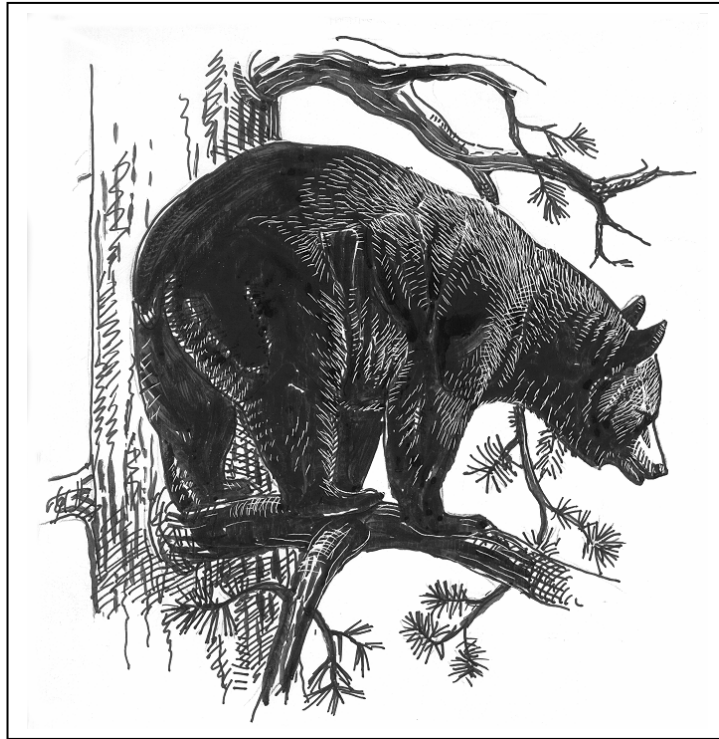


**BLACK BEARS IN NEW YORK:  
Natural History, Range, and Interactions with People**

Second Edition



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## SECTION 1: INTRODUCTION

### **Purpose of this Document**

The Bureau of Wildlife in the New York State Department of Environmental Conservation (DEC) is responsible for black bear management in New York State. Historically, New York State has had distinct populations of black bear (*Ursus americanus*) in western, northern, and southeastern New York. In recent years, black bear numbers have increased and bear populations have become more widely distributed across the state. As a result of this expansion in numbers and range, interactions between people and black bears have increased. These developments prompted DEC staff to develop a new framework for making decisions about black bear management. The planning framework has been implemented since 2003 and is described in a DEC document called “A Framework for Black Bear Management in New York” (NYSDEC 2007).

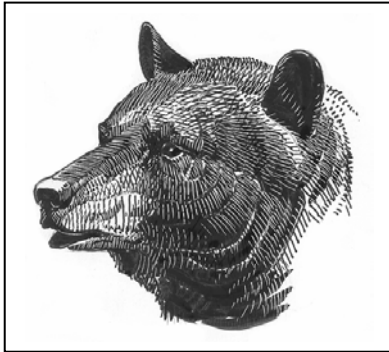
People with an interest in or concern about black bears have a stake in bear management. Stakeholder engagement is the cornerstone of the planning framework. We developed this document about black bears in New York as an information resource for use by black bear management stakeholders. It provides background information about black bears that stakeholders should consider as they become engaged in discussions about the black bear management program.

### **Organization of this Document**

We have divided this document into three sections, including this introduction. Section two highlights basic information about black bears in New York, including their physical characteristics, range and distribution, population characteristics, life history, habitat needs, and behavior. Section three provides a brief history of human-bear interactions in New York.

## SECTION 2: BLACK BEARS IN NEW YORK

### Physical Characteristics



There are different color phases of the black bear, but over 99% of the black bears in New York State are the black color phase. One albino black bear was reportedly taken near Hague, Warren County, in the early 1900s (Seton 1929). Color phases rarely found in New York are brown or cinnamon. The hair around the black bear's muzzle is short and generally brown in color. Many black bears have a white chest blaze which is often in the shape of a V.

