

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

CORRECTED:

Item No. 3B1 a

Page numbers added.

Secretary's Memo, page 9, harvest quota average for fisher and otter.

SUBJECT: Bobcat, fisher and otter population trends, harvest quotas, and harvest management within established quotas.

FOR: December 2012 Board meeting

TO BE PRESENTED BY: John Olson, Furbearer Specialist

SUMMARY:

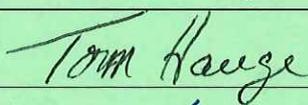
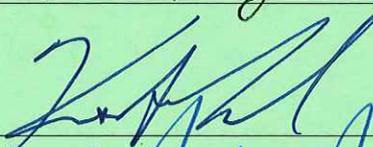
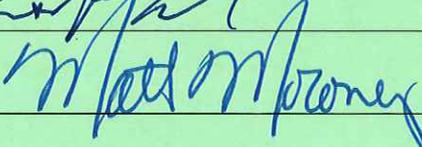
This presentation will describe:

- The process for establishing otter, fisher, and bobcat harvest quotas and permits.
- The species' population goal, population estimate and trend, and why some species are below goals.
- How the furbearer committee and department consider other mortality factors, such as incidental take, in setting quotas and permit levels.
- The departments general approach to establishing quotas and recent trends in quota levels.
- Current rules regarding harvest reporting and the department's authority to close seasons if quotas are reached.
- Issues beyond these rules that impact our ability to keep harvest within quotas.
- Changes being considered to reduce the probability of harvest exceeding quotas.

RECOMMENDATION: Information only

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

- | | |
|---|------------------------------|
| <input checked="" type="checkbox"/> Background memo | <input type="checkbox"/> N/A |
| <input type="checkbox"/> N/A | <input type="checkbox"/> N/A |

Approved by	Signature	Date
Tom Hauge, Bureau Director		11/30/12
Kurt Thiede, Administrator		11/30/12
Cathy Stepp, Secretary		12/3/12

cc: Board Liaison – AD/8

DATE: November 30, 2012 FILE REF:

TO: Natural Resources Board Members

FROM: Cathy Stepp, Secretary

SUBJECT: Bobcat, Fisher and Otter Population Trends, Harvest Quotas, and Harvest Management

Summary Overview.

Furbearer management involves numerous department and partner inputs; various methods of measure including aerial, field, in-person, laboratory, and postal; and, is on a never-ending, constant cycle. Through use of the Scientific Method we're constantly sharing, reviewing, improving, and updating our information on these unique, elusive wildlife of Wisconsin. Through this commitment by the department, and with strong interest from the public, we've been able to maintain healthy, viable populations for several decades. With less than perfect knowledge, we attempt to balance population information with tribal and public interest. This memo will briefly highlight important considerations in our management program with additional emphasis on bobcat, the species of highest concern at this time.

