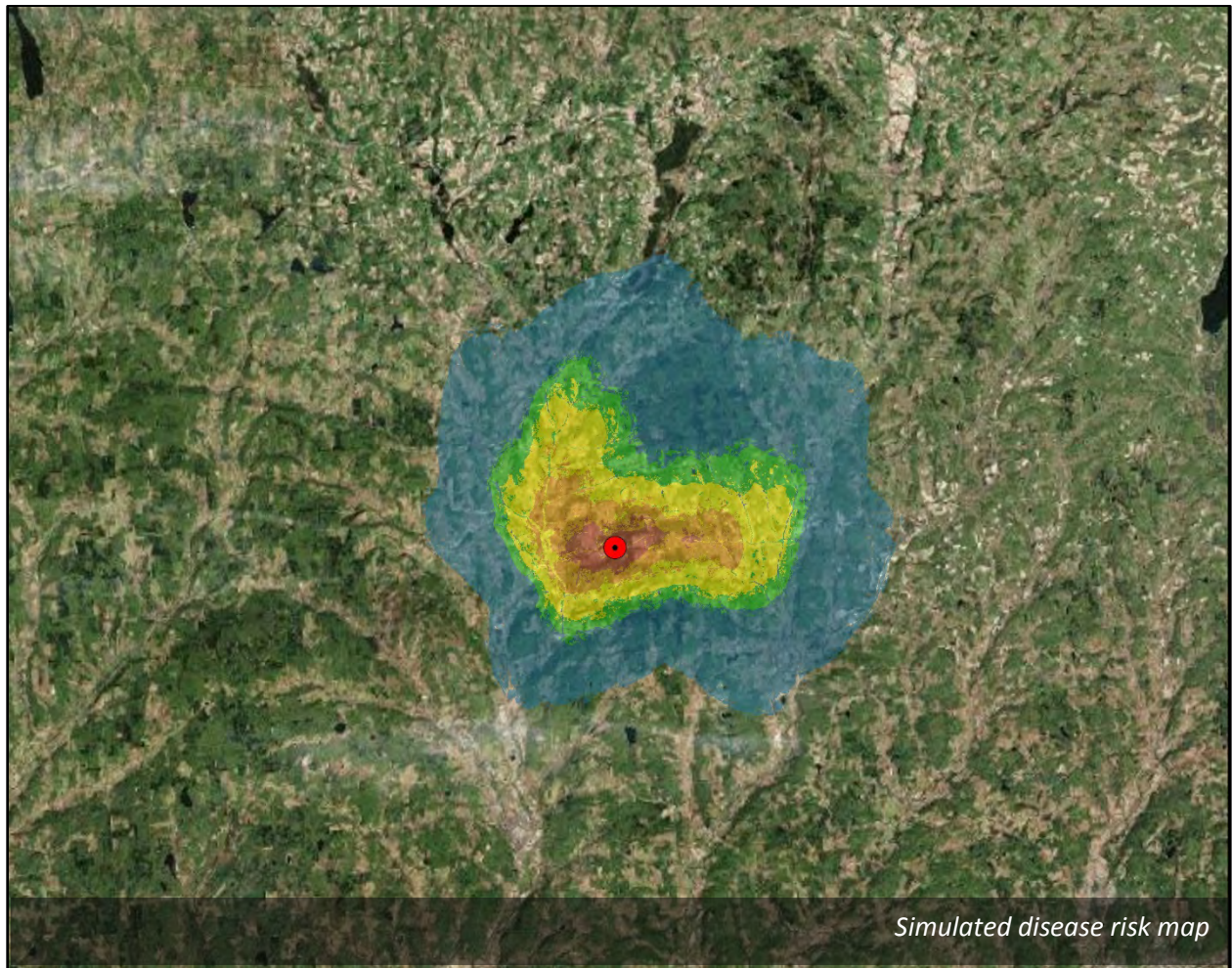


# New York State Interagency Chronic Wasting Disease Response Plan 2015-2025



New York State Department of Environmental Conservation  
Division of Fish, Wildlife and Marine Resources  
Division of Law Enforcement

New York State Department of Agriculture and Markets  
Division of Animal Industry

Cornell University College of Veterinary Medicine  
Animal Health Diagnostic Center

## Executive Summary

[Chronic wasting disease](#) (CWD) represents a serious threat to New York State's wild white-tailed deer population and [captive cervid](#) industry with potentially devastating economic, ecological, and social repercussions. This plan presents the steps necessary to mount an initial response to determine the scope of a chronic wasting disease (CWD) outbreak and inform future disease management decisions in New York State, as determined by an Interagency CWD Team comprised of NYS Dept. of Environmental Conservation (DEC) Division of Fish, Wildlife and Marine Resources Bureau of Wildlife, DEC Division of Law Enforcement, NYS Dept. of Agriculture and Markets (AGMKT) Division of Animal Industry, and Cornell University College of Veterinary Medicine Wildlife Health faculty. The [legal authority](#) and agency missions necessitate management actions for outbreaks of disease in the wild and captive animals. Introduction of CWD into New York State by captive or wild deer would have severe consequences for either side of the fence, hence, it is critical that both agencies support these response measures. Actions were considered based on expert CWD risk assessment, current scientific evidence, field surveys, and participant knowledge specific to New York. This plan provides agency-specific details and associated strategies for implementation if CWD is detected in captive cervids or wild deer. For DEC, responsibilities include determining the scope and prevalence of CWD infection in the wild deer herd, initiating actions to minimize movement of the disease to other locations through emergency regulations, and instituting aggressive management strategies to eliminate or control CWD in local deer populations. AGMKT will be responsible for management and epidemiological investigation of the infected herd, such activity might include herd quarantine, premise use limitation, potential depopulation of CWD-positive or CWD-high risk herds, and testing of deer from, or linked to, positive or high risk herds. There will be considerable interagency cooperation in handling a CWD-detection. The process will include an initial surveillance response, public outreach, establishment of a [containment area](#), adoption of emergency regulations, and agency cooperation to monitor nearby wild deer and/or captive herds as appropriate. Development of long-term management objectives will be an adaptive process based on understanding gained from the initial surveillance activities and emerging science.

## Table of Contents

Executive Summary.....	2
Purpose .....	5
Scope.....	5
Agency Roles .....	5
Supporting Agencies .....	6
Authority .....	6
Responsibilities .....	7
Interagency CWD Team Members.....	7
Introduction .....	8
Adaptive Framework for CWD Response.....	9
Long-Term Objectives .....	9
Current State of CWD Science & Knowledge .....	9
Leadership Roles and Interagency Notification .....	10
Wild White-tailed Deer or Moose.....	10
Captive Cervid .....	10
Postdetection of a Wild White-Tailed Deer or Moose.....	12
Purpose .....	12
Assistance.....	12
Actions .....	14
1. Conduct Enhanced Surveillance .....	14
2. Enable CWD regulations .....	17
3. Conduct risk assessment for local captive cervid herds .....	18
Postdetection of a Captive Cervid.....	19
Purpose .....	19
Assistance.....	19
Actions .....	19
1. Immediate quarantine of index and associated herds/premises .....	19
2. Intrastate movement ban .....	19
3. Affected herd site visit .....	21
4. Epidemiological investigation .....	21
5. Wild cervid surveillance in the vicinity of a captive CWD-positive premises .....	22

Definitions.....	23
Literature Cited .....	26
Appendix I: CWD Outbreak Response GIS Toolkit .....	27
Appendix II: Collection and Sampling of Wildlife with Firearms.....	31
Appendix III: Field Activities and Equipments Needs.....	41
Appendix IV: New York State Regulated Sanitary Landfills.....	46
Appendix V: DEC Permission to Access Property and Landowner Contact Sheet.....	49
Appendix VI: CWD Remote Field Laboratory Equipment and Supply List.....	51
Appendix VII: Collection of Tissues for CWD Testing at Deer Check Stations and Remote Field Laboratories .....	53
Appendix VIII: Draft CWD Press Release and Talking Points .....	56
Appendix IX: Administrative Readiness .....	58
Appendix X: Amendment for Section 189.7 CWD Containment Area .....	59
Appendix XI: Draft AGMKT Quarantine Example .....	61

## Purpose

This plan provides direction for response actions to be taken by DEC and AGMKT following confirmation of a CWD-positive test result in wild or captive cervids (Genus *Odocoileus*, *Cervus*, and *Alces*) in which laboratory confirmation is established. At the present time, the following species are considered to be naturally CWD-susceptible: white-tailed deer (*O.virginianus*), moose (*A. alces*), elk (*C.e.canadensis*), red deer (*C. elaphus*), mule deer and black-tailed deer (*O. hemionus*), and other non-native CWD-susceptible species that may be held in captivity [sika deer (*C. nippon*)]. Additional species will be included as they are confirmed to be naturally susceptible. The plan details individual agency roles and responsibilities, as well as areas of cooperation, for the short-term activities that will inform a longer coordinated management strategy.

## Scope

The confirmation of CWD in a wild deer or wild moose will impact a relatively small geographic area. The initial DEC response will be to conduct more intensive surveillance of appropriate wild deer from the immediate vicinity of the index case to determine the prevalence and geographic distribution of CWD. This sample size will be calculated from the local deer population assessment, landowner access, and a 95% statistical confidence interval of disease detection given a prevalence of 1%. Based on that information, agency actions will be implemented to prevent the disease from becoming established in wild cervid populations. If the disease is determined to be [endemic](#) after several years of intensive sampling, the goal will be to minimize the geographic spread and [prevalence rates](#) in the wild deer herd.

The confirmation of CWD in a captive cervid herd will also be a localized incident, impacting a small geographic area. The initial AGMKT response will be to [quarantine](#) the herd where the positive animal was found and may prohibit live cervid movements within the state until [trace outs](#) are complete. DEC will conduct focused CWD [surveillance](#) around the index herd to determine if CWD is in the wild deer population. Information from the initial responses will determine prevalence rates in the wild deer population and epidemiological links between deer herds that will guide additional actions by DEC and AGMKT.

## Agency Roles

Supervising Agency for Wild White-tailed Deer and Moose: NYS Department of Environmental Conservation (DEC)

Supervising Agency for Captive Cervid Species: NYS Department of Agriculture and Markets (AGMKT)

## Supporting Agencies

NYS Department of Environmental Conservation

Division of Fish, Wildlife, and Marine Resources (DEC-DFWMR)

NYS Department of Agriculture and Markets

Division of Animal Industry (AGMKT-DAI)

NYS Veterinary Diagnostic Laboratory, Cornell Animal Health Diagnostic Center (AHDC)

U.S. Department of Agriculture, Animal Plant Health Inspection Service

Veterinary Services (USDA-VS)

Wildlife Services (USDA-WS)

NYS Department of Health, Zoonotic Disease Section (DOH)

## Authority

Environmental Conservation Law (ECL) Article 11 states whenever it is determined by the DEC that an [epizootic](#) disease, which endangers the health and welfare of native fish or feral animal populations only, exists in any area of the state, or is in imminent danger of developing or being introduced into the state, the DEC may adopt any measures or regulations with respect to the taking, transportation, sale, offering for sale or possession of native fish or feral animals deemed necessary in the public interest to prevent the development, spread or introduction of such disease.

In addition, Article 11 states whenever it is jointly determined by the DEC and the DOH or the AGMKT, and certification is made to the Commissioner of DEC by the Commissioner of DOH or the Commissioner of AGMKT, that a disease, which endangers the health and welfare of fish or wildlife populations, or of domestic livestock or of the human population, exists in any area of the state, or is in imminent danger of being introduced into the state, the DEC shall adopt any measures or regulations with respect to the taking, transportation, sale, offering for sale, or possession of native fish or feral animals it may deem necessary in the public interest to prevent the introduction or spread of such disease. The DEC may undertake such fish and wildlife control measures it may deem necessary to eliminate, reduce or confine the disease.

6 NYCRR Part 189 states the DEC hereby finds that CWD, a fatal transmissible neurodegenerative disease which endangers the health and welfare of wildlife populations and captive cervids, has been confirmed to exist in New York State. The nature of CWD requires prompt and extraordinary actions to address the threat posed by this disease. The purpose of this rule is to prevent further introduction of this disease into New York, to contain the spread of this disease within New York, to prevent exportation of this disease outside of New York, and to protect the health of wild white-tailed deer (*Odocoileus virginianus*) and wild moose (*Alces alces*) in New York.

Article 5 of the Agriculture and Markets Law states that whenever any infectious or communicable disease affecting domestic animals or carried by domestic animals and affecting humans shall exist or be brought into or break out in this state, the Commissioner of Agriculture and Markets shall take measures promptly to suppress the same and to prevent such disease from spreading.

Article 5 Section §73-b of the Agriculture and Markets Law provides, in part, the Commissioner of AGMKT is authorized to establish and maintain, by contract or otherwise, a New York state veterinary



diagnostic laboratory and to contract for other diagnostic services, as he or she may deem necessary or beneficial, to improve the health of food and fiber producing animals, companion animals, sport and recreational animals, exotic animals and wildlife. Note: The Animal Health Diagnostic Laboratory (AHDC) at the College of Veterinary Medicine at Cornell University is the New York State veterinary diagnostic laboratory.

1 NYCRR Part 68 was updated as of April 15, 2014 and includes Captive Cervid Health Requirements with special provisions for CWD-susceptible cervids in section 68.3. These include a temporary ban on importation of live cervids from outside New York State, except for accredited zoological collections. There are also requirements to participate in the CWD Certification or Monitoring programs, maintain adequate fencing and recordkeeping, submit to premise inspections, and CWD testing prior to distribution of products.

The Animal Damage Control Act of March 2, 1931 (7 U.S.C. 426-426c; 46 Stat. 1468) and the Rural Development, Agriculture and Related Agencies Appropriations Act of 1988 (Public Law 100-202, Stat. 1329-1331 (7 U.S.C. 426c)) authorizes the USDA APHIS Wildlife Services (USDA APHIS WS) program through the Secretary of Agriculture to enter into agreements with states, local jurisdictions, individuals and public and private agencies, organizations and institutions in the control of nuisance mammals and bird and those mammal and bird species that are reservoirs of zoonotic diseases. In addition, the USDA APHIS WS program is directed to conduct investigations, experiments and tests as deemed necessary in order to determine, demonstrate and promulgate the best methods for managing conflicts between people and wildlife.

## **Responsibilities**

Both DEC and AGMKT have responsibilities prior to and after the detection of CWD in New York State. For DEC, specific activities include co-approval of white-tailed deer movements, testing of the wild deer herd, and mitigating risk of introduction through regulations. After detection of CWD, their responsibilities include determining the scope and prevalence of CWD infection in the wild deer herd, and initiating actions to minimize movement of the disease to other locations. For AGMKT, they will be responsible for management of infected herds, specifically, implementation of facility quarantines, depopulation of affected captive herds, testing of appropriate deer herds, and traces (in and out) of exposed herds. An on-going, positive-collaborative approach will be required at the central office and field level, in order to seamlessly implement the necessary response activities. To coordinate the activities of involved agencies, the Interagency Team was formed in June 2013.

