

HUMAN-BEAR CONFLICT MANAGEMENT PLAN  
FOR  
RESORT MUNICIPALITY OF WHISTLER, BC



Application for Bear Smart Community Status  
BC Bear Smart Community Program, Phase 2

Prepared for  
Resort Municipality of Whistler  
British Columbia  
October 2009  
by  
Maggie M. Paquet, MAIA BioLogics

# PLAN APPROVAL

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## DISCLAIMER

Maggie M. Paquet, of MAIA BioLogics, Port Alberni, gathered the research and prepared this document, with input from Whistler’s municipal staff and BC provincial government agencies, including the Conservation Officer Service and Environment ministry. Additional information has been provided by members of the Whistler Bear Working Group, the Bear Aversion Research Team, BCCF/Bear Aware PDS, and others. Previous reports about bears at Whistler were also used as background. I have assumed the information provided is accurate and reliable.

This report was written according to the guidelines of the BC Bear Smart Community Program for a Bear-People Conflict Management Plan, except where additional analysis was deemed necessary.

While this report contains the best information available to provide an accurate and authoritative analysis of the subject matter, no liability is assumed with respect to the use or application of the information contained herein.

# RECORD OF PLAN REVISIONS

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# ACKNOWLEDGEMENTS

As with the active implementation of a Human-Bear Conflict Management Plan, the writing of such a plan cannot be accomplished without the assistance and collaboration of key agencies and individuals. In this regard, I would like to acknowledge—and heartily thank—the following:

- ◆ Whistler’s Mayor and Council, for acknowledging the need for this report
- ◆ Whistler municipal staff, particularly Heather Beresford, Environmental Stewardship Manager, and Sandra Smith, Bylaw Services Supervisor
- ◆ Sylvia Dolson and the Get Bear Smart Society
- ◆ Chris Doyle, Drew Milne (2008 Bear Response Officer), and Byron Andres of the BC Conservation Officer Service
- ◆ Tony Hamilton, Large Carnivore Specialist, BC Environment Ministry
- ◆ Lori Homstol and other members of the Bear Aversion Research Team (BART)
- ◆ Michelle Sims, 2008/09 Bear Aware (BCCF) Program Delivery Specialist
- ◆ All the other members of the Whistler Bear Working Group
- ◆ Mike Badry, BC Environment Ministry, Wildlife Conflict Prevention section
- ◆ The local companies that provide equipment for bear-resistant garbage containment, namely:
  - Jeff Rollins (Rollins Machinery, Langley)
  - John Nesbitt (Wasteline Containers, Abbotsford)
  - Russ Roy (Critter Guard, Squamish)
- ◆ Sean Sharpe, RPBio, for his friendship and encouragement
- ◆ Wayne McCrory, RPBio, bear biologist and outstanding mentor, for continued advice

Maggie M. Paquet, Biologist  
MAIA BioLogics  
5232A Margaret Street  
Port Alberni, BC V9Y 6J2  
Ph: 250-723-8802, C: 250-735-BEAR (2327)  
email: maggie\_paquet@telus.net

Most of the photos in this report were provided by the Get Bear Smart Society; the rest were either provided by the CO Service or were taken by the consultant.

Cover image: mother and cub resting, photo courtesy of Get Bear Smart Society

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# EXECUTIVE SUMMARY

British Columbia's Bear Smart Community Program was developed to be a proactive response to increased numbers of conflicts between people and bears. The program has two phases: the problem analysis phase and the solution/implementation phase.

The community of Whistler has been actively engaged in proactive initiatives to reduce and prevent human-bear conflicts from as far back as 1995. Concerned about the sharp rise in conflicts, the Whistler Black Bear Task Team was formed in 1997, and produced the *Black Bear Management Plan* in 1998. In 2004, bear biologist Wayne McCrory wrote a *Bear Hazard Assessment* (phase 1) for Whistler. In 2005, McCrory produced a follow-up *Bear-People Conflict Prevention Plan* (phase 2), which was presented to council, but not adopted. Subsequently, further conflict management reports have been produced to address human-bear conflicts in Whistler. While these proposed human-bear conflict management plans have not been adopted, each has served to further Whistler's desire and efforts to be designated a Bear Smart Community.

In the time since those reports were submitted to the Resort Municipality of Whistler (RMOW), a number of their recommendations and implementation priorities have been acted upon to varying degrees (see Appendix 1). This Human-Bear Conflict Management Plan (hereafter referred to as the "Bear Plan") has been written using these reports as background material, together with the most recent information, as well as direct input from members of Whistler's Bear Working Group.

## The goals of this Bear Plan are to:

- a. build on the information provided in the previously mentioned reports (see section 2.1) conducted for Whistler;
- b. assess the current status of conflict reduction and prevention activities in Whistler, including public education, waste and attractant management, bylaws and enforcement, green space management, and development and land-use planning;
- c. recommend an implementation plan that will result in a significant reduction of human-bear conflicts in Whistler, increase safety for people, reduce property damage, and reduce the number of bears destroyed within Whistler's boundaries;
- d. provide Whistler with the information it needs to implement the required Bear Smart Community Program criteria over the recommended five-year period, while allowing Whistler to apply for Bear Smart Community status upon adoption of this plan;
- e. provide a strong rationale for designation of Whistler as a Bear Smart Community.

This Bear Plan follows BC's Bear Smart Community Program guidelines. It describes priority actions to be phased-in over five years. This time span allows RMOW staff and the public to make the changes and acquire the funding needed to achieve the Program's criteria. When RMOW's Council adopts this plan, Whistler can apply to the province to be designated a Bear Smart Community. In view of the 2010 Winter Olympics and increased global attention, Council may opt to "fast-track" some priorities, notably those relating to waste and attractant management. Acquiring Bear Smart Community status will greatly enhance Whistler's attractiveness to residents, businesses, and tourists. It will also confer a better liability position for the RMOW.



## TOP PRIORITIES—2009-2011

### Develop a Community Vision That Supports Bear Smart Principles

- ◆ The community vision recognises the primary goal of this Bear Plan, which is to improve public safety and reduce property damage by significantly reducing the dependency of bears on garbage and other non-natural attractants. This will eliminate the food-conditioning of bears and allow for continued proactive management of bears that do enter human-use areas.
- ◆ Public support of the Bear Plan is essential. It is important to develop a community vision that enables safer coexistence with bears, including reduced property damage, and fewer human-bear conflicts and management kills. Whistler businesses and residents already show a high level of support for implementing Bear Smart measures.
- ◆ Continue to engage the public in determining the best options for bear-proofing, including provision of bear-proof waste management in neighbourhoods, reducing other residential attractants, and increasing public awareness about bears. While the community has already been doing this in various ways for years, there needs to be a concomitant—and widely accepted—statement issued by Whistler’s municipal government.
- ◆ The public exercises of reviewing Whistler’s OCP and Protected Area Network (PAN), which are planned for 2011, as well as various rezoning hearings that occur from time to time, will help to define the community vision and increase support for this Bear Plan.

### Implement & Enforce Bear-Proof Waste Management Throughout Whistler



- ◆ Design and install the most effective bear-proof waste management system possible, tailored to Whistler’s unique circumstances. All waste—whether garbage, recycling, or compost—should be considered a bear attractant. The goal is to stop bears getting access to these wastes and becoming food-conditioned.
- ◆ Focus first on making bear-proof waste management more easily available in neighbourhoods for residents who have no means to transport their garbage and recycling to the two drop-off depots at the north and south ends of Whistler. This includes designing and carrying out a pilot project to test a stationary and a mobile waste management system for hotspot neighbourhoods.
- ◆ Devise a way to fund full and effective waste management for all Whistler residents, including a voluntary \$1.00 surtax on a variety (or a specific one) of Whistler tourist amenities.
- ◆ Completely fence and install gates that can be easily opened by people at any hour and time of year (see section 3.1.2 for explanation) at Function Junction and at Nester’s.
- ◆ Implement a regular maintenance schedule for all waste management equipment and infrastructure with a clear description of who has responsibility for which activities and when.
- ◆ Develop a combined “carrot and stick” approach that targets new residents and seasonal workers to understand and comply with waste and attractant management bylaws. This approach entails incentive(s) for compliance and strong disincentive(s) for non-compliance.



### Reduce availability of other attractants (landscaping plants, fruit trees, birdfeeders, etc.)



◆ The second most common attractants that bring bears into residential and commercial areas are landscaping trees and plants that produce berries, followed by birdfeeders, fruit trees, gardens, composts, barbecues, and backyard ponds and hot tubs.

◆ Continue to implement the municipality's Recommended Plant List policy to reduce use of bear food plants (see table 6).

◆ To further reduce the availability of other attractants include ongoing (and specifically targeted to various demographic groups) public education and enforcing Whistler's Garbage Disposal & Wildlife Attractants Bylaw No. 1861, 2008.

◆ Enforce the bylaw to prevent bears getting access

to other attractants (birdfeeders, outdoor fridges and freezers, BBQs, pet and livestock feed, landscaping plants, fruit trees, composts), in order to stop enticing bears into the community.

## **ONGOING PRIORITIES—2009-2014**

### Maintain and Support the Public Education Program

- ◆ Continue to support the activities of the Get Bear Smart Society, the BC Conservation Foundation's Bear Aware program, and the Bear Response Officer (BRO) program of the BC Conservation Officer Service (COS), which together provide excellent public education in Whistler. Target messages especially for visitors, new residents, and seasonal workers.
- ◆ Make "Bear Smart" information on Whistler's website easier to find by putting a primary link to comprehensive information about bears and the need for Bear-Smart practices in a prominent location on the municipality's home page. Include links to local contacts and organisations (e.g., Get Bear Smart Society, Bear Aware, and BC's Bear Smart Community Program).
- ◆ All messages and signs about bears need to be consistent. They need to contain sufficient information on how to respond safely to bear encounters.

### Maintain and Support the Whistler Bear Working Group

- ◆ The formation of a Bear Working Group (BWG) is a required component of the Bear Smart Community Program. Whistler's original Black Bear Task Team was established in 1997, well before the BC Bear Smart Community Program was developed. Whistler's current BWG was established in 2002 and is comprised of members from a variety of local and provincial agencies, organisations, and community volunteers, including
  - Resort Municipality of Whistler (RMOW)
  - Get Bear Smart Society (GBS)
  - BC Conservation Officer Service (COS)
  - BC Ministry of Environment (MOE)

- BC Conservation Foundation’s Bear Aware Program Delivery Specialist (PDS) (operating with reduced support in 2009)
  - Carney’s Waste Systems
  - Whistler-Blackcomb (Intrawest)
  - RCMP
  - Other agencies and organisations that join temporarily from time to time, notably: the Bear Aversion Research Team (BART, operating with reduced support in 2009); Vancouver Olympic Committee-VANOC, and the Association of Whistler Area Residents for the Environment-AWARE)
- ◆ The RMOW should continue to support the BWG through a variety of ways, including providing direction to the activities of the BWG via active staff participation on the BWG, and following through with proposed conflict reduction solutions and decisions made by the BWG.

### Modify bylaws and implement zero-tolerance compliance enforcement

- ◆ Whistler has enacted a new bylaw governing waste disposal. Titled the Garbage Disposal and Wildlife Attractants Bylaw No. 1861 (2008), it is further described as, “A Bylaw to provide for the Disposal and Storage of Garbage and Control of Wildlife Attractants.”
- ◆ Enforce the bylaw with zero tolerance for non-compliance. This is currently being done by Whistler’s Bylaw Services department.
- ◆ The Bear Response Officer (BRO) program, which Whistler jointly sponsors with the BC Conservation Officer Service, offers the potential for stepped-up enforcement of the Wildlife Act with the issuance of Dangerous Wildlife Protection Orders (DWPOs).
- ◆ RMOW’s “unsightly premises” bylaw is another tool that can be used in conjunction with the Garbage Disposal bylaw to further support Bear Smart activities in that it can require owners to clean up properties or remove items that may potentially attract bears.



### Modify green space development and management planning

- ◆ Whistler’s Protected Areas Network (PAN) (see below and sections 3.2.5 and 3.2.6) is a proposed amendment to the OCP that sets out rules for new development, including for green spaces. The PAN has mapped sensitive ecosystems and wildlife habitats, and defines methods for protecting habitats, including connectivity corridors to allow for seasonal movements and dispersal by wildlife.
- ◆ Continue with the “No-Go Zone” designation in the main and upper Village areas for priority response to actual or potential conflicts.<sup>1</sup>

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<sup>1</sup> The “No-Go Zones” are in the highest human-use areas of the Village and Upper Village, and where there is zero tolerance for bears to be present. The concept and boundaries were developed by Whistler’s Bear Working Group in 2006. See map and further description in section 3.2.6.

- ◆ Plan for and manage green spaces to discourage human-bear conflicts. Planning for new green spaces needs to allow for undisturbed bear habitats and movement corridors. Where possible, locate new green spaces away from high human-use areas, such as the Village, and away from areas that bears are already known to use.
- ◆ Implement measures that discourage bears from going into human-use areas (e.g., parks, public walkways, golf courses) through siting (i.e., locating a human-use amenity or facility away from good cover or known bear travel corridors), by fencing, increasing visibility, and using bear-proof waste receptacles.



- ◆ In parks, play areas, and on walkways or trails situated in known bear use areas, picnic tables and children’s playsets should either be fenced or moved as far as possible<sup>2</sup> from dense shrub or forest cover. Alternatively, remove this cover so bears (and cougars) are not hidden from view. The photo at left shows good positioning of a playset and bear-proof bin at a play area in Squamish.

- ◆ Relocate all garbage receptacles that are immediately adjacent to playsets and picnic tables.

- ◆ Post temporary (or permanent, if appropriate) “bear-in-area” warning signs in play areas and on trails where bears have been sighted. Have a procedure in place to restrict access or close areas, if necessary.
- ◆ While Whistler’s new garbage bylaw ensures that all public waste receptacles will be bear-proof, the municipality needs to formalise an inspection and maintenance schedule to ensure they are emptied frequently in hot weather and heavy-use conditions. Provisions for inspection and maintenance should also be a requirement when issuing development permits.

### Maintain the intent of the Official Community Plan, including the PAN designations, and other development plans and permits

- ◆ Whistler’s OCP will be amended in 2010. At that time, the proposed Protected Areas Network (PAN) amendment, which describes a wide range of land use strategies and ecosystem designations, will be added to the OCP.
- ◆ Ensure future planning and new developments are done in a Bear Smart manner at the earliest possible planning and design stages.
- ◆ Using available data on bear use areas and movement corridors, site and design new developments to reduce potential conflicts.
- ◆ Development and building permits, especially for multi-family complexes, commercial areas, and recreation developments, will (under the new waste and garbage disposal bylaw #1861) require bear-proof waste management to be “built in.” The use of landscaping plants that attract bears will also not be allowed.

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<sup>2</sup> 50 metres is the recommended minimum distance to ensure the safety of children; make distance greater, if possible (personal communication, 26 Nov 2008, with W. McCrory).

## Additional recommendations

- ◆ School District #48 should be encouraged to participate and co-operate with the BWG.
- ◆ To help increase the safety of children and staff, all schools need to fully engage in Bear Smart practices. SD #48 maintenance staff (or contractors, whichever is appropriate) should be required to manage waste and play areas in line with Bear Smart practices.
- ◆ Much of the bear-related information on the municipality's website required considerable and sustained effort to find. Poorly organised, it nonetheless indicates that RMOW is well-engaged in human-bear conflict issues. It should, however, be made easier to find by having a primary link to Bear Smart issues on the municipality's home page.

Throughout this document, please keep these points in mind:

1. This Bear Plan allows for an implementation period between 2009-2014; however, Whistler can apply to the province for designation as a Bear Smart Community once it has agreed to implement the plan (i.e., it does not have to implement all the recommendations in this report before applying for designation, nor does the municipality have to wait until the five-year implementation period is over before it can apply). Once Whistler's Council agrees to adopt the plan, it becomes eligible to apply for Bear Smart Community status.
2. The Bear Plan addresses black bears, but can be used for other wildlife that pose a safety concern in the area.



3. As these recommendations are implemented, a significant reduction of management bear kills and property damage, as well as increased public safety, will be the positive outcomes (the "carrots").

4. The highest priority of the Bear Plan is to eliminate, or reduce as much as possible, the food-conditioning of bears by implementing an area-wide waste management system that is as fully bear-proof as possible, given current technology.

5. Successful implementation of the Bear Plan will require commitment of RMOW and the Bear Working Group to co-ordinate activities and policies with multiple agencies and volunteers. This includes zero tolerance enforcement by RMOW's Bylaws department, the CO Service, and the RCMP (the "sticks").

All the above are further explained in the Discussion section (sec. 3).

# HUMAN-BEAR CONFLICT MANAGEMENT PLAN (THE “BEAR PLAN”)

## 1.0 THE BEAR SMART COMMUNITY PROGRAM

Conflicts between humans and bears occur frequently in many British Columbia communities. Attempts at managing these was largely reactive in that problems were only addressed after they had developed. There was no co-ordinated attempt to prevent conflicts. “Fixing” the problems usually meant destroying the bears involved or moving them to a remote location. Killing bears does not stop conflicts because the bears don’t learn to stay away from human-use areas and non-natural attractants. More importantly, people don’t learn not to attract bears to their properties.

Moving, or translocating, bears requires (a) having good knowledge about the availability of a suitable area to put a bear into, and (b) having the manpower and equipment to move it there. Regardless, it nearly always results in the bear either returning to where it had learned to find food, or being killed by a dominant bear already in the “new” area, or starving to death. This reactive approach is expensive because it demands considerable materials, time, and manpower, often at the expense of wildlife.



Conservation Officers drag carcass of bear that was destroyed when it came into conflict with people. This reactive measure is one the Bear Smart Community Program can help prevent. COS photo

The “old” way of trying to deal with human-bear conflicts proved to be futile. It did nothing to decrease either the frequency or the intensity of future conflicts, and did little to protect public safety or prevent property damage. This inefficiency, combined with a change in the public’s attitude towards destroying bears, resulted in changes to the ways in which human-bear conflicts are managed.<sup>3</sup> What was needed was a way to prevent conflicts. These changes form the basis for the Bear Smart Community Program.

