

**SUPPLEMENT TO THE ENVIRONMENTAL ASSESSMENT:
BLACK BEAR NUISANCE AND DAMAGE MANAGEMENT IN WISCONSIN**

**Prepared by the
United States Department of Agriculture
Animal and Plant Health Inspection Service
Wildlife Services**

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The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program completed an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) on the reduction of black bear (*Ursus americanus*) damage to human health and safety, agriculture, property, and natural resources in Wisconsin in May, 2002 (USDA 2002). The EA evaluated the need for WS activities and the relative effectiveness of five alternatives to resolve black bear damage complaints, while accounting for the potential environmental effects of these activities. The Wisconsin Department of Natural Resources (WDNR), U.S. Department of the Interior (USDI) Fish and Wildlife Service (USFWS), Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP), and USDA Forest Service (USFS) were consulted in the preparation of the EA. Based on analysis in the EA and response to public comments, WS selected Alternative 5 “*Integrated Adaptive Black Bear Damage Management (IABBDM)*” in which WS provides technical assistance and direct control activities to alleviate black bear damage and conflicts. This supplement provides an update on WS’ bear damage management activities and their associated environmental impacts which have occurred since the completion of the EA and FONSI in 2002. The report also considers a new management alternative which would increase the annual take of black bear under the current management alternative from 15 to 25 bears per year. This supplement adds to the analysis in the 2002 EA and FONSI and all information and analyses in the 2002 EA remain valid unless otherwise noted below.

The WS program responds to requests for assistance from individuals, organizations and agencies experiencing damage caused by wildlife. WS is the federal program authorized by Congress and directed by law to reduce damage caused by wildlife (Act of March 2, 1931, as amended (46 Stat. 1468; 7 U.S.C. 426-426b) and the Act of December 22, 1987 [101 Stat. 1329-331, 7 U.S.C. 426c]). Wildlife damage management is the alleviation of damage or other problems caused by or related to the presence of wildlife, and is recognized as an integral part of wildlife management (The Wildlife Society 1992). The imminent threat of damage or loss of resources is often deemed sufficient for wildlife damage management actions to be initiated (U.S. District Court of Utah 1993).

The current IABBDM program is conducted in cooperation with the Wisconsin Department of Natural Resources (WDNR) and in accordance with a cooperative agreement between WS and WDNR. Wildlife Services typically provides assistance with problems involving bear predation

on livestock, damage to crops and property, threats to human health and safety, and general nuisance complaints. The program emphasizes the use of technical assistance (education/advice) supplemented by operational assistance with methods such as selective trapping and relocation of problem bears. Technical assistance includes providing brochures, other written information, personal or telephone consultations, or workshops. WS may also conduct demonstrations, lend equipment such as frightening devices (when equipment is available), and provide information on animal husbandry. Resource owners are responsible for implementing most non-lethal methods. Operational assistance from WS includes installation of electric fencing, capture and relocation, capture followed by euthanasia and shooting. Lethal methods are only used in a limited set of site specific situations approved by the WDNR (e.g., safety risks to people, livestock depredation, bears severely injured by vehicles). All WS wildlife damage management activities are in compliance with applicable state, federal and local laws and regulations including the Endangered Species Act (ESA) of 1973.

CONSISTENCY

Wildlife damage management activities conducted in Wisconsin are consistent with Work Plans, Memorandum of Understanding (MOU) and policies of WS, the WDNR, DATCP, USFWS, and the USFS. In addition, WS has completed ESA Section 7 Consultations with the USFWS for wildlife damage management activities. WS has also consulted with the WDNR regarding risks to state-listed threatened and endangered species.

The Coastal Zone Management Act of 1972, as amended (16 USC 1451-1464, Chapter 33; P.L. 92-583, October 27, 1972; 86 Stat. 1280) requires that federal actions be conducted in a manner consistent with the federally approved state Coastal Zone Management Plans. Wildlife Services has determined that the proposed action would not affect coast resource and would, by default, be consistent with the State's Coastal Zone Management Program. Wildlife Services is currently seeking concurrence with this determination from the Wisconsin Coastal Management Program.

MONITORING

The Wisconsin WS program annually gives the WDNR data on the take of black bear and non-target animals to help ensure the cumulative impact of WS actions do not adversely impact the viability of state black bear or non-target species populations. WS is also a contributing member of the WDNR black bear management advisory committee. WS reviews program activities annually to determine if the analyses and determinations in the EA adequately address current and anticipated future program activities.

