

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD REPEALING,
RENUMBERING, AMENDING, AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to repeal NR 10.07(1)(g) and 10.11(1)(a), renumber NR 10.001(9b) to (10m), amend NR 10.001(2s); and to create NR 10.001(1r), (7e), (10), (10c), (12), and (23e), 10.07(2) and (2m), 19.001(1m), (4), (4m), (6d), (6h), (12e) and (15m), and 19.60 relating to the regulation of baiting and feeding to control and manage chronic wasting disease and bovine tuberculosis.

WM-34-04

Analysis Prepared by Department of Natural Resources

Statutory Authority and Explanation: Statutes that authorize the promulgation of this rule order include §. 29.014 , 29.063, 29.335, 29.336 and 227.11, Stats. These sections grant authority to the department to promulgate rules pertaining to hunting, feeding wildlife and management of Chronic Wasting Disease (CWD).

Statutes Interpreted and Explanation: In promulgating this rule §. 29.014 , 29.063, 29.335 and 29.336, Stats., have been interpreted as allowing the department the authority to establish restrictions on the feeding of wildlife for hunting and non-hunting purposes to prevent the spread and establishment of CWD.

Related Statute or Rule: The department is currently operating under an identical emergency rule (WM-35-04(E)) that was adopted and intended to remain in place until this permanent rule could be adopted. § 29.335 and 29.336, Stats., are related and create the parameters for this rule order and the associated emergency rule.

Plain Language Rule Analysis: Since the discovery of CWD in Wisconsin's free-roaming deer herd in February 2002, the Governor, the legislature, and the Natural Resources Board have given the Department of Natural Resources the directive to control the spread of CWD from its current known location and to eradicate the disease where it exists. Additionally, an Environmental Impact Statement, completed in conjunction with last year's CWD rules, identified the feeding of deer for hunting and non-hunting purposes as risks for the spread of CWD. This rule is similar to last year's CWD baiting and feeding emergency rule order, which banned baiting and feeding in 24 southern Wisconsin counties at greatest risk for CWD. Specifically, this rule establishes guidelines for feeding wildlife and feeding for hunting purposes (baiting).

General provisions: This rule provides definitions of terms used but not clearly defined in statute, such as animal part or animal by-product, feeding site, owner-occupied residence, business, bait and feed. Additionally, terms created specifically for these rules are defined and include definitions of "hunt over", platted land, small mammals, decoy, bird feeding device or structure and scent. Additionally, this rule prohibits baiting and feeding statewide, except for baiting as allowed for bear and deer hunting (as well as exceptions for trapping furbearers, scientific research, and other special permitted situations) in limited areas and feeding of deer and other wild animals and birds within specified guidelines.

Other general provisions include a prohibition on any feed material that contains animal parts or animal by-products. Feeders, which are not intended for use to feed small mammals and birds and that are designed to deposit or replenish food automatically, mechanically or by gravity are also prohibited.

Deer Baiting: Deer baiting is prohibited in any county where CWD eradication zones or herd reduction zones have been established in the county or a portion of the county; or a CWD or bovine tuberculosis positive captive or free-roaming, domestic or wild animal has been confirmed after December 31, 1997 from the county; or if the county or portion of the county is within a 10 mile radius of a captive or free-roaming, domestic or wild animal that has been tested and confirmed to be positive for CWD or bovine tuberculosis after December 31, 1997. Additional counties meeting these criteria can be included in the ban by secretary's order.

Outside this area, deer baiting is allowed within the parameters established by 2003 Wisconsin Act 240 and this rule. Bait or feed may be placed and used for hunting deer outside of the banned counties, except no person may place, use or hunt over bait or feed during the closed season for hunting deer. For the purpose of this rule the closed season will not include the Friday prior to the deer bow or gun seasons. So, hunters will be allowed to place legal feeding sites on the day prior to the opening of the deer bow and gun seasons. Deer hunters may not place, use or hunt over bait or feed in excess of 2 gallons at any feeding site. Also, a hunter may not place more than one feeding site on each contiguous area of land under the same ownership that is 40 acres or less or more than one feeding site for each full 40 acres that make up a contiguous area of land under the same ownership. Finally, that no hunter may place, use or hunt over 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.

