

# BAMFIELD AND ANACLA BEAR HAZARD ASSESSMENT

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*Bamfield*  
PURE WESTCOAST



**Alberni-Clayoquot**  
Regional District



British Columbia Conservation Foundation

## Executive Summary

The Community of Bamfield adopted the resolution to become a Provincially-certified Bear Smart Community in February of 2017. Since that time, it has made significant progress towards gaining Bear Smart Community status by implementing a cost-sharing initiative to help subsidize the purchases of bear-resistant products for the community, electrifying the eastside transfer station and providing education through the Bamfield Bear Aware Program (2013-2019) and WildSafeBC (2020-present).

There have been 86 reports to the Conservation Officer Services (COS) regarding black bears in Bamfield and Anacla over the last 8 years. During this time, 5 bears were destroyed by the COS. The number of reports peaked in 2018 with 34 calls. The number of incidents reported to the COS does not accurately represent the actual number of incidents that occur since the majority of incidents in Bamfield and Anacla go unreported. These communities tend not to report negative human-bear interactions until conflict has escalated. The attractants most frequently associated with these reports were garbage, residential fruit trees and freezers. In order to create a more robust picture of the actual amount of conflict in the area, this report draws heavily upon local knowledge.

Bamfield and Anacla are surrounded by high quality bear habitat with a myriad of natural food sources. Much of the communities are surrounded by marine shoreline which provides highly desirable intertidal forage. The remainder of the towns are surrounded by mature forest, providing readily available natural foods. Forest cover and a network of dirt roads, logging roads and footpaths allow bears to securely travel through town.

A Community Bear Interaction Survey was developed in order to better understand people's perceptions about bears in the community. The results of this survey helped inform our understanding of how people in the community felt about bears. This included their perceived risks, current efforts at conflict reduction, and constraints associated with attractant management.

Areas that were considered a higher risk for conflict were determined based on an analysis of past bear activity, presence of attractants, proximity to quality bear habitat, and human safety concerns and use by children. The areas identified as highest risk in Bamfield were; Bamfield Marine Sciences Center (BMSC), Eileen Scott Community Campground and the Boardwalk. Pachena Bay Campground was the area designated high-risk in Anacla.

This Bear Hazard Assessment (BHA) will inform the Human-Bear Conflict Management Plan (HBCMP), which will identify priorities and recommendations to address these issues in a manner that reduces preventable human-bear conflict moving forward.

## Acknowledgement

Funding and support for this project was made possible by the Alberni-Clayoquot Regional District and Jenny Brunn - General Manager of Community Services. Our appreciation goes out to the British Columbia Conservation Foundation staff for their project management and review of this document. A big thank you to Dr. Beatrice Frank for developing the Community Bear Interaction Survey; Cora Skaien for GIS work; the WildSafeBC staff for their continuing support and guidance; Mike Badry (Ministry of the Environment and Climate Change Strategy - Wildlife Conflict Manager) and Andrew Riddell (local Conservation Officer). A special thank you to the Bamfield and Huu-ay-aht communities who showed such support and enthusiasm for helping develop this document and for their continued effort to reduce human-wildlife conflict in our community.

## Disclaimer

This report has been prepared to fulfil the guidelines of the British Columbia Bear Smart Community Program. The report has been prepared with the best information available. No liability is assumed with respect to the use and application of the information it contains.

This BHA is not a complete picture of bear attractants and hazards in the community due to the limits of collecting data within a short time frame. This process was unable to capture all potential sources of attractants such as unsecured garbage on private property. Furthermore, historical human-bear conflict data from the COS reporting line are limited to those conflicts that were actually reported.

This document is meant to be adaptive and updated as necessary to reflect progress and new attractant issues as they arise.

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## Introduction

### Human-Bear Conflict

There will be human-bear interactions as long as humans and bears share a landscape. Bears often pass through communities either to access habitat or to forage on local foods both natural and unnatural in origin. Bears that spend more time in communities can become habituated to human presence and lose their natural wariness. A habituated bear tolerates humans in much closer proximity than what is safe for both bears and humans. Conflicts can arise when bears access unsecured human-provided foods and become food-conditioned. A food-conditioned bear associates food rewards with human activity. Bears are strongly food motivated and require significant calories. A food-conditioned bear can threaten human safety as they become bolder and protective of food sources. This can result in encounters at close range, damage to property, injury to pets and livestock and potential for human injury. Food-conditioned bears are more likely to be in conflict and may be destroyed by the Conservation Officer Service (COS).

### What is a Bear Hazard Assessment?

This Bear Hazard Assessment (BHA) was initiated to identify the key issues that influence existing or potential human-bear conflicts in Bamfield and Anacla including:

- Community perceptions about bears
- History of bear reports,
- Identifying high-quality bear habitat,
- Non-natural attractants such as garbage or fruit trees, and
- Bear travel corridors.

Risk areas for human-bear conflict have been identified as areas where bear habitat, corridors, and attractants overlap with human-use areas. Risk ratings were determined based on an analysis of the previous criteria (evidence of past bear activity, presence of attractants, and proximity to quality bear habitat) as well as human safety concerns and use by children. Risk area ratings (low, medium, high) represent a potential for a negative human-bear encounter.

This BHA will inform the Human-Bear Conflict Management Plan (HBCMP), which will identify priorities and recommendations to address these issues in a manner that reduces preventable human-bear conflict moving forward. This document represents one of the six criteria for a community to be eligible to apply for status as a Bear Smart Community.