## **Interagency CWD Team Members (as of August 2014)**

Patrick Martin, DEC Wildlife Health Unit, Albany  
Kevin Hynes, DEC Wildlife Health Unit, Delmar  
Art Kirsch, DEC Bureau of Wildlife, Region 8  
Steve Heerkens, DEC Bureau of Wildlife, Region 6  
Jim Farquhar, DEC Bureau of Wildlife, Region 6  
Matt Revenaugh, DEC Division of Law Enforcement, Region 7  
Dwight Bruno, AGMKT Division of Animal Industry

George Merrill, AGMKT Division of Animal Industry, Albany  
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Krysten Schuler, Cornell University Animal Health Diagnostic Center

## Introduction

New York State Department of Environmental Conservation (DEC) and New York State Department of Agriculture and Markets (AGMKT) are committed to responding to a detection of CWD in either wild white-tailed deer or captive CWD-susceptible cervids with a coordinated and effective approach. This plan presents the recommendations of an Interagency CWD Team formed for the purpose of identifying steps that will be taken by both agencies in response to a detection of chronic wasting disease (CWD) in New York State. The Interagency CWD Team (“Team”) was comprised of DEC Division of Fish, Wildlife and Marine Resources Bureau of Wildlife, NYS Dept. of Agriculture and Markets (AGMKT) Division of Animal Industry, Cornell University College of Veterinary Medicine Wildlife Health faculty, and DEC Division of Law Enforcement. These efforts began in 2011 with identification of risks leading to a revised weighted risk-based surveillance program aimed at increasing the sampling detection efficiency. The Interagency CWD Team met over the course of several months to craft recommendations for disease prevention as these actions apply not only to CWD, but are also the best management practices for other diseases such as highly significant reportable disease like tuberculosis, brucellosis, and foot-and-mouth disease. The specific response activities will be customized based on the time of year, location, geography, and local conditions following the detection of a CWD-positive animal. The Team concluded with recommendations for a joint CWD Response Plan that outlines the recommended courses of action for the initial response. The goal of the initial response is to determine the scope of the disease on the landscape to inform further management actions. Based on the success of New York’s 2005 CWD response, we strongly recommend continued aggressive action toward any detection of CWD with the duration of response actions assessed through surveillance results rather than pre-determined timelines.

After responding to a CWD-detection in wild and captive white-tailed deer in 2005, both agencies had experience with on-the-ground activities. Reflections on the 2005 response provided context for how a subsequent detection should be handled in an effective and efficient way. A [CWD-positive](#) detection will trigger this New York State Interagency CWD Response Plan 2015-2025 (CWD Response Plan) and become one of the highest agency priorities over subsequent months. For the affected DEC Region, it will mean re-prioritizing deliverables, committing to funding additional seasonal employees and permanent resources, and support coming from the other Regions and Central Office, as well as other divisions and agencies. The estimated cost of the CWD event in 2005 to DEC was \$1,000,000. Presently, the DEC Wildlife Health Strategic Plan Goal is to be prepared to respond to wildlife health incidents in a timely, effective manner and work cooperatively as needed with other agencies and collaborators, and will be involved in all aspects of CWD response, including interactions with AGMKT, NYSDOH, and



neighboring states. Contractual agreements with AHDC have a \$100,000 emergency retainer that can be used for CWD testing. Direct costs to the agencies are difficult to estimate, but may exceed \$180,000 for DEC during the initial sampling period based on rough estimates of 300 deer collected through agency directed culling at a cost of \$250-600/deer (DeNicola et al. 2000).

Discovery of a CWD positive in the wild deer herd will trigger a heightened surveillance and disease management strategy intended to: 1) determine the scope and prevalence of CWD infection in the wild deer herd; 2) initiate actions to minimize movement of the disease to other locations. An additional benefit of sampling deer from the local population is to reduce contact and potential disease transmission among animals before the disease becomes endemic in the population and further contaminates the environment. Following the initial notification to key personnel, response efforts will follow a concurrent 4-step process which includes the initial surveillance response, public outreach, establishment of a containment area and amending associated regulations, and interface with AGMKT to monitor nearby captive herds and/or amend regulations as appropriate.

### **Adaptive Framework for CWD Response**

Development of long-term disease management objectives will be an adaptive process based on results of the initial four steps. A CWD Management Plan will be created to direct response actions, which will be modified as appropriate based on understanding gained from monitoring and surveillance activities, identification of risk pathways, and emerging science. The primary actions following the initial response activity will be to ensure CWD does not become established in the wild white-tailed deer population. If successive information indicates the disease is endemic, actions will be taken to minimize the incidence and distribution of infected wild deer. The CWD Management Plan will involve appropriate New York State agencies, as well as neighboring state's natural resource and agricultural agencies.

### **Long-Term Objectives**

1. Collect scientific information to determine prevalence and geographic distribution
2. Prevent the disease from becoming established in wild white-tailed deer
3. Minimize geographic distribution and incidence rate if CWD becomes established
4. Encourage public acceptance of disease management activities

## **Current State of CWD Science & Knowledge**

1. There is no evidence that CWD is naturally transmitted to livestock, predators, or humans.
2. The finding of CWD in wild white-tailed deer or moose in New York State will have significant implications causing economic disruptions to industries related to hunting, wildlife watching, and captive cervid operations.
3. Disease eradication will be exponentially more difficult the longer the disease is present in New York and may be impossible if the disease becomes established on the landscape.
4. Prions bind to soil and may remain infectious for years after the removal of infected animals.
5. CWD is not currently endemic in New York based on >10 years of testing.

6. CWD will negatively impact deer populations and decrease life expectancy.
7. Deer can be infected directly from contact with other deer or indirectly from saliva, urine, and feces that contaminate the environment.
8. CWD-infected deer may not appear sick for months and will shed prions for months to years before appearing ill.
9. There is no known treatment or vaccine for CWD-infected animals nor is there a disinfectant for contaminated soil or premises.
10. Testing deer for CWD only is possible on dead animals. Validated tests are not available for live animals or soil/objects.

## Leadership Roles and Interagency Notification

The notification procedure will occur from the Transmissible Spongiform Encephalopathy Laboratory at the Animal Health Diagnostic Center to the DEC or AGMKT-DAI through existing lines of communication. From that time, it will be the Supervising Agency responsibility to notify other state agencies, organizations, and the public. Detailed communication will take place after confirmation of positive results by [immunohistochemistry](#) (IHC) from the USDA – National Veterinary Services Laboratory in Ames, Iowa. Preliminary results will be communicated from the AHDC to the Supervising Agency; further distribution prior to confirmation will be assessed on an individual case basis.

### Wild White-tailed Deer or Moose

When CWD is confirmed by the AHDC in a wild free-ranging deer or moose ([index animal](#)), the AHDC will first notify the DEC-BOW and then notify the AGMKT-DAI. Upon notification of a positive case of CWD in a wild deer or moose, the DEC will assume responsibility of the Supervising Agency and begin actions outlined in this CWD Response Plan. The DEC-BOW will notify the Director of the Division of Fish, Wildlife and Marine Resources who will notify the DEC Executive staff. Notification within DEC will include referring to the CWD Response Plan posted to DEC's internal website that outlines the actions to be taken. DEC-BOW will notify the Regional Director, Regional Natural Resources Supervisor, and Regional Wildlife Manager in the Region where the index animal originated. Concurrently, DEC-BOW will notify the Regional Managers across the state.

DEC Executive will designate a Response Leader and Spokesperson in the Press Office, both the DEC-BOW Central Office and the Regional Office, to serve as points of contact for the CWD event. DEC Executive will request from AGMKT a person as the point of contact to serve as the liaison with DEC-BOW for this event.

### Captive Cervid

When CWD is confirmed by the AHDC in a captive cervid, the AHDC will first notify the AGMKT-DAI and then DEC-BOW. Upon notification of a positive case of CWD on a captive cervid herd, the AGMKT will assume responsibility of the Supervising Agency and begin actions outlined in this CWD Response Plan. The AGMKT-DAI will notify AGMKT Executive staff and provide hard copies of the CWD

Response Plan. AGMKT Executive will designate persons in the Press Office to serve as the point of contact for the CWD event. AGMKT Executive will request a person as the point of contact to serve as the liaison with DEC-BOW for this event.

# Postdetection of a Wild White-Tailed Deer or Moose

## Purpose

The [initial response](#) effort is to gather information on the scope of CWD infection on the landscape in the vicinity of the initial positive animal (index case) and prevent wider dissemination of disease. This phase may commence quickly with on ground activity and amending regulations within one month and may last up to several months. Appropriate planning and identification of sampling areas will take a few days and will require local expertise to identify landowners and parcels for sampling. The Region may lead a targeted deer sampling effort within the initial response area. The current CWD regulation (6 NYCRR Part 189) will be amended to limit movement of live and dead animals or parts from within the initial response area. In partnership with AGMKT, DEC will evaluate the risk posed by and to local captive cervid facilities. If additional positive animals continue to be discovered, a long-term disease management and monitoring program will be implemented. The decision matrix summarizes the major activities and actions.

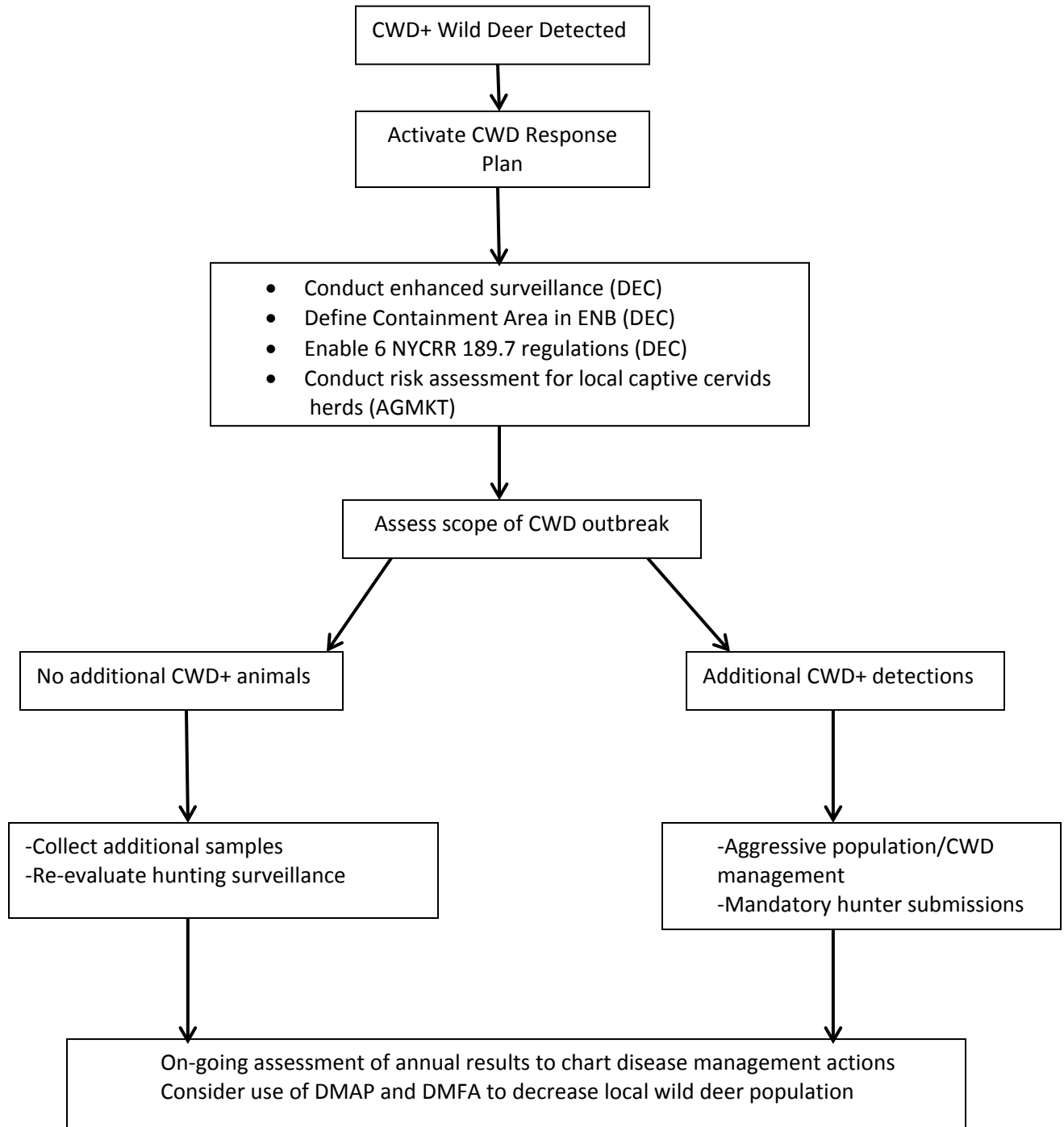
## Assistance

The Region will request assistance from DFWMR staff from Central Office and other regions to assist in collection of deer samples. The Division of Public Affairs and Education, Environmental Conservation Officers, Forest Rangers, and other Divisions may be asked to assist in various roles if a staff field collection of deer is initiated. Assistance from USDA-APHIS-Wildlife Services will also be requested as appropriate for deer sample collection. The Regional Wildlife Unit (Big Game Biologist, or designee) is expected to provide guidance for the initial response with technical assistance from other staff and Divisions as requested.

Bureau of Wildlife Staff should consult with Regional Division of Law Enforcement (DLE) staff as soon after a potential positive sample is found, prior to initial response, and throughout the response period. Early involvement of local DLE officers can benefit the initial response planning through their local knowledge, contacts, and experience in the area. They may also be able to facilitate discussions and arrangement with local law enforcement and municipalities for additional support. Additionally, DLE Staff can provide site or scene security, and may be able to augment Wildlife's local knowledge of landowners and stakeholders. DLE provides its officers with vehicles that may be used to assist with sample collection and transport. DLE maintains a fleet of 4 wheel drive and off-road vehicles (ATVs, UTVs, watercraft, snowmobiles, trailers) which can facilitate access to sampling areas or assist with the transport of carcasses or samples.

DLE is the Department's lead on the investigation of any potential criminal liabilities. In most cases an Investigator will be assigned to assist in the determination of criminal liability of the people involved and should be considered to aid with investigating the source animal and trace outs. DLE involvement is appropriate to ensure a proper chain of custody and safeguarding of evidence collected. DLE will also be necessary should DEC require search warrants to gain entry to property where access is necessary but denied.

## CWD DECISION MATRIX FOR WILD WHITE-TAILED DEER OR MOOSE



ENB = Environmental Notice Bulletin  
DMAP = Deer Management Assistance Program  
DMFA = Deer Management Focus Area

Additionally, DEC will engage AGMKT-DAI field veterinarians to supplement local knowledge of large landowners that have agricultural crops, traditional livestock, or captive cervid facilities owners. The AGMKT-DAI has close working relationships with many of these operations and may be able to facilitate actions and access to parcels.

DEC will notify and may request information from neighboring states if the initial discovery is close to a border area. Coordination on response activities will be encouraged.

## Actions

1. **Conduct Enhanced Surveillance** (DEC)– The goal is to collect more surveillance samples in designated zone around index case to provide information for further disease management decisions
  - a. Identify Exact Location of Index Animal- DEC-BOW Wildlife Manager and the DEC-BOW Central Office will identify as precisely as possible the exact location of where the index animal was taken or found.
  - b. Designate Initial Response Area – In addition to the point location for the index animal, sex, and season will be necessary to use the CWD Outbreak Response Toolbox (**Appendix I**) for creating a cumulative disease risk probability map. Initial response activities will focus on identified high disease risk areas and may extend 2.5 miles in radius up to 10 miles radius determined by local geography, estimated deer density, and feasibility of obtaining sample size.
  - c. Determine Surveillance Sample Goals - The local deer population density will be estimated by the DEC-BOW Region. The sample size will be determined by season, statistical assurance, and logistical considerations. Collection activities will commence as soon as biological, logistical, and administrative concerns can be addressed (generally 1 week to 1 month). Generally, during sensitive seasons, such as fawning, method of sample collection will be given consideration to the greatest extent possible. Collection efforts will continue until the target sample has been achieved, or the Region in consultation with Wildlife Health Unit (WHU) staff determined further immediate collection is unwarranted. Additional sampling may be necessary depending on results of initial efforts and captive cervid risk assessment (see 3. below).
  - d. Sample Collection Methods – Depending on the time of year and other factors, hunter-harvested animals will constitute the bulk of samples from the initial response area. These samples will be submitted directly by hunters or collected from meat processors and taxidermists. A current list of meat processors and taxidermists in operation should be maintained by Regional staff for routine CWD surveillance. Hunter submissions may be voluntary or mandatory as determined by emergency regulations (see 2. below). Additional deer will likely be collected through agency-directed sampling. Between 40-200 deer will be sampled based on typical NYS deer densities. These animals will be taken by trained staff from DEC-BOW, DEC-LE, and USDA-WS using agency-issued firearms (**Appendix II**). Agency



sampling methods will employ opportunistic collection or baited stations during the day or non-daylight hours, which also may involve use of elevated platforms and forward-looking infrared radar (FLIR). Baited sites will be cleaned of residual material at the completion of the collection effort. Samples can also be collected from Deer Management Assistance Permits (DMAP) and/or suitable vehicle-strikes working with DOT, county, or local municipalities. Detailed field activities and equipment needs are outlined in **Appendix III**. Routine procedure is for DEC-BOW to follow-up on any reports of abnormally acting animals throughout the year.

- e. Carcass Disposal – Deer taken by staff or collected by other means will be taken whole to a designated site for sample collection or head removal. Carcasses may, and entrails will, be disposed of in an approved landfill (**Appendix IV**), incinerator, or carcasses may be held pending test results and donated to charity. Donation will require additional processing for cold storage, a fail-proof method of carcass separation to avoid cross contamination, and a rigorous identification systems to assure CWD non-detect test results. A refrigerated trailer or local meat processor are storage options depending on time of year. Such donation will depend on logistics, staffing and the ability to avoid cross contamination during storage.
- f. Locate Lands for Sample Collection – DEC-BOW Regional and Central Office staff will work with geographic information specialists (GIS) to identify lands and ownership (through Real Property) readily accessible to agency-directed sampling. These include private landowners, as well as working with other managed lands (Tribal lands, Dept. of Defense, and other Federal lands such as U.S. Fish and Wildlife Service National Wildlife Refuges) that may not be open to hunting (Figure 1).

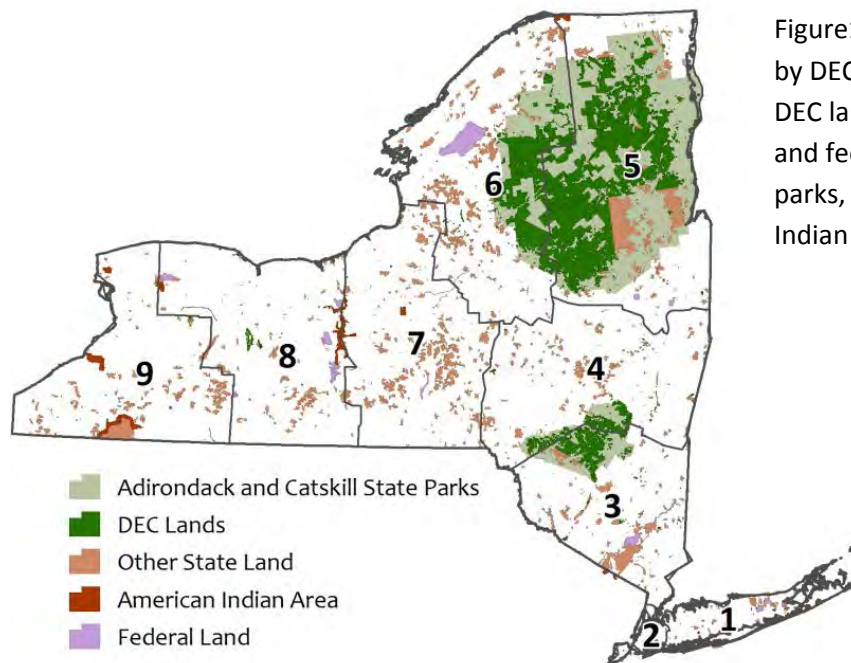


Figure1. Landownership by DEC Region showing DEC lands, other state and federal lands, state parks, and American Indian territories.

Communication of the CWD Response Plan to these managers should also be done in advance of a CWD-positive finding. Access to private lands will be obtained through a written document signed by the landowner that will provide DEC-BOW or LE staff with legal access (**Appendix V**). USDA-WS will employ their own access form. Specific land parcels will be identified and those landowners will be engaged by the staff conducting field collection activities. Participating and non-participating land parcels will be mapped for accurate field operations and to determine sample collection distribution.

- g. Field Laboratory – DEC-BOW Regional staff will identify a location for a field lab where deer carcasses can be taken for removal of the head or tissues for CWD testing. Sample collection will include obex, retropharyngeal lymph nodes, and possibly tonsils. Ideally, this facility would be an existing facility and within the initial response area for ease of hunter-submitted samples and to avoid moving potentially infected material any further than absolutely necessary. Requirements for this facility include electric, running water, heated facility, and cold storage and several regional field labs are equipped throughout the state. Most supplies for the initial response activities (**Appendix VI**) will be available through WHU or Regional Offices. Supplies not readily available will be acquired by Central Office during the planning phases of the CWD event. Field lab protocols (**Appendix VII**) will include requirements for staff safety including use of PPE and an emergency contact list; recordkeeping; sample collection, handling, and shipment to the AHDC for testing; disinfection; and disposal requirements.
- h. Coordination – Staff from DEC-BOW Regional Wildlife and Central Offices, WHU, and AHDC will meet to review the information collected on captive cervid facilities, available lands for CWD sampling, and field laboratory facilities. This group will determine a strategy for obtaining samples including timing, staff required, opportunities for immediate sample collection, and identification of possible issues. AGMKT-DAI and USDA-WS may be present to participate and provide experience with CWD sample collection. The group will also identify needs for staffing, field lab location, disposal methods, supplies and equipment, lodging, and all logistics to put the staff in the field to collect samples. Additional needs include access to funds, Regional travel approvals, and overnight travel approval.
- i. Activity Reporting – The [Response Leader](#) will report regularly to DEC and AGMKT personnel with significant information, including the weekly tally of deer taken/tested and developments (accidents, injuries, public protest, red flags/green flags).
- j. Public Outreach – Regional Citizen Participation staff will work with wildlife staff to draft press releases and talking points (**Appendix VIII**), as well as brief the designated spokesperson. The DEC-CP staff will be expected to use social media and current web information for rapid communication and schedule public meetings as deemed necessary. DEC-CP will coordinate with AGMKT and DOH staff for joint information releases

- k. Cost – The initial response activities will require significant financial support from DEC-CO. Funding will be completed through an Attachment A (**Appendix IX**). The CWD event in 2005 was estimated to have cost over \$1,000,000 in total. For agency directed culling, estimated costs for removal of deer range between \$250-600/deer (DeNicola et al. 2000) which puts an upper estimate at \$180,000. This estimate does not cover staff time for collecting hunter harvest samples or other divisions contributions.
2. **Enable CWD regulations** (DEC) –6 NYCRR Part 189 will be amended to include a legal definition of the Containment Area and prohibitions on moving live animals or parts. The regulation will be amended concurrent with the initial response as appropriate to support hunter-killed deer collection efforts.
- a. A **Containment Area** (CA) will be established by publication in the Environmental News Bulletin (ENB) for the purpose of managing CWD in the Initial Response Area, and preventing spread of the disease to other locations. This CA will be developed by the Interagency Team, with the lead responsibility residing in the BOW, from the initial index animal location and a GIS model (**Appendix I**, Dechen Quinn et al. 2009, Williams et al. 2014) considering land use types, seasonal contacts between animals, movement rates, and resource selection behavior to define an area of highest disease risk. The boundaries of the CA will be defined beyond the Initial Response Area by easily identified, reasonable, and logical boundaries (e.g., roads, major waterbodies). As a general basis, the Containment Area will minimally extend in at least a 5-mile radius from the index case, and maximally not more than 10 miles.
  - b. Regulations will include a prohibition on deer rehabilitation within the CA, mandatory submission of all hunter-killed deer (heads), and restrictions on movement deer carcasses and part from the CA (**Appendix X**). Duration of CA restrictions will be evaluated based on surveillance results. A prohibition on possession of road kill carcasses may also be evaluated. All licensed Wildlife Rehabilitators will be notified that injured or abandoned wild deer from the CA must be left in the wild; no rehabilitated deer will be allowed to be released within the CA.
  - c. Established check stations will be set-up, staffed and maintained during the hunting season, the number and location of which will be determined by the Regional Wildlife Manager. DEC will make efforts to use cooperating meat cutters, taxidermists, and other convenient locations for head submission (Regional DEC facilities) to improve hunter compliance. This may include options for hunters to drop off heads at designated locations
  - d. Any deer appearing ill or dying while in rehab within the CA must be reported and submitted for testing.
  - e. All licenses issued that allow the capture and holding of live wild deer for scientific or other purposes within the CA will be reviewed. No live deer will be allowed to be removed outside the CA. Captured deer may be euthanized on site and then moved for further processing.

- f. Evaluation of the current estimated deer population by the regional Big Game Biologist, in consultation with WHU and the deer program specialist, will set a deer population objective for the Containment Area. The objective will be to reduce (if necessary) the herd density to lessen the spread of CWD through animal to animal or environmental contact. In some high deer-density hunt units that have not responded to conventional reduction methods, agency-directed culls or new deer harvest strategies may need to be evaluated and implemented temporarily through CWD regulation. Use of a Deer Management Focus Area (DMFA) for population control within the CA may be possible.
3. **Conduct risk assessment for local captive cervid herds** (AGMKT) – The risk posed to/from captive cervids will be geographically specific based on the location of the index animal and captive facilities within the surrounding area.
- a. All Domestic Game Animal Breeder license holders within the response area will be identified to determine if they have white-tailed deer or any other CWD-susceptible cervid on the premises. DEC will work with AGMKT-DAI to gather information on location, number of animals by species, importation history, and compliance issues. A list will be made with the following information:
    - i. Name, address, and phone number of the licensee
    - ii. License type (if present)
    - iii. Species and number of CWD-susceptible cervids possessed
  - b. Within the CA, site inspections by AGMKT-DAI in partnership with DEC-BOW and DEC-LE will be conducted as soon as possible to assess fence quality, conduct an inventory of animals and inspection of records.
  - c. All captive deer mortalities (natural and hunting) within the CA will be tested for a period of 5 years regardless of status (certified or monitored). Agency staff will work together to collect samples from mortalities in a timely fashion.
  - d. Additionally, the following measures may be taken by AGMKT to determine CWD status of captive herds, including an epidemiological investigation to possible exposures of captive deer (inter or intrastate movement); a prohibition on movement out of captive facilities within the containment area, unless direct to an approved [slaughter](#) facility; and possibly a solid barrier, second fence, or other method to prevent nose-to-nose contact must be constructed.
  - e. Captive cervids within the CA will be permitted to move when AKMKT determines herd records provide sufficient evidence that captive herd was not involved in the outbreak of CWD.

# Postdetection of a Captive Cervid

## Purpose

CWD detection in a captive cervid has implications for both the index captive herd and other businesses where animals may have originated from or been shipped to, as well as the wild white-tailed deer in the surrounding areas. The AGMKT has a procedure for notification, initial response, containment measures to prevent further spread of the disease, follow-up for longer term response efforts, and surveillance measures associated with a CWD-positive finding.

Any CWD-presumptive positive response plan on the part of NYS Department of Agriculture and Markets is based on 1 NYCRR Part 68 'Captive Cervid Health Requirements' and/or on other laws and regulations under the jurisdiction of NYS Department of Agriculture & Markets

From NYS Department of Agriculture and Markets perspective; although the focus has been on white-tailed deer, a similar response will evolve if CWD is diagnosed in another, non-native, CWD susceptible species.

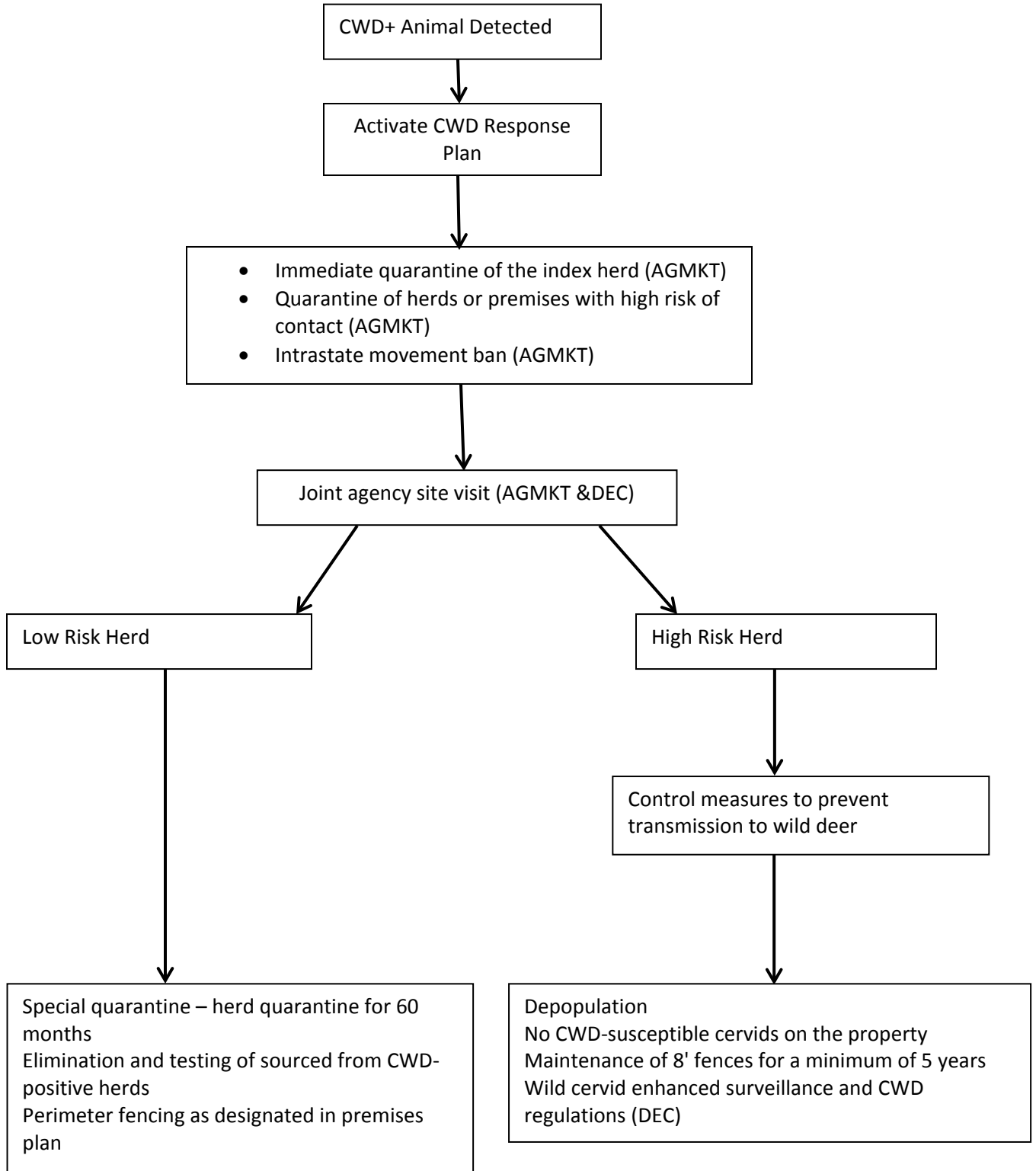
## Assistance

In the event of a CWD-positive detection in a captive cervid [herd](#), AGMKT will include DEC and USDA-VS in the response actions. DEC-Division of Law Enforcement may provide assistance as needed. USDA-WS services may be called upon, specifically for depopulation activities.

## Actions

1. **Immediate quarantine of index and associated herds/premises** (AGMKT) - A captive cervid found to have a positive CWD test will prompt immediate quarantine (**Appendix XI**) of the herd and the entire herd will be designated CWD-positive as the "index herd" and premises.
  - a. Any additional, immediately apparent herds or premises that have had a high risk of contact with the index herd would also be quarantined.
  - b. A [quarantine](#) would dictate that no animals could be moved into or out of the premises. The quarantine notice would be served initially by phone or in person through the AGMKT regional field veterinarian.
2. **Intrastate movement ban** (AGMKT) – No movement permits for any captive cervids would be permitted until all investigations are complete.
  - a. Within 72 hours, AGMKT will run an initial rapid assessment to categorize the index herd. Assessments will be facilitated by easy [trace-back](#) situations with complete business records, secure fencing, good history of compliance, and no escapes. Incompliance, poor record-keeping, and husbandry, as well as any indication of illegal or high risk activity, will delay completion of the assessment.
  - b. Intrastate movement of captive cervids can resume after tracing is completed. Movement data is available in the CoreOne database beginning in 2010 so traceouts are expected to be completed in a timely manner unless unusual circumstances arise.

**CWD DECISION MATRIX FOR CAPTIVE CWD-SUSCEPTIBLE CERVIDS**





3. **Affected facility site visit(s)** (AGMKT & DEC)- The regional AGMKT veterinarian will have local knowledge of affected herds and should be the lead on serving quarantines and setting up site visits.
  - a. Within 72 hours, a site visit should be arranged in conjunction with DEC-BOW and DEC-LE to inspect fencing and records. This visit should occur within a week to assure fencing is adequate to secure the herd(s) and also establish a herd inventory or estimate in the case of Special Purpose herds.
  - b. Potential risk factors for CWD transmission that should be considered include poor quality fencing, a history of escaped animals, frequent importation or export of animals, insufficient CWD and tuberculosis testing records and compliance, disposal of carcasses and other potentially contaminated products, and adjacent activities involving deer (taxidermy, meat processing, or wildlife rehabilitation).
  - c. Biosecurity measures should be enacted to prevent transport of [prions](#). Premises with multiple herds should be managed and kept biologically separate. There should also be prevention in place for humans or other domestic animals from contacting potentially infected material, or herd animals.
  - d. Control measures should be established to prevent transmission to wildlife from captive cervids, which could include isolation of the herd on the premises in a way that would reduce the likelihood of through-fence exposure to wild deer or other infectious materials through run-off, salt licks, or bedding.
4. **Epidemiological investigation** (AGMKT) - The AGMKT or USDA Epidemiologist, in consultation with subject matter experts at DEC, AHDC, and NYSDOH, will conduct an epidemiological investigation.
  - a. The index herd location will be mapped and the history of site inspections and compliance will be evaluated.
  - b. In and out tracing from the index herd will establish all epidemiologically linked herds that shall be subject to quarantine and disease management as [CWD-exposed](#) herds. A minimum of a 5-year trace-out period will be conducted, examining primary trace-outs first and then conducting a secondary trace-out if there are still unanswered questions.
  - c. Herds will be quantified based on risk and possible exposed status. Those [CWD-positive](#) herds will be designated as [high risk](#) and subjected to depopulation, as may [CWD-exposed](#) depending on conditions. Lower risk herds include [CWD-suspect](#), which will be placed under special quarantine with specific conditions, which will include but not be limited to (i) herd quarantine for 60 months, (ii) elimination and testing of cervids sourced from [CWD-positive](#) herds, and (iii) perimeter fencing as designated in herd and premises plans.
  - d. CWD herd plans will be developed for [CWD-positive](#), [exposed](#), or [suspect](#) locations. A [herd plan](#) will be developed by AGMKT and USDA-VS in conjunction with the herd owner, and implemented within 60 days of the CWD diagnosis. The herd plan should include a CWD premises plan addressing possible [environmental contamination](#) or other long-term issues. There will be provisions for cleaning and disinfection, future land use

restrictions, restocking constraints and timeframes, and fencing requirements to prevent contact with wildlife. There will be periodic premises inspections, including a written report by AGMKT officials. CWD-positive facilities will be quarantined from use by [CWD-susceptible](#) cervid species for a minimum of 5 years with fences maintained in good repair.

- e. Depopulation - CWD-positive and high-risk exposed herds will also be subject to depopulation in their entirety. Indemnity will be based on state-available funding and may be determined as a percentage of market value up to a specified maximum. Additional USDA funding may be available. The anticipated timeframe for depopulation will be less than two weeks after the initial CWD-positive diagnosis. Indemnity will only be paid if no illegal activity has occurred. The herd owner is subject to fines and penalties if the subsequent investigation indicates wrongdoing. If the AGMKT Commissioner indicates a significant threat, he/she can condemn the herd and confiscate the animals. Cervid carcasses depopulated from a herd will be tested for CWD.
  - f. Disposal - Disposal of carcasses for CWD-positive animals should be through incineration. Disposal plans approved by AGMKT and USDA-VS will be developed to prevent environmental contamination. Carcasses may, and entrails will, be disposed of in an approved landfill, or carcasses may be held pending test results and donated to charity if determined to be feasible.
  - g. Coordination – Staff from AGMKT and DEC will meet to review the information collected on captive cervid facilities and risk to wild white-tailed deer and moose. This group will determine a strategy for herd and [premises](#) plans, depopulation, biosecurity, and obtaining samples from wild cervids. USDA-WS may be present to participate and provide experience with CWD sample collection. The group will also identify needs for staffing, a possible field lab location, disposal methods, supplies and equipment, lodging, and all logistics to put the staff in the field to collect samples.
  - h. Activity Reporting – The Response Leader will report regularly AGMKT and DEC personnel with significant information, including the current status of CWD herds, weekly tally of deer taken/tested and developments (accidents, injuries, public protest, red flags/green flags).
  - i. Public Outreach –AGMKT and DEC will work together on communication products and press releases.
5. **Wild cervid surveillance in the vicinity of a captive CWD-positive premises** (DEC) - The response for DEC for wild deer will follow similar protocols as established for the Initial Response Efforts to assess prevalence and geographic distribution (see section above). If the initial assessment of the index herd is low risk to wild deer, DEC regional staff will attempt to collect samples from wild deer by identifying appropriate areas for baited collection of deer within 1-2.5 miles of the index herd and/or conduct intensive collection of select hunter harvested deer to inform disease management actions. If the index herd is deemed high-risk for CWD transmission to wild deer, the CWD regulation will also be enacted to enable additional time for assessment of wild herd status.

# Definitions

**Captive cervids** - cervids that are privately or publicly maintained or held for economic or other purposes within a confined space by a perimeter fence, facility or other barrier.

**Cervid** - any member of the cervidae family, hooved mammal that typically grows and sheds antlers yearly, includes deer, elk, and moose

**Chronic wasting disease (CWD)** - a transmissible spongiform encephalopathy (TSE) of cervids  
CWD-susceptible cervid - any captive cervid of the genera *Alces*, *Odocoileus* or *Cervus* or any hybrid of such genera shown to be naturally infected with CWD

**Containment area (CA)** - a legally defined geographic region in which the intent is to confine occurrence of CWD thus preventing spread to other locations

**CWD-exposed cervid** - a cervid that is, or has been part of a CWD positive herd within five years

**CWD exposed herd** - a herd in which an epidemiological link between the herd and another positive or exposed herd or animal is established to have occurred within the previous five years

**CWD-negative cervid** means a cervid that has had an official CWD test conducted by a laboratory certified by USDA/APHIS that resulted in a "not detected" or negative classification.

**CWD positive herd** - a herd in which a CWD positive cervid resided at the time it was diagnosed and which has not been depopulated and released from quarantine

**CWD-positive cervid** - a cervid that has had a diagnosis of CWD by ELISA or IHC and is confirmed by means of an official CWD test conducted by a laboratory certified by USDA-APHIS-VS

**CWD-suspect cervid** - a cervid for which inconclusive laboratory evidence suggests a diagnosis of CWD.

**CWD suspect herd** - a herd in which one or more CWD-suspect cervids are present

**Endemic** – a disease regularly found in a particular species in a given area where infection is maintained in the population without additional external inputs

**Environmental contamination** – prions shed in urine, feces, and saliva bind to the soil and remain infectious to cervids

**Epidemic**- new cases of disease in a given population, in a given area, or during a certain time period that exceeds what is expected based on past history and baseline rate of incidence

**Herd** - one or more cervids that are under common ownership or supervision and are grouped on one or more parts of any single premises (lot or ranch), and all cervids under common ownership or supervision on two or more premises which are geographically separated but on which cervids have been commingled or had direct or indirect contact with one another.

**High-risk captive herd** – CWD-positive, CWD-exposed, or herds that have received additions from source herds subsequently found to be CWD-infected

**Immediate slaughter** - slaughter within 10 days (240 hours) at a State or federally inspected facility which will retain and make available to USDA/APHIS or department personnel records of all identification from the animal(s) and samples as required by the USDA/APHIS or the department to test for CWD and Tuberculosis.

**Immunohistochemistry (IHC)** – testing method for CWD

**Index (herd or animal)** – first disease detection in a location or animal that starts the epidemiology investigation

**Initial Response** – short-term activities not to exceed 12 months that will gather data to inform a longer-term management strategy and initiate actions to prevent further disease spread

**Initial Response Area** – a designated area within 5 miles of the index animal that will be targeted for enhanced surveillance

**Low-risk captive herd** – CWD-suspect herd that may have epidemiological links to CWD-positive or CWD-exposed herds

**Premises** - the ground, area, buildings, water sources and equipment commonly shared by a herd of animals

**Prevalence** – proportion of the population found to be infected with CWD

**Prion** – misfolded protein that is the infectious agent of CWD

**Quarantine** - an order issued by a State or Federal official prohibiting the movement of animals to and from a designated premises

**Surveillance**- the systematic on-going collection, collation, and analysis of information related to animal health and the timely dissemination of information to those who need to know so action can be taken

**Containment Area** – designated zone around a CWD-positive finding that is established in regulation to prevent the further spread of prions on the landscape by limiting movement of live deer and deer parts

**Response Leader** – designated person who oversees all aspects of response, including managing operations, application of resources, and personnel assignments. This person will provide briefings to the Supervising Agency and coordinate with other agencies as needed. He or she will be responsible to insure incident safety and will delegate authority as needed.

**Trace-back** – epidemiological investigation examining all animals imported into a herd to determine the origin

**Trace-forward** – epidemiological investigation examining all animals exported from a CWD-positive, exposed, or suspect herd

## Literature Cited

Dechen Quinn, A., D. Williams, W. Porter, M. Smith, F. DeSantis, and S. McNulty. 2009. Risk Assessment of a Chronic Wasting Disease Outbreak in New York: Draft Final Report. State University of New York – College of Environmental Science and Forestry.

DeNicola, A. J., K. C. VerCauteren, P. D. Curtis, and S. E. Hygnstrom. 2000. Managing white-tailed deer in suburban environments – a technical guide. Cornell Cooperative Extension. 56pp.

Williams, D., A. Dechen Quinn, and W. Porter. 2014. Informing disease models with temporal and spatial contact structure among GPS-collared individuals in wild populations. PLoS ONE 9(1): e84368. doi:10.1371/journal.pone.0084368



## CWD OUTBREAK RESPONSE GIS TOOLBOX

In the event of a CWD outbreak, an important component of the response plan is the delineation of an appropriate containment area. The containment area must be sufficiently extensive to include all deer likely to have been exposed to CWD through direct contact with the known infected deer or through environmental contamination.

One approach to defining this containment area is to create a circle on a map centered on the point of disease occurrence with a radius based on the typical dispersal distance of deer, such as 10 miles for rural areas with an agricultural-forest matrix. To ease management challenges, the extent of the containment area can be adjusted to follow natural and political boundaries. However, with knowledge of deer movement and resource use on the landscape, it is possible to develop a more appropriate containment area that more accurately reflects the probability of contact between deer or overlap between deer home ranges.

Dr. Amy D. Quinn and others (2009) conducted a field study of deer movement, deer interaction, and resource use in order to estimate the potential risk of disease spread. The study was located in NYSDEC regions 6 and 7 in central New York. Using readily available geospatial datasets, such as the National Land Cover Dataset (NLCD) and USGS Digital Elevation Models (DEMs), the derived sex- and season-specific models can be used to map the statistical distribution of the risk of disease spread.

Based on the models and methods provided by Quinn and Williams, we have developed an ArcGIS Toolbox that can be used in a CWD outbreak response situation to rapidly define a containment area. All necessary geospatial datasets accompany the toolbox. The geospatial datasets have been preprocessed for efficiency and ease of use. Provided with a location (latitude/longitude), a user can create a map showing the extent of the area with highest risk for disease spread.

### THE CWD RESPONSE PLAN GIS TOOLBOX

The Toolbox consists of a four ArcGIS Tools, which when used in succession can shape the containment area delineation process. Use of the tools requires the Spatial Analyst extension, which commonly accompanies ArcGIS installations.

1. ***Contamination Point Layer from Table*** – converts a latitude/longitude pair in decimal degrees into a ESRI Point Shapefile in New York State Plane (Central) – NAD 1983 projection (a point layer required for subsequent tools)
2. ***Probability of Disease Risk Through Direct Contact*** – creates a raster representing cumulative probability of disease based on probability of contact between deer and sex- and season- specific resource use function (RSF) models, which are provided.
3. ***Intensity of Prion Accumulation (Indirect Contact Disease Risk)*** – creates a raster representing areas with high probability of resource use and high probability of indirect contact.
4. ***Cumulative Disease Risk Probability Captured by Delineated Containment Area*** – provided with a proposed containment area as a ESRI Polygon Shapefile or Layer, quantifies the proportion of cumulative probability of disease risk captured in the area; useful for comparing draft containment areas.