Bear Baiting: Bear baiting rules are clarified and certain regulations are put in place to assure that the unintentional feeding or baiting of deer does not occur. Bear baits may only be placed, used or hunted over from April 15 through the end of the bear season. Baits for bear may not be in excess of 10 gallons at any feeding site. Additionally, bait must be totally enclosed in a hollow log, a hole in the ground or stump which is capped with logs, rocks or other naturally occurring and unprocessed substances which prevent deer from accessing the bait material. However, liquid scent used for hunting of bear or training bear dogs does not need to be enclosed.

Feeding: Feeding for deer and other animals is prohibited in any county where CWD eradication zones or herd reduction zones have been established in the county or a portion of the county; or a CWD or bovine tuberculosis positive captive or free-roaming, domestic or wild animal has been confirmed after December 31, 1997 from the county, or if the county or portion of the county is within a 10 mile radius of a captive or free-roaming, domestic or wild animal that has been tested and confirmed to be positive for CWD or bovine tuberculosis after December 31, 1997.

In other areas, no one may place more than 1 feeding site for each owner-occupied residence or business and the feeding site may not contain more than 2 gallons of feeding material. This site must also be within 50 yards of any owner occupied residence or business. The feeding site or feed material may not be located within 100 yards from a roadway, having a posted speed limit of 45 miles per hour or more.

The rule also clarifies that there are a number of circumstances where feeding is allowed statewide including:

1. Material placed solely for the purpose of attracting and feeding wild birds and small mammals when placed in bird feeding devices and structures at a sufficient height or design to prevent access by deer and only when the structures and devices are no further than 50 yards from a dwelling devoted to human occupancy. However, if the department determines that wild deer are utilizing bird feeding devices or structures, the devices or structures shall be enclosed or elevated higher to prevent access by deer.
2. Feeding of wild animals, other than deer, elk or bear, by hand if the feed is placed not more than 30 feet away from the person feeding, and the person feeding makes all reasonable attempts to clean up the unconsumed food before moving a distance greater than 30 feet from the deposited food.
3. Food deposited by natural vegetation or found solely as a result of normal agricultural or gardening practices.
4. Standing crops planted and left standing as wildlife food plots that may be used by wild animals.
5. The placement of plain water for drinking or for bird baths.
6. The use of scents, provided the material is not accessible for consumption by deer or elk.
7. Food or bait material placed or used for fish, reptiles, amphibians or arthropods, provided the material is not accessible to bear, deer or elk.

Federal Regulatory Analysis: Provided state rules and statutes do not relieve individuals from the restrictions, requirements and conditions of Federal statutes and regulations, regulation of hunting and trapping of wild animals has been delegated to state fish and wildlife agencies. Other than Federally listed migratory game birds, no Federal regulations regarding feeding or baiting of other wild animals exist. Additionally, none of the proposed rules exceed the authorities granted the states in 50 CFR 10.

State Regulatory Analysis:

Illinois: Illinois instituted statewide restrictions on baiting and feeding shortly after the discovery of CWD in the wild deer population. The current administrative rule states that it is illegal to make certain materials available to deer including food, salt, mineral blocks, or other products meant for ingestion. Some exceptions do exist. It remains legal to:

- Place elevated feeders providing seed, grain, fruit, or suet to birds located within 100 feet of a dwelling devoted to human occupancy
- Incidentally feed deer within active livestock operations
- Leave standing crops as food plots for wildlife
- Bait deer in accordance with scientific permits and other permits issued by the Illinois Department of Natural Resources

Iowa: Iowa does not allow the baiting of deer for hunting purposes. Bait is defined as, “means grain, fruit, vegetables, nuts, hay, salt, mineral blocks or any other natural food materials, commercial products containing natural food materials or by-products of such materials placed in an area for the purpose of attracting wildlife. Bait does not include food placed during normal agricultural activities.” Iowa does allow the recreational feeding of deer. Feeding deer for the purpose of recreational viewing is allowed in any amount.

