

Bear Wise Community Hazard Assessment

What is a Community Hazard Assessment?

A **Bear Wise Community Hazard Assessment** is the first step for a community in taking a proactive approach to reducing human-bear conflicts. The goal of the program is to focus efforts on addressing the root causes of human-bear conflicts, reduce the number of conflicts and, ultimately, reduce the number of bears that must be relocated or destroyed. The Community Hazard Assessment identifies high-use bear habitat in the community and surrounding area (travel corridors, natural food sources such as berry patches, denning areas, etc.). It then identifies areas of traditional or potential human-bear interaction, and focuses prevention efforts where they will make the most difference.

1. Background:

Black bears live throughout the forests of Ontario and often reside at the forest edge near towns or farms. These bears frequently wander into areas of human development drawn by food and/or garbage. If people allow these visiting bears to access garbage and other non-natural food sources, they help to create problem situations for themselves and their neighbours.

Black bears are generally timid and avoid encounters with people, but they can come into conflict with people, especially when natural foods are scarce and non-natural foods are available.

Food is a bear's number one priority:

Black bears are actively feeding from mid-April to late fall in most parts of the province. They are omnivorous (they feed on both plants and animals). During the summer bears typically double their body weight while preparing for winter hibernation. Early in the season, energy-rich food is scarce, and bears are often in a negative energy balance, expending more energy than they are taking in, until late June or early July.

Bears are opportunistic omnivores; in other words, **they will eat practically anything that is easy to get.** Black bears feed mainly on summer and fall berry crops such as raspberries, blueberries and mountain ash, as well as acorns and beech nuts in the fall. Some non-natural foods that are attractive to bears include: human food and garbage, bird feeders (including hummingbird feeders), compost, pet food, livestock food, oats and grain, fruit trees and beehives.

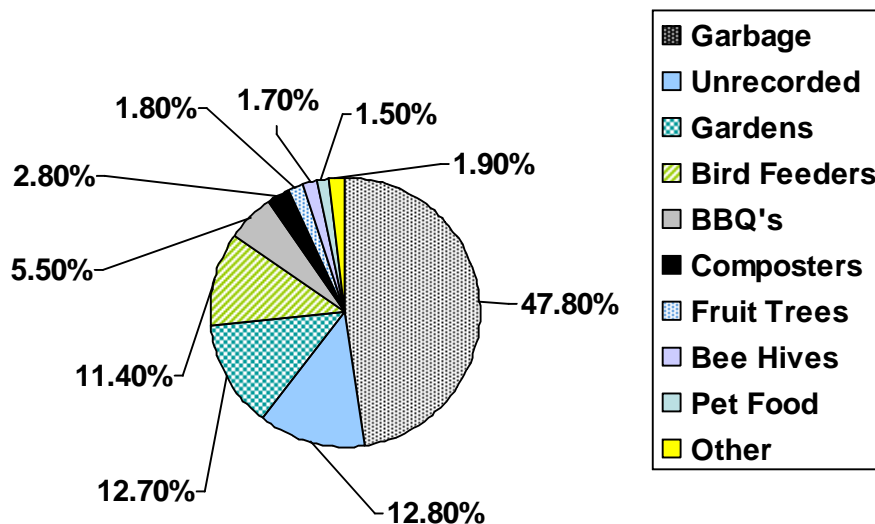
If bears are allowed to access human food and garbage, they quickly learn to associate it with people and become what is called food-conditioned. These bears lose their fear of humans and become habituated to people. Food-conditioned bears learn to expect

human food and are more likely to approach people than wild bears that have not been food conditioned. These bears can damage property and they can become a potential risk to people.

Bears are naturally creative and intelligent, especially when it comes to locating and obtaining food. A bear's natural curiosity and keen sense of smell will often lead it into trouble. Bears seek out new sources of food and remember where and how they found it. Females will teach their cubs how to obtain traditional, seasonally predictable foods, and non-natural foods from humans, as listed above.

Records kept in Central Ontario over the course of one season (2002), showed **that in 87% of bear calls recorded about human-bear conflicts, a non-natural food source was present.** Household garbage was the number one cause of bear problems (Fig. 1).

Fig. 1: Non-natural attractant found at site of problem bear occurrence.
Central Ontario, 2002



If local data is available on non-natural attractants, it may be inserted here. Some MNR offices or local bear agents may have collected this information in the community.