## DATA REQUIREMENTS

The base geospatial datasets required for mapping disease risk based on the models developed by Quinn and Williams include:

1. **The National Land Cover Database (NLCD), 2001**
2. **Hydrology 1:2M-scale adapted from the USGS Digital Line Graphs, 1999**
3. **Roads from the Census 2000 TIGER/Line Files**
4. **USGS 10-meter Digital Elevation Models (DEMs)**

These base geospatial datasets were processed using Resource Selection Function (RSF) models provided by Quinn and Williams to derive **sex-specific and season-specific probability of use rasters**, which are the only geospatial datasets required to use the provided tools.

## PROCESS

The basic information needed to use of the tools include:

1. Location of disease occurrence (in decimal degrees in a Microsoft Excel or basic text file)
2. The sex of the deer
3. Season of interest

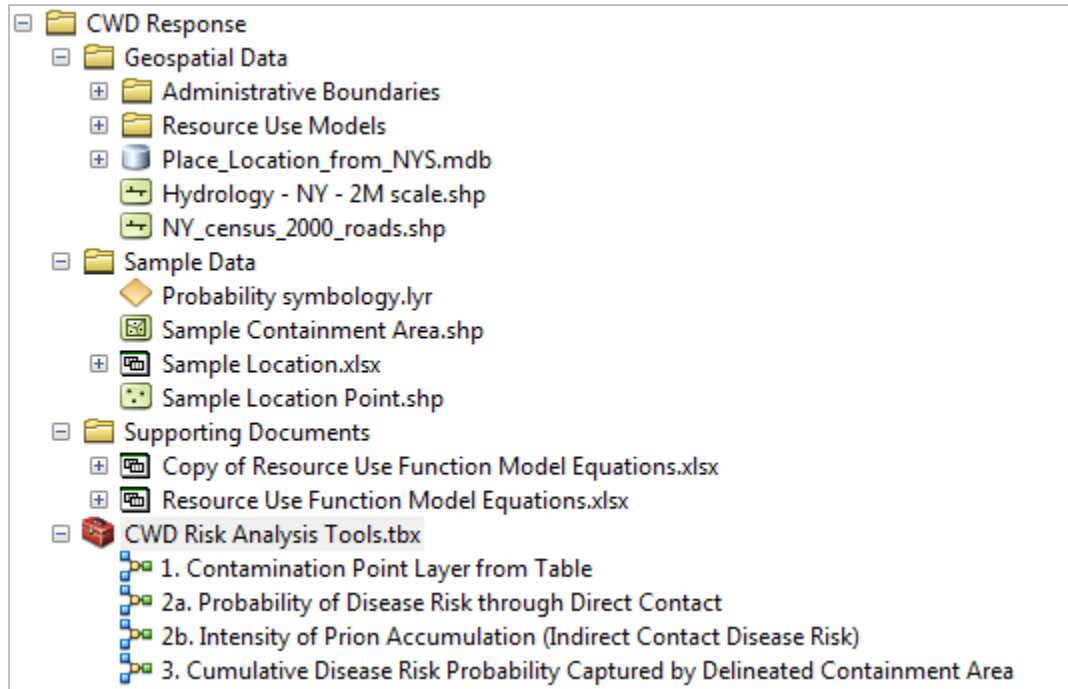
With these inputs, the toolbox can be used to derive a map of disease risk associated with direct contact or indirect contact (environmental contamination). The user can delineate a containment area using these and other supplemental geospatial data, such as political and natural boundaries. This portion of the process cannot be automated and requires at least basic ArcGIS software skills. Final delineation of a containment area may incorporate a large number of factors which have not been defined or cannot be readily represented or modeled using the basic geoprocessing tools provided in ArcGIS.

## LIMITATIONS

The toolset requires minimal inputs. However, the ArcGIS Spatial Analyst extension is required, and it is assumed that a user expecting to derive a final geospatial dataset representing a containment area will have basic ArcGIS skills, including the ability to create a shapefile and a polygon feature. Supplemental datasets, such as political boundaries, natural boundaries, and land ownership boundaries, may be critical for creating a manageable containment area.

This toolbox is intended to be a component of an emergency response plan and part of a broader GIS development process, not a stand-alone set of geoprocessing functions. For instance, following the delineation of a containment area, a GIS can be used to efficiently and accurately identify nearby landowners and track response efforts spatially.

## CWD RESPONSE PLAN GIS TOOLBOX CONTENTS

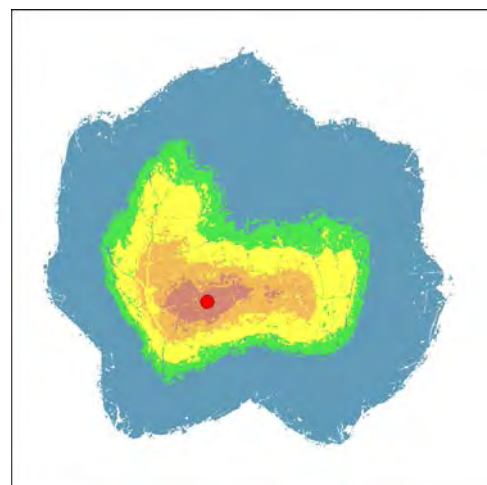
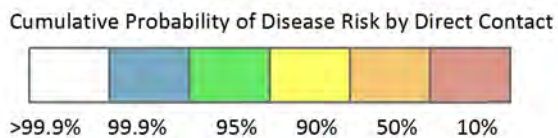


### EXAMPLE PROCESS

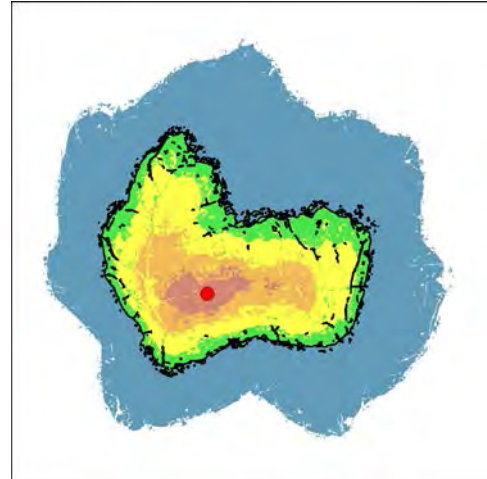
1. To illustrate the use of the Toolbox, a random point was generated in upstate New York. This point is initially defined as a latitude/longitude pair in a Microsoft Excel file (as shown below) with two columns and used as the input for the **Contamination Point Layer from Table tool**.

Lat	Lon
42.74484	-74.5390

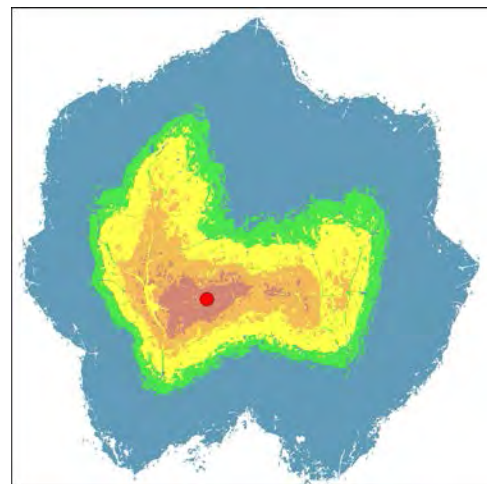
2. Using the Shapefile generated from the above table and the appropriate preprocessed RSF model raster which have already been created, the **Mapping Probability of Disease Risk Through Direct Contact** tool can generate a raster of cumulative probability of disease risk based on probability of direct contact between deer and resource use. Raster output values range from 0 to 1.



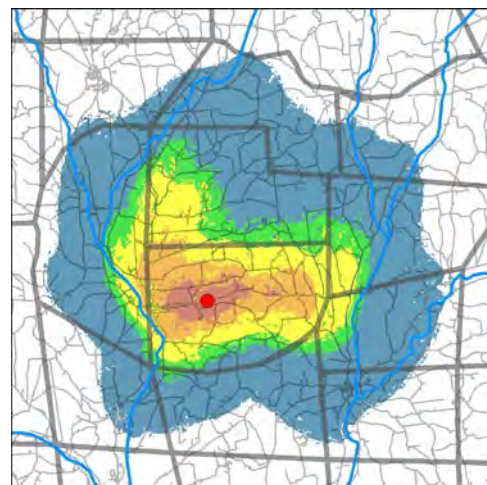
3. A user can define an area that encompasses an acceptable cumulative probability of disease risk. Using basic ArcGIS tools *Conditional(Spatial Analyst)* and *Polygon to Raster* a Polygon Shapefile can be generated. The **Mapping Probability of Disease Risk Through Direct** tool automatically generates a Polygon Shapefile representing the 95% cumulative risk probability, as shown here in blue.



4. If the user is interested in the accumulation of prions in the environment and potential risk of disease due to indirect contact, one can use the **Intensity of Prion Accumulation (Indirect Contact Disease Risk)**. This tool generates a raster similar to the primary output of the **Mapping Probability of Disease Risk Through Direct Contact** tool.



5. Visual analysis of the disease risk layers and supporting datasets such as political boundaries, tax parcel boundaries, hydrology, and roads, a containment area, taking into account information about the natural movement patterns of deer, resource use, and management concerns, in an ArcMap file can lead to the creation of an appropriate containment area. The **Cumulative Disease Risk Probability Captured by Delineated Containment Area** can then be used to quantify the percentage of the total cumulative probability of disease risk captured by the delineated containment area.



# DIVISION OF FISH, WILDLIFE AND MARINE RESOURCES STANDARD OPERATING PROCEDURES COLLECTION AND SAMPLING OF WILDLIFE WITH FIREARMS

## CONTENTS

- I. Purpose
- II. General Firearm Procedures and Protocols
- III. Basic Firearms Safety Training
- IV. Specialized Firearm Collection of Wildlife
- V. Protocols for Sampling, Collection, and Removal of Wildlife
  1. Emergency Response- Single Animal
  2. Captive Wildlife
  3. Free Ranging Wildlife
    - a. Daylight operations
    - b. Night operations
    - c. Water based operations
- VI. Consistency with Other Environmental Conservation Laws
- VII. Appendices
  1. Basic Firearms Safety for DFWMR Employees
  2. Specialized Firearm Collection and Sampling of Wildlife – Training Outline

## PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to describe the training, information, and equipment necessary to protect the health and safety of division employees and the public in situations requiring department authorized collection of wildlife with firearms. Division of Fish, Wildlife & Marine Resources (DFWMR) employees, particularly within the Bureau of Wildlife is sometimes required to remove wildlife as a part of their assigned duties. Situations involving firearm collection can vary widely, from euthanasia of a single distressed or diseased animal, to removal of multiple animals as part of a control program, scientific study, or disease investigation. In all cases, public and employee safety is the number one priority. This SOP outlines prerequisite safety training requirements for employees, field operation protocols, and provides for specialized firearm wildlife collection training to maintain a high level of employee/public safety.

While human safety is the foremost concern associated with the use of firearms, there is also a public expectation that wildlife euthanized for any purpose, in any fashion, be accomplished in a humane, efficient manner. To that end, the Bureau of Wildlife has previously developed recommendations for firearm euthanasia for several species under specific circumstances (e.g., Best Practices for Nuisance Wildlife Control Operators, 2004 and New York State Black Bear Response Manual, 2006). The guidance provided in this SOP, together with requirements for requisite training is intended to further ensure that any wildlife taken by DFWMR staff, for any purpose, be done humanely, safely, and effectively.

## GENERAL FIREARM PROCEDURES AND PROTOCOLS

Because firearms have a potential for misuse by untrained or unauthorized use, the care, storage, transportation and use of these tools needs to be well defined. Department policy provides basic oversight on the use of “Firearms and other Dangerous Weapons” and specifies that use by Wildlife or Sportsmen=s Education personnel be in accordance with assigned duties. See the [Department’s Administrative Policy OAD-16](#) for more information.

In addition to internal policy, the following requirements will be followed by DFWMR staff in the use, transportation, and storage of state assigned firearms.

1. No employee otherwise limited by law will be assigned duties involving the use of firearms.
2. Firearms not in use will be stored in a secure locked gun safe.
3. A trigger or breech lock that prevents firing will be used for temporary storage, such as during a multi-day detail.

4. When in transport to use in the field, firearms used by DFWMR employees shall be cased. If it is necessary for a firearm to be left in an un-attended vehicle temporarily, the vehicle must be locked, and the firearm stored out of sight.
5. When using firearms as a part of assigned duties, DFWMR employees shall be readily identifiable as a state official. State vehicles with department logo affixed should be used, and suitable clothing with Department/DFWMR identification should be worn.

## BASIC FIREARM SAFETY TRAINING

Employees handling and using firearms as a part of their assigned duties must be adequately trained to use these tools in a safe, humane, and efficient manner. To meet these requirements, DFWMR staff that use firearms will be trained in basic firearm safety and use. Such training will be conducted by either regional law enforcement or the regional sportsmen=s education coordinator in consultation with the regional Division of Law Enforcement (DLE) captain. The basic firearm safety training course is outlined in Appendix I. Components of the training will include safe handling/shooting instruction, rifle/shotgun design, ballistic characteristics, safe firearm handling simulation, personal protective equipment and personal safety, loading and unloading exercises, care and cleaning, and range firing. In addition, basic firearm safety training will include instruction on identifying whether collection by firearm is suited to the purpose, or if other techniques (e.g., traps, catch poles, or nets) are more appropriate. Upon completion of the training, a list of qualified individuals will be maintained by the appropriate regional wildlife manager (supervisors of Central Office employees will be provided documentation for any non-regionalized staff completing the training). Employees will be encouraged to take additional training from qualified sources to maintain proficiency and improve skills. In addition, annual range Are-certification@ will be required for each employee. Re-certification will include safe handling, loading/unloading and a live fire exercise administered by either DLE or the regional sportsmen=s education coordinator.

## SPECIALIZED FIREARM COLLECTION OF WILDLIFE

Any employee assigned to free ranging wildlife collection will receive appropriate situation training specific to the nature of the collection effort. Free ranging wildlife collection may necessarily take place on the open landscape during daylight, night-time, or over open waters. Because there is less control over the shooting environment in these situations, prerequisite specialized training will include instruction and field simulation exercises tailored to actual field conditions. Since field scenarios involve a variety of factors that



must be considered in determining whether an individual is capable of making a shot with required precision with near certainty, (such as firearm and ammunition selection, distance to target, availability of a rest or support, marksmanship skills, angle of presentation, vegetation or other obstructions, target behavior and speed) training will emphasize consideration of these factors and the importance of good judgment in determining whether a shot should be attempted or not, and will not test marksmanship per se. Appendix II contains a detailed outline of the specific training required for collection of free ranging wildlife.

## PROTOCOLS FOR SAMPLING, COLLECTION, AND REMOVAL OF WILDLIFE

The following several scenarios describe situations in which a DFWMR employee may be acting to collect, sample or remove wildlife.

