences of missed or unusable samples
- Verify that usable samples have been submitted for testing
- Verify that samples have been submitted within 7 days of death
- Place herds with suspect and positive test results under quarantine
Samples for CWD Testing
Samples for CWD Testing

Tissue samples can ONLY be collected by State officials, APHIS employees, accredited veterinarians, or certified CWD sample collectors.
Samples for CWD Testing

Both medial retropharyngeal lymph nodes (MRPLN) AND obex need to be submitted

Needed to assure thorough diagnostics

Results can be informative in epidemiological investigations
Samples for CWD Testing

**Fixed:** obex

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

Obex

Brain Stem → [Image]

Brain Stem ← [Image]
Samples for CWD Testing

**Fresh:** brain stem

Place the pieces of brain stem into the whirl pak.

Keep chilled

Obex

Brain Stem → [Image of brain stem]

[Image of whirl pak]

Brain Stem ←
Samples for CWD Testing

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
Samples for CWD Testing

**Fresh**: medial retropharyngeal lymph nodes (MRP LN)

Longitudinally cut (1/2 of left, 1/2 of right) and place in the whirl pak with the brain stem trimmings.
Samples for CWD Testing

**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 Submission

- Samples need to be submitted to a NAHLN laboratory for testing within 7 days of death.

- NAHLN laboratories may only use USDA approved CWD diagnostic assays.

- NAHLN Laboratory must be approved to conduct CWD immunohistochemistry (IHC) for standard CWD surveillance.
  - Or
  - ELISA for slaughter surveillance.

- IHC is the approved CWD testing method for standard CWD surveillance.
Sample Submission

It is the owner’s responsibility to ensure complete, good quality samples are collected and all sampling requirements are met.
Questions
5 min break
Poor-Quality or Missing Samples

Poor quality and missing samples undermine the ability to assess the status of CWD in a herd and consequently negatively impact the efficacy of the CWD Herd Certification Program.
Poor-Quality or Missing Samples

Poor Quality Samples:
- Severely autolyzed
- Wrong tissue type

Missing Samples:
Samples not submitted for testing (MRPLN and Obex)
STATE RESPONSIBILITY

Sampler’s skills are deficient

Repeated unusable samples
- Wrong tissue
- Missing sample type

Consequences
- Sampler training
- Lack of cooperation or ongoing issues - prohibit from collecting and submitting samples
Consequence options for Poor-Quality or Missing Samples

- Reduction in herd status
- Suspension of status
- Antemortem replacement of a missed or poor-quality sample
Antemortem replacement of missed or poor-quality sample parameters: (pending final approval)

Species-
Only applies to WTD at this time

State approval-
AVIC and SAHO must agree before offering this option to a herd owner

HCP-
Herd must be compliant with the HCP
Antemortem replacement of missed or poor-quality sample parameters:

**HCP Compliance**

- Herd must be compliant with the HCP
- AVIC & SAHO review previous 3 yrs of inspection reports and CWD testing
- AVIC and SAHO must agree in writing that the herd meets all requirements
Antemortem replacement of missed or poor-quality sample parameters:

Genetics-

- Only herds not breeding to increase the S allele at codon 96 are eligible at this time
- If genotype at codon 96 is unknown the owner must genotype animals to be tested
- If genotype at codon 96 is known the owner must have five WTD sampled with at least four with GG at codon 96
Antemortem replacement of missed or poor-quality sample parameters:

**Test type:**
- IHC Rectal biopsy

**Number of WTD to be tested:**
- Five WTD for each missed or poor quality sample

**WTD:**
- Between 2 and 4 years of age
- Longest exposure to missed mortality
Antemortem replacement of missed or poor-quality sample parameters:

Who can sample:
- State or Federal veterinarian, licensed accredited veterinarian under the supervision of a State or Federal veterinarian

Samples sent to:
- NVSL
Antemortem replacement of missed or poor-quality sample parameters:

**Acceptable samples:**
- Must have at least six lymphoid follicles
- Animals with insufficient follicles must be resampled
Questions
Epidemiological Investigations
STATE RESPONSIBILITY

Upon confirmation of a CWD positive animal the State must place all known CWD-positive, exposed, epi-linked/trace herds and suspect animals under quarantine stopping all movement until the epi investigation determines the status of the exposed animals.
STATE RESPONSIBILITY

Additionally, the State, in cooperation with APHIS, conducts an investigation to determine the locations where the CWD positive animal, and CWD exposed animals from the herd, resided in the last 5 years (60 months).
STATE RESPONSIBILITY

- Epi Investigation
  - Starts within 7 business days
  - Preliminary Epi report
  - Report out of state trace to appropr. SAHO
  - Identify tracebacks and traceouts of exposed animals
  - Herd/s placed under quarantine
QUARANTINE
The selection of herds to place under quarantine following the identification of a CWD-positive animal can be complicated
Definitions:

CWD Positive Herd

= CWD Positive Deer

= CWD Exposed Deer

Trace Forward Epi-Linked Herd
Trace-forward Herd (Epi-linked Herd)

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

- **Quarantine:** Animal Present
  - Postmortem Test
    - Non-Detect
      - Release Quarantine
    - Positive
      - Positive Herd
- **Quarantine:** Animal Absent or not tested
  - Possible Ante Mortem Testing
  - Trace-forward Herd
  - 5yr
  - Positive Herd: Purchased or Natural Addition
  - Quarantine
    - Positive Herd
CWD Exposed Herds

CWD Exposed Herd

CWD Exposed Herd

CWD Positive Herd
CWD-Exposed Herd

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

1. Quarantine
2. Quarantine 5yr
3. Possible Ante Mortem Testing
4. Positive Herd
   - Purchased Addition
Trace-out Epi Linked Herds

CWD Exposed Herd

Trace-out Epi Linked Herd
**Trace Out Herd (Epi-Linked Herd)**

Any herd(s) containing an animal that resided with a CWD-positive animal.

- **Quarantine:** Animal Absent or not tested
  - **Quarantine:** Animal Present
    - Postmortem Test

- **Exposed Herd**
  - **Trace Out Herd**
  - **Positive Herd**
Pass-through (Epi-linked Herd)

Positive Herd

Pass-through Epi-linked herd

Exposed Herd

Trace-out Herd

Trace-out Herd
Exposed Animal Traceback

Animal present before CWD animal joined herd

No action
Program assumes that positive is the first in exposed herd

Exposed animal traceback herd

Exposed Herd

Positive Herd
Purchased Addition

Exposed animal traceback herd
Questions
Option for reducing 5 yr quarantine

Who - Epi-linked or CWD-exposed white-tailed deer herds where trace animals were not tested or owner does not want to remove animal/s
Option for reducing 5 yr quarantine

(Guidelines in Appendix II of CWD Program Standards)

What: Two Whole Herd Antemortem Testing with (approved genetic ratio) at owner’s expense

- All animals
  - Rectal Biopsy IHC
  - Genetics codon 96
Option for reducing 5 yr quarantine

Where-

1. **All animals**
   - Rectal Biopsy IHC
   - Genetics codon 96

   - Sampled by State, Federal, or Accredited Veterinarian
   - State or Federal Oversight
   - Samples must go to NVSL
   - Blood in EDTA @ Gene Check etc
   - Allflex ear punch @ NADR
Option for reducing 5 yr quarantine

When:

- At least 24 months after last exposure to trace animal

- Two whole herd ante-mortem tests required. 2nd no sooner than 6 months after the 1st
Option for reducing 5 yr quarantine

Limitations

✓ Antemortem testing must in the herd plan
✓ Herd must have no fewer than 50% codon 96 GG
✓ Herds with <50% codon 96 GG cannot participate
✓ If more than 10% of samples are not usable the missed animals must be resampled
Questions
HERD PLANS

