

# **CHRONIC WASTING DISEASE RESPONSE PLAN**

**Kentucky Department of Fish and Wildlife  
Resources**



**Wildlife Division**

**#1 Sportsman's Lane**

**Frankfort, KY**

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## Definitions

**Active Surveillance.** Sampling apparently healthy cervids for CWD, including primarily hunter-harvested deer and elk.

**Approved Laboratory.** Any private, state, federal, or university laboratory that has passed an annual proficiency test for CWD testing. All CWD testing must be done in a laboratory approved by the National Veterinary Services Laboratories (NVSL).

**Bait.** A substance composed of grains, minerals, salt, fruits, vegetables, hay, or any other food materials, whether natural or manufactured, that may lure, entice, or attract wildlife.

**Captive Cervid.** Privately owned member of the family Cervidae that is required to be tagged and confined behind an approved perimeter fence. Includes animals enrolled in the CWD herd monitoring program or CWD herd certification program through the KDA and maintained for propagation, selling, trade, barter, or for taking by any harvest or slaughter method.

**Cervid.** Any member of the family Cervidae, including mule deer, white-tailed deer, elk, moose, caribou, and many non-native species of deer. In Kentucky, free-ranging cervids include white-tailed deer and elk; in addition, there are several species of captive cervids in the state.

**Enzyme-linked Immunosorbent Assay (ELISA).** An ELISA test utilizes fresh, homogenized tissue to detect the presence of abnormal prions by antibodies. The intensity of the antibody binding is read and assigned a numerical value. Values over a predetermined threshold based on assay controls indicate the presence of CWD prions.

**Feeding.** Willingly, wantonly, or knowingly depositing, distributing, or scattering of shelled, shucked, or unshucked corn, millet, milo, safflower seed, sunflower seed, thistle, wheat, or other grain, or any manufactured feed to be consumed by wildlife, but shall not include the establishment and maintenance of plantings for wildlife, foods found scattered solely as the result of normal agricultural planting or harvesting practices, foods available to wildlife through normal agricultural practices of livestock feeding if the areas are occupied by livestock actively consuming the feed on a daily basis, or standing farm crops under normal agricultural practices.

**Free-ranging cervid.** A member of the Cervidae family that is not tagged and is not required to be confined behind a fence, generally considered wild. In Kentucky, the only native free-ranging cervids are white-tailed deer and elk.

**Grandfathered non-commercial cervid.** Privately owned member of the family Cervidae that is required to be tagged and confined behind an approved perimeter fence held for non-commercial purposes and permitted by the KDFWR. Does not include animals enrolled in the CWD herd monitoring program or CWD herd certification program through the KDA or animals maintained for propagation, selling, trade, barter, or for taking by any harvest or slaughter method.

**Immunohistochemistry (IHC).** An IHC is a test that is used to detect the deposition of infectious prions within specific cervid tissues. The tissues are fixed in formalin, thinly sliced, and then an antibody-based stain is applied which binds to infectious prions applied. The samples are evaluated with light microscopy to determine the presence of CWD prions.

**Risk Factors.** Attributes of the landscape, environment, or animals associated with a greater probability of CWD occurring in a target region or target population.

**Target animal.** Sick-appearing deer or elk that is emaciated and/or has neurologic disorders.

## Background and History

Chronic wasting disease (CWD) is an infectious disease that affects cervids, including white-tailed deer, mule deer, elk, caribou, and moose. In Kentucky, there are two free-ranging species that may be impacted by CWD: white-tailed deer and elk. CWD is a degenerative neurological disease characterized by behavioral changes and progressive loss of body condition that invariably leads to the death of affected animals. It is believed to be transmitted from animal to animal via direct contact and contamination of feed or water sources with saliva, urine, and feces. Case studies suggest that the period of time between exposure and onset of clinical signs may be several years, allowing apparently healthy infected animals to move or be transported long distances, unknowingly spreading the disease to new areas. The disease can be spread across the landscape either directly through the natural movement of infected free-ranging cervids or the interstate movement of infected captive cervids. It can also be transmitted indirectly through the movement of infected carcasses and parts from hunter-harvested cervids, as well as contaminated soil and water sources. Currently, the Centers for Disease Control and Prevention (CDC) report there have been no reported cases of CWD infection in humans. However, recent studies suggest CWD poses a risk to certain types of non-human primates that ate meat or came in contact with brain or body fluids from CWD infected deer or elk. There is no known treatment or vaccine for the disease.

