State of Wisconsin \ LEGISLATIVE AUDIT BUREAU

JANICE MUELLER
STATE AUDITOR

22 E. MIFFLIN ST., STE. 500
MADISON, WISCONSIN 53703
(608) 266-2818
FAX (608) 267-0410
Leg.Audit.Info@legis.state.wi.us

October 21, 2003

Senator Carol Roessler and
Representative Suzanne Jeskewitz, Co-chairpersons
Joint Legislative Audit Committee
State Capitol
Madison, Wisconsin 53702

Dear Senator Roessler and Representative Jeskewitz:

At the request of several legislators, we have conducted a review of state efforts to combat chronic wasting disease (CWD), a fatal neurological disease that affects members of the deer family. The Department of Natural Resources (DNR) has primary responsibility for coordinating CWD management efforts in Wisconsin, in cooperation with the Department of Agriculture, Trade and Consumer Protection (DATCP), the Department of Health and Family Services, and the University of Wisconsin. Through fiscal year (FY) 2002-03, we estimate these state agencies spent a total of $14.7 million combating the disease. The majority of expenditures—64.9 percent—supported the salaries and benefits of an estimated 122.8 full-time equivalent employees dedicated to CWD efforts in FY 2002-03.

DNR had the largest share of CWD-related expenditures. Its spending totaled $12.6 million, including $4.0 million for the collection and extraction of deer tissue and for constructing and modifying facilities in which to conduct this work. At $2.0 million, costs associated with herd reduction and carcass disposal represented the second-largest expenditure category. In addition, DATCP spent a total of $1.1 million on CWD activities, primarily for regulating and preventing disease among farm-raised deer; the University of Wisconsin Veterinary Diagnostic Laboratory spent $924,000 to test deer tissue for the presence of CWD; and the Department of Health and Family Services spent $49,000 to review potential links between CWD and a related disease in humans.

A number of questions regarding efforts to contain CWD will need to be addressed in the future, including how best to ensure the effectiveness of herd depopulation efforts, ensure cooperation between DNR and DATCP in the regulation of farm-raised deer, make the greatest use of a new tissue digester that will likely provide a less-costly means of disposal than incineration, and ensure the most appropriate allocation of limited resources.

I hope you find this information helpful. We appreciate the courtesy and cooperation extended to us by DNR, DATCP, the Department of Health and Family Services, and the University of Wisconsin Veterinary Diagnostic Laboratory.

Sincerely,

Janice Mueller

Janice Mueller
State Auditor

JM/PS/bm

CHRONIC WASTING DISEASE

Chronic Wasting Disease (CWD) is a fatal neurological disease that affects members of the deer family, such as white-tailed deer, mule deer, and elk. The Department of Natural Resources (DNR) coordinates CWD management efforts in Wisconsin, in cooperation with the Department of Agriculture, Trade and Consumer Protection (DATCP), the Department of Health and Family Services (DHFS), and the University of Wisconsin. These four agencies have formed an interagency task force to address issues pertaining to CWD:

- DNR is the lead agency for coordinating the development of state policy on CWD-related efforts and for managing the disease in the wild white-tailed deer population;

- DATCP has primary responsibility for managing CWD in farm-raised deer herds and for establishing guidelines and providing information concerning meat safety;

- DHFS is responsible for investigating possible links between CWD and human health; and

- the University of Wisconsin is responsible for researching the spread and effects of the disease and, through the Wisconsin Veterinary Diagnostic Laboratory, for testing samples of deer tissue for presence of the disease.

In May 2002, the Governor called a special session of the Legislature to address CWD management efforts in Wisconsin. In response, the Legislature passed what became 2001 Wisconsin Act 108. The Act provided $4.0 million in one-time time funding, $3.0 million from the Fish and Wildlife Account of the Conservation Fund and $1.0 million from the Recycling Fund, as well as 3.0 project positions for DNR. An additional $300,000 in supplemental funds has been provided by the Joint Finance Committee since the passage of Act 108. DNR has, however, reallocated staff and funding under its existing expenditure authority to fund the majority of CWD activities.

Initial Identification and Management Efforts

In 1967, the symptoms of a new disease were first noted in mule deer at a northern Colorado wildlife research facility, but it was not until 1978 that CWD was first classified as a transmissible neurological disease of the deer family. CWD belongs to a family of diseases known as transmissible spongiform encephalopathies, which produce microscopic holes in brain tissue and eventually lead to the death of infected animals. The cause of these diseases is believed to be a deformed self-replicating protein known as a prion.

