# Conservation Bulletin

Examining News and Events in Natural Resources



The February 2021 Wisconsin Wolf Hunt: A Preliminary Assessment May 2021





# Wisconsin's Green Fire

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# The February 2021 Wisconsin Wolf Hunt: A Preliminary Assessment

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## **About this Work:**

Conservation Bulletins are published by Wisconsin's Green Fire to summarize science and background of key conservation and environmental news, issues, and events, and to make policy recommendations that support proconservation outcomes. The findings here reflect the judgement and consensus of our contributors, based on available evidence and relevant research.

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# The February 2021 Wisconsin Wolf Hunt: A Preliminary Assessment

# **Summary**

During the last week of February 2021, the State of Wisconsin allowed public hunting and trapping of wolves for the first time since 2014.

Following the January 4<sup>th</sup> federal removal of wolves from the Endangered Species List a chaotic series of events rapidly unfolded that featured conflicting opinions on how the state would comply with existing law. The decision by the Wisconsin Department of Natural Resources (WDNR) to forgo a late winter harvest was reversed by a circuit court which ordered the agency to plan and initiate a harvest with less than 5 days-notice, eliminating the opportunity to perform almost all the customary and necessary steps required to establish a season framework for use during the middle of the wolf breeding season. The last time wolves were hunted legally in Wisconsin in February was in 1956.

This paper provides our preliminary assessment of the February 2021 Wisconsin wolf hunting and trapping season. Included in this assessment: details about how the hunt developed; the impacts of the hunt on Wisconsin's wolf population; critical missing information; and recommendations to avoid repeat of the multiple failures that contributed to unwanted outcomes from the hunt and to help ensure that future wolf conservation decisions are informed by science and best practice.

# **Critical Findings**

- During the February hunt wolves were removed primarily from core habitats on public lands where conflicts with pets, livestock or human safety are already rare. There was correspondingly little reduction of wolf populations in areas of marginal habitat where livestock and pet depredations and human wolf conflicts are most likely to occur. Based on currently available information and our understanding of wolf populations and behavior, there is little evidence that the February 2021 wolf hunt will significantly reduce human wolf conflicts.
- Although there are significant uncertainties associated in making a prediction based on limited information, we believe that based on loss of bred females and alpha males, it is reasonable to estimate that 60-100 of Wisconsin's wolf packs may lose all pup production due to the February hunt. If this impact is realized it will represent 24-40% of the expected reproduction from 245 known wolf packs outside of Indian reservations in Wisconsin.

- ▶ The lack of consultation with Wisconsin Ojibwe Tribes over the February hunt failed to meet the state's responsibilities under both the LCO/Voight Decision, that applies specifically to the Ojibwe tribes of Wisconsin, as well as broader obligations under the doctrine of Federal Indian Trust Responsibility. The relations between the State and the Wisconsin Ojibwe Tribes have been damaged and will take time repair.
- As a result of significant exceedance of the state's harvest quota, a sustained effort will be required to rebuild public trust in WDNR's ability to accurately regulate future wolf hunt.
- It will be difficult to evaluate the impact of the breeding season hunt on the wolf population. During the three most recent wolf seasons (2012-2014), population data was gathered after the hunts took place. For the February 2021 hunt, most of the seasonal population data was collected before the harvest, confounding the ability for biologists to make accurate post-hunt population estimates. It won't be possible to fully assess the impact of the February 2021 hunt on the distribution and abundance of wolves until annual surveys are completed in late 2021/ early 2022, after quotas have been established for the legislatively mandated fall 2021 hunt.
- ▶ The mishandling of February hunt has incentivized hunting opponents advocating the immediate relisting of gray wolves as a federally endangered species. The outcome of Wisconsin's most recent wolf harvest threatens the reputation the state has established as a leader for wolf conservation for more than 60 years.
- Despite current law requiring annual wolf harvests, the WDNR retains authority to establish quotas and, within statutory limits, to regulate the form, timing, and methods of harvest. The WDNR should use its authority more fully to prevent the kind of unwanted outcomes experienced in February from being repeated.

# **Background and Timeline**

Wisconsin law (2011 Act 169) requires that when wolves are not on the federal or state threatened endangered species list, the WDNR is mandated to hold a wolf hunting and trapping season. The law requires that such a harvest shall occur from the first Saturday in November (previously designated as October 15) and continue until the quotas set for wolves are achieved, or the end of February, whichever comes first. (In this paper the terms "hunt" or "harvest" refer to the 'public hunting and trapping season which includes all legal forms of harvest, including hunting with hounds, firearms, and trapping.)

**On November 3**<sup>rd</sup>, **2020**, the United States Fish and Wildlife Service (USFWS) published their final rule removing gray wolves from the Endangered Species List.

On December 4<sup>th</sup>, 2020, the Wisconsin Department of Natural Resources announced the agency's intention to hold a wolf hunt beginning in November 2021, in anticipation of the USFWS delisting.

On January 4<sup>th</sup>, 2021, the U.S. Fish and Wildlife Service's final decision to remove gray wolves from the Endangered Species List throughout their entire range became effective.

**On January 13th**, the Committee on Sporting Heritage, Small Business, and Rural Issues in the Wisconsin Senate and the Committee on Sporting Heritage in the Wisconsin Assembly held a joint information-only hearing in which the committee chairs urged the WDNR Natural Resources Board (NRB) to direct the WDNR to initiate a wolf hunt before the end of February.

**On January 22<sup>nd</sup>**, the NRB held a special hearing to consider holding a winter wolf hunt. At that meeting, the NRB voted 4-3 against holding a February hunt, instead directing the Department to plan for a hunt to begin in November 2021. The inability to adequately consult with Wisconsin Ojibwe Tribes, which is required by longstanding legal precedent, was cited as a primary reason by board members to oppose holding a February hunt.

**On February 2<sup>nd</sup>**, Hunter Nation, a Kansas-based hunting advocacy group operating with representation by the Wisconsin Institute for Law and Liberty, filed a lawsuit in Jefferson County Circuit Court requesting a writ of mandamus to force WDNR to immediately hold a hunt before the end of the statutorily established February season.

**On February 11th**, Jefferson County Circuit Court Judge Bennett Brantmeier ruled in favor of the plaintiffs, ordering WDNR to immediately implement a wolf hunting and trapping season before the end of February. The WDNR filed an appeal and a request to stay Brantmeier's ruling in the State Court of Appeals. On February 19th, the State Court of Appeals dismissed the state's appeal and rejected the request for a stay.

**Between February 11th and February 15th**, WDNR staff met to determine a recommended harvest quota. The process used by Department staff to determine a recommended quota was highly abbreviated and did not involve traditional input or comments from stakeholders, input from the state's Wolf Advisory Committee, or consultation with tribal governments.

**On February 15<sup>th</sup>**, the NRB held a second special meeting to consider and authorize the Department's emergency plans for holding a hunt, establishing a quota and number of wolf harvest licenses. At the NRB meeting, the Department recommended setting a quota for 200 wolves and issuing up to 10 licenses per quota animal.

The NRB voted to approve the Department's recommended quota, but added an amendment to increase the number of licenses to up to 20 permits per quota animal.

**Between February 15<sup>th</sup> and February 18<sup>th</sup>**, the WDNR finalized plans to determine the number of licenses to issue and open applications for licenses.

Much of the occupied wolf range in northern and central Wisconsin consists of land originally ceded to the United States by Ojibwe Tribes. The tribes have reserved treaty rights for hunting, gathering, fishing and other uses from these ceded lands and they utilize living wolves for the ecological and cultural benefits they provide. Following established practice consistent with federal treaty law, the tribes declared their intent to protect their portion of the total quota (50% of the quota of wolves residing within ceded lands).

As a result of the Tribes' declaration within ceded territories, the WDNR reduced the approved quota of 200 wolves to 119 wolves available to state-licensed hunters. Based on the NRB directive to issue 20 licenses per quota animal, a maximum number of up to 2380 total licenses was established for state-licensed hunters.

# **Details of the February Hunt**

**Between February 16th and 21st**, the WDNR accepted applications for wolf harvest licenses.

18,503 people applied to receive a wolf harvest license. Of the total of 2380 applicants who were notified they were authorized to purchase licenses 1548 licenses were ultimately purchased by hunters and trappers. The number of licenses sold represents a 13:1 ratio of hunters to each of the 119 wolves approved for harvest, and about 1.5 licenses issued for every wolf estimated to be living in the state. Had all available licenses been sold the ratio would have been as much as 50% higher.

As a point of comparison, in 2020 the WDNR authorized 5 licenses for harvest of an allocated quota of 5 bull elks in the state's northern elk herd – a 1:1 ratio of hunters to quota animals. Together with the 5 bulls harvested by tribal members, the 2020 elk hunt represented a 1:30 ratio of hunters to total elk in the population.

On Monday February 22nd, legal wolf hunting and trapping began.

On Tuesday February 23<sup>rd</sup> at 10:00 AM, the second day of the shortened season, WDNR staff ordered closures for three of the state's six wolf zones (2, 5, & 6). Five hours later at 3:00 PM, WDNR staff ordered closure for the three remaining zones (1, 3, & 4).

**On Wednesday February 24**th, at 3:00 PM, legal hunting ended for the last of six wolf zones. (Note that a 24-hour season closure notice is required by state law.)

## **Hunt Results**

#### **Number of Animals Harvested**

The final reported harvest of 218 wolves over a period of three days exceeded the total quota for state-authorized hunters by 83%, or 99 animals. For comparison, in previous Wisconsin wolf harvests (2012-2014) which ran from October 15 to early or mid-December, the largest state-wide quota exceedance was 6 wolves.

As with any hunting season for any species, the number of animals registered does not equal the total number of animals killed. Missing from the total of 218 wolves registered in February would be wolves that were shot but unrecovered, and wolves killed illegally and not registered.

The additional number of unregistered wolf kills from the February 2021 season is impossible to estimate accurately. However, given the large number of hunters and hunting parties in the field, the rate at which harvest occurred, and evidence of illegal hunting based on citations issued by law enforcement, an estimate of unregistered kills should be factored into post-harvest population estimates.

#### **Rate of Harvest and Exceedance**

Compared to previous wolf hunts, the February 2021 season saw a high rate of animals killed in less than 72 hours – a rate that far exceeded any previous wolf season. This level of hunter success was due in part to large, coordinated hunting parties, extensive use of hounds with radio- tracking devices, and ideal tracking conditions with fresh snow at a time when wolf packs are typically most vulnerable during late-winter breeding season.

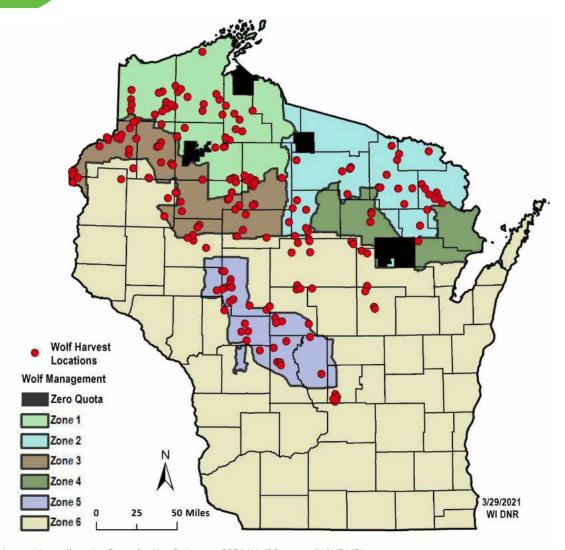
The WDNR's ability to regulate against overharvest is constrained by current law (2011 Act 169) which sets a minimum of 24 hours-notice from the time of a season closure announcement before the closure order can take effect. This requirement forces the Department staff to essentially guess at how many animals might be harvested during the 24 hours of additional hunting opportunity that occurs following announcement of the closure order.

