

**Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item**

SUBJECT: Request approval of a wolf harvest quota and number of licenses to issue for the 2013 - 2014 wolf hunting and trapping season.

FOR: June 2012 Board meeting

TO BE PRESENTED BY: Bill Vander Zouwen, Wildlife Ecology Section Chief

SUMMARY:

The department recommends a 2013-14 wolf season quota of 275 and issuing a number of licenses that is 10 times the quota. The quota distribution among zones and proportion of the recent winter minimum count midpoint are recommended as follows:

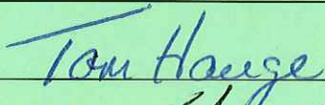
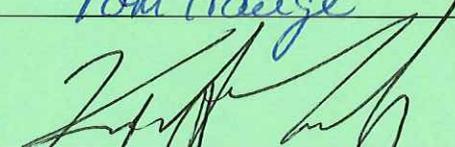
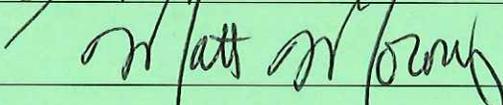
- Zone 1 - 84 (25%)
- Zone 2 - 31 (20%)
- Zone 3 - 79 (75%)
- Zone 4 - 13 (50%)
- Zone 5 - 35 (25%)
- Zone 6 - 33 (100%)

Annually the department will recommend wolf harvest quotas for each harvest management zone. The recommended quotas will be based upon consideration of a number of biological and sociological factors which are established by administrative rule and include; taking a certain percentage of the late-winter population count in each zone, the amount of potential conflict, and value for wolf conservation (i.e. core habitat).

RECOMMENDATION: Approval of a wolf harvest quota and number of licenses to issue for the 2013 - 2014 wolf hunting and trapping season.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- Background memo
- N/A
- N/A
- N/A

Approved by	Signature	Date
Tom Hauge, Bureau Director		6/17/13
Kurt Thiede, Administrator		6/17/13
Cathy Stepp, Secretary		6/18/13

DATE: 14 June 2013

TO: Natural Resources Board

FROM: Cathy Stepp, Secretary

SUBJECT: Wolf Quota and License Number Recommendations

I am asking for your approval of a 2013-14 wolf season quota of 275 and a license number of 10 times the quota. The quota distribution among zones and proportion of the recent winter minimum count midpoints are recommended as follows: Zone 1 - 84 (25%); Zone 2 - 31(20%); Zone 3 - 79 (75%); Zone 4 - 13 (50%); Zone 5 - 35 (25%); and Zone 6 - 33 (100%). Model projections suggest that, if this quota is reached, the minimum wolf count could be reduced by approximately 13% (range of 3-23%).

Background

Legislation and Rules: Wolves were delisted as a federally protected species on January 27, 2012. The legislature passed a bill to authorize hunting and trapping of wolves, which was signed by the Governor on April 2, 2012. Act 169 required the adoption of emergency rules to implement the first season in 2012, with the emergency rule to remain in effect until the permanent rule is promulgated. In December 2012, the Natural Resources Board approved taking a permanent rule to hearings. These hearings will be held next winter or spring in anticipation of Board action in June 2014. At that time, the department plans to bring the permanent rule language, updated wolf management plan, and 2014 wolf harvest quotas to the Board for approval.

2012-13 Quota and Licenses: The Board approved the department's recommendation for a 2012-13 quota and license numbers of 201 and 10 times the state quota, respectively. Half of the quota for wolves in ceded territory (85) was set aside for the Ojibwe tribes. The objectives for first wolf management season were to: begin to reduce the wolf population, address wolf depredation problems, provide opportunities for wolf trapping and hunting, and learn for future wolf management adaptation.

Over 20,000 people applied for a wolf license in 2012, and 1160 were notified that they were selected in the drawing. About three-fourths of these people purchased a license. License and application revenues amounted to nearly \$290,000, which is first used to pay damage claims (\$140,000 for 2012 claims) and then other wolf management costs, including the contract with USDA Wildlife Services for depredation control assistance to landowners.

2012 Hunter and Trapper Success: The number of licensees and their hunting and trapping success was sufficient to reach quotas in all 6 zones, with zone closures ranging from November 16 to December 23. Fifty-two percent of the harvested wolves were taken through trapping and the remainder through hunting.