Chronic wasting disease was first described in Colorado in 1967. It was first detected east of the Mississippi River in 2002. The disease has now been confirmed in more than half of the states, Canada, Europe, and has continued to spread. It has been detected in free-ranging deer or elk in many states and has been found in captive deer or elk in more than half of the states. The Kentucky Department of Fish and Wildlife Resources (KDFWR) has been conducting statewide surveillance for CWD since its eastern expansion in 2002. As of 2019, KDFWR has tested more than 30,000 free-ranging deer and elk for CWD; and to date, never detected CWD within the state of Kentucky. The disease poses a serious long-term threat to Kentucky's deer and elk populations.

The goal of this plan is to provide a logical method to manage issues related to CWD in Kentucky based on the best available science and current understanding of the disease, incorporating decades-long experience of states that have CWD in their deer and elk populations. This document describes the efforts to provide education and prevent the occurrence of CWD in the state; it also delineates KDFWR's planned course of action should a CWD-positive case be diagnosed in Kentucky.

### **Management and surveillance goals for CWD include:**

1. Prevention of CWD introduction
2. Early detection and management of CWD in known infected areas
3. Elimination of CWD where possible; when epidemiological evidence suggests a recent introduction
4. Monitoring for prevalence, distribution, and geographic expansion of the disease

### **These goals will be accomplished via:**

Enhanced surveillance including intensive sampling of high-risk cervids, including free-ranging clinically ill suspect animals, roadkill, and hunter-harvested animals from high risk areas. This will include mandatory testing of hunter-harvested deer at check stations within the CWD infection zone.

Targeted population reduction designed to eliminate potentially infected animals in known infected areas; when recent introduction is suspected. The method of sampling will be dependent on the time of discovery in relation to the hunting season, but may include a combination of hunter-harvest, landowner authorizations, and agency-directed culling.

Ban on feeding and baiting and import and export of high risk cervid parts from within the CWD infection zone.

### **Prevention**

Prevention is the only truly effective way to manage disease in a free-ranging population. Several pro-active steps have been taken by KDFWR, the Kentucky Department of Agriculture (KDA). Since 2002, a first priority has been to educate agency staff, hunters, captive cervid owners, and the public about CWD. Regulations enacted to reduce the likelihood of CWD from entering the state of Kentucky include a ban on importation of live cervids from CWD-positive states, required CWD monitoring of captive herds, and prohibiting the importation of high-risk carcass parts from all states and countries into Kentucky.

### **Surveillance Strategy**

Early detection will provide the best opportunity to eliminate the disease. The KDFWR surveillance strategy focuses on attributes of the landscape, environment, or animals associated with a greater probability of CWD. These “risk factors” include: population density of free-ranging cervids, number of captive cervid herds, areas artificially concentrated with cervids, interstate and intrastate movement of live or dead cervids, and proximity to CWD positive areas.

#### **See Appendix I.**

Sick or “target animals” are more likely to be infected, thereby increasing the probability of detection. The goal of targeting animals is to locate and test the animals most likely to be infected, thereby reducing surveillance costs while at the same time enabling adequate coverage of a large geographic area.

Regions are encouraged to focus sampling on older male deer or elk as published reports indicate that this demographic group has a higher prevalence of CWD. It will be the responsibility of each biologist to enter samples they have collected into the KDFWR CWD database; they will also be required to ensure the timely delivery of all samples and datasheets to the Frankfort office.

In the event that CWD is detected in Kentucky, targeted surveillance efforts will continue statewide.

CWD exhibits a clustered distribution near the point of introduction, which suggests that in cases of recent introduction, where environmental contamination is absent, targeted removal may limit prevalence and further disease spread (Osnas et al. 2009). If however, a long time

has elapsed between disease introduction and detection, and surveillance reveals disease is widespread in the population, population reduction measures may be ineffective and disease management actions will be greatly limited. Should CWD be detected, an adaptive management approach that allows for evaluation of monitoring of disease prevalence and spatial distribution of infection will be used to determine the most effective disease management strategy for Kentucky.

## **A. Response for detection of CWD within Kentucky (regardless of whether captive or free-ranging).**

The course of action stated below is intended to provide guidance and should not be construed to be legally binding. In urgent situations, all agencies involved have the authority to be flexible with their management activities as new information becomes available. The response to detecting CWD should be in proportion to the health risks and economic impact imposed by the disease.