Who, What, Where, and How
Herd Plans describe in detail the actions to be taken to control the spread of CWD from and within CWD-positive, exposed, epi-linked, or suspect herds. It is a herd and/or premises management agreement based on risk evaluation.
Herd Plans are developed by APHIS in collaboration with:
  - State representatives
  - Herd owner
  - Other affected parties
HERD PLAN MINIMUM COMPONENTS

- Should be signed within 60 days of confirmed Diagnosis
- Signed Herd Plan is required to receive Federal indemnity
- Regular Examination of Animals by herd Veterinarian for Signs of CWD
- Specifies type of official ID for each animal in herd
- Reporting to SAHO or APHIS of any CNS symptoms
- Maintaining records of births & deaths incl date
- Biosecurity recommendations for farmed cervid facilities
- Testing of All mortalities regardless of age
HERD PLAN OPTIONAL COMPONENTS

- **Depopulation parameters**: Whole herd antemortem CWD testing and genotyping using NVSL and APHIS-approved methods.
- **Time that premises must not contain cervids**.
- **Removal of CWD-exposed or suspect animals**.
- **Fencing requirements and time of regular inspections**.
- **Restrictions on the use and movement of equipment**.
- **Parameters for cleaning & decontaminating of site**.
- **Requirement to provide info to complete the preliminary and final epi report**.
- **Current CDC Guidelines for Prevention of Potential human Exposure to CWD**.
Questions
INDEMNITY
Federal indemnity may be available for the purchase, destruction, and disposal of CWD-positive, exposed, and suspect animals.

Factors that affect indemnity:
- A signed Federal budget
- Continuing resolutions affect the ability to offer indemnity
- Amount of money allotted by Congress for indemnity of cervids
- Approval by leadership
Current indemnity amount per animal

There have been significant changes:

The deer calculator is no longer in use

The USDA APHIS Veterinary Services Indemnity Values Specialty table is to be used for animal valuation
Herd owners may appeal the table value by:

- Informing APHIS in writing within 14 days of receipt of the indemnity proposal
- Having the deer appraised by a certified, third party appraiser at their expense
- Submitting the appraisal to APHIS
How to submit an indemnity request:

Who submits: State Animal Health Officials, VS Epidemiologist, VMO

Documents to be completed/submitted:
Indemnity Request form, Preliminary Epi Report, VS 1-23, Herd Plan

Requested submitted to: The APHIS Area Veterinarian in Charge, who will then sign and submit all completed documents to the Cervid Health Team for prioritization
Things to know:

APHIS cannot purchase dead animals.

APHIS will pay reasonable costs for destruction and carcass disposal for animals that are indemnified.

Once euthanized, the carcasses become the property of APHIS and APHIS may collect tissue samples as desired.
Questions
INDEMNITY
PRIORITIZATION
Evaluation & Prioritization:

- Availability of funds
- Herd size (as related to available 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 not compliant)

CWD Status of surrounding area (not detected in wildlife > detected)

Cervid density in local area (high > low)

Value of postmortem testing to inform epi and decision-making
Herd Depopulation
DEPOULATION

Must be in herd plan or in an amendment to herd plan

Carcasses must be appropriately disposed of

Whole herd only*

All animals must be postmortem tested in alignment with HCP guidelines

C&D of premises MUST be completed prior to the AVIC signing off for indemnity payment

• The exception is if the herd is participating in a predictive genetics approach to control CWD in which case all poor scoring animals would be depopulated and high scoring animals remain and are selectively bred.
CWD DEPOPULATION CHALLENGES

Keep depopulation site as clean as possible
  Plastic tarps, wood shavings, disposable instruments

Regular disinfectants do not inactivate infectious prions
  Must use 20,000 ppm bleach solution

CWD and other prions can remain infectious in the environment for many years
Questions?

Unclear about program requirements?

Want to discuss a complex situation?

CERVID PROGRAM STAFF ARE HERE TO HELP!
RESOURCES:

Cervid Health Program Email:
vs.sp.cervid.health@usda.gov

APHIS Cervid Health Website: