RECOVERY PLAN FOR GRIZZLY BEARS IN THE NORTH CASCADES OF BRITISH COLUMBIA

January 19, 2001

Questions & Answers

Introduction

British Columbia is home to an estimated minimum of 13,000 grizzly bears, approximately half the Canadian population and one quarter of the grizzly bears remaining in North America. The current provincial population is only half of estimated historic numbers in the province and grizzly bears have been extirpated from approximately 10% of their former range in British Columbia. This decline in numbers and range can be attributed to unsustainable levels of human-caused mortality and the loss of effective habitat. As a result of their vulnerability to human impacts, grizzly bears are Blue-listed in British Columbia and are listed as Vulnerable nationally in Canada.

Due to persecution by humans as well as habitat impacts; including human settlement, hydroelectric development, road building, resource extraction and agriculture, the range of grizzly bears has been significantly reduced in North America. A number of the populations along the southern portion of the current range of grizzly bears are considered to be at risk of extirpation.

The grizzly bear population in the British Columbia portion of the North Cascades is quite small (i.e. <25 individuals) and is threatened by human activities. This population is shared with the State of Washington, where grizzly bears are listed as Threatened under the federal *Endangered Species Act* and are designated as "Endangered" by state legislation. As a result, recovery of grizzly bears in the North Cascades will require cooperation between the United States and Canada. The joint U.S./British Columbia commitment to recover of grizzly bears in the North Cascades is stated through a Memorandum of Understanding with the Interagency Grizzly Bear Committee (IGBC) signed on behalf of the Deputy Ministers responsible for Environment, Parks and Forests.

This brochure is intended to provide the public with information and answers to the most commonly asked questions regarding: Grizzly Bear Ecology, Grizzly Bears in the North Cascades, Recovery in the North Cascades, The Recovery Plan Process, Grizzly Bear Management, Augmentation and Human Safety.

Grizzly Bear Ecology

Q. What is the life span of a grizzly bear?

A. The average life span of a grizzly bear in the wild is 15 to 20 years. The oldest grizzly bear ever captured is believed to be a 34-year-old female that lived in the Cabinet Mountains of Montana.

Q. How large are grizzly bears? Are they different in size from other kinds of bears?

A. The average spring weight (after hibernation) of an adult male bear in the Rocky Mountains is 180kg; a female weighs about 110kg. A grizzly bear may gain over 50kg during the summer and fall. Brown and Kodiak bears living in coastal areas are the same species as grizzly bears, but they are much larger as a result of their richer food sources (predominantly salmon) and the dominance of larger bears in breeding.

Q. What is the difference between a grizzly bear and a black bear?

A. The black bear is a different species of bear, smaller in size and more common in forested habitats throughout North America. Black bears and grizzly bears live in similar habitats except the black bear is rarely found above timberline. Black bears and grizzly bears both vary in colouration from nearly white to cinnamon-like to black, therefore colour alone is not a good way to tell the two bear species apart. Juvenile grizzly bears are no larger than adult black bears; therefore size is not a reliable indicator either. The distinguishing features of a grizzly bear are its long, curved front claws, a concave-shaped nose in profile and a muscular hump at the shoulders.

Q. What is the reproductive life of a grizzly bear?

A. Female grizzlies usually begin to breed at five to six years of age. Grizzly bears usually have one to four cubs (average two) born in the den from late January to early February. At birth the cubs' eyes are closed, they have very little hair and they weigh less than 0.5kg. On average grizzly bears give birth to cubs every three years and cubs accompany their mother until she has another litter. Grizzly bear mothers are highly protective of their young and will risk death to protect them. Female grizzlies usually begin to breed at five to six years of age. Male bears do not participate in caring for the young and sometimes even attempt to kill cubs. This tactic if successful will usually bring the female into estrus and the male will have an opportunity to breed.

Q. What do grizzly bears eat?

A. Grizzly bears eat both plants and animals (meaning they are omnivores) and are very opportunistic, taking advantage of whatever food sources they can find. Grizzly bear's living in the interior have a diet consisting primarily of berries, roots and grasses but they also scavenge meat from dead animals (e.g. often ungulates) and hunt live rodents, termites, ants, grubs and other insects. Grizzly bears occupying coastal habitats where salmon occur are highly accomplished fishers and will scoop live salmon from rivers and streams with remarkable speed and skill. Salmon become the major food source for coastal bears during the fall.