Over time, CWD was found to have infected wild animals in surrounding states. In 1997, CWD was identified in a captive elk herd in South Dakota. As a precautionary measure, DNR began taking steps in early 1999 to monitor and test for CWD in Wisconsin, as well as to educate farmers and the public about the disease. There are no known treatments for CWD. At present, it is believed that the disease is not transmissible to humans or to livestock other than members of the deer family.

The first measures DNR took to address CWD included providing information about symptoms of the disease to hunters, farmers, and game farm owners and working with DATCP on a policy for monitoring and regulating animals imported into the state. In addition, with the permission of hunters, DNR tested the lymph nodes and brain tissue of 231 deer that were harvested during the 1999 fall hunting season. No infection was found. An analysis of lymph nodes and brain tissue for evidence of CWD is currently the only method for identifying the disease. Consequently, deer must be dead before the presence of CWD can be detected.

DNR has continued to test deer for CWD annually, with the first confirmed cases being reported in February 2002, when a report from the National Veterinary Services Laboratory in Ames, Iowa, showed that three samples from deer taken during the 2001 fall harvest tested positive for the disease. All three deer were harvested near Mount Horeb in deer management unit 70A, which includes eastern Iowa and western Dane counties. In March 2002, DNR established a disease surveillance plan to identify and combat the spread of CWD. The plan's initial goals included determining the extent and severity of the disease within the Wisconsin deer herd.

In March 2002, DNR:

- established a 450-square mile surveillance zone that included sections of Dane and Iowa counties around the area where the initial three deer that tested positive for CWD were taken;

- conducted an aerial survey to gather data about the deer population in and around the infected area;

- ordered the shooting of approximately 500 deer within the surveillance zone, which was the number judged necessary to render reliable statistics on the extent of the disease outbreak;

- established a command center in Dodgeville to coordinate the deer sampling program;

- assigned 60 wardens to help investigate CWD in farm-raised deer herds; and

- established a Web site to post information about the disease.

In September 2002, the first case of CWD was identified in a captive deer herd in Portage County. The identification of the disease within a captive herd prompted additional testing of animals at several farms. DATCP ordered all deer known to have been exposed to the disease killed for testing. As required by statutes, DATCP paid owners for each animal slaughtered, at an average cost of $1,100 per animal. By November 2002, DATCP had quarantined six Wisconsin deer farms in Dane, Marathon, Portage, and Walworth counties. In December 2002, DATCP officials ordered the slaughter of all deer residing at one of the infected farms located in Walworth County. Of the 188 deer residing at the farm, four were found to be infected with CWD. A deer that had previously escaped from the farm was also found to be infected.

In October 2003, a deer from a game farm in Portage County already known to have been infected with the disease tested positive for CWD. A depopulation order requiring all of the deer on the Portage farm to be killed is currently on hold as the owner appeals the order.