Michigan: Michigan has special regulations related to baiting and feeding deer because of the influence of bovine tuberculosis. Baiting and feeding is strictly prohibited in seven northeastern counties including Alcona, Alpena, Crawford,

Montmorency, Oscoda, Otsego, and Presque Isle. Throughout the remainder of the state baiting is allowed. However, the volume of bait scattered on the ground cannot exceed 2 gallons at any one hunting site at any time, statewide. Furthermore, baiting can only occur from October 1 to January 1. The bait material may be of any food type. The bait must be dispersed over a minimum of a 10-foot by 10-foot area. The bait can be scattered directly on the ground by any means.

Supplemental feeding of deer is prohibited in Michigan, except in Ontonagon, Houghton, Keweenaw, Baraga, Alger, Luce, and those portions of Marquette and Chippewa counties north of the T43N-T44N boundary line if certain conditions are met. Specifically, permission to feed must be granted from the landowner and a permit must be acquired. Furthermore, feeding may only occur from the Monday following January 1 to May 15 in any calendar year. Feed must be placed ¼ mile or more from the nearest paved road unless otherwise stipulated in the permit. All feed must be placed at least 1 mile from cattle, goats, sheep, camelids, bison, swine, horses or captive cervids. Feed must also be placed at least 1 mile from wheat fields, potato fields, commercial fruit orchards, and commercial plantings of nursery stock. Feed must consist solely of grains and pelletized food materials containing no animal protein which is scattered or dispersed directly upon the ground to a depth which shall not exceed 3 inches. Finally, the person issued the permit must agree to assist the Michigan Department of Natural Resources in the collection of deer tissue for disease surveillance purposes.

Minnesota: Minnesota does not allow the baiting of deer for hunting purposes. Specifically, no person may place or use bait for the purpose of taking deer. “Bait” is defined as grain, fruit, vegetables, nuts, hay, or other food transported and placed for the purpose of attracting or enticing deer. This restriction does not apply to foods resulting from normal or accepted farming, forest management, wildlife management, orchard management, or similar land management activities. Liquid scents, salt, and minerals are not considered bait.

Minnesota does allow the recreational feeding of deer. Feeding deer for the purpose of recreational viewing is allowed in any amount. However, there are special provisions in place to make feeding illegal if CWD is ever detected in the wild deer population.

Summary of Factual Data and Analytical Methodologies:

Note: Since the time this factual data was gathered and summarized, additional research regarding Chronic Wasting Disease transmittance has been completed. As a result of research and results that were recently published by Miller, Michael W., Elizabeth Williams, N. Thompson Hobbs, and Lisa L. Wolfe. in Colorado, we now additionally know that:

- *CWD is transmitted laterally. This study showed that CWD was transmitted laterally, in 2 of 3 pens (new, no previous history of CWD) where susceptible and tonsil-biopsy positive deer were housed together.*
- *Deer can get CWD by ingesting something contaminated with diseased prion. This study showed that CWD was transmitted to susceptible deer when carcasses from clinically affected/neuropathy positive CWD carcasses were allowed to decompose in pens (2 of 3 pens).*
- *CWD prions may be shed in feces and saliva. Evidence from captive studies shows deer can get CWD from heavily contaminated environments. This study showed that susceptible deer can get CWD from living in pens (contaminated with feces and saliva) that previously housed CWD affected deer (1/3 pens).*

Provided by Dr. Timothy Van Deelen, UW - Madison

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:

- CWD is transmitted laterally (live diseased deer infect other deer)
- 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.