1. Upon receiving laboratory notification of the first CWD positive sample on an ELISA test from within Kentucky, the KDFWR Wildlife Health Program (WHP) or the Deer and Elk Program (DEP) will advise the Director of Wildlife and Commissioner that a preliminary positive case of CWD has been detected and that back-up samples are being tested via an IHC test for confirmation at a second independent USDA-approved laboratory. If the positive case is not confirmed via an IHC test, the Commissioner's office and Director will be notified and no further action will be required. If back-up samples for confirmatory testing are not available then the case will be considered a true positive.
2. If the positive case is confirmed by a second independent USDA-approved laboratory, WHP/DEP will notify appropriate personnel within KDFWR, KDA, USDA Veterinary Services (USDA-VS), USDA Wildlife Services (USDA-WS), and the Kentucky Department of Public Health.
3. Concurrently, KDFWR designees will notify key constituency groups, including Commission members, legislators, local community officials, and the landowner where the positive case was found, informing them that CWD has been identified in Kentucky. This may be completed via individual contact or press release.
4. The hunter that harvested the CWD positive cervid will be contacted upon confirmation of the disease.
5. Within 24-48 hours of confirmation, the media will be advised of the positive CWD case through a press release. The press release will include a synopsis of Kentucky's CWD surveillance efforts, an outline of likely CWD response management actions, and other CWD-related resources deemed appropriate to the particular facts at the time.
6. A CWD response team will be assembled under the direction of the Director of Wildlife, to include department staff and outside experts as needed. This team will determine the research and data needs necessary to effectively manage the disease response. Research and data collection may be contracted as appropriate.
7. The CWD response team will develop an information section for the KDFWR website to fully inform citizens about CWD and the KDFWR CWD response plan. The team will

identify stakeholders and begin preparations for a public information meeting. The team will prepare a contact list with names and addresses of private landowners, captive cervid facility operators, and cervid rehabilitators adjacent to the index location. The CWD response team will contact landowners and stakeholders within the CWD management zone (MZ) of the index case within 15 days of receiving confirmation of a positive test.

8. The CWD response team will send notification via mail to all captive cervid facility operators, cervid processors, taxidermists, and fawn rehabilitators alerting them to the change in Kentucky's CWD status and the disease management actions our agency will be implementing.
9. The CWD response team will secure a designated site for disposal location of carcasses, tissues, and other contaminated materials. The team will identify options for carcass processing and disposal of carcass parts for hunter-harvested deer within the management and surveillance zones.
10. As soon as management actions are finalized, within a month following the confirmation of a CWD positive case, public meetings will be held in the area of the new CWD index case, as necessary.
11. Key KDFWR staff members will be assigned as the CWD media contacts. All CWD-related questions from the public and media will be routed to this team. Whenever possible, one individual should be selected as the team's voice.

Legislation and/or emergency regulations may be enacted to implement appropriate disease surveillance and containment measures. These can include but are not limited to: expanding deer seasons and increasing bag limits, increasing allocation of deer management permits, mandatory deer check-in at designated locations, the issuance of special permits for the harvest of deer by licensed hunters on areas prescribed by KDFWR, the prohibition of deer and elk rehabilitation, prohibition of deer feeding or baiting, the prohibition of carcass movement within the SZ, and the implementation of necessary actions to secure captive cervid facilities. These actions are described in Section B below.

## **B. Response for detection of CWD in a free-ranging cervid in Kentucky**

The primary objective of the response efforts will be to determine the prevalence and geographic extent of CWD infection in the free-ranging cervid population. Secondly, where recent introduction is suspected, the objective will include efforts to eliminate disease and limit geographic spread, where possible.

In the event a CWD infected free-ranging cervid is identified, the following management actions will be implemented:

1. A map will be developed showing the location of the index case. A ten-mile radius circle will be drawn around the index case. The area within this circle will be reviewed to identify sites conducive to intensive sample of cervids. Agency staff will help prepare maps indicating the cervid density distribution, captive cervid facility locations, and land parcel ownership information within the 10-mile radius circle around the index location,

designated the CWD Management Zone (MZ). Parameters such as cervid density, accessibility, land ownership, and safety will be considered in order to identify where sampling would be most efficient. These areas will be called Selected Surveillance Areas (SSAs) and will be located with the goal of collecting a representative sample of the cervid population. The SSA approach will allow intensive spot sampling to occur in representative areas if needed. A secondary 30-mile radius circle will be delineated surrounding the index location. All counties within the 30-mile radius circle, within the MZ, and immediately adjacent to the MZ will be designated the CWD Surveillance Zone (SZ) **(Appendix II)**.