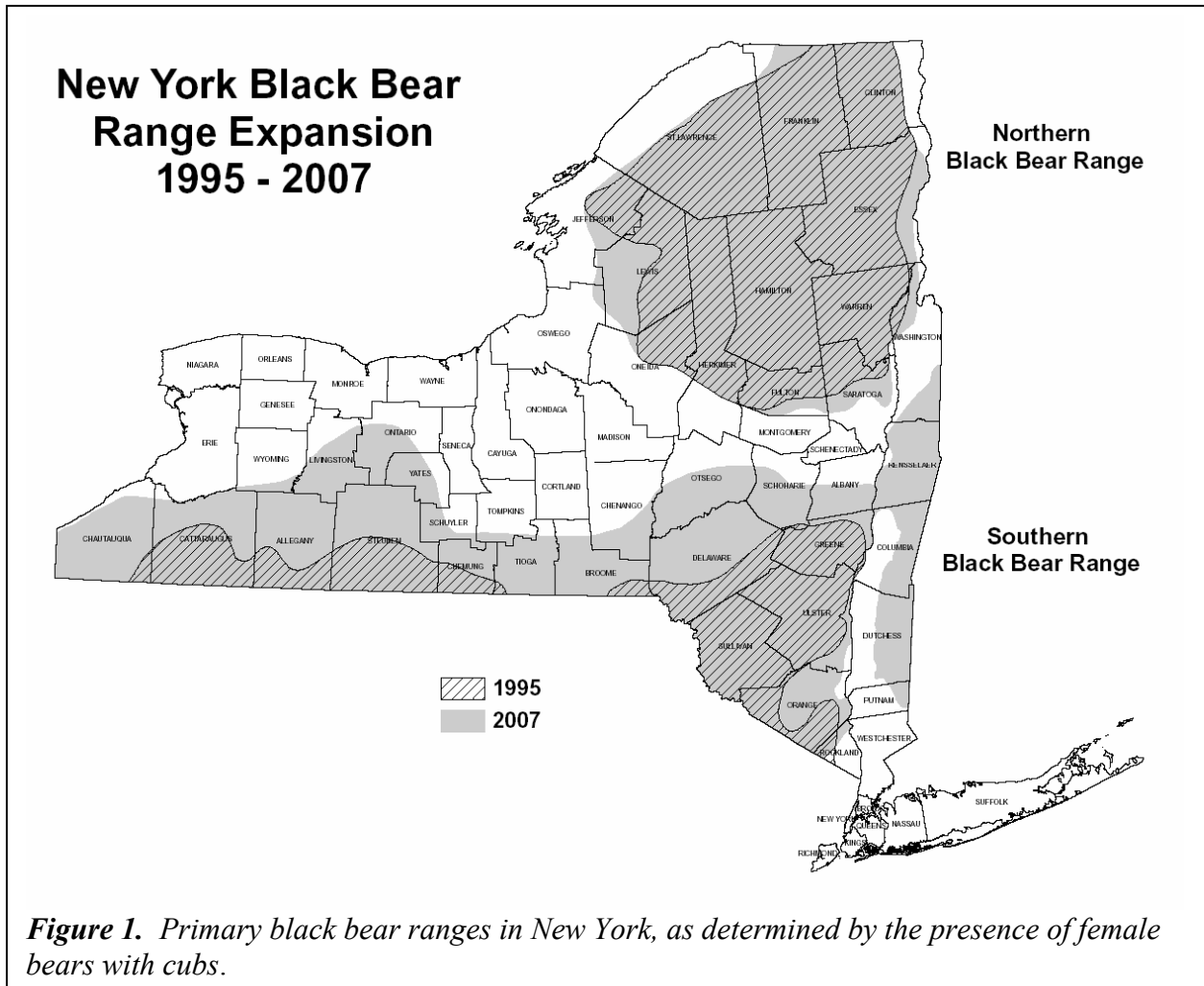
The largest live black bear handled in New York weighed 684 pounds (310 kg). The largest reported bear in New York weighed an estimated 750 pounds (340 kg). The average adult male weighs approximately 295 pounds (135 kg) and the average adult female weighs approximately 160 pounds (73 kg). When standing on all four feet, black bears are less than 39 inches (1 meter) in height at the shoulder, and are seldom more than 78 inches (2 meters) long from tip of nose to the tip of the tail.

### Range and Distribution

The American black bear can be found from Alaska to Mexico including 40 states in the United States. The black bear is the only species of bear found in the eastern United States. Black bears exist throughout New York State, and black bear occurrence can be broken down into 3 major categories, differing by a combination of factors such as habitat, human habitation, and the presence of breeding female bears. Defining bear occurrence in terms of primary bear ranges, peripheral bear ranges, and areas where bears are uncommon, provides a clearer picture of the abundance and distribution of black bears throughout the state.

Primary bear ranges in New York are described as areas sustaining viable black bear populations within their natural habitat. This is determined by the presence of breeding female black bears. In the mid 1970s, McCaffery et al. (1974, 1976) described three bear ranges in New York State totaling about 28,500 km<sup>2</sup> (11,004 mi<sup>2</sup>): the Adirondack Range [ca. 24,000 km<sup>2</sup> (9,266 mi<sup>2</sup>)] the Catskill Range [ca. 3,300 km<sup>2</sup> (1,274 mi<sup>2</sup>)] and the Allegany Range [ca. 1,200 km<sup>2</sup> (464 mi<sup>2</sup>)]. The Adirondack and Catskill black bear ranges included the areas in and around the Adirondack and Catskill Forest Preserves, and the Allegany black bear range was in southwestern New York along the border with Pennsylvania

Due to the expansion of bear populations in southern New York over the last 30 years, (Figure 1) the Allegany and Catskill Ranges have merged (Southern Black Bear Range) and total over 41,000 km<sup>2</sup> (15,850 mi<sup>2</sup>). Likewise, the Adirondack Range, while expanding only slightly in that time, is now referred to as the Northern Black Bear Range and totals over 33,200 km<sup>2</sup> (12,800 mi<sup>2</sup>). Parts of the Northern Black Bear Range contain large tracts of public forest land that offer protected habitat and limited accessibility for human use. The Allegany and Catskill Mountain regions of the Southern Black Bear Range also afford some significant parcels of public forest land. Both of these ranges have a viable population of bears and natural areas providing suitable black bear habitat. However, transient bears, mostly young males, can be encountered in any upstate county of New York State.