CWD Containment Strategies

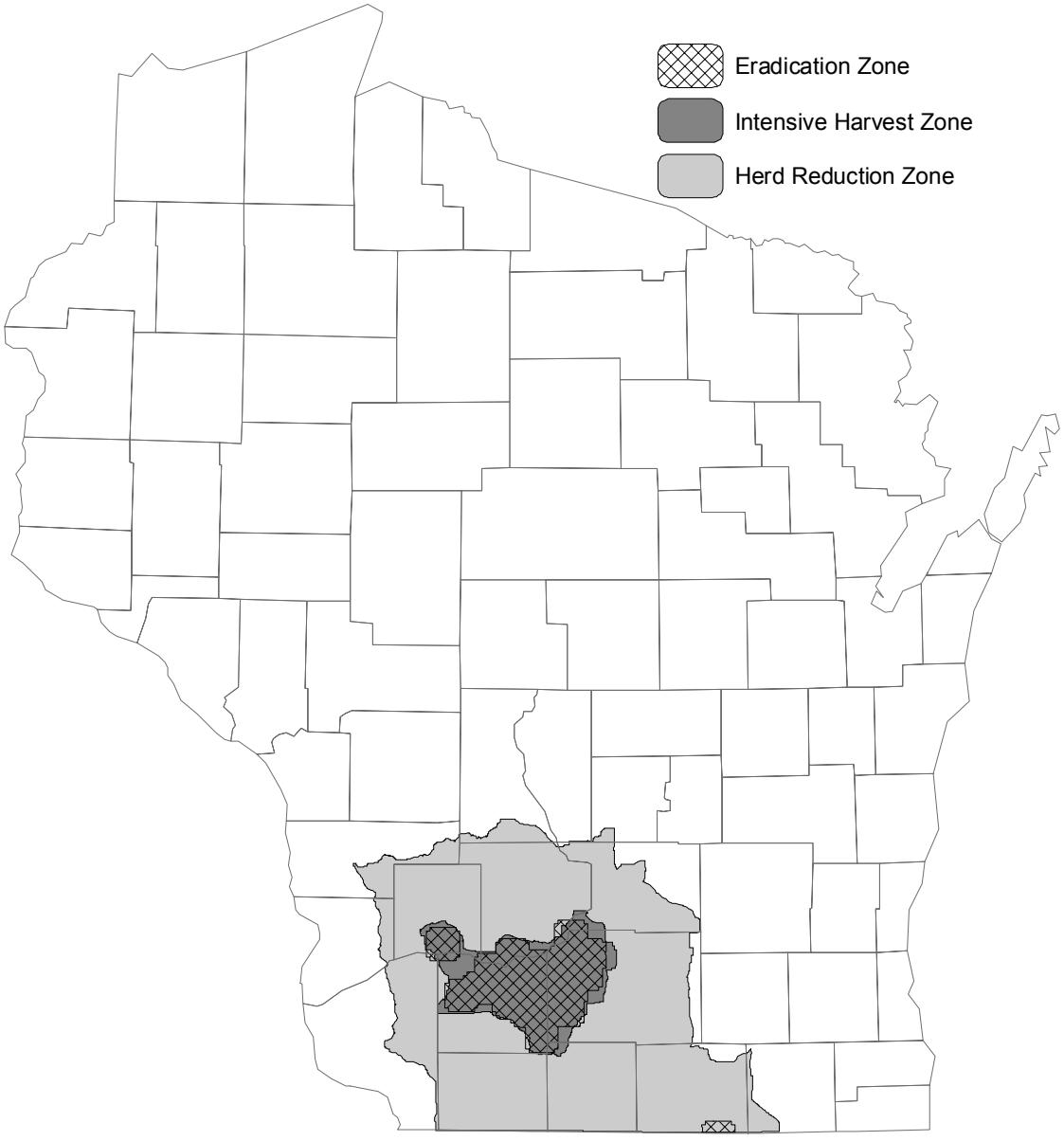
By summer 2002, DNR had a better understanding of the extent of CWD in the state, which included 18 documented cases of infected deer in southern Wisconsin. Based on available information, DNR established a plan to prevent the spread of the disease by reducing the number of deer within established perimeters of the areas in which the infected deer were found. Specifically, DNR discontinued its initial designation of a 450-mile surveillance zone in favor of a more comprehensive approach that called for the establishment of three distinct geographic zones:

- an eradication zone;
- an intensive harvest zone; and
- a herd reduction zone, which prior to 2003 was known as the management zone.

The current location of these zones is shown in Figure 1.

Figure 1

2003 Chronic Wasting Disease Zones



The eradication zone is the core area of known CWD infection and is designated by DNR as the area in which depopulation of the wild deer herd is required to eradicate, or at least limit the spread of, CWD. The area is defined by township sections and consists of all land contained within or intersected by a circle of up to a 4.5 mile radius drawn from the center of a section of land found to have contained a deer or elk that tested positive for CWD.

The intensive harvest zone is an area the extends slightly beyond the boundaries of the eradication zone and was delineated in order to allow hunters to more easily identify areas in which the depopulation of deer is encouraged. The area of the intensive harvest zone is defined by readily identifiable road boundaries that closely follow the outline of the eradication zone. The deer management goal for this area is identical to the goal for the eradication zone: depopulation of the wild deer herd to eradicate, or at least limit the spread of, CWD.

Finally, the herd reduction zone was established to reduce the risk of CWD transmission to adjacent areas of the state. Unlike the goals for the other two zones, the deer management goal for the herd reduction zone is to reduce the population to approximately 10 deer per square mile of habitat. The area of the herd reduction zone is also based on road boundaries, which are located approximately 40 miles from areas in which CWD-infected deer were first discovered.

CWD Testing During the 2002 Hunting Season

In April 2002, DNR continued its deer testing program by collecting samples of brain tissue and lymph nodes from 516 deer harvested by DNR staff. Fifteen deer from 516 test samples were found to have the disease; all were harvested in the Mount Horeb area.