Weather can play a big part in the number of bear problems:

Summer and fall food items vary greatly in timing of availability and in abundance from one year to another. For example, blueberries can vary from less than 10 kg per hectare to more than 1000 kg per hectare. The potential for human-bear interaction increases in years when berry crops are poor or fail and the animals search for alternate food sources. This behaviour may also be apparent the following spring when animals emerge from their dens in poor condition. Poor or failed berry crops may occur as a result of a late spring frost that kills blossoms (usually in early June), or a summer drought that causes the berries to shrivel (generally in July or August).

In years of natural food crop shortages, black bears may become more visible in or near the community as they roam and expand their range in search of alternate, often inappropriate food sources.

The following graph (Fig. 2) shows the annual variation in the number of calls received by the Timmins Police Service over a 6 year period. A late spring frost in 1998 had resulted in a near total failure of berry crops across much of Northeastern Ontario. Natural food crops were plentiful in 1999 and 2000. In 2001, a summer drought affected much of Central and Northeastern Ontario, resulting in a lack of natural food. Summer and fall berries were plentiful in 2002. Seasonal variations in natural food availability are reflected in the number of calls received by the Timmins Police.

Fig. 2: Nuisance Bear Calls
Timmins Police Service (1998-2002)

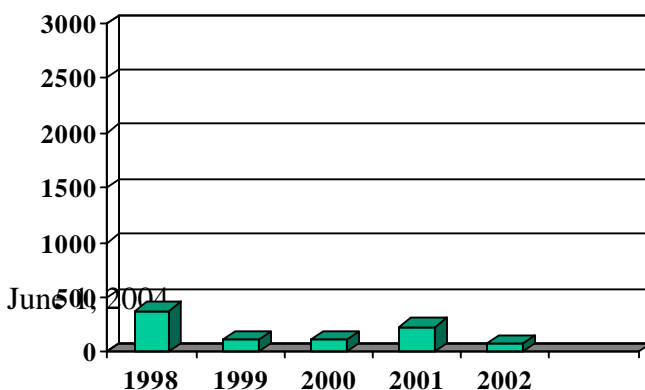
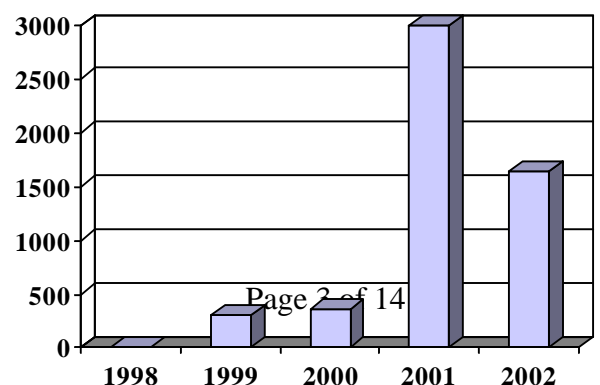


Fig. 3: Nuisance Bear Calls
Sudbury MNR (1998-2002)



A different pattern in bear occurrences is shown by the Sudbury data (Fig. 3). The Sudbury area was not affected by the same June frost in 1998. The drought conditions in 2001 were more pronounced in Sudbury and Central Ontario than in Timmins. Sudbury also experienced moderate drought conditions in 2002.

*Insert local data on number of bear occurrences each year if available. Provide regional information on natural factors, such as weather, that may have resulted in annual variation in production of critical food sources. **The local MNR office can provide this information on a District basis, if not by individual community.***

More information on bear biology and human-black bear conflict can be found in the various fact sheets available at your local MNR office, or on our website at bears.mnr.gov.on.ca.

2. Historical Management Options:

MNR and others, have traditionally responded to bear occurrences, and dealt with human-bear conflict, by trapping and relocating the problem animal. Live trapping and relocating bears is costly, and does not provide a long-term solution. Often the bears return to the site where they were captured. This is particularly true of adult bears.

Trapping should be reserved for serious problem bear complaints, where no attractants are present, when attractants have been removed for some time, or when there is a high risk of human injury.

Chemical immobilization (i.e. drugging) of free-ranging bears is rarely necessary and should be restricted to situations where public safety is a concern, (and will not be compromised by an immobilization attempt) or when the animal is contained in a relatively small area.