### **EMERGENCY RESPONSE - SINGLE ANIMAL**

An emergency response includes situations in which human health or safety may be in danger if prompt removal of an animal does not occur. Most often, a law enforcement agency will be the first responder, and the likely entity to destroy the animal. In some circumstances however, law enforcement may be unavailable, or may not be comfortable in taking the animal due to a lack of familiarity with the species or proper shot placement. In these situations Bureau of Wildlife staff and other trained DFWMR staff may be required to remove the animal. Removal of such animals will be limited to qualified employees who have completed either Basic Firearm Safety Training or Specialized Collection of Wildlife Training.

### **CAPTIVE**

Captive wildlife includes animals contained in fences, cages, or otherwise restrained from free movement in the wild. Often, but not always, these animals are possessed illegally. To minimize potential liability associated with private property claims, field personnel should thoroughly describe the specifics of each case for consideration by appropriate policy makers in the regional office. In some cases, it may also be necessary to consult with central office personnel. In cases that clearly have legal implications, both the Division of Law Enforcement and the Department's Office of General Counsel, via the regional attorney, should be consulted before taking further action. Removal of such animals is sometimes necessary to protect human health and safety, prevent spread of wildlife disease, or to euthanize a sick or injured animal. Because there are often strong human emotions involved with taking wildlife in someone's possession, alternative methods should first be considered. Removal options include traps, nets, catch poles, and chemical immobilization.

These techniques allow for non-lethal removal from a premise in a way that may be viewed as more acceptable than lethal take on site. Unfortunately, non-lethal capture and removal is not practical in every situation. Animals held in large enclosures or that are otherwise wary can often avoid capture attempts, requiring the range afforded by a firearm for efficient taking. In these circumstances, removal with a firearm is appropriate by members of the Bureau of Wildlife that have completed Basic Firearm Safety Training. When lethal control is used, or when the forcible removal of an animal is required from private premises, the Division of Law Enforcement must be present during all phases of these operations.

## **FREE RANGING**

Applies to situations in which single or multiple animals will be collected as part of routine or special circumstances. Example include: collections as part of scientific study, disease control, or monitoring, and population control programs. These typically involve healthy animals on the landscape, or in special circumstances, diseased animals in a free ranging state. Minimum qualifications are basic safety training and completion of specialized instruction which includes training specific to the scenarios in subsections 1-3 below.

### *DAYLIGHT OPERATIONS*

These situations may include collection of apparently healthy, free ranging wildlife for control purposes, contaminant study, and disease monitoring or scientific research. In addition to the basic considerations of staff/public safety, and proper firearm selection and handling, the collector needs to be prepared to operate under conditions that cannot always be controlled. In field situations, distance to target, terrain, weather, and other factors can influence when and if an animal should be collected. Because of these factors, a shooting team of a minimum of two staff is normally recommended, with one designated as the spotter and the other as shooter. The role of the spotter is to ensure safe and effective collection can take place through assessment of downrange conditions, distance to target and other circumstances which might dictate the decision to shoot or not. The shooter and the spotter must be in agreement that a safe and effective shot is presented before shooting. Additionally the shooter needs to have adequate knowledge of the effective range of the firearm in use, and possess the required proficiency to be successful. Required equipment for the shooting team includes appropriate hearing and eye protection, and suitable clothing for conditions. In addition, where distance or visibility and terrain features indicate, they should also be equipped with binoculars, spotting scope or rangefinder.

### *NIGHT OPERATIONS*

Many species of wildlife can be more effectively taken during the evening hours than during daylight due to their natural activity patterns. Night-time shooting (or in low light

conditions) requires additional considerations and equipment to ensure safety and efficiency are not compromised. Wildlife collection after dark should normally be done by a shooting team of at least two persons with duties as described for daylight operations. Pre-scouting of shooting locations during daylight is a desired prerequisite to determine safe zones of fire, and any potential hazards/obstacles which may not be apparent in the dark. Each shooting team needs to be equipped with a hand-held spotlight. In addition, Forward Looking Infra-Red (FLIR) or Generation II (or higher) night vision optics to identify target animals is highly recommended. These devices are also very useful in confirming the absence of downrange hazards and for this reason they should be used whenever practical. Use of FLIR or Gen II technology is a critical component of the Specialized Collection of Wildlife training. Each member of the team will be familiar with these devices prior to going afield.

### *WATER*

Taking wildlife on or over water; or shooting such that a bullet passes over water, requires consideration of maximum downrange safe zones. The potential for ricochet off the water surface, combined with a lack of obstructions to intercept a bullet amplify downrange safety concerns. Generally, the safe downrange distance beyond a target animal should be considered to be equivalent to the maximum range of the bullet/caliber being used. Unless conditions dictate otherwise, short range projectiles should be used. Most wildlife collection over water requires a shooting team of two or more people consisting of shooter and spotter(s). Because boat traffic, both motorized and non-motorized, can enter downrange areas from any direction, the role of the spotter becomes even more important than in land based shooting. Wildlife collection over water requires constant communication between spotter and shooter to ensure extended downrange safety is maintained, and safe zones of fire are not encroached. The two person team requirement may be dropped when shooting on/over small water bodies in remote locations, where bullet ricochet would not be a problem. The two person team is also not required when shotguns (used with shot), and not rifles, are being used.

## CONSISTENCY WITH OTHER ENVIRONMENTAL CONSERVATION LAWS

Collection of wildlife for research, management and control (ECL Article 11, Title 5) is ethically and legally distinct from hunting wildlife (ECL Article 11, Title 9). Environmental Conservation law limitations placed on hunting to ensure the ethical concept of fair chase do not apply to collection of wildlife by DFWMR staff. As such, there are instances where

carrying a loaded firearm in a vehicle, including boats, shooting from a vehicle, baiting, and utilization of ECL prohibited technological advantages (i.e., electronic calls) may be allowed after consultation with the Regional Wildlife Manager and DLE staff. However, procedures and considerations for the ethical and humane disposition of animals will remain in place.

## APPENDICES

### APPENDIX I - BASIC FIREARMS SAFETY FOR DFWMR EMPLOYEES

All DFWMR employees assigned to use firearms during the course of wildlife management activities will be trained in their safe use and operation. A basic training course consisting of 4 hours of instruction is required. The course shall consist of 2 hours of classroom instruction and 2 hours of range instruction. Annual range re-certification will be required to maintain qualification.

#### Classroom:

The following topics shall be taught: basic firearm safety rules, firearm handling, firearm design, calibers, ballistics, trajectory, safe zone of fire, and appropriate firearm selection for various species and situations. In addition, firearm cleaning, care and storage will be discussed. Classroom discussion will emphasize the importance of ethics, public relations, and professional conduct as a representative of the Department.

#### Range:

Range session will include firearm inspection (loaded vs. unloaded), safe handling and carrying exercises, loading and unloading, and range shooting.

### APPENDIX II – SPECIALIZED FIREARM COLLECTION AND SAMPLING OF WILDLIFE – TRAINING OUTLINE

#### CLASSROOM – DAY 1

*10:00 A.M. - GENERAL CONSIDERATIONS:*

##### **Need or Purpose for Collection** (20 minutes)

Segment to cover the range of possible scenarios in which wildlife collection may occur. For specialized collections there is often lead time prior to implementation. Among other topics, the need for pre-planning, proper equipment selection and

documentation of activities will be stressed. Classroom discussion will emphasize the importance of ethics, public relations, and professional conduct as a representative of the Department.

**Shot Placement and Purpose** (30 minutes)

Depending on the purpose of the collection effort, shot placement can be critical. While a single, humane, killing shot is always the goal, often there is a need to preserve specific tissues or organs. This segment will address best shot placement relative to humane interests and the specific collection purpose.

**Safety- Employee SOPs and Best Practices** (30 minutes)

Segment to include: firearm cardinal rules, safe handling, and required/recommended PPE (hearing, eye, etc). This portion of course will be a refresher, intended to build on instruction provided in the Basic Firearm Safety training required as a pre-requisite. In addition, storage requirements will be reviewed.

**Safety- Public** (40 minutes)

Segment will cover understanding ballistics, zones of fire, recognition of site features which could influence public safety, and safe shot decision-making. Key purpose will be to provide a solid basis for assessing a site for safe firearm use.

*12:00 P.M. - LUNCH*

*1:00 P.M. - GEARING UP:*

**Firearms (suited to species), including ammunition selection** (20 minutes)

Segment will focus on selection of best rifle or shotgun for the task. Emphasis will be on knowing the purpose of the collection, likely site characteristics, suitability of various calibers (gauges/chokes) at various ranges for individual species, and best ammunition and bullet choices for safety and efficiency.

**Daytime Operations** (30 minutes)

Segment will serve as an introduction to daytime collection of free ranging wildlife. This is the portion of the course which begins to put all aspects of safety, planning, firearm/gear selection and site considerations together. The instruction contained in the segment will be the basis for putting everything into practice during the field simulation exercise.

**Night-time Operations** (30 minutes)

Segment will serve as an introduction to night-time collection of free ranging wildlife. Night operations are not inherently different from daytime operations, but do require some gear and some practices which differ from daytime work. This segment will cover those unique aspects, familiarity with specialized equipment, and provide a basis for the field simulation exercise.

**Water based Operations** (20 minutes)

Segment will address the unique nature of shooting over or on open water. In particular projectile trajectory for various firearms will be discussed, bullet skip, need for extended downrange clearance, and best firearm choices for wildlife collection on water.

**PPE and Emergencies** (30 minutes)

Segment will cover prevention and treatment of common injuries associated with field activities (burns, cuts, scrapes, sprains, etc). Also to be included, will be an emergency response template for medical emergencies, accidents, or the very rare event of a firearm related injury.

**FIELD – DAY 1**

*3:30P.M. - FIREARM SAFETY AND HANDLING- RANGE*

Practical hands-on session will include basic handling, carrying, loading and unloading, as well as a range shooting exercise.

*5:00P.M. - PRE-SCOUTING OF NIGHT OPS SHOOTING SITES*

Session designed to instruct staff on individual site factors to assess as a prerequisite to a wildlife collection.

*6:00P.M. - DINNER*

*7:30P.M. - COLLECTION SIMULATIONS- NIGHT OPERATIONS*

Session is a live simulation of night wildlife collection based on classroom instruction, and pre-scouting and pre-planning efforts. Attendees will have an opportunity to use

the specialized equipment to acquire and shoot a pre-set target in a realistic field setting.

## **FIELD – DAY 2**

### *8:30A.M. - COLLECTION SIMULATIONS, CONTINUED- DAY OPERATIONS*

Session is a live simulation of daylight wildlife collection based on classroom and other portions of the training. Attendees will have hands-on opportunity to assess targets and shoot under realistic field conditions.

### *11:00A.M. - ELEVATED SHOOTING PLATFORMS*

Session will introduce attendees to various tree stands and other elevated shooting platforms with an emphasis on best safety practices (and PESH/OSHA requirements) for using these tools for wildlife collection purposes.

## **CLASSROOM – DAY 2**

### *12:00P.M. - WRAP-UP, EVALUATIONS, UNANSWERED QUESTIONS*

### *1:00P.M. - ADJOURN*

## **New York State Department of Environmental Conservation Field Activities and Equipment Needs**

This appendix of considerations, recommendations, and supplies is provided as a guide to staff in the event of CWD detection. This list is generated from staff experience from the 2005 and 2009 Oneida County wild deer collections. Local land use conditions, time of year, and specific circumstances surrounding the detection will dictate staff and equipment required to take the appropriate sample of free range wild deer.

The goal is securing an appropriate sample of wild deer from the landscape surrounding the CWD detection and to achieve that sample in an orderly, safe, and efficient manner. The list below is in a chronological order.

**Notification of positive-** as described in Page 10 of this Plan

**Determine best method(s) of sample collection-**

- Will a bait-and-shoot/free range collection effectively secure sample?
- Would drop or rocket nets be useful in areas where shooting is prohibited?

**Time of year will dictate best sampling alternative**

**Other methods of collection be that will need consideration-** *road kills, nuisance permits, clinical deer*

**How close is CWD detection to hunting season?**

- Can hunter kill submissions contribute during the initial response phase?

**Identify nearest facilities for operation headquarters and or remote sample processing facilities (electricity and water preferred)**

- Consider DEC facilities first choice
- What alternative facilities exist - *DOT, OPRHP or County*
- If hunter submissions are to be utilized, consider multiple collection locations
- Would a mobile facility or temporary structure like a tent be adequate?

**Sampling area**

- Define appropriate sample area
- Identify local municipal constraints – *no access, shooting prohibitions.*
- Land use characteristics/constraints – *tribal lands, park lands, refuges, etc.*
- Identify human population centers/density
- Identify major human and natural barriers
- Determine usable green space/public lands



**Identify Staffing – *numbers of staff dependant on circumstances surrounding detection.***

Wildlife Health Unit– *lead Bureau, local expertise, coordination, direct sampling, sample processing*  
Central office – *support, executive/press liaison, situational up-dates/releases*  
Conservation officers/Forest Rangers – *direct sampling, public safety POC*  
Operations – *facility construction/renovation, field logistical support*  
Regional Public Participation Specialists – *local public outreach*  
Regional GIS support staff - *landowner identification, landscape features, and sample distribution*  
USDA APHIS Wildlife Services – *direct sampling assistance*  
Assess seasonal hiring needs – *Rabies prophylaxis would be an employment condition*

**Additional Staff Considerations**

Determine work schedules - *weekends, holidays, OT, crew sizes, shift durations*  
Rabies vaccinations/titer needs – *ensure staff is up-to-date on shots and titers*  
Firearms training - *DFWMMR SOP with appropriate refresher status*  
Ensure communications capability – *cell phones and radios*

**Gain landowner permission and identify sampling constraints**

Written permission forms necessary  
Landowner limits on deer to be taken  
Landowner limits to property access or special considerations for access  
Limits to shooting hours or frequency  
Notification to local authorities (before any collection)

**Shooting Related – *ensure staff is familiar with equipment prior to collections***

Develop operational sampling strategy and assignments – *evaluate need for teams, hours of operation, communications, and carcass removal from field*  
Agency provided firearms – *scoped rifles (.243 or greater) or shotguns with slugs*  
    Hard transport gun cases  
    Appropriate and sufficient ammunition  
    Cleaning kits  
    Equipment storage capabilities (locked offices, gun safes or lockers, etc.)  
Eye and ear protection  
Rangefinders  
Night vision, spotlights, or FLIR units  
Binoculars and spotting scopes  
Shooting sticks and bi-pods  
Bait/attractants – *to be maintained on weekends and off hours*  
Portable blinds/shooting tri-pods/elevated stands  
Review policy/guidelines for wounded deer  
\*USDA-WS may use sound-suppression equipment

## Appendix III

### **Vehicles**

- 4x4 pick-up trucks – *open and covered beds*
- ATV/UTV/snowmobiles – *depending on season or terrain*
- Trailers/pull-behind sleds

### **Carcass Handling – *not all equipment is listed here and a review of specific needs with Wildlife Health Unit will be required***

Rabies vaccinations/titer needs – *ensure staff is up-to-date on shots and titers*

Staff training or review for handling animals carcasses

Field PPE (gloves, disinfectant, towels, etc)

Deer carts/carriers/snow sleds

Body sized clear bags, duct tape

Carcass tag/ID requirements

Walk-in cooler or refrigeration truck (weather dependent)

### **Sample Removal and processing - *requires consultation with Wildlife Health Unit staff***

Evaluate need for remote sampling facility – *such as Rome Check station, Rome Fish Hatchery, John White, etc. (do prior to start of collection, or consider head shipments to Delmar/Cornell, leaving only a need for a location to remove heads/store carcass/meet/gather as needed.)*

Associated PPE and equipment to process samples

Provision for sample transport to Delmar or Cornell

### **Consider best carcass disposition options**

Incineration (known CWD positive material)

Venison Donation- identify participating processors and funding source - *would require short term holding of carcasses until testing completed*

Landfill disposal – *contact local Waste Authorities*

On-site disposal needs – dumpster rentals (lined)

### **Wrap up/End**

Clean-up bait sites

Remove blinds/shooting stands

Clean-up and dismantle field headquarters

Landowner outreach

Public outreach and summary

## Appendix III

**Equipment needs for CWD Field Response:** Equipment needs for an initial CWD Response effort fall into five broad categories: Field Collection, Carcass Handling, Sampling Lab\*, Miscellaneous items, and Administrative support. Equipment required for field response is relatively minimal, need not all be on-hand, nor be situated in a single location. What is necessary for a prompt response effort is an up to date inventory, and preparedness for obtaining needed items in a timely manner. The following lists describe by category, whether currently on hand (a), needed in advance (b), or to be obtained when needed (c). Additionally, sources/location/responsibility for equipment is listed. These lists should be reviewed and revised annually.