### Bear Smart Community Program

The goal of the [Bear Smart Community Program](#) is to address the root causes of human-bear conflict, and in doing so, to reduce the number of bears that are destroyed while increasing human safety. It is a voluntary program that has been designed by the British Columbia Ministry of Environment and Climate Change Strategy in partnership with the British Columbia Conservation Foundation and the Union of British Columbia Municipalities (Davis et al., 2002). It provides local governments with a series of criteria

that must be achieved that have been shown to be effective in reducing preventable human-bear conflicts. A municipality can apply for official Bear Smart Community status once they have fulfilled the following criteria:

1. Prepare a bear hazard assessment of the community and surrounding area.
2. Prepare a human-bear conflict management plan.
3. Revise planning and decision-making documents such as Official Community Plans and/or Solid Waste Management Plans.
4. Implement a continuing education program consistent with WildSafeBC or Ministry standards.
5. Develop and maintain a bear-resistant solid waste management system.
6. Implement "Bear Smart" bylaws.

## Study Area

The study area was limited to the townsite of Bamfield and the Huu-ay-aht Village of Anacla. These remote communities are both situated within the traditional territory of the Huu-ay-aht First Nations on the West Coast of Vancouver (Figure 1). The town centre of East Bamfield is connected to the Village of Anacla by a 4 km paved road.

Bamfield is predominantly a seasonal tourist town. The majority of eco-tourism and sports fishing occurs between June and September. The permanent population of Bamfield is 179 (2016 census) which increases dramatically during the tourist season. Bamfield is divided into East and West Bamfield by the Bamfield Inlet. East Bamfield is flanked by marine shoreline while the inland portion is surrounded by the Bamfield-Huu-ay-aht Community Forest (BHCF). The BHCF totals 365 ha of predominantly (96%) old growth forest (+250 years) (BHCFS, 2017). The BHCF is bound by the Pacific Rim National Park, Huu-ay-aht Lands and Forestry lots (Appendix 1).

West Bamfield is located on a peninsula surrounded by marine shoreline. It backs onto private old growth forest which is bound by BHCF. West Bamfield is only accessible by boat. The M.V. Francis Barkley provides passenger and freight service between Port Alberni and Bamfield multiple times a week. There is a regular foot passenger water taxi between East and West Bamfield.

The Huu-ay-aht Village of Anacla has a population of 123 residents (Coraleah Bauer, Huu-ay-aht Law Clerk, personal communication, 13 January 2022.) It is divided into Upper and Lower Anacla by the Pachena River. The majority of the population reside in the lower part of Anacla which is flanked by the Pachena Bay Campground, a popular destination that receives between 5,000 to 7,000 visitors each year between June and October (Sarah Johnson, Human Resources for Huu-ay-aht Group of Businesses, personal communication, 13 January 2022). There is currently a housing development under construction in Upper Anacla.

Bamfield and Anacla are located in the Coastal Western Hemlock very wet hypermaritime Biogeoclimatic zone (CWHvh), the rainiest biogeoclimatic zone in British Columbia. Much of the area is surrounded by a diverse marine shoreline which include estuaries, mudflats, and rocky, cobble and sandy intertidal beaches. Sugsaw Creek and Pachena River are the main salmon-bearing streams close to or within the boundaries of the study areas.

