VII. TABLES

Number of Black Bear Complaints 1999-2005

Reported to DFW Wildlife Control Unit

Only calls received by the DFW are represented in this table

INCIDENT TYPE	1999	2000	2001	2002	2003	2004	2005
NUISANCE	468	483	357	525	357	229	360
GARBAGE	496	290	269	379	503	282	333
BIRDFEEDER	274	202	137	137	89	59	76
PROTECTED HIVE	4	7	0	2	3	5	0
UNPROTECTED HIVE	19	16	13	24	9	5	6
LIVESTOCK KILL	25	22	36	27	17	24	17
RABBIT KILL	28	38	57	34	38	27	9
UNPROVOKED DOG ATTACK	12	17	6	15	11	5	8
PROVOKED DOG ATTACK	***	***	***	***	22	4	1
HOME ENTRY	29	29	29	55	53	24	28
AGGRESSIVE	34	51	37	28	19	7	19
CAMPSITE / PARK	28	22	5	10	1	3	0
URBAN REMOVAL	10	7	12	19	11	12	33
PROPERTY DAMAGE	232	191	123	111	132	44	69
HUMAN ATTACK	0	0	1	1	2	1	1
ATTEMPTED HOME ENTRY	*	*	5	25	23	10	20
AGRICULTURAL DAMAGE	*	*	5	9	5	10	6
TENT ENTRY	*	*	2	5	4	2	3
VEHICLE ENTRY	*	*	2	6	9	3	3
Total	**1,659**	**1,375**	**1,096****	**1,412****	**1,308****	**756****	**992******

* Separate Incident Type beginning in 2001

** Does not include calls handled by police departments.

***** New Incident Type for 2003**

******Incidents up to October 6, 2005**

Police training in increased involvement began in 2001. These years are signified in red.

TABLE 1. Number of Black Bear Complaints 1999-2005

VIII. APPENDICES

Appendix A. Letters in Support of a Bear Hunting Season

Jul-03-2003 07:09pm From-INFO SERVICES 717 787 3292 T-101 P.002/002 F-387

OFFICE OF
EXECUTIVE DIRECTOR
717-787-3633

COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission
2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

PERSONNEL 717-787-7836
ADMINISTRATION 717-787-5670
AUTOMOTIVE AND
PROCUREMENT DIVISION 717-787-6594
LICENSE DIVISION 717-787-2084
WILDLIFE MANAGEMENT 717-787-5529
INFORMATION & EDUCATION 717-787-6286
LAW ENFORCEMENT 717-787-5740
LAND MANAGEMENT 717-787-6818
REAL ESTATE DIVISION 717-787-6568
MANAGEMENT INFORMATION
SYSTEMS 717-787-4076

www.pgc.state.pa.us

July 2, 2003

Mr. Martin McHugh
Director
New Jersey Division of Fish & Wildlife
P.O. Box 400
Trenton, NJ 08625

Dear Mr. McHugh,

The Pennsylvania Game Commission supports a regulated hunting season for black bears in New Jersey. Once considered to be at low population levels, black bears are now abundant throughout most of their eastern U.S. range. Population estimates have almost quadrupled since 1980 in Pennsylvania alone. The recovery of bear populations is a great wildlife success story. However, because human-bear conflicts have also increased, the need to manage bear populations is becoming increasingly obvious. We believe that hunting is an effective and responsible way to manage bear numbers.

Pennsylvania and New Jersey share the same bear population, and natural movement of bears between the two states is well documented. Last year, 12 bears with New Jersey ear tags were harvested in our hunting season. Thus, how bears are managed in either jurisdiction may potentially impact the other. Human-bear conflicts have become a concern for us in eastern Pennsylvania, and we support a management program in New Jersey that would help stabilize the local bear population.

I commend your agency for the black bear management options being proposed and the sound research that is guiding you. Thank you for the opportunity to comment, and please feel free to contact me if our agency can be of any assistance.

Sincerely,

Vernon R. Ross
Executive Director

OFFICE OF
EXECUTIVE DIRECTOR
717-787-3633

COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission
2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

ADMINISTRATIVE BUREAUS:

PERSONNEL 717-787-7836
ADMINISTRATION 717-787-5670
AUTOMOTIVE AND
PROCUREMENT DIVISION 717-787-6594
LICENSE DIVISION 717-787-2084
WILDLIFE MANAGEMENT 717-787-5529
INFORMATION & EDUCATION .. 717-787-6286
LAW ENFORCEMENT 717-787-5740
LAND MANAGEMENT 717-787-6818
REAL ESTATE DIVISION 717-787-6568
MANAGEMENT INFORMATION
SYSTEMS 717-787-4076

www.pgc.state.pa.us

July 6, 2004

Mr. Martin McHugh
Director
New Jersey Division of Fish & Wildlife
P.O. Box 400
Trenton, NJ 08625

Dear Mr. McHugh,

The Pennsylvania Game Commission supports a regulated hunting season for black bears in New Jersey. Once considered to be at low population levels, black bears are now abundant throughout most of their eastern U.S. range. Population estimates have almost quadrupled since 1980 in Pennsylvania alone. The recovery of bear populations is a great wildlife success story. However, because human-bear conflicts have also increased, the need to manage bear populations is becoming increasingly obvious. We believe that hunting is an effective and responsible way to manage bear numbers.

Pennsylvania and New Jersey share the same bear population, and natural movement of bears between the two states is well documented. Thus, how bears are managed in either jurisdiction may potentially impact the other. Human-bear conflicts have become a concern for us in eastern Pennsylvania, and we support a management program in New Jersey that would help stabilize the local bear population.