RELATED ENVIRONMENTAL DOCUMENTS

Wildlife Services Programmatic EIS. Wildlife Services issued a final EIS (USDA 1997 Revised) and Record of Decision on the National APHIS-WS program. Applicable sections of the EIS are incorporated by reference in the EA and this supplement.

PUBLIC INVOLVEMENT

When the EA was originally completed, an invitation for public involvement letter containing issues, objectives, preliminary alternatives, and a summary of the need for action was sent to 342 individuals, agencies, or organizations identified as interested in Wisconsin WS projects. Notice of the proposed action and invitation for public involvement was placed in eight newspapers with circulation throughout Wisconsin. An invitation for public comment letter also was sent to the federally recognized Native American tribes in the state and the Great Lakes Indian Fish and Wildlife Commission (GLIFWC). WS received 18 letters in response to the invitation for public involvement. Issues and concerns from these letters were included in the pre-decisional EA. The pre-decisional EA was sent to 39 entities, including tribes, GLIFWC, and the 18 respondents to the initial invitation for public comment. Notice of the pre-decisional EA was placed in four newspapers, including the *Milwaukee Journal-Sentinel*. All comments received on the pre-decisional EA were reviewed for issues and concerns prior to reaching a Decision. These letters and notices are maintained in the administrative file located at the Wisconsin WS District Office, P.O. Box 1064, Rhinelander, WI 54501.

None of the tribes identified provided any comments regarding cultural or other concerns relating to WS' IABBDM program during the 30 day public involvement process. However, a letter was received from the GLIFWC, which represents member tribes off-reservation treaty rights. The Wisconsin WS State Director also met with GLIFWC to discuss issues and concerns related to the EA. WS will continue to consult with GLIFWC on bear damage management issues and concerns.

The EA, the 2002 Decision/FONSI, and this new 2009 Decision/FONSI are being made available for public review and comment through a legal notice in the Wisconsin State Journal and by direct mailing to agencies, organizations, and individuals with probable interest in the proposed program. All documents are also available for review on the WS website at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml. New issues or alternatives raised during the comment period will be fully considered to determine whether the EA should be revisited and, if appropriate, revised. The comment period for this supplement is open until August 6, 2010. Public notification procedures are in compliance with new WS NEPA implementation procedures published in the Federal Register March 21, 2007 (Vol. 72, No. 54: 13237-13238).

MAJOR ISSUES

Several issues were identified by the Multi-agency Team (i.e., WS, WDNR, DATCP, and USFS) during preparation of this pre-decisional EA and in public comments received in response to the invitation for public involvement. The following issues were determined to be relevant by WS, WDNR, DATCP and the USFS based on public and other agency comments and were used in the analysis:

- 1) Viability of black bear populations in Wisconsin.
- 2) Public health and safety from black bear management.

3) Maintain effective and selective resource protection methods and tools.

4) Potential for some WS methods to take non-target animals.

Objectives for Wisconsin WS Black Bear Damage Management

In addition to the issues that were analyzed in detail, Wisconsin WS and the consulting agencies developed three objectives to help evaluate the effectiveness of the IABBDM program:

Objective 1) Acceptance of the program by cooperators;

Objective 2) All requests for black bear damage management assistance receive a response within 48 hours;

Objective 3) No adverse impact on the statewide black bear population.

AFFECTED ENVIRONMENT

The area of the proposed action includes all private and public lands in Wisconsin where black bear damage is occurring or could occur and a request for assistance is received. The proposed action could be conducted on urban/suburban sites, campgrounds, farms, seasonal residences or other locations as appropriate.

During preparation of the EA, WS did not have any agreements or MOUs with Native American Tribal governments. WS will only work on Tribal lands if a request for assistance is received from the Tribal government and an “*Agreement for Control*” is signed. In 2006, at the request of the St. Croix Band of the Lake Superior Chippewa Indians, WS signed an agreement to resolve black bear damage complaints on St. Croix Tribal lands. When WS is conducting IABBDM under this agreement, WS activities are highly coordinated with the Tribal Police Department to insure Tribal cultural/spiritual beliefs are recognized.

ALTERNATIVES ANALYZED IN DETAIL

Five alternatives were developed by the multi-agency team to address the issues identified above (see “Major Issues” section). Three additional alternatives were considered but not analyzed in detail. Reasons for not considering the alternatives in detail remain as discussed in the EA. A detailed discussion of the effects of the Alternatives on the issues is described in the EA. The following is a summary of the management alternatives considered in the EA.

Alternative 1. No Federal WS Black Bear Damage Management in Wisconsin.

This alternative would eliminate all WS black bear damage management (operational and technical assistance) in Wisconsin. WS would not be available to provide technical assistance or make recommendations to individuals or entities experiencing bear damage. Requests for information or assistance with bear damage management would be referred to the WDNR, extension agents, local animal control agencies, or private businesses or organizations as

appropriate. Under this alternative, the WDNR would be responsible for most bear damage management assistance. Given budget and staff limitations, the WDNR will likely seek alternatives for authorizing others to conduct bear damage management (i.e., through permits). Damage management methods and devices might be applied by people with less training and experience than WS specialists. This could require more effort and cost to achieve the same level of problem resolution, and could result in more risk to human health and safety and non-target animals than an operational program by WS.

Alternative 2. Technical Assistance Only.

Under this alternative, WS would not conduct any operational black bear damage management in Wisconsin. Wildlife Services would only provide technical assistance. This alternative would place the immediate burden of operational black bear damage management on the WDNR. Given budget and staff limitations, the WDNR will likely seek alternatives for authorizing others to conduct bear damage management (i.e., through permits). Damage management methods and devices might be applied by people with less training and experience than WS specialists. This could require more effort and cost to achieve the same level of problem resolution, and could result in more risk to human health and safety and non-target animals than an operational program by WS.

Alternative 3. Non-lethal Black Bear Damage Management Only.

Under this alternative, WS would not conduct any lethal operational black bear damage management. Wildlife Services would encourage resource owners to use non-lethal methods which could include environmental manipulation, animal husbandry changes, habitat modification, fencing, and harassment. WS would only provide technical assistance or conduct trap and relocation activities for problem black bears when requested. Captured black bears would be relocated to suitable areas in accordance with applicable regulations and policies and consultations between WS and the WDNR. The WDNR would be responsible for lethal bear damage management. However, given the limited need for lethal methods, the WDNR is more likely to meet the need with available staff and resources than for Alternatives 1 and 2.

Alternative 4. Lethal Only Program

Under this alternative, WS would only provide operational and technical assistance with lethal black bear damage management methods. Requests for information or assistance with bear damage management would be referred to the WDNR, extension agents, local animal control agencies, or private businesses or organizations as appropriate. This alternative would not allow WS to consider the use of physical exclusion, trap and relocation, livestock guarding dogs, fencing, electronic frightening devices or other non-lethal devices, even where these non-lethal methods may be beneficial. Lethal methods used by WS would include shooting and live-capture followed by euthanasia.

Alternative 5. Integrated Adaptive Black Bear Damage Management (“No Action” Alternative/Proposed Alternative).

The No Action alternative is a procedural NEPA requirement (40 CFR 1502.14(d)), is a viable and reasonable alternative that could be selected, and serves as a baseline for comparison with the other alternatives. The No Action Alternative, as defined here, would involve continuing the current bear damage management program. Wildlife Services could choose to leave the

maximum annual lethal take of bears at 15 bears per year or, based on the analysis in this document and responses to public comments, could choose to increase the maximum annual lethal take of bears to 25 bears per year.

Wildlife Services would continue to use an Integrated Wildlife Damage Management approach to reduce black bear damage and conflicts in Wisconsin. WS would encourage resource owners to use non-lethal methods including environmental manipulation, attractant removal, animal husbandry changes, fencing, and harassment. Operational assistance from WS includes installation of electric fencing, capture and relocation, capture followed by euthanasia and shooting. Lethal methods used by WS would include trapping and euthanasia drugs, and/or shooting. In addition, non-lethal methods would be given first consideration, but may not always be implemented based on the damage/nuisance situation (i.e., particularly human health and safety).

SUMMARY OF WS BEAR DAMAGE MANAGEMENT ACTIVITIES IN WI

During 2002-2009, WS received 9,918 requests for assistance, 6,558 (66%) were handled with technical assistance, and 3,360 (34%) were handled with direct operational assistance. A total of 4,845 bears were captured, of which 4,800 (99%) were relocated or freed, and 45 were euthanized (WS Management Information System [MIS] 2002-2009, Tables 1, 2, 3). Lethal removal was used for bears that were highly habituated to humans, aggressive, sick or injured, when bears entered inhabited dwellings, or depredated livestock. Technical assistance included personal consultations, written or telephone consultations, and literature on bear management. Direct control included capturing bears in culvert traps or foot snares, installation of non-lethal abatement equipment (e.g., electric fencing), and euthanasia of bears via shooting or euthanasia drugs.