### Northern Black Bear Range:

The majority of the Northern Black Bear Range consists of the six million acre Adirondack Park, which is evenly split between public and private lands. The public land is almost all part of the State Forest Preserve and cannot be developed or logged. Much of the private land is in timber company holdings, some of which are protected from development by conservation easements. Most of the land is steep, rugged, and forested, with few roads or human habitation. There are thousands of lakes and ponds, vast wetlands, and the headwaters of many of the state's major watersheds, including the Hudson River and Lake Champlain. Elevations range from about 100 feet above sea level in the Champlain valley to over 5000 feet

on the highest mountain peaks. Forests are comprised of spruce-fir and northern hardwoods in the interior, with some white pine-red oak forests in the eastern and southern portions of the range.

Black bears also inhabit peripheral areas of the Adirondacks and will take advantage of areas of active agriculture. The presence of bears is especially evident in spots along the northern fringe of the Mohawk Valley, southern fringe of the St. Lawrence River Valley and along the eastern edge of the Black River Valley. A stable population of bears occurs on the Fort Drum Military Reservation in Jefferson County. Breeding bears are also present on the Tug Hill Plateau in Lewis and Oswego Counties, although bear abundance is considered fairly low at this time.

The combination of forests and wetlands with sparse human population provides excellent black bear habitat. Natural foods are normally abundant throughout the growing season, with wetland plants and succulents in the spring, soft mast such as blueberries and raspberries in the summer, and beechnuts, black cherries, and acorns in the fall. Extremes in weather conditions can have a profound effect on food availability during any season.

### **Southern Black Bear Range:**

The Southern Black Bear Range is made up of much of the Allegheny Plateau, the Catskill Mountains and the Taconic Highlands. This range extends from the southwest corner of the state, easterly along the Pennsylvania border, through south central New York in the Binghamton area, into the Catskill Mountains and to southern Orange and Rockland Counties at the New Jersey border. Bears also occupy much of the Taconic Highlands along the eastern border of the state from Washington County south into Putnam County.

The Allegheny Plateau portion is characterized by varied topography and large tracts of

forested land, with intermingled agriculture. Rural forested tracts that have occurred as a result of reforestation efforts and farmland abandonment during the 20th century represent a major portion of this range (NYSDEC year unknown, Decker et al. 1981). Similar habitats occur eastward to the Catskill Mountains. These habitats consist of a mixture of private and public lands. Although the actual numbers are not known, it is clear that a portion of the bear population in this range is an expansion of Pennsylvania's bear population. There is considerable evidence of bears freely passing from one state to another, as well as young males dispersing several miles into New York. Recent radio-telemetry research suggests that black bears in this range are adapting to forest fragmentation by increasing home-range size. This adaptation places bears at an increased risk of becoming a nuisance to landowners not accustomed to encountering bears, as well as being killed on area highways. In recent years this portion of the Southern Black Bear Range has expanded northwards, throughout rural areas, into more highly populated sections throughout western and south central New York.

At one time, the Catskill Black Bear Range consisted of two sub-sections which contained separate bear populations. The northern section of this range consisted of large tracts of publicly owned state forest (the Catskill Preserve) north of route 17 (now called interstate 86). The southern section consisted largely of private lands (McCaffery et al. 1976, Decker et al. 1981), significant areas of human development, and densely populated urban areas.

In addition to the merging of these two Catskill populations, the northern edge of the Southern Black Bear Range is expanding northward into southern Albany, Schoharie and Otsego Counties. Although development, increasing human populations, and open agricultural areas occur here, there are parcels of woodland that afford suitable food and cover.



Despite being largely private, southern Orange and Rockland Counties still contain large parcels of forested property. Some significant parcels of forested property stretch from the New Jersey border and follow northeast along Interstate 87 to the Hudson River. Some of these parcels are owned and operated by the New York State Office of Parks, Recreation and Historic Preservation. This is a primary corridor for bear immigration from New Jersey.

The Taconic Highland portion of the Southern Black Bear Range is an extension of a larger bear range including portions of Vermont, Massachusetts and Connecticut. The Hudson River and associated agriculture and human development along its banks reduce bear movement between the Taconic Highlands and the other portions of the Southern Black Bear Range.