I commend your agency for the successful implementation of a black bear hunting season last year that contained no hunting accidents and allowed important biological information to be collected while working toward the goal of stabilizing the regional bear population. Thank you for the opportunity to comment, and please feel free to contact me if our agency can be of any assistance.

Sincerely,

Vernon R. Ross
Executive Director

OFFICE OF
EXECUTIVE DIRECTOR
717-787-3633

COMMONWEALTH OF PENNSYLVANIA
Pennsylvania Game Commission
2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

July 21, 2005

ADMINISTRATIVE BUREAUS:

PERSONNEL 717-787-7836
ADMINISTRATION 717-787-5670
AUTOMOTIVE AND
PROCUREMENT DIVISION 717-787-6594
LICENSE DIVISION 717-787-2084
WILDLIFE MANAGEMENT 717-787-5529
INFORMATION & EDUCATION .. 717-787-6286
LAW ENFORCEMENT 717-787-5740
LAND MANAGEMENT 717-787-6818
REAL ESTATE DIVISION 717-787-6568
MANAGEMENT INFORMATION
SYSTEMS 717-787-4076

www.pgc.state.pa.us

Bradley M. Campbell
Commissioner
N. J. Department of Environmental Protection
P.O. Box 402
Trenton, N. J. 08625-0402

Dear Mr. Campbell:

The Pennsylvania Game Commission urges your department to implement an annual regulated hunting season for black bears in New Jersey. Although once considered to be an imperiled species, black bears are now abundant throughout most of their eastern U.S. range. The recovery of bear populations is a great wildlife success story; however, because human-bear conflicts have also increased, the need to manage bear populations is increasingly important. It is our experience that hunting is the most cost effective and responsible method for managing bears numbers, and an important component of an integrated, adaptive management program.

Pennsylvania and New Jersey share the same bear population, and natural movement of bears between the two states is well documented. Thus, how bears are managed in either jurisdiction may potentially impact the other. Human-bear conflicts have become a concern for us in eastern Pennsylvania, and we support a management program in New Jersey that would help stabilize the regional bear population.

While certainly controversial, you demonstrated in 2003 that bears could be hunted safely in your state. Hunting is not a panacea, but it is an important tool in the management of this resource and the conflicts experienced by landowners and communities. The season also was important because it allowed your staff to collect important biological information to be collected while working toward the goal of stabilizing the regional bear population.

Again, we encourage you to reinstitute bear hunting in New Jersey in 2005. Please feel free to contact me if our agency can be of assistance.

Sincerely,

Vernon R. Ross
Executive Director

RECEIVED
JUL 27 2005
Div. of Fish & Wildlife
Director's Office

GE E. PATAKI
OVERNOR

ERIN M. CROTTY
COMMISSIONER

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK 12233-1010

JUL 0 1 2003

Mr. Martin McHugh
Director
Division of Fish and Wildlife
Department of Environmental Protection
PO Box 400
Trenton, New Jersey 08625-0400

Dear Mr. McHugh:

The New York State Department of Environmental Conservation supports the implementation of a managed bear hunting opportunity in New Jersey. Studies conducted in New York and New Jersey have documented that black bears move freely between our two states. Therefore, the long term success of bear population management in this region requires close collaboration between our agencies. Despite annual hunting seasons conducted in southeastern New York, the number of bears and the frequency and severity of human/bear conflicts have increased markedly during recent years, culminating in the tragic death of an infant last summer. Our staffs attribute these increases, in part, to recent increases in bear numbers in New Jersey.

An annual regulated hunting season for bears is currently the best mechanism for regulating bear numbers. Managed successful hunting seasons in both New York and New Jersey, coupled with educational programs and nuisance abatement protocols, are the keys to the sound management of this magnificent resource. Citizens of both New York and New Jersey can thereby enjoy the benefits derived from our shared black bear resource, while allowing people to be relatively free from the negative impacts of high bear populations.

I lend my support for the implementation of a managed bear hunting opportunity in New Jersey. I also look forward to the continued cooperation of our staffs and the successful management of the black bear resource for the people of our States.

Thank you.

Sincerely,

Erin M. Crotty

cc: Commissioner Bradley Campbell

GEORGE E. PATAKI
GOVERNOR

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY, NEW YORK 12233-1010

DENISE M. SHEEHAN
ACTING COMMISSIONER

JUL 14 2005

RECEIVED
JUL 18 2005
COMMISSIONER'S OFFICE

Honorable Bradley M. Campbell
New Jersey Department of Environmental Protection
401 East State Street
7th Floor, East Wing
PO Box 402
Trenton, New Jersey 08625-0402

Dear Commissioner Campbell:

I am writing on behalf of the New York State Department of Environmental Conservation (Department) to express support for a resumption of the black bear hunting season that you reinstituted in New Jersey in 2003. As you are aware, studies conducted in New York and New Jersey have documented that black bears move freely between our two States. Therefore, the long term successful management of our shared bear population in this region requires close and continued collaboration between our agencies.

The Department's wildlife staff believe that an annual regulated hunting season for bear is currently the best mechanism for regulating bear populations. Moreover, the Department also believes that managed successful hunting seasons in both New York and New Jersey, coupled with educational programs and nuisance abatement protocols, are the keys to the sound management of this magnificent resource. Citizens of both New York and New Jersey can thereby enjoy the benefits derived from our shared black bear resource, while remaining relatively free from the negative impacts of high bear populations.

I look forward to the continued cooperation of our agencies and the successful management of the black bear resource for the people of our States.