Kapp (2005) summarized efficacy of translocating black bears in Wisconsin for conflict abatement. Of 587 marked individuals, 38 black bears were recaptured during the same year. Homing tendencies were a function of month captured, age, sex, and translocation distance. Kapp (2005) summarized that moving black bears more than 45 miles did not significantly decrease homing tendencies for black bears in Wisconsin. McLaughlin et al. (1981) also stated that relocated black bears, regardless of distance moved, generally decreased their nuisance behavior. See Appendix C of the EA for additional review of black bear relocation efficacy.

ENVIRONMENTAL IMPACTS

The following section provides a summary of environmental impacts resulting from the implementation of the WS bear damage management program from 2002-2009. It also includes an analysis of potential impacts which may result from increasing the maximum annual black bear take under Alternative 5 from 15 to 25 bears.

Impact on the Viability of black bear populations in Wisconsin

Data on the number of bear damage and nuisance complaints received by WS and the type of assistance provided by WS is provided in Table 1. Bear complaints have been relatively stable, with WS placing emphasis on providing technical assistance to the public on how to resolve

complaints without trapping and relocating or killing bears. However, there has been an increase in the number of bears captured annually to resolve agriculture damage (52%) and nuisance (40%) complaints (Table 2). Increased capture rates may be attributable to combination of factors which include variable crop prices, an increasing bear population, drought (limited natural forage production) or increased density of human dwellings. The number of bears intentionally killed by WS per year (1-14 bears per year) has been very low relative to the number of complaints (1,003-1,383 complaints per year) and the number of bears relocated (Table 3).

Table 1. Number of black bear damage and nuisance complaints in Wisconsin for 2002-2009 and Wildlife Services (WS) response to the complaints.

Calendar Year	Total Complaints Received by WS	Complaints that received only Technical Assistance (% of Total)	Complaints that received technical and operational assistance (% of Total)
2002	1,296	960 (74)	336 (26)
2003	1,339	914 (68)	425 (32)
2004	1,296	882 (68)	414 (32)
2005	1,003	664 (66)	339 (34)
2006	1,107	686 (62)	421 (38)
2007	1,193	699 (59)	494 (41)
2008	1,383	901 (65)	482 (35)
2009	1,301	852 (65)	449 (35)
Total	9,918	6,558 (66)	3,360 (34)

Table 2. Black bears captured by Wildlife Services in Wisconsin to protect agricultural resources and property or to reduce nuisance complaints and risks to human health and safety, 2002-2009.

Calendar Year	Agriculture	Property	Nuisance (Human Health & Safety)	Total
2002	220	42	137	399
2003	256	48	242	546
2004	276	29	287	592
2005	240	41	201	482
2006	479	54	196	729
2007	382	45	336	763
2008	359	49	320	728
2009	266	83	257	606
Total	2,478	391	1,976	4,845

In the EA, WS estimated that no more than 15 bears would be intentionally killed per year while implementing the IABBDM program (Alternative 5). Fourteen bears were intentionally euthanized by WS in 2009 (Table 3). Including unintentional take (bears killed by WS while implementing other wildlife damage management projects), fifteen bears were killed in 2009. Comparing the year with the greatest number of bears killed by WS (both intentional and unintentional) to the estimated population in 2009, WS killed 0.07% of the estimated black bear

population. During each year a percentage of bears euthanized have been struck by vehicles and would have died. Wildlife Services' total take has been less than 0.4% of the take by licensed hunters.

Table 3. Summary of black bears captured, relocated and killed by Wildlife Services and hunter harvest of bears in Wisconsin from 2002-2009.

Calendar Year	Total Bears Captured	Bears Relocated	Bears Intentionally Killed by WS (% of Bears Captured)	Total Bears Killed by WS (% of Harvest)^A	Hunter Harvest^B
2002	399	396	3 (0.8)	3 (0.1)	2,471
2003	546	543	3 (0.5)	3 (0.1)	2,905
2004	592	590	2 (0.3)	2 (0.07)	3,063
2005	482	481	1 (0.2)	3 (0.1)	2,645
2006	729	729	4 (0.5)	4 (0.1)	3,068
2007	763	754	9 (1.2)	9 (0.3)	2,797
2008	728	719	9 (1.2)	10 (0.3)	2,954
2009	606	592	14 (2.3)	15 (0.4)	4,009
Total	4,845	4,800	45 (0.9)	49 (0.2)	23,851

^A Number includes unintentional mortality which occurred as a result of other WS programs in 2005 (2 bears), 2008 (1 bear), 2009 (1 bear).