Item- Field Collection	Status	Source/Location/Responsibility	Note
Firearms .243 or >	a	Regional Wildlife Units (RWUs)	
Gun accessories Ammo, cleaning, transport cases	a?	RWUs	Status may vary by Region- need inventory
Shooting PPE	a	RWUs/Sports Ed Program	
Rangefinders	a/b	RWUs/purchase on-line or sporting goods store	Each Region should have 3-4
Night vision/FLIR	a	RWUs/CO	1 in each region/CO
Binoculars/spotting scopes	a/b/c	RWUs	Need inventory 3-4 per Region
Spotlights	a/b	RWUs/purchase on-line or sporting goods store	Need inventory/3-4 per Region
Shooting sticks/bipods	a/b/c	“ “	Need inventory/3-4 per Region
Bait/attractants	c	RWUs/local purchase	need to identify sources
Blinds/Stands	b/c	RWU/CO/SEP	Inventory and Bulk purchase?
Gun storage 12-20 rifle	a/b	May have already- verify Gun cabinet at Rome	Just 1-2 needed with storage location noted for deployment

Item- Carcass Handling	Status	Source/Location/Responsibility	Note
Field PPE-Cleaning	b	WHU Delmar	Gloves/coveralls/towels/disinfectant etc. Store adequate supply
Carts/carriers/sleds	a/b		2 carts/1 sled in R6
“body bags”	b	WHU Delmar	Store adequate supply-central location
Deer tagging/ID	b	WHU Delmar	Store adequate supply-central location
Walk-in or truck refrigeration	c	WHU and RWU	Need to identify sources

### Appendix III

Item-Sampling Lab*	Status	Source/ Location/Responsibility	Note
Scalpels/forceps	a?	WHU	Store central location-Delmar?
Absorbent pads	a?	WHU	Store central location-“ ”
Sample containers	a?	WHU	Store central location-“ ”
Garbage bags/trash cans		WHU	Store central location-“ ”
Disinfectant	a/b?	WHU	Store central location-“ ”
Work station (s)	a	Rome	2 SS tables with shelf
Cooler/refrigeration			
Sharps containers	a/b?	WHU	Store central location-Delmar?
PPE			

\*Alternative to on-site lab is field/field office head removal and head ship to John White, Cornell, Rome or Delmar for sample processing.

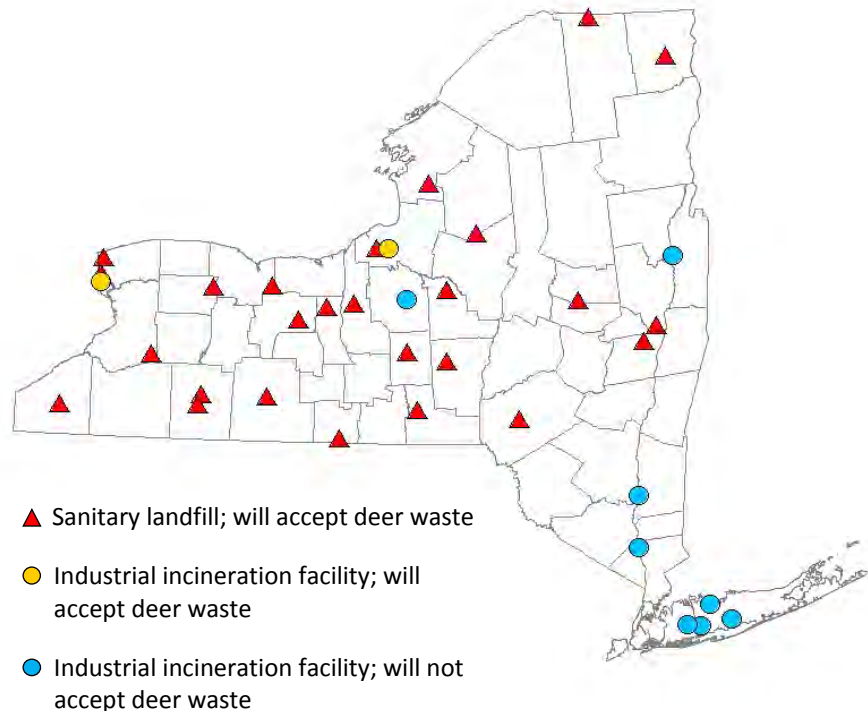
Item- Miscellaneous.	Status	Source/Location/Responsibility	Note
Batteries	c		
Flashlights	a/b		
Radios/Cell phones	a/b		
4x4 pickup trucks	a		
GPS	a/b		
First aid kits	b		
ATV/UTV/Snowmobile	a		

Item- Administrative	Status	Source/Location/Responsibility	Note
Fax or			
Computer/scanner/internet?			
Office supplies – pencil/paper, etc			
GIS Capability			Off-site ok

## Recommended Disposal Options for Deer Carcasses and Parts

Placing deer carcasses and parts in a landfill is the best option for disposal of this waste and the preferred method in this plan. Deer waste can be generated by hunters directly, by hunters via deer processors and taxidermists, or by highway departments who pick up road-killed deer, but could also come from a targeted surveillance collection if CWD is found. Regulated sanitary landfills routinely cover their waste (at least once per day), minimizing the it is exposed to scavengers and the elements. Additionally, sanitary landfills are designed to contain any leachate with a system of liners, with this material ultimately going to a waste water treatment plant (although this type of treatment itself does not render prions inactive). Placing deer waste in a regulated sanitary landfill is nevertheless the safest, most practical, and most accessible means of disposal currently available to hunters, taxidermists, deer processors, and highway departments.

There are 26 sanitary landfills in New York, all regulated and permitted under NYCRR Part 360 (Figure 1). In the spring of 2014, we contacted all of the individual landfill operators to determine their willingness and ability to accept deer waste. In addition to discussing facility constraints and operating procedures, we also shared DEC's CWD plan and our approach to more strongly encourage hunters to dispose of deer carcasses and parts in the waste stream. All the landfills indicated they would accept deer waste, although conditions varied under which they would do so (Table 1). Most of the facilities also indicated they would assist DEC with larger scale disposals (sharpshooting, staff collections, etc.) if necessary. About half of the state's sanitary landfills are county operated, and half privately run.



*Figure 1. Locations of NY sanitary landfills and DEC-regulated industrial incineration facilities*

Deer carcasses and parts can also be disposed of by incineration. It's important to note however, that incineration by itself is not a complete disposal method; the resultant ash needs to be then deposited in a sanitary landfill, albeit in much reduced volume. There are ten industrial incineration facilities in the state regulated by NYSDEC (Figure 1). In the summer of 2014, we contacted all of these facilities to determine their willingness and ability to accept deer waste. Only two were willing and able to do so (Table 1).

Reasons for negative responses to incineration varied, but could be grouped into four categories:

- 1) Their contract with another regulatory entity (not DEC) precludes it;
- 2) Due to their size and composition, deer carcasses do not fully combust;
- 3) They are located in a residential area or otherwise concerned about negative reactions from people, including staff;
- 4) Small size of their facility limits the overall volume they can accept

Due to the greater number of facilities, their accessibility, and intake volume that landfills afford as compared to industrial incineration facilities, we recommend landfilling as the preferred method of disposal for deer and deer parts in New York. Nothing in the preceding statement, however, would preclude us from using incineration as an additional disposal method in the future if we so choose.

*Table 1. New York's sanitary landfills and industrial incineration facilities, grouped by their policies on acceptance of deer waste (blue = will accept, brown = will not accept)*

Facility Type	Policy	Facility	County	Town	DEC Region
Sanitary Landfill	Will take carcasses and parts; prior notice for large volume (62%)	Colonie Sanitary Landfill	Albany	Colonie	4
		Clinton County Landfill	Clinton	Black Brook	5
		Broome County Landfill	Broome	Nanticoke	7
		Auburn Landfill No. 2	Cayuga	Auburn	7
		Chenango County Landfill	Chenango	Pharsalia	7
		Cortland Co. Westside Extension Landfill	Cortland	Solon	7
		Madison Co. Westside Extension Landfill	Madison	Lincoln	7
		Chemung County Sanitary Landfill	Chemung	Chemung	8
		Seneca Meadows Landfill	Seneca	Seneca Falls	8
		Bath Sanitary Landfill	Steuben	Bath	8
		Chautauqua Landfill	Chautauqua	Ellery	9
		Modern Landfill	Niagara	Lewiston	9
		Ontario County Sanitary Landfill	Ontario	Seneca	8
		Allegany County Sanitary Landfill	Allegany	Angelica	9
		Ava Landfill	Oneida	Ava	6
Hyland Landfill	Allegany	Angelica	9		
Facility Type	Policy	Facility	County	Town	DEC Region

Sanitary Landfills	Will take carcasses, parts, and large volume; prior notice needed for all (15%)	Franklin County Regional Landfill	Franklin	Constable	5
		Fulton County Landfill	Fulton	Johnstown	5
		Devel. Authority of the North Country Landfill	Jefferson	Rodman	6
		Bristol Hill Sanitary Landfill	Oswego	Volney	7
	Will take carcasses and parts; paperwork needed for large volume (15%)	High Acres Western Expansion Landfill	Monroe	Perinton	8
		Mill Seat Sanitary Landfill	Monroe	Riga	8
		Chaffee Landfill	Erie	Sardinia	9
		Allied Waste Niagara Falls Landfill	Niagara	Niagara	
	Will take some carcasses and parts with prior notice; no large volume (4%)	Albany Rapp Road Landfill	Albany	Albany	4
	Will take parts and carcasses, but no large volume (4%)	Delaware County Solid Waste Management Facility	Delaware	Walton	4
Incinerators	Will take, but may limit amount/day (10%)	Oswego County Energy Recovery Facility	Oswego	Volney	7
		Covanta Niagara, L. P.	Niagara	Niagara Falls	9
	Will not take carcasses or parts (80%)	Hempstead Resource Recovery Facility	Nassau	Hempstead	1
		Babylon Resource Recovery Facility	Suffolk	Babylon	1
		Covanta MacArthur Renewable Energy	Suffolk	Islip	1
		Huntington Resource Recovery Facility	Suffolk	Huntington	1
		Dutchess County Resource Recovery Facility	Dutchess	Poughkeepsie	3
		Wheelabrator Westchester	Westchester	Peekskill	3
		Wheelabrator Hudson Falls	Washington	Kingsbury	5
		Onondaga County Resource Recovery Facility	Onondaga	Onondaga	7





**New York State Department of Environmental Conservation**

**Division of Fish, Wildlife and Marine Resources, Region 6**

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Website: www.dec.ny.gov



Joe Martens  
Commissioner

**Permission to Access Property**

By signing this permission form, the owner/authorized representative consents to allow property access by DEC staff for the purpose of Chronic Wasting Disease (CWD) monitoring activities. This consent allows DEC staff to enter upon and pass through such property in order to collect deer for CWD surveillance along with actions associated with such collections. Activities associated with collection of deer may include establishment of bait stations, erection of blinds or elevated shooting platforms, and use of ATVs/snowmobiles to facilitate such activities. All baits, blinds or other items will be removed from the property at the conclusion of collection activities. Unless further conditioned below, access as described above is granted without prior notice, between the hours of 6:00 a.m. and 9:00 p.m., Monday through Friday. If DEC staff should wish to access the property at other times, DEC staff will notify the owner/representative to obtain a separate consent for entry to the property.

Special Restrictions/Conditions specified by Landowner (*if any*):

1. \_\_\_\_\_  
\_\_\_\_\_
2. \_\_\_\_\_  
\_\_\_\_\_
3. \_\_\_\_\_  
\_\_\_\_\_
4. \_\_\_\_\_  
\_\_\_\_\_

Permission is granted for access to property at the following Address(es):

\_\_\_\_\_  
\_\_\_\_\_

*By signing this form, I affirm under penalty of perjury that I am authorized to give consent to entry by DEC staff as described above. I understand that false statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.\**

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\*The signer of this form must be an individual or authorized representative of a legal entity that:

- Owns fee title and is in possession of the property described above;
- Maintains possessory interest in the property through a lease, rental agreement or other legally binding agreement; or
- Is provided permission to act on behalf of an individual or legal entity possessing fee title or other possessory interest in the property for the purpose of consenting to access to such property.

## **Chronic Wasting Disease Remote Field Laboratory Equipment and Supply List.**

Background: In the event that Chronic Wasting Disease (CWD) is detected in wild or captive cervids in New York the NYSDEC CWD Response Plan will be implemented. This response may include targeting samples from an area immediately surrounding the location of the CWD positive animals. If a suitable Field Lab site can be secured the retropharyngeal lymph nodes (RPLNs) can be removed close to, or in, the response zone. Suitable Field Lab sites would have running water, electricity, HVAC, and access to major roadways; phone service, internet connection, and bathroom would be desirable. Several potential sites should be identified in each Region in advance. If a suitable site is not available, the deer heads can be packaged and transported/shipped to the WHU Lab in Delmar for processing and the carcasses can go to the nearest landfill.