Sincerely,

Denise M. Sheehan

Appendix B. Letter from Chairman Ellis to Commissioner Campbell regarding Fertility Control

COUNCIL MEMBERS
W. Scott Ellis, Chairman

Jane Morton Galetto
George P. Howard
Fred Hough
Ed Kertz
Elwood Knight
Richard Culp
John Messeroll
Jack Schrier
Robert VonSuskil
Jeannette Vreeland

NEW JERSEY FISH AND GAME COUNCIL
PO Box 400
Trenton, NJ 08625-0400
Tel. 609-292-2965
Fax 609-984-1414

September 20, 2004

Mr. Bradley Campbell, Commissioner
N.J. Department of Environmental Protection
PO Box 402
Trenton, NJ 08625

Dear Commissioner Campbell:

I am writing to inform you of the New Jersey Fish and Game Council's position on the use of fertility control on free-ranging black bears. The Council believes it is appropriate at this time to state our position since we understand the Department is discussing a pilot study or studies with various groups using the captive bears at Great Adventure Safari Park in Jackson, Ocean County.

Wildlife in New Jersey is an important renewable natural resource. Proper management of freshwater fish, game birds, game animals and fur-bearing animals is the primary objective of the Fish and Game Council. Because of the cultural, biological and economic importance of this valuable resource, the Council has promulgated regulations to ensure its continued survival at levels compatible with the biological and cultural carrying capacity of the land.

By statute, the Council is authorized "...after first having determined the need for such action on the basis of scientific investigation and research, adopt and, from time to time amend and repeal such appropriate regulations... as it deems necessary to preserve, properly utilize or maintain the best relative number of any species or variety thereof, at the times, in the manner and the extent herein provided." (See N.J.S.A. 13:1B-30.) In following the mandate of this statute, the Council believes the management of species numbers is best done through the use of recreational hunting and trapping seasons. These public uses of the resource are the most effective and flexible means to accomplish the proper conservation and control of our state's game species of wildlife. In addition, these uses satisfy the Council's mandate to provide public recreation and food supply.

However, the Council also recognizes that research in alternative methods of controlling wildlife populations may be necessary because traditional means, such as recreational hunting and trapping, may not always be appropriate or effective in certain environments.

It is only through sound scientific research that advances in wildlife management come to light.

In order to ensure that wildlife is conserved and protected during such research and that the research, itself, is defendable through peer-review, the Council has adopted specific regulations dealing with research or control involving the inhibition of wildlife reproduction measures on free-ranging wildlife. These regulations require that a permit to inhibit wildlife reproduction be approved by the Council prior to permit issuance by the Division of Fish and Wildlife.

The Council will grant such a permit after considering:

1. the overall justification and need for the fertility-control procedure;
2. the qualifications of the persons administering the procedure;
3. the anticipated environmental impacts affecting both wildlife and humans and;
4. The probability of success in controlling free-ranging wildlife populations.

In the past, the Council has approved applications to inhibit reproduction in white-tailed deer for the Frelinghuysen Arboretum in Morris County and Princeton Township in Mercer County. These permit applications were approved after review by biologists from the Division of Fish and Wildlife, researchers from Rutgers University and other scientists.

These applications were approved only after verification that the chemical used had been successfully tested on captive wildlife in controlled experiments that were conducted using sound scientific principals and the results were peer-reviewed and accepted. Additionally, the necessary federal permits allowing testing on free-ranging wildlife were obtained prior to submission to the Council. And finally, these permits were approved because the study design had a reasonable probability of success in controlling isolated or quasi-isolated populations of deer.

It is interesting to note that the Frelinghuysen Arboretum study was abandoned by the Humane Society and the Morris County Park Commission in the fourth year due to a difficulty in obtaining positive results. The Princeton study is in the second year of a planned five-year experiment.

It is also important to note that, despite numerous studies conducted in many locations throughout the United States in the past 20 years, there have been no published studies documenting a successful control of a free-ranging deer population using fertility control.

Development of an anti-fertility agent to stabilize and/or reduce free-ranging wildlife populations is a difficult endeavor. The Council therefore believes any research must be thorough, well thought out and should not ignore the necessary analysis of the feasibility and costs of implementation over a large area. As in the past, we would insist on a scientific peer-review of the project.

Once developed, an anti-fertility agent could be one more valuable tool in an integrated strategy for wildlife management. The ultimate goal of any research should be to gain final commercial approval of an agent that is safe for use on wildlife, has no adverse environmental impacts and is cost – effective. Without this approval, no program could be successful.

The Council will continue to consider valid and credible research proposals that lead to that end.

Yours truly,

W. Scott Ellis, Chairman
New Jersey Fish and Game Council

C: Director Martin McHugh
Senator Richard Codey

Appendix C. Results of the 2003 Black Bear Hunting Season Final Data 2/16/04

2003 BLACK BEAR SEASON LEGAL HARVEST SUMMARY

	Monday 12/8	Tuesday	Wednesday	Thursday	Friday	Saturday 12/13	Total
Bears Taken	120	69	33	17	40	49	328
Cumulative Harvest Total	120	189	222	239	279	328	328
Hunter Success Rate (cumulative) based on 5450 permits-no youths	2.2%	3.5%	4.1%	4.4%	5.1%	6.0%	6.0%
2003 tagged bears recovered	17	10	5	5	6	10	53
2003 tagged harvested (%age based on 239 available)	7.1%	11.3%	13.4%	15.5%	18.0%	22.2%	22.2%
Total tagged from all years	36	21	11	7	10	15	100 of 328 harvested 7 of 10 bears in harvest are untagged
Nuisance bears							10
Non-target tagged at nuisance site							7
Urban bears							3
Research bears							74
Unknown (previously handled but tags ripped out)							6