^B Hunter harvest includes Chippewa tribal harvest. Estimates taken from: <http://dnr.wi.gov/org/land/wildlife/harvestsummary.pdf> and <http://dnr.wi.gov/org/land/wildlife/harvest/reports/08bearpop.pdf>

Published data indicates that relocation does not greatly increase natural mortality among bears \geq 2 years old (Rogers 1986). Harger (1970) found a similar mortality pattern of relocated (41%) and non-relocated bears (38%), suggesting that relocation did not increase natural mortality of black bear in Michigan. Alt et al. (1980) and McLaughlin et al. (1981) in Pennsylvania, and Massopust and Anderson (1984) in Wisconsin reported similar results. Furthermore, Rogers (1986) indicated that relocated black bears typically leave release sites within a few days and move widely, whether they return home or not, indicating that they should effect an impact on resident bears similar to dispersing bears or bears foraging naturally outside of their usual ranges.

Black bear harvest and population information indicate that the black bear population in Wisconsin has been healthy and slowly increasing since the early 1990s. (Rolley and Worland 2009, WDNR 2009). The 2009 WDNR pre-hunt black bear population estimate was 21,500 bears, up from an estimated 21,450 bears in 2008 (Rolley and Worland (2009). The 2008 and 2009 population estimates are substantially higher than the bear population estimates used in the EA (11,300 bears in 2002). Much of this difference appears to be related to a change in the methods used to estimate the Wisconsin bear population. The University of Wisconsin-Madison (UWM) began a cooperative research project with the WDNR and the Wisconsin Bear Hunters Association in 2006 to assess the bear population using a Mark-Recapture technique. Preliminary analysis of these data suggests the black bear population was underestimated and a new population estimate using new data may double the black bear population

(http://www.dnr.state.wi.us/news/DNRNews_article_Lookup.asp?id=748). After review of the study data the WDNR adjusted the 2008 bear population up from 13,050 bears to 21,450 bears. The Wisconsin black bear population appears to be expanding its range into southern Wisconsin and more populated areas. Consequently, the WDNR has increased the number of harvest permits recently by >50% which is intended to stabilize or reduce the statewide bear population.

In the EA, WS concluded that annual take of up to 15 black bears per year would not have an adverse cumulative impact on the black bear population. The WDNR, the agency with authority to manage resident wildlife populations, concurred with this determination. Given that the black bear population has been increasing during the period when WS has been removing bears for damage management, this determination appears to be correct.

Increases in the black bear population are likely contributing to the slow increase in the number of bears lethally taken by WS for damage management and bears euthanized by WS because of car collisions or other injuries/illnesses each year. Given current trends, WS is proposing to increase its maximum annual lethal take of bears from 15 to 25 bears per year. The conditions under which lethal methods may be used will not change from current criteria. Specifically, lethal methods will only be used to remove highly human-habituated and/or bold and aggressive bears, bears that have entered inhabited dwellings, bears that depredate livestock, and sick or injured bears. Based on the current WDNR estimated black bear population (21,500 bears), this new level of lethal take would remove 0.1% of the population and is only 0.6% of the 2009 estimated black bear harvest. In the WS programmatic EIS, it was determined that black bear populations could sustain up to 20% legal harvest. If the proposed maximum WS bear take (25 bears) was added to hunter harvest in 2009, the cumulative take would have been 18.5% of the state black bear population. This estimate is within the levels which can be sustained by the population. Based on the above information, we conclude that increasing WS maximum annual take of black bears from 15 to 25 bears per year would not adversely impact the state black bear population or black bear hunting opportunities.

Impacts on Public Health and Safety from Black Bear Management

The risk assessment from USDA (1997 Revised, Appendix P) determined that the human health and safety risks from WS' wildlife damage management activities are low. The greatest risks to human health and safety from WS' use of chemical and mechanical methods (immobilization and euthanasia drugs, shooting, trapping) are incurred by the WS Specialists who use these methods. All WS Specialists that use immobilizing/euthanasia drugs must attend an approved wildlife capture/immobilizing course that provides instruction on proper capture techniques and safety procedures (WS Directive 2.430). In addition, new WS Specialists receive additional training by working with experienced employees before they are allowed to work on their own. No WS specialist reported an injury during this reporting period while implementing IABBDM.

