

Wisconsin Deer Baiting and Wildlife Feeding Regulations



WM-456-2013

Counties where baiting and feeding of deer IS prohibited (shaded counties)

Baiting wild animals for hunting purposes is prohibited. No person may place, use, or hunt over bait or feed material for the purpose of hunting any wild animals except deer (see below), bear (see Wisconsin Bear Hunting Regulations), or wolf (see Wisconsin Wolf Hunting Regulations) unless authorized by a special permit or license issued by the department. Placing bait to hunt deer or feed for recreational viewing of deer is illegal in the shaded counties on the below map.

Scents: Scent may be used for hunting deer or other wild animals, but the scent may not be placed or deposited in a manner that it is accessible for consumption by deer, and scents shall be removed daily at the end of hunting hours established for deer. However, two ounces or less of scent may be placed, used or deposited in any manner for hunting game and does not need to be removed daily at the end of hunting hours.

Natural Vegetation and Plantings: You may hunt with the aid of material deposited by natural vegetation, material found solely as a result of normal agricultural or gardening practices, or with the aid of crops planted and left standing as wildlife food plots.

Feeding wild animals for non-hunting purposes is prohibited. No person may place, deposit, or allow the placement of any material to feed or attract wild animals for non-hunting purposes including recreational and supplemental feeding, except as allowed below for birds and small mammals.

Feeding Birds and Small Mammals: Material may be placed solely for the purpose of attracting and feeding wild birds and small mammals if:

- placed in bird feeding devices and structures at a sufficient height or design to prevent access by deer.
- the structures and devices are within 50 yards of a dwelling devoted to human occupancy.
- when deer, bear, or elk are found to be utilizing bird feeding devices or structures the devices or structures shall be enclosed or elevated higher to prevent access by deer.

Note: The placement of plain water for drinking or for birdbaths is allowed.

Feeding Animals by Hand: Feeding wild animals, other than deer, elk, or bear, by hand is not encouraged but is allowed if:

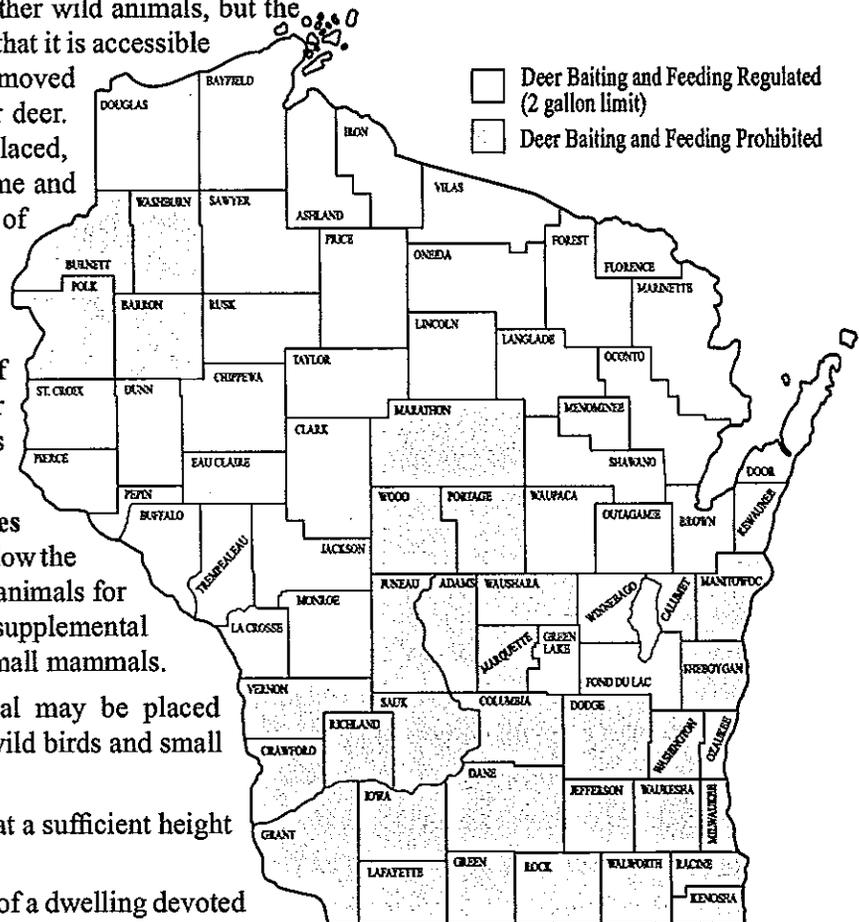
- feed is placed not more than 30 feet away from the person feeding.
- the person feeding cleans up the unconsumed feed before moving a distance greater than 30 feet from the deposited feed.

Natural Vegetation and Plantings: Feed that is deposited by natural vegetation or found solely as a result of normal agricultural or gardening practices, as well as standing crops planted and left as wildlife food plots, is not considered feeding for the purposes of these regulations, and is allowed statewide.

Counties where baiting and feeding of deer is NOT prohibited (non-shaded counties)

Baiting wild animals for hunting purposes is prohibited except as noted. No person may place, use, or hunt over bait or feed material for the purpose of hunting any wild animals except deer (see below), bear (see Wisconsin Bear Hunting Regulations), or wolf (see Wisconsin Wolf Hunting Regulations) unless authorized by a special permit or license issued by the department. Placing bait to hunt deer or feed for recreational viewing is legal in the non-shaded counties on the above map. See below for restrictions on deer baiting and feeding.

Scents: Scent may be used for hunting deer or other wild animals, but the scent may not be placed or deposited in a manner that it is accessible for consumption by deer, and scents shall be removed daily at the end of hunting hours established for



deer. However, two ounces or less of scent may be placed, used, or deposited in any manner for hunting game and does not need to be removed daily at the end of hunting hours.

Natural Vegetation and Plantings: You may hunt with the aid of material deposited by natural vegetation or material found solely as a result of normal agricultural or gardening practices, or with the aid of crops planted and left standing as wildlife food plots.

Deer Baiting – What Is Allowed For Deer Hunting Purposes

Amount: No person may place, use, or hunt over more than 2 gallons of bait or feed at any feeding site.

Placement: No person may place, use, or hunt deer over:

- bait located in a county in which baiting and feeding of deer is prohibited.
- more than 2 gallons of bait on each contiguous area of land under the same ownership that is less than 40 acres in size, or for each full 40 acres that make up a contiguous area of land under the same ownership. **Note:** Parcels of land that do not touch but are separated only by a town or county road or state highway are considered contiguous. **Note:** Feed at feeding sites may be spread out or divided into more than one pile as long as the total amount of feed material is not more than 2 gallons per forty acres.
- any feeding site that is located within 100 yards of any other feeding site located on the same contiguous area of land under the same ownership.
- any feeding site if the person doing the hunting is within 100 yards of more than 2 gallons of bait or feed located on the same parcel of land.
- any feeding site that is located within 50 yards of any trail, road, or campsite used by the public, or within 100 yards of a roadway, having a posted speed limit of 45 miles per hour or more.

Timing: No person may:

- place, use, or hunt over bait or feed during the closed season for hunting deer, but may start to place bait for deer hunting 24 hours prior to the first deer hunting season, which is the archery season. **Note:** The 24-hour period is the period from 12:00 A.M. to 11:59 P.M. on the day immediately before the archery deer season.
- hunt over bait or a feeding site that is in violation of these regulations, unless the area is completely free of bait or feed material for at least 10 consecutive days prior to hunting, pursuing animals, or dog training.

Content: No person may place use or hunt over any bait or feed material that:

- contains any animal part or animal by-product.
- is contained in or deposited by a feeder that is designed to deposit or replenish feed automatically, mechanically, or by gravity.
- contains or is contained within, metal, paper, plastic, glass, wood or other similar processed materials. This does not apply to bait or feed placed in hollow logs or stumps (see Wisconsin Bear Hunting Regulations) or to scent materials.

License: No person may use or hunt over bait or feed material placed for deer without possessing an appropriate valid archery or gun deer license and unused carcass tag.

Feeding Wild Animals Is Allowed For Certain Species For Non-Hunting Purposes

Feeding Deer:

Amount: No person may place or allow the placement of more than 2 gallons of feed material at any feeding site.

Placement: No person may place or allow the placement of:

- feed in a county in which baiting and feeding of deer is prohibited.
- more than 2 gallons of feed for each owner-occupied residence or business, regardless of property size.
- a deer feeding site more than 50 yards from an owner occupied residence or business.
- a deer feeding site within 100 yards from a roadway having a posted speed limit of 45 miles per hour or more.
- a deer feeding site without the approval of the owner of the owner-occupied residence or business.
- feed at a deer feeding site that the person knows is being used by bear and elk. If the owner of the residence or business is notified by the department or otherwise becomes aware that bear or elk have been using a deer feeding site, the owner must discontinue feeding for a period of not less than 30 days.

Content: No person may place any bait or feed material for deer that:

- contains any animal part or animal by-product.
- is contained in or deposited by a feeder that is designed to deposit or replenish feed automatically, mechanically, or by gravity.

Feeding Other Wild Animals:

No person may place, deposit, or allow the placement of any material to feed or attract other wild animals for non-hunting purposes including recreational and supplemental feeding, except as allowed below for feeding birds and small mammals.

Feeding Birds And Small Mammals:

Material may be placed solely for the purpose of attracting and feeding wild birds and small mammals if:

- placed in bird feeding devices and structures at a sufficient height or design to prevent access by deer.
- the structures and devices are no further than 50 yards from a dwelling devoted to human occupancy.
- deer, bear, or elk are utilizing bird feeding devices or structures, the devices or structures shall be enclosed or elevated higher to prevent access by the deer, bear, or elk.

Note: The placement of plain water for drinking or for birdbaths is allowed.

Feeding Animals by Hand: Feeding wild animals, other than deer, elk, or bear, by hand is not encouraged, but is allowed if:

- feed is placed not more than 30 feet away from the person feeding.
- the person feeding cleans up the unconsumed feed before moving a distance greater than 30 feet from the deposited feed.

Natural Vegetation and Plantings: Feed that is deposited by natural vegetation or found solely as a result of normal agricultural or gardening practices, as well as standing crops planted and left as wildlife food plots, is not considered feeding for the purposes of these regulations, and is allowed statewide.

Definitions:

Animal part or animal by-product means honey, bones, fish, meat, solid animal fat, animal carcass, or parts of animal carcasses, but does not include liquid scents.

Bait means any material placed or used to attract wild animals, including liquid scent, salt, and mineral blocks.

Bird feeding devices and structures means any device or structure that has the primary purpose of attracting or feeding birds or small mammals.

Business means a building used primarily to carry out commercial activities at which regular scheduled business hours are maintained for employees and the public, such as restaurants and retail stores, but does not include associated lands, warehouses, outbuildings or other buildings that are not normally open to the public.

Feed means any material that may attract or be consumed by wild animals that is placed for any non-hunting purposes including recreational and supplemental feeding, but does not include plain drinking water.

Feeding site means any location or area in which bait or feed is placed or deposited or that contains bait or feed material used to attract wild animals for recreational and supplemental feeding or for hunting purposes.

Hunt over means hunting within 100 yards of any feeding site where a person knows or reasonably should know that the area contains a feeding site.

Owner-occupied residence means a dwelling or building devoted to human occupancy or as a residence by the owner or members of the owners immediate family, or when used as a residence by individuals as a rental property.

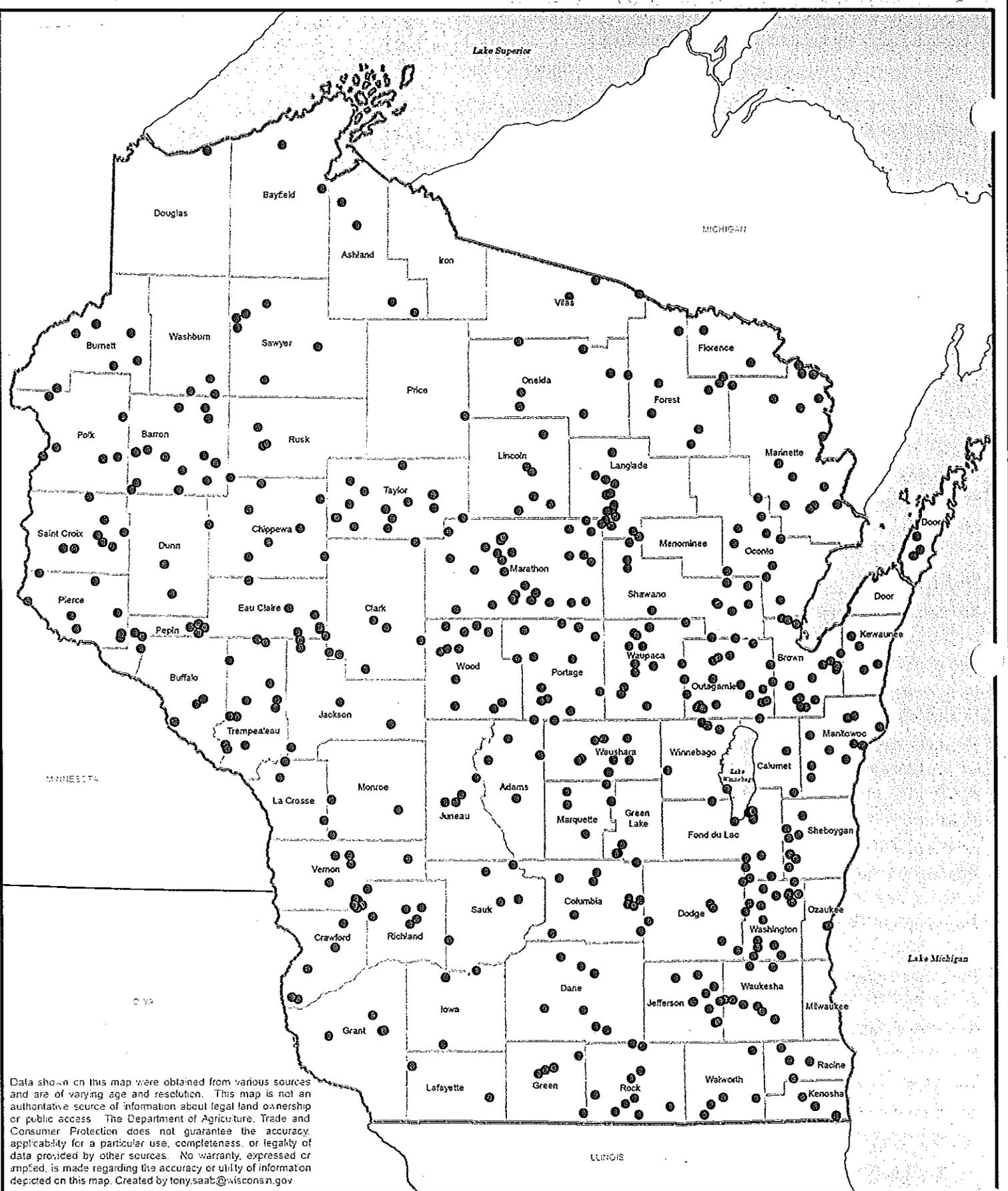
Roadway means that portion of a highway between the regularly established curb lines or that portion which is improved, designed, or ordinarily used for vehicular travel excluding the berm or shoulder.

Scent means any material, except animal parts or animal by-products, used to attract wild animals solely by its odor.

Small mammal means all mammals other than bear, deer, and elk.

NOTE: Additional counties may be included in the ban if: 1) a CWD eradication zone or herd reduction zone is established in the county or a portion of the county, or; 2) a new CWD or bovine tuberculosis positive captive or free-roaming, domestic or wild animal is confirmed in the county, or; 3) the county or portion of the county is within a 10 mile radius of a new captive or free-roaming, domestic or wild animal that has been tested and confirmed to be positive for CWD or bovine tuberculosis.





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Registered Deer Farms = 511
Some data points may overlap due to geocoding techniques

Registered Deer Farms as of (2/7/13)

0 10 20 40 60 80

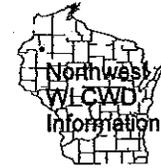
Wisconsin Department of Agriculture, Trade & Consumer Protection
Division of Animal Health

Wisconsin Department of Natural Resources

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Chronic wasting disease regulations

Included on this page are regulations that pertain to chronic wasting disease (CWD) hunting seasons, season dates and hunting opportunities.



The following page includes information on CWD in northern WI.

2012 CWD management zone season structure

There will be no October or Landowner (Jan. - March) firearm season for 2012.

Hunting Season	Dates	Kill Type	Notes
Archery	September 15- January 6	Bonus buck*	Antlerless only during the late firearm season
Youth	October 6-7	Either sex	The Saturday nearest Oct. 8 - the next day
Traditional 9-day firearm	November 17-25	Bonus buck*	The Saturday before Thanksgiving - the following Sunday
10-day muzzleloader-only	November 26- December 5	Bonus buck*	The ten days immediately following the traditional 9-day firearm season
Late firearm	December 6-9	Antlerless only	The second Thursday following Thanksgiving - the following Sunday
Holiday firearm	December 24- January 6	Bonus buck*	December 24 - the Sunday nearest January 6

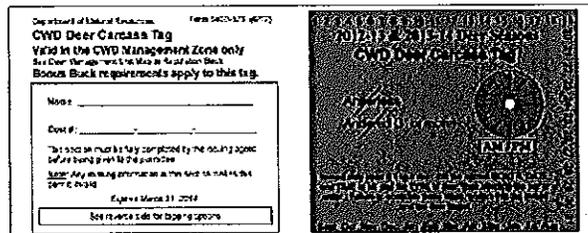
*Bonus buck = one buck per buck carcass tag plus unlimited antlerless deer with 1 buck per antlerless deer



Know CWD website [exit DNR] included on this site is general information about CWD in Wisconsin including common misconceptions.

Regulations

- Free carcass tags for use in the chronic wasting disease management zone (CWD-MZ) can be picked up at the following vendor locations.
- Statewide deer hunting regulations
- Baiting and feeding regulations
- Carcass movement restrictions



Firearm restrictions

In 2008, the CWD eradication zones and the herd reduction zone were combined to form the CWD management zone (CWD-MZ), providing consistent regulations across the entire area. It is now legal to hunt deer with a rifle anywhere in the CWD-MZ, except deer management unit 76M and where local ordinances prohibit their use.

Deer hunting in Wisconsin

For additional information about hunting white-tailed deer in and outside of the CWD-MZ visit the [deer hunting in Wisconsin web page](#).

White-tailed deer farming

Wildlife and habitat

Find

ways to reduce wildlife-human conflict and avoid wildlife damage.

Explore

Wisconsin's rare plants, animals and natural communities.

Discover

tips to manage your land for wildlife.

Learn

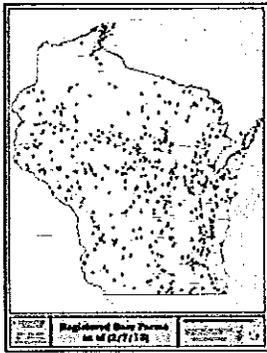
about wildlife health and rehabilitation.

Explore chronic wasting disease

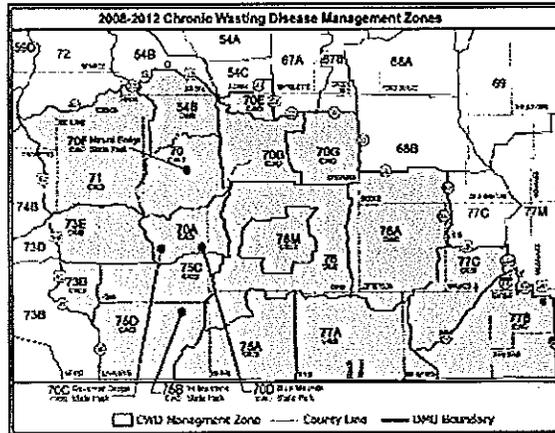
- ➔ CWD regulations
- ➔ Test results
- ➔ Registration & sampling
- ➔ Prevalence & surveillance
- ➔ Deer donation
- ➔ Processing your deer
- ➔ Disposal & sick deer
- ➔ Population & harvest
- ➔ CWD response plan

Related links

- ➔ Chronic Wasting Disease Alliance [exit DNR]
- ➔ Know CWD [exit DNR]



As of February 2013 there were 511 registered deer farms in



Illinois Department of Natural Resources [exit DNR]

Contact information

For information on CWD, contact:

Timothy Marien
CWD wildlife biologist
Bureau of Wildlife Management
608-264-6046

Please click for a larger deer farms map image. Registered Deer Farms. Courtesy of DATCP.

Wisconsin. White-tailed deer farming is regulated and licensed by the Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) [exit DNR]. However the Department of Natural Resources (DNR) is responsible for regulating white-tailed deer farm fencing. Before you can register your farm with DATCP you must have your fence inspected and receive a deer farm fence certificate from the DNR.

Last revised: Thursday February 07 2013



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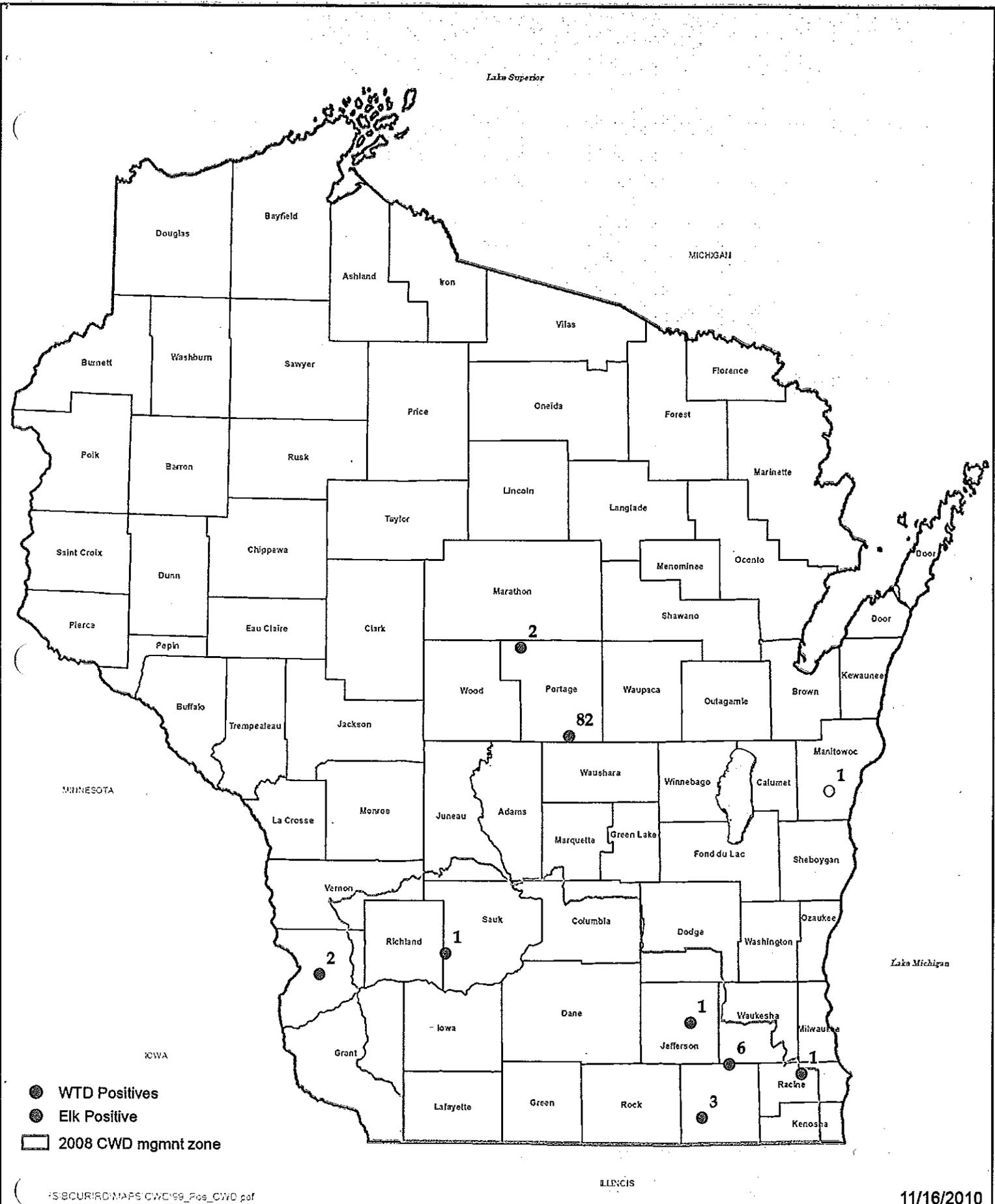


General Information 1-888-WDNRINFO | (1-888-936-7463) | Hours: 7 a.m. - 10 p.m.
101 S. Webster Street . PO Box 7921 . Madison, Wisconsin 53707-7921 . 608-266-2621

Some Baiting Rule History

- 1940 Use of Salt for hunting deer was prohibited
- 1940 Only law related to baiting was still that you could not use salt. Law pretty much stayed that way up until 1978, with a few additional rules along the way.
- 1971 **General Hunting - PROHIBITED BAITING METHODS.**
1. It became illegal to place, use or hunt over any baited area containing paper, plastic, metal or wood containers, or animal bones (excluding fish). This applies to hunting any species of wild animals or birds at any time.
- Bear Hunting:** It was illegal to place any material attractive to bear before August 1. Baiting for this purpose could be conducted from August 1 until December 1st.
- 1972 **General Hunting - PROHIBITED BAITING METHODS.**
1. Illegal to place, use or hunt over any baited area containing paper, plastic, glass, metal or wood containers, or other nondegradable materials, salt or animal bones the head or hoofs of any animal (excluding fish). This applied to hunting any species of wild animals or birds at any time.
- 1973 **Bear Hunting:** Illegal to place any material attractive to bear at any time other than the period beginning on the Saturday nearest August 15 and ending on the last day of the early bow season. No material attractive to bear shall be placed within 50 yards of any trail, road or campsite used by the public.
- 1974 **Bear Hunting:** (Note: Regulations pamphlet for 1974 did not mention any of this. Only the 50 yds from trail restriction)
1. Only honey and liquid scents are permitted 'bait' for bear hunting purposes.
2. Illegal to place any bait for bear at any time other than during the period beginning on the Saturday one week prior to the opening of the bear seasons and continuing through October 15.
3. Illegal to place, use or hunt over more than two bait stations. Such bait stations shall be registered at the nearest Department of Natural Resources office.
- 1975 **Bear Hunting:** (Note: Regulations pamphlet for 1975 did mention these items)
1. Only honey and liquid scents, except honey, were permitted 'bait' for bear hunting purposes.
2. Illegal to place any bait for bear at any time other than during the period beginning on the Saturday one week prior to the opening of the bear seasons and continuing through October 15.
3. Illegal to place, use or hunt over more than two bait stations. Such bait stations shall be registered at the nearest Department of Natural Resources office.*
- 1976 **General Hunting - PROHIBITED BAITING METHODS.**
1. It became illegal to use or hunt over any area containing, paper, plastic, glass, metal or wood containers, or other nondegradable materials or salt. This applied to hunting any species of wild animals or birds at any time.
2. North of Hwy 29 however, it was also illegal to place, use or hunt any species of wildlife (other than bear) over any bait, including honey (other liquid scents were allowed) during the period beginning on the Saturday 3 weeks prior to the opening of the bear season and continuing through the end of the bear season.
* **Repealed** the 2 bait station limit and the requirement to register bait stations with the nearest DNR office.
- Bear Hunting.** It was illegal to place any bait for bear at any time statewide, other than during the period beginning on the Saturday 3 weeks prior to the opening of the bear season and continuing through October 15.

- 1977 **Bear Hunting.** No person could place any liquid scent to attract bear at any time other than during the period beginning on the Saturday 3 weeks prior to the opening of the bear seasons and continuing through October 15.
- 1978 **General Hunting - PROHIBITED BAITING METHODS.**
1. Bait for ALL SPECIES was restricted to only **apples, pastry or liquid scent** North of highway 29 beginning on the Saturday 3 weeks prior to the opening of the bear season and continuing through the end of the bear season.
Bear Hunting - PROHIBITED BAITING METHODS.
1. Place bait or liquid scent used to attract bear at any time other than during that period beginning on the Saturday 3 weeks prior to the opening of the bear season and continuing through October 15.
2. Use any bait material for attracting bear other than **apples, pastry or liquid scent**.
3. Apples and pastry shall be confined to a hole in the ground measuring no more than 2 feet square.
4. Place of hunt over bait or liquid scent used for attracting bear within 50 yards of any trail, road or campsite used by the public.
5. Hunt bear over any bait other than during the time and in the manner provided in this section.
- 1980 **General Hunting - PROHIBITED BAITING METHODS.**
1. Place, use or hunt over bait contained within metal, paper, plastic, glass, wood or other nondegradable materials.
2. Use any bait material for attracting wild animals other than apples, pastry or liquid scent (Statewide).
3. Apples and pastry shall be confined to a hole in the ground measuring no more than 2 feet square.
4. Place or hunt over bait or liquid scent within 50 yards of any trail, road or campsite used by the public.
4. Exception: This subsection does not prohibit hunting over bait materials deposited by natural vegetation or found solely as a result of normal agricultural practices.
- 1982 **General Hunting - PROHIBITED BAITING METHODS. (in effect for the 1983 season)**
1. Restriction on apples changed to allow all fruits, vegetables and grains. These and pastry or liquid scents were all that were legal to use as bait.
- 1991 **General Hunting - PROHIBITED BAITING METHODS.**
1. The 2 square foot hole in the ground was replaced with the 10 gallon limit.
2. All materials became legal to use as bait, except animal parts and byproducts and honey.
*** NOTE:** Salt no longer illegal to use for baiting any species.
- 2002 **Statewide ban on all baiting and feeding**, except for bear hunting & bear dog training purposes.
- 2003 Ban on baiting and feeding only applied to certain identified counties. Started at 24 and rose to 26.
*** Reestablished the 10 gallon baiting rules for all other parts of the state, and no restrictions on feeding.**
- 2004-06
1. Continued the ban on baiting and feeding in 26 southern Wisconsin counties at greatest risk for CWD.
2. Established rules for feeding wildlife and baiting for hunting purposes.
3. Put in place the 2 gallon limit on baiting and feeding of deer required under Wis. Act 240.



- WTD Positives
- Elk Positive
- 2008 CWD mgmt zone

\\S:\BURI\RD\MAPS\CWD\99_Pos_CWD.pdf

ILLINOIS

11/16/2010

Data shown on this map were obtained from various sources and are of varying age and resolution. This map is not intended to be used for navigation, and is not an authoritative source of information about legal land ownership or public access. The Department of Agriculture, Trade and Consumer Protection does not guarantee the accuracy, applicability for a particular use, completeness, or legality of data provided by other sources. No warranty, expressed or implied, is made regarding the accuracy or utility of information depicted on this map. Created by tony.saab@doh.wis.gov

99 Positive CWD Farm-Raised Cervids



Wisconsin Department of Agriculture,
Trade & Consumer Protection
Division of Animal Health



Baiting and feeding of deer in Wisconsin – Update 2008

Keith Warnke, Bureau of Wildlife Management
Chris Jacques, Bureau of Science Services

Executive summary

Since the discovery of Chronic Wasting Disease (CWD) in Wisconsin and Bovine Tuberculosis (TB) in Michigan and Minnesota, the controversy surrounding baiting and feeding deer in Wisconsin has grown. Although contrasting views on the ethics of baiting and feeding are vigorously debated in the hunting community, recent scientific data regarding the presence and distribution of CWD in Wisconsin, and deer population management needs unequivocally require ending deer baiting and feeding. In the past two years, the case for prohibiting baiting and feeding in Wisconsin has been strengthened by additional research into deer disease transmission and the behavioral responses of deer to the repeated placement of small volumes of food.

CWD and TB are transmitted through deer to deer contact and concentrations of deer are likely to favor the transmission of infectious agents. CWD is also transmitted through exposure to a contaminated environment and TB is transmissible from contaminated food and feed sites (Whipple and Palmer 2000). Baiting and feeding cause unnatural concentrations of deer and their activity likely increasing the risk of disease infection and spread. Repeated use of feeding and baiting areas poses a long term risk of disease transmission.

Baiting and feeding practices likely alter deer movement patterns as well as increase the carrying capacity for deer in Wisconsin. These factors complicate deer management in several ways. First, if deer are not moving as much as they historically have or if they are not moving during hunting hours, they are not vulnerable to harvest (the primary tool for deer management). Second, increasing deer carrying capacity through the artificial and repeated placement of food increases deer production and survival while mitigating the limiting effects of a harsh winter. A third factor is the effect on deer distribution. Deer are often drawn by artificial feed into residential clusters or posted property where firearm discharge is unwelcome or access restricted. The resulting patchy distribution of deer often causes hunters to question population estimates and to resist herd reduction efforts.

Deer impact forest composition and structure statewide. Artificially high deer populations supported by baiting and feeding magnify the breadth and depth of deer impacts. In some areas, forest regeneration of all but a few species (e.g. spruce and fir) cannot be maintained without expensive protection measures. Some hardwood forests managed under uneven-aged forestry systems do not contain any successful regeneration of desirable species less than 10-15 years old. In some areas with very high deer populations, even red pine plantations, generally considered unpalatable, are being severely browsed. Foresters have identified deer as a leading statewide barrier to successful regeneration. Overabundant deer populations can cause widespread damage to vegetation, local extirpation of plant species, alteration of habitat for other wildlife species, and reduced biological diversity.

From an agricultural perspective, the discovery of TB in the dairy state would result in the dairy and beef industry losing its TB free status. This would cost producers an estimated \$1.9 million in annual testing costs alone. Michigan estimates that TB has cost its producers \$121 million over 10 years. TB distribution in Michigan is linked to the distribution of deer feeding. Public costs (those covered by state taxpayers) would include testing suspect herds, euthanizing infected herds and disposing of carcasses, paying indemnities for producers, and disinfecting the property.

History

The history of deer baiting in Wisconsin is not very well documented. It appears there was always some level of baiting, particularly in the middle-north forested region, prior to the late 1980s. This low level of activity was probably due to the perception that baiting was illegal. Growing awareness that baiting was legal in the late 1980s and early 1990s is believed to have resulted in a sudden increase in baiting. A survey of Wisconsin deer hunters following the 1992 hunting season revealed that 75% of hunters who baited had been hunting with bait for less than 5 years (84% had hunted deer for more than 6 years; Petchenik 1993).

The same survey also found that statewide during the 1992 gun season, 17% of gun deer hunters reported using bait. However, the frequency of baiting was greater in the north, where 24% of the gun deer hunters reported using bait. A 1999 Wisconsin Department of Natural Resources (WDNR) survey of Wisconsin gun deer hunters found that 16% reportedly used bait (Dhuey and McCaffery 1999). A similar survey of bowhunters found that 34% of archers used bait in 1997 (Dhuey 1998). These are self-reported figures and may be biased low due to public controversy surrounding deer baiting.

In Wisconsin, attempts to sustain overabundant deer populations via artificial feeding programs were initiated during the winter of 1934-35. As is often the case, public reaction to deer starvation is typically characterized by a strong desire to provide artificial feed for starving deer rather than to reduce deer densities to the carrying capacity of the range. Unfortunately, previous experiences of other states are seldom used to guide subsequent deer feeding programs. A notable exception to this general rule was Michigan's steadfast refusal to initiate artificial deer feeding as a part of their game management program (Dahlberg and Guettinger 1956). In 1951, the Michigan Department of Conservation stated that "artificial feeding has been tried over and over again in a dozen states. It's record is 100% bad. It has never worked because the underlying principles are wrong. It has no part in scientific deer management and should be forgotten once and for all (Anonymous 1951)."

The Department of Natural Resources has the public trust responsibility for regulating deer baiting and feeding subject to the limitations in State Statute 29.336. In response to the discovery of CWD in Wisconsin in 2002, the Department, through emergency Administrative Code procedures, placed a statewide prohibition on deer baiting and feeding. In 2003, the Department promulgated a permanent Administrative Code that prohibited deer baiting and feeding. During legislative review of Administrative Code, the Assembly Natural Resources Committee and the Joint Committee on Review of Administrative Rules (JCRAR) objected to the Agency's rule. The JCRAR introduced a bill that made baiting and feeding of deer legal by state statute, and limited the Agency's authority to regulate the practices. The state Assembly and Senate passed the bill and it became law in 2003.

The law allows the DNR to prohibit deer baiting and feeding in counties where CWD has been detected and in counties adjacent to counties where CWD has been detected. Currently, deer baiting and feeding are prohibited in 26 counties and most major conservation groups in the state support prohibiting these practices statewide.

Ethics

Ethics are a continuum of principles and practices by which hunters self-regulate. Ethical arguments have been waged over baiting and feeding in Wisconsin since at least 1990. A Michigan DNR report (Witcomb 1999) also indicated that the controversy among hunters was initially driven primarily by their perceptions of hunting ethics and only recently became a

biological issue as a result of disease concerns. Further, in their ethical arguments of baiting and feeding of deer, Brown and Cooper (2006) suggested that feeding is part of the domestication process that may subsequently lead to increasing desires for private ownership of wildlife. Likewise, Ortega y Gasset (1995) noted that baiting adds to the advantages of hunters over the hunted and consequently may decrease hunter satisfaction and increase concerns of anti-hunters and the non-hunting public. Brown and Cooper (2006) also suggested that on a "Hunter-Shooter" continuum, baiting and feeding practices have contributed to a sharp increase in the number of "shooters" in recent years. Equally disturbing is that shooters have little or no knowledge of deer biology or behavior, have limited hunting skills, and participate for the kill rather than the hunt (Brown and Cooper 2006). Although ethics discussions are interesting philosophically, their relevance to the issue of deer baiting and feeding pales in light of the numerous biological reasons to prohibit the practices.

Disease management

Chronic Wasting Disease is of immediate concern in Wisconsin due to discovery of the disease in the state in 2002. The route of CWD transmission among free-ranging deer remains uncertain (Gear et al. 2006), however, feces and saliva are the most likely sources of prion transmission (Sigurdson et al. 1999). High concentrations of prions at the surface of the tongues of infected animals further implicates saliva as a source of prion shedding and infection of other animals (Bessen et al. 2005). The presence of prions in saliva and oral transmission of CWD through saliva were confirmed by Mathiason et al. (2006). Deliberate eating of feces by deer has been reported while studying food habits of semi-tame deer (Bauer 1977, Shedd 1981). Fecal pellets also may be ingested incidental to feeding (Thompson et al. 2008). It is very likely that CWD will spread more efficiently in higher concentrations of deer. In general, high population densities of deer favor the transmission of infectious agents (Davidson and Doster 1997). Baiting and feeding cause unnatural concentrations of deer increasing the risk of disease infection and spread. In response to the discovery of CWD in a captive deer herd in September 2008, the state of Michigan banned deer baiting and feeding in the entire Lower Peninsula.

Indirect (environmental) transmission of CWD also is efficient. It was previously known that "highly" contaminated sites could transmit CWD to healthy animals (Williams et al. 2002). Subsequent experience suggests that CWD transmission can occur in more subtly contaminated environments. Several mule deer in one enclosure contracted CWD within a year and transmission is believed to have come from excreta deposited more than 2 years earlier. In another enclosure, deer were infected from decomposed carcasses after nearly 2 years (Miller and Wild 2004).

Thompson et al. (2008) assessed the potential for direct and indirect transmission of infectious disease (CWD) for different feeding quantities and methods based on deer use and behavior patterns at experimental feeding sites and natural feeding areas. In their Wisconsin study, deer spent more time foraging at bait piles than elsewhere and spent more time in close proximity to other deer at bait piles. They noted unusually large groups of deer at bait sites. Obviously, deer concentrated their use and spent more time where bait was present, all of which increased the risk of disease transmission. This project further explored the use of a limited amount of bait (the two gallon law) and concluded that while limiting the amount of bait used could limit the amount of feed individual deer consumed, it did not limit deer use of the site. These findings underscore concerns about potential disease contamination and transmission at sites where feed is repeatedly replaced and deer are habituated to revisit. Further, Miller and Williams (2003) found that horizontal transmission of CWD was "remarkably efficient" and warned against concentrating

deer in captivity or by artificial feeding; baiting and feeding cause unnatural concentrations of deer increasing the risk of disease infection and spread.

CWD prevalence was nearly twice as common (10% vs. 6%) near residential developments in Colorado when compared to undeveloped areas suggesting anthropogenic influences (Farnsworth et al. 2005). Possible mechanisms for higher infection rates included "artificial feeding around residences that concentrate deer at a few points on the landscape." Supporting their concern was evidence from Miller and Wild (2004) indicating that CWD can be transmitted via exposure to live infected animals or to environments contaminated with excreta or carcasses from infected animals. A Florida study also found that feeding significantly increased deer density, distribution, and group size near households that were feeding deer (Peterson et al. 2005).

Feeding site density is correlated with TB frequency in deer. Previous studies have confirmed that TB bacteria will live outside in frozen condition for up to 16 weeks (Whipple and Palmer 2000). Recent studies have linked the density of feeding sites with the frequency of TB infection among deer in Michigan (Hickling 2002, Miller and Williams 2003, Hickling et al. 2004). Modeling by Hickling (2002) suggests that TB incidence may not be spreading under current deer herd management (herd reduction and reduced feeding). However, projections indicate that Michigan is unlikely to achieve their goal of TB eradication among wild deer unless there is greater support from stakeholders for more aggressive deer herd reduction and for banning provision of artificial foods (Hickling 2002).

Evidence indicates that there is little or no natural resistance to CWD among deer (Williams et al. 2002) and that very high infection rates (>70% of adults) have been documented in captive situations (Edwards ranch NE, Hall Farm in Portage Co WI, 89% in a study by Miller and Williams 2003). The latter authors state directly that "concentrating deer in captivity or by feeding them artificially may facilitate transmission." Disease establishment elsewhere in Wisconsin remains a major concern. A statewide prohibition of baiting and feeding of deer is one proactive measure that can be taken to reduce the likelihood of disease outbreak and transmission.

Deer population management

Baiting and feeding deer has the potential to increase the carrying capacity for deer in Wisconsin. On average, deer need about 5,000 calories (kcal) per day – the equivalent of about 3 pounds of corn. The cumulative amount of energy being placed in the environment by baiting and feeding deer has not been quantified in Wisconsin. However, DNR questionnaire surveys have shown that 17% of gun- and up to 40% of archeryhunters admit using bait (Dhuey 1998, Dhuey and McCaffery 1999). There is no estimate on the quantity of bait placed by Wisconsin hunters. But, Michigan hunters self-reported placing 13.1 million bushels of bait in 1991 when there was no quantity restriction (Michigan DNR 1992). [A biased implication here as WI hunters no doubt placed much less.]

There are approximately 550,000 rural households in Wisconsin. There is no estimate of the proportion of households that feed deer, nor is there an estimate of the average quantity placed per household. However, any resident that would feed 2 gallons per day during a 150-day winter would place a ton of feed. If they were to feed 2 gallons per day year-round the cumulative quantity would be 2.5 ton per site. At the height (1950- 51) of State sponsored winter feeding of deer, only 1,131 tons of food were distributed (Dahlberg and Guettinger 1956:183).

Numerous ecological studies have shown that supplemental feeding of deer increases diet quality and quantity, which subsequently increases winter survival rates, population productivity, and hence rapid deer population growth (Brown and Cooper 2006). It can be expected that carrying

capacity for deer would increase as energy (food) was added to the system. Exploratory modeling that compared the 1980s with the 1990s suggests that the rise in baiting and feeding activity since 1991 contributed to increasing carrying capacity by a factor of 3-4 times in northern Wisconsin (Van Deelen, unpublished data). An impact of this magnitude from ad hoc baiting and feeding seems plausible when compared with results of 4 ad lib feeders on a square mile in the Cusino enclosure in Michigan. Here carrying capacity was believed to have been increased by a factor of 7-10 times (Ozoga and Verme 1982). Any rise in carrying capacity poses herd control difficulties and potential negative environmental impacts. Though disease risks are of greatest concern, degradation of habitat resulting from baiting and feeding deer has been documented throughout the U.S. and Canada (Brown 2004, Cattet 2004).

It is likely that the yearly and nearly ubiquitous availability of bait and feed is affecting, in part, deer production, survival, distribution and behavior. While some may view these impacts as favorable, most ecologists do not (Waller and Alverson 1997). Baiting and feeding are widely believed by non-baiting hunters to alter daily and geographic behavior of deer and to impair harvest opportunities. Skewed deer distribution also causes many hunters to question population estimates and to resist herd reduction efforts. This artificial energy is also believed to affect timely yarding and winter mortality which are part of the natural process for deer close to the northern limit of their range. Also, to the extent that this artificial energy elevates deer densities, it clearly impacts the distribution and abundance of other plant and animal species in the environment. Baiting and feeding appear to be confounding herd control efforts because deer behavior and distribution (and vulnerability to harvest) can be altered, and herd productivity and survival are likely artificially elevated.

Baiting and feeding causes unnatural concentration of deer

People use baiting and feeding to concentrate deer for enhanced individual hunter opportunity or viewing. In northern deer, seasonal concentration in deeryards is a well-known phenomenon (Blouch 1984). However, the potential for close animal-to-animal contact over a feed pile is fundamentally different than the contact yarded deer experience while foraging on natural food or at a food plot. Food sources in deer yards and food plots are widely distributed over a large area and they are not replaced. Moreover, browse is typically held aloft on the plant stem such that fecal and other contamination is less likely.

Garner (2001) demonstrated that, relative to natural forage, supplemental feeding caused reduced home range sizes, increased overlap of home ranges in space and time and dramatic concentrations of activity around feeding sites. Thompson et al. (2008) (see earlier discussion) replicated these conclusions in Wisconsin finding that large groups of deer spent more time close to feeding sites than at control sites. They also emphasized that limiting the amount of food or bait *does not* limit deer use or contact. There is no safe limit to deer feeding and baiting. Habituating deer to repeatedly return to feeding sites increases the probability of disease transmission as these sites become progressively contaminated with saliva, nasal droppings, urine, feces, and pathogens.

Deer hunting management

Over the past few years, wardens report that baiting and feeding for deer has grown to the point that it impacts the natural movement of deer which negatively impacts hunters' opportunity to harvest. Concerns also include influencing distribution of deer, cabin shooting, and conflict, particularly on public land (Stark 2006).

Illegal baiting and feeding was by far the most prevalent violation encountered by wardens during the past 3 gun deer seasons. The number of illegal baiting violations increased to 331, up

30% from the 2006 record of 254. The number of illegal feeding violations increased 82%, from 45 to 82.

In the southern 1/3 of Wisconsin, baiting and feeding have been prohibited since 2002 in an effort to affect the distribution and prevalence of Chronic Wasting Disease. Wardens reported baiting and feeding violations were up considerably in the Northern, Northeast and West Central Regions, but have decreased in the South Central and Southeast Regions (where baiting and feeding are prohibited). There has not been any effort or initiative to reinstate baiting and feeding in southern Wisconsin and hunter success has not been hampered by its prohibition. Moreover, a Wisconsin study found that baiting, as practiced by hunters, had little to no effect on final fall deer harvest totals (Van Deelen et al. 2006).

Baiting is often one of the contributing factors increasing the amount and intensity of conflict among hunters and landowners on both public and private property. Several years ago hunters reported that they saw more deer the year deer baiting and feeding was banned because deer reverted back to natural movement patterns. In talking to hunters, wardens have learned that baiting has created a widespread reactive response in the hunting community. Many hunters contacted would prefer not to bait, but feel they must bait to compete. Wardens also have reported an exponential increase in cabin shooting, a term used to describe situations where people place feed close to a dwelling, illuminate the feed with a light, and illegally shoot deer at night from the dwelling. Consequently, wardens are spending tremendous amounts of time on issues relating to baiting and feeding. This is time that could be spent elsewhere if baiting and feeding were not consuming a growing amount of the financial and human resources in the warden service.

Food plots

The Department does not promote food plots as an acceptable deer management practice for many of the same privatization, ethical, and human conflict issues identified above. Additionally, planting food plots can have the same effect of providing additional (and unnecessary) energy as a bait site or feeding station, however that effect is for a more limited time (food is not replaced) and spread geographically over a greater area. As a result deer to deer contact and local site contamination is less likely to occur at a food plot than at a bait site or feeding station thus significantly reducing the risk of disease transmission at a food plot.

Ecological impact of deer

Forestry

Deer impact forest composition and structure statewide. Artificially high deer populations supported by baiting and feeding magnify the breadth and depth of deer impacts. Overabundant deer populations affect valuable trees, shrubs, and flowers. In some areas, foresters are unable to regenerate preferred tree species following logging operations due to deer overbrowsing on tree seedlings. Long-term overpopulation of white-tailed deer and a ubiquitous ground cover of Pennsylvania sedge have dramatically reduced or eliminated regeneration of commercially important northern hardwood species on approximately 35,000 acres of forestland owned by International Paper Company (IP) located in the southern Upper Peninsula of Michigan and northern Wisconsin (Proceedings of the Michigan Society of American Foresters 2005). Some hardwood forests managed under uneven-aged silvicultural systems do not contain any successful regeneration of desirable species less than 10-15 years old. In some areas with overabundant deer populations, even red pine plantations, generally considered unpalatable, are being severely browsed. Foresters have identified deer as the number one statewide barrier to successful forest regeneration and have reported substantial problems where deer populations exceed 20-25 deer per square mile of deer range. Consequently, overabundant deer populations

can cause widespread damage to vegetation, local extirpation of plant species, alteration of habitat for other wildlife species, and reduced biological diversity.

High deer populations and over browsing of forests in Wisconsin has drawn the attention of forest certification auditors. Observations during a recently completed 2008 field audit on Wisconsin's County Forest system led to the following recommendation from the lead Forest Stewardship Council (FSC) field auditor; "The Wisconsin County Forest Program in cooperation with WDNR should take additional measures to reduce the deer population to levels where ecosystem health is not compromised by deer browse. " Observations by forest certification auditors include: "Deer browse in certain areas of the State is contributing to regeneration failures of desired species. Wisconsin County Forest Program is to be commended for its attempts to influence the legislature regarding deer harvest goals and policy, however, deer population numbers and impacts to regeneration remain problematic".

During a field visit in Bayfield County the forest certification auditor observed a site where the county had conducted an oak shelterwood cut in 2006 retaining 50 sq ft of basal area. The sale was 47 acres in size and the county fenced 29 acres. The auditor called the difference between the fenced and unfenced areas "dramatic". The auditor went on to say that this demonstration provided a "compelling case that a forest with ~35 deer per sq mile (which is over 70% above goal) is severely impacted."

Aldo Leopold warned of the threats to forests from overabundant deer in the 1930s and 1940s, and subsequent research (e.g., Côté et al. 2004; Rooney 2001; Rooney and Waller 2003; Horsley et al. 1983) has confirmed a host of direct and indirect ecological effects which accumulate over time. Tremblay (2005) summarized these effects as follows:

"By foraging selectively, deer affect the growth and survival of many herb, shrub, and tree species, modifying patterns of relative abundance and vegetation dynamics. Cascading effects on other species extend to insects, birds, and other mammals. In forests, sustained overbrowsing reduces plant cover and diversity, alters nutrient and carbon cycling, and redirects succession to shift future overstory composition. Many of these simplified alternative states appear to be stable and difficult to reverse."

Tremblay's last observation is particularly troublesome; i.e., reducing deer density does not guarantee that their ecological effects can be reversed. High deer populations can therefore directly threaten long-term forest sustainability (Proceedings of the Michigan Society of American Foresters 2005).

In Pennsylvania, as in other eastern states, deer have increased in abundance since the 1920s. Likewise, negative deer impact has increased on tree regeneration, and on shrub and herbaceous vegetation survival. Pennsylvania forest certification is threatened by the lack of regeneration due to overbrowsing from deer. Browsing by white-tailed deer was identified as the most important biological impediment to sustainable forestry on a majority of 16 certification assessments conducted in the northeastern United States (Proceedings of the Michigan Society of American Foresters 2005).

Specific forestry concerns include:

1. Failure of regeneration, resulting in unsustainable forest management.

- In a 2005 reforestation survey of practicing DNR foresters, deer browse was identified as the most significant barrier to successful artificial regeneration; 81% of respondents identified deer browse as a problem.

- Forest certification specifies regeneration standards. Deer browsing can result in regeneration failures that require corrective actions to maintain certification. These corrective actions can be expensive or infeasible, but if not implemented could result in the loss of certification.
2. Increased regeneration costs, through regeneration failure, repeated silvicultural treatments, and expensive protection of regeneration (e.g. fencing).
 3. Reduced tree growth rates and productivity, through regeneration failure, unacceptable stocking of desired species, delayed establishment, and slower growth from repeated browsing.
 4. Altered forest tree composition, through browsing preferences and impacts on regeneration. Some species are killed by browsing while others are placed at a competitive disadvantage. Examples:
 - Hemlock and white cedar: these historically predominant species are very susceptible to browsing, and regeneration is often reduced, resulting in a significant shift in ecosystem composition.
 - Maples, birches, and oaks: regeneration of these economically important species often is severely impacted, and can be eliminated under severe browsing pressure.
 - White pine: regeneration often is impacted, resulting in reduced growth and extended establishment period.
 - Red Pine: avoided at low deer populations with abundant food, but deer can cause significant damage when other food sources are lacking.
 5. Altered composition of understory plant communities, through browsing. At high deer densities, seedling and herbaceous plants can be extirpated, leaving only barren ground, grasses, or ferns. Lilies and orchids are particularly vulnerable.
 6. Altered composition of animal communities, through alteration of plant community composition and structure.

Deer herbivory in Wisconsin forests is causing economic and ecological losses by reducing tree survival and growth, and altering species and age class composition. The continued overabundance of deer can directly threaten the future of sustainable forestry. Research in Pennsylvania has shown that future economic impacts are avoidable, and that detrimental ecological impacts to forest plant and animal communities are preventable but only if action is taken to reduce deer numbers. The opportunity to reduce the economic and ecological effects is within reach if deer numbers are reduced in a timely and strategic manner.

Ecosystems

By the nineteenth century, natural historians recognized that overabundant deer could exclude certain plants from European landscapes (Watson 1983). Systematic studies of deer overabundance, however, did not occur until after the emergence of wildlife ecology, developed by Aldo Leopold. Based on his experiences with the dangers of deer overabundance, Leopold was the first to discuss threats posed by growing deer herds (Leopold 1933, Leopold et al. 1947). Leopold's warnings sparked an initial period of concern in the 1940s and 1950s, mainly in the midwestern United States, which prompted the construction of exclosures to demonstrate the influence of native deer on forest regeneration (Beals et al. 1960, Pimlott 1963, Stoekler et al. 1957, Webb et al. 1956). Interest in deer impacts expanded in the 1970s, primarily in the Midwest and the Allegheny region of New York and Pennsylvania (Anderson and Loucks 1979, Behrend et al. 1970, Harlow and Downing 1970).

Seminal experiments on the population dynamics of white-tailed deer on the George Reserve in Michigan were conducted in the 1970s (McCullough 1979). The introduction of deer into a fenced area demonstrated that, because deer have such a high potential rate of increase, they can

easily overwhelm the carrying capacity of their environment and consequently have strong and persistent negative impacts on vegetation (McCullough 1979, 1997).

In North America, the study of deer impacts soon broadened to include birds (Casey and Hein 1983), interactions with weeds (Horsley and Marquis 1983), and long-term effects on forest composition (Frelich and Lorimer 1985) and sapling-bank diversity (Whitney 1984). By the late 1990s, impacts resulting from high deer densities were being tallied in review articles (Alverson et al. 1988; Gill 1992a, b; McShea and Rappole 1997a, b; Miller et al. 1992). Tilghman (1989) quantified direct effects of overbrowsing on regeneration of tree seedlings, wood shrubs, and herbaceous plants in hardwood forests in northwestern Pennsylvania while DeCalesta (1994) noted deer overbrowsing contributed to declines in species richness and abundance of canopy-nesting songbirds. To this end, high deer populations in northern Wisconsin (and elsewhere) artificially supported by baiting and feeding are ecologically troubling. Forest regeneration is negatively impacted by high deer populations and the forest industry will continue to be affected by wholesale type conversions of Wisconsin's forests.

Recent research of plant communities in Wisconsin provides valuable information on changes in species composition over time and clues about the cause of these changes. The ecological impacts associated with deer herbivory on native plant communities are large and long term. Excess herbivory on palatable and browse-sensitive plant species can restructure native plant communities such that biodiversity is lost, species composition is altered, and vegetative structure is simplified. Numerous adverse effects of overabundant deer populations on plant species composition, regeneration and productivity (particularly on eastern hemlock, northern white cedar, Canada yew, yellow birch, and numerous herbaceous species) have been noted throughout northern Wisconsin and nearby areas of the Lake States since the early 1940s (Beals et al. 1960, Mladenoff and Stearns 1993, Rooney and Waller 2003, LeBouton 2005, Hurley and Flaspohler 2005). These cumulative impacts have contributed to ecological degradation of forested ecosystems (Stoekeler et al. 1957, Waller and Alverson 1997, Rooney 2001) and economic losses have been observed in forestry regeneration projects across Wisconsin.

Although many plant species are negatively impacted by high deer populations, some benefit. Species that have benefitted from deer overbrowsing include both common native species and invading exotics. Decreasing species are mostly rarer native forbs that appear sensitive to desiccation, anthropogenic disturbance, and/or herbivory by white-tailed deer. The fact that the species that have increased are the ones that resist or tolerate deer herbivory while many of those that have decreased are sensitive to deer suggests that deer may be a key driver of the shifts we observe in these forests.

Agricultural Industry

An outbreak of Bovine Tuberculosis in wild deer would result in Wisconsin losing its TB-free status. Agriculture officials estimate that dropping from TB-free to TB-modified accredited advanced (that's a one-level drop on a five-level scale) would cost Wisconsin dairy and beef producers about \$1.87 million in testing costs annually. The drop in status would mean that other states and nations would require each animal shipped to have a TB test, where they now are accepted in most places without being tested.

There are additional costs that producers would incur. Infected herds would not be sold and producers would have to feed cattle they'd ordinarily be shipping until the herd was depopulated. Post depopulation, there would be further downtime while cleaning and disinfection occurred. Dairy plants may decide not to accept milk from quarantined farms due to perceived liability issues. Public costs would include testing suspect herds, euthanizing infected herds and disposing

of carcasses, paying indemnities for producers, and disinfecting the property. There may be loss of consumer confidence in Wisconsin dairy products and loss of markets overseas.

In Michigan, the projected cost to producers alone is \$121 million over 10 years without accounting for costs to other segments of the industry or any multiplier effects. Minnesota is just beginning an economic analysis of what their TB outbreak has cost to date. That will be helpful to us in projecting costs if we found ourselves in a similar situation. Given Wisconsin's position as a leading milk producing state, we have more to lose than Minnesota or Michigan. Recently brucellosis in cattle herds in Montana and Wyoming has been linked to brucellosis in elk and bison in the Greater Yellowstone Area. Wyoming's infected herd has been directly linked to Wyoming elk feeding grounds.

Conclusion

This paper explored the history and ethics of deer baiting and feeding and evaluated the impacts and risks these practices bring to deer disease and population management, ecological conservation, and to the agricultural and forest industries in Wisconsin. Repeated use of baiting and feeding sites poses a long term risk of disease transmission. Baiting and feeding practices likely alter deer movement patterns as well as increase the carrying capacity for deer in Wisconsin. High deer populations are a leading statewide barrier to successful forest regeneration. Overabundant deer populations can cause widespread damage to vegetation, local extirpation of plant species, alteration of habitat for other wildlife species, and reduced biological diversity. Banning baiting and feeding statewide is not a single comprehensive solution to these challenges. However, baiting and feeding deer greatly exacerbate these challenges (and others) and confound public efforts to address them. Banning baiting and feeding deer is an easy and effective approach to mitigate the unnecessary complication and risks associated with these practices.

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Chronic Wasting Disease and the Science in support of the Ban on Baiting and Feeding Deer.

Timothy R. Van Deelen Ph.D. Wisconsin DNR Research

Summary

Reliable science provides support for a ban of baiting and feeding of white-tailed deer to reduce disease risks for Chronic Wasting Disease (CWD). Peer-reviewed research papers published in reputable scientific journals indicate the following:

- Deer can get CWD by ingesting something contaminated with the disease prion
- CWD prions may be shed in feces and saliva
- Disease course and symptoms indicate high potential for transmission where deer are concentrated
- Evidence from captive situations indicates that deer can get CWD from highly contaminated environments.
- Baiting and Feeding causes unnatural concentration of deer
- Reduction of contact through a ban on baiting and feeding is likely very important to eradicating or containing a CWD outbreak.
- Baiting and feeding continues to put Wisconsin's deer herd at risk to other serious diseases

In addition, experts in CWD, wildlife disease and deer nutrition support bans on baiting and feeding as part of a comprehensive strategy to prevent and/or manage CWD.

Under a baiting and feeding ban, disease outbreaks are more likely to be smaller in scale and more apt to be contained or eliminated. With the long CWD incubation period and other factors that make discovery of a new outbreak difficult, an outbreak that is already widespread when detected because of baiting and feeding may not be able to be contained or eliminated.

This document provides details and explicit links to the supporting science.

Chronic Wasting Disease and the Science behind the Ban on Baiting and Feeding Deer.

Some critics claim that there is no scientific support for the judgment that resulted in the ban. This is simply untrue. In this document, I review some of the scientific evidence in support of the baiting and feeding ban.

The science in support of the ban on baiting and feeding is strong and comes from a number of diverse scientific sub-disciplines (veterinary medicine, wildlife ecology, biochemistry, physiology, etc.). Consequently, there is no single comprehensive study or paper that, by itself, demonstrates the CWD-related effects of baiting and feeding of wild deer (good or bad). Evaluating the science relative to baiting and feeding requires integration of scientific evidence from several different sub-disciplines.

The quality of scientific evidence is an issue for some critics who claim that other science or other experts fail to support the ban. It is also an issue in trying to reach an objective scientific judgment. In keeping with established scientific practice, I consider articles published in reputable, peer-reviewed, scientific literature to be of the highest quality. Peer-review insures that articles have been rigorously evaluated and endorsed by qualified specialists. A secondary level of scientific rigor is the unpublished opinion or unpublished research of recognized experts working on the topic of interest. An example of this would be the opinion or unpublished research on CWD transmission from investigators who have established their expertise through peer-reviewed publication on other CWD-related topics. A very distant third level of quality is the unpublished opinion of recognized experts working on distantly related topics. Again, scientific expertise is demonstrated by frequent publication in reputable peer-reviewed scientific journals.

The following is a partial list of scientific evidence that suggests that baiting and feeding of wild deer elevates the risk of CWD transmission. This list focuses almost entirely on disease risks posed by CWD although other diseases (e.g. Bovine Tuberculosis) may pose even greater risks and there are many other reasons (e.g. ecological, social, nutritional) why baiting and feeding deer is inappropriate management. This list is intended to be explicit in its links to peer-reviewed science. Complete literature citations are included at the end of the document for readers who want to read the original scientific articles.

- **CWD is transmitted laterally (live diseased deer infect other deer)**
Researchers who have studied CWD epidemics in both captive and free-ranging deer populations have determined that CWD is both contagious and self-sustaining (meaning that new infections occur fast enough for CWD to persist or increase over time despite the more rapid deaths of the diseased individuals;

Miller et al 1998, 2000). Supporting evidence comes from observational data (Williams and Young 1992; Miller et al. 1998, 2000) experimental data, and epidemiological models fit to observed prevalences in free-living deer (Miller et al. 2000, Gross and Miller 2001, M. W. Miller unpublished in Williams et al. 2002). These studies suggest that observed prevalences and rates of spread of CWD in real populations could not occur without lateral transmission. For example, maternal transmission (doe to fawn) if it occurs, is rare and cannot explain most cases where epidemiologic data are available (Miller et al. 1998, 2000). Similarly, indirect lateral transmission (e.g. from a contaminated environment) may require unusually high levels of contamination (see below; Williams et al. 2002). Nonetheless, emerging research from Colorado suggests that indirect lateral transmission from environmental contamination appears to play a role in sustained and recurrent epidemics (Miller 2002).

- **Deer can get CWD by ingesting something contaminated with the disease prion**
Six mule deer fawns were fed a daily dose of 2g (0.07 ounces) of brain tissue from CWD-positive mule deer in a tightly controlled experiment for 5 days. Another three were fed the same doses using brain tissue from CWD-negative mule deer. All deer were held separately in indoor pens that had never before held deer. The fawns were then killed and necropsied at specific intervals 10 to 80 days post-inoculation. At 42 days and later post inoculation, all fawns dosed with CWD-positive tissue tested positive for CWD prions in lymph tissues associated with their digestive tracts (Sigurdson et al. 1999). Other transmissible spongiform encephalopathies (TSEs; Kuru, transmissible mink encephalopathy, bovine spongiform encephalopathy [BSE]) appear to be transmitted through ingestion of prion-infected tissue as well (Weissmann et al. 2002). Due to the human health crisis associated with eating BSE-infected beef in Europe, many other researchers working with TSEs, including CWD (Sigurdson et al 1999, 2001), have traced the movements of infectious prions of orally-infected animals through the lymph tissue embedded in the intestinal lining, into nervous tissues associated with the digestive tract (e.g. Maignien et al 1999, Beekes and McBride 2000, Heggebo et al. 2000, Huang et al. 2002) and eventually to the brain via the nervous system (Sigurdson et al. 2001, Weissmann et al. 2002). Experimental studies using hamsters have shown that prions can infect through minor wounds in the skin (Taylor et al. 1996) and that infection through minor wounds on the tongue was more efficient than infection from ingestion (Bartz et al. 2003). These studies not only demonstrate that an oral route of infection is possible, but are beginning to provide specific details about the pathways involved in the movement of infectious prions into the central nervous system and other organs (Weissmann et al. 2002).
- **CWD prions may be shed in feces and saliva**
Following oral exposure, prions associated with many TSEs (Maignien et al 1999, Huang et al. 2002) including CWD (Sigurdson et al. 1999; Miller and Williams 2002 and Spraker et al. 2002 cited in Williams et al. 2002) both accumulate and replicate in the lymph tissues associated with the gastrointestinal tract - particularly in lymph tissues in contact with the mucosa lining the inside of the intestines (e.g. Peyer's patches, Weissmann et al. 2002). In infected deer, CWD prions also accumulate in the pancreas and various other glands of the endocrine system (Sigurdson et al 2001). Experiments with hamsters demonstrated that infectious prions can travel from the brain to the tongue along tongue-associated cranial nerves (Bartz et al. 2003). During digestion, the liver, pancreas, intestinal mucosa, and other glands secrete chemicals needed for digestion (Robbins 1983) and cells lining the inner surface of the intestine continuously die and slough off providing potential physical mechanisms for prion shedding into the intestines (others are likely). This is evidence that infectious prions are likely shed in the feces and saliva (Sigurdson et al. 1999).
- **Disease course and symptoms indicate high potential for transmission where deer are concentrated**
Appearance of CWD symptoms in an infected deer lags initial exposure by a variable time period on the order of roughly 12-24 months or more ([E. S. Williams and M. W. Miller unpublished; E. S. Williams, M. W. Miller, and T. J. Kreeger unpublished] cited in Williams et al. 2002). Once clinical symptoms are observed, deer enter a symptomatic phase that may last on average 1-4 months before they invariably die (Williams et al. 2002). Symptoms are initially subtle but eventually include behaviors likely to contaminate a site with bodily fluids (e.g. excess urination, excess salivation including drooling and slobbering, and uncontrollable regurgitation, Williams et al. 2002). Deposition of feces increases with concentration of deer activity. This is both obvious and intuitive and pellet group counts have been used as an index of deer density since the 1940's (Bennet et al. 1940). During winter, northern deer defecate about 22 times a day (Rogers 1987). At least one study (Shaked et al. 2001) has reported detection of an altered form of the

infectious prion in the urine of hamsters, cattle, and humans with TSEs. This altered form, while not as virulent, produced sub-clinical prion infections following experimental inoculation. Shedding of infectious prions is likely progressive during the course of disease from infection to death (Williams et al. 2002). Replication and presence of infectious prions in gut-associated lymph tissue early in the incubation (Sigurdson et al. 1999, Weismann et al. 2002) and epidemiological modeling (M. W. Miller unpublished cited in Williams et al. 2002) suggest that shedding precedes the onset of symptoms in both elk and mule deer.

In this regard, Garner (2001) documented a particularly alarming behavior among deer using frozen feed piles. Deer used the heat from their mouths and nostrils to thaw and dislodge food such that frozen feed piles were dented with burrows made from deer noses. He reported that "Throughout the winter multiple numbers of deer were observed working in and around the same feed piles. I suspect that each deer that feeds this way at a frozen feed pile leaves much of its own saliva and nasal droppings in the field pile at which its working"(Garner 2001, p. 46).

- **Evidence from captive situations indicates that deer can get CWD from highly contaminated environments.**
In addition to direct lateral transmission, researchers suspect that deer can be infected indirectly from contaminated environments. Contaminated pastures "appear to have served as sources in some CWD epidemics although these observations are anecdotal and not yet corroborated by controlled studies" (Miller et al 1998, [M. W. Miller unpublished and E. S. Williams, W. E. Cook, and T. J. Kreeger unpublished] cited in Williams et al 2002). The potential for transmission from the environment is a function of the degree of contamination and the resistance of disease prions to chemical breakdown (Williams et al 2001, 2002). Consequently, the highest prevalences recorded for CWD outbreaks have been in captive situations (Williams and Young 1980, Williams et al. 2002) where because of abnormal concentration, indirect and direct transmission likely occur together (Williams et al. 2002). At high concentration, the persistence of the CWD prion in contaminated environments, may be a serious obstacle to disease eradication (Williams et al. 2002).
- **Baiting and Feeding causes unnatural concentration of deer**
People use baiting and feeding to concentrate deer for enhanced hunter opportunity or viewing. In northern deer, seasonal concentration in deeryards is a well-known phenomenon (Blouch 1984). However, the potential for close animal-to-animal contact over a feed pile is fundamentally different than the contact yarded deer experience while foraging on natural food. In deeryards, deer eat a variety of woody browse plants and arboreal lichens (Blouch 1984) scattered across a large area. In terms of biomass and nutrition, the best source of browse and lichens may be litter-fall rather than live plant material growing in the understory (Ditchkoff and Servello 1998). Food sources in deer yards (litter and understory plants) are widely distributed over a large area and they are not replaced. Moreover, browse is typically held aloft on the plant stem such that fecal contamination is less likely. Foraging by wintering deer is an optimization process. Energy gains associated with eating need to be balanced against energy costs associated with travel and exposure (Moen 1976). Yarded deer with little or no access to supplemental food maintain relatively large overlapping home ranges (e.g. 110 acres in Minnesota [Nelson and Mech 1981], 480 acres in Michigan [Van Deelen 1995], 318 acres in Quebec [Lesage et al. 2000]) suggesting that foraging widely on a diffuse food source is normal. Garner (2001) monitored 160 radio-collared deer for 2 fall/winter periods in northern Michigan and documented their behavior over feeding sites using both telemetry and direct observations. He demonstrated that, relative to natural forage, supplemental feeding caused reduced home range sizes, increased overlap of home ranges in space and time and dramatic concentrations of activity around feeding sites.
- **Reduction of contact through a ban on baiting and feeding is likely very important to eradicating or containing a CWD outbreak.**
Epidemiological models fit to real-world data on CWD outbreaks in mule deer predict that local extinction of infected deer populations is likely (Gross and Miller 2001). The predicted outcomes of these models are highly sensitive to input estimates of the amount of contact between infected and susceptible deer meaning that small reductions in contact rates can dramatically reduce the rate at which prevalence changes during an epidemic (Gross and Miller 2001). Garner (2001) demonstrated that baiting and feeding was associated

with deer concentration, extensive face-to-face contacts, and increasing overlap of deer home ranges. White-tailed deer have contacts from social and grooming behaviors apart from contact over baiting and feeding sites (Marchinton and Hirth 1984) but social groups of whitetails tend to be small during most of the year (4-6 individuals, Hawkins and Klimstra 1970). Whitetail physiology and behavior are adapted to selective foraging on nutritious plants (Putman 1988). Moreover, social groups tend to exclude one another by using different areas or by using shared areas at different times (Mathews 1989, Porter et al. 1991). Concentration of deer activity over feeding sites increase both direct and indirect contact between groups by increasing home range and core area overlap and by increasing the amount of time that unrelated deer feed in close proximity to each other (Garner 2001).

Eliminating these contacts has added significance because CWD is a uniquely difficult disease to manage and study. There is no treatment and no vaccine. Moreover CWD is difficult to track in a population because of long incubation periods, subtle early clinical signs, a resistant infectious agent, potential for environmental contamination and incomplete understanding of transmission mechanisms. These characteristics make prevention critically important (Williams et al. 2002).

- **Baiting and feeding continues to put Wisconsin's deer herd at risk to other serious diseases**
CWD is not the only infectious disease that threatens Wisconsin's deer herd. One, Bovine Tuberculosis (TB) warrants special attention because the link to baiting and feeding is clear. TB is an infectious bacterial disease that is spread from animal to animal through inhalation of infectious aerosols or ingestion of other infectious body fluids (e.g. saliva). TB bacteria can live outside of an animal for as long as 16 weeks on a frozen feed pile (Whipple and Palmer 2000 cited in Garner 2001) and Garner (2001) demonstrated that supplemental food increased close contact among wild deer through a number of mechanisms. Garner (2001) also demonstrated extensive home range overlap between a TB-positive deer and 15 other radio-collared deer in northern Michigan. Recent epidemiological research suggests that baiting and feeding of deer enabled the TB outbreak in Michigan to persist and spread and that declines in TB prevalence were associated with a ban on baiting and feeding (O'Brien et al. 2002). Current attention is focused on the CWD outbreak in southwestern Wisconsin. However, should CWD or other infectious disease show up elsewhere, baiting and feeding are likely to facilitate or enhance an epidemic. TB has been confirmed on 6 captive game farms in Wisconsin and the presence of over 800 captive cervid farms statewide suggests that the disease risks associated with baiting and feeding are not confined to the known CWD-infected area of southern Wisconsin.
- **What do the experts say relative to artificial feeding and CWD and disease transmission?**
A discussion of CWD in a review of the scientific literature on captive deer done for The Wildlife Society (Professional society for wildlife biologists, managers, and researchers; publisher of 3 premier peer-reviewed scientific journals on wildlife ecology and management)...
"Concentration of deer and elk in captivity or in the wild by artificial feeding may increase the likelihood of transmission between individuals." (DeMarais et al. 2002, p. 6).

In a review of the technical literature on CWD by the top CWD specialists in the world...

"Concentrating deer and elk in captivity or by artificial feed probably increases the likelihood of direct and indirect transmission between individuals. Transmission via contact between susceptible and infectious individuals probably requires more than just transient exposure. Thus, minimal fence-line exposure does not pose excessive risk of transmission; however, prolonged fence-line contact increases the possibility of transmission" (Williams et al. 2002, p.557).

In a peer-reviewed paper on the epidemiology of Bovine TB by the team of veterinarians, epidemiologists, and wildlife researchers working to contain the outbreak in Michigan...

"Previous qualitative examinations of the origins of tested deer already suggested that TB positive animals were more likely to come from the core area. Our new analysis quantifies that risk. The high risk associated with the core coincides with an area of historically prevalent and intensive baiting and supplemental feeding of deer - practices that were likely crucial to the establishment of self-sustaining TB in the deer population" (O'Brein et al. 2002 and citations within).

In oral presentations given to the Texas chapter of the Society of Range Management (Oct. 6 2000) and to the Southeastern Deer Study Group (Feb. 19 2001) by Dr. Robert D. Brown, Professor and Head of the Department of Wildlife and Fisheries Sciences at Texas A&M University, Internationally recognized expert on deer and deer nutrition...

"One of the major points of this paper is the concern over transmission of disease. It amazes me that we have not done more studies in Texas on disease transmission at food plots and deer feeders, whether they be for supplementing the deer or for baiting. We know that in 1994 tuberculosis (TB) was first detected in wild deer in Michigan. It is now in a 5-county area, and has spread to carnivores and dairy herds"... "In Wyoming and around Yellowstone Park, brucellosis is wide spread among cattle, elk, and bison, the latter two species being concentrated on feeding grounds in the winter. Likewise, Chronic Wasting Disease (CWD) has now been observed in free-ranging elk and mule deer in several western states. Since CWD is passed animal to animal, concentrations caused by supplemental feeding is believed to increase the spread of the disease" (Brown Unpublished).

In a report issued by a panel of internationally recognized wildlife disease experts who reviewed Colorado's CWD management program...

"Regulations preventing...feeding and baiting of cervids should be continued" (Peterson et al. 2002).

In a comprehensive review of the ecological and human social effects of artificial feeding and baiting of wildlife prepared by the Canadian Cooperative Wildlife Health Centre, Department of Veterinary Pathology, University of Saskatchewan...

"Significant ecological effects of providing food to wildlife have been documented through observation and experimentation at the individual, population, and community levels. The increased potential for disease transmission and outbreak is perhaps of greatest and immediate concern; recent outbreaks of bovine tuberculosis and chronic wasting disease in Canada and the United States giving credence to this point. Nevertheless, even if disease is prevented, other significant ecological concerns exist" (Dunkley and Cattet 2003, p. 22).

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- Julia Langenberg DVM (Wildlife Veterinarian, Wisconsin DNR; CWD, wildlife diseases)
- Nohra Matus-Pinilla DVM, Ph.D. (Research Epidemiologist, Illinois Natural History Survey, University of Illinois; wildlife diseases, epidemiology)
- Nancy Mathews Ph.D. (Assoc. Professor of wildlife ecology, UW-Madison; deer ecology and behavior)
- Keith McCaffery M.S. (Deer specialist, Wisconsin DNR, retired; deer ecology and management)
- Robert Rolley Ph.D. (Population Ecologist, Wisconsin DNR; population dynamics, deer management)

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***Deer Management
for 2000 and Beyond***

A Wisconsin Conservation Congress Initiative

**Final Report
of the
Deer Baiting and Feeding
Study Group**

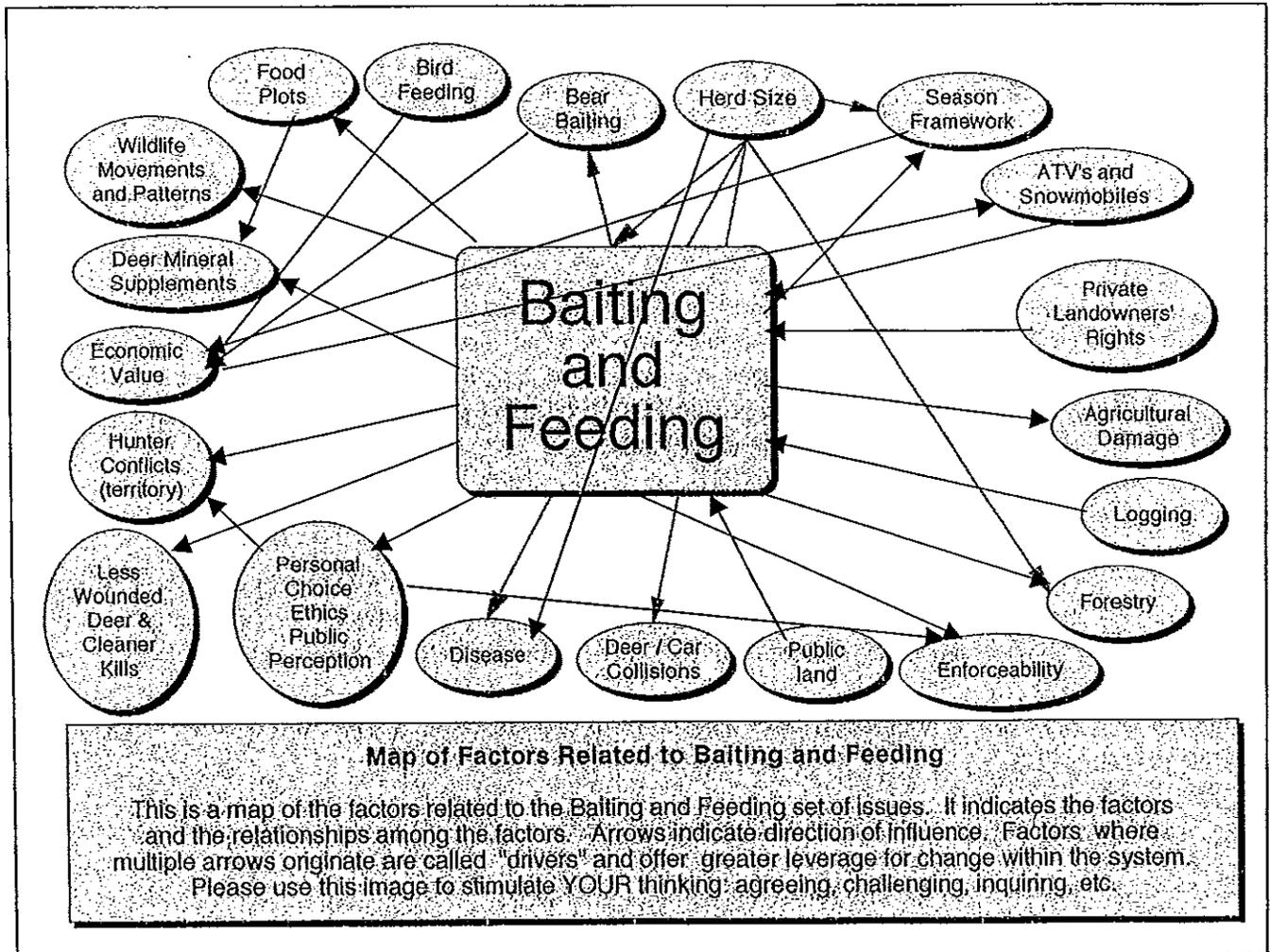
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II. Study Group Focus

To study the impact of feeding and baiting deer in Wisconsin... consider the health of the deer herd, other wildlife and domestic animals, economic benefits, agriculture, ecological habitat, and other social and recreational interests, and make any necessary recommendations.

III. Map of Related Issues



IV. Summary of Recommendations

We recommend that the following definitions be adopted:

Definition of baiting: The placing of food materials in the out of doors for the purpose of harvesting deer.

Definition of recreational feeding: The placing of food materials in the out of doors for the purpose of viewing or photographing deer.

Definition of supplemental feeding: The placing of food materials in the out of doors for the purpose of sustaining the deer herd.

We recommend the following additions/changes to current law:

Baiting:

1. Allow baiting with six-gallon limit per hunting site, with three sites per forty acres or less. Bait shall be spread over a ten-foot by ten-foot area. Baiting season runs from September 1 through the end of deer season. Bait must be placed fifty yards from a dwelling and one hundred yards from a road posted forty five miles per hour or higher. Baiting regulations will be the same on private and public lands.
2. We recommend that baiting rules adopted will remain constant through all deer seasons
3. During deer hunting seasons bait cannot be hauled by an ATV or snowmobile on public land except for those roads on official map open to ATV trails from October 1st through the end of deer hunting (2/05). Exception: persons holding a DNR disabled hunting permit.
4. Substantial increase of fines and one year revocation for violation of baiting regulations
5. No baiting within 100 yards from hard surface road posted at 45 miles per hour or more
6. All types of feeders for baiting of deer are illegal
7. The Feeding and Baiting Group recommends that the DNR continue and intensify monitoring of Wisconsin's wild deer and other sentinel species for TB and other emerging diseases

8. The baiting and feeding group recommends Department of Agriculture Trade and Consumer Protection (DATCP) and DNR should continue and intensify surveillance and control programs for TB and other emerging disease in captive deer and elk. Specifically we encourage:
 1. DATCP to develop a faster more effective system for TB testing, preferably in state
 2. DATCP and DNR to more effectively enforce any farm fencing requirements
 3. DATCP and DNR to consider limiting importation to Wisconsin farms of deer/elk from states/areas with significant type of disease.
9. We recommend that the DNR distribute a color brochure to all deer hunters that describes and illustrates signs of TB in deer to prevent a population disease problem.
10. The DNR should have the legal authority to increase control of baiting and feeding in the disease affected area and in a reasonable buffer zone if a significant disease is found in Wisconsin wild deer.
11. If disease is found we recommend that the Isotope Strontium test be performed to determine where the affected animal came from.
12. It is illegal to place food, salt, mineral blocks or other products that could be used as an attractant to deer within 50 yards of a dwelling used for occupancy from September first to the end of deer seasons with the exception of bird food that would be 4 feet off ground.
13. Bait should be spread over a minimum ten-foot by ten-foot area.

Recreational Feeding:

1. We recommend that recreational feeding be allowed from May 1 through August 31, with the same quantity as baiting (six gallons) within one hundred yards of a dwelling or habitable residence, with the exception of an area where the discharge of a firearm is prohibited.
2. One six-gallon site per dwelling.. One site per forty acres.
3. No feeding within 100 yards of a county state or federal highway (2/12) or any hard surface road posted at 45 miles per hour or more
4. Bait should be dispersed in a minimum 10 feet by 10 feet area.
5. Spin cast type feeders or hand spread only. To address disease transmission, feeding sites should be rotated.

Supplemental Feeding

1. The committee recommends that supplemental feeding should be allowed. The allowable amount is three ten-gallon sites per forty acres or less.
2. Feed must be placed 300 yards from a county, state, or federal highway (2/12) or hard surface road posted at 45 miles per hour or more.
3. Supplemental feeding should be allowed from the end of deer hunting season through April 30.
4. The DNR should have the legal authority to increase control of baiting and feeding in a disease affected area and in a reasonable buffer zone if a significant disease is found in Wisconsin wild deer.
5. Feeding may be done in a 10 feet by 10 feet area of 10 or less gallons
6. Spin cast type feeders or hand spread only. Feeding sites should be rotated.
7. Supplemental feed should be 300 yards from road and no feeding within 50 yards of public trails. Public trails on private land are exempt from supplemental feeding regulations.
8. We recommend that emergency feeding be allowed and be regulated by the D.N.R.

The study group recognizes the wording of substitute amendment to Assembly Bill 225, an Act to create 29.335 of the statute; relating to: feeding deer for purposes other than hunting; and granting rule-making authority.

29.335 Feeding wild animals for non-hunting purposes. The Department shall promulgate rules to regulate the recreational and supplemental feeding of deer for purposes other than hunting.

In this report the baiting and feeding committee has put forth wording that could be used by the D.N.R. in drafting these laws and/or regulation

V. Details of Recommendations

Current laws:

Baiting Rules:

It is illegal to:

- A. Place, use or hunt over bait contained within or containing metal, paper, plastic, glass, wood (other than hollow stumps) or other non-degradable materials.
- B. Use any bait, liquid or scent for attracting wild animals containing honey, bones, fish, meat, solid animal fat (which includes bacon grease) or parts of animal carcasses.
- C. Place or hunt over baiting material, liquid or scent within 50 yards of any trail, road or campsite used by the public.
- D. Place or hunt over baiting material, liquid or scent during the archery season without possessing a valid unused bear harvest permit or archer deer tag.
- E. Use or hunt over a baited area which contains more than 10 gallons of bait material or liquid scent. Note: you may hunt over bait deposited by natural vegetation or normal agricultural practices.

Feeding Rules:

Currently Wisconsin does not have any rules pertaining to feeding deer.

Baiting

Results from our June questionnaire shows fifty seven percent of people felt baiting should continue.

Emotional prejudices aside, over a year of information and deliberation by the baiting and feeding group, we recommend baiting in a responsible, legal manner continue as another means of hunting deer.

- Rationale:** Due to the results of the June 2000 Questionnaire it was decided by a majority vote of the baiting and feeding study group that the practice of baiting deer should continue
- Attractants:** We recognize that there are other deer attractants such as powder and liquid scents available today. We feel the usage of attractants is limited, they do not move large amounts of deer and we are addressing it in the process
- Baiting-** Biologists of Michigan said baiting doesn't cause disease. Baiting increases the opportunity for stationary shots, less wounding, close in shots for archers, hunter opportunity, gives the handicapped hunter a better chance of seeing and harvesting deer.
- Disease** We are concerned about Wisconsin losing its TB free status. "Although Bovine TB was once relatively common in cattle in the U.S., it has historically been very rare in the free ranging wild deer herd. Prior to 1999, only eight wild white-tailed or mule deer had been reported with Bovine TB

in North America.

Surveillance of Wisconsin's wild deer herd for bovine tuberculosis (TB) was continued in 1999, when 278 hunter-harvested deer were sampled. Lymph nodes collected from the deer throats were submitted to the USDA's National Veterinary Laboratory, who generously donated the histopathology TB screening tests. ALL TESTS WERE NEGATIVE; NO EVIDENCE OF TB WAS FOUND.

Since 1995, a number of Wisconsin deer have been tested for TB with no positive deer found. Annual surveillance of deer will continue, because of the persistent risk from the uncontrolled TB outbreak in Michigan's deer population, and the repeated identification of TB in captive elk herds in Manitowoc County, Wisconsin

- Cabin shooting** The 50-yard clause would basically stop archers as the distance is too far for a decent shot. But people could still view deer at a reasonable distance.
- Recreational feeding** is a popular and important thing to do for many people and has economic value.
- Supplemental feedings** can be helpful for deer and ecology if regulated properly
- Emergency feeding:** should be practiced only under DNR guidelines and dire need.
- Proximity to highway:** Drivers traveling less than 45 MPH should be able to stop in time.
- Proximity to dwelling/cabin** This was to keep all baiting and feeding equal during hunting seasons and keep people from year round feeding to hold deer in their area
- Quantity** A large quantity is not needed for viewing purposes and keeps possibility of disease spread down.
- Time of year** Supplemental and emergency feeding should occur in the time of year when deer may need help.
- Coverage/Dispersal /Feeders** This recommendation would cut down on nose to nose contact and passage of disease through fluid exchange. Feed should be spread, not in troughs to prevent possible spread of disease.

Important supporting information- See literature cited item XIV in this report, starred items had more weight in our recommendations.

Comment on open house and other opinion information-September 1999 open house turn out was low. Questionnaires from the June 2000 open house were over 10,000 with definitive answers

received. The baiting and feeding group had eleven questions in the questionnaire. See the survey results on pages 20-22.

Our recommendations relative to other Study Groups recommendations-

Herd Size group's recommendation- was to eliminate baiting. Questionnaire indicates otherwise.

Agriculture group -said baiting should continue. This parallels the results of the questionnaire.

Forest & Ecology group's secondary recommendation said baiting should be eliminated: Questionnaire indicates otherwise. The consideration of economic impact on forest and ecology does not outweigh the consideration of economic impact on apple growers and agricultural producers, supplying feed for baiting. Loss of habitat by deer feeding naturally is widespread throughout the state. Baiting deer may help circumvent this loss of habitat as well as prevent financial loss.

Herd size

* Herd size can be positively and negatively affected by baiting and feeding. (2/26)

*Herd size (2/12) said there would be no impact on herd size if baiting or feeding were eliminated.

- The change of deer distribution from people, who bait deer, is no more or less effective than clear cuts, agriculture crops, food plots, or hunting pressure. Hunters want deer to come to land where they can hunt, or place a good shot.
- Hunters tend to monopolize certain areas of public land that they have hunted for years. Other hunters can feel they are forced to hunt less productive areas, they put the hunt on an equal level by baiting.
- Turf Battles
- Deer hunting stand locations have forever been a competitive situation. Long before baiting came to the forefront. Better hunter ethics must be maintained by all sports people and should be addressed in our Wisconsin hunting regulation pamphlet. Public land should always be treated as equal use opportunity for all types of hunting.
- Addressing the issue of deer becoming nocturnal due to baiting;
- We have yet to find a study proving this theory that baiting causes deer to become nocturnal. Deer are naturally nocturnal, especially when you have a sudden influx of hunters into an area. There is no reason to treat a bait pile differently than food plots, agriculture practices, etc.
- Addressing potential for disease;
- Baiting and feeding in Wisconsin, thus far, has had no responsibility in the transmission of tuberculosis or other diseases. The potential for disease has been addressed in our final report, but we can agree reducing our maximum amount of allowable to six gallons per our recommendations down from the present ten gallons should reduce some potential for the spreading of disease if and when it should occur. We maintain all avenues for disease potential should be studied and given equal priority. Food plots, logging & Forestry, Cattle & agricultural farming, captive deer and elk transportation & fencing, all of these practices are most likely potential sources for disease.

Season Framework

*Baiting rules should remain constant through all deer seasons. (2/26)

Agricultural Damage

*Baiting should continue because it minimizes agricultural damage (1/22)

Logging & Forestry

*Compared to the damage caused to the forest by current logging practices, the current baiting proposals considered baiting damage inconsequential to the ecology of the forest

Enforceability

Both sides agree it is obvious that more wardens need to be hired to help monitor violations. All agree the laws for baiting are only as good as the enforcement applied to them.

Deer/Car Collisions

* Issue warnings on radio during deer hunting and rut (1/22)

Ethics

* Ethical considerations have been taken into account in all of the recommendations of this committee and we feel they have been addressed properly (2/05)

We could not dictate ethics to individual hunters as everyone views ethics differently.

Less Wounded Deer/Cleaner Kills

*After consideration this committee finds there is inconclusive evidence that hunting over bait or not hunting over bait results in cleaner kills or less wounded deer (2/05)

Hunter Conflict

*Hunter conflict has increased due to baiting. However baiting is only one source of hunter conflict (2/05) Deer stand locations have been a competitive situation long before baiting came to the forefront.

Economics

*State-wide numbers are unattainable due to failure to report earnings. We recognize that baiting and feeding has a significant economic impact in the state of Wisconsin. Recommendations made thus far take this impact into consideration (2/05)

Movement and Patterns

We recognize that recreational feeding does affect deer movement and patterns. (2/12)

Ecological Damage

*We have information that shows there are both positive and negative ecological effects from recreational feeding. (2/12)

VI. Action Steps and Expected Results

Priorities:

High priority- baiting amounts, private landowners rights, enforceability, public lands, disease, cabin shooting, quantity, time of year.

Medium- ATV's and snowmobiles, proximity to highways.

Low Attractants, deer car collisions, coverage/dispersal, feeders, bird feeding, and proximity to highway.

Baiting:

All law enforcement officials with the authority to, will monitor the amount of bait at hunting sites or make sure there are no bait piles, over 6 gallons.

We expect strict and aggressive enforcement of baiting rules. We expect that people will live with the 6-gallon rule and comply with it. And those not baiting will feel less affected by hunters who bait. Also it will be easier to enforce the amount since it is the same on public and private lands.

Disease should be less likely to be spread if there is a lower limit on the amount per site.

The baiting regulations would only be in effect during the deer hunting seasons and would go into effect as soon as possible.

This recommendation can only be evaluated if it parallels our recommendations on prevention of disease. Since there has not been disease found in Wisconsin, it will be difficult to know if baiting rules have the effect of lessening the spread of disease.

To evaluate impacts on hunter conflict, hunters need to be surveyed accurately and asked how the baiting recommendation/rule has affected them.

ATV's/Snowmobiles:

All law enforcement officials with the authority over any trails would carry out this recommendation. Hunters observing violations would also be responsible for help in carry out this recommendation. The group believes there would be less forest damage from ATV's and snowmobiles and less violation of current baiting limits. If people are not allowed to haul bait on an ATV or snowmobile it will be more difficult for them to violate the bait amount limit.