#### **Peripheral Bear Range:**

As its name implies, peripheral range occurs at the immediate edge of the primary Northern and Southern Black Bear Ranges. Bear occurrence in these areas is closely related to population variables in the primary ranges and, in some cases, population variables in neighboring states. Factors in the primary ranges that influence the occurrence of bears in these areas include movements related to breeding behavior, bear population densities, and food availability. Peripheral areas also have fewer instances of bear sightings, nuisance complaints, road kill reports and other documentation of bear presence.

The Mohawk Valley is a peripheral area between the Northern and Southern Black Bear Ranges. Other peripheral areas include the Northern Allegany region nearly to the New York State Thruway (I-90) and the Finger Lakes Region of Central New York.

#### **Bear Occurrence Uncommon:**

Bear occurrences in these areas are infrequent. Bears in these areas are normally transient bears such as those moving as the result of breeding activity or dispersal. These areas

are either well removed from established populations, lack natural habitat, or are heavily developed. Bear occurrences in these areas often attract public attention and create anxiety.

These areas include major metropolitan areas of upstate N.Y around Buffalo, Rochester, Syracuse and Albany along with their associated suburban environments. They also include agricultural areas of the lake plains.

### **Abundance and Population Characteristics**

In New York State, the DEC monitors several indices of the bear populations (e.g., bear harvest, non-hunting mortality, nuisance complaints) to determine population trends. Our bear populations have been increasing, especially in southern New York. Though it is difficult to determine population levels, the minimum post-harvest population estimate for black bears in New York State is between 6,000 and 7,000 animals, including 4,000-5,000 bears in the Northern Black Bear Range, about 2,000 bears in the Southern Black Bear Range, plus 100-300 outside of the primary ranges. Populations in primary ranges contain numerous cubs and breeding females, an approximate sex ratio of 1:1 male to female bears, and an average bear age of over four years old. Populations outside the primary ranges contain few cubs or breeding females, have more male than female bears, and an average bear age of under four years old.

Bears annually disperse in and out of the primary ranges. The amount and direction of dispersal is influenced by variations in bear density as bears typically disperse from areas of high population density to areas of suitable habitat with lower population density. Populations of bears in New York are not distinct from those in bordering states, and at one time, a significant number of bears, mostly young males, annually dispersed into New York from Pennsylvania, New Jersey, and Massachusetts. Today, bears are numerous across these borders, as well as with Connecticut. Current tagging and radio-collaring efforts are insufficient to determine if there is

any significant net gain of bears from immigration into New York. Management direction in each state is determined independently from the other states, and while management action can impact bear dispersal within a state, the impacts can also be evident across state borders.

### **Life History**

#### **Reproduction:**

In New York State, female black bears generally become sexually mature at two to five years of age. Males become sexually mature at four to six years of age. Bears are polygamous and breeding occurs from late May until perhaps as late as September. Female black bears may ovulate after they mate (Boone and Boone 2001). In black bears, a fertilized egg develops into a blastocyst, which does not attach to the uterus until November or early December (Wimsatt 1963). This ensures that all cubs are born between January and early February, while the female is still in a winter den. The earliest confirmed date for the presence of cubs in New York, was January 17, when two bear dens containing recently born cubs were identified by DEC wildlife staff in 2007.

Litter size varies from one to five, but two or three are most common in New York. Cubs den with their mothers during their second winter and disperse as yearlings during their second spring or summer. In New York, adult female bears regularly breed every other year.

One adult female black bear from New York had numerous reproductive indicators (Coy and Garshelis 1992) in the layering of the annuli in the cementum of its teeth. These indicators suggest that the bear had given birth to cubs every other year between its 3rd and 21st year for a total of ten litters. Another female was recaptured with two cubs 16 years after being originally captured as an adult.

**Longevity:**

The average age of harvested bears from primary ranges in New York is approximately 5 years old but the average age in the population is believed to be higher. Tagged male and female bears have been known to live for over 20 years. The oldest New York bear, as determined by analysis of cementum annuli (Willey 1974), was just over 42 years old.

**Parasites and Diseases:**

Black bears are relatively free of parasites and diseases with infestations and outbreaks having minimal impact on overall populations. Trichinosis, low levels of round worms and low frequencies of mange and ticks have been found in New York's bears. Rabies was confirmed in one black bear in New York in 1999 and in one bear in 2003. These two instances are the only confirmed cases of rabies in black bears in New York. In the 2003 case, staff at a youth camp in the Catskill region New York, contacted DEC staff for assistance with a small black bear acting strangely. The bear was found to be suffering from tremors and hindquarter paralysis and was destroyed by DEC staff upon arrival. Post-mortem analysis confirmed that the bear was rabid. Several camp staff chose to undergo rabies post-exposure treatments.