To reduce the size of the deer herd, DNR implemented a special summer hunt within the eradication zone and the intensive harvest zone. The hunt ran for one week each month from July through September 2002. In total, 1,498 deer were harvested during this period. Of these, 22 tested positive for CWD.

As shown in Table 1, DNR extended the 2002 fall hunts within the eradication and intensive harvest zones into 2003 and included three separate gun seasons within the intensive harvest zone.

Table 1

2002 Fall Hunting Seasons in the Eradication and Intensive Harvest Zones

Hunt Type	Eradication Zone	Intensive Harvest Zone
Fall Archery Season		
Start	September 14, 2002	September 14, 2002
End	January 31, 2003	January 3, 2003
Fall Gun Season		
Start	October 24, 2002	October 24, 2002
End	January 31, 2003	October 27, 2002
Start	--	November 23, 2002
End	--	December 15, 2003
Start	--	December 21, 2002
End	--	January 3, 2003

DNR undertook an extensive testing program associated with the 2002 deer hunting seasons that established a goal of 50,000 animals. The program included more than 1,200 employees and volunteers to staff 200 deer collection sites statewide. A total of 41,323 deer samples were collected for testing and included those donated by hunters, as well as deer harvested by DNR staff from every county.

For the first time, testing of deer tissue was performed within the state by the Wisconsin Veterinary Diagnostic Laboratory. In 2002, the Diagnostic Laboratory attained federal certification to test for the presence of CWD and developed additional testing capacity to perform CWD testing. While the Diagnostic Laboratory conducted the majority of the tests performed in 2002, a small number of samples were sent to a laboratory in Illinois to ensure that all tests were completed in a timely manner.

Tests of tissue from the 41,323 deer identified the disease in 207 animals, all of which were harvested in four contiguous counties: Dane, Iowa, Richland, and Sauk.

Enhancing Regulatory Efforts

In April 2002, the State enacted 2001 Wisconsin Act 56, which enhanced DATCP's authority to regulate captive wildlife. This legislation, which took effect January 1, 2003:

- expanded DATCP's authority to quarantine wild and domestic animals;
- required licensing of markets, dealers, and transporters who handle deer and other wild animals;
- increased registration requirements for farm-raised deer herds;
- transferred regulatory authority for captive white-tail herds from DNR to DATCP; and
- directed DATCP to draft and implement CWD rules.

In April 2002, DATCP used its new legislative authority to adopt an emergency administrative rule intended to prevent the spread of CWD by imposing a moratorium on deer and elk imports until the herd of origin has been monitored for a least five years. A final rule, which essentially incorporated the same provisions as the emergency rule, went into effect on June 1, 2003. Because there is no reliable test for CWD among live animals, the final rule requires testing of all farm-raised deer at least 16 months old that are shipped to slaughter or die on the herd premises. In addition, the rule prohibits the movement of live captive animals from herds in Wisconsin unless the herd is monitored for CWD under a plan approved by DATCP.

Under the final administrative rule, every deer and elk that is imported into the state must have an import permit and a health certificate signed by a federally accredited veterinarian who examines the animal prior to import. The permit must include the name and address of the importer and the recipient, the type and number of animals imported, the herd of origin, and the herd of destination. Since 1995, a total of 2,604 deer, elk, and their kin have been imported into Wisconsin, which includes 410 animals that have been imported from states in which CWD has been found. DATCP has not authorized imports from herds known to be infected with CWD at the time of import. However, the source herd for 19 elk imported into Wisconsin were found be infected after the time of import. These imported animals were traced by DATCP and either killed for testing or placed under quarantine until they can be shown to be healthy for five years after the date of exposure to CWD.

DNR has also promulgated rules related to CWD management. In June 2002, the Natural Resources Board approved an emergency administrative rule that placed a statewide ban on deer feeding and baiting, which was designed to prevent the spread of CWD and to help insure that the disease would not become established in other parts of the State. In April 2003, the Board voted to adopt a final rule with similar provisions.

In May, the Assembly Natural Resources and Senate Environment and Natural Resources committees voted to modify DNR's administrative rule by providing for the use of up to two gallons of bait, and limited feeding, in areas in which CWD-positive animals had been

identified. When the Natural Resources Board voted against modifying its original rule, the Joint Committee for Review of Administrative Rules passed motions recommending that the original rule not apply after June 30, 2004, and providing for continued baiting and feeding under some circumstances.

Specifically, the Joint Committee for Review of Administrative Rules recommended that baiting be allowed when:

- it occurs during an open season for hunting deer;
- it occurs outside of a CWD eradication zone, management zone, or intensive harvest zone; and
- no more than two gallons of bait at no more than two sites within a 40-acre parcel are spread daily.