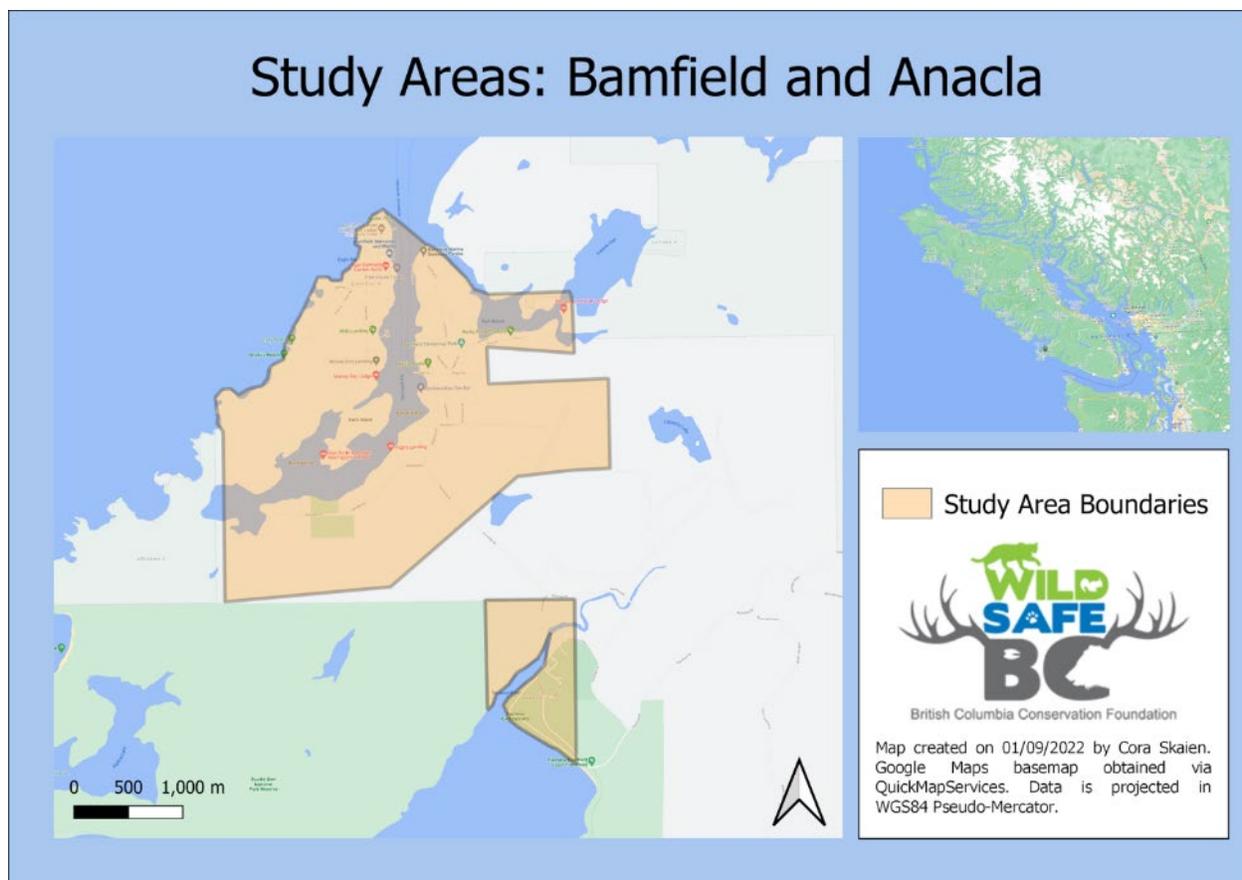


Figure 1. The study area of this BHA for Bamfield and Anacla, BC.

## Current Progress towards Bear Smart

Bamfield has taken steps toward reducing human-bear conflict (Table 1).

*Table 1. Bear Smart status criteria and progress.*

Criteria	Status
1. Prepare a bear hazard assessment of the community and surrounding area.	In progress
2. Prepare a human-bear conflict management plan.	To be completed
3. Revise planning and decision-making documents.	To be completed
4. Implement a continuing education program.	The community has participated in the volunteer-run Bamfield Bear Aware program since 2013-2019 and WildSafeBC program since 2021.
5. Develop and maintain a bear-resistant solid waste management system.	In the planning stages
6. Implement "Bear Smart" bylaws.	To be completed

This BHA was initiated in 2020 and represents one of the necessary criteria for achieving Bear Smart Community status. Continuing education programs have been active in Bamfield since 2013. A volunteer-run Bamfield Bear Aware program was active between 2013 and 2019 providing continuing education to the community through public talks, workshops and the distribution of educational material. Attractant management literature specific to the community's needs were developed and permanent metal signage was put up in high-risk areas. A cost-sharing program was developed with funds from the Bamfield Community Affairs grant-in aid-program to make bear-resistant bins/ composters and electric fencing available to the community at half the cost. Many of these products were sold to high-risk areas associated with previous conflicts. In 2020, funding was provided by the Alberni-Clayoquot Regional District (ACRD) to support the existing Bear Aware coordinator in delivering the WildSafeBC program and developing this BHA.

The ACRD is in the planning stages of designing a new bear-resistant solid waste management system. Outstanding criteria required to achieve Bear Smart Community status include: a Human-Bear Conflict Management Plan, revised planning and decision-making documents, the development and maintenance of a bear-resistant solid waste management system and the implementation of “Bear Smart” bylaws. Final review of these documents rests with the Province.

## Methods

The objective of this BHA is to identify the key issues that influence existing or potential human-bear conflict in Bamfield and Anacla. In order to accomplish this, the following data was gathered and analyzed using the following methods:

**Bear reports** to the Conservation Officer Service through WildSafeBC’s Wildlife Alert Reporting Program (WARP)(WildSafeBC, 2020). This data is generated from calls made to the COS RAPP line (1-877-952-7277) and is updated daily. The data is presented as a georeferenced map on WildSafeBC’s website and can also be exported as a dataset. The information includes: location, date, and time of sightings; species; attractants associated with the report if applicable (garbage, barbeque, livestock, fruit trees, etc.); and encounter type (sighting, food conditioned wildlife, damage to property by wildlife, injured animal, aggressive animal, etc.). There are limitations to the data as reports are limited to those conflicts that were actually reported. The data also requires an address to be properly located on the map, otherwise the report is georeferenced to the community’s centre; in Bamfield this is the BMSC. Additionally, not all reports are attended or confirmed by the COS and there may be cases of misidentification of wildlife species. As such, the data provides valuable information on human-bear conflict sites but does not represent bear distribution or abundance. Data is available from as far back as 2014. Also available from the Province are Human-Wildlife Conflict Reports (HWCR). This is the source of the WARP data but with more details and comments that can be used to cross-reference the data.

**Community Bear Interaction Surveys** with the general public and interviews with experts were used, along with WARP/HWCDR data, to provide a more robust picture of human-bear conflict in the community. Information was collected about perceptions of bears, the number of bears in the community, the types of human-bear conflict that occurs in the community and on the respondents’ property, and barriers and solutions for reducing bear attractants. The Community Bear Interaction Survey was developed by WildSafeBC in 2020 with consultation from social scientist Dr. Beatrice Frank. The survey was administered to the Bamfield and Huu-ay-aht communities via Survey Monkey in November 2020. A total of 65 people participated in the survey. The survey consisted of 42 questions; questions 31 to 42 were personal demographic information questions and not included in this analysis (Appendix 3). Survey questions included closed-ended quantitative and open-ended qualitative questions. Closed-ended questions were used to reduce the response burden for participants and offered predetermined answers. Open-ended questions were included to allow respondents to offer additional comments and clarify their responses if they wished. The survey allowed us to measure and

better understand the community's concerns about safety, other risks associated with bears, and barriers for managing wildlife attractants. Interviews with experts were completed with local biologists, long-time residents and Elders, Conservation Officers, and solid waste management experts through phone calls, email correspondence and in-person meetings. The author's personal experience, working as the Bamfield Bear Aware Coordinator since 2013 and more recently the WildSafeBC Coordinator, was also heavily drawn upon.

