

SUBJECT: Approval of bear harvest quotas for the 2008 season.

FOR: JANUARY, 2008 BOARD MEETING

TO BE PRESENTED BY: Keith Warnke, Big Game Biologist

SUMMARY:

The department recommends a bear harvest quota of 2,950 and an overall permit level of 4,660 for the 2008 season. In individual management units the recommended 2008 permit level is: A) 1,440; B) 850; C) 1,650; D) 720.

This permit level represents a nearly 6 % increase in bear harvest permits with most of the increase occurring in management zone B.

Regulated hunting is the primary management tool for Wisconsin's black bear population. Interest in bear hunting remains high as evidenced by the over 80,000 individuals who applied for a kill tag or preference point in 2007. Recommended bear harvest quotas are determined using the department's bear population model to assess the effects of various harvest levels on the bear population estimate. Most department bear research and management activities are directed towards managing bear populations within zones and developing harvest strategies to maintain populations at or near prescribed goals. The statewide pre-hunt population goal is 11,300 bears and the current 2008 pre-hunt population estimate is 13,200. Population goals for each zone are based on habitat suitability and human tolerance levels.

On November 30, the Conservation Congress Bear Study Committee unanimously endorsed the quotas and permit levels proposed by the Department. When the Department receives tribal harvest declarations, we will incorporate those along with tribal harvest history into the final permit availability.

RECOMMENDATION:

Approval of bear harvest quotas for the 2008 hunting season.

LIST OF ATTACHED MATERIALS:

- | | | | | | |
|----|-------------------------------------|---|-----|-------------------------------------|----------|
| No | <input checked="" type="checkbox"/> | Fiscal Estimate Required | Yes | <input type="checkbox"/> | Attached |
| No | <input checked="" type="checkbox"/> | Environmental Assessment or Impact Statement Required | Yes | <input type="checkbox"/> | Attached |
| No | <input type="checkbox"/> | Background Memo | Yes | <input checked="" type="checkbox"/> | Attached |

APPROVED:

/s/	12-19-07
_____	_____
Bureau Director,	Date
/s/	12-19-07
_____	_____
Administrator,	Date
/s/	12-21-07
_____	_____
Secretary, Matt Frank	Date

- | | | |
|--|-----------------------------|--------------------------|
| cc: Laurie J. Ross - AD/5 | Bill Vander Zouwen - WM/6 | Bob Manwell - CE/8 |
| Cons. Cong. Executive Comm. - 4 - LS/5 | Diane Brookbank - CS/GEF 3 | Reg. WM Sups. - 5 - WM/6 |
| Kurt Thiede - 6 - LS/5 | GLIFWC & Tribes - 14 - WM/6 | Randy Stark - LE/5 |
| Barbar Zellmer - WM/6 | | |

DATE: December 18, 2007
TO: Natural Resources Board Members
FROM: Matt Frank
SUBJECT: 2008 Bear Season Quotas

FILE REF: 2300

Background:

Regulated hunting is the primary management tool for Wisconsin's black bear population. Interest in bear hunting remains high as evidenced by the over 80,000 individuals who applied for a kill tag or preference point in 2007. Recommended bear harvest quotas are determined using the department's bear population model to assess the effects of various harvest levels on the bear population estimate. Most department bear research and management activities are directed towards managing bear populations within zones and developing harvest strategies to maintain populations at or near prescribed goals. The statewide pre-hunt population goal is 11,300 bears and the current 2008 pre-hunt population estimate is 13,200. Population goals for each zone are based on habitat suitability and human tolerance levels.

Bear bait station surveys are conducted annually in the counties comprising Wisconsin's northern and central bear range. These surveys provide an index of population trends for correlation with population estimates. Each survey transect consists of 50 bait stations that are placed at 0.5 mile intervals along roads. Bait stations are checked 7 days later to determine the percentage visited by bears. The survey is conducted June 15 – July 15 to correspond with the breeding season when most bears are within their home ranges.

The average visitation rate along transects is calculated each year and three-year running averages are used as an index of population trends. Using this 3-year average reduces the influence of random annual fluctuations in visitation rates resulting from variable sample sizes and fluctuations in availability of natural foods.

Information on abundance of bears is needed for making sound harvest management decisions. Population indices such as bait station surveys, harvest figures, permit success rate, age structure of harvest, and nuisance and agricultural damage complaints provide useful information in assessing the population level and trend but are not population estimates.