Compounding this difficulty, the WDNR's hunting rules allow hunters up to 24 hours from the time of kill to register harvested wolves. So, for example, the Department's order to close a zone issued at 3:00 PM on a Tuesday would allow legal hunting to occur until 3:00 PM Wednesday. Any hunters that harvest a wolf during the 24-hour notice period could then legally register harvested animals as late as 3:00 PM Thursday.

The large number of hunters allowed in the field, coupled with the high level of hunter success and the variable rate at which kills were registered contributed to the significant exceedance of the quota by state-authorized hunters. As evidenced by multiple widely-shared social media posts, at least some hunters intended to exploit the 24-hour registration window, delaying registration of kills for up to 24 hours after harvest, which contributed to the department's inability to act quickly enough to close the season before harvest quotas were exceeded.

Attempting to manage thousands of organized hunters under significant operational constraints made it impossible for Department staff to effectively control the harvest activity and avoid exceeding the quota.

Despite a rapid response by the agency to the unprecedented rate of harvest activity, overharvesting in individual zones ranged from 115% over quota in Zone 5 in the Central Forest region to 265% over quota in Zone 6.



Harvest Locations by Zone for the February 2021 Wolf Season (WWDNR).

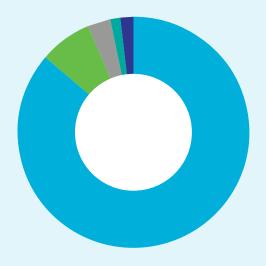
Unlike previous wolf hunts, hunting with dogs in the middle of wolf breeding season proved to be a highly effective and efficient method for killing a large number of wolves rapidly. A total of 86% of the registered wolf harvest was from hunting wolves with dogs.

During the breeding season in late winter, wolf marking activity peaks as wolves leave easily detected sign and patrol and establish their territories, especially along forest roads and trails. During the February 2021 hunt, roads were generally in good driving conditions, and fresh snow allowed especially easy detections of wolves.

Current law does not allow use of hunting wolves with dogs until after the state firearm deer season closes, typically in late November or early December. Because previous wolf harvests began and ended much earlier, the extent of wolf hunting with dogs in those seasons was minimal. In 2013 hunting with dogs was allowed in one zone with 35 wolves harvested (14% of the harvest), and in 2014 dogs were allowed in two zones with 6 wolves harvested (4% of the harvest).

During February 2021, hunting parties often consisted of coordinated groups with multiple sets of dogs and multiple vehicles using radio and cellular-based communications. Hunting regulations allow a maximum of 6 dogs in a pack at any

## Method of Take Summary for Wolves Harvested During the February 2021 Wolf Season (WDNR)



TOTAL	218	100%
Stand / Still Hunting	4	2%
<ul><li>Cable Restraint</li></ul>	3	2%
Foothold Trap	7	3%
Hunting / Predator Calls	16	7%
<ul><li>With Aid of Dogs</li></ul>	188	86%

one time to pursue wolves, but this provision is difficult to enforce when fresh sets of dogs are brought in to replace dogs already in the field during a chase. And there is no regulation limiting the number of people with firearms who may accompany a licensed hunter in the field.

Under Wisconsin wolf hunting regulations, a wolf license holder is the only member of a hunting party who may shoot or take a wolf, and wolves that are harvested must be tagged by the person who harvested the animal. It is illegal to place a wolf pelt tag on a wolf that has been harvested by another person.

Large, coordinated groups of hunters were commonly observed during the February hunt and reported on in both traditional and social media, suggesting that legal group hunting with both licensed hunters and non-licensed participants was a common practice. WDNR reported three citations issued to individuals who shot wolves without being in possession of a valid license, at least one of whom was hunting in a party with licensed hunters. It is likely the overall participation in the February hunt would have included at least several thousand people in the field.