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 available upon request, 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, Weismann 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). White-tailed deer 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 increases 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. Due to these characteristics and because this is a resistant infectious agent that has a potential for environmental contamination, prevention is 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 Southeast 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).

Anticipated Private Sector Costs: These rules, nor the legislation which grants the department rule making authority, do not have a significant fiscal effect on the private sector. Additionally, no significant costs are associated with compliance to these rules.

Effects on Small Businesses: The proposed revisions to NR Chs.10 and 19 Wis. Adm. Code, which regulate baiting and feeding of deer, impose no compliance or reporting requirements for small businesses, nor are there any design or operational standards contained within the proposed rule. However, prior to April 2002, recreational feeding of deer was unregulated, and now that restrictions on recreational feeding are in place, it may impact the profits of small businesses. As a result of the provisions outlined in 2003 Wisconsin Act 240, which limit the amount of food that can be placed for recreational feeding and where the feeding is allowed to occur, these provisions may limit the amount of feed that a small business sells compared to the years prior to regulation of recreational feeding.

In accordance with s. 227.114, Stats., the department has considered the possible implications of these rules on small business, however under the authority of s. 227.114(3), Stats., any modification of the rules pertaining to baiting and feeding would undermine the effectiveness of the rule. In addition, the department has weighed the economic impact to the state of a potential collapse of the deer herd, which is an increased risk under continued baiting and feeding, against the economic burden that is placed on feed mills in the state with the baiting and feeding ban.

Some small businesses are highly dependent on the sale of corn and other supplements to those that bait and feed deer and would certainly experience economic losses with any prohibition of baiting and feeding. While no studies have been conducted to date to determine the economic impact of bait and feed sales for deer in Wisconsin, estimates have been made in neighboring states. In Michigan for instance, it is estimated that the sale of feed for baiting and feeding of deer exceeds \$50 million.

In addition there are potential economic impacts to farmers who sell deer corn. Agricultural industry spokespersons have indicated that the prohibition of baiting and feeding would have the effect of forcing export from Wisconsin of three million bushels of corn annually with a profitability loss of \$0.50/bu. Despite their strong economic interest in the alternative market that deer feeding provides for agricultural products (cull potatoes, carrots, apples, sugar beets, etc.), the Farm Bureaus in both Michigan (in 1999 and 2002) and Wisconsin (in 2002) have endorsed prohibitions on deer feeding. Their primary concern is protecting the health of agricultural animals from deer-borne diseases.

However, when you compare the economic benefits that a healthy deer herd brings to the state of Wisconsin, the economic impacts on small business and farmers are brought into perspective. Deer are one of the favorite wild animals in Wisconsin. In addition to deer hunting, which in 2001 alone generated over \$925 million, an estimated 2.4 million people participated in wildlife watching activities in Wisconsin in 2001 contributing approximately \$1.3 billion to the state's economy (IAFWA 2001). A separate estimate of economic impact specific to out-state tourists was not made.

The department has considered alternatives to prohibiting these practices in areas of highest risk and limiting baiting and feeding in other areas, but these alternatives are not feasible, and would be contrary to the statutory objective of disease control and eradication. Additionally, in light of the significant economic impact deer watching and hunting has to the state of Wisconsin by way of tourism, quality of life and recreation the department feels both economically and biologically a ban on deer feeding and baiting is in the best interest of Wisconsin.

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Section 1. NR 10.001(1r) is created to read:

NR 10.001(1r) "Animal part or animal byproduct", for the purposes of s. 29.336(3)(d) and (4)(d), Stats., means honey, bones, fish, meat, solid animal fat, animal carcass or parts of animal carcasses, but does not include liquid scents.

Section 2. NR 10.001(2s) is amended to read:

NR 10.001(2s) ~~For "Bait", for the purposes of this chapter, "bait" means honey and any solid or nonliquid any material attractive placed or used to wildlife attract wild animals, including liquid scent and feed that is used for hunting purposes under s. 29.336(4), Stats., but does not include plain drinking water or decoys.~~

Section 3. NR 10.001(7e) is created to read:

NR 10.001(7e) "Decoy" means the replica of an animal used to attract wild animals for the purpose of hunting, but does not include any food materials that can be consumed by any wild animal. For the purposes of this chapter, a decoy is not considered bait.