In addition, the Committee recommended that feeding for the purpose of viewing deer be allowed when:

- it occurs north of state highway 54;
- it occurs outside of a CWD eradication zone, management zone, or intensive harvest zone; and
- no more than two gallons of feed are spread daily within 50 yards of an owner occupied residence.

At a special meeting in September 2003, the Natural Resources Board did not adopt the Committee's recommendations and instead approved a second emergency rule prohibiting deer baiting and feeding, in part based on a recently published study in the journal *Nature* that indicated CWD spreads more easily than had previously been thought. The new emergency rule imposes the same restrictions as those adopted by the Board in its April 2003 emergency rule, but limits the restrictions to 22 Wisconsin counties. Both the Board and the interagency task force believe this action was necessary because the 22-county area is known to be at risk for either CWD or bovine tuberculosis either because an infected animal has been identified in them or because they are within a 10-mile radius of animals that had been confirmed to have one of the two diseases. DNR has indicated that it intends to seek two extensions to the emergency rule that would allow the ban to remain in effect until mid-June 2004, rather than lapse after a standard 150-day time period.

In September, the Assembly passed 2003 AB 519, which would allow individuals to feed deer or elk outside of the three CWD zones established by DNR as an exception to DNR's feeding rules, provided that the site of feeding is within 50 yards of an owner-occupied residence and is 100 yards or more from a highway that has a posted speed limit of 45 miles per hour or more. In addition, the bill also would allow individuals to bait deer or elk for hunting purposes north of state highway 54 during open hunting season, provided the baited area consists of no more than

40 acres and is 100 yards or more from a highway. No more than two gallons of food may be placed daily under the provisions of the bill. At present, the Senate is considering a similar bill, 2003 SB 259.

Program Expenditures

Through fiscal year (FY) 2002-03, $14.7 million has been spent on combating CWD in Wisconsin. As shown in Table 2, 92.7 percent of these expenditures were from segregated funds. GPR accounted for $868,800, or 5.9 percent of total expenditures.

Table 2

Chronic Wasting Disease Expenditures by Funding Source
FY 2001-02 through FY 2002-03

Funding Source	DNR	DATCP	Diagnostic Laboratory	DHFS	Total	Percentage of Total
Segregated revenue	$12,216,314	$ 446,996	$923,844	$34,304	$13,621,458	92.7%
General purpose revenue	226,668	642,166	0	0	868,834	5.9
Program revenue	162,328	8,871	0	0	171,199	1.2
Federal revenue	0	16,257	0	14,239	30,496	0.2
Total	$12,605,310	$1,114,290	$923,844	$48,543	$14,691,987	100.0%

DNR accounted for the majority of CWD expenditures: it spent $12.6 million directly and provided and additional $1.0 million to the other three agencies through memoranda of understanding. Of the remaining $1.1 million in CWD expenditures, $14,200 was spent by DHFS from a $93,000 multi-year federal grant, and the remainder was spent by DATCP, largely from its general program operation funds.

As shown in Table 3, $9.5 million, or 64.9 percent of all funds, was spent to support staff in the agencies working to combat CWD, while $5.2 million, or 35.1 percent, was spent on supplies and services. Of the $12.6 million in expenditures made by DNR, $1.3 million represents overhead costs: $931,100 for staff, and $402,700 for supplies and services. These costs do not represent direct charges for CWD activities, but include overhead costs that were allocated by formula to all of DNR's programs.

Table 3

Chronic Wasting Disease Expenditures by Type
FY 2001-02 through FY 2002-03

Type	DNR	DATCP	Diagnostic Laboratory	DHFS	Total	Percentage of Total
Staffing						
Permanent staff salaries	$ 4,540,461	$ 591,789	$156,666	$19,959	$ 5,308,875	36.1%
Fringe benefits	2,282,407	245,320	43,548	10,640	2,581,915	17.6
Allocated staffing costs*	931,054	0	0	0	931,054	6.3
LTE staffing costs	621,101	24,452	61,581	11,850	718,984	4.9
Subtotal	8,375,023	861,561	261,795	42,449	9,540,828	64.9
Supplies and Services						
Purchased services	1,281,505	2,688	0	0	1,284,193	8.7
Materials and supplies	683,968	547	82,114	527	767,156	5.2
Equipment acquisition and maintenance	547,520	76,375	142,329	0	766,224	5.2
Travel	485,930	26,468	5,342	632	518,372	3.5
Building maintenance and utilities	279,801	0	203,139	0	482,940	3.3
Allocated supply costs*	402,724	0	0	2,323	405,047	2.8
Data processing	254,157	0	0	0	254,157	1.7
Facility construction	0	0	229,125	0	229,125	1.6
Miscellaneous	181,230	5,211	0	2,601	189,042	1.3
Indemnity payments**	0	141,240	0	0	141,240	1.0
Printing	75,350	90	0	11	75,451	0.5
Informational advertising	38,102	110	0	0	38,212	0.3
Subtotal	4,230,287	252,729	662,049	6,094	5,151,159	35.1
Total	$12,605,310	$1,114,290	$923,844	$48,543	$14,691,987	100.0%