The Bear Smart Community Program is a province-wide initiative to reduce conflicts between people and bears and, in doing so, increase public safety. The province created the proactive Bear Smart Community Program in 2002 in partnership with the Union of BC Municipalities and the BC Conservation Foundation. According to the government’s website, the program guides communities toward a safer and more sustainable way for people and bears to co-exist. The program’s goal is “to address the root causes of bear-human conflicts, thereby reducing the risks to human safety and private property, as well as the number of bears that have to be destroyed each year.”<sup>4</sup> The initiative depends on a partnership with other provincial agencies, regional and municipal governments, businesses, community groups, NGOs, and individuals.

<sup>3</sup> Davis, Helen M., Debbie Wellwood, and Lana Ciarniello. March 2002. “*Bear Smart*” Community Program: Background Report. BC Ministry of Water, Land and Air Protection, Victoria, BC; p. i.

<sup>4</sup> <http://www.env.gov.bc.ca/wld/bearsmart/bearsmintro.html>

The program is designed to be adaptive so that new management options or improvements can be incorporated into each phase and tailored for each community. Criteria for each step in the process are provided so that communities have clearly defined and achievable targets.

## 1.1 The Two Phases of the Program

There are two phases in the Bear Smart Program:

Phase 1 is to conduct a Bear Hazard Assessment (BHA), which is a detailed assessment and analysis of the state of the problem in a given location/community. The Bear Hazard Assessment makes recommendations for solving the problems and conditions described in the assessment report. There are seven (7) criteria that need to be met in Phase 1; these are listed in the table below, along with Whistler's progress in achieving these Phase 1 criteria:

**Table 1. Whistler's status in achieving Phase 1 Bear Smart Community criteria**

	Criterion	status
1	Conduct bear hazard assessment	√ (completed)
2	Review human-bear conflict public education programs	√
3	Design human-bear conflict monitoring and reporting system	√
4	Review waste management system	√
5	Review waste management bylaws	√
6	Create (or review) a green space management strategy	√
7	Review community planning strategy	√

Phase 2 entails producing a Human-bear Conflict Management Plan for the community to implement. This is the problem solution phase of the program. Phase 2 has six (6) criteria that need to be implemented. It contains the priorities and actions for carrying out the recommendations that were described in the BHA. The implementation period for the Bear Plan is typically up to five years to allow communities to achieve the required activities and acquire the funding needed to implement new systems and practices. Table 2 below lists the six criteria for Phase 2, along with Whistler's progress in achieving them:

**Table 2. Whistler's status in achieving Phase 2 Bear Smart Community criteria**

	Criterion	status
1	implement human-bear conflict monitoring system	√
2	implement public education program	√
3	implement bear-proof waste management system	partial completion
4	implement and enforce bear smart bylaws	√
5	revise the OCP and local development plans to be consistent with the goals of the bear plan	partial completion
6	implement the green space management plan	partial completion

## 1.2 Components for Designation as a Bear Smart Community

The government’s website states that there are six (6) required components a community must complete—or be committed to and engaged in implementing—in order for it to be designated a Bear Smart Community. Table 3 below shows Whistler’s overall progress:

**Table 3. Status of required components for designation as a Bear Smart Community**

Steps	Component	Completed for Whistler
1	Prepare a Bear Hazard Assessment (BHA) using the criteria outlined.	√ (McCrory 2004)
2	Prepare a human-bear conflict management plan to address the hazards and conflicts identified in the BHA. [Once the local government accepts the management plan, it can apply for designation as a Bear Smart community.]	√ (complete when approved by Bear Working Group and adopted by RMOW Council)
3	Implement a continuing public education program directed at all sectors of the community.	√ Get Bear Smart Society, COS BRO Program, RMOW, Bear Aware PDS
4	Implement "Bear Smart" bylaws that prohibit the provision of food to bears as a result of intent, neglect, or irresponsible management of attractants.	√ (Garbage Disposal and Wildlife Attractants Bylaw No. 1861 passed March 2009)
5	Develop and maintain a bear-proof municipal solid waste management system.	√ partial, continuing progress
6	Revise planning and decision-making documents and policies to be consistent with the bear-human conflict management plan.	In progress (OCP, public zoning hearings); Bear Foods Plant List added to landscape policy

As can be seen in the table, Whistler has achieved, or is in the process of achieving, all the required components to be designated a Bear Smart Community. Whistler’s BHA was completed in 2004 (McCrory), and a proposed human-bear conflict prevention plan was completed in 2005, but not adopted for a variety of reasons. Public education and conflict monitoring/reporting have been place for years, largely through the Get Bear Smart Society and Bear Aware programs, as has the jointly RMOW/COS-funded Bear Response Officer (BRO) program. Implementation of the remaining criteria requires continued commitment from the RMOW, as well as to an active partnership with the members of the Whistler Bear Working Group (BWG).



The continuation of the BWG is fundamental to Whistler’s success in achieving Bear Smart Community status. The BWG is a partnership that includes federal and provincial agencies, regional and municipal governments, businesses, community groups, NGOs, and individual citizens, acting as a dedicated team whose goal is to provide the community with leadership and direction to becoming a Bear Smart Community. It is important to remember that some activities of this partnership may require funding and ongoing commitment from jurisdictions and agencies

that are outside of the control of the municipality, such as the Conservation Officer Service (COS), other provincial departments and ministries (Ministry of Environment, Ministry of Transportation and Highways), the RCMP, and the area school district. However, by showing support to

maintaining the BWG and working to implement decisions made by the group, Whistler can help to increase the level of commitment of these outside agencies.

### 1.3 Response Plan

The Conservation Officer Service (COS) and BC Environment are committed to working with local governments, law enforcement agencies, and community groups to develop a response plan for human-bear conflicts that is specifically tailored to that community.

The response plan allows BC Environment and its partners the option of using non-lethal techniques, such as bear aversion, when bears come into the community and exhibit undesirable behaviours. Non-lethal control of bears, including short-distance (<10 km) translocation, aversive conditioning, and on-site release, are used in communities where a plan outlining responses to human-bear conflicts has been prepared and approved by the COS Regional Director. Non-lethal management techniques may be used when it is determined that a bear's behaviour does not pose a moderate to high risk to public safety or cause significant damage to public or private property.

In other words, once the COS recognises a community as being well-involved in the Bear Smart Community Program, more options become available for managing human-bear conflicts in that community, as described above. An additional option is the provision of a Bear Response Officer (BRO). The BRO is a CO whose role is “to deliver a human-bear conflict response program to protect human safety and reduce conflicts between humans and bears.”<sup>5</sup> The BRO works directly with the members of the local Bear Working Group. This is the case in Whistler, where the COS and the RMOW have jointly sponsored a BRO program since 2006.



When a community has progressed in the Bear Smart Community Program—as Whistler has—through public education, attractant and waste management, bylaw enforcement, and multi-agency cooperation, the COs and their partners can decide which of the non-lethal options to use (as may be appropriate to the conflict situation). In making their decision, they use a variety of bear behaviour criteria, such as the Bear Aggression Index<sup>6</sup> and new criteria that have been developed specifically for black bears in urban areas. These can be used as a basis to help reduce the number of bears that are killed in and around that community. The goal is to significantly reduce the number of bears that come into conflict with people.

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<sup>5</sup> Drew Milne, Whistler Bear Response Officer Program: 2008 Year End Report, p. 10.

<sup>6</sup> Carrie Hunt, *Bear Shepherding Guidelines for Safe and Effective Treatment of Human-Bear Conflicts*. Wind River Bear Institute. 2003. Partners-in-Life Program.



## 2.0 INTRODUCTION TO WHISTLER'S BEAR PLAN

This Bear Plan follows the provincial Bear Smart Community Program guidelines for a conflict management plan. It contains proposed priority actions for implementation to be phased-in over a five-year period. This amount of time is recommended as a reasonable period to allow RMOW staff and the public to make and accept the necessary changes and funding requirements that will enable Whistler to apply for BC Bear Smart Community status. Once RMOW has made the commitment to implement the plan by adopting it, the municipality can apply to the BC government for designation as a Bear Smart Community.

### 2.1 History—Whistler as BC's Prototype Bear Smart Community



For well over a decade, there has been direct interest in reducing conflict interactions between bears and people in Whistler.<sup>7</sup> Whistler's Get Bear Smart Society (GBS), formerly called the Jennifer Jones Whistler Bear Foundation, formed in 1995. Whistler's Black Bear Task Team was established in 1997. It developed a black bear management plan (1998) and provided public education about bears and waste management.

In 2002, a new group came into being, the multi-agency Whistler Bear Working Group (BWG). The core membership includes the RMOW, the Get Bear Smart Society, BC's Environment ministry and Conservation Officer Service, Whistler-Blackcomb (Intrawest), Carney's Waste Systems, and the RCMP. Additional members, as they are needed or available, also participate, such as the BC Conservation Foundation's Bear Aware Program Delivery Specialist, VANOC, and community volunteers.

In 2004, a Bear Hazard Assessment was conducted for Whistler (McCrary). In the report, McCrary notes that Whistler was one of the key original models (*1995 Bear-People Conflict Community*) selected for reducing "problem" bear behaviour, and that in 2001, Whistler was also described as an example of a community taking proactive steps to reduce conflicts. He also wrote that Whistler "has one of the most progressive and successful human-bear conflict prevention plans in the province." Following up on the report's recommendations, McCrary also wrote the (*Proposed*) *Bear-People Conflict Prevention Plan* in 2005. This plan was presented to the RMOW council, but not adopted because it was thought some of the recommendations were too costly. A second report, the *Human-bear Conflict Management Plan* was written in 2006 (Groeger and Zurbuchen) and revised with municipal staff in 2007. All these have been used as background for this Bear Plan.

Throughout all this time, the RMOW has engaged in or supported a number of initiatives to help reduce conflicts between bears and people, including actively supporting the BWG, partnering with the COS for a Bear Response Officer (BRO), cost-sharing with the BC Conservation Foundation to support a Bear Aware PDS, amending and enforcing its waste management bylaw to prevent bears getting access to garbage, and by proposing to amend its OCP to include the Protected Areas Network (PAN) framework for developments in the valley (recreational, commercial, residential) so they are sited in less sensitive areas, including prime bear habitats.

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<sup>7</sup> Adapted from Whistler's website: [www.whistler.ca/content/view/267/329](http://www.whistler.ca/content/view/267/329)

In spite of the considerable work to reduce conflicts that is being done in Whistler, human-bear conflicts, including home invasions, property damage, and injuries to people, continue to increase. Food-conditioned bears are the culprits. Reducing, and in some cases, eliminating, bear attractants is the only way to reverse the statistics.



These photos were provided by Whistler's Get Bear Smart society to show the extent of damage that bears are capable of in their search for food.

This Bear Plan is an implementation road map for Whistler. It is a required component of BC's Bear Smart Community Program and, if adopted by Whistler's municipal council, will be the basis of Whistler's application for Bear Smart Community status.

The most critical components a community needs to have in place in order to demonstrate that it is committed to the program and desires to obtain Bear Smart Community status are the level and quality of public education, the extent to which the community is in the process of bear-proofing its waste management operations, and amending necessary bylaws and providing compliance enforcement. This report describes the progress of Whistler in achieving these and other requirements, as set out below.

Whistler has a rich ecological and social history that is something of which it is proud. One of the ways Whistler is demonstrating that it is a good steward of this history is by showing how it is working towards managing its relationship with local bears in a sustainable way. When bears are allowed to be attracted to garbage and other non-natural attractants, that relationship—and the bears—is jeopardised.

Access to attractants can cause a local increase in the bear population, which further increases the number of conflicts with bears. Increased conflicts usually results in an increased number of habituated and food-conditioned bears, which frequently results in having to kill those bears. The destruction of a high number of bears is evidence that Whistler has not (yet) achieved good stewardship of the area's bears. Increased numbers of conflicts leads to an increase in the potential risk to the safety of residents and visitors alike. These are all good reasons to support implementing this Bear Plan for Whistler.

## 2.2 Goals of the Bear Plan

The generic goals of a Human-bear Conflict Management Plan<sup>8</sup> are to:

1. provide a general summary of the conflict issues based on the BHA [Phase 1 Problem Analysis]
2. identify the community's level of commitment to the program
3. identify the level of tolerance of the community towards maintaining or restoring natural bear habitats (e.g., travel corridors and feeding areas) adjacent to the community
4. clearly establish goalposts for the success of the program
5. identify the agencies, groups, or individuals responsible for addressing problems (see Appendix 3)
6. determine what is necessary to address each problem successfully
7. set priorities for specific actions to be taken
8. develop a timetable for addressing each problem
9. conduct a cost estimate of proposed management actions and provide a budget break-down for each of the criteria in the program<sup>9</sup>



Because the RMOW has been actively seeking to become “bear smart” for over a decade, it has already accomplished a number of these generic goals. The goals of this Bear Plan for Whistler are:

- a. to build on the information provided in the previously mentioned reports (BHA 2004 and Bear Plan 2005, and others as described in section 2.1) conducted for Whistler;
- b. to assess the current status of Bear Smart activities in the RMOW (including waste management issues, bylaws and enforcement, development and land-use planning);
- c. to recommend an implementation plan that will assist the RMOW to significantly reduce human-bear conflicts, increase safety for people and protection of private property, and reduce the number of bears destroyed within the RMOW's boundaries;
- d. to provide Whistler with a strong, supportive rationale for successful application to the province for Bear Smart Community status.

The government's background report for the Bear Smart Community Program also states that, “Preparation for the management plan should include a brainstorming stage for generating ideas and concepts for developing the plan. The contents of the management plan should be developed using a consensus-based approach for identifying and assessing preferred solutions.” Whistler's Bear Working Group (BWG) continues to carry out brainstorming and concept refinement activities by consensus. In addition, the BWG has the responsibility for writing annual reports on Bear Smart activities in the community, and for revising the Bear Plan as and when necessary.

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<sup>8</sup> *Ibid.* p. 39.[Davis, Helen M. *et al.*]

<sup>9</sup> Many of these goals may be undertaken by the Bear Working Group, especially the last one as this cost information is not readily available to the consultant. As well, government members of this group have the authority needed to make the necessary decisions regarding costs and budget allocations.

## 2.3 Methodology

I first did an in-depth review of the 1998 report of the Whistler Black Bear Task Team. Then I focused on reviewing McCrory's 2004 Bear Hazard Assessment report, particularly the recommendations listed, and McCrory's 2005 Proposed Bear-People Conflict Prevention Plan. Next, I acquired copies of the other available reports that were conducted by and for Whistler over the past decade. Then I set out to discover which activities and policies Whistler had already undertaken or achieved in the intervening years (see Appendix 1).

I had telephone and/or email discussions with individuals in the RMOW's Environmental Services and Bylaws departments, and maintained an exchange of information to stay current with any new developments. Maps were provided by searching the RMOW's website.

I discussed their activities with members of the Bear Working Group and attended meetings via teleconference. I also had discussions with and reviewed activities and reports of the District CO Service.<sup>10</sup>

Research was carried out in a number of ways, including online research of practices and bylaws of a number of communities in BC, Alberta, Ontario, and Colorado that are also working on human-bear conflict issues. I reviewed Bear Hazard Assessments and Human-bear Conflict Management Plans for a number of other BC communities (including those written by myself and others), as well as reports, books, and journal articles on the subject. I collected information on human-bear conflicts throughout BC (Vancouver's North Shore, Vancouver Island, the Kootenays).

I consulted with the CO Service about encounters with bears in other BC communities (Coquitlam, Port Alberni, Port Renfrew). I discussed bear behaviour with the North Shore and Coquitlam Bear Aware program delivery specialists, and with bear biologists in BC and Alberta.<sup>11</sup>

I reviewed the latest technologies in waste management (see Table 5), including attending at Wasteline Containers in Abbotsford, Rollins Machinery in Langley, as well as numerous other manufacturers and suppliers via phone and online searches (most notably, Critter Guard in Squamish and BearSaver of California), and email exchanges.

I did periodic checking of the information on Whistler's website regarding bylaws (and reviewed all the relevant ones), waste management, Whistler's Official Community Plan, and the proposed OCP amendment subtitled the Protected Areas Network (PAN) in order to discover what environmental and planning zoning that exists in Whistler.

I discussed the "bear-safe" status of some of Whistler's "hotspot" neighbourhoods with BWG members to assess waste management practices and/or equipment. I visited Whistler to inspect the Function Junction and Nester's drop-off depots; and examined a random sample of bus stop Hid-a-Bag bins in all areas.

I reviewed Whistler newspapers (see Appendix 4) for stories about bears in the area.

Finally, at least two draft reports were initially reviewed by Heather Beresford, Environmental Manager for RMOW, and finally by the whole Bear Working Group, and all comments have been discussed and inputted into this final version.

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<sup>10</sup> Review of 2007 and 2008 BRO year-end reports, as well as personal communications with Chris Doyle and Drew Milne, COS Squamish & Whistler, various dates.

<sup>11</sup> Personal communications with Tony Hamilton, Wayne McCrory, and Stephen Herrero on various dates.

### 3.0 DISCUSSION: IMPLEMENTING THE BEAR PLAN

The goal of this Human-Bear Conflict Management Plan is to build on the information provided in the Bear Hazard Assessment (McCroory 2004) and other reports, assess the current status of conflict-reduction activities in Whistler, and provide an implementation plan to assist Whistler in significantly reducing human-bear conflicts, increase safety for people and protection of private property, and reduce the number of bears destroyed within the RMOW's boundaries.

The Bear Plan contains proposed priority actions for implementation to be phased-in over a five-year period. This amount of time is recommended as a reasonable period to allow RMOW staff and the public to make and accept the necessary changes and funding requirements that will enable Whistler to apply for BC Bear Smart Community status. It follows the Bear Smart Community Program guidelines for a conflict management plan.

The tangible benefits of implementing an effective Bear Plan are:

- ◆ increased safety for residents and visitors due to the reduced risk of encounters with black bears
- ◆ reduced property damage by food-conditioned bears
- ◆ more effective and efficient use of public resources (COS, RMOW Bylaw Services, RCMP)
- ◆ better long-term prognosis for healthy black bear populations (see footnote 25 on p. 38)
- ◆ a variety of tourism benefits because global travellers favour selecting destinations that show policies for wildlife conservation, especially iconic species such as bears

There is an element of immediacy in the need for all South Coast communities to implement an effective conflict management plan due in large part to a trend identified by the CO Service: that of an increasing number of resident (or urban) bears that are no longer taking to the "bush" to hibernate over winter. The concern relates to the increasing number of bears coming into conflict in communities likely because the bear population is higher than what would normally be sustained if the bears were not accessing high-calorie non-natural foods, most notably garbage. The high number of food-conditioned and human-habituated bears in our communities greatly increases the safety risk for residents.