No matter where bears live the food sources must provide them with sufficient nutrients and protein to build fat reserves for winter hibernation.

Q. Why do bears eat continually?

A. Because bears must live off stored fat reserves in their bodies through six months of winter denning, they must consume large quantities of food during spring and summer in preparation for their hibernation. An adult male may consume the caloric equivalent of 10 huckleberry pies per day during the prime berry season.

Q. Do grizzly bears kill big game?

A. Grizzly bears sometimes prey on elk calves and deer fawns. Generally, they are not very skilled at killing the adults of those species. However in some areas, big game is a vital food source for the grizzly bear. In most areas grizzly bear densities are too low to have a significant impact on big game populations.

Q. Do grizzly bears do anything besides eat?

A. Although eating occupies much of a bear’s time during the summer, bears do rest most days for a short period during the heat of the day. Suitable “day bedding” areas are located close to feeding areas (e.g. adjacent to an avalanche chute) and usually contain overhead cover such as trees to provide shade.

Grizzly bears are extremely intelligent animals and each individual has a personality all its own. Grizzly bears often look for activities and objects in their surroundings that interest them. They can be very curious and playful.

Adult bears are sometimes observed climbing on the high peaks of mountains and entire family groups of mother and cubs have been observed sliding down steep snow slopes on their rumps and then climbing back up again, not unlike people tobogganing. Grizzly bears

also enjoy water and especially on hot days can be seen splashing and diving in pools and streams. Bears will play with each other for hours, both as cubs and when older and sometimes amuse themselves by wrestling with logs and sticks.

Q. Do bears have to hibernate every year?

A. Almost every bear hibernates because it makes it easier for a bear to survive during winter when food is scarce and nutritionally inadequate. Bears who have had unusually warm weather conditions in winter don't hibernate because they don't need to. Females give birth to cubs in the den during late January or early February.

Q. How do grizzly bears hibernate in winter?

A. Grizzly bears usually go into hibernation or 'den' by October or November, usually emerging in mid-April, although there are reports of grizzly bears emerging from dens in March. They usually prepare a den site just before hibernation by digging in a hillside or under the roots of a tree or find a natural cave or crawl into thick brush and let the snow cover them. They often enter their dens during a snowstorm, but they may also den in the autumn before the onset of winter weather if they are sufficiently fat. They almost always den at elevations above 1 800 meters. A grizzly bear rarely uses the same den year after year.

Q. How are grizzly bears able to survive long periods in the den?

A. During winter when a bear is in its den, its heart rate, breathing rate and body temperature is reduced, which serves to conserve energy so that it can survive on its stored body fat. Bears do not eat, drink, urinate or defecate while they are in the den. Water is produced as their fat is metabolized, and this provides their body with necessary fluid. The functioning of the bear's kidneys is not well understood and is being studied to provide potential benefits for human kidney research.

A bear's preparation for winter denning begins as soon as it wakens in the spring. Grizzly bears must accumulate sufficient fat reserves to successfully hibernate through winter. A bear that has not been able to find enough high quality food (to store fat) will likely not survive denning.

Q. Do bears ever wake up during hibernation?

A. A hibernating bear can wake up if disturbed, although it would be quite groggy. Bears may emerge from their dens for a day or two during warm periods and sit in the sun at their den entrances. There are reports of grizzly bears wandering around in mid winter for short periods of time, these bears have returned to their dens usually for the remainder of the winter hibernation period.

Q. How large a habitat does an individual grizzly bear need to thrive?

A. That depends on the abundance and quality of food in the habitat. Grizzly bears are not territorial animals, staking out and defending a defined area. Rather they go where food can be found on a seasonal basis. For example, a food source that is rich in the spring often fizzles out later in the season requiring that bears roam into other areas to forage for food in summer or fall. As a result, home ranges can be altered from year to year. Most bears move through an area of several kilometers during a 24-hour period, but daily movements vary by season, food availability, age and gender; and how well protected they feel from the disturbance of other bears and from human beings.