HARVEST BY COUNTY

County	Total Harvest	Percentage of Harvest	Area mi^2	Percentage of Hunt Area	Harvest/mi^2
Sussex	233	71 %	537	34 %	0.43 / mi^2
Warren	48	15 %	363	23 %	0.13 / mi^2
Passaic	26	8 %	126	8 %	0.21 / mi^2
Morris	20	6 %	429	28 %	0.05 / mi^2
Bergen	1	0.3 %	35	2 %	0.03 / mi^2
Hunterdon	0	0	219	13 %	0 / mi^2
Somerset	0	0	74	4 %	0 / mi^2
Total	328		1558		0.21 / mi^2

Note: Area of individual counties does not add up to Total area due to rounding of municipality data

SEX AND AGE DISTRIBUTION OF HARVEST

Age	Male	Female	Total (%)
Young of year	46	37	83 (25%)
Yearling	11	22	33 (10%)
Adult	62	150	212 (65%)
Total (%)	119 (36%)	209 (64%)	328

HARVEST RATE OF 2003 TAGGED BEARS

Class	Rate
Young of year (M & F)	17/79 = 21.5%
Males >= 1	7/53 = 13.2%
Females >= 1	29/107 = 27.1%
TOTAL	53/239 = 22.2%

NJ HARVEST BY DAY vs. PREDICTED HARVEST

DAY	Predicted Percentage of Harvest	Predicted Bear Harvest per Day Season Harvest of 328	Actual Bear Harvest per Day Season Harvest of 328
Monday	45 %	148	120 (37 %)
Tuesday	15 %	49	69 (21 %)
Wednesday	10 %	33	33 (10 %)
Thursday	8 %	26	17 (5 %)
Friday	7 %	23	40 (12 %)
Saturday	15 %	49	49 (15 %)
Total	100 %	328	328 (100 %)

NJ bear harvest predictions by Division of Fish and Wildlife biologists:

Prediction: <10% of80,000 firearms hunters would participate:

6,777 hunters applied
5,450 permits issued (5,665 permits issued, including youths)

Prediction: Bear hunters would hunt bears where they traditionally hunt deer:
86% of bear permit holders said they would hunt bear where they hunt deer (based upon application question)

Prediction: This hunting season would not draw excessive numbers of non-resident hunters:

Only 4.3% of bear permit holders were non-residents. This is similar to other seasons.

Prediction: *About half of the NJ bear hunters would have experience hunting bears:*
47% of permit applicants had hunted bears previously, either in NJ before the season was suspended in 1971 or in other states or provinces

Prediction: *Harvest rate would be less than 25% of available bears:*

22.2% of 2003 tagged bears were harvested

Prediction: *Hunter success rate would be between 5% and 7.5%:*

6.0% of hunters were successful

Prediction: *Harvest would be between 272 and 408 bears*:

328 bears were harvested

Prediction: NJ Harvest would be similar to PA harvest in Carbon, Monroe and Pike counties:

2003 harvests were NJ: 328 PA 2002: 443 PA 2003: 303

Appendix D. Recommended Bear Management Budget

Bear Education	$ 250,000
Bear Research, Response & Control	750,000
Community Grants	250,000
Total	**$ 1,250,000**

Appendix E. Summary of Comments Related to the Draft Comprehensive Black Bear Management Policy

Public comment on the Fish and Game Council's draft Comprehensive Black Bear Management Policy was solicited during the period from September 6 through October 6, 2005. Notice of the public comment period was published in the October 6, 2005 edition of the New Jersey Register and by public notice published in the Council's official newspapers, the Star Ledger and the Press of Atlantic City. Notice was also sent to the State House press office, the Secretary of State and to 12,000 people signed up for the various list serves available through the Division of Fish and Wildlife's Webpage. Copies of the Policy were posted in downloadable PDF and Word format on the DFW's Webpage. Constituents could comment by email including a comment page on the webpage, through mail, fax or in person at a public hearing held at Cook College, Rutgers University on September 21, 2005.

The DFW received comments from 2035 individuals. The majority of the comments were in the form of form letters or form emails. 854 letters and 1057 emails were received. 124 persons presented oral comment at the public hearing.

The vast majority of comments only referenced the proposed hunting of bears. 1130 comments were received against hunting bears; most often the objection was based upon a philosophical opposition to the killing of animals. Some commentors believed that only non-lethal options such as bear education and garbage management could control bear problems. However, only a few commentors proposed alternative means of population control such as fertility control. In support of that argument two commentors referenced three papers which they felt proved fertility control was a viable option. A review of these papers indicated that the studies involved two fenced deer herds and one island deer population, not free ranging populations. 905 supported bear hunting as part of an overall management strategy. Several commentors believed that all of southern New Jersey should be part of the bear exclusion zone. Only one government official, the mayor of Stillwell Township, Sussex County commented. He believed that the overabundant bear population warranted a bear hunt. It is interesting to note that the ability to comment by email elicited comments from families on both side of the issue, a group not typically represented in oral or written comment on bear hunting in the game code.

A summary and discussion of comments received follows, arranged according to the order discussed in the policy.

Supreme Court Decision Commentors who supported the policy generally did so because they believed it provided an integrated approach to bear management and met the conditions of the Court decision to discuss and evaluate the tools available to manage bears.

Several commentors believed the policy did not meet the criteria outlined by the Supreme Court. The first comment was that the policy does not discuss how the black bear policy fits in with the overall DEP policy for environmental protection. Although there is no specific reference to wildlife in the DEP mission statement, the Council's goals for bear management reflect the legislative mandate of the DEP and the Council (N.J.S.A. 13:1B-28 et seq.) and DEP mission and goals as identified on the Division's web page and annual reports.

