



NEW JERSEY DIVISION OF  
**Fish and Wildlife**

# Chronic Wasting Disease Response Plan 2013

New Jersey Division of Fish & Wildlife

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## **A. INTRODUCTION**

Chronic wasting disease (CWD) is a disease affecting the central nervous system of members of the deer family, also called cervids, which include mule deer, black-tailed deer (mule deer variant), rocky mountain elk, moose and white-tailed deer in North America. CWD belongs to a family of diseases known as Transmissible Spongiform Encephalopathies (TSE), which include scrapie of domestic sheep and goats, bovine spongiform encephalopathy (BSE or “mad cow disease”) of cattle, and transmissible mink encephalopathy of farmed mink, all of which may occur in wild or domestic and captive-reared animals. Creutzfeldt-Jakob Disease (CJD) is a human TSE that occurs throughout the world. Variant CJD (vCJD) is a human TSE believed to be caused by the consumption of BSE-contaminated beef.

Unlike BSE and vCJD, there is no evidence that CWD is transmissible to humans who consume or handle infected cervids. However, researchers and public officials, including the Center for Disease Control, continue to advise hunters to err on the side of caution and not to consume meat from an infected animal or an animal that looks sick (<http://www.cdc.gov/ncidod/dvrd/cwd/>).

See Appendix A for more information on Chronic Wasting Disease.

Statewide surveillance efforts in New Jersey to detect CWD in wild deer and captive cervids began during the 1997-98 hunting season and sampling has been conducted annually since 2002. During the 2012-13 hunting season 425 wild, hunter-harvested deer were sampled from locations throughout New Jersey, which brings the total number of wild deer tested since 1997 to 5,178. In addition to the wild deer, 129 captive deer, 6 captive elk and 3 captive reindeer have been tested. All samples to date have been negative for CWD. The Division of Fish & Wildlife (NJDFW) will continue to monitor for the presence of CWD in wild and captive cervids in New Jersey.

Based on annual targeted sample size, there is a 95% probability that at least one CWD-positive deer would be detected if less than 1% (0.75%) of the deer population was infected. To conduct the survey retropharyngeal lymph nodes are extracted from deer heads collected from cooperating butchers throughout the state and the lymph nodes are submitted to a USDA-certified laboratory for testing. In addition to hunter harvested deer, each year samples are also collected from wild or captive cervids that display symptoms that are consistent with CWD.

While CWD has potentially serious consequences for both the New Jersey wild white-tailed deer herd and deer hunting’s contribution to the state economy, there is currently no evidence that it can be transmitted to humans or domestic animals. Consequently, it is important that the response to an outbreak of CWD be in proportion to the relatively low health risks to

humans, livestock and domestic animals. A variety of CWD management efforts in other states have not been successful in eliminating CWD from their free-ranging deer populations. Therefore, the primary goal of New Jersey's plan is to rapidly contain or slow the spread of the disease in our free-ranging deer population.

The New Jersey CWD Response Plan will be put into effect if CWD is detected in a wild or captive cervid within 20 miles of the NJ border or if CWD is detected in a wild deer or a captive deer in New Jersey. The Response Plan outlines the actions NJDFW will take to:

1. Verify the presence of the disease and determine its prevalence and distribution in New Jersey.
2. Define chains of intra and interstate communication to relay surveillance data and disease management information.
3. Impose regulations and restrictions necessary to manage CWD in wild or captive cervid populations.
4. Implement a public communication plan to inform hunters and the general public about CWD in New Jersey deer and precautions necessary to contain and slow the spread of the disease.

A CWD response team has been assembled. The response team will determine the research and data needs, management actions and information and communication actions necessary to effectively manage the disease response. Research and data-collection work may be contracted as appropriate. The CWD response team includes staff from the following:

NJDFW Director's Office  
Bureau of Wildlife Mgmt. - Deer Project  
Office of Fish and Wildlife Health and Forensics  
Bureau of Wildlife Mgmt. - Wildlife Control  
Bureau of Law Enforcement  
Bureau of Information and Education  
DEP Press Office  
US Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS),  
Veterinary Services (VS)  
New Jersey Department of Agriculture, Division of Animal Health  
Other subject matter experts as deemed necessary

## **B. RESPONSE PLAN IMPLEMENTATION AND ACTIONS**

The New Jersey CWD Response Plan will be put into effect if CWD is detected in a wild or captive cervid within 20 miles of the NJ border or if CWD is detected in a wild deer or a captive deer in New Jersey.