**Mapping of non-natural attractants** was completed through a field survey between May and November, in 2020 and 2021. A GPS unit was used to mark the location of 'chronic' attractants (those that are relatively permanent) and photos were taken at points of interest. Attractant data was collected at the townsite and Village and the surrounding areas within approximately one kilometer according to the following guidelines:

#### Garbage:

- An overview of how solid waste is managed in the community was reviewed and summarized (waste streams: compost, garbage, recycling, collection schedule, hours of transfer station etc.)
- If transfer stations or landfills were located within the study area, they were mapped and their wildlife exclusions methods were described (eg. physical barriers or electric fencing)
- All municipal and commercial dumpsters and commercial garbage cans were marked as waypoints.
- Single family residential garbage bins were not mapped as we can expect them at each home. Incidental attractants such as litter were also not mapped.

#### Other Attractants

- Waypoints were created for other attractants that were visible from public property. These included fruit trees, hobby farms, community gardens, campgrounds, and fish cleaning stations or docks where fish were cleaned on boats.

**Identification of landscaping berry-producing plants and other attractants:** There are many species of plants that are used in landscaping that can be highly attractive to bears. It was not possible to map all of the attractants but special attention was paid to high conflict areas and public landscaping such as in parks, schools and the hospital. The City of Coquitlam's guide, "Landscaping in Sensitive Bear Habitat" was used as a reference (City of Coquitlam, n.d.).

**Bear travel corridors were identified** as routes that reduced exposure to risk and were preferred by bears to move safely between areas of suitable habitat. Potential travel corridors were identified by analyzing aerial imagery (Google Earth, 2021), site visits (when feasible), and through public surveys. Grazing and foraging areas were identified through interviews with specialists, the community survey and personal observation.

**Classification of risk areas** for human-bear conflict was done by identifying areas where bear habitat, corridors, and attractants overlap with human-use areas such as schoolyards, parks, and recreation areas. Potential risk areas were marked using a GPS unit. Risk ratings were determined based on an analysis of the previous criteria (evidence of past bear activity, presence of attractants, and proximity to quality bear habitat and cover) as well as human safety concerns and use by children. Risk area ratings (low, medium, high) represent the potential for a negative human-bear encounter (see 'Risk Areas' section for criteria).

All data was mapped using QGIS software by Heather Richardson and/or Cora Skaien (WildSafeBC).

## Results and Discussion

### Community Perceptions about Bears

A survey designed to better understand and measure community perceptions about bears was put to the Bamfield and Huu-ay-aht community in November 2020 via Survey Monkey. Of the 65 participants who participated in the Community Bear Interaction Survey, the majority of respondents (63%) had seen more than 10 bears on their property or street over the last 3 years (Figure 2). There were 92% respondents that strongly agreed that learning to co-exist with bears is a normal part of living in their community and 95% liked having bears in the area. Most of the participants (86%) disagreed/strongly disagreed that bears were nuisance animals in their community. This data indicates a strong tolerance for and appreciation of bears in the community.