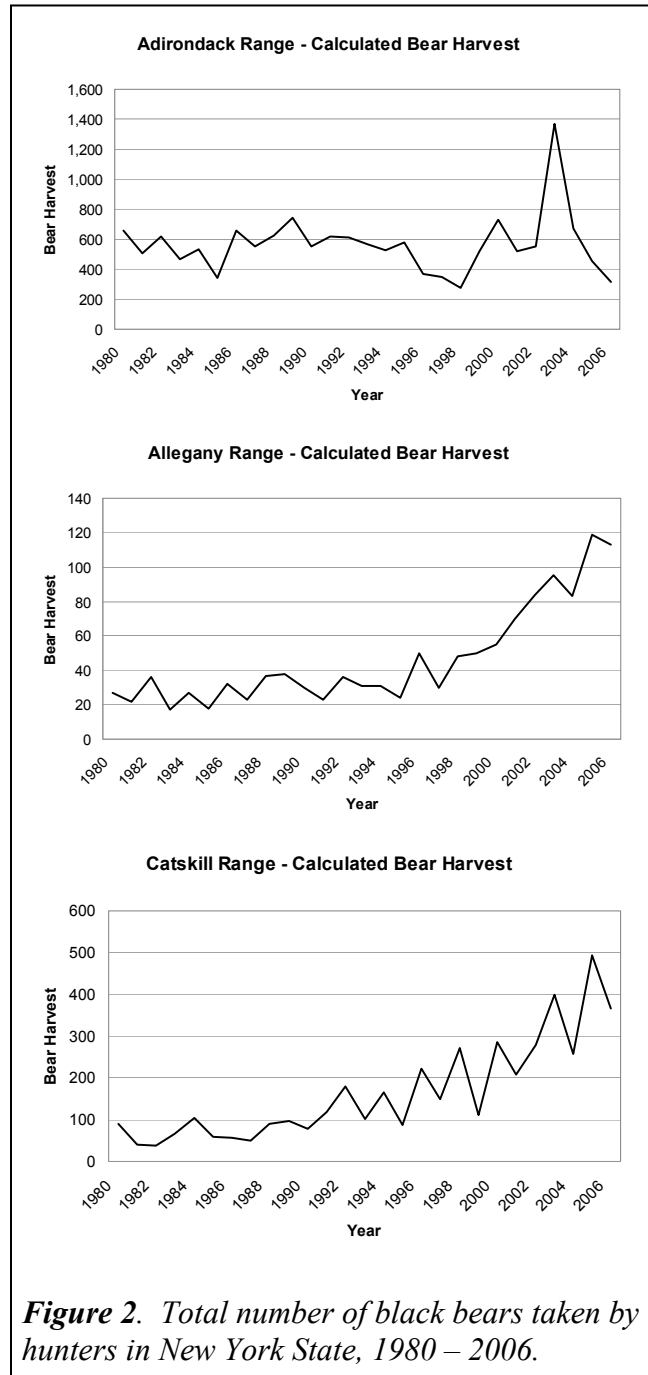
**Sources of Mortality:**

Legal harvest is the primary source of mortality for black bears in New York. Annual legal harvest has varied from 525 to 1,864 bears during the past 20 years (Figure 2). Vehicle collisions are another source of mortality, especially during droughts or other periods of unusual food availability or shortages. Droughts reduce the abundance of natural foods which results in increased movement of bears, often outside of their normal home range where the bear is less familiar with the landscape and thus more vulnerable to road hazards. Known mortality due to collisions with vehicles has varied from 14 to 61 annually during the past 20 years. Actual bear

mortality due to vehicle collisions may easily be twice the known mortality. Nine black bears were known to have been struck by vehicles while crossing roads to be fed or to reach open dumpsters during one summer along a 40-mile stretch of a state highway. Now, with regulations restricting feeding and prohibiting open dumpsters, an average of only one or two bears a year are known to be struck by vehicles along this same highway. Various other types of accidents (e.g., struck by trains, electrocutions) and predation or aggression by other black bears are additional sources of mortality, but such incidents are difficult to quantify.

Black bears may be more susceptible to unjustified or illegal taking during times of drought because dry conditions tend to attract bears to human food sources and make bear activities more visible to people. Often these bears are killed due to the intolerance of property owners to the animals' presence or perceived danger that the animal poses. Few if any animals are

killed due to direct aggressive behavior towards humans. Illegal harvest also occurs during the



bear hunting season in the form of illegal baiting. Baiting is an accepted means to hunt bears in many parts of the country; however, establishing bait stations for the specific purpose of taking a bear is illegal in New York. Annually, Law Enforcement officers issue tickets to individuals across the state for illegally taking bears with the use of bait. It is believed that illegal baiting is significant in the Northern Black Bear Range as the bear season opens in September, but the exact degree of use of this method is unknown.

Poaching or illegal take for use or sale of parts is uncommon in New York State, perhaps at least partially because the sale of parts other than flesh is legal from legally harvested bears. The legal supply of parts such as gall bladders seems to equal or exceed demand in New York, which results in low prices being paid for such parts. Lower prices provide less incentive for poaching. However, there is some concern that the legal trade of bear parts in New York may facilitate the illegal taking of bears in other states to be sold here.