2. The cervid population will be assessed within the ten-mile circle in order to develop an estimate of the population size and other parameters. The estimate will be used to determine the relationship between a given sample size of any collected deer and the corresponding degree of certainty that any additional infected deer or elk have been identified.
3. Within 21 days of confirmed diagnosis of CWD in Kentucky, KDFWR staff will determine the number of samples necessary to determine CWD prevalence and geographic distribution. Sample sizes within the MZ will be based on estimated regional deer abundances and estimated CWD prevalence rate in the population. Sample size will be sufficient to estimate prevalence with an error of +/- 1% at 95% confidence.
4. During the first hunting season following a new CWD index case, the KDFWR will collect a statistically valid number of samples from the SZ. The samples size within the SZ will be large enough to result in 95% confidence that CWD will be detected if the prevalence of the disease is >1%.
5. Within 21 days of a confirmed diagnosis of CWD in Kentucky, KDFWR staff will assess the need to begin collecting samples from free-ranging cervids within the MZ using various methods (hit-by-car, deer disposal permits, agency directed culling, and hunter-harvested animals). Landowner permission will be obtained prior to collecting animals on private property. The method of sampling will be dependent upon the time of discovery in relation to the upcoming hunting season.
  - a. If CWD is detected during hunting season, hunter harvested surveillance will be used as the primary method of determining distribution and prevalence of CWD. Hunting opportunities will be liberalized by expanding seasons and increasing available licenses in the MZ. Landowners will be provided with additional opportunities to take antlered or antlerless deer during the hunting season. Regulations will mandate testing of any cervid harvested within the MZ at a KDFWR check station.
  - b. If hunters do not kill a sufficient number of cervids to provide an adequate sample size or if CWD is detected outside of the hunting season, KDFWR will consider designating special hunts, landowner shooting permits, agency-directed culling and/or other methods as deemed necessary. Agency staff will work cooperatively with landowners to direct targeted culling efforts area by authorizing landowners to take deer on their properties and agency staff will participate in targeted culling under the authorization of willing landowners following the hunting season.

6. A mandatory hunter check station will be established near the center of the MZ and multiple mandatory hunter check stations will be established within the SZ, during the muzzleloader/gun deer season. Testing of all deer harvested in the SZ will be declared mandatory at designated CWD check stations. The initial objective within the MZ will be to sample all deer harvested through the duration of one full muzzleloader/gun deer season. The initial objective within the SZ will be to sample a sufficient portion of the population to result in 95% confidence that CWD will be detected if the prevalence of the disease is >1%. All hunters will receive a harvest authorization number and each deer will be affixed with a numbered identification tag. Testing results will be available to hunters through the KDFWR website or by calling a dedicated telephone number within 14 days of collection. Hunters harvesting deer outside of the SZ or after closure of mandatory check stations can transport the deer carcass or head to other designated testing sites for voluntary CWD testing. The location of testing sites will be listed on the KDFWR website in the event the CWD Response Plan is implemented.
7. In the event of a confirmed case that is believed to have been a recent introduction, where disease management efforts aimed at preventing establishment of disease in the population may be effective, targeted population reduction within a small specific area within the MZ, in proximity to the area where CWD positive deer have been discovered will be initiated. Increased efforts will be made to intensively sample within 1 mile of all known positive deer. The method of sample collection will be dependent on timing of CWD discovery, deer density, and deer distribution in the area and may include targeted sample collection utilizing landowner authorization and agency-directed culling. Localized population reduction efforts may exceed the designated sample size to estimate disease prevalence in the MZ. In an effort to increase landowner support, landowners will be provided an opportunity to participate in targeted removals.
8. Baiting and feeding of cervids within the SZ, including the index county and counties directly adjacent to the index county will be prohibited by emergency regulation.
9. Any deer or elk carcasses or parts that originate within the SZ will be prohibited from leaving the SZ, except deboned meat, clean skulls or finished taxidermy work. Carcass parts must be disposed of at designated locations within the SZ.
10. Meat processors, taxidermists, road-pick up crews, and waste management services contractors will be required to dispose of all cervid wastes from the MZ via incineration, in designated lined landfills or in dumpsters provided by the KDFWR.
11. In the event that agency-directed targeted culling is elected based on cumulative assessment of all available testing results, a contract will be developed with local meat processors to process and hold all meat until sampling results are reported. All processed deer meat will remain identifiable. Upon notification of CWD negative test results, ground meat will be redistributed to landowners. Unwanted deer meat will be donated to Hunters for the Hungry. Every reasonable attempt will be made to use all meat taken as part of the targeted culling effort.
12. Rehabilitation and release of any cervid from the SZ will be prohibited. Rehabilitated deer outside of the surveillance zone counties, may only be released in the county of origin.