**1. RESPONSE FOR DETECTION OF CWD WITHIN 20 MILES OF THE NEW JERSEY BORDER:**

The response plan will be activated upon notification from an adjacent state of a CWD positive detection within 20 miles of a New Jersey border. Under this scenario, the primary objectives of the response effort will be to 1) increase CWD surveillance of those areas within New Jersey that are nearest the out-of-state endemic area, and 2) communicate and coordinate with the public and other agencies on issues related to CWD and the actions being taken by NJDFW.

- The following management actions will be implemented when CWD is detected within 20 miles of the New Jersey border. The NJDFW will coordinate notification of the following:
  - Assistant Commissioner; will inform Offices of the Governor and Commissioner
  - DEP Press Office
  - Director of the Division of Parks and Forestry
  - Office of Legal Affairs
  - NJDFW staff
  - NJ Department of Agriculture
  - USDA-APHIS-Wildlife Services (WS)
  - USDA-APHIS-VS
  - Office of the Attorney General
  - NJ Department of Health
- Within 48 hours of notification of the CWD case within 20 miles of the border, the media will be advised through a press release from the Press Office. The press release will describe the state CWD response plan and the CWD response management actions dictated by the plan for detection of the disease near our border
- NJDFW deer biologists will regularly communicate with deer biologists in the infected state and remain apprised of the disease status in the infected state.
- Using the nearest out-of-state positive site as a starting point, a New Jersey CWD surveillance area will be delineated and mapped. The size and location of the area will be determined based on deer biology and local geographic features.
- CWD sampling will be increased in the surveillance area and hunter-killed deer, road-killed deer and deer killed under Special Wildlife Management permits may be sampled. The CWD Response team will determine the target sample size with the goal of

detecting CWD at the lowest possible prevalence, given the location and the resources available.

- Subsequent sampling intensity and management action will be determined based on the infected state's sampling results in the New Jersey border area. A CWD positive case within 5 miles of a New Jersey border would trigger a significant increase in sampling intensity. Targeted sampling may be employed by the NJDFW along with the collection methods outlined above.

## **2. RESPONSE FOR DETECTION OF CWD IN NEW JERSEY**

The response plan will also be put into effect when CWD is detected in a wild or captive cervid in New Jersey. An initial report of a positive test result from a USDA-certified laboratory will be considered a suspect positive until it is confirmed by the USDA National Veterinary Services Laboratory (NVSL). If no backup samples are available for testing, the result will be considered a true positive. If CWD is detected in New Jersey, each subsequent CWD case detected in the state will be evaluated to determine whether or not it is an index case. For the purposes of this plan, an **index case** is a new discovery of CWD that is geographically distinct from the first or other existing cases and/or not reasonably related to existing cases. The determination of whether a new case is an index case or one that is likely related to existing cases will be made by the CWD response team. Upon receiving notification of a suspect positive sample from a New Jersey cervid, the NJDFW Director and Assistant Directors will be notified and the CWD response team will expeditiously determine whether it is a new case of the disease (index case) or one that it is likely related to existing cases.

The first CWD case in New Jersey and all subsequent index cases would trigger the following response actions.

- Upon receiving notification of a suspect positive CWD case from New Jersey that is either the first potential New Jersey case or a potential new index case, the NJDFW will advise the Governor's Office and the DEP Commissioner's Office. If back-up samples are available for confirmatory testing, the Governor and Commissioner will be advised that confirmation may take a week or more from the initial positive CWD case notification. If the backup sample does not test positive for CWD, the Governor and Commissioner Offices will be notified of the results and advised that no CWD response actions will be taken.