Risks to the public from WS' bear damage management activities are also very low. When WS sets traps, WS places warning signs on traps and often blocks off trap areas with warning tape. Despite these precautions, in 2007 a child appears to have been scratched by a black bear that was captured in a culvert trap. The child's parents were advised to seek medical attention to

assess the injury. The physician recommended the bear be euthanized and tested for rabies. The test results were negative. Incident investigation revealed that the child was probably feeding the captured bear while accompanied by an adult. WS completed a risk assessment for this incident and concluded that appropriate precautionary steps had been taken. Given that this is the only such incident in 19 years and that WS was found to have complied with all applicable provisions for the protection of human health and safety, we conclude that the EA's determination that the IABBDM program poses a low magnitude of risk to human health and safety is still valid. Implementation of the IABBDM reduces threats to public health and safety by removing black bears that pose threats to humans or pets.

The EA concluded that impacts on human health and safety would be insignificant. WS implementation of program activities did not result in any significant adverse impacts to human health and safety. Program activities and methods and their potential impacts on human health and safety have not changed from those analyzed in the EA. Increasing the annual lethal bear take is not anticipated to have a substantial impact on program risks to human health and safety. Allowing the proposed level of increase in bear take would enable WS to continue to provide prompt and effective bear damage management assistance despite increases in the bear population. Impacts of the bear damage management program on this issue are expected to remain insignificant.

Maintain effective and selective resource protection methods and tools

WS Specialists are trained in the safe and proper use of the most selective and effective tools for capturing black bears. Culvert traps are the most commonly used method to capture black bears and are utilized by most wildlife management agencies involved in black bear management. Wisconsin WS biologists review scientific literature routinely and will adapt new techniques if they are developed and become available for use. The EA concluded the selection of this alternative would give WS access to the widest range of methods for reducing black bear damage and conflicts. The conclusion in the EA is still valid. Increasing annual lethal take from 15 to 25 bears per year would not impact the damage management methods available to WS under this alternative. Consequently, increasing the annual lethal bear take under this alternative would not change the impacts expected for the current management alternative (Alternative 5).

Potential for some WS methods to take non-target animals

During 2002-2009, WS captured a total of 338 non-target animals while implementing the IABBDM program of which 336 were freed and 2 were killed (Table 4). The non-target species captured while implementing the IABBDM program included 14 fishers (*Martes pennanti*), 284 raccoons (*Procyon lotor*), 37 striped skunks (*Mephitis mephitis*), 1 opossum (*Didelphis virginianus*), 1 badger (*Taxidea taxus*) and 1 dog (*Canis familiaris*). Raccoons compose the largest percentage (84%) of the total non-target animals captured while implementing IABBDM followed by skunks (11%) and fishers (4%). WS lethal take of non-target species is expected to remain very low. This level of take will not adversely impact non-target species populations, especially when compared to the recreational harvest of these species (Table 5). Increasing WS maximum annual lethal take from 15 to 25 bears per year is not expected to result in a substantive increase in risk to non-target species. Even if WS' current unintentional lethal take

of non-target species increased to twice that which currently occurs (i.e., increased to four raccoons over an eight year period), unintentional take would still have a negligible impact on non-target species populations.

Table 4. Non-target species captured by Wildlife Services during bear damage management activities in Wisconsin conducted during 2002-2009 (F = freed, K = killed).

Year	Fisher	Raccoon	Skunk	Opossum	Badger	Dog	Total
2002	0	22F	0	0	0	0	22F
2003	6F	30F	10F	0	0	0	46F
2004	2F	59F	0	0	0	0	61F
2005	2F	30F, 1K	6F	0	0	0	38F, 1K
2006	2F	47F	4F	1F	1F	1F	56F
2007	0	40F	6F	0	0	0	46F
2008	2F	38F	2F	0	0	0	42F
2009	0	16F, 1K	9F	0	0	0	25F, 1K
Total	14F	282F, 2K	37F	1F	1F	1F	336F, 2K

Table 5. Recreational harvest of fisher, raccoon, and skunks in WI, 2002-2008. (Data from WDNR harvest reports <http://www.dnr.state.wi.us/org/land/wildlife/harvestsummary.pdf>). (2009 date not available)

Year	Fisher	Raccoon	Skunk
2002	1,803	98,707	5,920
2003	1,126	161,221	8,943
2004	1,560	157,736	9,156
2005	1,896	87,255	5,930
2006	2,450	137,453	9,692
2007	1,385	116,762	8,179
2008	1,539	152,398	9,002
Total	10,220	739,752	47,820

An informal Section 7 Consultation on bear damage management was completed in 2002. The USFWS determined that the proposed IABBDM activities may adversely affect gray wolves and Bald Eagles and may affect but were unlikely to adversely affect Canada lynx. The USFWS deferred to the provisions of the 1992 Biological Opinion on the national WS program (USDA 1997 Revised) for the protection of gray wolves and Bald Eagles and did not add any additional Reasonable and Prudent Measures for the protection of these species. Bald Eagles have subsequently been removed from the Federal list of threatened and endangered species. However, Bald Eagles have additional protections under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. WS is continuing to implement key provisions for the protection of Bald Eagles to minimize the risk of take.