#### **Hunting with Hounds**

Wisconsin is the only state that allows hunting wolves with dogs. 188 (86%) of the 218 wolves registered in the February hunt were taken by hunters using dogs.

Due to the timing of previous seasons, wolf harvests in fall 2012-2014 predominantly occurred via trapping and hunting without dogs, demonstrating that hunters and trappers could effectively achieve established quotas within a few weeks. The February wolf harvest demonstrated that hunting with dogs, often done in large groups, can quickly lead to overharvest and is difficult to regulate.

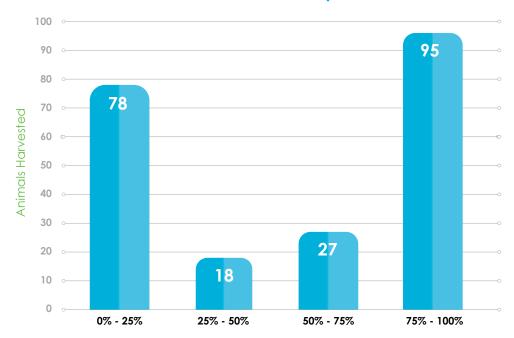
The WDNR has the authority to limit hunting hours during wolf hunts. During the 2012-2014 wolf harvest season night hunting was not allowed. During the February 2021 hunt, WDNR allowed night hunting to occur over bait or using wolf calls for hunters not using dogs. The Department has not reported how many wolves were harvested at night.

#### Where Harvests Occurred

Beyond the total number of animals harvested, the location and spatial patterns of harvests are critical in understanding the population response and the effect of hunting activity on human - wolf conflicts. The land ownership around wolf kills can provide an important predictor of whether removal of animals is likely to reduce the most common human - wolf conflicts.

Human - wolf conflicts, including depredations of pets and livestock, occur almost exclusively around private lands with forest and farms and high road densities which are considered marginal wolf habitat. The majority of wolves harvested in the February 2021

#### Percent of Public Lands at 192 Unique Harvest Locations



Percent Public Land in Surrounding Section

hunt were taken from larger blocks of public lands considered prime wolf habitat. Of the 218 wolves registered in February, 160 were reported taken on public lands (73%), and 58 reported from private lands (27%).

WGF analyzed location data and land ownership patterns and we calculated the percentage of public land ownership within each of the 192 unique square mile locations (sections) associated with the 218 wolf harvest records provided by WDNR.

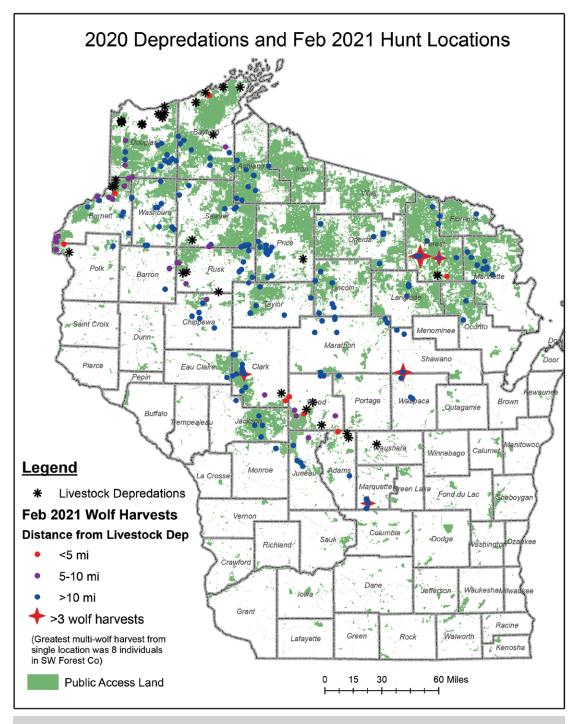
122 (56%) of wolf harvest locations occurred in sections with >50% in public ownership, and of those, 95 (43%) were >75% public ownership, 96 (44%) of the harvest locations were <50% public ownership, and of those, 78 (36%) were <25% public ownership.