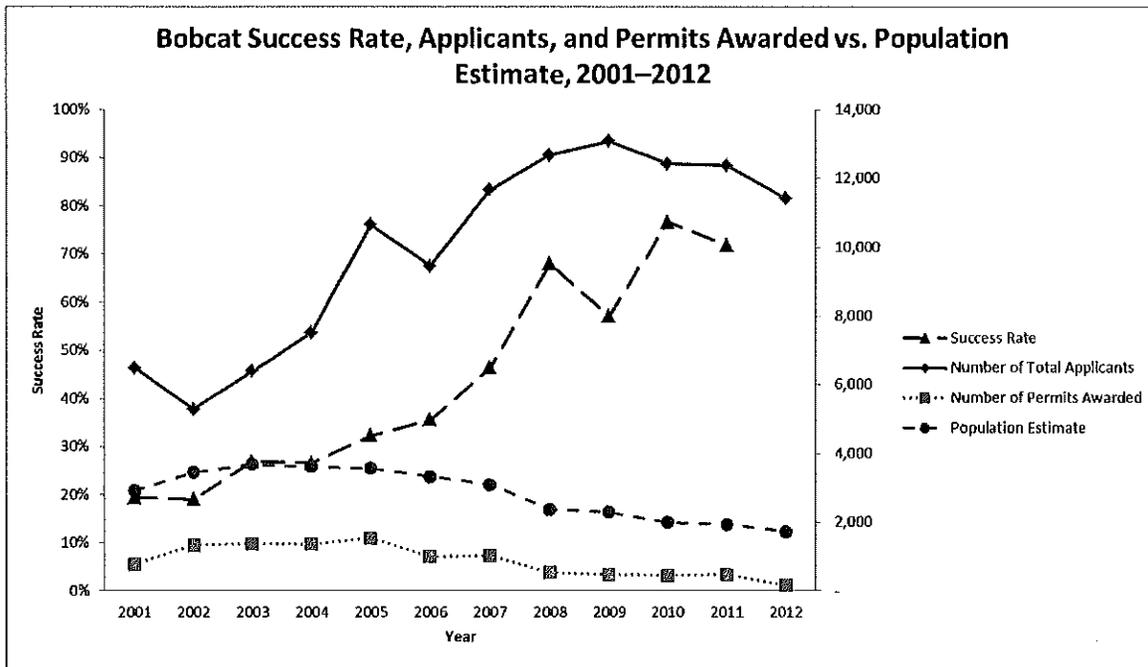
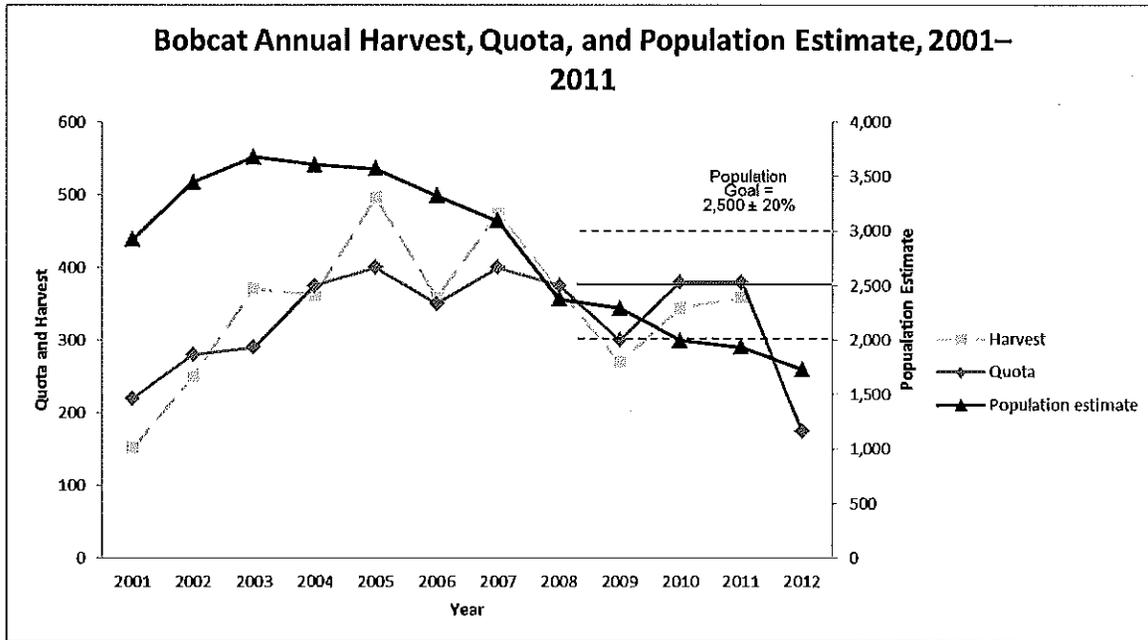
Bobcat Management.

The management goal for bobcat in the zone of harvest (northern one-third of the state) is 2,500 plus or minus 20%, which means we attempt to maintain this population between 2,000 and 3,000 cats. The prehunt 2012 estimate is 1,700, only recently dropping below our management goal. Our harvest recommendation was a reduction from 380 bobcats in 2011-12 to 175 bobcats in 2012-13. This has caused public concern both from increased difficulty in obtaining a harvest permit and differing views that bobcat populations are more abundant than department data indicates.

A. Increased difficulty in obtaining a harvest permit.

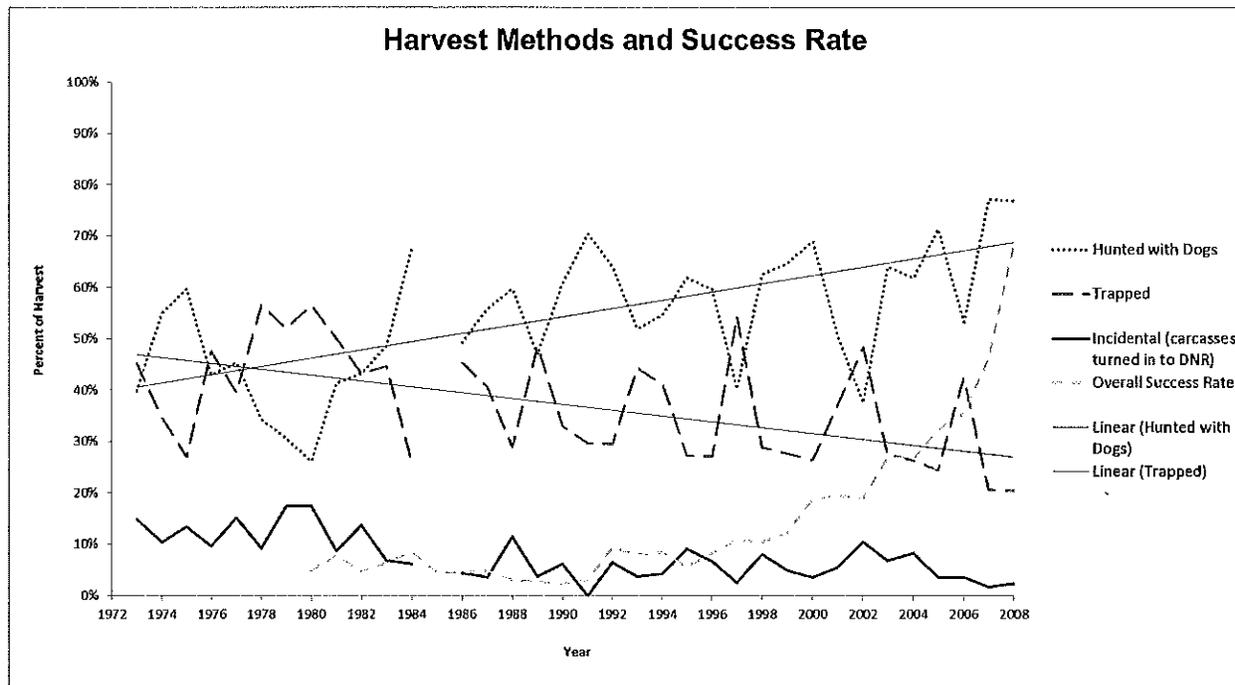
A number of factors have combined to lengthen the wait between receiving a bobcat harvest permit, which includes:

1. Overall, the interest in harvesting a bobcat has increased significantly from 5,778 applicants in 2000 to 11,424 applicants in 2012-13. With more folks in the system, fewer applicants are successful in drawing permits. Permits issued are based on the highest success rate in the previous three years, which has worked well in controlling overall harvest. Although annual fluctuations are expected, over the past eleven years the difference between the actual harvest and the recommended harvest has been exactly zero.



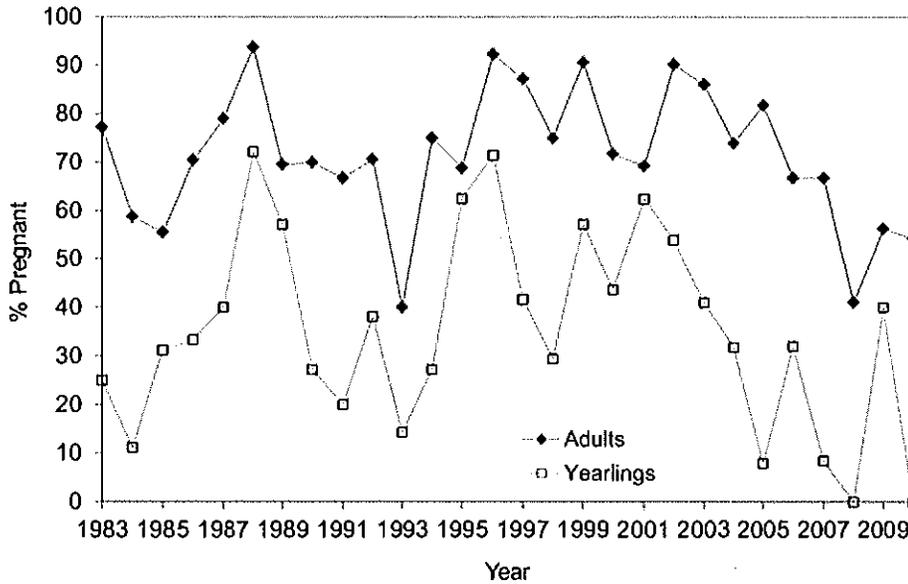
2. With increased demand, we've also recorded an increase in harvest success rates. From a low success rate of 2.2% in 1990 (the harvest was 98 total, estimated to be 5 % of the population), it climbed to 18.5% in 2000 (the harvest was 279 total, estimated to be 10 % of the population). The new, longer two-part harvest season initiated in 2010, has improved hunting conditions and harvest opportunity, with the success rates now slightly over 56% (the harvest in 2010-11 was 359, estimated to be 19 % of the population). Earlier harvests were equally split between trapped and hunted with a shift in recent years to being primarily hunter harvest. Use of trained dogs with snow has changed

the complexion of bobcat management in Wisconsin. Dedicated hunters are highly successful, making it important to monitor harvest, monitor survey trends and possibly recommend emergency closure if needed.