Research throughout North America indicates that black bear populations are growing and that they are expanding their range after having once been reduced in numbers—even extirpated in some areas. Researchers suggest that because people have moved into many areas once inhabited by bears, the widespread habitat loss, coupled with natural food shortages due largely to [intermittent and unpredictable] weather conditions, and the lack of adequate management of garbage [and other food attractants] by people and the natural ability of bears to access non-natural foods, there is an increasing frequency of interactions between black bears and people.<sup>12</sup>

In prior years, the risk of serious conflicts causing injury to people was practically non-existent in the South Coast/Vancouver Island area. In the previous decade, there were 11 incidents throughout the whole region that resulted in minor injuries. However, the overall picture has now changed with the attacks and injuries, some requiring hospitalisation of more than 24 hrs, that occurred in summer 2008, such as the ones in Whistler, Coquitlam, Port Renfrew, and elsewhere, as well as higher numbers of home invasions by bears everywhere in the South Coast/Vancouver Island region (see media articles in Appendix 4).

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<sup>12</sup> Sharon Baruch-Mordo. 2007. MSc Thesis: *Black Bear-Human Conflicts in Colorado: Spatiotemporal patterns and predictors*; Colorado State University, Fort Collins & Colorado Dept. Fish, Wildlife & Conservation; pp. 53, 68, and 75.

There were over 900 calls to the CO Service in 2008, 54% less than in the previous year. While that number had declined, the number of reports of bears breaking into homes and vehicles increased to 57 attempted and successful break-ins. The number of successful home invasions increased by 6 for a total of 26 in 2008. There were also four incidences of bears causing injuries to people in Whistler alone. Compare this to the 11 incidents that occurred throughout the entire South Coast region in the previous decade. There were also 32 complaints about property damage.<sup>13</sup> In spite of the high number and quality of activities being done in Whistler to reduce conflicts, these numbers confirm the trend that potentially serious conflicts are increasing not only in Whistler, but generally throughout the South Coast region, including on Vancouver Island. The number of bears having to be destroyed has also not been reduced, another indication that there are still significant numbers of conflicts with bears. The area COs confirm that 11 bears were destroyed, three died in motor vehicle accidents, and one was killed by a civilian, totalling 15 dead bears in 2008.

### **3.1 Top Priorities**

The BC Bear Smart Community Program stipulates that the top priorities are those actions that need to be implemented as soon as possible in order to mitigate the relatively high number of human-bear conflicts in Whistler.

#### 3.1.1 Develop a community vision to support Bear Smart principles

The process of developing a Bear Smart Community vision opens up the discussion to the whole community on how Whistler can become Bear Smart. This is necessary to find the additional solutions residents and visitors can embrace. Having an official RMOW vision statement also tells BC Environment that Whistler is strongly committed to being a Bear Smart Community, and it lets residents know that their municipal government encourages Bear Smart practices.

In his 2006 North Shore BHA, McCrory commented on the lack of a common community vision and the often strongly conflicting range of notions residents held about bears and bear-proofing the waste management system. Much of the disparity, he noted, was due to the lack of widespread scientific information about bears and about the kinds of waste management systems that have been put into place in communities that are already working towards being Bear Smart.

Most of Whistler's residents are very bear aware. However, the more or less permanent population of the municipality numbers about 10,000, while there are many more tens of thousands of seasonal workers and transient recreationists in Whistler at any given time. Extending bear awareness to all these people is essential in order for the efforts expended by residents to result in successfully achieving Bear Smart Community status for Whistler.

One of the best ways to achieve this broader awareness and acceptance of Bear Smart principles—and therefore this Bear Plan—is to engage the whole community in developing a vision statement committing to practices that are proven to reduce human-bear conflicts. To a limited extent, this has already been done. The Get Bear Smart Society has carried out a number of surveys and facilitated focus group sessions, the results of which have been used to design public education materials and programs. Also, various open planning sessions held to develop Whistler's "2020 Comprehensive Sustainability Plan" and numerous other public education events have further served to broaden public understanding of the issues and the need for the whole community to embrace the practices that will reduce human-bear conflicts.

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<sup>13</sup> Drew Milne, BRO Year End Report for 2008, pp. 3-4

### 3.1.2 Implement bear-proof waste management throughout Whistler

Whistler’s new Garbage Disposal and Wildlife Attractants Bylaw No. 1861, 2008 contains the following definitions::

*“wildlife attractant” means any substance that could be reasonably expected to attract dangerous wildlife including but not limited to food products, domestic garbage, pet food, seed, restaurant grease, game meat, or glass or metal ware or other item having contained food.”*

*“wildlife resistant container” means a fully enclosed container with a sealed lid and a self-latching mechanism of sufficient design and strength to prevent access by dangerous wildlife, that is securely affixed to the ground or to an immovable object or fixture, and that is described in Schedule A;*

*“wildlife proof enclosure” means a structure which has enclosed sides, a roof, doors and a self-latching mechanism of sufficient design and strength to prevent access by dangerous wildlife, that is designed and constructed in accordance with the standards and specifications set out in RMOW Garbage Enclosure Guidelines.*

Clause 3 of the bylaw states: *No person shall dispose of or store domestic garbage, waste, or recyclable material except into a container that is a wildlife resistant container or is located in a wildlife proof enclosure.*

These changes to Whistler’s bylaw go a long way to preventing bears becoming food-conditioned. However, as is evidenced by the continuing—and increasing—numbers of conflicts with bears, some of them serious (e.g., home “invasions,” personal injuries), waste management in Whistler is still not what it needs to be. This section describes the proactive means to reduce human-bear conflicts that have been achieved in Whistler and what still needs to be done to effectively reduce conflicts so that Whistler can be successful in obtaining Bear Smart Community Status.

Provision of bear-proof waste management for all Whistler residents and visitors is imperative in order to prevent bears becoming food-conditioned. Considerable time, money, and effort have already been expended by the RMOW, GBS, COS and others in trying to achieve this goal.

Since Whistler does not have curbside garbage and recycling pickup, two communal garbage and recycling drop-off stations—Nester’s on the north end of Whistler and Function Junction on the south end—were constructed. These have been expanded to include provision for dropping off re-usable and compostable materials.



Ungated entrance to Function Junction. M Paquet photo



Ungated exit at Function Junction. M Paquet photo

Upon inspection, both these sites were seen to be clean and have plenty of clearly worded, easy to understand signs to inform users about Bear Smart practices (see photos below). The Nester's site is well-fenced. The site at Function Junction, however, is open at both ends (see photos above), allowing bears the opportunity to roam around in the site looking for whatever they can eat. In warm weather, particularly, the smells will attract them, as will some of the materials deposited for re-use and recycling. This site needs to be completely fenced. Gates should be installed at either end and kept locked at all times. To prevent people dropping off materials outside the fenced area, the gates need to be able to be easily opened at all times. A sign giving the code to open and close the gates should be prominently displayed. (Since bears can't read, there's no worry they would unlock the gates.) To facilitate easy access for people using the sites and in all weather, these gates should be opened electronically by sliding sideways, rather than opening out- or inward. The power to do this can be supplied with solar panels, if necessary. It may also be beneficial to have each drop-off depot fitted with closed-circuit cameras to maintain surveillance to observe people who don't close and re-lock the gates or who put garbage and recycling on the ground instead of in the bins.



Additionally, the area immediately outside the drop-off station should be cleared of bear-attractant plants. On the day I visited, there was a clump of fruiting thimbleberries (*Rubus parviflorus*) just outside the fence at the exit (photo at left). This is not a high bear attractant, but if allowed to spread, could become significant. Upon further inspection, there were few other bear foods nearby.



The signage at the sites is very clear and focuses on ways to prevent attracting bears to the compactor and various bins. In the time it took to inspect the site, there was a continual stream of people using it. As can be seen in the photos, there are a variety of sign types. This helps to get the message across to a number of different users.



The two drop-off stations serve the mobile population fairly well. However, many seasonal and transient residents are not mobile and frequently store their garbage and recycling where they live until they can get someone to drive them to the drop-off stations. Often, these materials are stored outdoors in a non-bear-proof manner. In other cases, people stockpile their garbage and recycling indoors, either in their homes, sheds, or garages. Whistler's Garbage Disposal and Wildlife Attractants bylaw, coupled with increased enforcement by Whistler's bylaw officers and the CO Service's Bear Response Officer should soon work to prevent illegal outdoor storage. These materials become smelly and attract bears and other wildlife. This is likely the reason for increased incidents of bears breaking into homes and

outbuildings. A mobile or stationary method of waste/recycling collection to some neighbourhoods would remedy this problem, and is a primary recommendation of this report.



The RMOW needs to apply a solution to the problems caused by this lack of access by non-mobile residents, however temporary their tenures in the Village may be. There are two possible solutions: 1) have a mobile waste collection system taken to the neighbourhoods (especially those that have been identified as “hotspots”) on given days, well-publicising the schedule so everyone knows when the mobile facility will be in their area. This solution was discussed by the RMOW (see proposal 3 in table on next page), but rejected because of lack of funding; 2) install fixed stations in the most problematic neighbourhoods. This option is discussed more fully further on in this section. I urge the municipality to reconsider these options, giving them the highest priority in order to solve what is the primary reason the current waste management system is not effective at reducing the number of human-bear conflicts in the community.

People who are unable to get to the drop-off stations for whatever reason sometimes deposit their household waste in transit shelter bins, even though this practice is not allowed. These are bear-proof bins, but this extra garbage causes them to be over-filled and the lids then remain open, enabling bears to get at the contents. Sometimes, garbage is illegally left beside the bin. To help reduce this problem, RMOW is currently putting grates on all the bins to prevent people from stuffing in household garbage, and staff are checking that all bins are locked and in good repair, or are replaced. Another solution to this would be to empty the bus stop bins more frequently and keep them in good condition. In recognition of this problem, the Materials & Solid Waste Task Force of Whistler’s 2020 Comprehensive Sustainability Plan,<sup>14</sup> voted to “increase waste pickup frequency at select bus stops” with the following rationale:

*The waste bins at some of Whistler’s bus stops often overflow as a result of household waste being disposed of in these receptacles. This action consists of determining which are the problematic sites and increasing the waste pick-up frequency at those sites.*

Unfortunately, the following actions, including the ones just described, that could potentially reduce bears becoming food-conditioned to garbage, and thus reduce human-bear conflicts, were declined by RMOW’s General Managers or Council. Lack of funding was given as the reason. If #3 were to be approved, the need for the others would be reduced or eliminated.

**Table 4. Proposed waste management-related actions to help reduce human-bear conflicts**

Proposal	Description and Rationale
1. Hire a RMOW waste management coordinator for all waste programs	A commitment to Waste Management through education/outreach/stewardship starts at the local gov’t level. This position would play an integral support role in working with all stakeholders to ensure best practices for waste management are in place and followed.
2. Put contact number on all recycling and garbage bins in Whistler.	When a receptacle is full/untidy, who to contact is clearly visible on the receptacle. Educational as well as practical action as it will avoid bear/garbage interaction and generally “clean up” our community.
3. Create neighbourhood mobile waste/recycling collection system.	Confirm the feasibility assessment done by Get Bear Smart; address NIMBYism about siting bins. Temporary bin-siting would cycle between locations. The service at the current two drop-off sites should be expanded to neighbourhood-based sites to alleviate problem of residential garbage put into public bins, which contributes to bear/garbage problems.
4. Pilot a recycling infrastructure at frequently used WAVE transit stops.	Information from the Whistler-Blackcomb staff housing pilot for recycling occurring in 2008-09 should be used to inform the pilot at some WAVE stops. This action is intended to help eliminate waste from overflowing in the garbage bins at frequently used stops where some people also deposit their household waste. It is also intended to help reduce human/bear conflicts.

<sup>14</sup> Whistler 2020 *Comprehensive Sustainability Plan, Current Reality Addendum*, Materials and Solid Waste Task Force, 2010 Action Planning Session, April 2009.

The “Summary of Indicator Results” in the Task Force’s report shows that Whistler’s success in reducing bear incidents is “moving away from the description of success.”<sup>15</sup>

What is Measured?	Chart	2020 Trend	Results
<p>This indicator reports the number of bears destroyed in Whistler or translocated from Whistler on an annual basis. Translocated means the bear needs to be and is removed from its home range.</p>		<p><b>Up away from Vision</b></p>	<p><b>2008</b> 15 <b>3 year change</b> 40% <b>1 year change</b> -</p>
<b>Why is it important?</b>			
<p>Though solid waste is currently a fact of life the human wildlife conflict that arises from waste management practices is something that can be prevented. Whistler has spent an enormous amount of energy on reducing conflict with bears however many challenges still exist and the majority of bear incidents are due to human bear conflict related to waste food.</p>			
<b>Descriptive Analysis</b>		<b>Calculation</b>	<b>Notes:</b>
<ul style="list-style-type: none"> <li>• In 2008, there were fifteen bear incidents in Whistler. Of the incidents, fourteen bears were destroyed and one bear was translocated.</li> <li>• Results over a year to year period stayed the same, while the three year average increased. The number of bears destroyed as opposed to both translocated and destroyed increased over both time periods.</li> </ul>		<p>Sum of the number of bears destroyed in Whistler or translocated from Whistler on an annual basis</p>	<p><b>Source:</b> MOE <b>Time period:</b> Annual</p>

There has been considerable work done in Whistler—including public education, signage, and placing bear-proof waste and recycling bins at housing developments—to let people know that garbage attracts bears, and to try and change people’s behaviour.



Photo top left: Sign at Whistler Athlete’s Village construction site; top right: bus shelter and bin; bottom left: waste and recycling bins at a housing development; bottom right: signage on lid of bus shelter bin

<sup>15</sup> Ibid.

There are good products available to bear-proof a neighbourhood collection system—whether mobile or fixed (see table 5 on p. 24). The major barrier expressed by RMOW is cost. Rollins Machinery in Langley, which provides bear-proof residential polycarts (plastic roll-out bins) is a local company that already does a lot of business in the Sea-to-Sky region. Their polycarts could be used by residents who have no bear-proof place to store waste. They would still have the problem of emptying the contents at one of the drop-off depots, but at least bears would not be attracted to their homes in the meantime. Wasteline Containers in Abbotsford is a local company that provides high quality dumpsters that can be made to bear-proof specifications and that can be modified so that people of all sizes and abilities can use them. Critter Guard in Squamish retrofits sturdy polycarts to be bear-proof. Using local companies helps to keep costs down.

There is always concern for people's various abilities to put garbage into dumpsters. Metal lids are heavy, and many people either can't reach or can't lift the lids. Wasteline Containers designs and manufactures several exceptionally sturdy models that can be adapted for use by people of all abilities and in a variety of public and commercial settings.

A good source of information on what kinds of waste management systems may work for Whistler is to look at what other comparable communities are doing and whether or not they are successful in increasing safety and reducing human-bear conflicts. It's important to keep in mind that not all communities are alike. Whistler is considered somewhat unique due to its location and mountain/valley terrain. The municipality receives a high amount of snowfall in winter, is situated in very good bear habitat, has a considerable amount of new development, and an equally considerable amount of seasonal workers, many of whom are from places around the world where bears don't exist. One town, in particular, to which Whistler can be compared is Canmore, Alberta. It has achieved notable success in solving human-bear conflicts, after much trial and error and public consultation. Other places where effective Bear Smart waste management occurs include most of the provincial and national parks in the Rocky Mountains, Stewart BC, and in Furry Creek (south of Squamish).<sup>16</sup> Many of these communities use communal drop-off depots distributed throughout the community for easy access by all residents to deposit their garbage and recycling materials. If these neighbourhood sites are kept clean through proper maintenance, they will not attract bears and will be less likely to offend nearby residents. It is quite likely that a kind of hybrid system is suitable for Whistler.

Whistler has not yet undertaken any formal trials (pilot projects) in problematic neighbourhoods, citing lack of funding for such studies. The province's Bear Smart program may help provide funding for such a trial, and I recommend that the RMOW and BWG design an appropriate pilot and apply for funding from a variety of sources, including the Bear Smart Community Program.

Some research has already been done in consideration of a pilot project for Whistler, including focus groups and surveys conducted by the Get Bear Smart Society and a trip by Sylvia Dolson of the GBS and Lori Homstol of the Bear Aversion Research Team to assess the applicability of the Canmore, Alberta communal waste management system for Whistler. Canmore's system is highly successful at preventing bears from becoming food-conditioned. Essentially, they were impressed with the overall success of Canmore's system. Some of the highlights include:

- the system works; bears cannot access garbage in Canmore
- easy access for residents; all bins within one block of a residence
- can dispose of garbage as generated; no need to store garbage so no odour to attract bears
- low failure rate of bins; secure to ground so can't be tipped over by bears
- good longevity; a bin in Banff still works after 25 years

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<sup>16</sup> These are described fully in bear hazard assessments for RMOW, Squamish, Lions Bay, etc.

Some of their criticisms when comparing it to what might work in Whistler, include:

- the high cost of the Haul-All dumpsters
- the expense of the required infrastructure, particularly the specialised trucks
- the need to prevent people dumping inappropriate items (e.g., mattresses, appliances, etc.)
- people recycled less because it wasn't convenient

Since their visit, Canmore has modified their program by providing a portable recycling trailer that is moved to a different part of town everyday. The history of how—and why—Canmore finally adopted its waste management system is well worth re-considering for Whistler. This information is available on Canmore's website.<sup>17</sup>

In a media article in the *Whistler Question*, published on 14 August 2008,<sup>18</sup> after three bears had been shot in a five-day period, Dolson is reported to have "...just returned from a visit to the northwest BC community of Stewart and was impressed that the town had adopted a garbage collection system identical to the ones in place in the Rocky Mountain communities of Banff and Canmore, Alberta. The system, which involves a network of large, bear-proof neighbourhood bins, is far more effective at reducing bear-human conflicts than is Whistler's current compactor-based system..."

While Haul-All equipment is recognised as being of extremely high quality and durability, it is also expensive. The high cost of buying new infrastructure, or retrofitting existing trucks, for instance, along with the number of new dumpsters required for a full neighbourhood waste management system, has been a huge barrier to having this kind of system installed in Whistler. A pilot project using a few Haul-All dumpsters in a select neighbourhood and a few Wasteline Containers in a comparable neighbourhood would provide the community with the information it needs to make a decision both on the benefits of at least providing this service to the "hotspot" neighbourhoods and which company can provide the equipment at the best cost.