Mission: To protect and manage the state's fish and wildlife to maximize their long term biological, recreational and economic values for all New Jerseyans.

Goals:

> To maintain New Jersey's rich variety of fish and wildlife species at stable, healthy levels and to protect and enhance the many habitats on which they depend.
>
> To educate New Jerseyans on the values and needs of our fish and wildlife and to foster a positive human/wildlife co-existence.
>
> To maximize the recreational and commercial use of New Jersey's fish and wildlife for both present and future generations.

Clearly, the integrated approach proposed by the Council, which includes education, research and monitoring, population control; and an endorsement of the DEP's habitat protection and land acquisition efforts, is in line with the mission and goals of DEP as it relates to wildlife. The DEP mission and goals for wildlife should be incorporated into the final report.

One commentor believed the draft policy should be rejected on procedural grounds because the Council adopted a bear season for 2005 prior to the approval of the policy. They, however, fail to mention that the Game code provides that the proposed season is contingent on the approval of the policy. This wording adopted by the Council clearly reflects the Supreme Court order that a bear hunt could "could not take place" prior to the adoption of a policy.

Several commentors believed the policy should be rejected since an absolute number of bears is not indicated in the policy. The Council reiterates that it is impossible to obtain absolute counts on wildlife species. The Policy relies on estimates of abundance within the bear study areas as well as the changes in human-bear related incidences when considering bear management decisions.

Education: There is general support for increasing staff and funding for bear education.

Control of Human Derived Food. Commentors opposed to lethal control believed more should be done regarding garbage management and the enforcement of the ban on feeding bears. Some persons suggested that garbage resistant cans should be mandated for those living in bear country and do not believe the Council has done enough in that regard. Although the Council does not have the authority to mandate the use of bear resistance cans, the Council does discuss the need for local authorities to mandate the use of bear resistance cans with coordination of local garbage haulers (page 10, para. 1). Some commentors did not believe that general funds should be used to award grants to communities to purchase bear resistance cans.

Several comments stated that better enforcement of the statute prohibiting the feeding of bears would solve bear-human conflicts. The Council believes the language of the statute which distinguishes intentional vs. unintentional feeding, needs to be clarified (page 10 recommendation 2). The Council reiterates, however, that the enforcement of this statute is not within their authority but rests with state and local law enforcement officials.

A general theme of many comments is that improved garbage management would result in a drop in the reproductive rate of the bear population resulting from a reliance on only natural foods. However, data from other states indicate that bear populations within the entire mid-Atlantic region benefit from a diverse source of natural foods and agricultural food sources, in addition to garbage. Mid-Atlantic region bears do not suffer from mast failures or droughts that negatively effect the reproductive potential as documented for other regional bear populations. No data exists which demonstrates that reduction of provisioning from garbage sources will result in decrease in fecundity within this region.

One commentor presented data indicating that intense education of campers and visitors to several national parks (Yellowstone, Yosemite and Great Smokey Mt.) was a successful nonviolent approach to bear nuisance complaints and therefore was a better alternative to a hunt. The commentor indicated that states with hunts (Virginia, Pennsylvania, New York, Ontario and Minnesota) all reported increasing in bear related nuisance activity. The Council agrees that educating campers and visitors to parks is a valid and successful way to minimize negative bear-human interactions. However, it does not address the need to reduce the bear population. The Council notes that all states referenced by the commentator have adopted an integrated approach to bear management similar to that proposed in this policy.

Research Persons supporting the policy did so because it relied on sound science. Persons opposed to the plan, particularly bear hunting, believed that the data did not support a need for a hunt. One commentor stated that the policy did not fulfill the court mandate to consider the absolute size of the bear population and the extent of harmful bear-human interactions. They and several other commentors believed there was no peer review of the population estimates and/or an inadequate presentation and discussion of the research. However, the data and populations estimates are discussed at length in the

various status reports cited in the policy, some of which received extensive peer review by bear biologists and statisticians.

Bear Habitat Ranking As with the case above, HSUS believes the data used to formulate the ranking of habitat should be presented as part of the policy. They also questioned the methodology and rationale to rank bear habitat based upon the percentage of various habitat types. As mentioned in the research section above, it is not appropriate to present the analysis of the data within the policy. The selection of the methodology was based upon studies done in other states and the citations are given. These studies include a Minnesota study by Dr. Lynn Rogers (page 11, para. 2).

Bear Control Few comments were received regarding bear control. One commentor questioned the humaneness of shooting problem bears. The issue of humaneness, pain and suffering was addressed in USDA WS WI (2002) and CA FED (2000). NJDFW will continue to follow euthanasia procedures recommended by the American Veterinary Medical Association (Beaver et. al. 2001). A properly placed gunshot can cause immediate insensibility and humane death. In some circumstances, a gunshot may be the only practical method of euthanasia. Given the need to minimize stress induced by handling and human contact, gunshot may at times be the most practical and logical method of euthanasia of wild or free-ranging species. An accurately delivered gunshot is a conditionally acceptable method of euthanasia (Beaver et. al. 2001).

One commentor did not think the level of serious damage was clearly defined for category I bears. The $500 damage threshold for Category I bears was not mentioned in the policy, and should be included.