Hunter and Trapper Survey: Preliminary findings from the wolf hunter and trapper survey include:

- There did not appear to be a large number of permits purchased by individuals with no intention to hunt or trap wolves

- Most intended to hunt rather than trap
- Of possible motivations offered in the survey, the most frequently selected by respondents was to lower perceived wolf impacts on deer and game, closely followed by the opportunity to pursue an animal they had not previously hunted or trapped
- About two-thirds of all permit holders were active, with most non-active persons stating their reasons for non-participation as zone closure or that they had intended to pursue wolves with dogs
- For trappers, foot holds were used more than cable restraints (restraints were only a legal option a couple of days due to zone closure dates)
- Calling was the most common hunting technique, followed by incidental to other hunting
- Most active hunters and trappers saw wolf sign
- Two-thirds of wolf pursuers selected an area based on predation to livestock, dogs, or game
- One-third of wolf pursuers had to move due to zone closures; and most felt we were fairly effective at alerting them of closures
- Success rates of trappers was significantly higher than for hunters
- Wolf pursuers did not feel crowded, but trappers did feel more crowded than hunters
- Most harvesters kept their wolf as a mount or a tanned hide
- Ratings of quality were fairly neutral, but trappers did rate the season higher than hunters
- About two-thirds of the permit winners said they would apply again, with no difference between successful and unsuccessful wolf harvesters

Final survey results will be posted on the Department website wolf page.

2012 Wolf Mortalities and Population Impacts: Mortality of wolves was tracked through registration, reports, and radio-telemetry. Known wolf mortality in 2012 included: 117 harvested by hunters and trappers, 76 removed in depredation control actions, 24 killed in vehicle collisions, 22 shot illegally, and 5 dying of unknown causes. The Tribes did not harvest any wolves. The total known human-caused wolf mortality in 2012 was 239 or 28% of the midpoint of the minimum winter count for 2012. Studies suggest that a human take of approximately 30% is required to cause a decline in an established wolf population.

Scientific literature suggests that survival and reproduction of remaining wolves will be reduced to some degree as a result of human take. The overall impact depends on the size of the packs individuals are removed from, the number of adults remaining in the pack, the proportion of the harvest that was lone individuals, and the number of wolves that could immigrate into the area from adjacent areas. Studies show that wolf populations primarily compensate for human take through changes in rates of emigration and immigration rather than compensatory changes in mortality rates. Age data is not yet available from the lab that analyses teeth collected from last fall's season, so it is not known how many of the harvested wolves were pups vs. adults. Harvested wolves were comprised of 41% females and 59% males. More information on reproductive impacts will be known following howling surveys (to detect pups) this summer and next winter's counts. However, 2013 winter counts found as many packs as in 2012, which suggests a lack of large-scale pack destabilization in response to additional mortality.

Wolf monitoring in Wisconsin Including a Comparison with Other States: Wisconsin uses a territory mapping with telemetry technique to annually monitor gray wolf populations. This technique relies upon multiple data sources to identify the existence of wolf packs, delineate their territories and enumerate the number of individuals. Pack estimates are aggregated into a state-wide population estimate. The methodology produces a count of the minimum known wolf population in winter.

Territory mapping with telemetry is a well-accepted methodology. Of the 10 states with gray wolf populations, 8 use this method to monitor their populations. The 2 states who do not, Idaho and Minnesota, use similar techniques across a small sample of their population and use the data they gather from their territory mapping techniques to extrapolate an estimate to the rest of the population. All but 3 states base management decisions on an estimate of the minimum wolves known alive. All 10 states with gray wolves estimate their populations in winter, at the low point in the population cycle.

Wisconsin has one of the most robust and intensive implementations of territory mapping with telemetry. We also have more opportunity for direct public involvement than any other state through our use of volunteers to conduct wolf surveys and our incorporation of public wolf observations into our estimate. Wisconsin's data comes from 3 primary sources; telemetry and aerial observation, reported wolf observations and ground tracking.

A sub-sample of Wisconsin's wolf packs includes a radio telemetry collared individual. In 2012, as many as 60 wolves had collars with mortality reducing this number through the year. Telemetry locations and aerial observations of pack size are made by DNR pilots. Telemetry locations are obtained from each wolf on a weekly basis. Telemetry data allows for precise mapping of pack territories and provides data on sources of mortality. During the winter count period (January-March) pilots record visual observations of wolf packs and enumerate individuals.

Public reports of wolf observations are collected year round. Observations reported outside of the winter count period (January-March) are used to document the location of wolf packs and to direct future tracking efforts. Observations reported within the count period which contain enough information to confirm species, location and number of animals, are directly incorporated into the population estimate.

Ground tracking represents a primary source of data for Wisconsin's wolf monitoring program. Wolf range is divided into tracking blocks used to assign tracking effort. Surveys are conducted on snow covered roads. Observations of wolf packs, number of individuals and breeding status (observed through deposition of blood) are collected. Surveys are conducted by agency personnel and trained volunteers. In 2013, an average of 3.6 ground-based surveys were conducted in each pack territory and a total of 13,178 miles of tracking was conducted. Experienced staff and volunteer trackers met our survey needs by providing the effort needed to count wolves across the wolf range. Volunteer contributions are conservatively calculated to equal greater than \$20,000 annually.