13. If additional infected cervids are detected in the MZ, a new ten-mile radius boundary will be extended and the MZ and SZ will be enlarged and sampling will be conducted at newly identified SSAs within the expanded MZ.
14. Targeted surveillance for CWD will be intensified within all counties in the SZ. This surveillance will focus on morbid individuals, road kills, and cervids taken under the authority of a disposal permit, and deer or elk taken during the regular hunting seasons. Taxidermists and processors will be asked to cooperate by saving portions of the carcass for testing.
15. If captive facilities are present within the MZ, KDFWR and KDA personnel will inspect the facilities immediately following confirmation of CWD in the MZ. All captive cervids  $\geq 6$  months of age that die in captivity will be tested for CWD, per request by the KDA, Office of the State Veterinarian. KDFWR personnel will check the integrity of perimeter fencing every 6 months. Per regulation, facility owners are required to check the integrity of the perimeter fencing on a regular basis.
16. Based on evaluation of epidemiological data and assessment of risk, KDA may impose additional movement restrictions for farmed cervids in facilities associated with the containment and/or surveillance zones.
17. If no additional positive cases are detected for a period of one year targeted surveillance for CWD will be continued for four additional years in all counties in the SZ. The MZ will be considered CWD-free when no new cases have been found for five consecutive years.
18. If additional CWD infected free-ranging animals are confirmed, the MZ will be extended as necessary. If new cases are sufficiently distant from the existing MZ, a new MZ will be established and the response plan implemented as per a new area.
19. An adaptive management approach will be employed, allowing flexibility to alter disease management activities, evaluate effectiveness of methods applied, and to direct future research efforts. Annual evaluation of methods and success of strategies implemented will be required to ensure the effectiveness of disease management efforts in meeting management goals.

### **C. Response for detection of CWD in a captive cervid in Kentucky**

In August of 2019, there were 101 individuals or organizations that legally possessed live cervids in Kentucky. Restrictions in place for these facilities include:

- Boundary fences must be at least 8 feet high.
- All captive cervids  $\geq 12$  months of age must be identified with at least 2 forms of identification.
- Cervids that die that are  $\geq 12$  months of age must be reported to the Kentucky Department of Agriculture and submitted for CWD testing.
- All cervid facilities are required to have a permit from KDFWR; captive cervid facilities are also required to have a permit from KDA and be enrolled in a CWD surveillance program.

Upon detecting CWD in a cervid facility, the primary objectives of the initial CWD response effort will be to 1) eradicate the disease from the cervid facility, and 2) determine if the disease is present in free-ranging cervids surrounding the CWD infected facility. In the event a CWD infected captive or farmed cervid is identified, the following measures will be implemented:

1. If chronic wasting disease is confirmed within a cervid facility, the situation shall be reported to KDA, Office of the State Veterinarian.
2. KDA State Veterinarian shall report all non-negative chronic wasting disease testing results to KDFWR.
3. All facilities having a confirmed case of chronic wasting disease will be placed under quarantine by KDA State Veterinarian.
4. KDA will attempt to trace-back and trace-forward all cervids in contact with the CWD infected animals to determine the origin and prevent further spread. As needed, based on epidemiological investigation, the State Veterinarian will place additional facilities under quarantine for surveillance and testing. Movement restrictions may not be limited to the containment and/or surveillance zones.
5. The KDA will depopulate all cervids within facilities having documented chronic wasting disease; and test all cervids from such facilities for CWD within 60 days of detection, if indemnity funding is available. Any exception to depopulation within 60 days shall require a herd health management plan, jointly approved by the KDA and KDFWR.
6. Depopulation activities will be initiated, overseen, and verified by the State Veterinarian with appropriate support from KDFWR.
7. All cervids testing positive for chronic wasting disease or that have been depopulated from a facility with a confirmed case shall be disposed of at a site jointly approved by KDA, KDFWR, and KDPH.
8. If necessary, KDFWR will modify or augment the fence surrounding the facility to eliminate direct contact with free-ranging native cervids, which may include double fencing requirements. KDFWR will inspect the integrity of perimeter fencing every 6 months.
9. KDFWR jointly with KDA will suspend the captive cervid permit and decontaminate equipment following USDA guidelines and regulations.
10. Based on evaluation of epidemiological data and assessment of risk, KDA may implement emergency regulations regarding cervid facilities. These include: 1) prohibit all importation and exportation of cervids into and out of the containment and/or surveillance zones; 2) prohibit all intrastate movement of cervids from within the CWD containment and/or surveillance zones.
11. During the course of the above referenced items, KDA, KDFWR, and KDPH will work cooperatively to continually keep the cervid industry, private land owners, and general public informed of the ongoing situation.