A current pilot/research project on a curbside collection system is being done in Revelstoke, BC.<sup>19</sup> Much like Whistler, Revelstoke "is a relatively isolated [mountain] community [surrounded by large wilderness parks and] adjacent to prime bear habitat. There is a history of bears entering the community. Concerns over the high numbers of bears that were being destroyed within the city prompted the creation of the Bear Aware Program there."<sup>20</sup> While Revelstoke has a curbside waste collection system, the pilot is mentioned here because this jointly sponsored Bear Aware/City of Revelstoke project highlights three main similarities to Whistler: 1) the garbage-related conflicts in hotspot neighbourhoods causing the food-conditioning of bears, 2) the partnership between the local government and a non-profit organisation, and 3) the importance of carrying out an effective pilot project in order to determine the best solution for the community.

I strongly recommend that Whistler conduct a testing program in the hotspot neighbourhoods to serve residents and visitors who do not have cars or who are otherwise unable to get to the drop-off depots.

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<sup>17</sup> <http://www.canmore.ca/Municipal-Services/Recycling-and-Waste-Management/Animal-Proof-Containers.html>

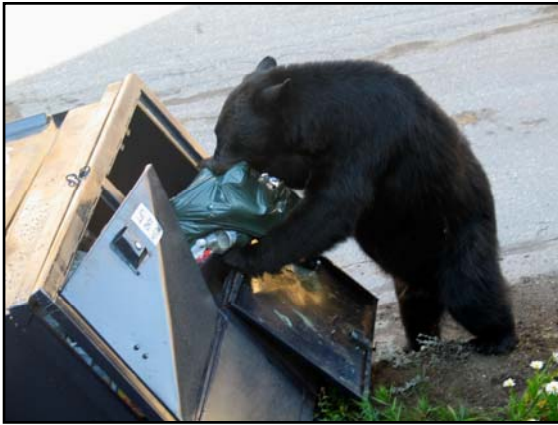
<sup>18</sup> Reprinted from the Whistler 2008 Year-end BRO Report by Conservation Officer Drew Milne; see Appendix 5.

<sup>19</sup> source: <http://www.revelstokebearaware.org/current-issues.htm>

<sup>20</sup> "Creating a Bear Aware Community Case Study: Revelstoke, BC." In the conference proceedings *Creating Bear Aware Communities: Summaries of Presentations*, Columbia Mountains Institute of Applied Ecology; November 2001, p.7.

There is no doubt that Whistler needs to improve its waste management system by making it easier for non-mobile residents to deposit their garbage, recycling, and compost. Another way to help reduce costs would be for the RMOW to consider using bins (or stipulating that their contractor use bins) manufactured by Wasteline Containers of Abbotsford. In this consultant's opinion, this company manufactures dumpsters to clients' specifications/needs, are very well constructed of sturdy materials, are produced locally, and are affordable (see table and photos on following pages).

Deciding on a completely bear-proof waste management system that will work—and be accepted by residents and be enforceable in the mix of urban, commercial, and recreational settings—will be a challenge. The results of a pilot project will be vital in helping Whistler decide on the best ways to significantly reduce human-bear conflicts.



Whatever system is developed, while it may be considered expensive to initiate, it must prove to be affordable over time. Phasing in a system over the five-year implementation period will enable Whistler to devise methods to fund the system and equipment needed. Importantly, an incremental phase-in period will be adaptable and allow Whistler to make changes or corrections as new information and technologies surface.

One possible way for the RMOW to fund the costs of a neighbourhood system—whether mobile or stationary—is to institute a voluntary \$1.00 surtax on a popular local amenity, such as hotel rooms or golf course bookings—or both. The Local Government Act gives municipalities the power to do this. One dollar is a nearly insignificant amount for most groups or individuals, but could add up to a significant amount. Two things must accompany such a voluntary surcharge:

1. assurance that the money will be used exclusively for the purpose of providing bear-proof waste management for all of Whistler, including neighbourhoods, or some method to facilitate bear-proof waste handling by non-mobile residents and visitors; and
2. a well-publicised campaign—locally (including front-and-centre on Whistler's website) and more broadly to tourism providers everywhere—of the benefits of such a program. Given the environment-conscious tourism market, this can give Whistler a definite marketing advantage.

**Table 5. Information About and Images of Waste Management Supplies and Equipment**

The following is from personal visits to companies, phone interviews, emails, internet research, and personal use/testing of roll-out carts. [n/av = not available]. **Important:** prices change and may not be as set out below. This updated table is current as of December 2008.

Name, location of company	item type (s) company provides	initial cost	long term costs	infrastructure required	where used	# people served	Recommendations/ comments (community acceptance rate, etc.)
Rollins Machinery Ltd., 21869 56th Ave, Langley, BC V2Y 2M9; 604-533-0048; Fax: 604-533-3820; cell: 604-833-3428; toll-free: 1-800-665-9060; email: jeff@rollinsmachinery.ca; website: www.rollinsmachinery.ca	provides Haul-All equipment, incl automated trucks, residential and commercial dumpsters, residential polycarts of various sizes (Schaefer roll-out carts). Rollins also supplies Molok and BigBelly systems for parks and open spaces.	high initial costs, sells 32-, 64-gal, and 95-gal Schaeffer carts in range \$159-185; good discounts for bulk orders; also sells LaBrie and Haul-All trucks, mechanical arms, and a variety of dumpsters.	equipment & infrastructure is very durable; cost-effective over time.	semi-automated and automated trucks (LaBrie and other companies)	many locations throughout BC and elsewhere, notably national and provincial parks, in Whistler, other south coast communities, Canmore, etc.	unknown	Brochure says reinforced polybins are certified by the Living with Wildlife Fdn; drawback is that locking clasps must be undone by residents at time of being set out for collection in order to enable emptying by automated or semi-automated means; only bear-resistant for manual collection if collection staff are willing to unlock clasps. Locking clasps have been changed from "thumb clips" to larger carabiners; not as difficult for most people to use; still entails risk of not being kept latched, rendering them not bear-proof. I have not had any test results on the effectiveness of the new caribiner clasping mechanism. Other equipment and infrastructure this local company supplies is highly effective and durable. Made in Canada. This equipment is recommended.
Wasteline Containers Ltd., 2141 Queen St, Abbotsford, BC, V2T 6J3, 604-852-5614, or 1-800-663-1772; Attn John Nesbitt, www.wastelinecontainers.com; info@wastelinecontainers.com	provides dumpsters & compactors of various types, including one called "Bear Proof Lid"	Recent quote for 2 to 8 yd containers of various models ranged from \$1,123 to \$2,187. Prices vary according to amount ordered, market fluctuations	n/av	n/av	n/av		This BC company appears to have sturdy, well-designed bear-proof dumpsters; drawback is they seem to only be available on a "made-to-order" basis. There were none available for me to view. Equipment designed with "bear-proof" lids and doors is recommended. This researcher recommends this company's products, both for quality and for pricing. See photos of some of their designs on the next page.
Haul-All Equipment Systems, 4115 18th Ave North, Lethbridge AB T1H 5G1; toll-free: 1-800-661-1162; 403-328-7788; Fx: 403-328-9956; email: solutions@haulall.com; website: www.haulall.com/english/ Haul-All equipment available from Rollins Machinery in Langley, BC, see above.	supplies residential and commercial equipment, including automated trucks, commercial/residential dumpsters, and single & double trash cans and enclosures	6 cu yd self-dumping with concrete platform & spacer pads costs \$6,175; Hid-A-Bag trash can + concrete pad costs \$945	n/av	side-loading automated trucks for dumpsters; single/double cans need fixing into a concrete base	Canmore, Whistler, other communities throughout Canada and the US, many Nat'l & Prov parks	n/av	Quote dated 13 Jul 2005 based on bulk purchase of 100 dumpsters and 50 hid-a-bag cans: total estimate for 100 dumpsters/platforms is \$617,500; 100 Hid-A-Bag containers/platforms is \$93,000; and 50 Hid-A-Bag cans/platforms is \$47,250, for total quote of \$757,750 + taxes. This equipment is recommended but the single and double Hid-A-Bag cans <u>must be installed properly</u> . High initial costs, low maintenance costs; equipment very durable.

Name, location of company	item type (s) company provides	initial cost	long term costs	infrastructure required	where used	# people served	Recommendations/ comments (community acceptance rate, etc.)
<p>BearSaver, 1390 S Milliken Ave, Ontario, CA 91761; 909-605-1697; www.bearsaver.com; Steve Thompson Sales Mgr: email: steve@bearsaver.com</p> <p>BearSaver bins and carts are not recommended at this time because of CDN/US dollar exchange rates, and because of high freight costs and possibly customs duties.</p>	<p>provides Haul-All Hid-A-Bag type single and double trash cans and enclosures; also provides 32-, 68-, and 95 gallon residential poly carts of the "Otto" variety of manufacture; also supplies commercial dumpsters; products seem quite durable.</p>	<p>high initial costs; US\$ prices for black bear model 32 gal: \$121.44 for 1-300; \$115.21 for 301-1000; \$110.54 for 1001-5000; \$105.87 for 5000+ will tailor payment plan for local governments and/or individual residents if bought in bulk; company agreeable to bulk pricing.</p>	<p>depends on # of items purchased, how used and where located; equipment is very sturdy</p>	<p>depends on system in place; can be used for manual &amp; semi-automated pickup</p>	<p>In many parks, rural areas, and communities in both the US and Canada; specific locations available on request to company.</p>	<p>n/av</p>	<p>32-34 gal residential carts meet most local government limits for household pickup. Larger carts and bins useful in public settings (parks, housing complexes). Residential polycarts employ "one-finger unlatching" with snap-shut lid; designed for manual and semi-automated collection. As with other residential equipment, drawback is that lid must be undone by residents at time of setting out for collection in order to enable emptying by automated or semi-automated means; only bear-resistant for manual collection if collection staff are willing to unlock clasps (most seem to be). Smaller bins (32-gal) have not yet been submitted to LWWF testing program, but most of BearSaver's equipment usually passes the tests with grizzlies. Finger-latch tested in pilot in Coquitlam shows favourable results. Improved design on 32-gal cart ensures latching when lid is simply dropped. This equipment is recommended. Major drawbacks: US \$ exchange rate, high freight costs from California, customs duties.</p>
<p>Critter Guard Lock Systems, R R Enterprises, Russ Roy owner, PO Box 1658, Squamish, BC V8B 0B2; email: rrenterprises@shaw.ca Cell: 604-892-7947</p>	<p>Retro-fitting of plastic roll-out carts; see attached photos.</p>	<p>Approx \$75 for carts, plus \$91 to retrofit, total approx \$160; comes to your (lower mainland) home to retrofit carts, or will sell complete.</p>	<p>Savings if buy IPL carts in bulk. IPL plastic durable; 5-yr warranty as retrofitted</p>	<p>Suitable for manual &amp; semi-automated collection; applying for patent on latch to use with fully automated collection.</p>	<p>Whistler, Squamish, Port Coquitlam; other South Coast towns</p>	<p>So far, about 1,000; expected to increase dramatically over next few years</p>	<p>Retrofitting 64 gal (240 L) carts (price based on this size; likely reduce to about \$70 for 32 gal (120 L) carts, for total about \$140). Ads say BC Conservation Foundation, Bear Aware, Mun District of Squamish, and City of Port Coquitlam endorse these carts + locking hardware. "Bear-tested" in Whistler. IPL plastic and hardware all made in Canada. Pending visual inspection of a 32-gal retrofitted cart and assessment for effectiveness by this researcher, this equipment <u>may</u> be recommended over other equipment because all Canadian in materials and manufacture.</p>
<p>Universal Equipment Handling Ltd., 4024 39139 Hwy 2A; Red Deer, AB, T4S 2A8; Ph: 403-346-1233; Fx: 403-340-8720 toll free: 1-877-843-4105; email: in BC: Ed Schmidt, Sorrento; email: eschmidt@uhecl.com</p>	<p>loaders, bulk containers, roll off bins, self dumping hoppers, stationary compactors, products bearproof and non-bearproof</p>	<p>Ed quoted me bulk prices (2008): 100 x 3 cu yd @ \$1,306.80; 20 x 4 cu yd @ \$1,611</p>	<p>n/av</p>	<p>requires automated trucks; model LM2000 costs \$250,000</p>	<p>many locations in BC: Sea-to-Sky, south coast, Vanc. Island, etc.</p>	<p>unknown</p>	<p>Bulk prices could include freight; dumpsters have heavy metal lids, but those used by Carney's in Squamish have problems breaking down; info I have indicates the gauge of steel used for these products may not be heavy enough to withstand use over time. Products seem to require a high degree of maintenance.</p>

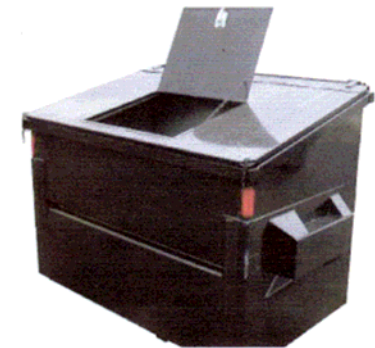
Name, location of company	item type (s) company provides	initial cost	long term costs	infrastructure required	where used	# people served	Recommendations/ comments (community acceptance rate, etc.)
AtSource Recycling Systems 1318 Ketch Court, Coquitlam, BC V3K 6W1; Toll Free: 1-877-927-8324 P: 604-523-2926, F: 604-523-2920 Email: info@atsource.ca www.atsource.ca	compactors, balers, and recycling equipment; also public use indoor compactors for restaurants, etc.	n/a	n/a	n/a	supply to Pattison Group of companies; various agencies and municipalities	across western Canada	Does design work with customers to tailor equipment to need. WasTech is one of their companies, through it, operates GVRD transfer stations and Cache Creek landfill. "AtSource looks after equipment requirements." Representative said all their equipment is bear-proof when the units are closed.

Three of Wasteline Containers' dumpster designs:



### BEAR PROOF LID

REAR LOAD, 6 or 8 YARD

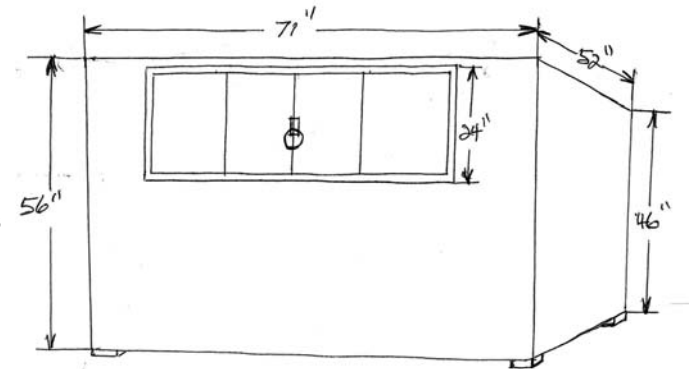


The photo at right shows an ID Lock split lid container. The ID Lock can be secured with a carabiner or padlock.

The photos above and below left show the front and back of the same style container. The platform enables use by shorter people and children. The front could be kept locked until dumpster is emptied and the back opening could be used for more frequent deposit of garbage bags. This model can be fitted with a bear-proof latch, which can also be kept locked.

The drawing at right is of the rear of a 4 cu yd front-sloping container that has a sliding door at the back. This dumpster would be made to order. This container is small enough that no platform is needed for children or shorter adults. When the sliders are moved left and right, there would be an opening about 24" top to bottom and 36" sideways. The doors will be constructed with 3/16" steel plate and guide ways and with a latch in center, which when closed, is secured with a heavy duty carabiner or padlock. The top of the container would have X Heavy Duty steel lids and include a single bar IDLock system. A carabiner or padlock could be used in the IDLock housing for security. The estimated price for this container is \$1,669.00 FOB Abbotsford. This price would be reduced for a quantity order.

WASTELINE CONTAINERS  
REAR VIEW - 4 YARD  
FRONT LOAD SLOPER CONTAINER  
SLIDING REAR DOOR  
OPENING 24" X 36" W/L  
ALL DIMENSIONS MIL.





## 3.2 Ongoing Priorities

Ongoing priorities are those that need to continue throughout the implementation period, and beyond, in many cases. They are the infrastructure that supports becoming—and being—a Bear Smart Community.

### 3.2.1 Maintain the public education program

An effective, multi-faceted public education program is absolutely essential to ensure that residents, seasonal workers, and visitors understand the need to be Bear Smart. The BC Conservation Foundation's Bear Aware program, the BRO program of the Conservation Officer Service, and Whistler's Get Bear Smart Society all provide a variety of effective public education activities in Whistler. Until recently, the Bear Aversion Research Team also provided information to government agencies and the public. RMOW should continue to support widespread public education programs in partnerships with the GBS, COS, and Bear Aware.

The municipality should also provide comprehensive information on its website. Currently, much of what's on the site is difficult to find (*Residents* tab to *Municipal Services* tab to *Animal Control and Wildlife* tab and finally to *Black Bears* tab). The municipality should put a "Bears" tab on its home page with links to all the relevant information, as well as to local and provincial groups. All residents and visitors need to get a stronger message about bears in Whistler.

Signage must include a reminder that bears can be encountered anytime and anywhere within Whistler and that, while they are not generally aggressive toward people, any bear has the potential to become dangerous. Everyone needs to know how to respond safely to any encounter with a bear. Consistent and best practices safety information (e.g., Do not run or scream; Back away slowly; Pick up small children or pets; etc.) should be provided on all public messages.

In 2008 and 2009, Whistler participated in the BC Conservation Foundation's Bear Aware Program by co-sponsoring a Bear Aware Program Delivery Specialist to provide information to the public and coordinate efforts with the RMOW Bylaw Services and Conservation Officers. Much of the public education material used by the Bear Aware PDS has been developed and tested in other locations, although there was some adaptation to target messages specifically for Whistler.

The Whistler public can report human-bear conflicts to the 905-BEAR information phone line which connects them to one of three locations of their choice: the provincial call centre in Victoria, Whistler Bylaw Services to report non-compliance with the RMOW Garbage Disposal and Wildlife Attractants Bylaw, or to the Bear Aware PDS (summer) or the GBS Society (winter). Calls are tracked through these services. Monitoring and reporting conflicts is important in order to determine what kinds of problems the community is having, where the hotspots are, at whom to target concentrated education and enforcement efforts, and to assist the local Conservation Officers and municipal bylaw enforcement personnel in their work.