In 2002, WS completed an informal Section 7 consultation regarding impacts of the Eastern Region WS program on Canada lynx. The USFWS determined that the Eastern Region WS'

programs for wildlife damage management might affect, but were unlikely to adversely affect Canada Lynx. Wisconsin WS reinitiated informal consultation with the USFWS in 2006, because of new information on Canada lynx populations in the eastern United States and an increase in WS operational activities in Wisconsin. The USFWS concurred with WS' determination that WS' wildlife damage management activities, including bear damage management, may affect, but are not likely to adversely affect Canada lynx.

WS has determined that the proposed action will have no effect on the remaining species federally-listed in Wisconsin, specifically: Kirtland's Warbler (*Dendroica kirtlandii* - endangered), Piping Plover (*Charadrius melodus* - endangered), Whooping Cranes (*Grus americanus* - experimental non-essential), Eastern massauga (*Sistrurus catenatus* - candidate), Higgins eye pearl mussel (*Lampsilis higginsii* - endangered), Winged mapleleaf (*Quadrula fragosa* - endangered), sheepsnose mussel (*Plethobasus cyphus* - candidate), spectacle case (*Cumberlandia monodonta* - candidate), Hine's emerald dragonfly (*Somatochlora hineana* - endangered), Karner blue butterfly (*Lycaeides melissa samueli* - endangered), Dwarf lake iris (*Iris lacustris* - threatened), Eastern prairie fringed orchid (*Platanthera leucophaea* - threatened), Fassett's locoweed (*Oxytropis campestris* var. *chartacea* - threatened), Mead's milkweed (*Asclepias meadii* - threatened), Northern wild monkshood (*Aconitum noveboracense* - threatened), Pitcher's thistle (*Cirsium pitcheri* - threatened), and Prairie bush-clover (*Lespedeza leptostachya* - threatened).

Wildlife Services also consulted with the WDNR regarding the risks bear damage management activities may pose to state-listed threatened and endangered species. In the March 23, 2002 consultation letter, the WDNR concurred with WS' determination that the IABBDM program would not adversely affect the gray wolf or Bald Eagle and would have no effect on any of the other state listed species. Gray wolves and Bald Eagles are no longer state-listed as threatened or endangered.

The primary risk to non-target species from the IABBDM program are the risk of unintentional capture and injury or death of a non-target animal in a device set to capture bears. Shooting is virtually 100% selective for the target species and risks to non-target animals from this method are negligible. No species have been added to the state list of threatened and endangered species since the completion of the EA.

WS has not taken any federal or state listed threatened or endangered species during the IABBDM program. Given that there has been only two instances of unintentional mortality of a non-target species since the completion of the EA, the Standard Operating Procedures established to reduce risks to non-target species in Chapter 3 of the EA, and the analysis above, the continued implementation of the IABBDM will not adversely impact non-target species populations.

OBJECTIVES ANALYSIS

Objective 1) Acceptance of the program by cooperators: WS has numerous cooperative agreements with various resource managers/owners in Wisconsin who provide funding for WS to implement the IABBDM program. All cooperative agreements have been renewed annually, excluding those terminated due to a lack of need for IABBDM, indicating a high level of cooperator acceptance to the program. Based on this information, WS met objective 1.

Objective 2) Respond to 100% of requests for black bear damage management assistance within 48 hours: During normal business hours and Monday – Friday an employee is designated to receive calls from citizens concerning black bear complaints. In addition, WS maintains two 1-800 telephone numbers that are checked periodically during the weekend to insure complainants reporting black bear damage are contacted within 48 hours. Assistance may entail a telephone call or a site investigation. WS specialists involved in black bear damage management routinely work 7 days a week and respond to requests for assistance during weekends. In addition, a survey of WS Specialists involved with black bear damage management indicates that all requests for assistance were responded to within 48 hours. Based on this information, WS met objective 2.

Objective 3) No adverse impact on the statewide black bear population: Based on the analysis in this supplement, WS met this objective.