* Represents overhead costs that were not directly charged to the CWD program but allocated through a formula.
** Payments to captive deer owners for animals that were slaughtered for testing.

As shown in Table 4, an estimated 122.8 full-time equivalent (FTE) staff were dedicated to CWD efforts in FY 2002-03. Ninety percent of all positions were staff employed by DNR. It should be noted that this estimate does not include all efforts dedicated to CWD because data were not always kept in a manner that facilitated a breakout. For example, DNR allocates overhead staffing costs to CWD, but there is no readily available way to convert these costs into FTEs. In addition, DNR staff time charged directly to CWD includes overtime hours, but actual

overtime hours dedicated exclusively to CWD activities could not be calculated from available data. However, DNR staff estimate that overtime costs associated with CWD totaled at least $530,000 in FY 2002-03.

Table 4

Estimated Number of Full-time Equivalent Staff Dedicated to Chronic Wasting Disease Activities
FY 2002-03

Agency	Number
DNR	109.9
DATCP	6.6
Diagnostic Laboratory	5.4
DHFS	0.9
Total	122.8

Expenditures can also be defined by the types of activities they support. Because 85.8 percent of all expenditures were made by DNR, and because DNR has typically been engaged in a broader range of CWD-related activities than the other agencies, we focused the majority of our work on identifying the CWD activities of DNR staff. Although DNR has developed specific codes for tracking time staff spend on CWD efforts, these codes do not typically indicate which specific CWD-related task was performed. Therefore, we compiled detailed information from DNR's time reporting system for each of the 1,695 individual staff who recorded time to CWD, and asked DNR officials to use this information to estimate the percentage of time staff spent on a number of broadly defined CWD-related activities.

As shown in Table 5, DNR spent the largest portion of funds—$4.0 million—on the collection and extraction of deer tissue for testing. Deer heads from harvested animals were transported in refrigerated trucks to five extraction sites, located in Black Earth, Black River Falls, Eagle, Green Bay, and Park Falls, where DNR staff removed the tissue needed for testing. The tissue was placed in a preservative, boxed, and shipped to the Diagnostic Laboratory. The $4.0 million in expenditures for this activity include staffing costs associated with removal and transportation of deer tissue, laboratory supplies needed for tissue removal and preservation, and site preparation and construction. At four of the collection sites, DNR converted existing space into laboratory collection centers by coating the floors with a sealant and adding walls where necessary to isolate the collection site from the existing facilities. At the Black Earth site, DNR constructed a new facility because existing structures were deemed inadequate to meet long-term tissue extraction needs.

Table 5

CWD Expenditures by Activity

	FY 2001-02	FY 2002-03	Total	Percentage of Total
DNR				
Collection and extraction of deer tissue	$ 301,686	$ 3,685,751	$ 3,987,437	27.1%
Herd reduction and carcass disposal	227,694	1,816,537	2,044,231	13.9
Planning and policy development	393,302	1,280,201	1,673,503	11.4
Public relations and outreach	180,204	1,232,804	1,413,008	9.6
Allocated overhead costs*	189,986	1,143,791	1,333,777	9.1
Deer/elk farm oversight	42,834	675,254	718,088	5.0
Research	44,746	533,984	578,730	3.9
Administrative and support services**	15,799	468,375	484,174	3.3
Baiting and feeding enforcement	0	372,362	372,362	2.5
Subtotal	1,396,251	11,209,059	12,605,310	85.8
DATCP				
Farm-raised deer regulation and disease prevention	126,613	418,964	545,577	3.7
Rule/policy development and legal services	130,000	268,269	398,269	2.7
Indemnity payments to game farms	0	141,240	141,240	1.0
Human food safety	9,073	14,027	23,100	0.2
Animal feed safety	3,100	3,004	6,104	<0.1
Subtotal	268,786	845,504	1,114,290	7.6
Diagnostic Laboratory				
Testing of deer tissue	0	923,844	923,844	6.3
DHFS				
Creutzfeldt-Jakob disease surveillance	0	48,543	48,543	0.3
Total	$1,665,037	$13,026,950	$14,691,987	100.0%

* Represents allocated overhead costs that could not with accuracy be categorized by activity.