### 3.2.2 Maintain and support the activities of the Bear Working Group

In their report, Davis et al (2002) describe the importance of the Bear Working Group (also called a Bear Stewardship Committee) as the most effective way to implement the Bear Smart Community Program. Decisions on the process, delivery, and implementation of the Program must come from a community that takes ownership of it. Community ownership implies that the community has a desire to reduce preventable destruction of bears.

The Davis report states that primary objectives of the Bear Working Group are to:<sup>21</sup>

- ◆ Initiate and support the development of the “Bear Smart” Community Program.
- ◆ Review management strategies and options for attaining “Bear Smart” Community status.
- ◆ Initiate and review the Problem Analysis.
- ◆ Establish a Human-bear Conflict Management Plan that will implement the recommendations from the Problem Analysis.
- ◆ Monitor the progress of the program.
- ◆ Provide annual reports to identify the progress of the program, evaluate the success or failure of management strategies, and provide direction for the program for the following year.

A Bear Working Group of one form or another has existed in Whistler since before the Bear Smart Community Program existed. The first one—called the Black Bear Task Team—started in 1997 and was made up of essentially the same membership as today’s Bear Working Group.

Whistler’s current Bear Working Group was formed in November 2002. One of its major roles is as an overall coordinating and decision-making body that has a strong working relationship with all agencies involved in public education, infrastructure improvements, policy development, and conflict monitoring. Appendix 3 details some of the conflict-reduction items the BWG has completed in 2008. RMOW needs to continue its ongoing support of the BWG.

### 3.2.3 Reduce the availability of other bear attractants

The second most common bear attractants are landscaping trees and plants that form berries, followed by fruit trees, birdfeeders, backyard pools and ponds, hot tubs, gardens and composts, barbecues, patios, pet foods and dishes, any small livestock (such as chickens) and their feed, dumping of garden wastes onto public property (including unwanted fruit), even beehives. In order to prevent attracting bears into residential areas in their search for food, all these need to be made bear-proof or otherwise inaccessible to bears. Once garbage becomes significantly less available, these can provide sufficient attraction to keep bears searching for food rewards in neighbourhoods and so must also be reduced. Most of these attractants are covered under Whistler’s new bylaw, which states:

#### *WILDLIFE ATTRACTANTS*

*17. No person shall store, handle or dispose of wildlife attractants in such a way that they are accessible to dangerous wildlife.*

*18. No person shall feed or attempt to feed dangerous wildlife, or deposit wildlife attractants in a place or manner that attracts dangerous wildlife.*

*19. No person shall place or allow a bird feeder on a parcel so that the bird feeder is accessible to dangerous wildlife. Every person who occupies a parcel must keep the area below a feeder free of the accumulation of seed and debris from the feeder at all times.*

*20. No owner or occupier of a parcel shall permit or allow fruit from a tree or bush on a parcel to accumulate on the tree, bush or ground such that it attracts or is likely to attract dangerous wildlife.*

*21. No person shall fail to take remedial action to avoid contact or conflict with dangerous wildlife after being advised by a designated bylaw enforcement officer that such action is necessary.*

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<sup>21</sup> Davis et al, Ibid. p. 19.

The bylaw doesn't directly mention the need to clean off barbecues after every use (storing grease cans/drip pans indoors); backyard pools and ponds, or hot tubs, or list them in the definition of "wildlife attractants," but these could be construed to be wildlife attractants under some circumstances.

Landscaping plants that attract bears, other than fruiting trees or bushes, are also not specifically addressed in the bylaw. However, RMOW has a policy for new developments that require a municipal permit. The list of the most highly bear-attractant plants that should not be used for landscaping in Whistler developments is presented in table 6 below. There is also a complete ("working") plant list of native and alien trees, shrubs, wildflowers, grasses, as well as recommended native tree and shrub species for restoration and enhancement of fish and wildlife habitat available from the Community Planning Department at Whistler's municipal office.

**Table 6. Draft list of bear food plants included in RMOW Recommended Plant List<sup>22</sup>**

Planting guidelines (municipal policy) exist for developments requiring municipal approvals (development permits, etc.).		
Plants ranked "high" are not permitted in the "No Go" Zone (Whistler Village and Upper Village). Outside the "No Go" Zone, must be planted 25 metres away from high use human areas, e.g., playgrounds, doorways, residences		
Not intended to be applied to single family homes or retroactively		
Scientific name	Attractant Rating	Common name, comments
<i>Sorbus sitchensis</i>	High	Sitka mountain-ash
<i>Cornus stolonifera</i>	High	Red-osier dogwood
<i>Amelanchier alnifolia</i>	High	Saskatoon berry
<i>Oplopanax horridus</i>	High	Devil's club
<i>Vaccinium membranaceum</i>	High	Black huckleberry
<i>Vaccinium alaskaense</i>	High	Alaskan blueberry
<i>Vaccinium ovalifolium</i>	High	Oval-leaved blueberry
<i>Vaccinium parvifolium</i>	High	Red huckleberry
Other <i>Vaccinium</i> spp	High	Various common names
<i>Rubus spectabilis</i>	High	Salmonberry
<i>Gaultheria shallon</i>	High	Salal
<i>Aronia melanocarpa</i>	High	Black Chokeberry
<i>Arctostaphylos uva-ursi</i>	High, fall & spring	Kinnikinnick
<i>Rosa pisocarpa</i>	High	Wild rose
<i>Shepherdia canadensis</i>	High	Soopollalie, soapberry
Horsetail, grasses, sedges	Medium to High	Depends on species and season
Clover, alfalfa, dandelion	High	
<i>Rubus armeniacus</i>	High	Armenian (wild; aka Himalayan) blackberry; aggressive invasive
Domestic fruit trees	High	All species (plums, apples, pears, etc.)

<sup>22</sup> This is now in RMOW landscaping policy. The list was compiled from a variety of sources, including Get Bear Smart Society, Wayne McCrory, RPBio, and will be updated as new information is available.

Lower Ranked Bear Food Plants		
General Use Guidelines: Use in areas of low human use; avoid cluster planting or planting in combination with high ranked bear food plants near high human use areas, e.g. building entrances, playgrounds		
Scientific name	Attractant Rating	Common name, comments
<i>Viburnum edule</i>	Medium, fall & spring	Highbush-cranberry
<i>Ribes bracteosum</i>	Medium	Stink currant
<i>Ribes lacustre</i>	Medium	Black gooseberry/swamp gooseberry
<i>Prunus virginiana</i>	Medium	Choke cherry
<i>Rubus idaeus</i>	Medium	Red raspberry
<i>Rubus parviflorus</i>	Medium to Low	Thimbleberry
<i>Sambucus racemosa</i>	Low	Red elderberry
<i>Rubus leucodermis</i>	Low	Black raspberry
<i>Corylus cornuta</i>	Low	Beaked hazelnut
<i>Lonicera involucrata</i>	Low	Black twinberry
<i>Mahonia nervosa</i>	Low	Dull Oregon-grape
Outstanding Questions (not yet ranked)		
<i>Prunus padus</i>		European Bird Cherry—potential bear food. Status unknown; best to avoid
<i>Berberis thunbergii</i> DC.		Japanese barberry—potential bear food. Status unknown; best to avoid
<i>Ribes alpinum</i>		Alpine currant—potential bear food. Status unknown; best to avoid
<i>Rosa medilland</i>		potential bear food. Status unknown; best to avoid
<i>Rosa rugosa</i>		Pavement rose—potential bear food. Status unknown; best to avoid
<i>Viburnum burkwoodii</i>		Burkwood viburnum—potential bear food. Status unknown; best to avoid
<i>Rosa nutkana</i>		Nootka rose—potential bear food. Status unknown; best to avoid

### 3.2.4 Modify bylaws and step-up compliance enforcement to Zero Tolerance

Whistler’s Garbage Disposal and Wildlife Attractants Bylaw No. 1861, 2008 requires that no person shall dispose of or store domestic garbage, waste, or recyclable material except into a container that is a wildlife-resistant container or is located in a wildlife-proof enclosure. In addition, no person shall store, handle, or dispose of wildlife attractants in such a way that they are accessible to dangerous wildlife. The fines range from \$200 to \$500 per day of non-compliance and, if non-compliance continues, the file can be moved to the provincial court system where fines of \$2,000 to \$10,000 or jail time of up to three months can be levied.

A schedule is attached to the bylaw containing guidelines for building wildlife-proof garbage enclosures based on the best knowledge of the Bear Working Group. The guidelines are the standard against which all garbage enclosures are measured to determine compliance with the bylaw and to assist residents when building a new enclosure or renovating an existing structure. Development Permit information has also been modified to be specific to garbage enclosures, streamlining the permitting process for building, or renovating waste enclosures.

Once Bear Smart bylaws are in place and the public is well-informed about them, compliance should be stepped up to zero tolerance because it only takes one resident out of compliance to spoil it for all the others in a neighbourhood who are working to prevent attracting bears. In fact, provincial statistics indicate that, in general, about 5 percent of households cause 95 percent of the problems.

Bylaw Services staff are enforcing the bylaw with zero tolerance based on complaints received, information from the Whistler Bear Working Group (including from GBS or Bear Aware PDS information), and staff observations. Other existing bylaws, such as those regulating unsightly properties and dogs on leashes, can have some application for Bear Smart practices and should be investigated to determine opportunities.

Bylaws, coupled with green space, OCP, and development plans and permits that recognise the need to keep bears and people separated, will result in fewer bears being destroyed, less property damage, and an increased safety margin for Whistler's residents and visitors.

### 3.2.5 Modify green space development and management planning

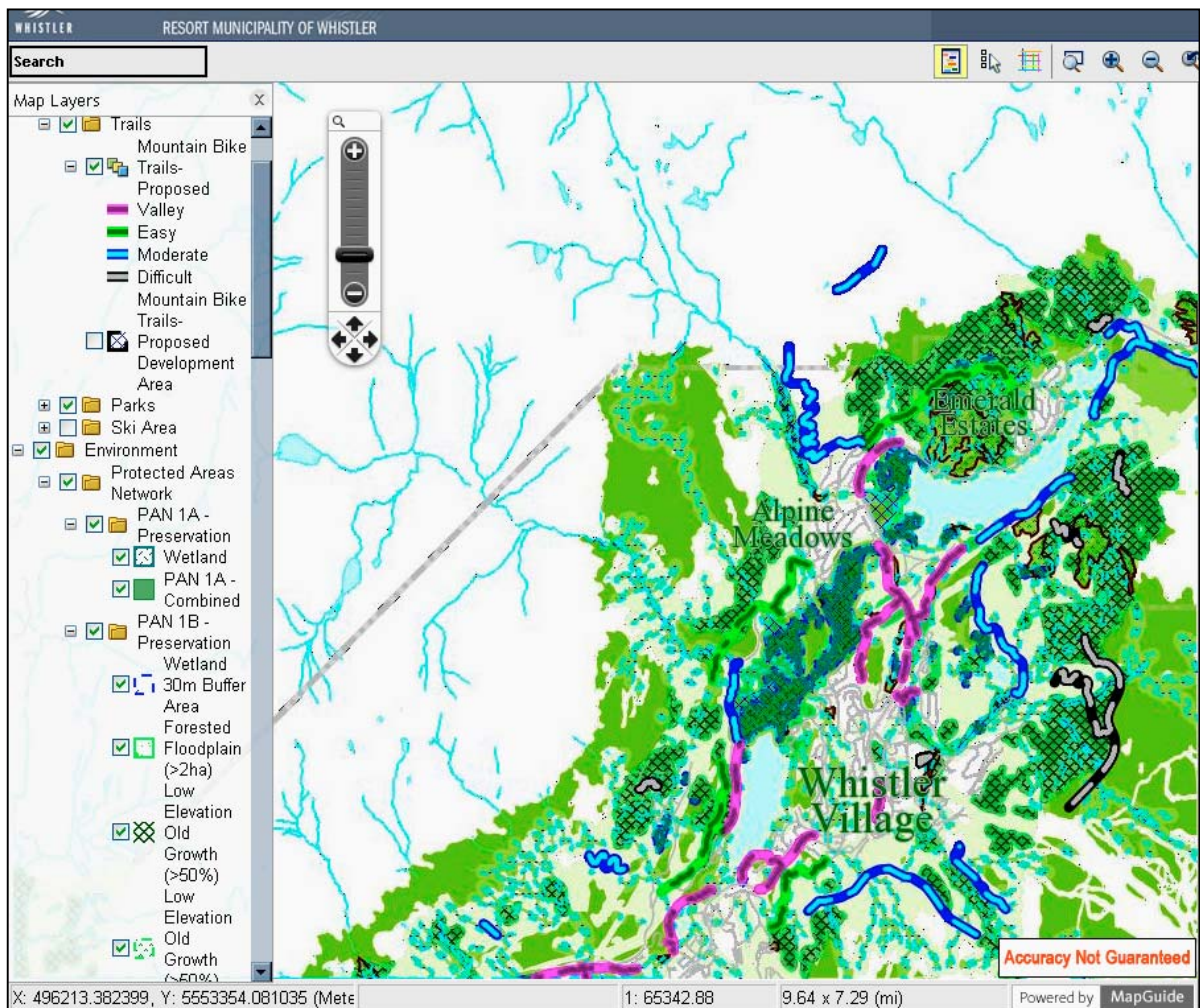
In addition to the easy accessibility of garbage and non-natural food attractants, how we use and develop land, including where we locate and how we manage our green spaces, has a major influence on whether or not bears come into conflicts with people in communities. Residential, commercial, and recreational developments that do not take into consideration the prior use of habitats by bears is one of the causes of the steep rise in human-bear conflicts over the past number of years. Green spaces, ravines, forested areas, wetlands, and creeks give bears sufficient cover and/or incentive to move into residential and commercial areas that have high attractants. Wherever possible, golf courses, new parks and recreational trails, including bike trails, should avoid being established in known bear habitats and movement corridors. If this is unavoidable, then extra measures will need to be put in place to inform people to be aware that a bear could be encountered at any time and what to do if this happens.

Whistler plans to modify its Official Community Plan in 2010 by adding the Protected Areas Network (PAN) amendment, which describes a wide range of land use strategies and ecosystem designations. The map on the next page shows the detail to which RMOW staff have assessed a wide variety of ecosystems. The PAN policy provides specific guidelines to protect sensitive and important ecosystems, and general development guidelines to address wildlife habitats. Staff have the ability to direct proposals in a manner appropriate for reducing human-bear conflicts. The PAN identifies sensitive ecosystems and outlines development guidelines to reduce impacts to them.

In addition, the RMOW's recommended plant list discourages the use of landscaping plants that are known bear food attractants (table 6 on p. 29) from all developments that require municipal approval, as well as on municipal lands, such as Whistler Village and parks. This list is not intended for application to single family homes, but public education on reducing bear attractants, including what plants people use to landscape their properties, is directed at residents.

In order for residents to fully enjoy parks, trails, and walkways, municipal staff will need to implement measures to prevent bears from threatening the safety of users. Some measures to do this include siting children's playsets well away from dense shrubs and tree cover, removing garbage cans from the immediate vicinity of play areas, and posting temporary warning signs when bears are known to be in the area. The RMOW should also have a well-publicised policy on when and how to temporarily close parks and trails for safety reasons when the need arises.

The sidebar in the map below shows the highly detailed map layers used by the municipality to determine where there is bear (and other wildlife) habitat relative to development proposals.



Whistler has also defined “no-go zones” in the Main and Upper Village areas where there is zero tolerance for the presence of bears because of the high density of people and human use areas (see map of “no-go zones” on following page). When a bear is reported to be in one of these areas, all possible efforts will be made to keep bears out and provide the highest level of response in order to protect people and property.

### 3.2.6 Modify the Official Community Plan and future development plans

The Bear Smart Community Program requires that all planning and decision-making documents be consistent with a human-bear conflict management plan. In other words, planning documents need to show how bear use areas are kept separate from areas that people use, as much as possible. And where it isn’t possible, they need to describe mitigation efforts required to help keep conflicts to a minimum, such as a targeted public education program and prescriptive waste management bylaws.



No-Go Zones in Whistler; map provided by Lori Homstol and Nicola Brabyn of the Bear Aversion Research Team (BART).

Development and building permits for multi-family complexes, commercial areas, and recreation developments will be subject to the new waste management bylaw, which requires bear-proof waste management to be built into the development. The use of landscaping plants that developers can use will also be governed by RMOW policy in order to prevent the installation of bear food attractants at developments, whether commercial, recreational, or residential.

## 4.0 NEXT STEPS

### 4.1 Resources Needed To Implement The Bear Plan

When people see the word “resources,” they usually first think of financial resources. Certainly those are required to fully implement this Bear Plan. However, not all the actions needed have to cost money, or very much, or even on a permanent basis. Re-allocating staff resources, if only temporarily, and offering various kinds of support to local residents and community groups, can also help achieve some of the items on the list of criteria to successfully implement this Bear Plan. The other major “resource” needed is a commitment to becoming Bear Smart. Everyone, from BC government agencies to Whistler’s municipal council, to its residents, can contribute to this goal.

1. Develop a Bear Smart Community Vision Statement

To save money, this could be done primarily through an online process and through the local media, at least to all but the final stage. It could also be accomplished as part of any OCP or new neighbourhood or development plan reviews. It does not need to be an expensive item, although it does need to reflect all segments of the community, including, as much as possible, the visitor and transient worker segments.

2. Implement Fully Effective Waste Management for all Whistler Residents

This is probably the most difficult, and possibly the most expensive, item on the list. Implementing a comprehensive and effective bear-proof waste management system for Whistler will undoubtedly be a significant challenge, both financially and socially. Given the initial costs to install additional bear-proof garbage and recycling depots or facilities, as well as commercial and residential complex dumpsters throughout Whistler will be high, but costs all around will come down fairly rapidly. Seeking funding only from government sources will likely take considerable time to achieve. Consider looking for private, business, and foundation sponsorship (e.g., Adopt-a-Can programs) of bear-proof bins, such as for schools, public spaces, and other high-profile locations.