WGF also compared the locations of February 2021 registered wolf harvests to the locations of confirmed wolf depredations (death or injury caused by wolves) of livestock reported in 2020 by WDNR, which operates a wolf depredation program in partnership with the USDA Wildlife Services program.

In a 2009 publication, Adrian Wydeven and others found the mean territory of a Wisconsin wolf pack to be 53 square miles (sq. mi.). We selected a larger area of 78 sq. mi. as a size likely to include most wolf territories in the state, which equates to a circular area with a radius of 5 miles.

Using these assumptions about territory size, we classified all wolf harvest locations based on distance from any of the 48 confirmed wolf livestock depredations reported in 2020.

Our analysis found that of 218 wolves harvested, only 9 (4.1%) occurred within 5 miles of a previous depredation location, 26 (11.9%) occurred between 5 and 10 miles, and the remaining 183 (83.9%) were greater than 10 miles from the nearest reported depredation.



Data provided by the WDNR was used to compare Feb 2021 wolf harvest locations with all confirmed Wisconsin wolf depredations reported in 2020. WDNR provided 192 unique wolf harvest locations at the scale of a survey section (typically about a square mile). We plotted the center point of each section, so that each plotted location would be 0.7 miles or less from the actual wolf harvest location. Livestock, hunting dog, and pet depredations for 2020 were plotted using points from the WDNR Wolf Depredation interactive map (https://dnrmaps.wi.gov/H5/?viewer=GRAY\_WOLF\_DEPREDATION).

WGF applied a proximity analysis (ESRI ArcGIS "Near" Tool) to determine the distance between each wolf harvest location and the nearest confirmed livestock depredation location reported in 2020.

# Distance of February Wolf Harvest Locations from 2020 Livestock Depredations



4.1%

11.9%

183 83.9%

218 100%

26

Less than 5 miles

**TOTAL** 

Between 5 and 10 miles

Greater than 10 miles

Individual animals rarely, if ever, travel for long distances outside their territory under normal circumstances and pose little risk of causing depredation at distances greater than 10 miles. Non-territorial wolves (aka lone wolves) generally represent <5% of wolf populations and are rarely involved in depredation on large livestock.

During the February hunt wolves were removed primarily from core habitats on public lands where conflicts with pets, livestock or human safety are already rare. There was correspondingly little reduction of wolf populations in areas of marginal habitat where livestock and pet depredations and human / wolf conflicts are most likely to occur. Based on the currently available information and our understanding of wolf populations and behavior, there is little evidence to conclude that the February 2021 wolf hunt will significantly reduce human wolf conflicts.

# **Biological Implications**

As with any species, removal of pregnant females has a strong effect on population growth and reproduction. Killing pregnant wolves generally eliminates any spring pup production in their respective packs. However, because hunters were not required to submit carcasses for inspection, the breeding status of harvested female wolves cannot be determined with certainty.

The 218 wolves registered from the harvest included 116 males and 102 females. Age class distribution included approximately 9% pups, 51% yearlings and at least 40% adults. Most adults would have been breeding-age animals.

Based on previous research, as many as 65% of the 38 adult females harvested and 50% or more of the 53 yearling females that were harvested may have been bred (pregnant) at the time of harvest. Taken together, this rate of loss would lead to as many as 50 wolf packs not producing pups this year due to loss of breeding females.

Removal of 47 adult males will also be detrimental to pup survival and pack stability. Many of the adult males harvested would have been mates of breeding females, and the loss of these males would result in adult females trying to raise pups on their own, contributing to additional loss of reproduction. Adult males are also critical to maintaining territories and their loss often leads to packs dissolving.

Hunting during such a late period in the wolves' breeding season magnifies the population reduction that results from each individual animal that is removed, due in part to the likely inability for those remaining adult animals to find a new mate and breed again.