The impact of this recommendation could be evaluated with inventory of forest damage by USFS, wardens, or forest user observation. Also wardens and hunters could be surveyed to find out if violations of bait limits have been curtailed.

Season Framework, Private landowners rights:

All the above recommendations fall under the enforceability umbrella of wardens and/or law enforcement officials and regulation of the DNR or NRB and judges. Enforcing the above rules is the responsibility of wardens. We think constant baiting rules will cause less confusion, more understanding of baiting rules and ultimately more compliance. Giving private landowners rights will keep them happy and maintain compliance. To evaluate the results we can survey those affected.

Enforceability:

Judges will need to implement the higher fines and license revocations. The DNR will be accountable for hiring more wardens. We expect violations of baiting regulations to ultimately

decrease with stricter penalties; however, there maybe some initial increase due to more wardens able to detect violations. This recommendation is flexible enough to be changed as needed.

Deer/Car Collisions:

This recommendation will be implemented by wardens and/or law enforcement officials. The DNR should write the text of the warnings and distribute it to a variety of radio stations. We expect there will be a decrease in the number of deer hit by vehicles. We should wait a necessary amount of time before looking at deer/car collision statistics; if there are fewer collisions then our recommendation has been successful.

Feeders:

During deer hunting seasons, wardens will have to make sure hunters are not hunting over bait from a feeder. We think there will be less violation of the maximum bait quantities. This should be addressed again in three years by surveying hunters and wardens on their opinions, and looking at statistics of violations of bait limits and using feeders.

Disease:

The following parties will need to work together to implement our recommendation: DNR and its wardens, DATCP, and hunters. We expect that there will be more precise and complete data on disease in Wisconsin. While some disease may be found due to more precise data, disease will be much less likely to spread. The timeline for applying the disease recommendation could take up to five years if a new testing facility is built. The effects preventing and monitoring disease can be seen by looking at the new data. Also the impacts will be known by looking at statistics of TB and other diseases in cows.

All of the above recommendations include hunters in the implementation. The people affected by them will be important. Most of the recommendations require wardens to enforce them. Many of our recommendations are towards our goal of reducing risk of disease. Our benchmarks expect that accurate and substantial statistics will be recorded by the DNR.

VII. Major Alternatives and Likely Results

- A) Eliminate baiting and feeding in general. This proposal was considered a reasonable answer to an ongoing problem of hunter territorialism, negative public perception, ethics, changes in deer movement, and disease potential. While some people feel strongly about these issues most realize a compromise may be the only reasonable solution. With lesser amounts of feed and bait proposed, spreading the food out in a larger area for less nose-to-nose contact lessening the spread of disease, calendar dates are alternatives to banning baiting or feeding entirely. These solutions are accepted by most but not all. An absolute agreement by all committee members was not possible over this highly emotional issue.
- B) Public versus private lands
Survey results show 76% of the people form the September open house want both lands treated equally and 24% do not. The June 2000 results were very similar. Allowing private land owners to have more relaxed rules and higher amounts of bait and feed or allowing only them to bait and feed, was considered unfair. We felt as a group, different standards were coming from this and only a higher division between users would occur. It was felt that public land around private land would be void of deer, and over-population would occur on private land increasing disease

potential. If fewer deer are shot or seen by people on public land it would adversely effect believability of numbers and herd size totals. Equalizing public or private land use is not completely possible according to certain rights by law. We can only get close. Example: we can't enforce one tree stand per forty acres on public land because it is open to the public, but we could on private land. Example: we cannot enforce one bait or feed pile on public land because there may be more than one user in the same area but this can be enforced on private land. The area we may reach agreement on enforcement is the amount of bait used within a hunt-able distance on public and private land.

C) Disease potential in Wisconsin

The possibility for disease is always present in our cattle industry as well as our deer herd. The elimination of feed or bait piles would not eliminate the possibility of disease. This was supported by our September survey results, 78% to 22% respectively. It was felt by most people involved that intense monitoring of wild deer, captive deer and the cattle industry as well as all other animals that are known to carry TB and emerging diseases would be the best way to prohibit disease infiltration to our state. While eliminating bait or feed, or cutting back the amounts of bait or feed used, or spreading out bait or feed over a given area, may help curtail a possible disease spread, it will not stop it. With there being so many other possibilities for disease to arrive and spread in Wisconsin, we must give all avenues of disease transmission equal attention for protecting our state.

D) DNR enforceability of rule changes

Due to the highly volatile situations created between non-baiters and baiters who abuse the current limit amounts, a call for strict sentencing and exorbitant fines was suggested. An amount of up to \$2,000 and lifetime revocation of deer hunting licenses was asked for by some. After input from the DNR warden staff informing us a panel of judges would determine what amount was suitable for a baiting and feeding violation compared with other fish and game violations. We concluded that a firm statement suggesting high monetary fines and a considerable amount of deer hunting years revoked was sufficient punishment to deter baiting and feeding violations without being considered too harsh.

E) Herd size group recommends to ban baiting

This seems to be a step in the right direction toward reducing deer numbers that are at an all time high. It's a fact that deer are healthier when fed and healthier deer have more offspring than usual creating an unnatural inflated population. Not all people in the state are in agreement with the DNR or they don't see enough deer. The herd size statement is not a compromise, which the baiting and feeding group must have at this time, to set a reasonable alternative to the existing style of hunting currently so controversial in the state of Wisconsin.

F) Apple growers and feed mill economics

These two businesses are always looking for additional market groups to sell their products to. With the current depressed agricultural market conditions and the past record of the recent years, time does not allow many in the business to take a significant monetary decline while trying to find another market. This decline would definitely occur if baiting and feeding were discontinued. The intent of the baiting and feeding group is to find reasonable compromise for all people affected by baiting and feeding rule changes. Reductions in allowable amounts of feed and bait used daily through proposed amount changes may gradually reduce their sales yearly. This may help the loss of revenue for apple growers and feed mills until other markets can be explored. This is better than the effect an immediate ban on baiting and feeding could have.

G) Other suggested alternatives received either oral or written

License baiters and feeders

Require baiters and feeders to be licensed and require food sites to be labeled with the user's name and address, something like duck blind rules. The group rejected this because it causes privatization of public land and invades the rights of private landowners.

Some people may stop hunting.

Some people felt they could no longer hunt if baiting were banned because their age, health or hunting situation doesn't allow them to pursue game. Losing any more hunters should not be an option especially at a time when the DNR feels there is an overabundance of deer. Neither is the lost license revenue at a time when many programs are under-funded. We did feel there was not a significant number of people with this opinion to stop hunting, but enough worth considering.

VIII. Future Research and Considerations

A) Areas recommended for additional research

Economic impacts on people and businesses selling deer food materials. How much did the hunter spend on food? If possible ask feed mills to disclose how much of corn/feed was sold for deer bait and/or feed. Ask apple growers how much of their crop goes to feed/bait deer?

Research on the health of deer. Better testing of deer and more data on existing/at-risk diseases is needed as soon as possible.

Zone of influence needs to be studied.

DNR study of how many hunters hunt over bait, their success rates, and regular or new practice.

B) Issues recommended for tier two/three consideration

None

IX. Trends and Facts

Food Plots- are legal for baiting and feeding. Food plots are recommended by the DNR and wildlife agencies as good land management and as being beneficial to wildlife. Food plots can change wildlife movement/patterns. Food plots are an agricultural practice.

Bird Feeding-Lots of deer feed from bird feeders. Feeding birds is a popular pastime. Bird feeding can be used to circumvent existing laws on baiting deer. Bird feeding creates a nuisance in suburban areas.

Bear Baiting- ten-gallon cap. Occurs during deer (bow) season. Legal to place on ground, food that attracts deer as well. Both bait and feed facilitates bear hunting. Increased numbers and survival rate of bear cubs in den. Minnesota versus Wisconsin survey showed 1 cub in MN and 3 in WI. Will use baiting and feeding to circumvent existing law on baiting deer. Baiting and feeding habituate the bear.

Herd size is larger/over goal. Increased supplemental feeding means an increase in production and survival rates (Ecology and management study). People feed more during severe seasons. Deer are harvested over bait.

Season Framework-Length of deer hunting season lengthens baiting. Deer season has been stable for a considerable time. Rifle season is nine days long. Can feed year round. Harvest is under DNR harvest goal.

ATVs and snowmobiles-carry more bait. Increased use on public land. More bait pile violations on public land. Increased accessibility for elders and disabled. Causes damage to forest by constantly riding to one spot.

Some people suggested the following as a way to reduce all-terrain vehicles (ATV) violations and damage to trails and woodlands, and to reduce conflict with bear hunting season:

During deer hunting seasons no bait or food material can be carried on a ATV or snowmobile on public land from October 1 through the end of deer hunting seasons unless the road or trail is marked on maps as being open. The exception would be a person holding a DNR disabled hunting permit. The results follow; definitely support 2703(40%), Probably support 1460(22%),not sure 760(11%), Probably oppose 633(9%), Definitely oppose 1055(16%), I don't understand/need more information 99(1.5%)

Private Land Owner's Rights-Landowners don't want to be told what to do. What one landowner does affects neighboring land, private affects public. Different rules on state and private land, example stands impacts agricultural damage positively and negatively.

Logging/Forestry-Forestry practices are used to bait and feed. Recommended land management. Forestry practices are recommended to increase wildlife on your property. Positive or negative effect on forestry from baiting and feeding. Deer herd healthier in northern part of state due to logging.

Enforceability-No feeding laws. Increase in certain violations. Existing deer baiting laws are not deer specific; using existing migratory bird and bear laws. Shooting deer from cabins is a growing enforcement problem.

Public Land-Territorial disputes exist, because of growing hunter pressure brought on by urban sprawl and more private posted land. Seventy one percent of the people answering the questionnaire feel deer baiting regulations should be the same on public and private lands.

Deer/Car Collisions-Costly. Placement of bait could influence. 1998 there were 44,000 deer car collisions. The study group has followed the majority of the respondents in making suggestion for rule and/or law changes.

Disease-Infectious disease spreads more easily with density of deer. Deer eating from a concentrated baiting/feeding source will have increased contact with oral secretions, which may increase transmission of TB or respiratory disease. Bovine TB in lower MI has been associated with supplemental feeding. MI is going to National Resources Council. Bovine TB has not been identified in wild deer in WI. Bovine TB affects both deer and cattle and can have devastating effects. The Isotope Strontium test should be applied if disease is found.

Personal Choice/ Ethics/Public Perception-Less tolerance by non-bait hunters for hunting over bait. Being reported by non-bait hunters. Substantial number of surveyed people (50%) believes shooting deer with the aid of bait is unethical. Substantial numbers of surveyed people (50%) believe the opposite. Baiting and feeding is a choice left up to the individual.

Hunter conflicts/Territory baiting and feeding created conflicts over territory on public land and private land.

Trends

Food Plots-more people are putting food plots in. Food plots are more popular. Food plots are a food source for more non-specific species. There is a new industry for the seeds/plants for food plots, which influences economics. The current thinking around food pots suggests they are environmentally friendly. (We are not saying that they are, just that many people think that they are)

Bird Feeding - increased turkey/game bird feeding. (Cornell lab of ornithology states that it is increasing)

Bear Baiting- more recreational feeding. Increase in food/bait increases the number of bear that survive winter. Thus there are more bear.

Herd Size-increase in baiting and feeding causes larger herd size. Increase in selectivity in targets.

Season Frame work-Thanksgiving week is gun season. Variable seasons take care of problem areas. Increasing antlerless permits.

ATVs and snowmobiles- increase use and numbers, increase in regulation positive and negative.

Private Land owner's rights- landowners' rights are decreasing. Increasing regulations around zoning, less private land open to public.

Logging & Forestry becoming bigger tool in wildlife management. Private land owners becoming more involved in timber management.

Enforceability-more Law Enforcement hours are spent on inter-related enforcement matter. More Law Enforcement hours need to be spent on baiting and less on other matters.

Public Land- increase in baiting, more hunting pressure due to less open private land causing dissatisfaction with hunt.

Deer/Car Collisions- increases in deer/car collisions.

Disease-concern about diseases (potentially devastating) in deer is increasing in WI and across US. Deer and elk farming are increasing. Bovine TB has been identified and CWD is suspected in WI captive elk. Testing is going on, TB tends to be in older deer (or at least older deer develop the symptoms).

Personal Choice/Ethics/Public Perception- not real trends- personal choice is on the rise.

Hunter conflicts/Territory more people are baiting and conflict has risen in some places

Economic Value *Co-op data from the northern part of the state indicates that ten (10) percent of shelled corn is used to feed or bait deer. There is a lot of revenue (tremendous money generator) for small businesses for sale of bait and feed. MI loss of revenue (\$21-\$24 million) in cattle industry for bovine TB.*

X. Addressing the Mission and Purpose Statements

Baiting:

The baiting and feeding study group is a reflection of the state, in that, it is split over the issue of using bait to harvest deer. A small vocal portion of the baiting and feeding committee wants a total ban on baiting. The majority of the group wants bait quantities reduced from the present 10 gallons. A small number of members want the baiting laws unchanged.

The baiting and feeding recommendations are to be implemented statewide.

If baiting is continued at lesser amounts than the present laws allow, hunter conflicts should be lessened. Hunters would be free to bait or not to bait.

Maximizing Safety: Hunter's proximity to bait will allow for a safer shot placement.

Our recommendation in the event that significant disease is detected in Wisconsin's wild deer herd, will give the D.N.R. additional tools to deal with the disease in the affected area and a buffer zone around it.

We recommend that a state lab be set up to test wild and captive animals for disease. This would greatly enhance the testing time period and would be able to show if the tested wild deer came from that area or were shot elsewhere and brought into a different area.

We recommend that ATV's and snowmobiles are banned from hauling deer bait on public land. This should lessen hunter conflict and non-hunter complaints regarding this practice.

We recommend that if baiting is continued quantities per site should be the same on public and private lands. This should reduce the conflict between hunters.

The deer-baiting season runs concurrent with the bow and gun deer seasons.

The group believes that deer baiting in and of itself does not lead to an increase in the deer herd. Urban baiting is a tool to manage deer in overpopulated metro units.

Our final baiting recommendation to all citizens is when baiting violations are observed, the D.N.R. should be notified immediately.

Feeding:

Heretofore, there have not been any regulations pertaining to the feeding of the wild deer herd. Our study group has endorsed substitute Assembly Bill 225, an act to create 29.335 of the statutes relating to feeding deer for purposes other than hunting, and granting rule-making authority to the D.N.R. to promulgate rules to regulate the recreational and supplemental feedings of deer.

The study group has drawn up regulations for both recreational and supplemental feeding wherein the quantities of feed and the placement of said food are closely regulated, as is the time of year when the three types of feeding may be done.

In addressing these issues, car-deer accidents were taken into consideration.

The study group also looked at the impact of feeding and damage to the forest ecosystem. It is our opinion after reviewing several documents that deer feeding does not do anywhere near the damage that present day logging practices does.

We do agree that supplemental feeding is one factor in keeping; the deer heard healthy, thus fewer deer die during winter and the herd is larger.

XI. Questionnaire Results

Section V: How should baiting and feeding of deer be regulated?