One idea is to put a voluntary \$1 charge on a popular tourist amenity, such as all hotel rooms in Whistler. This could be an ongoing and dedicated fundraising program to help pay for fully bear-proofing all waste and recycling activities. Most visitors to Whistler would be quite willing to pay an additional \$1/day per hotel stay, for instance, to increase safety and help conserve local biodiversity. This plan could also give Whistler a marketing advantage in this age of environmentally conscious tourists, especially from European visitors.

3. Establish and Maintain an Area-wide Public Education Program

Provincial, regional, municipal, and organisational funding and collaboration (as currently exists to a large degree) can continue to achieve this goal. Commitment from the provincial government and the municipality to continue sharing the costs of providing a Bear Response Officer, and between the municipality and Bear Aware for a Program Delivery Specialist can help to keep this activity affordable for both. Whistler’s Get Bear Smart society should also receive consideration, not only for the considerable public education activities it performs, but also for the more in-depth work it does in conducting surveys and lobbying public and private agencies.

4. Maintain an Area-wide Human-bear Conflict Monitoring Program

Conflict and sighting monitoring in Whistler is done by calling the Bear Line at 604-905-BEAR (2327). Callers can report to the Conservation Officer Service provincial call centre in Victoria,



RMOW Bylaw Services, or the Bear Aware PDS (in summer) and the Get Bear Smart society the rest of the year. Reporting bear sightings is important so their movements can be tracked and for immediate information/assistance about conflicts with bears.

5. Enforce Bylaws to Zero Tolerance Compliance

Whistler's new waste management bylaw is already being enforced. No extra resources are required to achieve this criterion.

6. Green Space Development and Management Resources and Development Planning Resources

Both of these will likely require a minimal amount of financial resources to allow for public consultation and feedback. Some non-financial resources (such as changing staff duties) could be achieved through re-allocating staff, however temporarily.

Continuing its strong commitment to reducing conflicts between people and bears, Whistler can become a Bear Smart Community. Agencies, businesses, organisations, and individuals are all potential sources of the ideas, the funding, and the drive needed to achieve the goal. With the dedicated planning and coordination provided by the BWG, Whistler could implement this Bear Plan over the next five years... or sooner.

## 4.2 Moving Forward to Attaining Bear Smart Community Status

### 4.2.1 Benefits of and Barriers to Bear Attractant Management

In the introduction to her report on community-based social marketing, Visser<sup>23</sup> (p. 3) says:

*Surveys across North America...indicate that most residents know how to not attract bears to their backyards, and that a substantial portion of people care about bears and wildlife. Yet bear-human conflicts continue, largely because of attractants, and many bears are killed every year as a result.*

*Why are people not motivated to take action, even when they say they believe in peaceful coexistence with bears? Why do people's actions differ from their words? Why aren't our "bear smart" programs working to the extent we would like? How can we foster the human behaviour changes that will lead to truly bear-smart communities?*

Changing human behaviour is the key to achieving Bear Smart Community status. By using community-based social marketing (CBSM) strategies to promote bear smart behaviour in people, we can achieve a higher degree of success than by a public education campaign alone. CBSM "looks at understanding human behaviour." How do we do this?

- ◆ Look at who is doing the activities/behaviours you want and who is not.
- ◆ Break down behaviour changes into segments.
- ◆ Identify barriers—the PERCEIVED ones, since they are the reality for those who hold the perceptions.
- ◆ Identify motivators/incentives.
- ◆ Identify useful tools to influence behaviour.
- ◆ Develop measurable programs to change behaviour.

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<sup>23</sup> Visser, Lorna. 2007. *Using community-based social marketing strategies to promote bear smart human behaviour: A review of the literature on bear-human conflict in a CBSM context.*

CBSM is not a simple public education campaign uniformly applied to all communities. It requires conducting prior research to discover that community's barriers to bear attractant management.

The benefits of managing bear attractants accrue to individuals, communities, provincial and local governments, and society as a whole. Individuals can better enjoy their homes and local recreational pursuits, such as bringing in the groceries, or walking along a community trail, when they don't have to be so concerned about encounters with food-conditioned and human-habituated bears.

Communities benefit by the increased safety of residents, less damage to municipal and private property (and lower insurance rates), and a better sense of well-being for everyone. Neither will so many community members become upset when bears have to be destroyed.

Local and provincial authorities won't have to spend so much time and money on compliance and enforcement, and can better direct their energies and expertise to the many other tasks for which they are responsible.

Society as a whole is much better served when bear populations are in balance with the local environment. If we managed our garbage and other food attractants more successfully, there would be far fewer bears in the local (urban and suburban) environment. The benefits of bear attractant management are:

- ◆ safer neighbourhoods
- ◆ compliance with provincial and local/regional regulations and bylaws
- ◆ no requirement to pay fines for non-compliance
- ◆ reduction in human-bear conflicts
- ◆ residents and tourists not upset when bears are killed
- ◆ bear populations are not artificially increased because of access to garbage/food attractants

The barriers to managing bear attractants—at our homes and throughout our communities—may be internal or external. For example, lack of knowledge is an internal barrier, as is not caring about the issue. An example of an external barrier is lack of convenience to bear-proof one's garbage either because bear-proof containers are unavailable or unaffordable, or if a resident is not mobile to take their garbage to a central bear-proof drop-off station.

The primary barriers identified in a number of communities where the research has been done, include:

- ◆ lack of education/information
- ◆ disinterest
- ◆ inconvenience
- ◆ lack of household and institutional money to pay for bear-proof equipment
- ◆ social/political inertia to pass bylaws that would require either local governments or local residents to spend the money needed to achieve fully bear-proof waste management

This latter one is a very real—and very valid—barrier in all the communities in which I have undertaken human-bear conflict related work.

The two biggest barriers to bear-proofing our communities are knowledge and funding. We are continually increasing our knowledge and understanding of the complexities of human-bear conflicts, but we may never know everything about them. For now, we need to do all we can to commit the resources needed to act on what we do know. Success will come incrementally with increases in both knowledge and funding for the programs and activities that are required to make Whistler a Bear Smart Community.

In his report<sup>24</sup> to the BC Environment ministry, Christopher Parker’s priority recommendation is: “Provide more resources at all levels; e.g., designated staff, field staff, program staff.” He further says, “Expand education programs and efforts with improved products and programs based on focused social marketing and research to break down barriers to action and acceptance of message.”

Overcoming the various kinds of barriers and inconvenience for people to practice Bear Smart waste management is key to successful reduction of human-bear conflicts. Based on information from the Bear Aware Program Delivery Specialists, the table below highlights some of the “historic” solutions that eventually proved to be unsuccessful, along with proposed new solutions.

**Table 7. Proposed solutions to overcoming barriers to effective bear-proof waste management**

Inconvenience/Problem	“Historic” Solution	Reasons For Failure	Proposed Solution
People without vehicles cannot get to depots.	Use of bear-proof containers at bus stops (even though this is not allowed); stockpiling waste at home until someone can take it to one of the drop-off depots.	Household garbage in bus shelter bins attracts bears, particularly if they get over-filled. Stockpiled waste, whether indoors or out, is smelly and attracts bears.	Take a trailer with garbage and recycling bins to the neighbourhoods on different days.
Bears get into bus stop bins, tip them over, scatter contents	When time permits, clean up the mess.	Not all the bus stop bins are properly anchored to concrete platforms. Often, the backs are not kept locked.	Anchor all bus stop bins and keep them locked at the back until they are emptied by staff.
Residents leave doors and windows open, especially in warm weather, enabling easy access by bears that may be attracted by smells coming from residence.	None, other than public education, including media coverage of issue.	Other than the likelihood that not everyone has got this message, there are always people who seem to think that “it won’t happen to them.”	Increased and specifically targeted public education effort.
Some compactor sites are over-used and containers get overloaded by commercial garbage.	Proposal to staff depots to prevent commercial use, especially for construction waste or other non-household garbage.	Bins and compactors are not emptied frequently enough in high use seasons.	Sites need to be in a completely bear-proof enclosure.
People abuse the commercial dumpsters and cause damage that renders them not bear-proof.	Urge contractor to fix latches, doors, hinges, and enclosures to make dumpsters and bins bear-proof.	People make changes to enable easier use for themselves.	Develop regular inspection and maintenance schedule and assign responsibility.
The public does not perceive a high level of support by the RMOW Council for Bear Smart practices.	Continuing media articles about the problems associated with bears becoming food-conditioned.	Unknown, aside from Council’s continuing concern about costs.	Devise a funding scheme to help defray costs for taxpayers and alleviate Council’s concerns.

<sup>24</sup> Christopher Parker, *Recommendations for Black Bear/Human Conflict in British Columbia*. 2008. Executive Summary.

## 5.0 CONCLUSION

The widespread use of bear habitats by people resulting in the loss of natural habitats for use by bears, and the increased availability of anthropogenic food sources (e.g., garbage, landscaping plants, gardens)—or both—are the primary reasons for increased human-bear conflicts. While people have stepped-up activities in response to this increase, so have bears increased their activities, as is evident by their bolder behaviours in human-use areas, such as the growing number of bears entering homes and businesses and the increased number of both minor and major injuries to people in some South Coast communities.

The effects on both people and bears are varied, but, generally, are quite negative:

- a. increased frustration by some people caused by their perception of why their behaviours need to change in order to prevent conflicts (e.g., restrictions on recreational activities in some areas or at some times of year, the need to expend personal energy for waste and other attractant management)
- b. increased cynicism about how COs and RCMP respond (or not) to human-bear conflicts, especially when bears are shot
- c. increased financial costs to people and government agencies
- d. more bears becoming habituated and food conditioned
- e. increased public safety hazard
- f. increased “aggressive” behaviours (particularly defensive aggression) exhibited by bears towards people, and concomitant fear felt by residents and visitors
- g. detrimental effects to bear populations (e.g., artificial increase in number of bears in a local area, population sink effects)<sup>25</sup>

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<sup>25</sup> Increased caloric intake by bears, whether from garbage or other anthropogenic sources, causes bears to be more fecund. This is one reason why urban areas adjacent to bear habitat, especially in BC’s South Coast, generally contain more bears than the area would usually support. Dispersal of young bears does not occur in a “natural” way, causing them to want to stay in areas where they can more easily get food. Population sink is a term in “source-sink dynamics,” a theoretical model used by ecologists to describe how variation in habitat quality may affect the population growth or decline of organisms. Simply, a “source” is when a population experiences more births than deaths. A “sink” is when the population experiences more deaths than births. In real life, things are rarely simple. It is vitally important, however, to understand population dynamics (of a given species) for many reasons, including developing species AND land management practices, conservation guidelines, and regulations (e.g., bylaws).

Given that when bears get many more calories from garbage, etc. resulting in more offspring, it would seem that the “source” half of the equation is in operation. However, when we have more bears in our communities, there are greater numbers of conflicts, resulting in more bears either being moved out of the area or, more commonly, destroyed. So the “sink” half of the equation comes into play. Wildlife biologists cannot yet say what the ultimate effect will be on bear populations in the South Coast region of the province. One thing they do seem to agree on is that, in the long run and given that ultimately humans will win out over bears, the population is likely to decline significantly. How much is too much? Since we don’t know, it’s best to “normalise” things as much as we can by reducing anthropogenic sources of food for bears.

McCrary, in his Bear Hazard Assessment for the North Shore (2006), describes “population sink” as: *a biological black hole where bears are constantly drawn into areas of high artificial food sources, become problematic, and are removed from the area (translocation) or the population (shooting them) in an endless cycle. Management costs to address these...situations are high, [as are] property damage, stress on residents, ... on the bears, and the increased risk of human injury from such close proximity between people and bears.*

Because access to garbage is by far the major non-natural attractant in every community, it is incumbent on people to stop allowing bears access to garbage. This should be the primary focus of our activities.

While it may be considered overly dramatic to characterise the issue of human-bear conflicts as a war—certainly some people in every community don’t even perceive that there’s a problem—there is definitely a battle going on. Possibly, it is merely one aspect of the age-old battle between “man and nature.” On the other hand, the very fact that people are spending more time and money on trying to prevent conflicts and looking for solutions could be an indication that we desire to learn how to better collaborate with nature, in this case, bears.

The new goal to achieve “zero waste” exhibited by municipalities all over British Columbia—aside from the need to reduce the amount of land that is converted to landfills—is another indication that people desire to live in better harmony with nature. The two goals—that of wanting to live in harmony with the environment and of achieving “zero waste”—are compatible. Whistler is to be congratulated for wanting to achieve these goals, and their activities to do so should be supported in every way possible. It is in this context that the recommendation to confer Bear Smart Community status on Whistler—once it commits to a fully effective waste management system—is made.

While “zero waste” is a component of Whistler’s “2020 Comprehensive Sustainability Plan,” it is a long-term objective that will likely be even more difficult to achieve than a bear-proof waste management system, especially if and when the municipality expands its collection of compostables (organic wastes). By making a bear-proof system mandatory, people’s behaviours can be regulated and compliance enforced. The practices required to achieve zero waste, however, occur at a more personal behavioural level and are, therefore, practically impossible to enforce. Whistlerites already relate to bear issues very strongly. RMOW and the BWG should use this high level of awareness as a stepping-stone to the ultimate goal of zero waste and, in the meantime, reap the benefits of becoming a Bear Smart Community.



## 6.0 LIST OF CONTACTS

Heather Beresford, RMOW, Environmental Stewardship Manager

Sylvia Dolson, Get Bear Smart Society

Tony Hamilton, BC Ministry of Environment

Sandra Smith, RMOW, Bylaws Supervisor

Lori Homstol and Nicola Brabyn, Bear Aversion Research Team (BART)

Chris Doyle, Conservation Officer Service

Drew Milne, Bear Response Officer (COS)

Michelle Sims, Bear Aware PDS

Jeff Rollins, Rollins Machinery, Langley

John Nesbitt, Wasteline Containers, Abbotsford

Russ Roy, Critter Guard, Squamish

Mike Badry, BC Environment

Wayne McCrory, McCrory Wildlife Services

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## **APPENDICES**

Note: There is a lot of information in these appendices that may be very familiar to some readers of this report. However, there will be others reading this report for whom these appendices will be necessarily informative about the particular topic and who may need this information in determining if and when to confer Bear Smart Community Status on Whistler.

**Appendix 1 Current Status of Recommendations of the Bear Hazard Assessment (McCrorry 2004) & Implementation Priorities in the Proposed Bear-People Conflict Prevention Plan for Whistler (McCrorry 2005)**

**Appendix 2 Bear-Human Interaction Definitions**

**Appendix 3 August 2008 Work Plan of the Whistler Bear Working Group**

**Appendix 4 Miscellaneous Media Articles (2008-2009)**

**Appendix 5 Bear Smart Best Practices for Whistler Businesses (and others)**

**Appendix 6 Risk Assessment and Risk Management**

## APPENDIX 1

### Current Status of Recommendations of the Bear Hazard Assessment (McCrorry 2004) and Implementation Priorities of the Proposed Bear-People Conflict Prevention Plan (McCrorry 2005)

The following is a summary of the main recommendations presented in the Whistler Bear Hazard Assessment (McCrorry 2004) and the implementation priorities contained in the Proposed Bear-People Conflict Prevention Plan (McCrorry 2005) for Whistler.

Recommendation	Current status
<b>Highest priority recommendations</b>	
Develop a more consistent application of non-lethal and aversive-conditioning management.	BRO, BART working on this; as well, there is annual classroom and field training of RCMP for A-C activities; training manual has been distributed to all RCMP members.
Bear-proof the highest risk children's play areas, including at 7 municipal parks and 2 schools by bear-proof fencing, relocating playsets away from proximity to bear habitats/ dense cover.	Blenz play area near Marketplace was probably the highest risk location, but the adjacent forest (Lot 1/9), which acted as a staging area for bears to enter the village, was cut down in 2008 to begin construction on Celebration Plaza, so risk eliminated. Situation at other playgrounds unchanged.
Develop a way to reduce the potential for collisions with bears by mountain bikers on trails.	Need to check with Arthur DeJong on this.
Eliminate illegal camping in green spaces and develop a proper campground for seasonal workers where they can stop providing food/non-natural attractants.	This problem may be temporarily worse this summer as the Riverside tenting sites won't be available. They are building a new spa/camping area on the other side of Fitzsimmons Creek that won't be open until 2010. Bylaw patrols parks and parking lots to remove people who are camping illegally. Since Lot 1/9 was clearcut, this area no longer provides sleeping spots for the homeless. A BearSaver waste bin has been placed in the day skier parking lot for motorhomes and buses, and this can at least provide a secure site for disposing of garbage.
Adopt a zero tolerance policy towards all garbage and other food attractants being made available to bears and other dangerous wildlife.	The new bylaw is stronger on this and Bylaw Services are using it to take a stronger stance, such as the proactive efforts in the Village last year.
Either fix the electric fence problem at the landfill or convert it to a transfer station. Either way, make all of it bear-proof.	There is no longer a landfill in Whistler and the transfer station and composter are surrounded by electric fences with electrified cattle guards at the entrances.
Fully bear-proof any transfer (or garbage drop-off) station.	The Callaghan Transfer Station is ringed by an electric fence. The other two drop off depots are not fully fenced with no plans to do so. Waste containers are bear-proof when used properly. Area needs to be kept clean, especially waste residue that drips onto the ground, in particular from the new compost receptacle.
Replace current drop-off system with bear-proof neighbourhood communal waste containers.	Recommendation was rejected by RMOW Council.