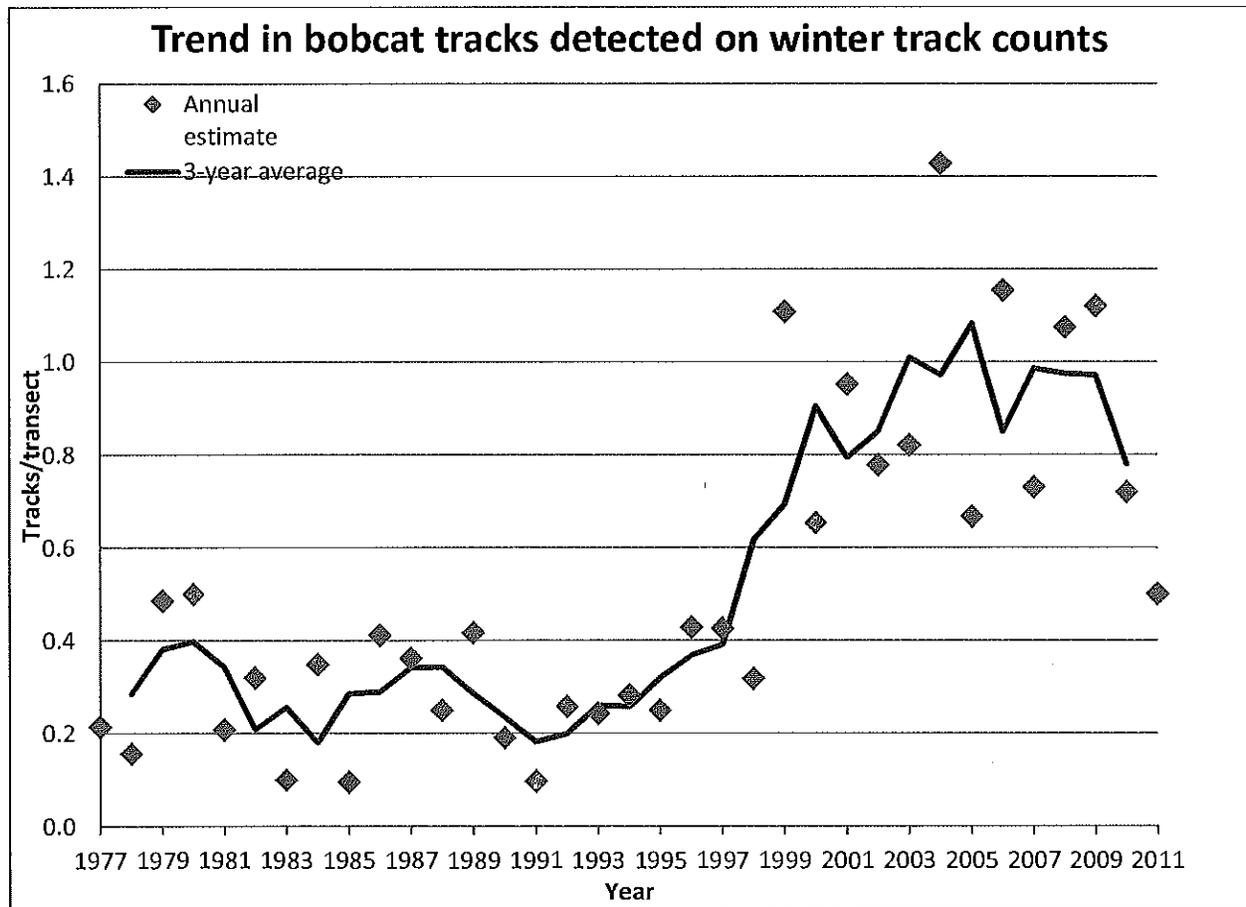
3. Long term reproductive rates, measured from carcasses on an annual basis, suggests lower pregnancy rates in recent years. In 2010, the most current year of carcass data available, we only had 6 yearling female carcasses, with zero pregnancies. However, the lack of production by yearlings, which over the long term averages 40 % pregnancy, was not the whole story. Carcasses from 59 adult females (2.5 years old or older), harvested in 2010 were also examined with a pregnancy rate of 54%. This compares to a long-term average adult pregnancy rate of 72%. Low pregnancy rates in adult females were also noted in 2008 and 2009.

Bobcat Pregnancy Rates 1983-2010



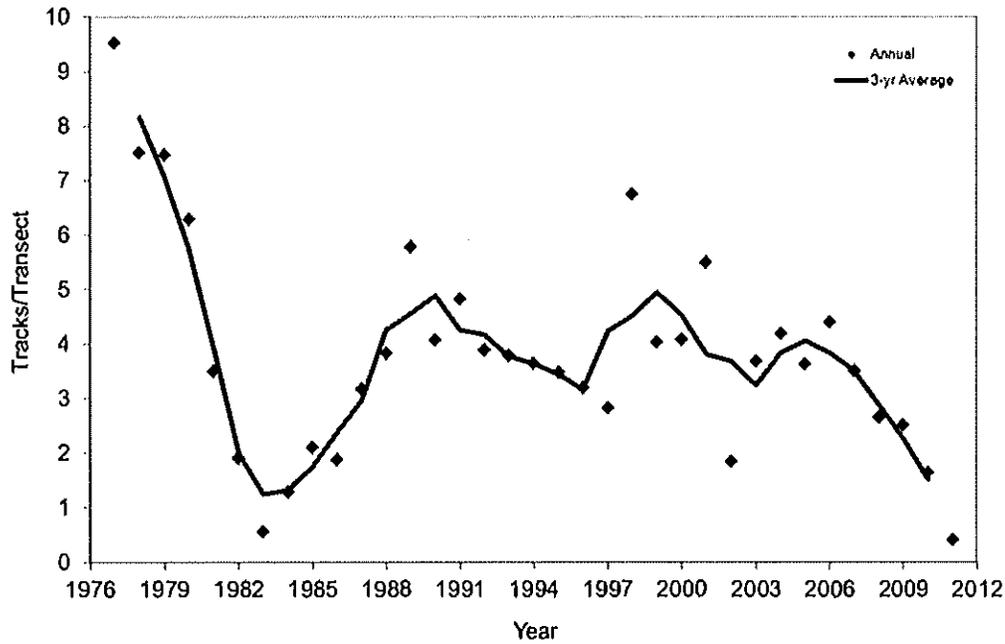
Note: Receipt of age data is delayed by one year due to workloads and contracts beyond our control. This information for the 2010-11 harvest season was received in early 2012 just prior to the May 2012 Furbearer Committee meeting. When new data are incorporated into our population model, the model produces a current year population estimate and updates estimates from previous years. Bobcat populations in 2009 and 2010, earlier calculated at 2,335 and 2,254 respectively, were adjusted to 1,995 and 1,936 respectively. So in May, 2012, the updated population estimates for 2009 and 2010 had dropped slightly below our minimum threshold of 2000 animals.