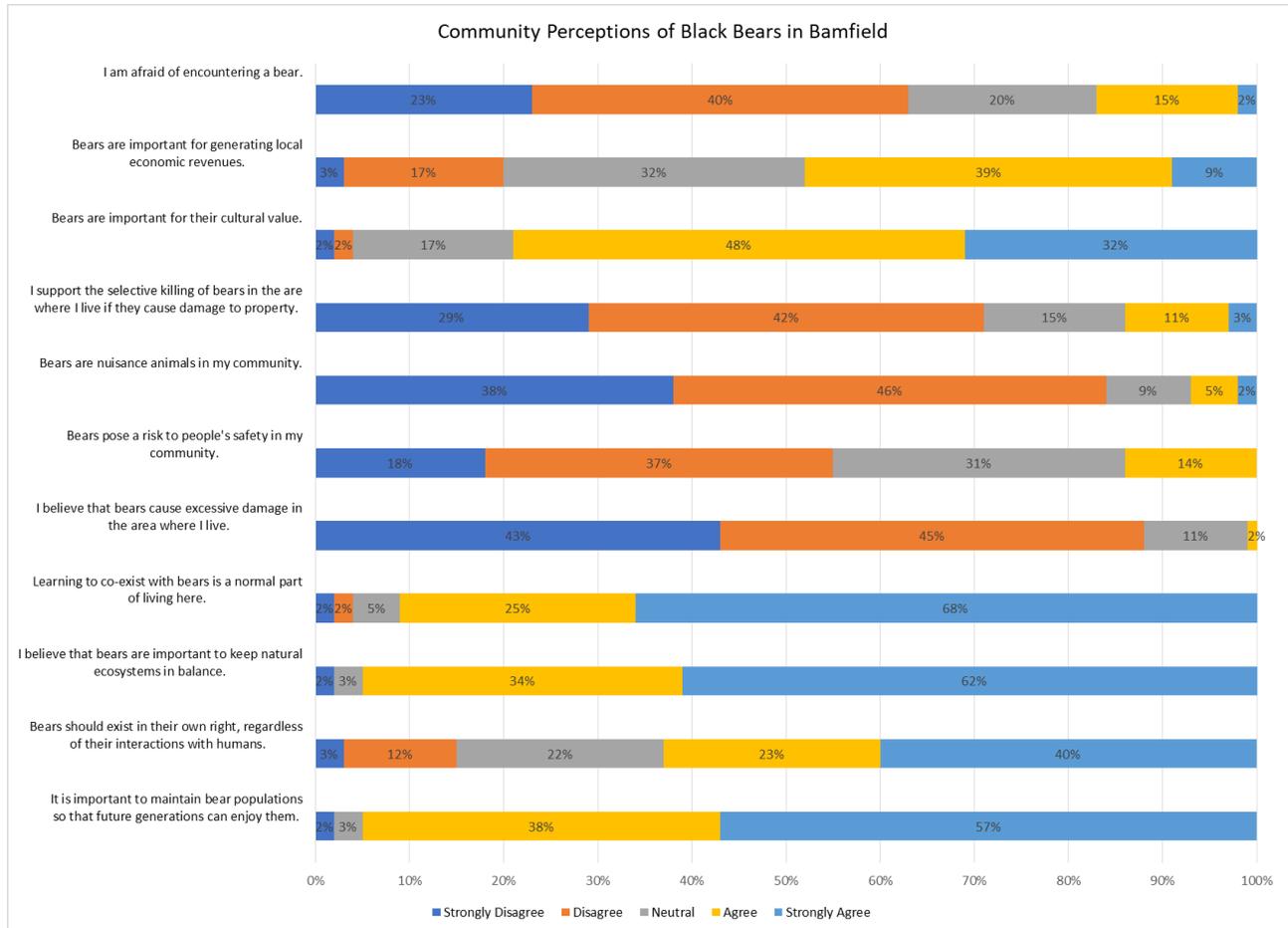


Figure 2. Community perceptions of black bears in Bamfield and Anacla as indicated by 65 participants who participated in the Community Bear Interaction Survey, 2020.

In order to develop appropriate management strategies, it is important to gauge people’s perceptions about safety and human-bear conflict (Figure 3). When asking about safety, respondents were split in opinion about the risks posed by bears to people in their community. The greatest concern was expressed for elderly and vulnerable people, followed by pets, children, and their own safety. For livestock, around half of participants felt the statement was not applicable to them.

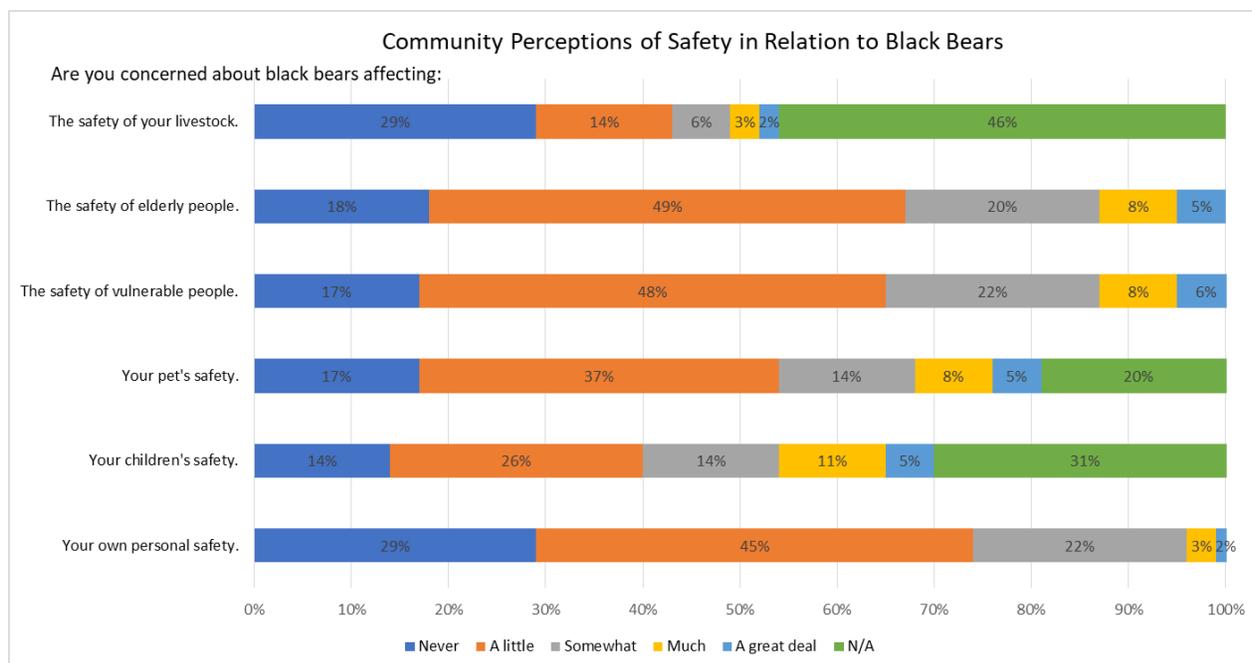


Figure 3. Community perceptions of safety in relation to black bears as indicated by 65 participants who participated in the Community Bear Interaction Survey, 2020.

When asked if the number of bears entering the community had changed over the last 3 years respondents replies were divided between increasing (17%), fluctuated yearly (29%), stayed the same (32%) or were decreasing (6%), while 15% said they did not know. Respondents were equally divided between believing that conflicts with bears over the last 3 years were increasing (8%), fluctuated yearly (28%), stayed the same (26%) or were decreasing (17%), while 22% said they did not know. Respondents justified their perception of conflict fluctuating, staying the same or increasing, as a result of inadequate Bear Aware education and/or the arrival of new residents. Other themes mentioned were habitat loss as a result of human encroachment and logging practices. Most of those perceiving a decrease in conflict attributed it to an increase in community knowledge about attractants offered through Bear Aware education.