12. KDFWR will implement the management actions described in Section B, CWD Response Plan for Free-ranging Cervids, using the cervid facility as the index case. A 5-mile radius circle will be drawn around the index case, designated the CWD Management Zone (MZ). A secondary 15-mile radius circle will be delineated surrounding the index location. All counties within the 15-mile radius circle, within the MZ, and immediately adjacent to the MZ will be designated the CWD Surveillance Zone (SZ). **(Appendix III)**

#### **D. Response for detection of CWD in a grandfathered non-commercial cervid facility in Kentucky**

As of March 2016, the KDFWR no longer issues grandfathered non-commercial permits. There are currently 8 individuals or organizations that possessed a grandfathered non-commercial permit to hold live cervids in Kentucky. Restrictions in place for these facilities include:

- Boundary fences must be at least 8 feet high.
- All cervids must be identified with at least one form of identification.
- All cervids that die must be reported to the Kentucky Department of Fish and Wildlife Resources and submitted for CWD testing.
- All cervid facilities are required to have a permit from KDFWR

Upon detecting CWD in a grandfathered non-commercial cervid facility, the primary objectives of the initial CWD response effort will be to 1) eradicate the disease from the facility, and 2) determine if the disease is present in free-ranging cervids surrounding the CWD infected facility. In the event a CWD infected cervid in a grandfathered non-commercial facility is identified, the following measures will be implemented:

13. If chronic wasting disease is confirmed within a cervid facility, the situation shall be reported to KDA, Office of the State Veterinarian.
14. The KDFWR will strongly encourage the facility owners to depopulate all cervids within facilities having documented chronic wasting disease; and test all cervids from such facilities for CWD within 60 days of detection.
15. Depopulation activities will be initiated, overseen, and verified by the KDFWR.
16. All cervids testing positive for chronic wasting disease or that have been depopulated from a facility with a confirmed case shall be disposed of at a site approved by the KDFWR.
17. If necessary, KDFWR will modify or augment the fence surrounding the facility to eliminate direct contact with free-ranging native cervids, which may include double fencing requirements. KDFWR will inspect the integrity of perimeter fencing every 6 months.
18. KDFWR will suspend the non-commercial permit and decontaminate equipment following USDA guidelines and regulations.
19. KDFWR will implement the management actions described in Section B, CWD Response Plan for Free-Ranging Cervids, using the cervid facility as the index case. A

5-mile radius circle will be drawn around the index case, designated the CWD Management Zone (MZ). A secondary 15-mile radius circle will be delineated surrounding the index location. All counties within the 15-mile radius circle, within the MZ, and immediately adjacent to the MZ will be designated the CWD Surveillance Zone (SZ). **(Appendix III)**

## **E. Response for out-of state detection within 30 miles and 5 miles (captive) or 15 miles (free-ranging) of the Kentucky border**

If CWD is detected in an adjacent state within 30 miles of the Kentucky border, the primary objectives of the response effort will be to 1) increase CWD surveillance of those areas within Kentucky that are nearest to the out-of-state endemic area to detect the disease as early as possible, where it has not yet been found, and 2) communicate and coordinate with the public and other agencies on issues related to CWD and actions being taken. If CWD is detected within 5 miles (captive) or 15 miles (free-ranging) of a Kentucky border, surveillance will be significantly increased next to the out-of-state endemic area.

Upon confirmation of CWD within 30 miles of a Kentucky border, the following management actions will be implemented:

1. KDFWR will notify appropriate parties using means identified in section A.
2. The surveillance area in Kentucky will be determined using topographical boundaries, with the nearest out-of-state positive case as a starting point. The size and location of the surveillance area will be based on geographical features, captive cervid density, free-ranging cervid density, and cervid biology. If a portion of the surveillance area encompasses another state, the KDFWR will coordinate with the neighboring state's wildlife agency to establish an interstate surveillance area.
3. Increased CWD sampling will occur in the surveillance area primarily using hunter-killed cervids, cervids killed with disposal permits, and road killed cervids. A minimum of 298 samples will be collected from the surveillance area to establish at 95% confidence that CWD does not exist at over 1% prevalence in the area.
4. Baiting and feeding of cervids within the surveillance area will be prohibited by emergency regulation.
5. Movement of captive and free-ranging cervid carcasses and parts from within the surveillance area will be prohibited.
6. Subsequent sampling intensity and management action will be determined based on results of sampling by the infected state and by sampling results in the Kentucky surveillance area.

Upon confirmation of CWD within 15 miles of the Kentucky border (free-ranging) or 5 miles of the Kentucky border (captive), sampling intensity will increase significantly. KDFWR will use targeted sampling and employ the KDFWR Chronic Wasting Disease Response Plan as for CWD detection within Kentucky.

## **Communication Plan**

A communication plan has been developed to targeted key stakeholders and the public to help them understand the basic science of the disease, support KDFWR's effort to contain it, and to assist with surveillance and targeted population reduction efforts. Landowners and hunters will play a key role in helping the KDFWR manage CWD. Failure to keep these groups informed with relevant facts will influence their view and acceptance of disease management strategies, and may impact hunter recruitment and retention. Ensuring that current and accurate information is provided to hunters and other constituents will be essential to facilitate understanding and compliance with management strategies and to prevent disease expansion.