4. Winter track surveys, conducted for over three decades across 17 northern counties (two transects/county) also suggests a decline in bobcat presence.

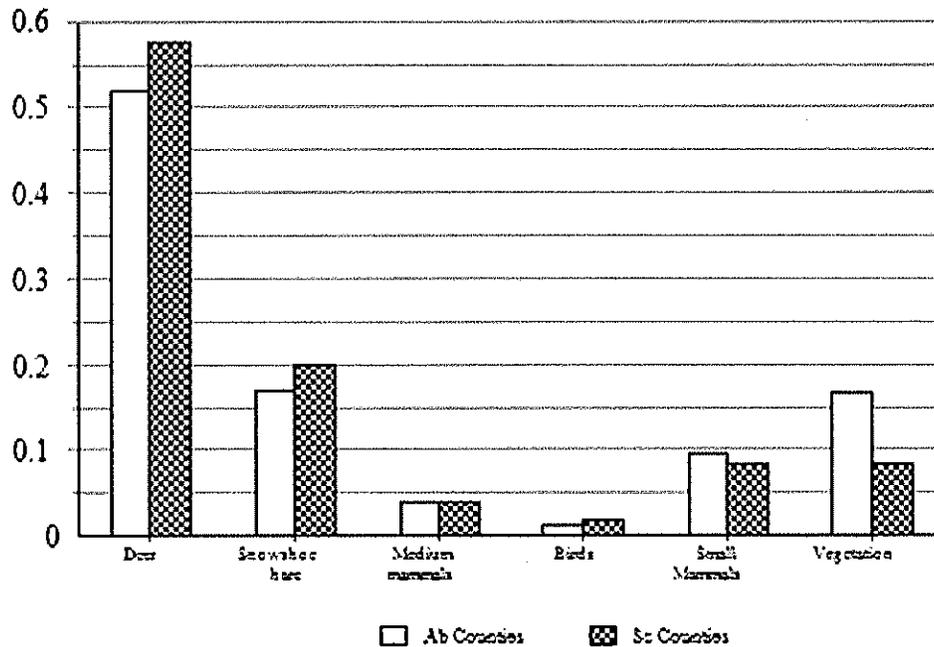


5. Snowshoe hare, another piece of the puzzle, an important prey item for many mid-sized carnivores, has also been on a long term decline. Although bobcats, like other carnivores such as fisher, are generalist predators, to our knowledge, no other small mammal has filled this vacant “prey” niche in our northern forests. Cottontails, increasing in the north, rarely occur in our larger forests, but instead in more disturbed areas such as pasture/field edges and around buildings and other brushy locales, less available to forest inhabitants such as fisher or bobcat.

Snowshoe Hare Track Index on Northern Winter Track Surveys 1977-2011



The following (scanned) graph is from research Dr. Jon Gilbert conducted in northwestern Wisconsin. He looked at stomach contents of 400 fall harvested bobcats (1991–95) as part of this research. Deer are clearly the dominant part of their diet in late fall, with snowshoe hare the second largest component. While we do not have food habits data from Wisconsin in other seasons of the year, snowshoe hare have been an important component of bobcat diets in all seasons in other northern states. This coupled with historically lower hare numbers could be impacting reproduction. For the graph – Ab represents bobcat stomachs from counties where fishers are abundant and Sc represents bobcat stomachs from counties where fishers are scarce.



B. Differing Views that bobcat populations are not on a decline.

There are members of the public that are skeptical of the bobcat population estimates. They believe bobcats remain very abundant and that permits should not be lowered. When we manage secretive, elusive, low-density species such as many of our furbearers, it's quite plausible that overall populations may vary dramatically from one locale to another. This is true of even our more prolific wildlife species such as deer, raccoon, muskrat or even mice. Although there are various suggestions why current anecdotal observations may differ from our survey information, it would not be appropriate to speculate.

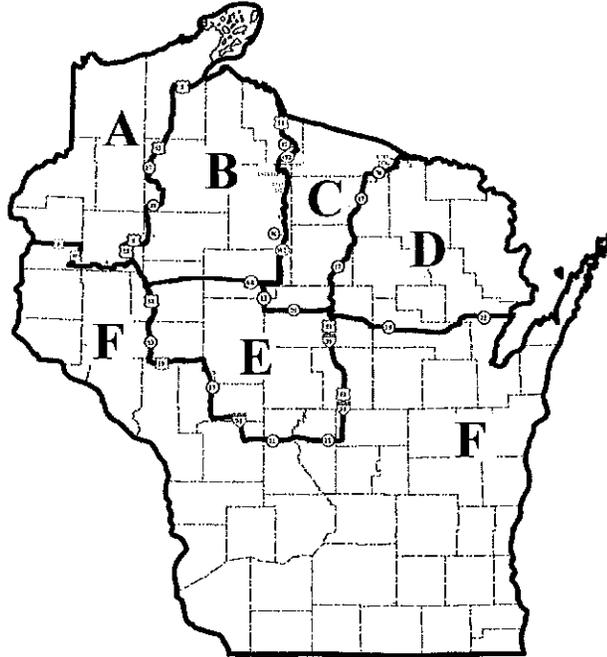
In managing these species for our citizens, we're obligated to use the best science available and do such in a manner that when replicated on seasonal or annual cycles, we can generate long term trends. Our variety of surveys conducted at various levels and at various times of the year provides this data that collectively gives us suggested trends. Without going into great detail, here are the important survey tools currently used by the department in measuring bobcat, fisher and otter trends:

1. **Reporting and Registration.** All bobcat harvested must be reported within 24 hours and then all bobcat, fisher and otter are registered with department personnel within 5 days of the month of harvest.
2. **Winter Track Surveys.** Conducted by trained wildlife personnel this information gives us trend data on several Wisconsin furbearers including bobcat and fisher.
3. **Carcass Collections.** From furbearer carcasses we obtain age, pregnancy rates and litter size.
4. **Trapper Survey.** A mailed survey from which we collect considerable information on effort, harvest and other information.
5. **Fur Buyer Survey.** A mailed survey to all licensed fur buyers that provides information on fur pelts purchased in the state and the average pelt price.
6. **Bobcat Survey.** A mailed survey to all permit holders that provides us with information on effort, harvest method and other information.

However, in an effort to strengthen our science on furbearer surveys, an integrated department committee has begun a review of the above monitoring tools to determine if improvements can be made. In a broader context, so are other Midwestern states including Missouri, Illinois, Indiana, Nebraska, North Dakota, Minnesota and Michigan.

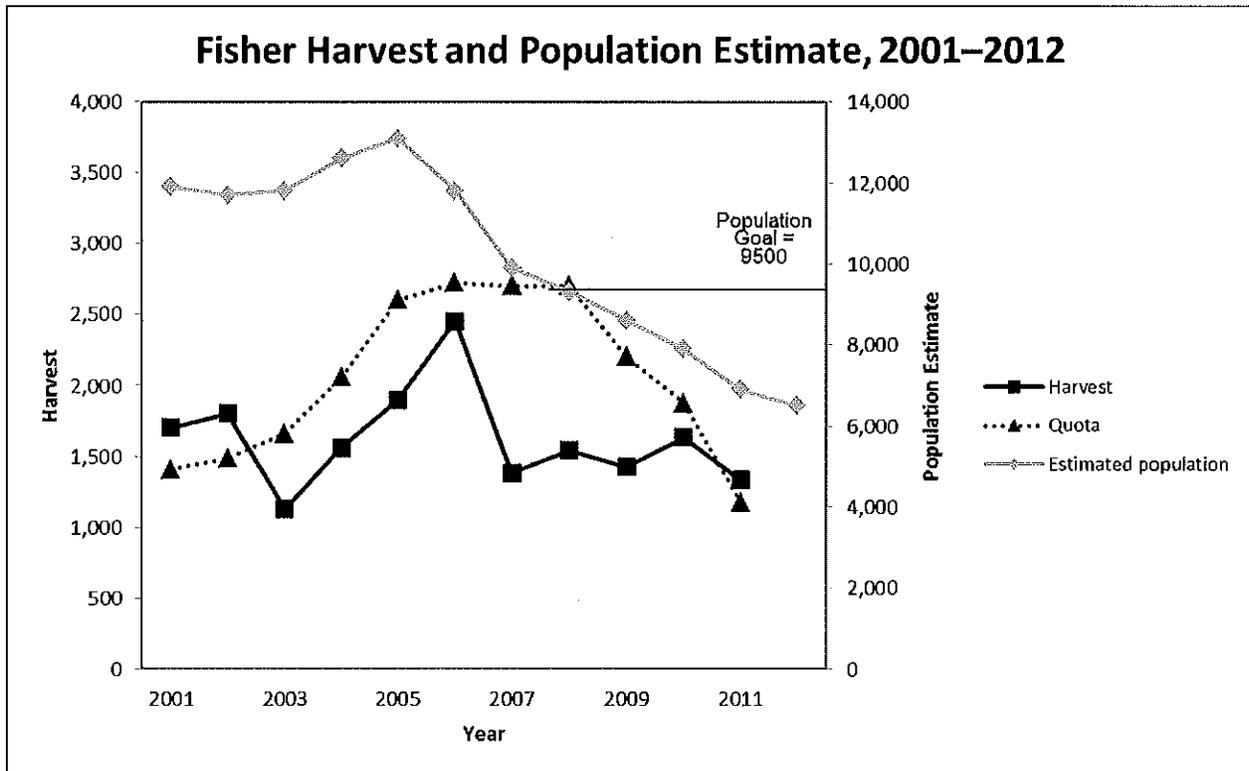
Fisher Management.

The management goal for fisher in the northern four zones (A – D) is 9,200. Our current population estimate for these same zones is 6,500. Fisher Zones E & F (central and southern Wisconsin) do not have population goals at this time. In Zones A – F our harvest quota for 2011 was 300, 200, 100, 50, 200, and 200, respectively. The harvest quota for 2012 is: 125, 80, 50, 50, 225, and 225, respectively. This is a drop in Zones A – C, the same in Zone D, and an increase in Zones E & F (see map at right).