If there are no backup samples to confirm the suspect positive CWD result or if the suspect positive result is confirmed by NVSL, response actions will begin and the NJDFW will coordinate notification of the positive CWD occurrence to the following:

- Assistant Commissioner; will inform Offices of the Governor and Commissioner
  - DEP Press Office
  - Director of the Division of Parks and Forestry
  - Office of Legal Affairs
  - NJDFW staff
  - NJ Department of Agriculture
  - USDA-APHIS- Wildlife Services
  - USDA-APHIS-VS
  - Office of the Attorney General
  - NJ Department of Health
- Concurrently, the DEP, NJDFW Director and designees will notify key constituency/stakeholder groups, including Fish and Game Council members, wildlife agencies in the surrounding mid-Atlantic states, appropriate federal agencies, legislators, and local community officials where the positive case was found, informing them that CWD has been identified in New Jersey. This may be done via individual contact or by Press Release.
  - Within 48 hours of confirming the first or subsequent index CWD cases in New Jersey, the media will be advised through a press release from the DEP Press Office. The press release will describe the State CWD response plan and the CWD response management actions dictated by the plan and other CWD-related resources deemed relevant to the CWD case at that time.
  - NJDFW staff and DEP Press Office staff will be assigned to a CWD information and media contact team. All CWD-related questions from the public and the media will be routed to this team. This team will also coordinate posting of up-to-date information on the NJDFW and DEP Websites in order to fully inform citizens on CWD and the actions being taken under the CWD response plan.
  - Legislation and/or emergency regulations may be enacted to implement appropriate disease surveillance and containment measures within the DCA. These can include but are not limited to: expanding deer seasons and increasing bag limits, mandatory deer check-in at designated NJDFW check stations, the issuance of special permits for the harvest of deer by licensed hunters on areas prescribed by NJDFW, the prohibition of deer rehabilitation, limitations on deer feeding or baiting, the prohibition of carcass importation, the prohibition of intra-state deer movement, the ban of urine-based lures,

the prohibition on importation of deer semen, and the implementation of necessary actions to secure captive cervid facilities.

**2a ADDITIONAL RESPONSE ACTIONS FOR CWD INDEX CASES IN FREE RANGING DEER WITHIN NEW JERSEY**

In addition to the response actions described when CWD is detected in New Jersey, the following management actions will be implemented as rapidly as possible when CWD index cases involve free-ranging deer. The primary objective of the response efforts will be to determine how many deer are affected (prevalence) and geographic extent of CWD infection in the free ranging deer population (distribution).

- A map will be developed showing the location of the index case. A five-mile radius circle (79-mi<sup>2</sup> area) or a 10-mile radius circle (314 mi<sup>2</sup>) will be drawn around the index case. A CWD Disease Containment Area (DCA) will be established based on existing NJDFW deer management zones and/or units (geographic codes used to check-in deer) that encompass the reference circle. The area within the DCA will be reviewed to identify sites conducive to sampling deer for additional testing. Parameters such as deer density, accessibility, land ownership and safety will be considered in order to identify where sampling would be most efficient.
- The deer herd will be assessed within the DCA in order to develop an estimated population size. This estimate will be used to determine the relationship between a given sample size of any collected deer and the corresponding degree of certainty that any additional infected deer have been identified. As the sample size increases, there will be a corresponding increase in confidence that additional positive deer will be detected, if present.
- Sampling will commence as soon as possible to determine the prevalence and geographic distribution of CWD in the DCA. Various methods (e.g., road-kills, Special Wildlife Management Permits, controlled shooting, hunter-harvested animals, etc.) may be used to collect additional samples, with controlled shooting by trained government teams considered the last resort. Landowner permission will be obtained prior to collecting/testing any deer on private property. All collection locations will be recorded using GPS coordinates and transferred to a master map. Based on the recommendations of the CWD Response Team, hunting regulations and carcass transport regulations may be modified within the DCA. These may include, but are not limited to, the following: the restriction of baiting and feeding of deer, the ban on whole carcasses leaving the DCA, and requesting the cooperation of processors and taxidermists to handle deer harvested within the DCA. Dumpsters may be provided for carcass waste disposal, and hunters may be required to bring harvested deer to a check station if enough samples cannot be obtained otherwise.