Section 4. NR 10.001 (9b) to (10m) are renumbered (9c), (9g), (9n), (9r), (9w), (10g) and (10n).

Section 5. NR 10.001(10) is created to read:

NR 10.001(10) "Feed" means any material that may attract or be consumed by wild animals that is placed for any non-hunting purpose including recreational and supplemental feeding under ss. 29.335 and 29.336, Stats., but does not include plain drinking water or decoys.

Section 6. NR 10.001(10c) is created to read:

NR 10.001(10c) "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.

Section 7. NR 10.001(12) is created to read:

NR 10.001(12) "Hunt over" means hunting within 100 yards of any feeding site in an area where a person knows or reasonably should know that one or more feeding sites exists.

Section 8. NR 10.001(23e) is created to read:

NR 10.001(23e) "Scent" means any material, except animal parts or animal byproducts, used to attract wild animals solely by its odor.

Section 9. NR 10.07(1)(g) is repealed.

Section 10. NR 10.07(2) is created to read:

NR 10.07(2) GENERAL BAITING REGULATIONS. (a) *General prohibition.* 1. No person may place, use or hunt over bait or feed material for the purpose of hunting wild animals or training dogs, except as provided in par. (b) or sub. (2m), or as authorized by a permit or license issued under s. 29.614(1) or 169.25(1)(a), Stats., or s. NR 12.06(11) or 12.10(1).

Note: Section 29.614, Stats., states: Scientific collector permit. (1) Application for a scientific collector permit shall be submitted to the department. The department may issue a scientific collector permit if the department determines that the applicant is a natural person and is engaged in a bona fide program leading to increased, useful scientific knowledge.

Note: Section 169.25, Stats., states: Scientific research license. (1) Issuance. (a) The department shall issue a scientific research license to any person who is engaged in a study or in research that the department determines will lead to increased, useful scientific knowledge and who files a proper application and who pays the applicable fee.

2. No person may hunt or train dogs over bait or a feeding site that is in violation of s. 29.336(4), Stats., this section, or in violation of the feeding prohibitions of s. NR 19.60, unless the feeding site is completely free of bait or feed material for at least 10 consecutive days prior to hunting, pursuing animals or dog training.

Note: Section 29.336 (4), Stats., states that a person may feed deer for hunting purposes in counties not included in the rules promulgated under sub. (2) during any season open for hunting deer if all of the following apply:

- (a) Not more than 2 gallons of material are at the feeding site.
- (b) No feeding site is closer than 100 yards of another feeding site.
- (c) The person does not place more than 2 gallons of material in any area comprising 40 acres or less.
- (d) The material used to feed deer does not contain any animal part or animal byproduct.

Note: Removal of unlawfully placed bait or feed material does not preclude the issuance of a citation for the original placement of the unlawful baiting or feeding material.

(b) *General exceptions.* A person may place, use or hunt over bait or feed as follows:

1. For the purpose of hunting bear and bear dog training in compliance with sub. (2m).
2. For the purpose of hunting deer in compliance with sub. (2m).
3. Scent may be used for hunting game and, except as allowed under subd. 4., the scent may not be placed or deposited in a manner in which it is accessible for consumption by deer or elk, and scents shall be removed daily at the end of hunting hours for deer established in s. NR 10.06(5).
4. 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.
5. With the aid of material deposited by natural vegetation or material found solely as a result of normal agricultural or gardening practices.
6. With the aid of crops planted and left standing as wildlife food plots.
7. With the aid of feed material placed in a bird feeding structure or device if the hunting is authorized under s. 29.337, Stats.
8. For the purpose of hunting coyote, fox, raccoon and unprotected species over bait or feed placed in compliance with this section or s. NR 19.60, if the hunting involves the release and use of trailing hounds.
9. Bait placed for trapping as specified in s. NR 10.13.
10. Feed or bait material placed or used for fish, reptiles, amphibians or arthropods, provided the material is not accessible to bear, deer or elk.