1. During the 1999 deer seasons did you or a member of your hunting party hunt deer using bait during the:

Gun (or muzzleloader) season	<u>CIRCLE ONE</u> 992 (10%)
Bow season	1839 (18%)
Both gun (or muzzleloader) and bow season	2070 (20%)

We did not use bait in 1999 4956 (48%)
I do not hunt / did not hunt in 1999 414 (4%)

2. How much of a problem, if at all, is deer baiting in this unit?

CIRCLE ONE
No problem 5424 (54%)
Small problem 1678 (17%)
Moderate problem 1291 (13%)
Large problem 1673 (17%)

3. Do you think deer baiting should:

CIRCLE ONE
Be allowed, but only during the gun/muzzleloader season 175 (2%)
Be allowed, but only during the bow season 1059 (10%)
Be allowed during all deer hunting seasons 4720 (45%)
Be prohibited during all deer hunting seasons 2559 (24%)
Be completely eliminated year round 1947 (19%)

GO TO QUESTION 6
GO TO QUESTION 8

4. What do you think the legal amount of allowable bait should be? Should it be restricted to:

CIRCLE ONE
1 - 2 gallons 916 (14%)
3 - 5 gallons 1487 (23%)
6- 10 gallons 2048 (41%)
More than 10 gallons 784 (12%)
Not sure 567 (9%)

5. ATV restrictions: Please tell us if you support or oppose this idea.

CIRCLE ONE
Definitely support 2703 (40%)
Probably support 1460 (22%)
Not sure 760 (11%)
Probably oppose 633 (9%)
Definitely oppose 1055 (16%)
I don't understand the issue/need more inform 99 (1.5%)

6. Should deer baiting regulations:

CIRCLE ONE
Be more strict for public lands than on private lands 2416 (27%)
Be more strict for private lands than public lands 172 (2%)
Be the same for both private and public lands 6296 (71%)

7. "Cabin shooting": make it illegal to place within 50 yards of a dwelling any solid or liquid material capable of attracting deer.

CIRCLE ONE
Definitely support 3404 (38%)
Probably support 1744 (19%)
Not sure 777 (9%)
Probably oppose 1259 (14%)
Definitely oppose 1771 (20%)

8. Recreational feeding of deer (for non-hunting purposes) should:

	<u>STRONG SUPPORT</u>	<u>SUPPORT</u>	<u>NO OPINION</u>	<u>OPPOSE</u>	<u>STRONG OPPOSE</u>	<u>DON'T GET IT</u>
Not be limited or controlled in any way	2249(24%)	1771(19%)	1115(12%)	1881(20%)	2250(24%)	38(0.5%)
Be the same as baiting during deer hunting season	1942 (21%)	2687 (29%)	1384 (15%)	1436 (16%)	1591 (17%)	108 (1%)
Be completely eliminated	1590(18%)	671(7%)	1130(12%)	2153(24%)	3453(38%)	59(0.65%)

9. Supplemental feeding of deer (for non-hunting purposes) should:

	<u>STRONG SUPPORT</u>	<u>SUPPORT</u>	<u>NO OPINION</u>	<u>OPPOSE</u>	<u>STRONG OPPOSE</u>	<u>DON'T GET IT</u>
Be the same as baiting—limited to 10 gallons or less at all times on all property	1303(14%)	2618 (27%)	1721 (18%)	1963 (20%)	1880 (20%)	146 (2%)
Be limited to 30 gallons	1405 (15%)	2011 (22%)	2956 (32%)	2536 (27%)	164 (2%)	282 (3%)
Be limited to 55 gallons (the size of an oil drum) or less at all times on all property	366(4%)	982(11%)	1942(21%)	2972(32%)	2901(31%)	167a%)
Not be limited or controlled in any way	1437 (15%)	1261 (13%)	1384 (14%)	2332 (24%)	3045 (32%)	158 (2%)
Be completely eliminated	1657 (17%)	767 (8%)	1300 (13%)	2234 (23%)	3544 (37%)	184 (2%)

10. Suggestions designed to minimize deer-vehicle accidents.

	<u>STRONG SUPPORT</u>	<u>SUPPORT</u>	<u>NO OPINION</u>	<u>OPPOSE</u>	<u>STRONG OPPOSE</u>	<u>DON'T GET IT</u>
No baiting within 100 yards of a hard surface road with a speed limit of 45 miles per hour or more	3792 (37%)	3515 (34%)	1001 (10%)	1119 (11%)	874 (8%)	58 (0.5%)
No recreational feeding within 100 yards of a hard surface road with a speed limit of 45 miles per hour or more.	3443(33%)	3316(32%)	1174(11%)	1361(13%)	972(9%)	57(0.5%)
No supplemental feeding within 300 yards of a hard surface road with a speed limit of 45 miles per hour or more.	3075 (29%)	2259 (22%)	1519 (15%)	1995 (19%)	1505 (14%)	78 (0.75%)

11. In the event of a disease outbreak, the DNR should have authority to regulate:

	<u>STRONG SUPPORT</u>	<u>SUPPORT</u>	<u>NO OPINION</u>	<u>OPPOSE</u>	<u>STRONG OPPOSE</u>	<u>DON'T GET IT</u>
Baiting of deer	5421 (51%)	3096 (29%)	672 (6%)	669 (6%)	615 (6%)	76 (0.72%)
Feeding of deer	5432 (51%)	3179 (30%)	686 (7%)	618 (6%)	555 (5%)	84 (1%)

12. In the event that foresters determine that baiting and or feeding has resulted in damage to forest habitat, should the DNR have the authority to regulate the

	<u>STRONG SUPPORT</u>	<u>SUPPORT</u>	<u>NO OPINION</u>	<u>OPPOSE</u>	<u>STRONG OPPOSE</u>	<u>DON'T GET IT</u>
Baiting of deer on private land	2541(24%)	2146(20%)	966(9%)	2560(24%)	2253(21%)	69(1%)
Baiting of deer on public land	3562(34%)	3734(35%)	1206(11%)	1123(11%)	856(8%)	68(1%)
Feeding of deer on private land	2429 (23%)	2153 (20%)	1027 (10%)	2583 (25%)	2270 (22%)	71 (1%)
Feeding of deer on public land	3542(33%)	3708(34%)	1279(12%)	1093(11%)	854(8%)	71(1%)

XII. Group Process

A) Meetings held

Study Group meetings were held 16 times between August 1999 and July 27, 2000. Meetings were facilitated. There were several sub-group meetings, which were not facilitated.

B) Methods used to synthesize, categorize, and analyze information

Consensus to make decisions and if that didn't work we used a vote based on 50% attendance, facilitated dialogue, nominal group technique (rank order).

C) Subject matter experts

Julie Langenberg, Wildlife Veterinarian

Dr. Clarence Siroky, DATCP State Veterinarian

Dr. Cook, Veterinarian

Elaine Carlson, Michigan DNR

D) Public participation opportunities and results.

All group meetings have been open to the public and the result was the formation of our study groups. Issue searches were conducted in February of 1999 in each Conservation Congress district, which helped to define our focus issues. Open houses were held in each Wisconsin County in September 1999 where surveys could be filled out and current information was available. The results from the Open Houses helped shape our recommendations. 187 petitions were received from Citizen's right To Feed to support baiting and feeding. Approximately 50 percent of the letters received were for baiting and 50% were against. There were 4,081 signatures that do not support legislation making recreational feeding or baiting illegal.

Secondary Recommendations to Forest and Ecology.

Recommendation: A citizens advisory council be established to work with the DNR to establish criteria to determine when ecological damage due to baiting/feeding of deer has occurred, and to participate in consideration of individual cases of damage. The council should be two tiered, including temporary local advisory groups to deal with local issues. The council should be representational, including the Conservation Congress, DNR, and non-DNR foresters, and representatives of other interest groups

XIII. Study Group Members

Group Leaders: Dave Nowak, Jerry Aulik

Group Members:

James Barnard, Jason Bitter, Daniel Black, Lance Black, Norm Blohm, Mike Campbell, Willard Cartwright, Fran Cherney, Howard Cook, Jay Cornell, Richard Doersch, Paul Eldridge, Ruel Fleming, Craig Giese, Jim Good, Roger Greenway, Paul Gulan, Steve Hanson, Jon Haag, Chuck Hirtreiter, Verlan Holt, Stu Hunt, Doug Karshbaum, Bob Kissinger, Joel Knoeck, Rick Koenig, Richard Koerner, Gary Lemmen, Bob Link, Richard Ludwig, Elmer Miller, Ken Minch, Arold Ninneman, Dave Nolan, Dan Norrgran, Gerald Panka, Richard Peterson, Lee Petrina, John Pliska, Scott Reindell, Rod Robillard, Terri Roehrig, Gary Roehrig, George Rogers, Dave Schmidt, Russell School, Wayne Schroeder, Rich Schuhmacher, Mike Servais, John Smith, John Srueth, Tom VandenElzen, Ron Weber, Bobbie Webster (recorder), Dick Wellskop, Bob White, Allen Wright, Gregory Wysocki.

DNR Liaisons: Dave Evenson, Dave Zeug, Julie Langenberg, and Larry Kriese.

Other Participants: Steve Silverberg (facilitator 2/26), Representative DuWayne Johnsrud 2/26, and Steve Miller (WDNR)

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WARNINGS

Wardens tracked the number of verbal warnings for violations encountered during the gun deer season. A total of 1,627 warnings were given, which represents approximately 1.6 warnings for every citation issued.

Most commonly encountered violations for which warnings were given

Rank	Violation	Warnings
1	Hunt without, or improper, blaze orange	176
2	Illegal use of bait – firearms 159/archery 5	164
3	Hunt deer without back tag displayed	146
4	Hunt within 50 feet of paved road center	81
5	Fail to validate tag	71
6	Operate ATV on roadway	66
7	Fail to display or improper display of registration on ATV or UTV	52
8	Place/possess loaded gun in vehicle	51
9	Hunt deer before or after hours	50
10	Fail to remove tree stand or blind on state land	48

WOLVES SUSPECTED AS ILLEGALLY KILLED

Seven wolves suspected as illegally killed were found dead during the 2012 gun deer season. This figure is preliminary pending investigation and animal necropsy to determine cause of death. Two of the wolf kills resulted in issuance of a citation for hunting wolf without a license. Illegal wolf kill in recent years was 9 in 2006, 2 in 2007, 3 in 2008, 8 in 2009, 2 in 2010, and 7 in 2011. It appears this year that 3 wolves were found illegally killed in Wolf Management Zone 1 that was closed to coyote hunting in 2011, but open in 2012. In 2011, the number of detected illegal kills was also 3; from this limited sample, there is no evidence of a major increase of illegal kills. Suspected illegal wolf shootings and current status in 2012 included the following. (*The AF or AM designation means an adult female or adult male greater than 2 years old.*)

1. AM not collared, found dead 11/25/12 in Walworth County - carcass held for necropsy: Citation
2. AF not collared, found dead 11/21/12 in Oconto County - carcass held for biological sampling
3. AF not collared, found dead 11/18/12 in Bayfield County - carcass held for biological sampling
4. AF with collar 802F, found dead 11/19/12 in Price County - carcasses held for necropsy
5. AM with collar 832M, found dead 11/19/12 in Adams County - carcass held for necropsy
6. AF with collar 615F, found dead 11/19/12 in Bayfield County - carcass held for necropsy
7. AM not collared, found dead 11/25/12 in Dane County - carcass held for biological sampling: Citation

CUSTOMER SERVICE: HOTLINES AND CALLS FOR SERVICE

Use of the DNR Violation Hotline continues to be strong. The total number of calls handled by Hotline dispatchers increased during the gun deer season to 732. Hotline callers were also using the texting feature for the third year; nine texted reports were received via TIP 411.

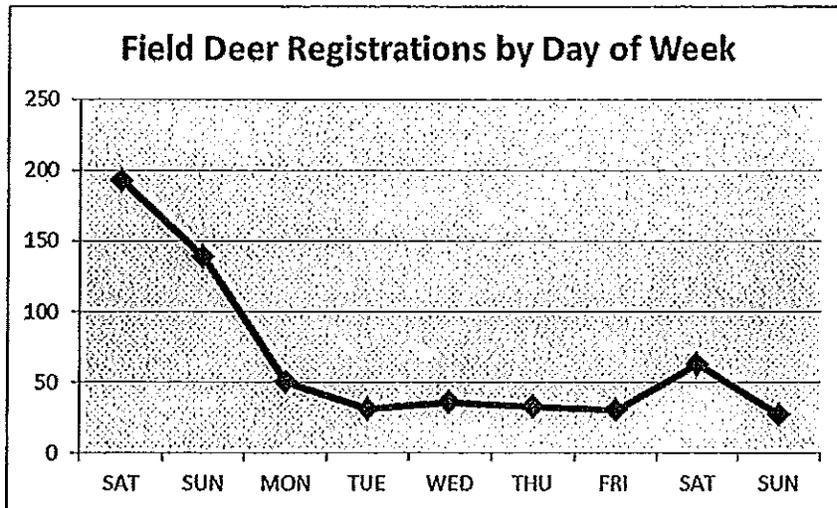
In addition to the documented Hotlines received by dispatchers, wardens received 3,637 calls for service. These calls include all complaints or requests *made directly to a warden* from the public, from another government agency or from news media requesting a service, action, information, follow-up, call back, contact, or response of any type during the deer season.

Calls to DNR Hotline during the gun deer season 2009-2012

Type of information reported by caller	2012	2011	2010	2009
Found dead deer or other carcass	108	84	90	84
Baiting and feeding	29	23	24	48
Heard shots; believes poaching	23	19	13	23
Hunt within 50 feet of roadway center	12	29	30	20
Shoot from a vehicle	18	21	16	21
Hunt before or after hours	56	43	31	31
Possession of untagged deer	11	1	2	5
Possession of illegal deer	12	14	19	15
Miscellaneous	256	234	245	229
Total Hotlines	535	436	470	476
Calls to the Hotline not DNR violations or other calls for service/information	197	158	168	157
Total calls	732	594	638	633

CUSTOMER SERVICE: FIELD REGISTRATION OF DEER

In 2012, the warden service tracked the number of deer that wardens registered each day when contacting hunters in the field. Wardens have performed this customer service as time permitted for many years as a convenience to the hunter. A total of 613 deer were registered by wardens in the field during the 9-day season. The number of deer that wardens registered each day of the season tracks closely with hunting pressure on that day.



TAGGING SYSTEM

Overall, the current configuration of the tagging system is generally working well.

Wardens, particularly those in northern Wisconsin where there were units with no antlerless harvest allowed, reported fielding many questions regarding the use of Herd Control tags that are issued with every license sold. Several wardens offered a possible solution to reducing this confusion. The suggestion was to prompt hunters at the time of sale whether or not they intended to hunt in a Herd Control Unit. If so, they would be issued a Herd Control tag. If not, they would not be issued a Herd Control tag. If the hunter later decided they wanted to hunt in a Herd Control unit, they could then obtain their first Herd Control tag at no charge.

Question 16. Did you hunt in a unit where baiting was legal?

2012 (Preliminary)

Answer	# of Responses	Percent (%)
Yes	1,286	43.9%
No	1,048	35.8%
Unsure	597	20.4%

No Answer = 128

If YES, did you bait for deer?

Answer	# of Responses	Percent (%)
Yes	489	39.6%
No	746	60.4%

No Answer = 51

Question 16. Did you hunt in a unit where baiting was legal?

2011

Answer	# of Responses	Percent (%)
Yes	1,439	48.1%
No	887	29.7%
Unsure	664	22.2%

No Answer = 80

If YES, did you bait for deer?

Answer	# of Responses	Percent (%)
Yes	569	40.9%
No	824	59.2%

No Answer = 46

Question 20. Did you hunt in a unit where baiting was legal?

2010

Answer	# of Responses	Percent (%)
Yes	1,627	46.7%
No	1,125	32.3%
Unsure	733	21.0%

No Answer = 83

If YES, did you bait for deer?

Answer	# of Responses	Percent (%)
Yes	544	34.2%
No	1,046	65.8%

No Answer = 37

Question 18. Did you hunt in a unit where baiting was legal?

2009

Answer	# of Responses	Percent (%)
Yes	1,787	47.6%
No	1,191	31.7%
Unsure	774	20.6%

No Answer = 92

If YES, did you bait for deer?

Answer	# of Responses	Percent (%)
Yes	621	35.3%
No	1,136	64.7%

No Answer = 30

ARCHERY QUESTIONNAIRE, 2009?

Question 18. Did you hunt in a unit where baiting was legal?

Response	Frequency	Percent
Yes	2,587	56.1%
No	1,495	32.4%
Unsure	527	11.4%

No Answer = 50

If YES, did you bait for deer?

Response	Frequency	Percent
Yes	1,286	50.1%
No	1,282	49.9%

No Answer = 18

17. What type of bow did you use most this past season? Please check only one.

Response	Frequency	Percent
Longbow	41	0.9%
Recurve	62	1.3%
Compound	3,993	86.4%
Crossbow	528	11.4%

No Answer = 35