Include a description of local past efforts by the community, police, MNR and others to deal with human-black bear conflict.

Document previous education and prevention programs, consultation with local residents and cottage associations, and other proactive local initiatives used to resolve human-bear conflicts.

The Bear Wise Community-based program encourages communities to take a proactive approach to resolve human-bear conflicts through education programs, bear-resistant waste management practices, and enforcement of appropriate by-laws.

3. Community Description:

Provide a description of the community or municipal area for which the Hazard Assessment is being prepared. This is the first step in identifying historic and potential areas of human-bear conflict which will assist in focusing community prevention efforts.

Describe the area that will be considered as part of this Bear Hazard Assessment. Include a map of the area showing its relative location in the Region or Province.

Include a map of local land use patterns and natural features such as agricultural land, forested areas, residential areas, waterbodies and green space within the community. Identify any high-use bear habitat including berry patches and travel corridors.

MNR can assist with this mapping.

Black Bear Habitat Suitability:

The land cover classification and distribution, cropland and agricultural areas are mapped to identify general black bear habitat suitability within and adjacent to the study area. Identify and map potential natural movement patterns and travel corridors of black bears in this area.

Quality black bear habitat is generally considered to contain significant mixed forest cover (>80% forest canopy) consisting of a variety of tree and shrub species of varying ages. These ecosystems provide a variety of natural food sources that black bears rely on during their annual cycle, as well as shelter. If possible, identify natural food sources in the study area that may attract and concentrate bears during different seasons (e.g. sucker spawning streams, berry-producing areas, oak stands, or beech stands).

In addition, areas of cropland and fragmented forests can provide black bears with adequate habitat for survival especially in years of berry crop and forest nut failure among the mixed forested regions.

Variations on the ideal habitat do occur across Ontario and they should be mapped for the specific study area.

Map the black bear habitat suitability in the study area. This is of particular value for municipalities which encompass an area of mixed land use, including forest cover, urban and rural development, and agricultural areas. MNR can assist in mapping black bear habitat suitability.

Human Development is bringing us closer to bears:

Both bears and humans like to settle in lush valleys and along creeks, lakes and rivers. More people are developing properties in these beautiful areas with the result that more people are living in closer proximity to bears. Human settlements built near bear habitats can soon lead to human-black bear conflicts; especially when bears are allowed to access non-natural foods.

Some conflicts with bears can be reduced if cities, towns and tourist areas are planned with bears in mind. Green spaces can be planned in new subdivisions so they do not directly connect with, or provide an easy travel corridor, from surrounding forested land to the residential development. Movement corridors can be provided for bears, allowing them to escape from towns and giving them access to additional habitats of their own. Landscaping of suburban/urban areas should not include tree species such as crabapples or mountain ash which may attract bears.

*Provide any local information on expected population growth in the Region or Community
Identify any future development plans for the community.*

Recommendations: Consider recommendations on future planning of green space to be incorporated into the Community's Official Plan.

4. Historical Human-Black Bear Conflicts:

Human-black bear conflicts are most likely to occur where human development and bear habitat meet. Bears have a keen sense of smell and are easily attracted to food waste and other attractants. Review the community map and identify where residential areas are in close proximity to forest edges, green spaces, ravines, creeks or other natural bear habitat. Identify locations of landfill sites, community composting sites, agricultural crops, beekeepers, orchards or commercial dumpsters and grease pits at food services businesses.

Detailed occurrence reports can be mapped to provide a picture of where and why bears may be attracted into the community.

If detailed black bear occurrence reports are available for the community, plot them on the community map of land use patterns and natural features.

*If detailed occurrence reports are not available, use local knowledge of landfill site operators, MNR staff, local police, bear agents or others to identify traditional and potential areas of human-bear conflict (e.g. areas with potential attractants). **MNR can assist with gathering and mapping this information***

From this map, high-risk human-black bear conflict areas can be identified and begin prevention efforts can be better focused. In particular, consider areas such as school yards, parks and children's play areas, hiking or biking trails, which may be in close proximity to forested areas and natural bear habitat.

More detailed hazard assessment may need to be conducted for these high-risk areas.