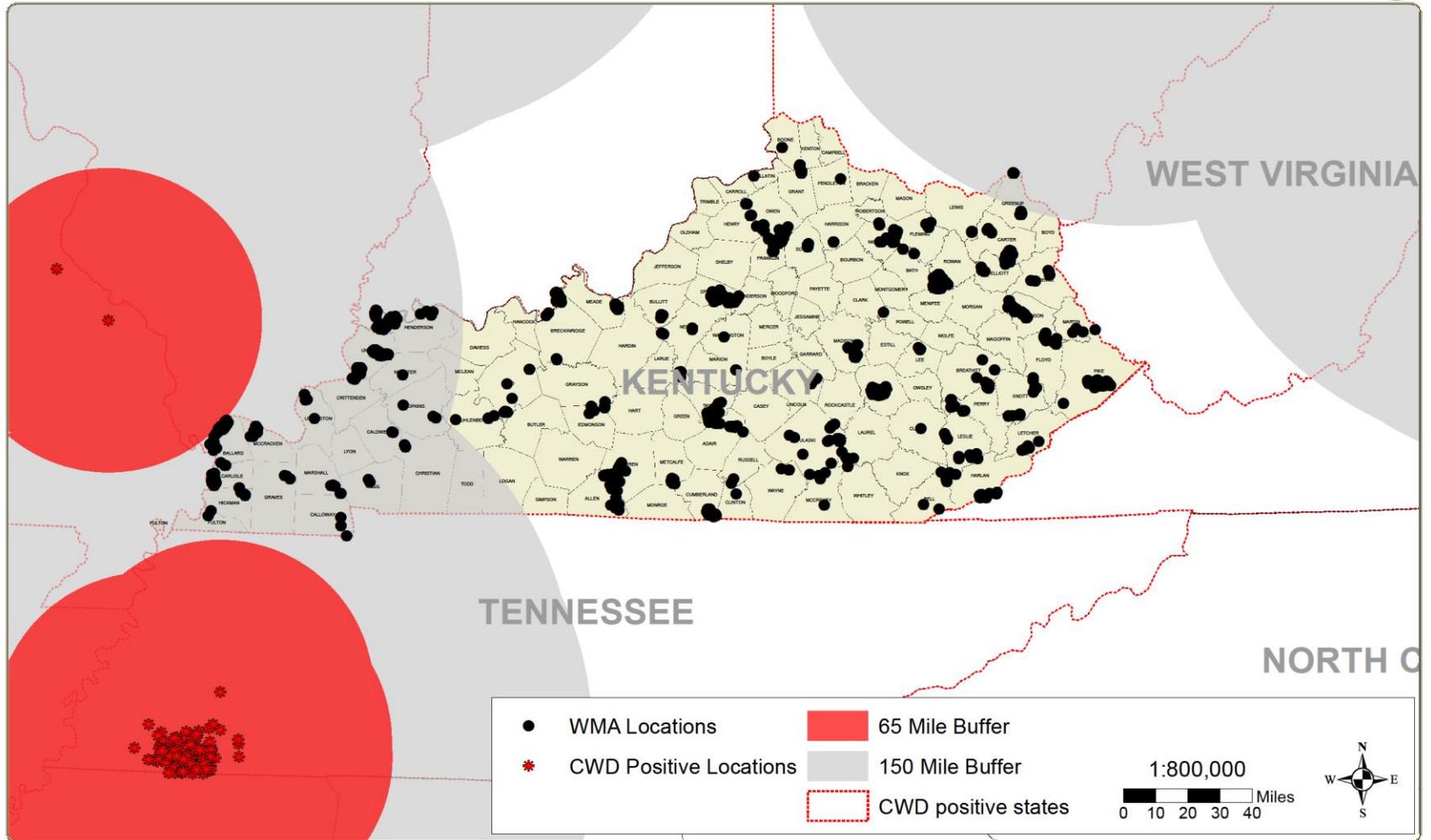
## **References**

Almberg, E. S., P. C. Cross, C. J. Johnson, D. M. Heisey, and B. J. Richards . 2011. Modeling routes of chronic wasting disease transmission: environmental prion persistence promotes deer population decline and extinction. PLoS ONE. 6(5):e19896.

Edmunds, D.R., M.J. Kauffmann, B.A. Schumaker, F.G. Lindzey, W.E. Cook, T.J. Kreeger, R.G. Grogan, and T.E. Cornish. 2016. Chronic wasting disease drives population decline of white-tailed deer. PLoS ONE. 11(8): e0161127.