### **Field Laboratory equipment:**

Refrigerator, walk-in cooler, or reefer truck/trailer  
Lined dumpster with contract for disposal in lined municipal landfill  
Work tables (stainless steel necropsy tables preferred)  
Portable toilet (if no bathroom facilities)  
Pick-up truck  
Computer with Access CWD database and UPS shipping software  
Computer printer  
Phone  
Auxillary lighting  
Blue bins/carcass transport tubs  
50 X 96 X .6 mil clear deer body bags  
Duct tape  
NYSDEC DEER KILL REPORT tags  
Black ink pens/ sharpies  
Extension cords  
Power strips/surge protector

### **Field Laboratory Supplies:**

Plastic garbage cans with wheels and lids  
43 X 57 X .4mil clear poly can liners (7-8 deer heads/bag)  
1 gallon sharps containers  
Absorbent pads (~30 X 36" underpads) (1 per head)  
Assorted size latex and nitrile gloves (4 per head)  
Assorted size cut proof gloves  
Disposable scalpels (1 per head)  
Disposable forceps (1 per head)  
2N sodium hydroxide  
Plastic dish pans  
Disposable face shields or goggles/safety glasses  
Face masks

## Appendix VI

Procedure gowns

Tyvek pants

Rubber overboots

50 ml sample tubes (self standing centrifuge tubes) (1 per head)

Tube racks/stand

Bar code labels (1 set per head)

Soap or hand sanitizer

Paper towels

General disinfectant (Promicidal or 10% bleach solution)

Shipping coolers

Ice packs

Packing tape

NYSDEC Chronic Wasting Disease Submission Forms

Bags for sample tubes shipping (8 X 12 X 30 clear gusseted) (1 per 20 heads)

Deer age reference charts

Duct tape

Black ink pens and sharpies

## Appendix VII

### **New York State Department of Environmental Conservation Division of Fish, Wildlife, and Marine Resources Wildlife Health Unit**

Collection of Tissues for Chronic Wasting Disease Testing at Deer Check Stations and Remote Field Laboratories.

Revised: 07/03/2014

- I. Background/Objective: Chronic Wasting Disease (CWD) is a prion-caused, transmissible spongiform encephalopathy of elk, mule deer, and white-tailed deer. It is similar to scrapie in sheep and bovine spongiform encephalopathy (mad cow disease). There is as yet no evidence that CWD can be transmitted to livestock or humans.

NYSDEC has a surveillance program that encompasses both testing of deer showing any possible clinical signs of CWD (e.g. emaciation, neurological aberrations) and a testing of a cross section of hunter-harvested wild white-tailed deer. The NYS Department of Agriculture and Markets is conducting surveillance of captive cervids. The CWD test is currently being performed by Cornell University. The WHU performs post-mortem examinations on sick deer or deer found dead, and collects brain stem (obex), tonsil, and retropharyngeal lymph node samples from these and other cervids for testing by Cornell. The sample collection procedure for remote field or check stations is described below.

- II Activity Locations: Suitable field laboratories or deer check stations statewide. Suitable sites would preferably be under NYSDEC control or alternatively another State Agency or Federal facility. Ideal sites will have running water, electricity, HVAC, and access to major roadways; phone service, internet connection, and bathroom would be desirable. Several potential sites should be identified in each Region in advance. If a suitable site is not available, the deer heads can be packaged and transported/shipped to the WHU Lab in Delmar for processing and the carcasses can go to the nearest landfill.

- III. Participant Restrictions: Only personnel that have received a pre-exposure rabies vaccination and have demonstrated an acceptable titer in the last six months may be engaged in this activity. Furthermore, participants must have viewed the procedure as performed by a practiced dissector, and must perform the procedure initially under direct supervision of the same. An instructional video of this technique is available from the WHU.

- IV Principal safety concerns:

1. Cuts and punctures related to use of scalpels.
2. Exposure to pathogens, particularly rabies virus, especially via accidental punctures or lacerations.

## Appendix VII

3. Loss of prion-pathogens to the environment.
- V. Personal Protective Apparel: Necropsy gown, latex or nitrile gloves, cut-proof glove (on non scalpel hand), face shield (or surgical mask and safety goggles/glasses).
- VI. Tools and Supplies: Disposable scalpels, disposable forceps, 50 ml plastic centrifuge tubes., absorbent pads, 2N sodium hydroxide solution, general disinfectant\*, bar code labels, Access CWD database on laptop.  
  
\*\*Phenol or quaternary ammonium based, or 1: 9 aqueous dilution of household bleach (sodium hypochlorite).
- VIIa. Removal of Retropharyngeal lymph nodes (RPLNs) from cervids not requiring a rabies test:
  1. Place the cervid head upside down, foramen magnum towards dissector, on an absorbent pad on a stainless steel work surface or hard flat surface covered with a waterproof, cut-resistant material (or combination of materials).
  2. Use a scalpel and forceps to expose the paired RPLNs located beneath the cranium several centimeters anterior to the occipital condyles. They can be distinguished from the abundant salivary gland tissue by their ovoid shape, firmer texture, and characteristic lymph node architecture (noticeable cortex and medulla). Free the RPLNs and place in a centrifuge tube to be refrigerated. Place unique barcode label on tube, specimen submission form and Deer Kill Report tag.
  3. Examine the deer's premolars and molars and estimate age by wear.
  4. Wrap the head in the pad and place in a poly bag-lined waste can or barrel. Do not place more than 6 heads in each bag, seal the bag with an overhand knot or duct tape and place in designated dumpster.
- VIIb. Collection of retropharyngeal lymph nodes (RPLNs) from deer requiring a rabies examination.
  1. DO NOT disturb the brain stem
  2. Remove the RPLN's as above VIIa.
  3. Request return of the head (if desired) from NYSDOH on the rabies submission form.
- VIII. Clean-up and Disposal of Waste.
  1. Cervid remains and all contaminated pads, disposable personal apparel and the plastic work surface covering are to be placed in biohazard-labeled waste can

## Appendix VII

lined with a 3 mil polyethylene bag and burned in the WHU incinerator in Delmar.

2. Disposable scalpels and forceps are to be discarded in a sharps container prior to incineration. Disposable forceps can be re-used if cleaned and soaked in 2N sodium hydroxide for 1 hour minimum.
3. If contamination of the underlying work surface has occurred, clean with a general disinfectant.

### IX. Accident Guidelines:

1. Cuts or punctures sustained while collecting tissues should be immediately cleaned with soap and water. Initially encourage bleeding. Staunch bleeding with pressure and apply a sterile dressing. Submit the head or brain to NYSDOH for rabies testing. Notify the site supervisor ASAP and complete an accident report.
2. Cutaneous exposures to blood should be swabbed with general disinfectant and rinsed with water. Follow with a thorough wash-up with hot soap and water at the earliest opportunity. If contact with nervous tissue, salivary glands, or saliva has occurred, submit the head or brain of the animal involved to NYSDOH for rabies testing. Notify the site supervisor ASAP in the latter instance.



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New York State Department of Environmental Conservation

Andrew M. Cuomo, Governor

Joe Martens, Commissioner

**For Release: IMMEDIATE**  
Wednesday, April XX, XXXX

**Contact: ???**

**DRAFT**

**CHRONIC WASTING DISEASE FOUND IN XXXX COUNTY IN WILD/CAPTIVE DEER  
Positive Result Found During DEC Monitoring Efforts**

The New York State Department of Environmental Conservation (DEC) today announced it has received confirmation of a case of Chronic Wasting Disease (CWD) in a *wild/captive* deer sampled in *XXXX County*. This is the first occurrence of CWD in a *wild/captive* deer in New York State since CWD was initially found in 2005.

The positive sample was from an *adult/yearling male/female* white-tailed deer, and was tested as part of DEC's/ New York State Agriculture and Markets (DAM) annual monitoring program conducted throughout the state. The sample tissue was tested at the New York State Veterinary Diagnostic Laboratory at Cornell University.

DEC began CWD monitoring efforts in 2002, but intensified the effort in 2005 after CWD was confirmed in both captive and wild deer in Oneida County – the first incidents of the disease in New York State. Since that time, DEC has tested over *40,000* deer statewide with no additional cases being discovered, until now.

This discovery will trigger the implementation of New York's CWD Response Plan developed jointly by DEC and DAM that was instituted in 2014. The plan outlines the steps both agencies will take to determine prevalence of the disease on the landscape and outlines the wild deer sampling DEC intends to implement. ([link to plan???](#))

In response to this finding, DEC and DAM will provide public outreach opportunities in *XXXX County* to help inform stakeholders and deer enthusiasts on the disease and to discuss management options. DEC and DAM will inspect all captive deer herds in the area. DEC will also initiate a wild deer collection, test deer taken on deer damage permits, and work with local hunters to sample deer in the vicinity of the index case to determine local prevalence of CWD. As always, the public is encouraged to report any sick or dying deer to DEC for possible collection and testing. Once a sufficient sample is achieved, DEC and DAM will determine how best to proceed with a disease management strategy.

DEC will file a notice in the Environmental Notice Bulletin (ENB), implementing aspects of 6NYCRR Part 189: Chronic Wasting Disease to ensure the proper handling of live captive deer, deer carcasses, deer rehabilitation to prevent further spread of CWD across the landscape. Part 187 will establish a containment area in *XXXX County* where this latest case of CWD has been identified. The containment area will initially include the (*define Containment area – with map*). Within the Containment area, DEC's CWD regulations will:

- § Prohibit the movement of high risk animal parts out of the containment area;
- § Establish *voluntary/mandatory* hunter sample submission for any deer harvested in the containment area;
- § Prohibit possession of any deer killed by a motor vehicle;
- § Prohibit the collection, sale, possession or transport of deer or elk urine taken from the containment area.

In addition to the requirements listed for the containment area, CWD regulations will include provisions to be followed by individuals and facilities across the State. The regulations will also:

- § Prohibit rehabilitation of wild white-tailed deer;
- § Reinforce a ban on feeding deer within the Containment Area.

CWD is a transmissible disease that affects the brain and central nervous system of certain deer and elk. There is no evidence that CWD is linked to disease in humans or domestic livestock other than deer and elk. More information on CWD can be found at DEC's website at [dec.ny.gov](http://dec.ny.gov)

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## **New York State Department of Environmental Conservation Administrative Readiness**

The purpose of this appendix is to ensure that relevant administrative matters are identified and addressed to the degree possible in advance of any new CWD cases. Since a response to new CWD cases will be a high program priority requiring immediate action, DEC must ensure that administrative requirements do not impede field work. This appendix also addresses several key matters of internal policy pertaining to the collection and processing of deer.

### **Travel**

- All field response personnel shall be issued a DEC travel credit card.
- A “blanket” Attachment A for travel expenses for all DEC response personnel will be prepared and held on file for immediate submission subsequent to confirmation of another CWD case.
- A single central office cost center will be used for all travel expenses related to CWD.

### **Time and Attendance**

- For eligible employees, and with the concurrence of the supervisor, overtime will be authorized. The use of alternative work schedules (DEC Time and Attendance Manual section 1.5) is also available to supervisors to accommodate intense field operations.
- A single TDS code will be established and used by all personnel during a field response.

### **Materials and Supplies**

- To the degree possible, materials and supplies that would be needed for an initial field response will be acquired and centrally stored to enable rapid field deployment.
- During the subsequent period of field response, a central purchase card will be used for all material and supply needs. (A single central office cost center will be used for all expenses associated with the purchase of materials, supplies, and equipment.)

### **Vehicles**

- DEC vehicles are the preferred field response vehicle.
- If DEC vehicles are not available, field response personnel are authorized to (1) rent vehicles; (2) use personal vehicles and be reimbursed for mileage.
- A single central office cost center will be used for renting vehicles.

New York State  
CWD Response Plan 2015-2025

Amending DEC Chronic Wasting Disease Regulation  
6 NYCRR Part 189  
To Establish a CWD Containment Area

**Background:**

The process to establish a CWD Containment Area (CA) is defined in Part 189.7. Specifically, “The department may establish CWD containment areas in the event that CWD is discovered to exist in captive or wild deer or wild moose in New York. CWD containment areas shall be established by the department through publication of a notice in the Environmental Notice Bulletin. Such notice shall identify the boundaries of the containment area(s). Upon publication of notice of a CWD containment area, the provisions of this section shall apply to the identified area. The department shall also publicize the establishment of a CWD containment area through press release and by posting notice on the department’s website.”

**Environmental Notice Bulletin (ENB):**

DEC’s ENB website <http://www.dec.ny.gov/enb/enb.html>

NOTE: Submissions for publication in the ENB are due in the ENB by close of business Wednesday for publication in the following week’s issue.

A “ENB SEQRA Notice Publication Form” must be completed and sent by e-mail to [enb@gw.dec.state.ny.us](mailto:enb@gw.dec.state.ny.us) Faxes will not be accepted.

**Press Release and posting on website:**

As required by the CWD regulation, DEC must issue a Press Release identifying the CWD Containment Area and post information about the CA on the DEC website.

**What Happens When the CA is Published in the ENB:**

1—All of the provisions of Part 189.7 will apply including but not limited to mandatory deer check, registration at designated DEC check stations, no permit for possession of deer or moose killed by a vehicle, no collection, possession, transport or sale of urine, no rehabilitation of deer or moose, no import or export of live deer or moose and mandatory disposal of parts and carcasses in a landfill.

2—DEC must publish in the ENB, information regarding deer check station locations within the CA and the times of operation. And, this information must be posted on the DEC website.

3—DEC will enforce the provisions of Part 189.7.

Section 189.7. CWD containment area.

(a) CWD containment areas. The department may establish CWD containment areas in the event that CWD is discovered to exist in captive or wild deer or wild moose in New York. CWD containment areas shall be established by the department through publication of a notice in the Environmental Notice Bulletin. Such notice shall identify the boundaries of the containment area(s). Upon publication of notice of a CWD containment area, the provisions of this section shall apply to the identified area. The department shall also publicize the establishment of a CWD containment area through press release and by posting notice on the department's website.

(b) Exportation of certain animal parts from a CWD containment area. No person shall remove from the CWD containment area the brain, eyes, spinal cord, tonsils, intestinal tract, spleen, or retropharyngeal lymph nodes, or any portion of such parts, of wild, captive, or captive-bred animals of the Genus Cervus or the Genus Odocoileus or the Genus Alces obtained from or taken within the CWD containment area, or any carcass containing such parts, except under permit issued by the department or as authorized by subdivision (g) of this section.

(c) Mandatory check of deer taken within a CWD containment area. All statutes, rules and regulations governing the taking of wild white-tailed deer apply within the CWD containment area. In addition, the following restrictions apply:

(1) All wild white-tailed deer taken within a CWD containment area during the open hunting seasons for deer shall be registered at a designated DEC check station located within the CWD containment area. The department shall post on the DEC website ([www.dec.state.ny.us](http://www.dec.state.ny.us)) and publish in the Environmental Notice Bulletin information regarding deer check station locations within the containment area and times of operation.

(2) Any person required to register a deer at a DEC check station pursuant to this section shall bring to the check station:

i. The field dressed deer carcass; or

ii the deer head, which shall be unfrozen, with antlers still attached (if any), with approximately three inches of neck still attached, and marked with a tag bearing the printed name, signature, and address of the person who took the deer, and the carcass tag documentation (doc) number, season of kill, date of kill and location of kill. The deer head tag shall be provided by the person registering the deer.

(3) Any person required to register a deer at a DEC check station pursuant to this section shall allow DEC staff to collect and retain tissue samples from the deer to test for the presence of CWD.

(d) Possession of deer or moose killed by collision. Notwithstanding the provisions of Environmental Conservation Law section 11-0915, the owner of a motor vehicle which has been damaged by collision with a deer or moose within a CWD containment area is prohibited from possessing such deer or moose, and no permit for possession of the deer or moose carcass shall be issued to the vehicle owner or to any other party.

(e) Deer, moose, and elk urine. No person shall collect, possess, transport or sell the urine of any deer, moose or elk located or taken within the CWD containment area.