We have documented a dramatic decline in fisher numbers across the northern portions of Fisher Zones A – D beginning in 2005.

This decline is being experienced in the western U. P of Michigan as well as northern Minnesota. Active, long term research on fisher and marten in Minnesota may shed light on this decline as they complete their research in the next two years. At the same time we've collaborated with parasitologists and other wildlife researchers with additional insight expected in the future. In the meantime, we've responded to the decline with a reduction in harvest to protect populations and to assure they have the opportunity to respond over time.



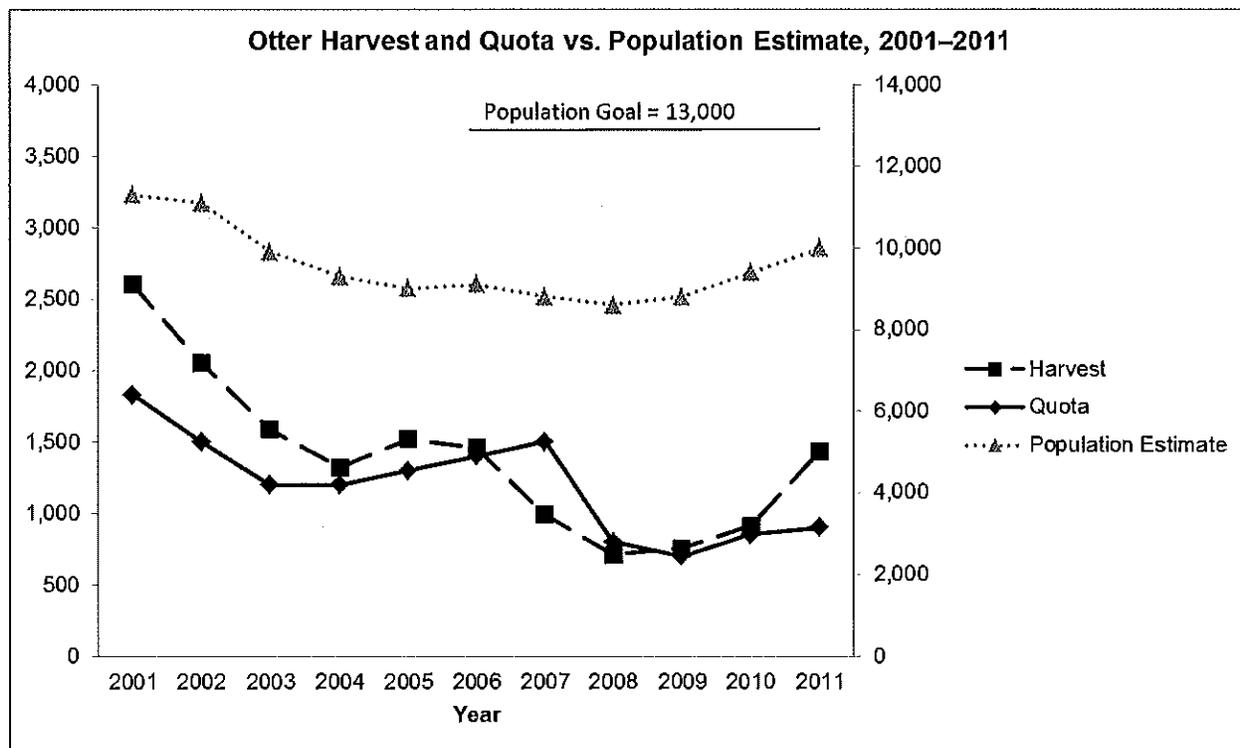
Population goals are not developed for Fisher Zones E & F, and changes in these more southern populations are not reflected in long term population numbers. While populations of fisher have declined in northern portions of A – D, we’ve also experienced a remarkable increase in fisher in the southern portions of these same zones and what appears to be a steady expansion in a southerly direction into the Central Forest, Coulees of the southwest and along major river corridors in south-central Wisconsin. We’re at a loss to estimate populations in these two southern zones, but with the continued annual collection of carcasses, we’ll be able to develop population models in the future.

Over the past eleven years, 2001-2011, our recorded harvest has been 26% over 17% under the targeted quota. Although we use the highest success rate in the previous three years to determine permit issuance, factors such as weather and access have a dramatic effect on harvest.

Otter Management.

The statewide management goal for otter is 13,000 with our current population estimate at 10,000. We have documented a decline in otter in the North Zone, an increase of otter in the South Zone, and moderate stability in the Central Zone. With this information we have recommended conservative quotas for the past few years that has allowed for gradual population growth. Additionally, over the past eleven years our harvest has averaged 9% below 15% above our quota recommendations.

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However, with the otter and beaver seasons concurrent, the long beaver seasons have resulted in an increase in the incidental take of otter.