** Includes costs such as data processing, Web site development, human resources, and accounting services.

The second-largest category of DNR's expenditures was herd reduction and carcass disposal, which include deer harvesting, and accounted for $2.0 million in total expenditures. A number of costs are associated with deer harvesting, including contacting landowners within the eradication zone for permission to hunt on their land, issuing special permits to allow landowners to hunt on their own land, baiting hunting sites, and actual hunting conducted by DNR sharpshooters.

Costs associated with carcass disposal include transportation and incineration or landfill disposal, as well as storage of dead deer, and car-kill deer pickups within the eradication and intensive harvest zones. Some of the largest single costs are associated with disposal. For example, in FY 2002-03 DNR made payments totaling $403,500 for incineration and $165,300 for landfill disposal of deer carcasses.

At $1.7 million, planning and policy development was the third largest category of DNR's expenditures. It includes costs associated with establishing rules and regulations, drafting a CWD management plan and environmental impact statement, coordinating efforts with state and federal agencies, and establishing deer management zones.

Finally, DNR spent $1.4 million on public relations and outreach. This included holding numerous meetings at locations throughout the state to provide hunters and other interested parties with information on CWD and the agency's plans to combat it; maintaining a Web site with information on CWD and test results for deer submitted by hunters; printing costs for informational brochures and pamphlets; and responding to questions from hunters, landowners, legislators, the media, and the public.

Of the $1.1 million spent by DATCP, the largest expenditure category was farm-raised deer regulation and disease prevention, which totaled $545,600. DATCP also spent $398,300 to develop policies, draft rules, and provide legal services for CWD issues. In addition, it spent $141,200 on indemnity payments to owners of farm-raised deer exposed to CWD that had to be destroyed for testing.

The University of Wisconsin Diagnostic Veterinary Laboratory spent $923,800 to test deer tissue. Its activities included developing and operating a testing facility, purchasing testing supplies, and staff time associated with testing thousands of tissue samples for the presence of CWD.

It should be noted that the Diagnostic Laboratory recently was alerted by the United States Department of Agriculture (USDA) that it will be permitted to house the only mobile tissue digester in the nation. The digester, to be delivered in late October 2003, will be owned by USDA but may be used by the Diagnostic Laboratory to chemically decompose infected deer. The digester is capable of destroying infectious prions, making incineration unnecessary. The sterile liquid waste produced by the digester will be disposed of through a sewage treatment plant. A total of $363,000 in state CWD funds has been budgeted to construct a building to house the mobile digester, which was required by USDA. Officials of the Diagnostic Laboratory are optimistic that they will be able to obtain federal funding to support operation of the digester through at least federal fiscal year 2004-05.

Finally, DHFS spent $48,500 to monitor potential links between CWD and Creutzfeldt-Jakob disease, which is a fatal neurological disease that afflicts humans. Efforts included a review of death certificates for individuals who were judged to have died from neurological diseases. They were funded to protect human health and provide information on the potential transmission of disease-causing agents from deer to humans.

Future Considerations

A number of questions pertaining to the State's CWD efforts will need to be considered in the future. A primary question is whether DNR has taken the correct approach in its efforts to combat CWD. As noted, the disease was identified in Colorado and other western states before it was found in Wisconsin. However, the size of Wisconsin's deer herd and the potential effects of CWD on deer hunting in the state led Wisconsin to become a national leader in efforts to combat the disease.

Questions have been raised about DNR's policy of eradication, and recently DNR officials have begun using the term "herd reduction" rather than eradication to describe the agency's efforts to depopulate deer within the eradication and intensive harvest zones. They note that eradication refers to their efforts to eliminate the disease and not to kill all of the deer within the eradication or intensive harvest zones, which may not be possible.

However, the animal health and disease research experts with whom we spoke believe that elimination of the disease may still be possible, even if all deer within these zones cannot be killed. They believe it may be premature for the State to move to a system of disease containment rather than eradication. Some disease experts believe that a policy of aggressive herd reduction could lead to a situation in which the concentration of deer within infected areas is reduced to the point that infected deer eventually die without passing the disease on to uninfected animals. However, it is not possible to determine the likelihood of success in the State's efforts to eradicate CWD because too many variables exist at the present time, including prevalence of the disease, its ease of transmission, and the extent to which prions remain in the soil and general environment as disease causing agents.