Bear Exclusion Zones Very few comments were received on the BEZ's. No government officials commented regarding the inclusion or exclusion of their jurisdictions within this category. A few commentors, apparently reacting to newspaper accounts, believed that the purpose of the BEZ was to physically prevent bears from entering the BEZ's, and questioned how this was possible. Others, again from newspaper accounts, believed that the DEP was going to round up or proactively eradicate all bears within the BEZ. However, the policy does not advocate either of the above scenarios. Therefore, the recommendation to euthanize bears when captured because of response to nuisance or urban bear response (page 16, recommendation 5) should be clarified in the final policy.

Several commentors, including two Grange Associations requested that Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester and Salem counties be designated as BEZ's to ensure bears do not become an agricultural problem and so constituents could still enjoy the outdoors. One commentor believed that the area of Salem county west of Rt. 47 should be removed from the BEZ because this area was primarily rural and contained thousands of acres of land in public ownership (WMA's).

The Council does believes that it is not practical nor appropriate to designate all of southern New Jersey as a BEZ since the pinelands region is suitable bear habitat.

Opening the area to bear hunting by permit, however, will ensure that the bear population is controlled. Although Salem County west of Rt. 47 is rural, the amount of forested habitat is low and does not meet the requirements necessary to sustain a viable bear population. The public land areas cited consist primarily of marsh habitat.

DFW staff from Southern New Jersey recommend that the BEZ boundary in Atlantic County should be shifted west to include the area west of Rt. 9 in the area of Egg Harbor City, Galloway and Absecon using the boundaries designated for Deer Management Zone 42. This area is undergoing rapid development and the DFW's goal is to reduce the population of deer in this area. It unlikely that it will remain suitable bear habitat because of developmental pressure.

Finally, because of the confusion regarding the meaning of Bear Exclusion Zones, the Council recommends changing the name of BEZ's and Bear Hunting Areas (BHA) to Bear Management Zones (BMZ). This terminology is more consistent with those used for other species such as deer and beaver. As identified in the draft policy, BMZ's 1-4, 5A, 6A and 6B are designated as zones where bears should be managed at various densities consistent with land use. For BMZ 5B, which does not contain habitat which will support a long term viable bear population the management objective is zero bears. This is similar to the deer management objectives for DMZ's 36, 50 and 51. The management objective of zero bears will be achieved through opening the zone to bear hunting during future years and by euthanasia of problem bears when captured during routine bear control activities.

It is recommended that for purposes of clarification and future management of bears, BMZ 5A be merged with BMZ 4, and the boundaries for all BMZs be defined during the next Game Code Amendment cycle (Figure 6, Final CBBMP).

Depredation Permits No one opposed issuing permits to farmers allowing the destruction of problem bears. Some persons opposed to bear hunting believed these permits as well as law enforcement response to problem bears negated the need for a bear hunting season. Although helpful to farmers in some instances, only 4 bears have been euthanized by farmers issued bear depredation permits in the last 3 years. The effect on the increasing bear population is, therefore, negligible.

Habitat Protection No one opposed the protection of bear habitat. Several commentors believed the DEP was not doing enough to prevent sprawl, which they believed was the cause of bear-human conflicts. The Council believes their support for the monumental effort by the DEP to preserve wildlife habitat through an aggressive Green Acres Program and Highlands legislation is adequately covered in the Policy.

One individual indicated that New Jersey should adopt the North Carolina plan of designating certain public land as bear refuges so that the population of bears would reach carrying capacity resulting in the dispersal of bears, particularly young males, to adjacent private land. This would ensure a sufficient supply for recreation, including

hunting. The Council believes that this suggestion is counter to the need to reduce the New Jersey bear population.

Bear Population Management The majority of the comments received addressed bear population management, particularly with the regard to hunting of bears. As noted, homeowners on both side of the hunting issue sent in email comments. Some persons opposed to bear hunting who lived adjacent to public land in the heart of bear county claimed to rarely or never having seen a bear. Other families in the same area claimed that they could not let their children play outdoors because of the frequent visits by bears, even though they practiced sound garbage management.

Some commentors did not believe that the proposed integrated black bear management strategy should include lethal control, while those favoring the policy indicated that the Council's strategy had a balanced approach which utilized all the management tools at their disposal. The Council adds that it is generally recognized that responsible management, not passive preservation, is necessary when managing agricultural and natural resources, or protecting property and human health and safety (USDA WS WI 2002).

Integrated Wildlife Damage Management (IWDM) seeks to prevent, reduce or stop wildlife damage by integrating a combination of methods sequentially or concurrently (USDA WS WI 2002). The PA Game Commission attempts to reduce conflicts by removing (translocating or destroying) problem bears, hazing or aversively conditioning bears from nuisance areas, asking people to remove food attractants, and regulating the abundance of bears by adjusting hunting regulations (Ternent 2005).

Wildlife managers, confronted with conflicting public perceptions of bears as both a nuisance and a valued game animal, are faced with a dilemma: how to maintain healthy populations of black bears while minimizing conflicts between bears and humans (USDA WS WI 2002).

Relocation A few individuals advocated the relocation of bears back to northwest New Jersey, to another state or to some public land surrounded by a fence. As discussed in the policy, these options are without merit.

Alternative Methods Several commentors opposed the lethal control of bears and suggested non-lethal methods should be tried as alternatives. Few specifics were given other than to use fertility control. Two commentors did, however, make reference to three published papers regarding deer fertility control as evidence of the viability of the technique. However a review of the papers shows otherwise. These studies are experimental involving enclosed or isolated deer populations using chemical agents not approved for free ranging populations of deer or bears.