Recommendation	Current status
Have all containers inspected monthly by an independent inspector (including those at ski hills) to ensure lids, latches, etc. are in good working order.	Municipal crews check all municipal bins while doing their rounds. GBS conducted an audit of waste enclosures, with the NO-GO Zone as a priority, and residential areas secondly. Noncompliant stratas and businesses were asked to bring their enclosures or bins into compliance with the new bylaw. COS is issuing DWPOs to help with compliance.
Improve public education so all new residents and visitors know that bears can be encountered anywhere in RMOW and what to do if they encounter one.	Bear Aware program delivery specialist in Whistler for past 3 years; no current funding for subsequent years. Initially, PDS worked for GBS, then RMOW took over program. There is Bear Aware info included in the Whistler FAQ booklet, <i>Survival Guide</i> , as well as many other info sources for new residents about bears and garbage disposal options.
<b>Lower priority recommendations</b>	
Put bear-aware signage on all playgrounds, trails, ski hills, bike parks/trails, etc. Be prepared to implement temporary closures	New signs erected in some areas and more signs will go to the day skier parking lot in 2009
Ensure future municipal planning and development incorporates consideration of cumulative impacts on bear habitats/movement corridors, including for roads, subdivisions, trails, bike trails, etc.	Included in Protected Areas Network guidelines.
Design new human-use areas and developments so they don't have cul-de-sacs that bulge into bear habitats.	This has not been written into any planning documents and would only be happening by chance, if at all. New subdivisions at Whistler Athletes Village and at Rainbow.
Reduce non-native trees and shrubs that produce berries that attract bears to developed areas. Pass a bylaw to prohibit using landscaping species that are bear foods.	Mountain ash removal program in Village area over last few years. The list of high priority bear food plants was added to the Village Design Guidelines and prohibited from use in the village core No-Go Zone. GBS is working with businesses and stratas to remove mountain ash trees in No-Go Zone, as well as beside entranceways, busy walkways, and beside children's playsets in all areas of RMOW. A significant number of trees have been removed, but work on this is continuing.
Consider planting these species in areas away from human use areas, such as on adjacent slopes.	Whistler Blackcomb's Habitat Improvement Team has helped plant about 200 mountain ash trees in two areas away from high human use areas (100 on Whistler Mountain, 100 on Blackcomb Mountain). The program will continue if trees are available.
Continue with an education program specifically targeted to construction workers not to put food wastes into the open demolition bins.	Program done in Whistler Athlete's Village in 2008. GBS is working with Carney's to place appropriate signs on bins.
Develop the proposed bear-proof community compost system.	Done. Large steel compost bins for receiving residential compost at both recycling depots and the commercial composter at the Callaghan transfer station.
Remove non-bear-proof cannister from Whistler Secondary School.	Done.
Ensure that bears cannot access birdfeeders (especially in winter).	The new bylaw doesn't outlaw birdfeeders but says all attractants must be inaccessible and if a problem occurs, Bylaw Services will request it be taken down and owner must comply.

Recommendation	Current status
Increase patrols in green spaces to prevent accumulation of garbage by itinerant campers.	Done and ongoing.
Replace food-hanging system at Riverside Resort & Campground with metal storage lockers and bear-proof cans at the mini-golf.	Not yet done.
Continue to support research on non-lethal bear management, DNA research, and mapping of bear habitats in the entire area. All research projects need to produce final reports to use for management, public education, etc.	Bear Aversion Research Team (BART) is doing this.
Identify highway and railway crossing sites for bears and other wildlife and encourage research on means to reduce mortalities, including further reducing speed limits.	Not done, but people at the Highway Improvement Project feel they have created ways for wildlife to cross under the highway. However, since there is no fencing along the highway that would lead wildlife to use the one or two underpasses, wildlife is not encouraged to use them.
Continue to support public education, including putting signage at north and south entrances to Whistler re possibility of encountering a bear anywhere in the area.	There is an information sign at south entrance to town at the highway pullover across from Function Junction, but you have to pull over to read/see it, doesn't work for people who are driving by. When the new Visitors Centre is built south of town, there will be some Bear Smart interpretive signage.

## APPENDIX 2

### Bear-Human Interaction Definitions<sup>26</sup>

Most of the following definitions apply to terms used to describe bear-human interactions:

**Aggressive behaviours:** Defensive: Defensive aggression is usually provoked and results in the bear swatting, charging, etc. when approached too closely. Offensive: Offensive aggression is usually initiated by the bear as attempted predation, tearing tents without food attractants, etc.<sup>27</sup>

**Anthropogenic foods:** Foods generally derived directly or indirectly from humans—usually non-natural (e.g., garbage), but can also be natural (e.g., fruit trees, artificially planted landscaping (e.g., mountain ash trees)).<sup>28</sup>

**Bear/human interaction:** Any of the various activities and their effects involving bears and humans, including sightings, encounters, and incidents.

**Bear Plan:** a human-bear conflict prevention (or management) plan.

**BHA:** a Bear Hazard Assessment.

**Bluff or False Charge:** A type of defensive or dominance behaviour exhibited by bears that can be characterised by a bear running or moving towards a person but veering off or stopping before making physical contact. This is almost always accompanied by other ritualised displays, like huffing, jaw-popping, or slapping the ground.

**BRO:** a Bear Response Officer, a position within the Conservation Officer Service.

**BWG:** the Bear Working Group comprised of public and private agencies and public interest groups.

**CO/COS:** a Conservation Officer or the Conservation Officer Service (a branch of BC Environment).

**Dangerous wildlife:** Under BC's Wildlife Act, specifically the Carnivore species: bear, wolf, coyote, and cougar.

**Displacement:** Encounters where the bear is displaced and runs or walks away.

**Dominance behaviour:** Body language and vocalisations used by bears to establish dominance hierarchies. Bears may also use this behaviour when interacting with people. The behaviour includes direct eye contact, jaw-popping, huffing, swatting, and bluff or false charges. This behaviour is considered defensive posturing rather than aggressive behaviour.<sup>29</sup>

**Encounter:** When bear is aware of human presence, regardless of whether or not the human is aware of the bear; bear may ignore people (because habituated to people), or may approach people.

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<sup>26</sup> Most of these definitions come from the following publication: Wellwood, Debbie. 2001. *Hazard Assessment of Bear-Human Conflict in Stewart, British Columbia—Phase 1*, Raven Ecological Services, Smithers, BC; p. 7; others have been adapted from general research and information from Wayne McCrory and others specialising in bear biology.

<sup>27</sup> BC Ministry of Environment. Dec 2002, Third Ed. *Human-bear Conflict Prevention Plan for Parks and Protected Areas in British Columbia*. Victoria, BC; pp. 73.

<sup>28</sup> Dolson, S., and C. Sherlock. 2006. *Responding to Human-Bear Conflicts: A review of non-lethal management techniques*. Prepared for Conservation Officer Service. Get Bear Smart Society, p. 8.

<sup>29</sup> Dolson, S., and C. Sherlock, *Ibid*, p. 8.

**Food-conditioned:** Bears that have been rewarded or positively reinforced with non-natural foods, such as human food or garbage, and as a result have learned to associate humans and/or human developments with the potential to obtain food. Bears that are both human-habituated (see below) and food-conditioned generally pose a serious threat to human safety. As a result, these bears are frequently killed (Herrero 1985, Ciarniello 1997).

**Human-habituation:** The reduction or absence of an avoidance or fear response that a bear can learn from neutral interactions with people and that are not threatening, painful, or injurious (to the bear). Bears can be human-habituated without being food-conditioned.

**Incident or conflict:** The most serious bear-human interaction. An interaction is considered an incident or conflict when any of the following occur:

- ◆ physical contact between a person and a bear
- ◆ damage to or loss of property or food
- ◆ high intensity charge by a bear toward people
- ◆ people have to take extreme evasive action in response to a bear
- ◆ people use a deterrent on a bear
- ◆ a bear is translocated or destroyed

**Non-lethal Bear Management:** A term used to describe various bear behaviour modification methods, including active approaches like aversive conditioning, bear-shepherding and hazing, as well as passive methods such as electric fencing.<sup>30</sup>

**Non-natural foods:** Foods made available to bears by people and that are either not natural in a bear's diet or have been taken out of a natural/wild context and placed in a settled area (such as some tree or shrub species that people use for landscaping purposes, in a backyard garden, agricultural setting, etc.).

**Observation:** When a human sees a bear but the bear is unaware of the human.

**Zero Tolerance:** Conservation Officers will issue a Dangerous Wildlife Protection Order (DWPO) for any garbage/attractant infraction, which carries a fine of \$545 when these are not obeyed.

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<sup>30</sup> Dolson, S., and C. Sherlock, *Ibid.* p. 9

## APPENDIX 3

### EXAMPLES OF CONFLICT-REDUCTION ITEMS COMPLETED (from the August 2008 Work Plan of the Whistler Bear Working Group)

Activity	Lead Agency (ies)	Status
<b>Human-Bear Conflict Management Plan, Bylaw &amp; Bear Smart Application</b>		
Finalise CMP	RMOW-Heather (Maggie Paquet)	Completed, fall 2009
Present Garbage Disposal & Attractants Bylaw to Council	RMOW-Heather	passed, is being enforced
RMOW continue to co-fund Bear Response Officer	Heather	For 2009 program
Draft Bear Management Protocols (underlying principles)	BART, RMOW, GBS	1st draft complete
<b>Public Education</b>		
Develop communications plan for coordinating GBS and RMOW information/education programs	RMOW, GBS	ready
Weekly contributions to "The Question" and other local media	GBS, BART, PDS	Ongoing
<b>Public Information Presentations/Workshops:</b>		
• AVP workers	COS	done
• Bike Park Staff	PDS (Bear Aware)	done
• RMOW Parks Staff	PDS	done
• WAV staff	Lori (BART)	done
• Chateau Health & Safety Day	PDS	done
• Kiewit construction staff	GBS	done
• Golf Course Staff, Ziptrak staff	PDS	done
• Provide Bear Aware info to Village Hosts	PDS	done
• Children's Art Festival	PDS	done
<b>Signage &amp; Targeted media/info messages</b>		
• Banner: Creekside Bridge	GBS	done
• Sandwich Board Signs – install, move as required	PDS, Bylaw, GBS	Ongoing
• RMOW parks (Dave Patterson) - DO NOT FEED BEARS	GBS	Ongoing
• on highway, digital message boards with changing text	GBS	Ongoing
• banners/flags along village streets	GBS	Ongoing
• gateway to Whistler (statues)	GBS	Ongoing
• Ads on Whistler Transit, bus schedules	GBS	Ongoing
Mail out targeted letters to residents	RMOW, GBS, PDS	Ongoing
Set up PSA (for visitors) on Village TV Screen	RMOW, GBS	done
Best Practices Guide for Whistler Businesses	GBS	done
Radio Ads - Free PSAs on Mountain FM (Joe Polito)	GBS	done

Attractant & Waste Management		
• Audit waste bins & enclosures	GBS, RMOW Bylaw Services	Ongoing
• Bear Saver Bins - determine success/failure - survey users; analyse bear-garbage conflicts	GBS	done
• Work with businesses/stratas to remove mtn ash (or pick berries) in No-Go Zone	GBS	Ongoing
• Secure pedestrian bins on RMOW property to ensure they can't be tipped, latch down back	RMOW	Ongoing
• Work with businesses and stratas that own pedestrian bins to ensure they can not be tipped, latch down back	Bylaw Services	Ongoing
• Work with businesses and stratas to remove any non-bear-proof bins	RMOW, GBS	Ongoing
• Bylaw Services Audit of No-Go Bear Zone	Bylaw Services	daily patrol
• Bus Stop pedestrian bin audit	PDS	done
• Bear Report Card - Whistler Audit	BWG	Dec. 31st annually



## APPENDIX 4

### MISCELLANEOUS MEDIA ARTICLES (2008-09)

#### 1. Summer bear season turns ugly (cover story)

Three more shot, one person injured; officials urge vigilance in securing attractants, reporting sightings **David Burke, Whistler Question, August 14, 2008**

Whistler – What had been a relatively low-key summer in terms of the number of bear-human conflicts in Whistler turned ugly in the past week as conservation officers shot three bears in a five-day period after the animals entered buildings and, after departing, appeared determined to attempt entry again.

The first of the three incidents, which took place last Thursday (Aug. 7) at the Peter Kiewit Sons Co. highway construction yard near the mouth of the Callaghan Valley, left a female Kiewit employee with cuts and bruises after a bear swiped her aside with its paw while trying to escape from a trailer on the Kiewit site.

The woman was the second person injured by a bear in Whistler in as many years, following a 2007 incident in which a resident had his face scratched by a bear that was trying to escape from a home. That was the first time anyone with knowledge of bear-human conflicts in Whistler could remember a person being injured by a bear.

Officers also shot and killed a yearling male bear on Sunday (Aug. 10) after it pushed its way through the door of a Creekside and showed little fear of humans, both when a resident made noise and threatened it with a golf club while it was still indoors and when Conservation Officer Drew Milne approached it outdoors a few minutes later.

On Monday (Aug. 11) at around 6 p.m., a large, 20-something-year-old male known as Fitz, which had been known to enter homes last year, entered a home on Par Road in Whistler Cay Heights through an open window and ate a loaf of bread.

After a female occupant – who lives at the residence with a small child – yelled at him, Fitz left.

Not long after RCMP were called and Milne, the Whistler Bear Response Officer, arrived on the scene, Fitz returned and appeared ready to attempt another entry before Milne shot the animal, he said.

“That happens often – a bear, once it gets a reward, wants to get back in for more,” Milne said.

Last Thursday’s incident involved a large male bear that entered one of the trailers on the Kiewit site and began foraging through food scraps and wrappers inside. The same bear had earlier entered other structures, including a nearby Blackcomb Snowmobiles facility, Conservation Officer Chris Doyle said.

The female Kiewit worker was injured when she entered the trailer and startled the animal.

“It rushed at her and swatted her across the torso,” Doyle said. “She was scratched and bruised, and was taken to the Whistler Health Centre by ambulance for treatment.

“Anytime a bear is in a confined space with a person, it’s going to want to get out and it’s not going to stop just because a person is there. We were just happy that the person wasn’t more seriously hurt.”

When officers arrived at the Kiewit site and began to set traps in an attempt to capture it, the animal returned. Officers finally decided that its behaviour made it a public safety threat and shot it, Doyle said.

“It just seemed likely that that sort of behaviour was going to continue,” he said.

Fitz was the seventh bear to have been shot and killed after entering structures in Whistler this year. Last year’s total was 12. Before the recent string of incidents, it appeared that the summer of 2008

would see far fewer bears killed but now, with an iffy berry crop on the mountains and the normally busy autumn still ahead, it appears likely that that number will be achieved or eclipsed.

Milne said the total of four bears shot before last Thursday might not have been an accurate barometer of the level of activity. He said that so far this month, bears invading homes and other structures have been an “almost daily” occurrence. Whistler bears’ conflict behaviour appears to be escalating, he said.

“It’s not unusual that there are lots of break and enters, but it’s unusual that I would catch up with two in two days, and it just shows how bold they’re becoming,” he said. “They’re just becoming so habituated that they just don’t care anymore.

“It’s very concerning,” Milne added. “It’s terrible to have to be destroying these beautiful creatures, and we need the public’s help again. I can’t urge that enough.”

Milne said it’s important that residents keep their doors and windows secured, that they keep garbage and other attractants in secure areas inside, and that they report bear sightings and incidents immediately so that officers can try to alter their behaviour before they become a safety risk.

Sylvia Dolson, executive director of the Whistler-based Get Bear Smart Society, echoed those comments and said the recent string of incidents shows bears’ adaptability. She also urged citizens to contact their elected leaders and encourage them to move toward a more bear-resistant garbage collection system.

“We must be more vigilant. The onus is on individual residents to first of all do their part at home and second of all demand a bear-proof waste system from Council,” Dolson said.

“The solution is to make the community as unattractive as possible. The less reasons the bear has to enter town and seek food, the better. If the risk is higher than the reward, bears will not continue to enter town.”

Dolson just returned from a visit to the northwest B.C. community of Stewart and was impressed that the town had adopted a garbage collection system identical to the ones in place in the Rocky Mountain communities of Banff and Canmore, Alta. The system, which involves a network of large, bear-proof neighbourhood bins, is far more effective at reducing bear-human conflicts than is Whistler’s current compactor-based system, she said.

Last year, after a presentation by Dolson and other members of the Whistler Bear Working Group, Whistler lawmakers voted not to adopt a similar system largely because of the expense, but resolved to keep the door open to a change if and when money becomes available in the future. Mayor Ken Melamed also pointed out that the system is less effective than Whistler’s current system at encouraging residents to recycle.

Milne said he doesn’t think some people realise the importance of reporting bear sightings. “A couple of residents came up to me and said, ‘We like the bear in our neighbourhood. We don’t mind them being in our garden,’” he said. “But that just leads to escalating levels of conflict and ultimately can lead to their destruction. It’s kind of ironic that people would let their love for the bears cause them to not call in incidents.”

To report a bear sighting, call (604) 905-BEAR (2327), 1-877-952-7277 or #7277 or a mobile phone.

## 2. EDITORIAL: Make bear-proof trash bins an election issue Whistler Question, August 14, 2008

Whistler – The extensive media attention given to recent bear-related incidents in and around the Vancouver suburb of Coquitlam – including one quite horrific attack on a woman that took place in her backyard – seems almost gratuitous from Whistler’s vantage point. After all, over the past three summers, home break-ins by bears have become commonplace here, and this week a B.C. conservation officer said break-ins have been an “almost daily” occurrence in the past few weeks.

The shooting of three bears in past week, as well as the injury to a Kiewit worker by a large bear as it rushed out of a trailer at the highway construction company’s yard near the mouth of the Callaghan Valley, should make us all take note of how lucky we’ve been – knock on wood – that a bear hasn’t yet caused serious injury, given the number of potentially dangerous encounters that have occurred here.

We fully appreciate the fact that Whistler’s lawmakers face a conundrum over what to do, or not to do, with regard to the community’s garbage collection system, which has repeatedly come under criticism for its failings in this regard. A new, more effective system would undoubtedly cost millions, but at least partly because of all the Olympic-related projects on the go, there’s little money in the Resort Municipality of Whistler’s coffers for a system of neighbourhood bins that’s in place in communities such as Stewart, B.C., and Canmore and Banff, Alta. We also appreciate the fact that such a system doesn’t encourage recycling the way the current compactor-based system does, though we don’t think it would take much to overcome that lone shortcoming.

Responsible management of the public purse, though, is only one of the many aspects of leadership. Ensuring the public’s safety is another of those and, we believe, takes precedence in this instance. The unfortunate attack that occurred in Coquitlam could, after all, have occurred here. In fact, it’s almost surprising that it didn’t, given the relative frequency of bear-related incidents we’ve experienced here. While our first concern must be for the victims of such incidents – both the woman who was attacked in Coquitlam and the who suffered less severe injuries here – the leaders of a world-class resort also have to think about the potential impacts on the resort’s image. We have little doubt that they would be significant and, quite likely, persistent.

Apart from the obvious need for Whistlerites to redouble their efforts to properly manage garbage and other attractants in the short term, it seems locals can only hold their breath and hope nothing untoward happens between now and whenever a waste collection system that is easy to use, and that is much more bear-friendly than the current one, is put in place.