### **Food Habits:**

Black bears are omnivores and feed on grasses and forbs in the spring, soft mast and colonial insects in the summer, and soft and hard mast in the fall. Bears also feed on a variety of crops including corn and honey. Bears are very opportunistic and may travel extensively to locate available food supplies. One radio-collared 299 pound (136 kg) adult male left his capture location, a mountainous area that contained no agriculture, and was located 81 miles (130 km) away in a ripening cornfield only a few months later.

While bird seed/feeders is the most common attractant that leads to human-bear interactions, many other attractants such as uncovered landfills, open garbage dumpsters, compost piles, barbecue grills, and direct bear feeding attract bears. This can habituate bears to humans and condition them to seek these types of alternative food sources. Availability of

alternative food sources has led to increases in conflicts between people and bears in the areas surrounding these sites. Starting in the 1970s, environmental laws and regulations in New York made landfills inaccessible to bears. Laws and regulations addressing open dumpsters and direct bear feeding were established in the mid 1990s, which have helped address these nuisance situations. Environmental Conservation Law (Subdivision 8 of Section 11-0903) gives DEC authority to regulate intentional and incidental feeding of black bears. Bear feeding is prohibited near buildings, roads, playgrounds, dumpsters, and campsites. Bear feeding also is prohibited during any bear hunting season and the nine days prior to any bear hunting season.

### **Habitat Needs and Preferences**

Black bears are typically found in large extensive forests, however, they are adaptable and do utilize open and developed areas especially where shelter or thick cover can be found nearby. New York State has a relatively high percent of forest cover, diverse food sources and an abundance of water. Due to changes in land use and reforestation, New York's bear habitat has improved and significantly increased in area during the last 100 years (Clarke, 1976). New York's Adirondack and Catskill Forest Preserves alone encompass approximately 325,000 hectares (800,000 acres) of black bear habitat.

### **Behavior and Movements**

#### **Denning:**

Black bears are not true hibernators but exhibit a dormant period during the winter. Typically, female bears enter a den during October or November, and males enter their dens in November or December. Except for newborn cubs, bears do not eat, drink, urinate or defecate during the denning period. Males leave their dens in March or April. Females leave their dens later than males, sometimes as late as May.

In New York, bear dens have been located in hollow trees, rock outcroppings, holes in the ground, under houses and even in more open places such as brush piles and blowdowns.

### **Immigration and Emigration to and from Neighboring States:**

Black bears are typically solitary animals except when breeding and when a female has cubs. Overall, home ranges for bears are extremely variable and are dependant on the season and available food resources. Young male bears dispersing from their maternal home range may travel great distances. One yearling 158-pound (72 kg) male bear was treed and captured in Rockland county New York. The bear was tagged and moved 49 miles (79 km) northwest into preferable bear range in the Catskills. One year later the bear was treed and recaptured in Westhaven, Connecticut, 115 miles (185 km) due east. Several months later the bear moved over 124 miles (200 km) southwest to Pennsylvania where a hunter harvested it during the hunting season.

The immigration and emigration of bears to and from adjoining states is an important consideration for black bear management in New York State. Bears are known to immigrate into New York from Pennsylvania and New Jersey along the southern border and from Connecticut, Massachusetts and Vermont along the eastern border. Immigration was once an important component of the Allegany Range's bear population (Decker et al. 1981) and also contributed to the Catskill Bear Range population.

### **Behavior of Bears Habituated to Human Food Sources:**

Given the opportunity, black bears in New York will nearly always avoid people. However, bears that learn to associate people with the availability of human food and garbage can learn to overcome their fear of people. The presence of black bears feeding on human foods and garbage creates the potential for unsafe interactions between bears and people. Bears



feeding on garbage or accidentally trapped near or in buildings may exhibit defensive behaviors that present human safety concerns. Bear social structure includes a number of dominant/subordinate relationships and when humans inadvertently assume the subordinate role, a nuisance situation can escalate into an unsafe human-bear interaction.

Many people believe that problematic interactions with bears will stop if wildlife managers simply “take the bear someplace else.” Unfortunately, moving a bear is not an effective way to stop problem interactions. Black bears have an excellent homing ability and they may readily return to the location from which they were removed. For example, an adult female bear in the Adirondacks, captured and marked because of nuisance behavior, returned to the same location after being relocated over 41 miles (90 km) from the original site. Numerous bears, including several family groups of sows and cubs, have been relocated from public sites where illegal feeding occurred in the Catskills, only to return to the exact same location in a short span of time and resume the nuisance behavior. In addition, even if the bear does not return, it may simply repeat its undesirable behavior elsewhere.