The Council offers the following additional information regarding fertility control. Current contraceptive techniques have been uneconomical or infeasible for practical

implementation even in small localized populations of game species and the species for which contraceptives have been primarily tested (long-lived species such as deer and horses) are least suited for population reduction through use of fertility control (Fagerstone et. al. 2002)

Although immunocontraception using GnRH has been researched for over 20 years, the vaccine has had mixed success (Miller et. al. 2004). Miller et. al. (2003) reported that GnRH vaccine has significant potential for limiting fertility of both males and females of many domestic and wildlife species, but they also reported that vaccine trapped in fat may not be released to the immune system, and therefore may be unavailable to induce an immune response in seals and black bears. GnRH immunocontraception may represent a broad tool for population control of wildlife; however, in almost every report, a series of treatments was required for adequate immunity and a portion of animals failed to respond to treatment and remained fertile (Levy et. al. 2004). These ambiguous results would indicate that more testing needs to be completed, including the possible harm to the bear population by allowing animals with compromised immune systems to continue breeding (because these animals failed to respond to treatment and remained fertile).

The expense of fertility control will never compete favorably with the revenue that can be produced by licensed hunting. While fertility control may not affect survival of individuals, it can easily be lethal to populations (Hobbs et al. 2000).

The first paper cited involved immunocontraception of white-tailed deer on the fenced campus of the National Institute of Science and Technology (NIST) in Gaithersburg, Maryland. The authors characterize the campus (<1 mi^2) as an isolated, refuge property with an inhospitable surrounding environment. The deer population was reduced and stabilized by immunocontraceptive treatment of females. However, the demographic response to contraception was strongly influenced by the low reproductive rate of untreated females and high mortality rate of that population (Rutberg et. al. 2004). The authors concluded that, given current technology and limits on efficiency of dart delivery, it seems unlikely that populations of deer occupying large blocs of rural and wild habitat will be amenable to management by dart-delivered contraception (Rutberg et. al. 2004, p. 248).

The second study cited involved an enclosed deer population in New York. Immunocontraceptive vaccines were effective for inhibiting reproduction in white-tailed deer on a small (1 mi^2), fenced (3 parallel, 8-foot security fences) enclosure on the Seneca Army Depot near Romulus, NY. However, the authors concluded that implementation of an immunocontraceptive program using current protocols, even in a semi-free ranging but enclosed deer herd, would be expensive and perhaps impractical and further research is warranted (Curtis et. al. 2002, p. 139).

The third paper discussed Fire Island National Seashore (approximately 10 mi^2), where the results of using immunocontraception to lower abundance of white-tailed deer have been mixed. The ability to treat sufficient numbers of females has varied, mostly due to access to deer. While there appears to have been a decline in deer abundance from 1994-

98, it cannot be conclusively established from the data. In some areas of the island, the deer population has declined by almost half, but in other treatment areas population responses have been much less dramatic. Therefore, the author concluded that management horizons of at least a decade are not unreasonable when attempting to evaluate fertility control for managing free-ranging deer (Underwood 2005).

More testing needs to be completed, including the possible harm to the population by allowing animals with compromised immune systems to continue breeding (because these animals failed to respond to treatment and remained fertile). Animals with good immune systems will be most likely to mount a strong immune response when given an immunocontraceptive agent and so would be least likely to reproduce. Animals with a poor immune system, either due to genetics, injury or disease, would be affected less, therefore be most likely to reproduce. The long-term implications of immunocontraceptives in wildlife populations would be that immunocontraception could artificially select for those individuals that are immunodeficient and produce populations of animals with weak immune systems and high susceptibility to disease and population fluctuations (Muller et. al. 1997).

The Council believes that these papers provided by the commentors, as well as Muller's conclusions do not support the use of fertility control on black bears. The Council reiterates its support for the continued testing of fertility control by credible scientists on enclosed populations (page 23, recommendation 7) and notes that research in this area for black bears is "…not nearly as advanced." (page 18 sect.2.)

Hunting By far, the majority of comments dealt with the proposal to hunt bears. The majority of commentors opposed to bear hunting cited their philosophical opposition to the killing of animals as a reason. Other reasons given were that the size of the bear population did not warrant reduction, or that the hunt would not eliminate bear problems. Some commentors questioned using the reduction of bear complaints as a measure to determine the appropriate bear population density and objected to the fact that the acceptable level of complaints was not stated.

Some commentors believed control of problem bears negated the need for a hunt since the hunt did not specifically target problem bears; and cited the fact that only 10 nuisance bears were harvested during the 2003 bear season. The 10 nuisance bears harvested represents only tagged nuisance bears. From 2001 to 2003, DFW personnel set 166 traps at nuisance locations capturing 36 bears. The bear season, therefore, resulted in the harvest of 28% of tagged nuisance bears for that period. Additionally, both West Milford and Vernon township officials have reported that their level of bear complaints dropped significantly in 2004, a year after the hunt, but are now increasing.

After conducting a review of the scientific literature, Conover (2001) determined that hunting reduces wildlife damage by reinforcing an animal's fear of humans and causing animals to avoid areas where they might come into contact with humans. Conover also stated that hunting should increase the effectiveness of non-lethal techniques because the animals learn to associate humans with negative consequences.

Two commentors opposed the use of bows, while twenty commentors supported the use of bows and muzzleloaders. Some supporters of bow hunting requested equitability in the number of days for archery hunting of bears. Several commentors believed that the bear seasons should be earlier in order to more effectively control the female segment of the population.

The Council offers the following additional information regarding hunting. Bear hunting relies on the principle of adaptive management as described by Walters (1986). This approach relies on managing wildlife populations through experience and monitoring which allows the management agency to make necessary changes to maintain the natural resource (bear population) in the desired condition. Because monitoring is ongoing, any changes needed can be made by annually reviewing hunting regulations.