- If additional infected deer are detected in the DCA, the boundary will be adjusted if necessary around the additional case(s). A new five-mile radius boundary will be extended and sampling will be conducted at newly identified DCA within the expanded area(s).
- Targeted surveillance for CWD will be intensified within all Deer Management Zones (DMZ) immediately adjacent to the DCA. This surveillance will focus on road killed deer, deer taken under the authority of a Special Wildlife Management Permit, CBDMP culls, deer taken via managed hunts and deer taken during the regular hunting season. Mandatory hunter check-in may be required during certain hunting seasons to allow NJDFW to operate check stations to take CWD samples from harvested deer. Deer processors may be asked to cooperate by saving portions of deer carcasses for testing by NJDFW staff during all or selected portions of the deer hunting seasons. Shooting deer by government employees is not expected to be necessary except in those cases where samples are not otherwise obtainable.
- Mandatory CWD testing may be implemented for all deer taken during deer hunting seasons or under permits at established check stations. This requirement will be instituted within and surrounding the DCA as determined by NJDFW. The testing results will be posted on NJDFW website; hunters will be notified of positive test results. If captive deer facilities and wildlife rehabilitators are present within the DCA, NJDFW personnel will inspect these facilities immediately following confirmation of CWD in the DCA and then on a regular basis thereafter. All captive deer that die in captivity will be tested for CWD. Division of Fish and Wildlife staff will check the integrity of the perimeter fencing.
- If no additional positive cases are detected for a period of one year then targeted surveillance for CWD will be continued for four additional years in all DMZs adjacent to, and containing the DCA. The DCA will be considered CWD-free when no new cases have been found for five consecutive years. Sampling will consist of:
  - CWD testing of hunter-harvested deer, focusing on deer processors, Special Wildlife Management permits and NJDFW check stations.
  - Non-hunter harvested target deer will be tested opportunistically as they become available (includes deer taken under Special Wildlife Management Permits and road kills).
  - Controlled shooting by government employees will only be done if needed to adequately assess the prevalence and geographic extent of disease and is not expected to be necessary unless samples are not otherwise obtainable.
- If additional CWD infected free ranging deer are found, the DCA will be extended as necessary. If new cases are sufficiently distant from the existing DCA, a new DCA will be established and the response plan implemented as per a new area.

- An adaptive management approach will be employed to determine how long to continue surveillance if the DCA area does not remain CWD free for a period of five years.

If CWD is identified in free ranging deer in New Jersey, the NJDFW will begin a comprehensive program to educate citizens on how to adapt to having this disease in the environment on a long term basis. Initially, effort will be focused to make the most current information on this disease available to all citizens in a manner that is easily understood and relevant to their daily lives. All common media and social networking outlets will be used to accomplish this objective. Regular updates will be made after the initial focused effort, especially as new information becomes available.

## **2b. RESPONSE ACTIONS FOR CWD CASES IN CAPTIVE CERVIDS WITHIN NEW JERSEY**

In addition to the response actions described when CWD is detected in New Jersey, the following management actions will be implemented as rapidly as possible when CWD index cases involve captive cervids. As of October 2012, there were 39 individuals or facilities that legally possessed live cervids plus six wildlife rehabilitators allowed to rehabilitate white-tailed deer in New Jersey. All animals that die must be reported to NJDFW as soon as possible. NJDFW will pay for laboratory testing. Additionally, live cervids may not be transported into New Jersey.

Upon discovery of the disease in a captive herd, the primary objective of the initial CWD response efforts will be to eradicate the disease from the captive herd and to determine if the disease is also present in free ranging deer surrounding the CWD infected captive cervid facility. In the event a CWD infected captive cervid is identified, the following measures will be implemented as rapidly as possible:

- Under applicable statutory and regulatory authority, depopulate all cervids from the facility where the infected animal was discovered and test all cervids for CWD.
- Modify or augment the fence surrounding the facility to exclude free ranging native deer.
- Decontaminate the facility to the maximum extent possible following the USDA APHIS guidelines.
- If the facility was legally permitted, revoke the permit due to site contamination.
- Attempt to trace-back and trace-forward any and all cervids in contact with CWD infected animals to determine the origin and prevent further infection.

- Implement the management actions described in section 2A. Additional response actions for CWD index cases in free ranging deer within New Jersey, using the captive facility as the index case.

## Appendix A.

### Information on Chronic Wasting Disease

Chronic wasting disease affects the central nervous system of elk, deer and moose. Most scientists believe CWD is caused by an infectious protein or prion. The brain of an affected member of the deer family (Cervidae) will have a microscopic sponge-like appearance. This characteristic finding places it in a group of diseases known as transmissible spongiform encephalopathies (TSEs). CWD could have been derived from alteration of an existing TSE or the CWD prion could have occurred spontaneously. Its origin may never be known.