The average home range size throughout North America for an adult female grizzly bear is approximately 180 square kilometers. Male home ranges are generally, on average approximately 1 000 square kilometers, because they travel over a broader area to find females. Female home ranges are usually smaller because the limited mobility of cubs confines them to an area just large enough to supply food, water and safety. More research is needed to learn all there is to know about grizzly bear home ranges and habitat use in the North Cascades.

When young bears are sent out on their own, they usually disperse from their mother's home range to find a suitable home. Young males often venture further than young females.

Q. Does a grizzly bear defend its home range from other bears?

A. No, grizzly bears are not territorial. Home ranges of bears overlap but each bear does have its own personal boundaries that it will not let another bear cross and bears will defend a limited food source such as a carcass from competing bears. "Marking" of traditional habitats (e.g. trees and trails) does occur so that other bears are aware of a bear's presence in a particular habitat.

Q. Can grizzly bears climb trees?

A. Yes, but they rarely do. Cubs climb trees well but this ability decreases as the bear grows in size. The size of the tree and the arrangement of branches usually determine how well an adult bear can climb.

Q. How fast can a grizzly bear run?

A. Though grizzly bears may look slow and clumsy, they can run as fast as a horse (either uphill or downhill) and are quite sure-footed. Most adult grizzlies could outrun even the fastest human sprinter.

Q. What do grizzlies use their long front claws for?

A. Primarily to dig for rodents, roots, bulbs and to tear apart rotten logs and stumps in search of grubs and insects. The strength for this comes from the large, muscled front shoulder hump.

Grizzly Bears in the North Cascades

Q. What is the history of the grizzly bear in the North Cascades?

A. Between 1827 and 1859 the trapping records of the Hudson's Bay Company indicate that 3,788 grizzly bear hides were shipped out of the North Cascades trading posts. Not all of these hides would have come from the North Cascades, however, it is clear that harvest levels were very high.

In the early part of the 20th century, grizzly bears were killed indiscriminately due to fears over potential conflicts. The evidence suggests that the North Cascades grizzly bear population never recovered from this uncontrolled killing although a small remnant population has persisted.

Q. How do we know there are grizzly bears in the North Cascades?

A. Members of the public have reported seeing grizzly bears in the North Cascades from the 1800s to the present. Based on a summary of sightings from 1993-1997, it has been estimated there was a minimum of 17 grizzly bears occupying the British Columbia portion of the North Cascades.

In 1998, a DNA inventory in the North Cascades of British Columbia detected one female grizzly bear. While conducting the inventory, biologists also observed grizzly bears three times during this project – one of those sightings was of a female with a cub.

Recovery in the North Cascades

Q. Why should we recover grizzly bears in the North Cascades?

A. Launched in June 1995, the province's Grizzly Bear Conservation Strategy (GBCS) commits British Columbia to conserving grizzly bears as an important part of our natural heritage. This commitment is particularly important in places like the North Cascades where grizzly bear populations are threatened. Also, the GBCS reconfirmed our commitment to taking a lead role internationally in the conservation of grizzly bears. The North Cascades is a cross-border grizzly bear population that is designated as "Threatened" under the U.S. Endangered Species Act and as such serves as an important example of how we intend to fulfill that commitment.

Q. What is a Recovery Plan?

A. When a grizzly bear population is identified as being "Threatened", a Recovery Plan is written by a team of technical experts. This plan outlines actions that need to be taken to increase the population to the point where it is no longer threatened. The implementation of the actions in the recovery plan is done through management documents such as Forest Development Plans and Park Management Plans, following the appropriate public planning processes. In addition, Wildlife Habitat Areas may be established to protect critical habitats.

Q. Does the recovery area provide sufficient habitat for the Recovery Plan to succeed?

A. The North Cascades Grizzly Bear Population Unit inside British Columbia has the capability to support approximately 250-300 grizzly bears. A habitat evaluation conducted on the Washington State portion of the North Cascades concluded that the approximately 25 000 km^2 area in the U.S. was adequate to sustain a population of 200 to 400 grizzly bears. This study found that the North Cascades have ample diversity and abundance of plants and animals to support grizzly bears. Most plant species that are consumed by bears in other ecosystems also exist in the North Cascades which adds richness to the bear's menu.