Black bear populations can withstand regulated hunting on an annual basis (CA FED 2000, Williamson 2002, Ternent 2005) and historically, managed hunting has been an effective system for protecting bear populations because it has enlisted a clientele interested in the continued abundance of the resource and it transfers the killing of a species which can become a public nuisance or threat from the general public to a smaller group of people (hunters) (Garshelis 2002).

Although the activity of sport hunting black bears results in the death of individual bears, specific safeguards, including an in-season closure mechanism and bag limit will assure that bear harvest will be below the population's sustained-yield capabilities. No significant negative effects, individually or cumulatively, on bears as a species are expected to result from hunting (CA FED 2000).

Experience in California and other states support the concept that archery equipment is efficient in killing big game animals including bears. It was determined that this method of take would result in no significant adverse effects on the bear population regionally or statewide (CA FED 2000).

The efficacy of using archery equipment to kill bears was thoroughly discussed and a finding that archery equipment is efficient in killing big game animals including bears was reported (CA FED 2000). The Wildlife Society determined that it is clearly established that archery is a lethal method of harvest (Kurzejeski et. al. 1999) and bow hunting is a socially responsible tool for both controlling wildlife populations and providing hunting recreation. All states which allow bear hunting allow the use of bows and muzzleloading rifles. Pennsylvania has recently amended their regulations to expand the archery hunting opportunity of bears. The Council also notes that archery hunting of bears was allowed in the past without incident in New Jersey.

The Council believes that the adaptive management process will guide the future structure of bear hunting seasons. This is a dynamic process that must evaluate the results of the bear hunting season on the bear population and bear related conflicts. The desirable bear population level will be influenced over time by many dynamic factors

such as the amount of available bear habitat, human population growth and resulting development; and changes in human tolerance for bears brought about by education and the willingness to change lifestyles to adapt to living in bear county.

Literature Cited:

Beaver, B.V., W. Reed , S. Leary, et. al. 2001. Report of the AVMA Panel on Euthanasia. J. Am. Vet. Med. Assoc. 218 (5):669-696.

California Final Environmental Document, Section 265, 365, 367, 367.5, Title 14, California Code of Regulations Regarding Bear Hunting. April 27, 2000. CA Department of Fish and Game, 188 pp. + Appendices.

Conover, M.R. 2001. Effect of hunting and trapping on wildlife damage. Wildlife Society Bulletin 29(2):521-532.

Curtis, P.D., R.L. Pooler, M.E. Richmond, L.A. Miller, G.F. Mattfeld, and F.W. Quimby. 2002. Comparative effects of GnRh and porcine zona pellucida (PZP) immunocontraceptive vaccines for controlling reproduction in white-tailed deer (*Odocoileus virginianus*). Reproduction Supplement 60:131-141.

Fagerstone, K.A., M.A. Coffey, P.D. Curtis, R.A. Dolbeer, G.J. Killian, L.A. Miller, and L.M. Wilmot. 2002. Wildlife Fertility Control. Wildl. Soc. Tech. Rev. 02-2. 29 pp.

Garshelis, D.L. 2002. Misconceptions, ironies, and uncertainties regarding trends in bear populations. Ursus 13:321-334.

Hobbs, N.T., D.C. Bowden, and D.L. Baker. 2000. Effects of fertility control on poplations of ungulates: general, stage-structured models. Journ. Wildl. Manage. 64(2):473-491.

Kurzejeski, E.W., J.L. Byford, K. Causey, J.W. Enck, L.P. Hansen, W. Krueger, K. Mayer, and K. McCaffery. 1999. The Role of Bowhunting in Wildlife Management. Wildl. Soc. Tech. Rev. 99-1, 15 pp.

Levy, J.K., L.A. Miller, P.C. Crawford, J.W. Ritchey, M.K. Ross and K.A. Fagerstone. 2004. GnRH immunocontraception of male cats. Theriogenology 62:1116-1130.

Miller, L., J. Rhyan, and G. Killian. 2003. Evaluation of GnRH contraceptive vaccine using domestic swine as a model for feral hogs. Wildl. Damage Manage. Conf. 10:120-127.

Miller, L.A., J. Rhyan, and G. Killian. 2004. GonaCon, a versatile GnRH contraceptive for a large variety of pest animal problems. Vertebr. Pest Conf. 21:269-273.

Muller, L.I., R.J. Warren, and D.L. Evans. 1997. Theory and practice of immunocontraception in wild mammals. Wildlife Society Bulletin 25(2):504-514.

Rutberg, A.T., R.E. Naugle, L.A. Thiele, and I.K.M. Liu. 2004. Effects of immunocontraception on a suburban population of white-tailed deer *Odocoileus virginianus*. Biological Conservation 116:243-250.

Ternent, M. A. 2005. Management Plan for Black Bear in Pennsylvania (2005-2015). PA Game Commission, Harrisburg, PA. 72 pp.

Underwood, H.B. 2005. White-tailed Deer Ecology and Management on Fire Island National Seashore (Fire Island National Seashore Science Synthesis Paper). Technical Report NPS/NER/NRTR—2005/022. National Park Service. Boston, MA. 35 pp.

USDA WS WI 2002. Environmental Assessment: Black bear nuisance and damage management in Wisconsin. Decision and Finding of No Significant Impact. U.S. Department of Agriculture-APHIS-Wildlife Services. May 10, 2002. 60 pp.

Walters, C. 1986. Adaptive management. MacMillan Publishing Co. NY. 374 pp.

Williamson, D.F. 2002. In the Black: Status, Management, and Trade of the American black bear (*Ursus americanus*) in North America. TRAFFIC North America. Washington, DC: World Wildlife Fund. 161 pp.