The likelihood of a bear becoming involved in an incident that results in injury to people is extremely low. Between 1960 and 2000, millions of people spent time living and recreating in areas of New York State occupied by bears, yet only eight people were injured by bears in that time. None of the injuries were serious. Since 2000, there have been two more serious injuries to people, including an unprovoked fatal encounter involving an infant. This incident was the first ever human fatality caused by a black bear in New York State, and only the second human fatality caused by a black bear in the northeastern United States since 1900. In early 2006, a young girl was attacked and killed by a black bear in Tennessee, the third bringing the total number of fatalities in the eastern United States to three.

## **New York State Black Bear Response Manual**

As black bear populations have increased and bear distribution expanded throughout New York State over the last few decades, the nature and frequency of human-bear interactions have grown. DEC staff throughout New York have developed knowledge and expertise in addressing a wide variety of situations in which the public may encounter bears or the impacts from bears. Given the vast area of the state and differing administrative jurisdictions within DEC's organization, there emerged a need for current and consistent involvement in conflict resolution and management interventions that would best serve the public and the bear resource.

In 1999, DEC's Bureau of Wildlife (BOW) Management Team established a project team to create a standard set of recommended actions for handling black bear issues that involve or could involve members of the public. A small team of BOW staff with a wide variety of knowledge and experience with black bear issues were charged with developing a summary of best practices for handling bear issues to be available to all staff for reference and field use. First published in the spring of 2000, as the New York State Standard Operating Procedures Manual (SOPM), this manual contains procedures and other recommendations for addressing over 50 situations in which humans might become involved with bears or their impacts (Henry et al. 2000). The SOPM was by design, a dynamic document to be updated periodically as knowledge and technology improved. The manual was completely updated in 2006, incorporating new response techniques for home entry bears and creating a classification system for the severity of bear behaviors. In addition to describing scenarios and recommended actions, the manual includes appendices with information regarding types and availability of materials and supplies. It also includes a current summary of those sections of Environmental Conservation Law (ECL)

and New York Conservation Rules and Regulations (6NYCRR) which provide authority for bear interventions.

Hard copies of the New York State Black Bear Response Manual are available at all Regional offices and electronic copies can be found on DEC's Intranet and many laptop computers used by field staff. Portions of the Response Manual have been used effectively by outside agencies such as sheriff and local law enforcement departments.

**Responding to Problem Bear Behaviors:**

Most human bear conflicts in New York can be alleviated or resolved by removing or adequately protecting whatever served to attract the bear. Modifications to human behavior are an important and often overlooked means of addressing problems with bears. Numerous recommendations for removing or modifying attractants are contained in the New York State Black Bear Response Manual. In some instances, more persistent bear problems are addressed by aversively conditioning the offending bear(s) with various negative reinforcements that result in unpleasant association with the presence of people or the attraction. Aversive conditioning is not always effective and future research is needed to show which techniques or methods hold the most promise.

Occasionally a bear becomes so habituated and conditioned to an attraction that its dangerous behavior cannot be changed or further tolerated. Killing the bear becomes the only option. The updated manual considers these bears to be Class 1 animals which cannot be easily broken from their bad behavior and should be destroyed. However, this level of behavior can easily be distinguished from instances of bears damaging bird feeders, which is considered a Class 3 behavior and is the most common complaint reported in New York.

## **SECTION 3: BEAR-HUMAN INTERACTIONS AND THEIR EFFECTS**

### **Historical Interactions**

During colonial times, black bears were eagerly hunted and trapped for their fat, flesh and fur. Occupying much of the same habitat and sharing similar food sources as early settlers, bears were often in direct conflict with them for their crops, livestock and food caches. Conflicts between bears and humans increased as the number of small farms increased in number and distribution. These conflicts eventually resulted in relentless pursuit of bears. During the 1800s, some individual hunters killed over 200 bears. From 1892 to 1895 New York State paid a bounty for each bear shot. At about the same time, almost 75 percent of the land in New York had been cleared of forest cover for farming, thus greatly reducing habitat suitable for bears.

The 1900s marked a big change towards the conservation of our natural resources. Over two million acres of state lands in the Adirondack and Catskill Parks were protected from development as “Forever Wild” (today, over 2.7 million acres of land within those parks is owned by the state). New York black bears were first protected as a game species in 1903 giving bears protection during the months of July and August. In 1923, the first bear hunting and harvest restrictions were established by New York law (Table 1). During the Depression of the 1930s there was a shift in human populations to urban areas and abandonment of farmland. The reforestation of abandoned farmland allowed bear populations to significantly increase.

### **Contemporary Interactions with Bears**

In recent decades, the human settlement trend has reversed, with many urban New York residents returning to more rural settings. At the same time, black bear are expanding their range. Many of the same kinds of conflicts



that early settlers experienced are occurring again. As people go about their daily lives they may unknowingly create potential food sources for bear and serve to attract bears into close proximity. Common activities, such as feeding birds and other wildlife, cooking food outdoors, feeding domestic animals in outdoor locations, and improperly storing refuse set the stage for bear-human conflicts. People need to be aware and consistently apply measures to ensure that human foods are unavailable to bears.