Q. How many grizzlies define a recovered population?

A. In order to remove the North Cascades population in BC from "Threatened" status to "Viable" status under the Grizzly Bear Conservation Strategy it is necessary to reach a population of approximately 150 grizzly bears (e.g. >50% of its capability). Even upon recovery the grizzly bear population in the North Cascades would still be relatively low density compared to other areas in North America.

Q. How long will it take to achieve a healthy grizzly bear population in the North Cascades?

A. It will take many decades before the North Cascades can sustain a healthy grizzly bear population. Factors affecting growth include the current low population, reduced genetic variability and their slow reproductive biology. Grizzly bears are the second slowest reproducing land animal in North America, second only to the musk ox. Females are not sexually mature until age five or six and then have an average of two cubs every two to four years. Not all these cubs survive to maturity. The best estimate indicates there are only 5-6 reproductive females in the entire population unit. Growth of the North Cascades grizzly bear population, even under the best natural conditions, is expected to be slow.

Q. What effects will grizzly bear recovery have on other wildlife in the North Cascades?

A. The wildlife of the North Cascades evolved and coexisted with grizzly bears and is unlikely to be adversely affected by grizzly recovery. Land management practices to recover grizzly bears generally benefit other wildlife.

Q. Will grizzly bear recovery affect salmon populations?

A. Grizzly bears, black bears and salmon evolved together and an increasing grizzly bear population is not likely to have a significant effect on salmon populations in the ecosystem. Fish populations in some creeks and streams may be affected in the short term by the activities of individual bears, but are unlikely to sustain long term decline. It should also be understood that salmon do not represent a major diet item for grizzly bears in the North Cascades.

Q. What impact will increasing grizzly bear populations have on black bears?

A. Biologists are not aware of any impact on black bears resulting from increased grizzly bear populations. There appears to be a healthy population of black bears in the North Cascades and is unlikely to be adversely affected by grizzly recovery.

Q. Could corridors be established to allow grizzly bears to move between ecosystems safe from human interference?

A. The team preparing the Recovery Plan will be carefully reviewing the potential to establish corridors both within the North Cascades and between the North Cascades and other grizzly bear populations west of the Fraser River. Habitat corridors between recovery areas would likely benefit grizzly bears by allowing genetic interchange, natural colonization of unoccupied or underutilized areas and improved distribution. But setting up corridors does not guarantee the bears will use these corridors. It would be a complicated process to plan and implement.

The Recovery Plan Process

Q. Will the public have an opportunity to review the Recovery Plan for the North Cascades?

A. **Yes.** The public will be given an opportunity to review a draft of the Recovery Plan before it is finalized and approved. Public meetings will be held and the public will be invited to review the plan and to suggest additions and revisions. The public will also be given opportunities to participate through all facets of the recovery process.

Q. Will there be opportunities for the public to participate in specific land-use decisions?

A. Generally management decisions of the agencies involved in the recovery of grizzly bears already include opportunities for public participation. Recovery Plans do not dictate land uses and are not used as executive decision documents. Recovery Plans provide a guide and a menu of management options that are designed to maximize the benefits for the species concerned--in this case grizzly bears in the North Cascades.

Q. What role will the United States play in the recovery process?

A. The continued existence of grizzly bears on both sides of the border depends on ongoing cooperation between our countries. Representatives from British Columbia take part on the North Cascades Grizzly Bear Ecosystem Subcommittee and in turn representatives from U.S. agencies participate on the North Cascades Grizzly Bear Recovery Team. This close cooperation will ensure that the efforts on each side of the border are complementary in contributing to grizzly bear recovery.

Grizzly Bear Management

Q. Will grizzly bear recovery affect grazing, timber, mining and recreation in this area?

A. Grazing conflicts between grizzly bears and livestock in other areas have largely concerned sheep, however, there are no sheep grazing currently in the North Cascades. The Recovery Plan will include measures for reducing the likelihood of conflicts between grizzly bears and livestock as well as for responding to any conflicts that may occur.