SUMMARY OF CUMULATIVE IMPACTS

No significant cumulative environmental impacts have resulted from implementation of the IABBDM program. Based on analysis in the EA and this supplement, future implementation of any of the alternatives, including increasing maximum lethal bear take under alternative 5 to 25 bears per year, will not result in substantial cumulative adverse impacts on the bear population. Under Alternatives 4 and 5, the limited lethal removal of black bears would not have significant adverse impacts on the state black bear population or black bear hunting opportunities. Risks to public safety from implementation of Alternative 5 are very low, and this alternative has the greatest potential to reduce risks to human safety from bears. Risks to human safety from the remaining alternatives will be similar to or slightly greater than Alternative 5 depending upon the training and experience of the individuals conducting bear damage management when WS assistance is limited or unavailable. In all Alternatives, however, it would not be to the point that the impacts would be significant. Alternative 5 also gives WS access to the widest range of effective and legally available damage management methods. Risks to non-target species from implementation of the IABBDM program are expected to continue to be very low. Risks from the other 4 alternatives may be similar or slightly higher depending on the training and experience of the individuals conducting the IABBDM in situations where assistance from WS is limited. WS expects to continue to be able to successfully meet bear damage management objectives established in the EA with the IABBDM program.

LITERATURE CITED

- Alt, G. L., G. J. Matula, JR., F. W. Alt, and J. S. Lindzey. 1980. Dynamics of home range and movements of adult black bears in northeastern Pennsylvania. *Int. Conf. Bear Res. and Manage.* 4:131-136.
- CEQ (Council for Environmental Quality). 1981. Forty most asked questions concerning CEQ's National Environmental Policy Act regulations. (40 CFR 1500-1508) *Fed. Reg.* 46:18026-18038.
- Hygnstrom, S. E., and T. M. Hauge. 1989. A review of problem black bear management in Wisconsin. pp 163-168 *in* M. Bromley, ed. *Bear-people conflicts: proceedings of a symposium on management strategies.* Northwest Terr. Dep. Renew. Resour.
- Harger, E. M. 1970. A study of homing behavior of black bears. M. A. Thesis, Northern Michigan Univ., Marquette. 81 pp.
- Kapp, K. 2005. Understanding the spatial patterns and demographic components of black bear human conflicts in Wisconsin. M. S. Thesis, University of Wisconsin-Madison. Madison, Wisconsin. 79 pp.
- Massopust, J. L. and R. K. Anderson. 1984. Homing tendencies of translocated nuisance black bears in northern Wisconsin. *Proc. East. Black Bear Workshop.* 7:66-73.
- McLaughlin, D. R., D. J. Baker, A. Sallade, and J. Tamblyan. 1981. Characteristics and movements of translocated nuisance black bears in north central Pennsylvania. *PA Game Comm. Rep.* Harrisburg. 31 pp.
- Rogers, L. L. 1986. Effects of translocation distance on frequency of return by adult black bears. *Wildl. Soc. Bull.* 14:76-80.
- Rolley, R. E., and M. L. Worland. 2009. Black bear population analyses. Wisconsin Department of Natural Resources, Wildlife Population Surveys. <http://dnr.wi.gov/org/land/wildlife/harvest/reports/09bearpop.pdf>.
- Slate, D. A., R. Owens, G. Connolly and G. Simmons. 1992. Decision making for wildlife damage management. *Trans. North Am. Wildl. Nat. Res. Conf.* 57:51-62.
- The Wildlife Society. 1992. *Conservation policies of The Wildlife Society: A stand on issues important to wildlife conservation.* The Wildlife Society, Bethesda, Md. 24pp.
- USDA, APHIS, Animal Damage Control (ADC). 1997 (revised). *Final Environmental Impact Statement.* USDA, APHIS, ADC Operational Support Staff, 4700 River Road, Unit 87, Riverdale, MD 20737.

USDA, APHIS, WS. 2002. Environmental Assessment (EA)–Black Bear Nuisance and Damage Management in Wisconsin. State Director, USDA/APHIS/WS, 732 Lois Dr. Sun Prairie, WI 53590.

WDNR (Wisconsin Department of Natural Resources). 2009. Wisconsin black bear population and distribution. <http://dnr.wi.gov/org/land/wildlife/hunt/bear/popndist.htm>

WS (Wildlife Services) Directive 2.201. Wildlife Services Decision Model.
http://www.aphis.usda.gov/wildlife_damage/ws_directives.shtml

WS (Wildlife Services) Directive 2.430. Chemical Immobilization and Euthanizing Agents
http://www.aphis.usda.gov/wildlife_damage/ws_directives.shtml