Wasserber, G., E. E. Osnas, R. E. Rolley, and M.D. Samuel. 2009 Host culling as an adaptive management tool for chronic wasting disease in white-tailed deer: a modeling study. Journal of Applied Ecology. 46:457-466.

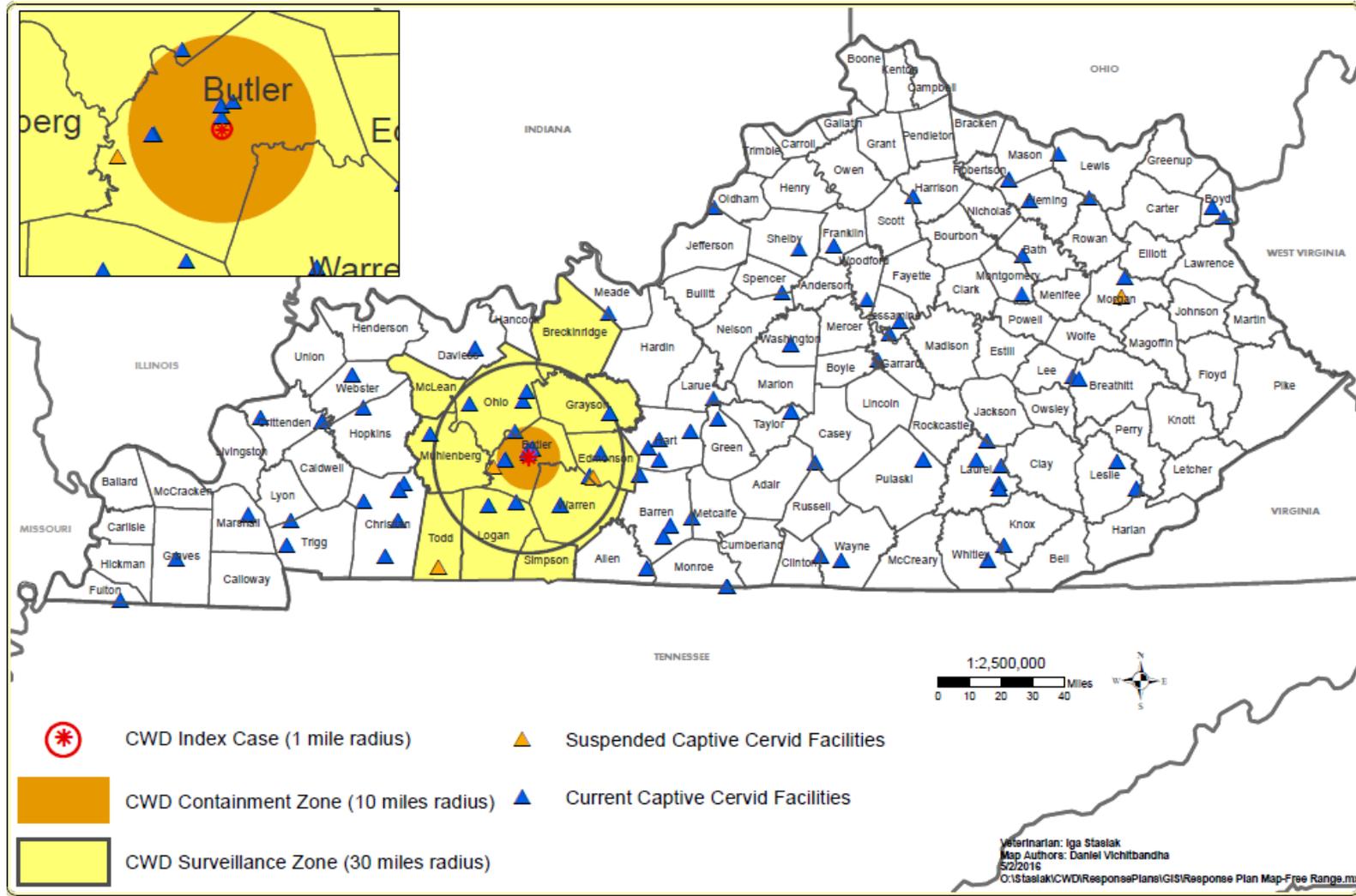
# Chronic Wasting Disease (CWD) Proximity to Kentucky



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3/21/2019

Appendix II. Chronic wasting disease sample response plan map (free-ranging cervid)

**CWD Response Plan – Free-ranging Cervid Detection (example)**



Appendix III. Chronic wasting disease sample response plan map (captive cervid)

**CWD Response Plan – Captive Cervid Detection (example)**