However, the fact remains that people who live and recreate in bear range can expect to encounter bears, and we can expect some people to perceive encounters with bears as threatening. Some people may perceive the risk from black bears to be at much higher level than actual experience indicates is warranted. This is especially true in areas where bear ranges and occupancy levels are expanding and people have little first-hand experience with bears. However, as the uniqueness of such interactions lessens, so does the perceived level of threat. Familiarity with bears goes hand-in-hand with understanding them and accepting their presence.

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## Appendix 1. The History of Black Bear Management in New York State.

Year	Noteworthy events
1892	New York established a \$10 bounty on black bears.
1894	New York State paid a bounty on 359 bears, all from the Adirondacks.
1895	The bounty on black bears was repealed.
1903	A new section of the Forest, Fish and Game Law gave bears limited protection as a game mammal; 100 bears were reported taken.
1923	The Conservation Law set bear hunting season dates and other restrictions such as bag limit and prohibition on the use of dogs to hunt bears.
1947	The Conservation Law in relation to Fish and Game changed to allow landowners to kill at any time, any bear worrying or menacing livestock or destroying an apiary.
1959	The Fish and Game Law continued to set bear hunting season dates and other restrictions, but a new section allowed the Department of Conservation to terminate the open season or declare a closed season in any county, by order, whenever the Department believed the resident bear population was not adequate. The Department used this authority to close much of the Southern Zone to bear hunting starting in 1959.
1972	A new subdivision to the Fish and Wildlife Law allowed the Department of Environmental Conservation (DEC), by order, to establish a special, additional bear hunting season if bears were too numerous and could cause substantial damage to property.
1973	A new subdivision of the Fish and Wildlife Law allowed DEC, by order, to set bear hunting open seasons, season dates, bag limits, manner of taking and disposition (except for any closed areas established by 11-0907 subdivision 5).
1975	DEC expanded the Catskill area open to bear hunting, shortened the Catskill archery bear hunting season, greatly shortened the regular bear hunting season, and mandated that all bears shot in the Southern Zone be checked by the Department.
1976 1977	DEC closed all bear hunting seasons in the Catskills.
1978	DEC reopened the Catskill regular bear hunting season concurrent with the first 7 days of the regular deer hunting season.
1979	DEC moved the Catskill regular bear hunting season to eleven days in December. The Department also started an experimental bear hunting season with dogs in a small portion of the Adirondacks.
1980	DEC changed the Catskill regular bear hunting season to begin five days after the opening day of the regular deer season and reduced the size of the Allegany bear hunting area.

Year	Noteworthy events
1990	<p>The ASPCA took DEC to court over the use of dogs and the court enjoined any bear hunting with dogs in New York State.</p> <p>DEC expanded the Allegany bear hunting area, adding 4 new units in Region 8.</p>
1991	<p>DEC delayed and shortened the Allegany regular bear hunting season by five days.</p>
1992	<p>The legislature approved a bill (The Comprehensive Bear Management Bill 10231-A) which would have repealed: the prohibition on the taking of cubs in the southern zone; the prohibitions on the use of dogs and the section of the ECL (section 11-0523 subdivision 2) that allowed the destruction of some nuisance bears (those worrying or menacing livestock or destroying an apiary) thus uniformly requiring everyone to get a permit before destroying a nuisance bear. The bill would have re-authorized DEC's ability to set seasons and regulate bear hunting. Finally it would have given DEC new authority to regulate bear feeding and the sale of bear parts. The Governor Cuomo vetoed the bill.</p>
1993	<p>A new bill was signed into law. It did not repeal any of the above sections, but did re-authorized DEC's abilities to set seasons and regulate bear hunting, and it established DEC authority to regulate bear feeding and the sale of bear parts.</p>
1994	<p>DEC expanded the Catskill bear hunting area, delayed and shortened the Allegany regular bear hunting season by an additional two days and allowed the taking of bears concurrently with the southern zone muzzleloader deer season.</p>
2000	<p>DEC completed a Standard Operating Procedures Manual (SOPM) that provides staff in all regions with uniform guidelines on agency response to over 50 situations involving bears or effects created by bears.</p>
2003	<p>DEC presented a draft Adaptive Impact Management Plan for Black Bears in New York State for public review and input.</p> <p>Stakeholder Input Group (SIG) meetings were held in Upper and Lower Catskills, and Allegany Regions to obtain public input on local black bear impacts.</p>
2004	<p>Opened 2 Wildlife Management Units (WMUs) in the Catskills and 6 ½ WMUs in the Allegany region to black bear hunting.</p> <p>SIG meetings held in the Binghamton area.</p>
2006	<p>SIG meetings held in the East of the Hudson River area.</p> <p>Three additional WMUs open to bear hunting in the northern Catskill region.</p>