Even if eradication of the disease does not turn out to be a viable strategy, many believe that DNR's current efforts will prevent or limit the spread of CWD, because depopulation reduces the concentration of deer within areas known to have infected animals, thereby limiting opportunities to transmit the disease. DNR's efforts will need to be supported by DATCP, which will be expected to play an active role in ensuring that infection is not introduced through the importation of deer into areas of the state where the disease does not currently exist.

Second, in order to have any chance of being successful, DNR's strategy of depopulating the deer herd in infected areas must be maintained over time. Mild winters and deer births could rapidly increase the size of the herd within the eradication and intensive harvest zones unless efforts are made to ensure that herd reduction activities are maintained. To that end, DNR announced in September 2003 that it will establish a pilot program, known as the CWD Control Reward Program, under which hunters who kill a CWD infected deer within the eradication or

intensive harvest zones will be paid $200 rewards. The rewards will be funded with $200,000 from the Fish and Wildlife Account of the Conservation Fund and a $50,000 contribution from an anonymous donor. If a deer is harvested on private land, the landowner will also receive a $200 reward. Any funds remaining after the rewards have been paid will be distributed through random drawings in $20 increments to all hunters registering deer from the two zones.

The reward program will be administered by Whitetails Unlimited, Inc., which will oversee the fund, coordinate payments, and conduct the random drawings. Because a private organization will be responsible for the expenditure of public funds, efforts will need to be made to ensure that all expenditures are made in compliance with applicable rules and regulations.

Third, state officials will need to closely monitor the cooperative arrangement of DNR and DATCP relating to the regulation of deer, in order to ensure that obligations and responsibilities are fulfilled and regulatory activities are proceeding smoothly. As noted, DATCP assumed responsibility for the majority of regulatory functions associated with farm-raised deer in January 2003. However, DNR has maintained responsibility for regulating fences that enclose white-tailed deer. In March 2003, the two agencies entered into a formal cooperative agreement through a memorandum of understanding that specifies how they will cooperate in promoting the interests of the State of Wisconsin and its citizens in protecting deer and elk populations, including both free-ranging and farm-raised animals. The agreement is specific and should afford a framework for inter-agency cooperation.

Fourth, attention will need to be given to ensuring that the tissue digester is used to its full advantage. Accurate estimates of the cost to dispose of deer carcasses through tissue digestion are not currently available because all costs, including sludge disposal and labor, are not known at the present time. However, it is anticipated that the cost to dispose of carcasses through tissue digestion will be lower than incineration. Provided that digestion costs are lower than incineration costs, as expected, DNR officials will need to work closely with the Diagnostic Laboratory to ensure that the full capacity of the digester is used to greatest effect in limiting the State's total carcass disposal costs.

Fifth, agency officials will need to closely monitor CWD-related expenditures to ensure that limited funds are used most effectively to address program needs. Some agency officials believe that current resources are inadequate to meet existing demands. For example, DATCP officials believe they need an additional $253,000 to depopulate farm-raised deer on 13 farms located either within the eradication zone or within two miles of the zone. Because of the location of the farms, DATCP officials believe the only practical way to deal with animals on these farms is through depopulation.

DATCP officials also believe the additional funds are needed to gain the compliance of farm owners with future depopulation orders. Without a guarantee of state reimbursement for the animals to be killed, officials contend DATCP will face lengthy and costly court challenges. DATCP is currently involved in five court cases with farm owners protesting DATCP's existing quarantine or depopulation orders. At this time, it is uncertain whether DATCP will pursue a s. 13.10 request through the Joint Committee on Finance to seek additional funding, or wait

until it has been able to better quantify the issues associated with farms located in or near the eradication zone.

Finally, continued attention will need to be given to the potential spread of CWD to humans and livestock. The research conducted to date has found no evidence of transmission to humans and unlikely transmission to cattle and other livestock. However, state agencies will need to monitor relevant research to ensure that public health and agricultural interests are adequately protected. In June 2003, the University of Wisconsin-Madison announced that that it will receive three grants from the Department of Defense, totaling $5.2 million, to conduct research into the molecular and environmental aspects of CWD, including its potential transmission to other species, as well as soil contamination leading to the spread of the disease. Funds from these grants will be distributed to the university over a five-year period.

****