Generally, there has been minimal conflict between actual timber harvest activities and grizzly bear management. However, access management on logging roads is essential to grizzly bear conservation because grizzly bears are disturbed by the use of roads developed for timber harvesting activities. As a result, some road closures should be expected. With coordination and implementation, little change in timber harvest is expected due to grizzly bear recovery.

Proposals for mineral activity would be coordinated to reduce the effects of the activity on grizzly bear recovery. Some of the areas identified as being of particular value to grizzly bears are within provincial parks and recreation areas, which have already been withdrawn from mineral extraction.

The effects on recreation in the North Cascades are expected to be minimal. There could be some seasonal trail closures for the safety of outdoor enthusiasts or the safety of bears. For example, if a large animal carcass is near a trail and bears are feeding on it, it is in the best interests of all concerned to close the trail until the carcass is moved or until the bears have consumed it and subsequently left. If grizzly bears, especially sows with cubs, are known to be using a high-use trail, the trail may be closed until the bears leave the area. In some cases trails may be relocated to avoid a particularly high value grizzly bear habitat. New recreational developments will be coordinated to minimize effects on grizzly bears. Public education will be an important part of recreation management.

Q. Are logging and grizzly bears compatible?

A. While timber harvest activity may temporarily displace bears, it does not necessarily cause long-term detrimental effects if road access is limited and silviculture work is carefully prescribed after harvesting is complete. Logging sometimes improves bear habitat in the short-term by prompting new growth of plants that bears can eat. Post-logging treatments such as broadcast burning preserves the soil layers and the roots of berry-producing shrubs that are beneficial to grizzlies. Use of herbicide to control competing vegetation in conifer plantations will affect forage availability when done by broadcast methods, however, selective treatment can still be carried out without significant impact to grizzly bear forage.

Alternate conifer planting regimes that maintain small openings in the forest can also be done to preserve shrub availability over the long term.

Effective road closures are one of the best ways to maintain both grizzly bears and timber harvesting. Closing nearby established roads while new roads are open can provide bears with the undisturbed habitat they need.

Planning logging or silviculture activities to avoid the season of use is another useful approach that allows harvesting but does not disturb important habitats when they are needed by bears. For example, to protect a spring grizzly bear habitat, plan logging activities in the summer or fall.

Q. How will the grizzly bear Recovery Plan affect private lands?

A. Landowners will be encouraged to reduce bear attractants (e.g. garbage, fruit tree leftovers, etc.) to reduce potential problems but when necessary, grizzly bears causing conflicts on private lands will be trapped and relocated. Public education, cooperation and coordination are the most effective way to deal with private land issues within the recovery area.

Q. How will grizzly bear recovery affect the wilderness character of the North Cascades?

A. Grizzly bears are an essential part of the natural wilderness in the North Cascades. Grizzly bear recovery would help to enhance the wild landscape by restoring the natural ecological processes that have been compromised by the near eradication of the grizzly bear.

Q. How would grizzly bear predation on livestock be handled? Will livestock growers be compensated for losses to grizzly bear predation?

A. Livestock growers will be encouraged to follow practices that will avoid attracting grizzly bears to their property and livestock such as removing or securing the non-natural foods that often result in conflicts between people and bears. These and other preventive measures have proven to be highly effective in reducing the number of conflicts that occur.

Reports of suspected grizzly bear predation on livestock will be investigated by Conservation Officers of the Ministry of Environment, Lands and Parks. Conservation Officers will document and verify the kill and if possible determine the cause.

If a grizzly bear is judged to be a nuisance because it becomes dependent on non-natural foods or habitually preys on livestock, that bear will be removed or destroyed in accordance with the Recovery Plan. While the provincial government does not compensate for wildlife damage, non-governmental organizations will be encouraged to establish a livestock

compensation program in the North Cascades to cover the costs of any livestock depredation by grizzly bears that does occur.