Research on wolf pack dynamics found that population growth is sensitive to the time it takes for a pack to reform when one of the alpha animals is killed.

Although there are significant uncertainties associated in making a prediction based on limited information, we believe that based on loss of bred females and alpha males, it's reasonable to estimate that 60-100 of Wisconsin's wolf packs may lose all pup production due to the February hunt. If this impact is realized it will represent 24-40% of the expected reproduction from 245 known wolf packs outside of Indian reservations in Wisconsin.

When developing the hunt framework, the Department did not request, and the NRB did not order the Department to require hunters to surrender wolf carcasses for sampling as was done routinely during the 2012-14 wolf seasons. A total of 21 hunters voluntarily submitted wolf carcasses for biological assessment in response to a WDNR request from the Great Lakes Indian Fish and Wildlife Commission (GLIFWC).

The WDNR's failure to require all harvested wolf carcasses be presented for sampling is an important missed opportunity. Such data would have been essential to fully assessing the hunt's impact.

Taken together, these factors all lend strong evidence that any fall 2021 harvest needs to be developed using highly conservative assumptions and with a goal of preventing further population loss.

Туре	Male	Female	Total	% by age
Young (<1 yr.)	10	10	20	<b>9</b> %
Sub-adults (1-2 yr.)	57	53	110	51%
Adults (2.5 yr. +)	47	38	85	39%
No Data	2	1	3	1%
Total	116	102	218	
% by Sex	53%	47%		100%

Sex and Estimated Age of Wolves Harvested in February 2021 (WDNR).

#### **Tribal Consultation**

United States Indian policy recognizes Native American tribes as governments with inherent sovereignty that pre-exists that of the federal government or of any state. Meaningful tribal consultation has been a longstanding cornerstone of Wisconsin's responsibility in natural resource management.

Ojibwe Tribes in what is now northern Michigan, Wisconsin, and Minnesota retained rights in 19<sup>th</sup> Century treaties to hunt, fish, gather and use natural resources in the areas known as Ceded Territories, which includes a large portion of northern and central Wisconsin. A 1983 U.S. Court of Appeals decision known as the LCO/Voight Decision codified this legal right and established the clear responsibility for states to make all

reasonable efforts to reach a consensus with recognized tribes around hunting, fishing, trapping, and all other management issues of any treaty reserved resource.

The Jefferson County Circuit Court ruling of February 11<sup>th</sup> ordered the WDNR to hold a hunt that could begin and end before February 28<sup>th</sup>. Complying with that order forced the Department to develop a season structure within days, preventing the possibility of any meaningful tribal consultation.

Although a member of the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) was briefed on the wolf quota process utilized by WDNR, discussions with GLIFWC staff members does not constitute tribal consultation and no other consultation with Wisconsin Ojibwe tribes took place. Nor was there meaningful consultation with any of Wisconsin's other (non-Ojibwe) Native American tribes.

In ordering the state to commence an immediate hunting season, Judge Brantmeier's order forced the WDNR to make plans for a hunt without any meaningful tribal consultation. This failure exposes the state to legal actions from Wisconsin Indian tribes and it has damaged state - tribal relations.

# **Conclusions**

Wisconsin was the first state to legally protect wolves (1957), the first to list wolves as a state endangered species (1975), and the first to create a wolf recovery plan (1989). Wisconsin also holds the distinction of operating the longest ongoing annual state survey of a wolf population (1979 to present). Despite these past achievements, Wisconsin has now become a prime example of what happens when wolf management is driven by politics instead of science.

As a result of significant exceedance of harvest quotas during the hunt, a sustained effort will be needed to rebuild the public trust in the WDNR's ability to accurately set quotas and regulate future wolf hunts. In light of missing information, and because new population estimates will not be available in time to inform decisions, any fall 2021 hunt must be developed using highly conservative assumptions and with a goal of preventing further population loss.