Note: 29.337 Hunting and trapping by landowners and occupants. (1) The owner or occupant of any land, and any member of his or her family, may hunt or trap beaver, coyotes, foxes, raccoons, woodchucks, rabbits, and squirrels on the land without a license issued under this chapter or ch. 169 at any time, except as follows:

- (a) An owner or occupant may not hunt any of these wild animals during the period of 24 hours before the time for commencement of the deer hunting season in any area where an open season for hunting deer with firearms is established.
- (b) Such persons may not hunt coyotes during an open season for hunting deer with firearms in an area that is closed by the department by rule to coyote hunting.

Note: Placing or using bait for purposes of trapping is regulated by ss. NR 10.13(1)(b), 19.27, 19.275 and not this subsection. Baiting for migratory birds is regulated by s. NR 10.12(1)(h) and not this subsection. This subsection does not prohibit hunting with the use of decoys except as already prohibited under ss. NR 10.12(1)(f) and (g) and 10.25(4)(d).

Section 11. NR 10.07(2m) is created to read:

NR 10.07(2m) BEAR AND DEER BAITING REGULATIONS. (a) *Affected area.* This section applies to deer and bear hunting statewide, except for baiting deer in the areas described in par. (b) where baiting for deer is prohibited.

(b) *Excluded area.* Deer baiting and feeding is prohibited in entire counties where any of the following criteria apply:

1. CWD eradication zones or herd reduction zones have been established in the county or a portion of the county, or;
2. A CWD or bovine tuberculosis positive captive or free-roaming, domestic or wild animal has been confirmed after December 31, 1997 from the county, or;
3. The county or portion of the county is within a 10 mile radius of a captive or free-roaming, domestic or wild animal that has been tested and confirmed to be positive for CWD or bovine tuberculosis after December 31, 1997.

(c) *Inclusion of additional counties.* 1. The department may add additional counties under par. (b) if they meet the criteria established in par. (b)1., 2. or 3.

2. The prohibitions and exemptions in this subsection shall become effective upon issuance of an order by the secretary of the department and publication in the official state newspaper. In addition, a notice of the order shall be provided to newspapers, legislators and hunting license outlets in the area affected.

(d) *Bear hunting and bear dog training.* Bait or feed may be placed and used for the purpose of hunting bear or training bear dogs, except no person may place, use or hunt over bait or feed:

1. Beginning the day after the bear season closes and continuing through the following April 14th.
2. In excess of 10 gallons of bait or feed at any feeding site.
3. That is not totally enclosed in a hollow log, a hole in the ground or stump which is capped with logs, rocks or other naturally occurring and unprocessed substances which prevents deer from accessing the material. Liquid scent used for hunting of bear or training bear dogs does not need to be enclosed.
4. Unless, when the bait or feeding site is checked or re-baited, all bait that has been uncovered is again enclosed and made inaccessible to deer in accordance with subd. 3.

(e) *Deer hunting.* Bait or feed may be placed and used for hunting deer outside of the counties described in par. (b), except no person may place, use or hunt over bait or feed:

1. During the closed season for hunting deer. For the purpose of this paragraph, the open season for hunting of deer includes the 24-hour period prior to the deer seasons established in s. NR 10.01(3)(e) and (es).

Note: The 24-hour period refers to the period from 12:00 am to 11:59 pm on the day immediately before the season.

2. In excess of 2 gallons of bait or feed at any feeding site.
3. In excess of 2 gallons of bait or feed on each contiguous area of land under the same ownership that is 40 acres or less, or for each full 40 acres that make up a contiguous area of land under the same ownership.
4. At 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.

