



Monitoring and Measuring Progress

We must be able to assess whether progress is being made in meeting the goal and objectives established and whether the actions taken are achieving the anticipated results. It is therefore imperative that monitoring systems be in place to acquire and analyze data during the 5-year life of the management plan. Monitoring efforts will allow the DNR to measure progress toward each objective and if necessary, to adapt our actions along the way.

1. Monitor CWD Disease Patterns and Trends

In order to determine whether we are preventing new introductions of CWD, are able to respond to new disease occurrences and are controlling the distribution and intensity of CWD, we need to effectively monitor disease patterns and trends. The best evidence of progress in CWD control would be if the growth of the geographic area affected and the increase in number of CWD-positive deer is lower than would have occurred in the absence of control efforts. However, with current knowledge on CWD in wild white-tailed deer populations, it is difficult to predict how the disease pattern would likely change over the next 5 years without management, so determining that control efforts have limited the expected changes will be challenging. In particular, detecting meaningful trends at the outer edges of the currently known geographic distribution is highly unlikely in a 5 year timeframe, because there are relatively few CWD-positive deer in these areas, so finding them to assess geographic spread and to determine if there has been a significant change in these very low prevalences requires sampling and testing extremely large numbers of deer.

Based on results of surveillance efforts to date in the known CWD-affected areas of Wisconsin

and the development of new assessment tools by collaborating CWD researchers, monitoring areas have been chosen in the higher prevalence CWD epicenters in south-central and southeastern Wisconsin. These will be the best areas for monitoring disease patterns to detect trends in geographic spread and numbers of positive deer resulting from control efforts. Intensive sampling and testing of hunter-harvested deer from the western core and eastern monitoring areas will be conducted annually during the five years of this plan.

To assess progress towards the objectives of preventing new introductions of CWD in currently unaffected areas of the state and to respond to new disease foci quickly and effectively, statewide sampling and testing of deer on a large scale will need to be conducted, approximately every five years. It will be important to work closely with the tribes during any surveillance efforts that include the ceded territory.

CWD is a disease that cannot be confirmed through simple visual inspection. It requires the collection of specific tissues and testing conducted by a USDA-approved laboratory. Trends in CWD prevalence and geographic distribution can only be measured if statistically sufficient, large sampling is conducted. Testing and surveillance costs accounted for over 50% of the total DNR expenditures during 2002–2008 and will likely continue to be the single largest cost of CWD management over the coming years. However, state and national efforts to improve the cost efficiency of tissue collection, testing, and data management and assessment will result in cost savings during the duration of this plan.

Active surveillance for disease in Wisconsin's white-tailed deer populations has always included monitoring for evidence of bovine

tuberculosis (TB). During CWD surveillance work, cranial lymph nodes are also visually screened for changes typical of TB and suspect samples are submitted for laboratory analysis. Since 1996, Wisconsin has screened over 152,000 deer for evidence of TB. If TB was present in wild deer in Wisconsin at the level detected in other jurisdictions (such as Michigan, Minnesota, and Manitoba); there is a very high likelihood that it would have been detected. To date there has been no evidence of bovine TB detected in free-ranging cervids in Wisconsin.

Action: The DNR will conduct sampling and CWD testing that is sufficient to:

- ◆ Monitor trends in prevalence and disease pattern within the western core monitoring area in western Dane and eastern-Iowa counties and the eastern monitoring area in Rock and Walworth counties;
 - ◆ Monitor spatial and prevalence patterns at selected higher prevalence areas at the outer borders of the current CWD geographic distribution;
 - ◆ Detect new disease foci at the borders of the currently known CWD affected area and statewide.
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Action: The DNR will continue surveillance for bovine tuberculosis as an adjunct to CWD surveillance.

2. CWD Zone Deer Population Monitoring

Understanding the status of Wisconsin's deer herd—in particular the deer population in the CWD Management Zone—is critical to determining progress in minimizing the presence of CWD. Reducing the deer population is currently the only available management strategy for the control of CWD once it is established in a free-ranging deer population. Understanding how the deer population in the CWD Management Zone is changing over the next 5 years is important in order to understand changes in CWD transmission rates and prevalence and in order to assess the effectiveness of specific harvest regulations. For all units in the CWD MZ to reach their interim goal as recommended by the CWD Stakeholder Advisory Group (SAG)—the population would have to drop to ~68,000 (to ~ 19 deer/square mile of deer range—see Appendix B).



Staff at the WDNR's Black Earth lab process samples collected from hunter-killed deer in preparation for CWD testing

Action: Changes in the size of the deer population in the CWD Management Zone will be monitored using a combination of helicopter and fixed-wing aircraft surveys and population modeling. Deer population monitoring will likely be conducted annually during the duration of the plan.

3. Monitor Hunter Participation and Public Support for CWD Management; Assessing Attitude and Behavior Changes

We will continue to monitor public opinions and attitudes towards CWD and its management strategies over the next 5 years. Monitoring to assess specific public opinions and attitudes towards CWD will address; 1) whether the public supports the DNR's CWD management goal and its strategies, 2) whether the public accepts the fundamental assumptions that we make about the disease, 3) whether the public agrees that the risks of CWD to the deer herd, to recreational hunting, to human health, to livestock health, and to public-DNR relationships warrant the efforts to control CWD, 4) what the level of concern is regarding CWD in the state, 5) whether hunters and landowners feel a personal responsibility for helping to manage the deer

population in the area they most frequently hunt/on the land that they own, and 6) what the public has to say about our communication and marketing strategies overall.

Public support must go beyond attitudinal measures. Public support must be demonstrated through changed behavior. As with public attitudes, we must continue to monitor hunter and landowner behavior—that is, are hunters shooting more deer now in an effort to assure good hunting and a healthy herd in the future? Specific behavioral measures to be monitored include, 1) the number of hunters in the CWD Management Zone (including hunter retention, recruitment and changed hunting locations to non-CWD deer management units), 2) hunter effort in the CWD Management Zone (including number of days hunted and hours hunted per harvested deer), 3) the number of antlerless and antlered deer harvested, 4) the number of deer donated to food pantry programs from the CWD Management Zone, 5) the number of hunters that landowners are allowing to hunt on their land, 6) and the number of landowners who are granting access to their land to kill deer.

Action: Scientific behavioral and attitudinal studies of our publics will be conducted on a regular basis, especially in response to a change in management strategy.