Our bear population model incorporates life history parameters that affect population size in known ways. These include sex and age composition of harvested bears, age specific reproductive rates, and rates of natural mortality. The size and composition of harvest is known from mandatory harvest registration. Estimates of rates of reproduction and natural mortality are based on bear research conducted in Wisconsin and neighboring states. The model is used to estimate population size by fitting the simulated population trends to the observed trends in the bait station index. The model is then used to assess the effects of various harvest levels.

Harvest Quotas and Permits

Zone A:

The DNR bear committee believes that the bear population in Zone A is above the goal of 4,600. The current estimate for pre-hunt 2008 is 5,040 – down slightly from last year. The harvest quota for A was 1,000 bears in 2007. Preliminary harvest level was 992 (compared to 941 in 2006). The minimum number of preference points needed to get a kill tag in Zone A in 2007 was 7. The bait station survey shows a slight trend upward in recent years followed by a leveling off. The pre-hunt population estimate for 2008 is 5,040. The bear committee recommends a harvest quota of 1,100 bears for Zone A. Using pooled permit success rates averaged over the last 3 years from units A and A1, there will be 1,440 permits in Zone A in 2006.

Zone B:

The previous population model for Zone B did not correlate well with the results of the bait station survey, so the model was adjusted to produce an increase in the population estimate that better reflects the survey data. The 2007 harvest quota was 500 bears and preliminary harvest figures show 499 bears harvested (compared to 592 in 2006) for a success rate of 81.1%. The minimum number of preference points needed to get a kill tag in Zone B in 2007 was 9. The population model indicates a slightly increasing population. This trend is supported by the bait station survey data. The pre-hunt population estimate for 2008 is 3,600. The population in Zone B is above the goal of 2,200 bears and the department recommends a harvest quota of 700 bears in 2008. This will result in 850 permits in Zone B next year.

Zone C:

The 2007 preliminary bear harvest in Zone C is 517, down some from 639 in 2006. The harvest quota in 2007 was 600 and the success rate was 33.1%. The minimum number of preference points needed to get a kill tag in Zone C in 2007 was 4. In Zone C, hunting bear with dogs is not permitted leaving hunters there with baiting as the main option. The tendency of bears to come in to bait is greatly influenced by mast crops – specifically acorn production. This past fall's mast crop was abundant and bear hunting efficacy in Zone C was likely hampered. The DNR bait station survey indicates that the population in Zone C has declined recently but is still above goal. The 2008 pre-hunt population estimate is 1,620 bears in Zone C. The committee recommended that the harvest quota remain unchanged over 2007 at 600. This would result in 1,650 permits.

Zone D:

Up to and including the 2007 bear season, hunters with a valid kill tag for Zone A were able use that tag to harvest a bear in Zone A1. This option was made available to use harvest to reduce the bear population in Zone A1. The Bear Committee believes this has worked. However, the ability for Zone A permit holders to cross the boundary in Zone A1 complicated management efforts because a reliable permit success rate cannot be determined. To remedy this, Zone A1 became a distinct Bear Management Zone (Zone D) effective November 2007. The 2007 harvest quota was 550 bears, preliminary harvest was 568. The minimum number of preference points needed to get a kill tag in 2007 was 7. Bait station trends and the population model correlate closely and indicate a population that is declining, but is now close to goal. The pre-hunt 2008 population estimate is 2,940. The department recommends a quota of 550 bears in the

allowable harvest in 2007 (equal to 2006) and a permit level of 720 (Using permit success rates averaged over the last 3 years in units A and A1 combined).

Recommendation:

On November 30, the Conservation Congress Bear Study Committee unanimously endorsed the quotas and permit levels proposed by the Department. The Department recommends that the Natural Resources Board approve the bear harvest quotas and permit levels in Table 1. When the Department receives Tribal harvest declarations, we will incorporate those along with Tribal harvest history into the final permit availability.

Table 1. Proposed black bear harvest quotas and permit levels for the 2008 black bear season.

Bear Management Zone	2008 harvest quota	2008 permit level	2008 Pre-hunt population estimate
A	1,100	1,440	5,040
B	700	850	3,600
C	600	1,650	1,620
D	550	720	2,940
Total	2,950	4,660	13,200