Despite current law requiring annual wolf harvests, the WDNR retains broad authority to establish quotas and regulate the form, timing, and methods of harvest. The WDNR should use its authority much more fully to prevent the kind of outcomes experienced in February from being repeated.



Credit: MI DNR

# **Policy and Practice Recommendations**

The following recommendations will help ensure that future wolf conservation decisions are informed by science and best practices as the Department plans for a fall 2021 hunt and begins the extensive process needed to update a state Wolf Conservation Plan.

- 1. WDNR wildlife biologists must make their best efforts to assess and model the impact of the 2021 February hunt, including estimating illegal or unregistered kills, removal of pregnant females, and loss of alpha males on the wolf population. Current population models and population estimation methods should also be assessed for reliability. This impact analysis should be completed and made available to the Wolf Advisory Committee prior to WDNR's development and public release of 2021 fall harvest quota alternatives.
- 2. The WDNR must invest now to measure and estimate the impact of the February harvest on wolf reproduction and future population levels. Summer howl surveys, a long-standing survey tool that was suspended in 2020, need to be reestablished in 2021.
- 3. In all future harvests WDNR must use its authority to require that carcasses be submitted for registration in person and be made available for biological sampling. Trained volunteers, including wildlife biologists with GLIFWC, Timber Wolf Alliance, and Wisconsin's Green Fire are available to assist with sample collection and assessment.
- 4. In light of so much missing information, and because population estimates and results from howl surveys will not be available to inform a harvest season in fall 2021, a fall 2021 harvest must be developed using highly conservative assumptions and with a goal of preventing further population loss.
- 5. The WDNR needs to use its authority to ensure that any fall hunt avoids the significant exceedance of quota that occurred in the February hunt. Tools within the Department's authority include:
  - Reducing the number of wolf harvest licenses issued for each quota animal to a level more similar to other large game species
  - Issuing harvest licenses specific to individual wolf zones
  - Limiting the number of hound hunting licenses relative to the total number of licenses
  - Limiting the hours within which hound hunting can occur
  - Requiring registration of animals to occur no later than 12 hours after harvest
- 6. Current regulations state that hunters may not use more than 6 dogs in a single pack to hunt wolves, but there are no restrictions on frequency of replacement, or criteria for defining dog packs. Limits on number of hounds allowed in packs need to be more clearly established with enforceable rules.

- 7. The Department should clarify and enforce regulations that only licensed hunters may legally shoot or take a wolf.
- **8.** All forms of night hunting of wolves should be eliminated. This practice was not allowed during previous wolf hunts in 2012-2014. Hunters and trappers were able to effectively harvest wolves without hunting at night. Night hunting increases risk of losing shot wolves.
- 9. Wolves are the only species where state statutes mandate a harvest season occur when a species is not federally listed. The legislature should revise 2011 Act 169 and restore to WDNR responsibility for determining when and under what circumstances any recreational hunting should occur, using established processes for assuring public input and species conservation.
- 10. WDNR should increase efforts to educate stakeholders about wolves' role in the landscape and help offset false claims about wolves. It is clearly within the mission of the agency to provide public information about wolf populations, wolf impacts, wolf effects on deer populations, wolf depredations, and the ecological benefits of wolves. For example, there are currently few easily accessed summaries about wolf depredations, despite the fact that WDNR collects detailed information on wolf depredations and wolf monitoring.
- 11. The State of Wisconsin needs to repair and regain trust with Wisconsin Tribal Nations who have legal and cultural interests in wolf management. Consultation should begin immediately and should occur at a high level from the Governor's office and the WDNR Secretary. Tribal declarations and interests need to be respected and integrated into all future wolf conservation plans and actions.
- 12. Ongoing cooperation and coordination is needed between the Department and tribes around future wolf harvests. Ojibwe Tribes, who were effectively denied their treaty rights in the February 2021 wolf hunt, must receive full access to half of any quota established within the Ceded Territories in the next wolf harvest. The 2021 fall season framework should establish buffers around tribal lands to allow tribes the ability to better protect wolves using their lands.





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