When people were asked about Bear Smart Community status, the majority (94%) perceived such status as important to very important for the community to achieve. These predominantly positive attitudes towards co-existing with bears will go a long way towards developing a Bear Smart Community.

## History of Human-Bear Interactions

Reports made by the public to the RAPP line are uploaded daily to WARP and are summarized below (Figure 4; Table 2). Examples of reports included: sightings, bears accessing attractants, bears damaging property, incidents where pets or livestock are injured or killed, bears exhibiting aggressive behaviour, or rare attacks on humans.

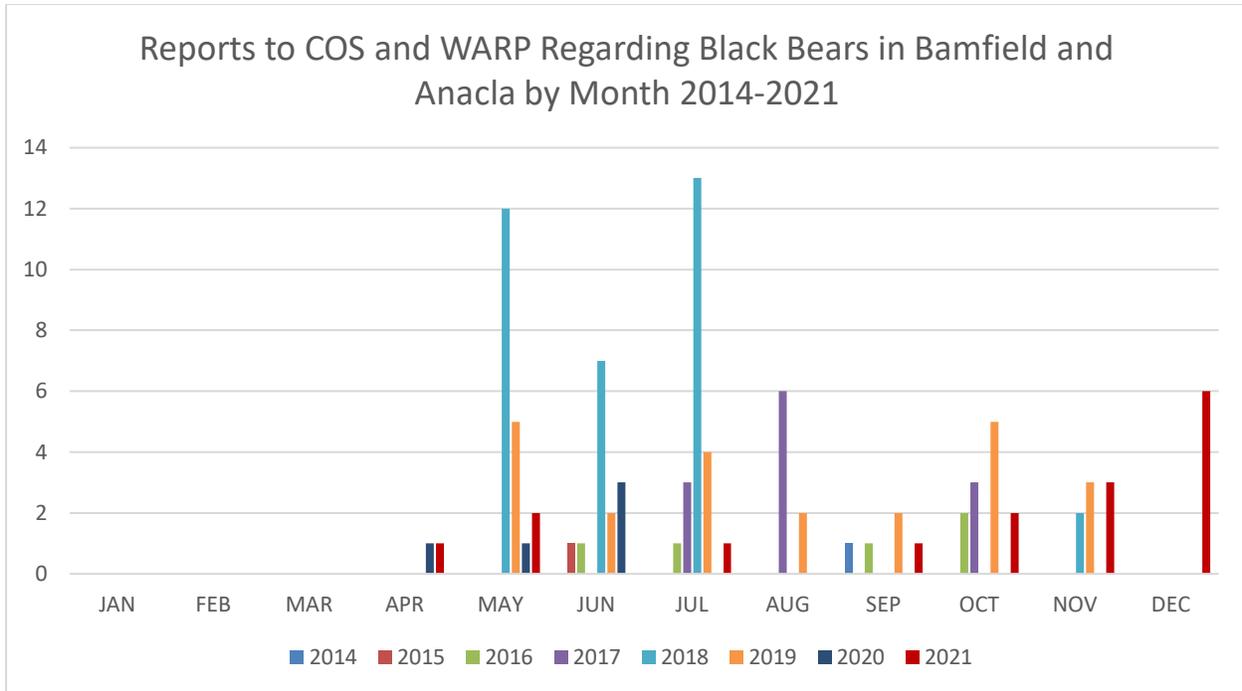


Figure 4. Reports to COS and WARP regarding black bears in Bamfield and Anacla by month between 2014 and 2021.

Table 2. Annual summary of Reports to COS and number of bears destroyed by COS between 2014-2020. This data does not include bears destroyed by others or hit by vehicles.

Year	Reports to COS	Bears destroyed by COS
2021	16	0
2020	5	1
2019	2	2
2018	34	1
2017	23	0
2016	5	0
2015	1	0
2014	1	1

Between 2014 and 2021, 86 calls to the COS were recorded for Bamfield and one for Anacla. During this time period 32% of the bear reports were associated with food-conditioned bears and five bears were destroyed by the COS. (Table 2). It is not possible to interpret the spatial distribution of conflict from calls to the COS. Many of the calls regarding conflict in Anacla have been recorded as calls from Bamfield and unspecified locations are automatically assigned BMSC as the location of origin. Since the number of calls to the COS vastly underrepresented the actual number of incidents, local knowledge was heavily relied on in order to develop a more complete picture of bear activity and conflict for this report.

Black bear reports usually occur between April to November when bears are not denning (Figure 4). Bear conflicts can arise at any time and can peak in any month depending on natural food availability, human activity and population dynamics. Conflicts often begin in May during the long weekend which coincides with a sudden influx of tourists. July and August are busy tourist months which lead to an increase in encounters and unmanaged attractants. Conflict tends to peak in late August and early September which is corroborated by the 2020 survey data but not supported by the limited WARP data (Figure 4). During this period tourism is still active, apple and pear trees are fruiting, fish are abundant, and bears are entering into hyperphagia, a period of intense caloric demand prior to denning. Typically, there is a reduction in the amount of conflict once bears start entering their dens, although in 2021 food-conditioned bears continued to break into structures throughout the winter months. Cold temperatures and limited food supply are factors that trigger hibernation. Despite the cold winter conditions in 2021, the continued access to unmanaged attractants such as freezers allowed several bears to remain active throughout the winter months.

### **Bamfield**

Historically there have been fewer reports of bear sightings and conflict in the commercial centres of East and West Bamfield. In the fall of 2021 however, food-conditioned bears continually accessed unsecured commercial garbage bins in the centres of town.