Q. Will ranchers and farmers be permitted to kill grizzlies that cause damage to their stock or property?

A. If a rancher observes a grizzly bear that is clearly inflicting serious damage to his property and livestock he can kill the bear. However, the incident must be reported promptly to either the police or the Ministry of Environment, Lands & Parks. The bear remains the property of the crown and must be turned over to authorities.

Q. Will black bear hunting be closed in the North Cascades to protect grizzlies?

A. Black bear hunting has not been restricted in the past, and no plans exist to restrict their hunting after the Recovery Plan is in effect.

Q. What happens if a hunter kills a grizzly bear by mistake?

A. All hunters are expected to learn the distinguishing characteristics of the species they are hunting. If a hunter kills a grizzly bear by mistake, he may be charged with illegal killing, just as an elk hunter could be charged under the Wildlife Act if he shot a moose by mistake.

Q. Will it be possible to hunt grizzly bears in the North Cascades sometime in the future?

A. If the grizzly bear population reaches viable levels, a hunting season may be possible.

Augmentation

Q. What is the difference between "augmentation" and "re-introduction" as those words are used in discussions of grizzly bear recovery?

A. Augmentation means adding to an existing grizzly bear population. Re-introduction means relocating grizzly bears into an area once inhabited by grizzlies.

Q. Has augmentation been used in any other grizzly bear recovery area?

A. Yes. In North America it has been used in the Cabinet-Yaak area of western Montana. From 1990-1994, four sub-adult female grizzly bears were taken from similar ecosystems in British Columbia and placed in the Cabinet-Yaak. The bears were monitored regularly and remained within Cabinet-Yaak. Of the four, only one died before its radio-collar stopped transmitting and none have become involved in a conflict with people.

In Europe, brown bear populations have also been successfully augmented in Austria and Italy.

Q. Will grizzly bears from other places be moved to the North Cascades as part of the recovery effort?

A. Yes. Biologists believe that adding bears to the North Cascades population would increase the probability of recovery and decrease the risk of extirpation. They estimate there are currently very few grizzly bears in the North Cascades, perhaps as few as 10 to 20 animals. Small populations such as this are highly vulnerable to extirpation.

Q. Would problem bears be moved into the North Cascades?

A. Bears that have been involved in bear-human conflicts in other areas have been trans-located into the North Cascades in the past without incident. While this practice is rare, it could continue to occur if this activity is compatible with the Recovery Plan. The intent of the augmentation program, should it occur, would be to capture wild bears with no previous capture history that are considered suitable candidates. Suitable candidates would include sub adult females and non-salmon dependant bears, to mention a few.

Q. How will the public participate in deciding if, or how, grizzly bears would be translocated into the North Cascades?

A. A decision on whether or how augmentation might be carried out will only be made after consultation with stakeholders and the public on a draft Recovery Plan for the North Cascades.

Human Safety

Q. How much danger do grizzly bears pose to humans?

A. The potential for having an adverse encounter with a grizzly bear is extremely low. Even when they occur, most bear encounters do not lead to human injury. Adverse encounters can usually be avoided through awareness of conditions that may lead to an encounter. Keeping a clean camp, not approaching wildlife too closely, and avoiding situations which might unknowingly surprise a bear will greatly decrease the risk of having an unwanted bear encounter. Proper sanitation practices and familiarity with bear behavior are likely to be the best safeguards against unwanted encounters.

Grizzly bear management must focus on minimizing or eliminating conditions which could attract bears to humans (such as improper garbage disposal) and promoting increased awareness on how to reduce the risk of an adverse bear encounter.

As grizzly bear populations increase and recreational use intensifies over the long term of the recovery plan, the probabilities of bear encounters will likely rise. However, the percentage of visitors encountering a bear will remain very small, as it is now. Most bear-human conflicts do not result in injury, and most bear attacks can be avoided if people follow preventive safety measures and pay attention to outdoor wilderness etiquette in bear country. Bear awareness training courses are available to the public from private agencies.

Q. How will land management agencies protect the increasing number of recreationalists within the recovery area?

A. Taking steps to reduce or eliminate human-bear conflicts is probably the most critical challenge of a grizzly bear recovery program. Land management and wildlife agencies will work together to educate people about safe behavior in bear country. Agencies will also move toward installation of bear-resistant dumpsters, poles for hanging packs in the backcountry, and other bear-resistant fixtures. These measures have proven to be successful in maintaining separation between people and bears in other grizzly bear areas.