What’s abundantly clear to us is that this issue needs to be front-and-centre during this fall’s municipal election campaign. While we share the business community’s budgetary concerns, the current Council has, in the past year or so, had to resort to borrowing to cover short-term budget shortfalls on some recent projects, including the Olympic athletes’ village/Cheakamus Crossing neighbourhood. What would be so horrible about borrowing another \$2 to \$3 million for much-needed bear-proof neighbourhood trash bins, concrete pads and a truck capable of emptying them?

In light of what’s happened over the past few weeks, we think there’s an urgent need, and that all that’s required now is the political will.

### **3. Bear destroyed in Emerald—Bears won't hibernate if there's still food available, says COS** By Jesse Ferreras, Pique Newsmagazine, December 11, 2008

It may be winter, but bear season is still here. The BC Conservation Officer Service was forced to kill a black bear in Emerald Estates in the final week of November, the 11th bear it's had to destroy in 2008. The bear, a 2½ year old, 110-pound male named "Oval," had been in the Emerald area for the past three weeks. It wasn't a very big bear but it nevertheless caused some damage in the neighbourhood. The bear forced its way into a house through the front door and got a food reward while inside. A trap was set in that location the morning after the home invasion, but at the time it didn't catch the bear.

Conservation Officer Drew Milne said that "lots of dogs" got into the trap and set it off, making it more difficult to catch the bear itself. The Conservation Officer Service later received more reports about property damage involving the bear. It got into a garage and tore it up, according to Milne, taking some boards off the walls.

Milne said that some bears are still awake at this time of year. "If there's food still available, they'll never actually go down to hibernate." Milne said Oval had been a "fairly high conflict bear" and had to be relocated three times. Relocation involves moving bears less than 10 kilometres away—beyond that, officers would be taking bears out of their natural home ranges. That's called translocation.

Oval also had two aversive conditioning programs performed on him. Those programs, administered by the COS, can include deterrents such as rubber bullets and foul-tasting chemicals to teach bears to associate humans and human food with a "scary or negative experience," according to the Ministry of Environment.

Neither relocation nor aversive conditioning worked on Oval, who kept coming back to residences for more. "We can't relocate or translocate a bear that has broken into a dwelling or a structure, as it's a public safety concern," Milne said.

Oval is the 14th bear killed in Whistler in 2008. Eleven have been killed by the COS, two were killed in highway accidents and another was shot in early May near Whistler Secondary School. That's two more bears than were killed in Whistler in 2007.

Milne is sounding the same warning he issued throughout the summer—keep your food secure and your doors and windows locked. He's imploring people not to become complacent simply because it's winter. "There's still a threat that bears will invade your house or any structure that has food available that's not secure. There's less bears around now, however there's still a few that are in and around the village and surrounding subdivisions."

Milne knows for sure that there are three bears roaming around Whistler, but there could possibly be more between Function Junction and Emerald Estates. Milne also provided Pique with statistics from a road check held between 10 a. m. and 3 p.m. just south of Pemberton on Nov. 30. The road-check was related to hunting, angling, and harvested forest products.

Officials with the RCMP, the COS, and the Ministry of Forests and Range checked 45 hunters and seized a deer from one of them. The hunter had shot the deer illegally so the officials took it from him, as well as his firearm. Another hunter was ordered to hand over a deer some days after he was stopped at the road-check. He complied. Both hunters are facing charges under the Wildlife Act, but Milne did not specify what they were.

All told, there were three charges under the Wildlife Act issued at the scene, as well as two warnings and two 24-hour license suspensions for alcohol- and drug-related offences.

[http://www.piquenewsmagazine.com/pique/index.php?cat=C\\_News&content=Bear+destroyed+1550](http://www.piquenewsmagazine.com/pique/index.php?cat=C_News&content=Bear+destroyed+1550)

#### **4. 2008: year of the big bear Too much garbage, too many dead bears overshadow progress. Jeff Gailus Special to The Question**

The year 2008 will be remembered as the year of the big bear. When researchers checked their traps in the Alta Vista subdivision, they found the largest black bear ever recorded in the Whistler area, a 485-pound male that Conservation Officer Chris Doyle called a “belly dragger” because of its immense girth. We won’t know where he went until he’s spotted on a hillside eating clover. His neck was so big the research team couldn’t find a radio collar big enough to fit, so he had to be content with attaching a tag to the bear’s oversized ear.

These are the kinds of stories that remind us how good it feels to live in the world of bears. Whistler is blessed to share the valley bottom and mountainsides with approximately 100 members of the species *Ursus americanus*, the American black bear, and for the most part this coexistence is a peaceable one.

But 2008 was a bloody year for Whistler’s black bears, and an indication that there is still much work to be done to make Whistler safe for both its ursine and human residents. Human-caused bear mortalities were up 43 percent over last year. It all began when Murray was shot in late May for breaking into a home, a precedent that started a record year for unwelcome house calls by our curious, four-legged neighbours. The bear season ended in late November when Oval, a two-year-old male, was trapped and shot after entering a house, putting home entries up 25 percent. Human injuries, too, set a new record, jumping from one in 2006, the first ever, to four in 2008.

“We lost a lot of well-known and treasured bears this year: Murray, Rocky, Fitz, Phillip, Oval, and many others that we didn’t know so well,” says Sylvia Dolson, Get Bear Smart Society executive director. “Little Jasmine, Jeanie’s daughter, was translocated and we don’t know her fate. It’s all very sad and, worst of all, needless.”

Despite years of hard work and many significant improvements, an unsustainable 15 bears were killed (and another two relocated) because of ongoing negative interactions with humans. Eleven bears were destroyed for entering homes and other buildings, and a 12th was shot after nipping an Australian tourist in Whistler Village. Two bears were killed in motor vehicle collisions, and one was poached right out of the school yard (that cub’s killer was later fined \$3,000 and prohibited from hunting or possessing firearms for three years).

“These trends are extremely distressing,” Dolson says. “The consequences for bears are deadly, and human safety risk is increasing at an alarming rate because more people are interacting with bears than ever before. Losing twice as many bears as is deemed sustainable by the British Columbia Ministry of Environment is simply unacceptable. We need to do something about this before it’s too late.”

Like every year, there were some significant incremental improvements to Whistler’s Bear Smart efforts. A detailed waste audit resulted in improved bear-proofing of condominium garbage sheds, and ongoing efforts by the Get Bear Smart Society, Bear Aware and the Whistler Bear Project continues to increase awareness. Perhaps the best news was the completion of the Conflict Management Plan and the new attractant management bylaw, which will be finalised and in place before the bears emerge from their dens in the spring.

But if Whistler is ever going to become an official Bear Smart community – and, more importantly, eliminate bear-caused human injury and reduce human-caused mortality to sustainable levels – the community needs to come together and find a way to better manage bear attractants around homes and businesses. While residents often like to point the finger at visitors and so-called “transients,” it is locals who are responsible for most of the more serious bear-human conflicts.

“Unfortunately, the locals are habituated to the bears,” says Drew Milne, bear response officer with the Conservation Officer Service. “Everyone says they’re Bear Smart, but they’re not. They don’t secure their homes and they don’t call when bears are around.

“The best thing they can do is to keep doors and windows secured, secure garbage and other attractants, and call in when bears are around so we can identify which ones are in conflict.” This allows Milne and the Bear Aversion Research Team (BART) to more effectively teach bears to stay out of developed areas.

Relocating bears is a Band-Aid solution that doesn’t really doesn’t solve the problem, says Lori Homstol, a bear researcher with BART. “And aversive conditioning works under some conditions, but it’s certainly not a silver bullet, especially when attractants are still so readily available to bears.”

Whistler is not the only community to struggle with the problem of living in close proximity to bears, though the high density of black bears here and the sprawling layout of the community make it more challenging. As Dr. Stephen Herrero pointed out in *The Whistler Question* earlier this year, Yosemite had serious problems with habituated black bears in the 1980s and ’90s, as did Canmore and Banff.

But all of these resort communities—Yosemite, Canmore, Banff—solved their bear problems by making garbage and other attractants off-limits to bears. If Whistler wants to keep its streets safe for both people and bears, it has little choice but to implement a solid waste management system that keeps garbage out of the mouths of bears and in the bear-proof bins where it belongs.

As I wrote earlier this year, there is no other option. Humans are clearly here to stay, and getting rid of the bears would require an all-out war involving poison and pump-action shotguns that the public would simply not support.

No one wants to get rid of the bears, anyway. They are an important part of the economic and social fabric of the community, one that deserves the investment of time and money that is required to implement a truly bear-proof waste management system. Let’s put our heads together and make it happen, so we can call ourselves a Bear Smart community by the time the world arrives on Whistler’s doorstep for the 2010 Olympics.

Jeff Gailus is an award-winning writer, member of the Get Bear Smart Society, and frequent visitor of Whistler’s beautiful black bears.

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<http://whistlerquestion.com/article/20081224/WHISTLER14/312249998/1028/2008-year-of-the-big-bear>

Published December 24, 2008 Bear Tracks

## 6. The 2008 Year in Review

David Burke, Whistler Question, December 31, 2008

**May:** Whistler RCMP arrested a West Vancouver man in connection with the shooting of a bear cub outside Whistler Secondary School on May 8. The yearling cub had been a regular visitor to the school over previous few weeks, and students had become quite fond of it, students said. An alert mom who was dropping off her son at school reported seeing the suspect get into a car near Highway 99 and reported the car’s licence plate to police. The 24-year-old suspect was arrested a short while later.

**August:** What had been a relatively low-key summer in terms of the number of bear-human conflicts turned ugly in early August when conservation officers shot three bears in a five-day period after the animals entered buildings. The first, at the Peter Kiewit Sons Co. highway construction yard mouth of the Callaghan Valley, left a female Kiewit employee with cuts and bruises after a bear that had entered a trailer on the site swiped her aside as it exited.

**October:** A young West Vancouver man who pleaded guilty to two charges in relation to the wanton shooting death of a bear cub in Whistler in May suffers from anxiety and depression and his actions were “happenstance,” not a premeditated act, his lawyer told a judge at an Oct. 17 sentencing hearing. Judge Douglas Moss called Andrew Dylan Robertson’s actions “cruel” and “outrageous” as he fined the 24-year-old \$3,000, ordered him to serve a three-year hunting and firearms prohibition, and to perform 30 hours of community service.

**The Question’s Quote Quiz for 2008**

*Comments, and some of the people, who made news in Whistler, Pemberton*

WHISTLER – The Year 2008 was certainly a significant one in terms of news in Whistler and Pemberton, and included some memorable remarks from those who helped make that news. As we’ve done for each of the past few years, The Question presents its annual Quote Quiz. The rules: Simply match the quotes with the names of those who uttered them below. “Any time a bear is in a confined space with a person, it’s going to want to get out and it’s not going to stop just because a person is there. We were just happy that the person wasn’t more seriously hurt.” - Chris Doyle

## APPENDIX 5

### BEAR SMART BEST PRACTICES GUIDE FOR WHISTLER BUSINESSES

Dozens of bears are killed each year in Whistler as a result of conflict with people. It only takes ONE food or garbage reward for a bear to learn that humans are a source of easy, high calorie meals. Most bears are killed for becoming conditioned to accessing human food and garbage; some die in vehicle collisions. As Whistler residents, and stewards of the earth and its inhabitants, we can all work together to make a difference.

#### **Here is what you can do to help:**

##### ***All about garbage and waste***

- a. Keep all garbage and recycling stored inside a secure building or in a bear-proof enclosure at all times. **This is the law** in accordance with the Resort Municipality of Whistler GARBAGE DISPOSAL AND WILDLIFE ATTRACTANTS BYLAW NO. 1861, 2008
- b. All bear-proof enclosures should be hosed down regularly to reduce odours and the likelihood of attracting a bear. Bears have an incredible sense of smell, about 7 times better than a bloodhound's or 2,100 times better than yours.
- c. Keep all access doors and latches properly secured. Report any maintenance issues to your manager (doors that don't close properly, missing keys to access garbage facilities, etc.)
- d. Recycling includes empty bottles, plastics, glass, tin, and aluminium that once contained food or drink. Any paper products with food residue should be thrown in the garbage; these are considered an attractant and not recyclable because they are contaminated. In addition, clean paper/cardboard recycling is not required to be kept in a bear-proof container or enclosure. Don't put pizza boxes, etc. into non-bear-proof recycling containers because these will attract bears, and aren't recyclable anyway.
- e. Don't dump food waste or food packaging (including paper cups, pop cans and bottles) into construction dumpsters. These dumpsters are usually open on the top and are therefore not bear-proof.
- f. Don't store food or food waste, garbage, empty drink cups/cans/bottles, food wrappers, or other odourous attractants in your vehicle. Bears have been known to break into vehicles just for an empty chocolate bar wrapper.

##### **Other ways to help**

- a. Keep all doors and windows (not just ground level access points, as bears are good climbers) closed and locked to minimise the possibility of a bear accessing your establishment, especially back doors and windows to kitchens.
- b. Keep loading bay access doors closed and secured unless a staff member is present. All loading bays should be hosed down regularly to reduce odours and the likelihood of attracting a bear.
- c. Don't keep improperly stored attractants on your premises! Attractants include but are not limited to: food, garbage, recycling, compost, bird feeders, pet food, barbeques, food deliveries, dirty plates & utensils, empty drink cups/cans/bottles, and food packaging.



- d. Fruit trees and landscaping plants, such as mountain ash, Saskatoon berry, devil's club, salmonberry, blueberry, huckleberry, salal, and black twinberry, among others, can also attract bears. Do not plant these on your property in potentially high conflict areas (such as beside walkways, entranceways, or children's play areas). If they are already present on your property, they should be removed.

### **Just for Restaurants and Food Vendors**

#### ***In addition to following the above practices, you should also note the following:***

- a. 1. Keep patios clean at all times. Non-bear-proof garbage cans are not permitted on patio decks. Please keep bus bins inside as well.
- b. 2. Grease bins must be bear-proof and secured at all times. They must be washed down regularly (at least once a week, depending on usage) with hot soapy water to reduce the likelihood of attracting a bear.
- c. 3. Don't leave your yummy soups and sauces cooling outside; they are also yummy for a bear. Even in the winter, as some bears have become winter active in the last few years, they are in and out of hibernation often seeking out a quick snack.
- d. 4. Time your food deliveries so that a staff member can meet the truck and promptly put away food deliveries. Whistler bears have actually been known to decipher delivery routines!

All of the above practices are in accordance with Resort Municipality of Whistler GARBAGE DISPOSAL AND WILDLIFE ATTRACTANTS BYLAW NO. 1861, 2008 and the BC Wildlife Act. By not following these practices, not only could Whistlers Bears be jeopardised, but local businesses could also be fined daily - up to \$500.

### **Education**

- a. Have a supply of bear information brochures on display in your business at all times. The Get Bear Smart Society provides Bear Smart Whistler Visitor's Guides free of charge. Call us and have some delivered to your business.
- b. Distribute and discuss bear information brochures with all employees. We also provide Bear Smart Whistler Resident's Guides free of charge. Call us and have some delivered to your business.
- c. Encourage guests to learn more about bears by offering them a bear information brochure.
- d. Encourage guests to participate in safe bear viewing activities, where bears can be seen in their natural habitats - such as from mountain gondolas/chairlifts, the Creekside Bear Viewing Platform, or by participating in a Bear Viewing Tour run by Whistler-Blackcomb.

### **What to do if you see a bear in the Village...**

Act responsibly and calmly. In the event of a bear sighting – assess the situation as follows:

- a. If the bear is just passing through and avoiding humans and non-natural food sources – no action is necessary.
- b. If the bear is accessing garbage or other attractants, call RMOW Bylaw Services (935-8280 day or 905-7489 after hours). After the bear has left the area, remove the attractant. Or call 604-905-BEAR (2327) and choose option 2.
- c. To report a human-bear conflict e.g. if the bear is threatening human safety, other animals or destroying property call 604-905-BEAR (2327) and choose option 1. All officers have been trained in non-lethal tactics and carry a wildlife kit in their vehicles – the bear will not be destroyed unless it poses an *immediate* threat to human safety or has entered a human-occupied structure.

### **Inform all staff to follow these guidelines.**

Many long time Whistler residents can personally testify to seeing a bear access various restaurants and business locations. While such bear behaviour does provide a good story to tell, sadly it often leads to the death of a bear. Be the leader that you know you can be – take charge and help reduce Whistler bear fatalities by setting a good example and setting others straight regarding this important issues! Your actions DO make a difference.

"Nobody made a greater mistake than he who did nothing because he could only do a little."

- Edmond Burke

## APPENDIX 6

### RISK ASSESSMENT AND RISK MANAGEMENT<sup>31</sup>

*Every day, officials charged with protecting public safety...must determine when there is sufficient scientific evidence to support government intervention and decide what actions are most appropriate. Nearly all regulatory decisions are made with incomplete scientific knowledge and data. Scientific certainty is an elusive, if not impossible, goal. Reducing risk involves two overlapping stages: risk assessment and risk management.*

Risk assessment is a useful analytical tool to determine the potential effectiveness of a regulatory decision; certainly, it provides a means to organise and present technical information to decision-makers.

Risks may be characterised in a quantitative or qualitative manner. Risk assessment is a function of two independent factors: the potency (or danger) of, and exposure to, a hazard. As the bridge between risk assessment and risk management, risk characterisation combines exposure data with the effects of a hazard...to determine the risk. It should include a description of the strengths, limitations, and uncertainties associated with the risk assessment process.

*Risk management* involves considering alternative strategies and taking actions to reduce or minimise risks. Risk management decisions take into account not only the risk assessment, but often numerous other factors, including...the feasibility and cost of preventing or managing the risk, social and behavioural factors that influence risks, and societal preferences.

[T]he benefits of reducing risks to public safety and the environment are typically more difficult to quantify than the costs. It is difficult to put a monetary value on maintaining the viability of natural resources or the benefits for future generations, yet there is often widespread public agreement that a resource [wildlife, for example] should be protected or maintained.

The public wants strong environment, health, and safety laws, and they want to participate in the decisions influencing their lives... [T]he important elements of a risk assessment and the key... considerations in making a risk management decision should be communicated...to interested citizens, who should be provided opportunities to express their views...Ultimately, a risk management decision involves a broad range of considerations, including economic feasibility [and] societal values...

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<sup>31</sup> [www.nnic.noaa.gov/CENR/riskwht.html](http://www.nnic.noaa.gov/CENR/riskwht.html), accessed November 2008; URL no longer active; US Nat'l Science & Technology Council; adapted.