Note: A person may place bait or feed for another person and may hunt over another person's bait or feed site if the person placing the bait is in compliance with s. NR 10.07(2) and (2m).

(f) *Additional prohibitions.* For bear hunting and bear dog training and for deer hunting outside of the counties described in par. (b), no person may place, use or hunt over bait or feed that:

1. Contains or is contained within metal, paper, plastic, glass, wood or other similar processed materials. This subdivision does not apply to bait or feed placed in hollow logs or stumps or to scent materials.
2. Contains any animal part or animal byproduct.
3. Is located within 50 yards of any trail, road or campsite used by the public, or within 100 yards from a roadway, as defined in s. 340.01 (54), Stats., having a posted speed limit of 45 miles per hour or more.
4. Except as authorized under s. NR 19.60(3)(a)1., is in a feeder designed to deposit or replenish the feed automatically, mechanically or by gravity.

Note: Section 340.01(54), Stats., "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. In a divided highway, the term "roadway" refers to each roadway separately but not to all such roadways collectively.

(g) *Valid approval required.* Unless hunting pursuant to s. NR 10.07(2)(b)8., no person may hunt over bait or feed material placed for:

1. Bear without possessing a valid unused class A bear license and carcass tag.
2. Deer without possessing an appropriate valid unused archery or gun deer license and carcass tag.

Note: Removal of unlawfully placed bait or feed material does not preclude the issuance of a citation for the original placement of the unlawful baiting or feeding material.

Section 12. NR 10.11(1)(a) is repealed.

Section 13. NR 19.001(1m) is created to read:

NR 19.001(1m) "Animal part or animal byproduct" has the meaning given in s. NR 10.001(1r).

Section 14. NR 19.001(4) is created to read:

NR 19.001(4) "Bird feeding devices and structures" means any device or structure that has the primary purpose of attracting or feeding birds or small mammals.

Section 15. NR 19.001(4m) is created to read:

NR 19.001(4m) "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.

Section 16. NR 19.001(6d) is created to read:

NR 19.001(6d) "Feed" has the meaning given in s. NR 10.001(10).

Section 17. NR 19.001(6h) is created to read:

NR 10.001(6h) "Feeding site" has the meaning given in s. NR 10.001(10c).

Section 18. NR 19.001(12e) is created to read:

NR 19.001(12e) "Owner-occupied residence" for the purpose of this section means a dwelling or building devoted to human occupancy when used while feeding deer as a residence by the owner, members of the owners immediate family, or when used as a residence by individuals as a rental property while feeding deer.

Section 19. NR 19.001(15m) is created to read:

NR 19.001(15m) "Small mammals" mean all mammals other than bear, deer and elk.

Section 20. NR 19.60 is created to read:

NR 19.60 Feeding of wild animals. (1) GENERAL PROHIBITIONS. (a) 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 provided in sub. (2) or (3), or as specifically authorized in a permit or license issued under s. 29.614(1) or 169.25(1)(a), Stats., or s. NR 12.06(11) or 12.10(1).

Note: Section 29.614, Stats., states: Scientific collector permit. (1) Application for a scientific collector permit shall be submitted to the department. The department may issue a scientific collector permit if the department determines that the applicant is a natural person and is engaged in a bona fide program leading to increased, useful scientific knowledge.

Note: Section 169.25, Stats., states: Scientific research license. (1) Issuance. (a) The department shall issue a scientific research license to any person who is engaged in a study or in research that the department determines will lead to increased, useful scientific knowledge and who files a proper application and who pays the applicable fee.

(b) Any person placing feed to attract wild animals in violation of this section or s. NR 10.07(2) or (2m) shall remove all feed or other material illegally placed or deposited when notified by the department to do so.

(c) Landowners, lessees or occupants of any property where feed or other material in violation of this section or s. NR 10.07(2) or (2m) is present shall remove all feed or other material illegally placed or deposited upon notification by the department of the illegal activity if not otherwise removed in accordance with par. (b).