CWD has been known by its symptoms in mule deer for more than 30 years and may have been present in free ranging mule deer for more than 40 years. It was first diagnosed in captive mule deer and black-tailed deer in Wyoming. In 1979 it was diagnosed in captive elk. Also about that time a captive mule deer was diagnosed with CWD in a zoo in Ontario, but the disease did not persist in that location. In 1981 CWD was diagnosed in a free-ranging elk in Colorado. In 2001, CWD was first discovered in wild white-tailed deer in South Dakota. At present, four species within the family Cervidae are known to be naturally susceptible to CWD. Cattle and other domestic livestock may be resistant to natural infection.

As of October 2012, the following states and Canadian provinces have reported CWD in captive or wild deer, elk or moose:

Alberta, Canada <sup>1</sup>	New Mexico <sup>3</sup>	Oklahoma <sup>2</sup>	Michigan <sup>2</sup>
Saskatchewan, Canada <sup>1</sup>	Texas <sup>3</sup>	Minnesota <sup>2</sup>	New York <sup>1</sup>
Montana <sup>2</sup>	North Dakota <sup>3</sup>	Iowa <sup>2</sup>	Pennsylvania <sup>2</sup>
Wyoming <sup>1</sup>	South Dakota <sup>1</sup>	Missouri <sup>2</sup>	West Virginia <sup>3</sup>
Utah <sup>3</sup>	Nebraska <sup>1</sup>	Wisconsin <sup>1</sup>	Virginia <sup>3</sup>
Colorado <sup>1</sup>	Kansas <sup>1</sup>	Illinois <sup>3</sup>	Maryland <sup>3</sup>

<sup>1</sup> CWD in both captive and wild herds

<sup>2</sup> CWD in captive herds only

<sup>3</sup> CWD in wild herds only

The clinical signs of CWD are not unique to this disease, but loss of body weight, even as the deer or elk continues to eat, is typical. The animals may walk in the same short path, repeatedly. They may be slightly unsteady standing with legs separated wider than normal. Some have subtle head tremors and are found near streams or ponds. Infected animals may have periods when they appear sleepy or unresponsive or may carry their heads down with their ears lowered. Increased salivation, drinking and urination may also occur. Usually, months to years pass from when the animal is infected to when it shows these signs. Once the signs develop they usually last for months, but occasionally the animal dies within a few days of showing clinical symptoms.

Currently, post mortem examination of brain and lymphoid tissue is the most reliable way to diagnose CWD. Microscopic examination of the brains of dead deer reveals the sponge-like changes typical of CWD. Early in the disease, before the spongy changes of the brain occur, special chemical stains for the CWD prion will reveal its presence. Studies have shown that the CWD prion is more likely to be detected in the lymph node near the pharynx than the brain stem, although, both tissues are routinely sampled to diagnose the disease. Prion-specific stains also have been used to demonstrate the CWD prion in biopsy samples of tonsils and rectal mucosa from live deer and elk, but these tests require anesthetizing the animal.

Chronic wasting disease is both transmissible and infectious amongst cervids. Studies have shown that, in a controlled environment, CWD can be transmitting through saliva. The prion has also been shown to occur in the digestive tract which suggests it may be excreted and then ingested by other deer feeding on contaminated grasses and plants. The prion is very resistant to traditional disinfectants and persists a long time in the environment. Prions in the tissue of dead deer may also contaminate the environment and infect deer that ingest contaminated plant material. The prion's persistence in the environment and the associated infection threat to other animals are the reasons for strict guidelines and requirements for the proper disposal of parts from butchered deer and restrictions on the transport of tissues where the prion concentrates, like brain and spinal cord.

No cases of human CJD or variant CJD have been linked to CWD in deer. It's important to remember that animals from known CWD regions in the Western U.S. have been in the human food chain for decades without a known case of related human illness. In Colorado, no cases of CWD or vCJD have been found in people or cattle living in the CWD-infected area, despite more than 20 years of monitoring.

Epidemiologists with the Center for Disease Control (CDC) have conducted extensive studies into the potential for human risk from CWD. They were not able to identify any association between human neurological disease and CWD and concluded that there is no current evidence that CWD is linked to disease in humans. Nevertheless, based on recommendations of the CDC and the World Health Organization, the best advice is to act with common sense and to not eat meat from an apparently sick deer, elk or any animal found dead or known to be positive for CWD. Also, as a precaution in areas where CWD has been identified, hunters are advised not to eat tissues known to harbor CWD prions (lymph nodes, tonsils, spleen, pancreas, brain, and spinal cord) and to “bone out” the meat.