Recommendation: Consider proactive education and awareness of residents in the areas with the highest traditional number of bear occurrences. Educating residents to remove non-natural attractants such as birdfeeders, pet food and household garbage can greatly reduce the potential for bears to be attracted into the neighbourhood.

Recommendation: Consider vegetation management such as removing underbrush adjacent to school yards and parks. Do not plant fruit bearing ornamental trees such as crab apples or mountain ash.

5. Review the Community Solid Waste Management Program:

Most bear problems occur as a result of improperly stored household garbage. Bears quickly learn to associate human residences with a readily available food source. If bears are prevented from getting to non-natural food sources, the likelihood of bears becoming a problem can be greatly reduced.

The community can play a vital role in preventing problems in the way it collects and stores garbage, how it manages landfill sites, in planning where development will occur and by better identifying and managing problem areas.

Review local garbage collection practices.

Garbage should not be placed outside until the morning of pick-up. Consider modifying garbage collection hours to start no earlier than 8:00 a.m. from mid-April until November. This allows residents time to put their garbage at the curb in the morning, rather than the evening before.

Some municipalities have enacted by-laws which prohibit the placement of garbage at the curb until the morning of pick-up.

If residents bring their garbage to the landfill site, the operating hours should be convenient, to allow residents to get rid of their garbage more often. Seasonal residents and cottagers need to be considered. Are they able to safely dispose of their garbage on the weekends? If landfill sites cannot be open to allow weekend use, consider installing bear-resistant dumpsters in areas which are accessible, even when the dump is locked.

In areas at high-risk for human-bear conflicts, consider replacing curb-side pick-up with community bear-resistant dumpsters.

Restaurants produce food waste too:

In some communities, bears have become a problem when they are attracted to food waste in commercial dumpsters, or to grease pits outside restaurants. Consider working with the local food industry to ensure food waste and grease is secured in bear-resistant dumpsters, or in an area enclosed by chain-link or electric fencing.

Bears are a common sight at many landfill sites:

Bears are naturally attracted to landfill sites. If the community landfill site is a significant distance from any residential areas, this may not cause a problem, but if bears are traveling between the landfill and residential areas, consideration may be given to fencing the landfill site to prohibit bears. Any fencing should only be done in conjunction with a proactive education and prevention campaign of neighbouring

residents to ensure bears will not be drawn to residential areas by non-natural food attractants.

Describe the community solid waste management program.

Are residents aware that garbage should only be placed outside the morning of pick-up?

Are landfill operation hours convenient for seasonal residents as well as full-time residents?

Are there specific parts of the community which would benefit from bear-resistant dumpsters?

Is the community landfill site in a location where bears may also become a problem for local residents?

Is there a community composting program, and if so, have measures been taken to keep compost in a secure area?

Does the community have a plan to deal with food waste at outdoor community events?

Has there been a problem with local residents who actively feed bears? Does the community have a strategy to deal with unwanted feeding?

6. Develop a Community Action Plan:

Review the information collected in the previous sections. Identify the community's high-risk areas for human-bear conflict and, in conjunction with the local MNR, develop an action plan to address those risks.

The accompanying document “**Best Practices for a Bear Wise Community**” may help in developing a Community Action Plan. Many actions will be relatively inexpensive to implement. If the community has identified the need for specific equipment or supplies, or wish to implement a local education or awareness program, they may be eligible for funding from MNR. Please refer to the “**Bear Wise Program Community Funding Guidelines**” and contact the local MNR office for more information.

Community Action Plan:

Identify the Actions which the community can take to reduce human-bear conflicts in the community. Consider recommendations and actions under the following headings:

- Public Education and Awareness

- Prevention, including:

Solid Waste Management Practices

Food Services Waste and Attractants

Agricultural Practices (especially tender fruit and beehives)

Managing Green Space in the Community: Present and Future.

For each action, identify who is responsible, timelines for implementation and estimated cost.

*Review the “**Bear Wise Program Community Funding Guidelines**” to learn which costs may be eligible for funding from MNR.*

Reviewing and updating the Community Action Plan:

To be successful, the Bear Wise Community Action Plan must be considered a long-term commitment to making appropriate changes. The Community Action Plan should be reviewed and updated regularly: annually as a minimum. Are the prevention measures having the desired result? Are there additional actions the community can take to further reduce human-bear conflicts?