(d) Except as authorized under sub. (3)(a)1., no person may place feed in a feeder designed to deposit or replenish the feed automatically, mechanically or by gravity.

(2) FEEDING DEER AUTHORIZED. (a) *Affected area.* This subsection applies statewide, except for those counties where deer baiting and feeding is prohibited under par. (b).

(b) *Excluded area.* Deer baiting and feeding is prohibited in entire counties where any of the following criteria apply:

1. CWD eradication zones or herd reduction zones have been established in the county or a portion of the county, or;
2. A CWD or bovine tuberculosis positive captive or free-roaming, domestic or wild animal has been confirmed after December 31, 1997 from the county, or;
3. The county or portion of the county is within a 10 mile radius of a captive or free-roaming, domestic or wild animal that has been tested and confirmed to be positive for CWD or bovine tuberculosis after December 31, 1997.

(c) *Inclusion of additional counties.* 1. The department may add additional counties under par. (b) if they meet the criteria established in par. (b)1., 2. or 3.

2. The prohibitions and exemptions in this subsection shall become effective upon issuance of an order by the secretary of the department and publication in the official state newspaper. In addition, a notice of the order shall be provided to newspapers, legislators and hunting license outlets in the area affected.

(d) *Deer feeding.* A person may place or deposit material to feed or attract wild deer for recreational and supplemental feeding purposes outside of the counties where deer feeding is prohibited under par. (b), but may not place or allow the placement of any feed material:

1. In excess of 2 gallons of feeding material within 50 yards of any owner occupied residence or business.
2. More than 50 yards from an owner occupied residence or business.
3. Within 100 yards from a roadway, as defined in s. 340.01 (54), Stats., having a posted speed limit of 45 miles per hour or more.

Note: Section 340.01(54), Stats., "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. In a divided highway, the term "roadway" refers to each roadway separately but not to all such roadways collectively.

4. That contains any animal part or animal byproduct.
5. Without the approval of the owner of the owner-occupied residence or business.

(3) EXCEPTIONS. (a) This section does not prohibit any of the following activities:

1. Material placed solely for the purpose of attracting and feeding wild birds and small mammals when placed in bird feeding devices and structures at a sufficient height or design to prevent access by deer and only when the structures and devices are no further than 50 yards from a dwelling devoted to human occupancy unless authorized by the department. If the department determines that wild deer are utilizing bird feeding devices or structures, the devices or structures shall be enclosed or elevated higher to prevent access by deer.
2. Feeding of wild animals, other than deer, elk or bear, by hand if:
 - a. Feed placed not more than 30 feet away from the person feeding, and
 - b. The person feeding makes all reasonable attempts to clean up the unconsumed feed before moving a distance greater than 30 feet from the deposited feed.
3. Feed deposited by natural vegetation or found solely as a result of normal agricultural or gardening practices.
4. Standing crops planted and left standing as wildlife food plots that may be used by wild animals.
5. Feed material placed for deer or bear hunting or bear dog training as authorized under s. NR 10.07(2m).
6. Feed material placed for trapping as specified in s. NR 10.13.
7. The use of scents, provided the material is not accessible for consumption by deer or elk or scent placed in compliance with s. NR 10.07(2)(b)4.
8. Feed or bait material placed or used for fish, reptiles, amphibians or arthropods, provided the material is not accessible to bear, deer or elk.
9. Feeding of deer as authorized under sub. (2).

Note: These feeding rules do not apply to captive wild animals held and licensed under ch. 169, Stats.

Section 21. Effective date. This rule shall take effect the first day of the month following publication in the Wisconsin administrative register as provided in s. 227.22(2)(intro.), Stats.

Section 22. Board adoption. The foregoing rules were approved and adopted by the State of Wisconsin Natural Resources Board on December 8, 2004 and February 22, 2005.

Dated at Madison, Wisconsin _____

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Scott Hassett, Secretary

(SEAL)