East Bamfield near Binnacle Road is more developed with a higher density of residential properties and people. Historically this area has not had a lot of bear conflict, however in 2021 there was a spike in conflict due to the increase in the number of people keeping backyard chickens. There are several main corridors that bears take from the BHCF to the foreshore, however there is less forest cover and fewer protected corridors here than in other areas. Bears travel more at sunrise and dusk in this area as highlighted by the qualitative data retrieved through the Community Bear Interaction Survey. Some residents participating in the surveys also attribute the lower number of bear interactions to the high number of dogs.

Grappler Inlet and South Bamfield both have a high density of bears due to the proximity to forest and marine shoreline. There are generally fewer conflicts reported in the Grappler area, likely due to the abundance of natural food available. Incidents that have occurred are usually during the peak months (August and September) and have been primarily associated with poor fish cleaning practices, garbage from fishing charters, and outdoor freezers. This is also supported by the data collected through the Community Bear Interaction Survey and community interviews.

The BMSC is a hot spot for bear activity and conflict because it is close to prime bear habitat such as the forests and the intertidal zone and hosts many visitors. Bears swim between East and West Bamfield which makes the identification of individuals involved in conflict difficult to determine (Andrew Riddell, personal communication, 5 January 2020).

The most human-bear conflict in Bamfield probably occurs on the west side. West Bamfield is situated on a narrow peninsula with a developed shoreline which becomes very populated in the summer months. Bears frequently use the main dirt roads, paths and driveways as corridors and are often seen foraging during the day. The last four years has seen an increase in sows with cubs and solo juveniles in West Bamfield. Residents often tolerate these young bears, more than they would adult bears, and allow them to forage for fruit or berries close to their houses. As the season progresses, these bears become human habituated. Once they enter into hyperphagia they can become bold, threatening, or food-conditioned, and are no longer tolerated by the community. Two bears have been destroyed on the West side because of this type of habituation and food conditioning.

The main attractants that have led to conflict on the west side include; garbage, fruit trees, fish refuse, compost, livestock/back yard chickens, vegetable gardens and off-leash dogs. Incidents with off-leash dog chasing bears under the direction of their owners is increasingly becoming an issue; an observation that was also confirmed by the qualitative data collected through the public survey and interviews in 2020. Several dogs on the west side have been injured by bears in recent years, resulting in the destruction of one bear.

Attractants can vary annually depending on the abundance of natural and non-natural food availability. In the summer of 2019, domestic fruit trees were almost a daily source of conflict, whereas the following year there were no conflicts reported. In 2021, backyard chickens and municipal and commercial garbage bins were the primary source of conflict. Fish refuse from cleaning stations (on boats and docks) as well as improperly stored fish coolers, are ongoing attractant issues. Often bears are drawn to the boardwalk by fish refuse in the intertidal zone resulting in other conflicts involving garbage and pets. Unfortunately, when there is no direct link to the initial attractant, like fish refuse, it remains unreported and unmitigated. During the survey, 80% of respondents observed black bears accessing fish refuse on their properties or in their neighbourhoods (Figure 5).

### **Anacla**

The Village of Anacla is surrounded by desirable bear habitat including forest, intertidal foreshore and the Pachena River. Historically conflict has occurred in the lower part of Anacla where the majority of the population reside and the Pachena Bay Campground is located.

The majority of conflict in lower Anacla has occurred or originated from the Pachena Bay Campground. Improper waste management such as broken and overflowing commercial garbage bins has been the primary source of conflict. Improperly stored attractants in the campground such as food and coolers have also resulted in conflict.

Broken or non-bear-resistant municipal garbage bins are the main source of conflict in the lower Anacla Village. Anacla does not appear to share all of the same attractant management concerns as Bamfield. Unmanaged fruit trees, backyard chickens, compost and fish refuse in the intertidal were not identified

as areas of concern. There have been incidents in the past of bears breaching smoke houses but this does not appear to be a common problem. Many people that were interviewed credited the local dog population for keeping the bears out of the Village.