Often times the incidental take of otter is unavoidable, as both species use and occupy the same habitat. But with concerns about this activity, since the mid-1990's, the Wisconsin Trappers Association and the department have focused on avoidance strategies that include trapper responsibility, trapper ethics and ease in reporting as mechanisms to increase the voluntary submission of incidentally caught otter. This effort has resulted in great cooperation from licensed trappers and timely submission of these incidentals. The combination of habitat loss (beaver ponds) and continued strong interest in beaver trapping has resulted in a recent increase in the incidental otter take.

In addition to this information, and copies of our Power Point presentation, answers to the following questions might be of value:

Question: How do the Furbearer Committee and department consider other mortality factors, such as incidental take in setting quotas and permit levels? All known human-caused mortality is documented as legal harvest (state and tribal), or incidental (turned in as trapped, shot, road-kills, seized, or other mortalities). If the actual carcass is submitted and location data is known, we include these in our carcass collections. The carcass collection provides data on harvest age structure and reproductive performance. All known human-caused mortality are included in the furbearer population models that are used to predict effects of various harvest levels on future population size.

Question: What is the department's general approach to establishing quotas? Annually all information available from registration, field surveys, mail questionnaires, and carcass submissions are reviewed, discussed and considered in quota recommendations. The Furbearer Committee, comprised of

department representatives from Wildlife Management, Law Enforcement, Fisheries, Endangered Resources, and Wildlife Research, includes active participation from partners including: the Great Lakes Indian Fish and Wildlife Commission (GLIFWC), USDA-Wildlife Services, USDA-Forest Service, Wisconsin Trappers Association (WTA), Wisconsin Conservation Congress (WCC) – Hunting with Dogs Committee and Fur Harvest Committee, Universities, the Wisconsin Wildlife Federation, and other interested citizens. As a group, we openly review, discuss, and eventually come to consensus on recommendations for harvest quotas (and other matters). These recommendations occur in late May, primarily because harvest data is just being finalized (otter seasons go through the month of April), and we have a need to provide these recommendations to the Voigt Task Force at their early June meeting. Such recommendations are reviewed and approved by the Wildlife Policy Team. The Voigt Task Force provides the department with harvest declarations in July, the department reviews, accepts, and/ or modifies, thus setting final state harvest quotas in early August. Application deadline for bobcat, fisher and otter permits is August 1st. A very tight timeline.

Question: What are the current rules on harvest reporting and the department's authority to close seasons if quotas are reached? Bobcat harvest must be reported within 24 hours with registration occurring within 5 days of the month of harvest. The department has emergency rule authority of early season closure for bobcat, fisher and otter. Due to the annual adjustments on success rates, and due to the timing of harvest, we've not used this authority to date. We are in the process of requesting 24 hour reporting of fisher and otter harvest as well.

Question: What changes are being considered to reduce the probability of harvest exceeding quotas? Absolute perfection in harvest is not possible due to factors we have no control over, and due to the species itself. Secretive, elusive, nocturnal, and solitary are terms that depict each of these valued furbearers. Weather changes have effects on both the species and those with harvest permits. Things that we can do to manage the species with greater caution include:

- generating more conservative permit levels by using even higher success rates;
- monitoring harvest and invoking emergency closure in anticipation of final take;
- increasing field surveys at an unknown cost; and/or,
- increasing research priorities focused on discovering new or different ways of monitoring.

Furbearer Management Activity Calendar Bobcat, Fisher and Otter

January – April: During early months of the year, Law Enforcement and Wildlife Management conduct statewide registration and accept carcasses. Field wildlife personnel conduct late-winter otter aerial (fixed-wing) surveys statewide and winter track surveys in the northern one-third of state. “Carcass coordinators” collect carcasses, and Wildlife Research organizes and conducts sample removal events. A tooth is collected to determine age and the reproductive tract removed to determine pregnancy and document the potential litter size.

April – May: Field surveys and mail questionnaires are completed with information and registration data collected, finalized and summarized.

May – June: Furbearer Advisory Committee reviews harvest figures, survey data and any other new information and makes quota recommendations to the Wildlife Policy Team for review and approval. Committee includes representatives from: Wildlife Management, Wildlife Research, Law Enforcement, Endangered Resources, Fisheries, Great Lakes Indian Fish and Wildlife Commission, Universities, USDA- Forest Service, USDA- Wildlife Services, Wisconsin Conservation Congress, Wisconsin Trappers Association, and the Wisconsin Wildlife Federation. Decisions made based on discussion and consensus.

June – July: The Voigt Task Force receives and reviews quotas and develops tribal harvest declarations (if needed), and shares with the department.

August: Final state quotas are determined, permit application deadline occurs (August 1st), and Customer Service and Licensing develops a final applicant data set for the drawing.

September: The randomized, computer drawing occurs and permits, pelt tags, and carcass tags are mailed shortly after. Results are posted on the department website and provided to various media sources.

October – November: The various harvest seasons open, which initiates the 24-hour reporting system for bobcat and the registration within-5-days-of-the-month-of-harvest, for bobcat, fisher and otter. With registration we begin the early carcass collections. The U.S. Fish and Wildlife Service CITES report is submitted for bobcat and otter.

December: Track training courses are held, survey protocol is reviewed and track surveys and aerial, fixed-wing otter surveys conducted, if conditions allow. Carcass collections continue and carcass collection events are organized.