Observations from these three sources are aggregated to map pack territories and estimate the state-wide population. All targeted tracking blocks received survey effort in 2013. All 2012 pack territories were surveyed. Tracking efforts detected 16 new packs which did not exist in 2012. The 2013 wolf population estimate is based on an average of 4.6 independent counts obtained from each of the 214 packs known to exist in Wisconsin.

2013 Minimum Wolf Count: The 2013 winter minimum count of wolf packs and individuals amounted to 809-834 with 214 packs compared to 815-880 with 213 packs in 2012. With all forms of known mortality falling into the expected range and a harvest of 117 compared to a total quota of 201, this result of no significant population change is consistent with projections used in the quota setting process. A key tool in our decision making is a model developed by Jen Stenglein and Dr. Tim Van Deelen at UW-

Madison. A post-harvest modeling analysis accurately predicted the 2013 wolf count, suggesting the model is useful in projecting short-term population change.

Approach to 2013-14 Quotas

In developing quota recommendations, the Department Wolf Advisory Committee considered wolf mortality levels of 2012, projected 2013 mortality levels including a reduced depredation control take, the current management plan, legal threats to delisting, expectations of the legislature and public, modeled projections of the impacts of many quota scenarios, and the uncertainty of overall impacts of the first season including impacts on reproduction. The Committee was also aware of the department objective to begin to reduce the wolf population, as was the objective in 2012.

The Wolf Advisory Committee supported continued use of the zone harvest approach used in 2012, where harvest targets were a lower proportion of the minimum wolf count in heavily forested regions (zones 1, 2, and 5) and a higher proportion of the minimum wolf counts in transitional (zones 3 and 4) and heavily agricultural regions (zone 6) where conflict potential is greater. This approach is intended to reduce the overall wolf population, while maintaining a sustainable wolf population and attempting to reduce the potential for conflicts with livestock. The Committee recommended a higher percent quota in zone 1 than 2 and in zone 3 than 4 due to differential levels of depredation. It should be noted that these harvest targets are based on percentages of the midpoint of the prior winter minimum counts, and not on the fall population.

The recommended 2013-14 harvest quotas are as follows:

Zone 1: 84 = 25% of the minimum winter count midpoint, excluding reservation packs.

Zone 2: 31 = 20% of the minimum winter count midpoint, excluding reservation packs.

Zone 3: 79 = 75% of the minimum winter count midpoint, excluding reservation packs.

Zone 4: 13 = 50% of the minimum winter count midpoint, excluding reservation packs.

Zone 5: 35 = 25% of the minimum winter count midpoint.

Zone 6: 33 = 100% of the minimum winter count midpoint.

Statewide: 275 = 35% of the minimum winter count midpoint, excluding reservation packs.

If this quota is reached, vehicle collisions and illegal kills remain the same as in 2012(24 and 22), and depredation control removals are half of last year (38, projected reduction based on analysis of year-to-date mortality by USDA Wildlife Services), then the total human take for 2013 would amount to 359 or 44% of the 2013 statewide minimum winter count midpoint (not of the larger fall population). With the recommended quota, the median projection of the University of Wisconsin wolf model is a wolf count reduction of 13% (range of 3-23% for 100 simulations).

Based on the minimum wolf counts within the ceded territory, and excluding reservation packs, the following portion of the quota are eligible for harvest declaration by the Ojibwe tribes: zone 1 - 42; zone 2 - 14; zone 3 - 40; zone 4 - 4; zone 5 - 2; and zone 6 - 13, for a total of 115.

License Numbers

The recommended ratio of wolf hunting and trapping licenses to state quota is 10:1. While this is lower than for other states, the 2012 season suggests that this number of licenses was sufficient to reach the quotas of 2012 well before the end of the season. The recommended number of licenses is an attempt to

balance objectives of: reaching quotas before the season ends; not exceeding the quotas before zones can be closed; and providing opportunity to as many hunters and trappers as possible; while keeping zones open for a reasonable amount of time for people to pursue wolves when and where they want.

Process for Recommendation Development and Public Input

A Wolf Management Round Table was held with representatives of a cross-section of wolf interest groups (notes can be found on the Wolf Advisory Committee page of the DNR web site) to get input on how to move forward with quotas, license numbers, wolf plan revision, and permanent rules. The Department Wolf Advisory Committee met for two days to listen to public comments, review data and modeling, consider impacts of the first season, listen to invited experts on wolf management sociology and biology, and debate and develop recommended harvest quotas and license numbers for the 2013-14 season (meeting notes on Wolf Advisory Committee page of the DNR web site). The committee is comprised of department staff, partner agency representatives, stakeholder group representatives, and a Great Lakes Indian Fish & Wildlife Commission representative. Their recommendations were endorsed by the department Wildlife Policy Team and the Conservation Congress Wolf Committee. Department representatives met to discuss the recommendations with the Voigt Task Force, who remain opposed to wolf harvest. The department has adopted the Wolf Advisory Committee recommendations, and I am asking for the Board's approval of these recommendations.