Land management agencies will move aggressively to control nuisance animals through relocation or, where required, by destroying the animal.

Q. Could there be a liability issue in the event a person is injured by a grizzly bear?

A. No. Use and enjoyment of Crown land is done at the user's risk. Whether a person is stung by a bee, hit by a branch, suffers a fall while climbing, or is injured by a bear, the land management agency may not be held liable unless negligence by the agency can be shown.

Q. How can people in grizzly bear country avoid attracting bears?

A. There are many specific things people can do to avoid attracting bears, either grizzly or black. Good sanitation is a fundamental requirement. Odors attract bears to potential food items. Carefully controlling odors associated with food helps to prevent bears from becoming accustomed to being near people. This means that people must store food, garbage, cooking gear and cosmetics where bears cannot access them. Once conditioned to associate people with the availability of food, a bear is more dangerous. It may approach humans closely and approach camps or homes in search of these non-natural food sources.

The Ministry of Environment, Lands and Parks has published pamphlets describing how to hike and camp safely in bear country.

Here are some of the specific things you should do:

- Keep a clean camp.
- Pitch your tent 100 meters away from the area where you're cooking and storing food.
- Store only sleeping gear and clean clothing in the tent. Never sleep in clothing worn while cooking.
- Never use stuff sacks for tents or sleeping bags to store food, garbage, cooking gear, or cosmetics. This may transmit smells attractive to bears to tents and sleeping bags.
- Never cook in or near the tent.
- Avoid cooking strong-smelling foods and use dehydrated foods when possible.
- Use a stove instead of a cooking fire whenever possible.
- Hang all food, garbage, cooking gear and cosmetics in a tree at least 4 meters above the ground and 1.5 meters from the trunk or nearby branches. If there is a device provided for storing or hanging your food and other items, use it. If you are camped near your vehicle, store these items in your trunk. Use PVC-type float sacks for storing such items to minimize odors.
- Never bury or burn garbage.

- Store horse feed the same as human food.
- Dispose of used tampons or sanitary napkins by packing them out in a sealed plastic bag.
- Where hunting is permitted, store game meat as you would human food. Dispose of fish entrails by puncturing the air bladder and dropping in deep water to allow natural decomposition.
- If dogs are permitted in the area, keep your dog on a leash; a free ranging dog may lead a bear back to you.
- Take a Bear Awareness Training course.

It is important for people living in bear country to recognize and remove potential bear attractants around the home and on other private property.

Here are some guidelines:

- Do not store or leave uneaten pet food outside, even on the porch.
- Garbage cans should have bear-resistant lids or be stored in a secure site. Garbage should be removed to an approved dumpsite on a regular basis.
- Fruit should be picked on a regular basis and never allowed to rot at the base of the tree.
- Livestock feed should be stored in a secure area where bears cannot reach it.
- Livestock carcasses should not be piled up as a bone yard; carcasses should be professionally rendered, deeply buried, or moved away from areas of human activity.

Q. How will garbage disposal be addressed in the grizzly bear recovery processes?

A. Making garbage unavailable to bears is important in avoiding the conditioning of bears to foods and places associated with people. Years of experience with limiting bears' access to garbage in other areas will help land managers and property owners in the North Cascades to take practical steps ranging from installing bear-resistant dumpsters to trucking garbage away from areas frequented by bears.

Q. What will be done to educate people about grizzly bears?

A. Information and education will be part of the Recovery Plan. As the plan goes into effect, existing information and education programs such as trailhead signs providing park users information on proper camping techniques in bear country will continue, and will be enhanced with new initiatives.

Q. How can humans and grizzly bears live together?

A. Living with bears is simply a matter of sharing the land. Humans have the capability and the responsibility to weigh the effects of their actions on other species. Bears simply make survival choices--whether it is food selection, cub protection, mating or travel.

There will occasionally be conflicts between humans and grizzly bears. But these conflicts can be minimized if humans increase their understanding and acceptance of bears through knowledge and experience.