### Black bear behaviour observed by respondents on their property or in their neighbourhood

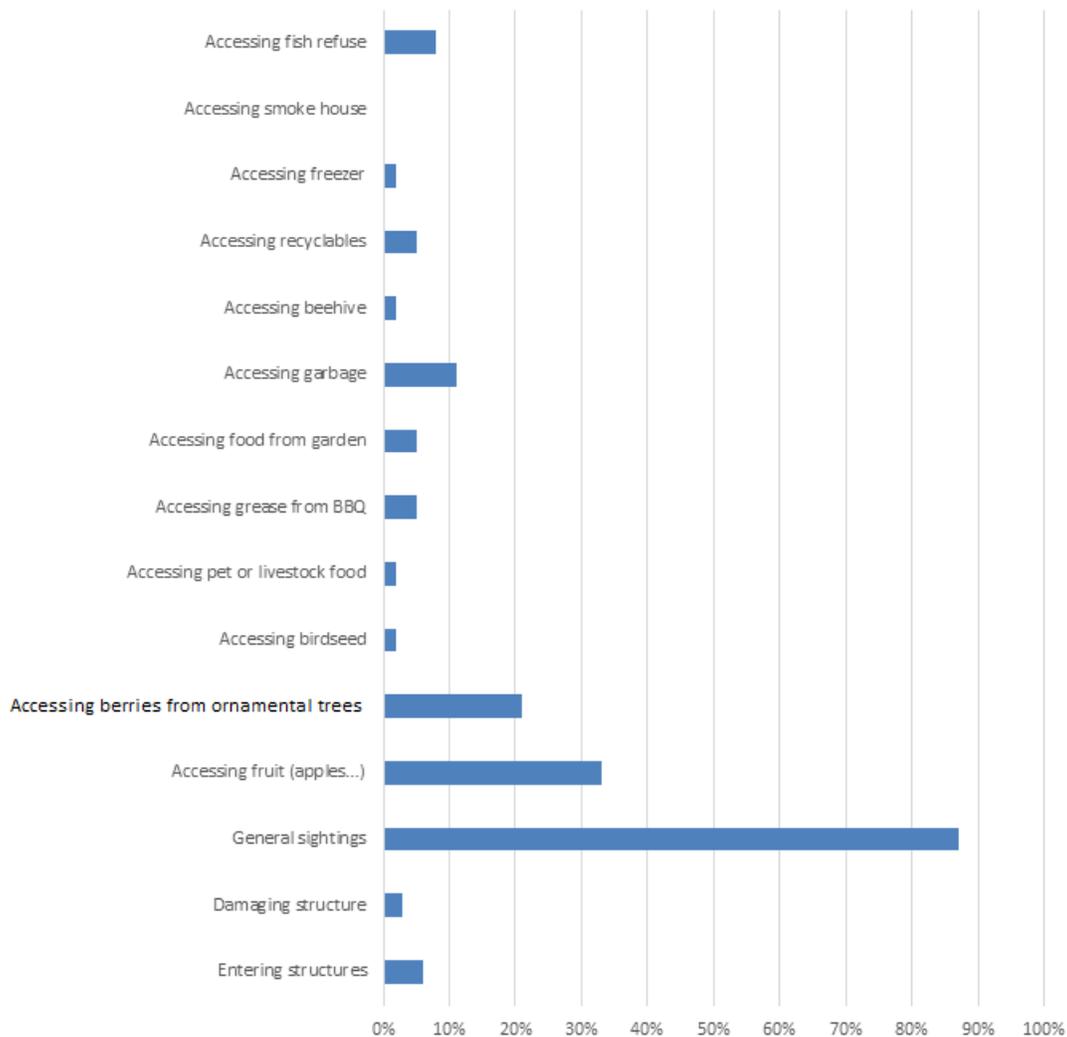


Figure 5. Black bear behaviour observed by respondents on their property or in their neighbourhood as indicated by 65 participants who participated in the Community Bear Interaction Survey, 2020.

Understanding people’s perception of bears can help us shed light on why there is such a low rate of reports to the COS. Nearly half of the respondents to the Community Bear Interaction Survey (46%) had never reported an incident to the COS, mostly because they did not feel it was necessary (48%), or were afraid the bear would be harmed (24%). This response aligns with the fact that only 14% of the respondents supported the selective killing of bears if they caused damage to property. This information illustrates the need to work towards developing trust between the community and the COS by developing an understanding of the role that the COS plays with early intervention to help mitigate conflict situations before they escalate.

### Non-Natural Wildlife Attractants

The attractants most frequently associated with reports to the COS were garbage, residential fruit trees/berries and outdoor freezers (Figure 6).

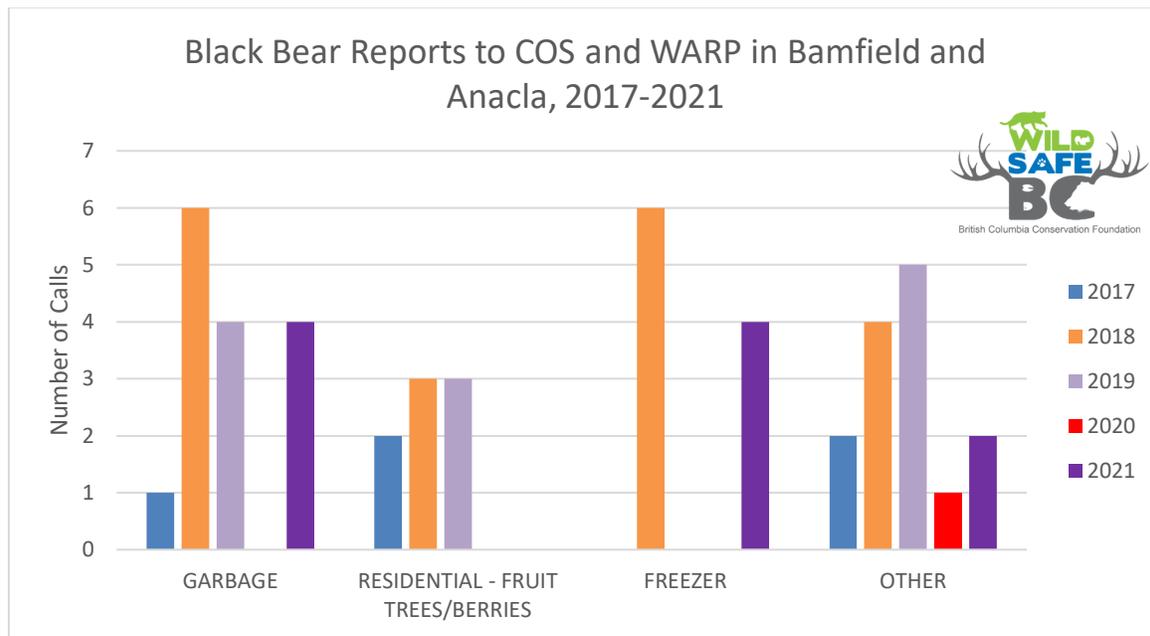
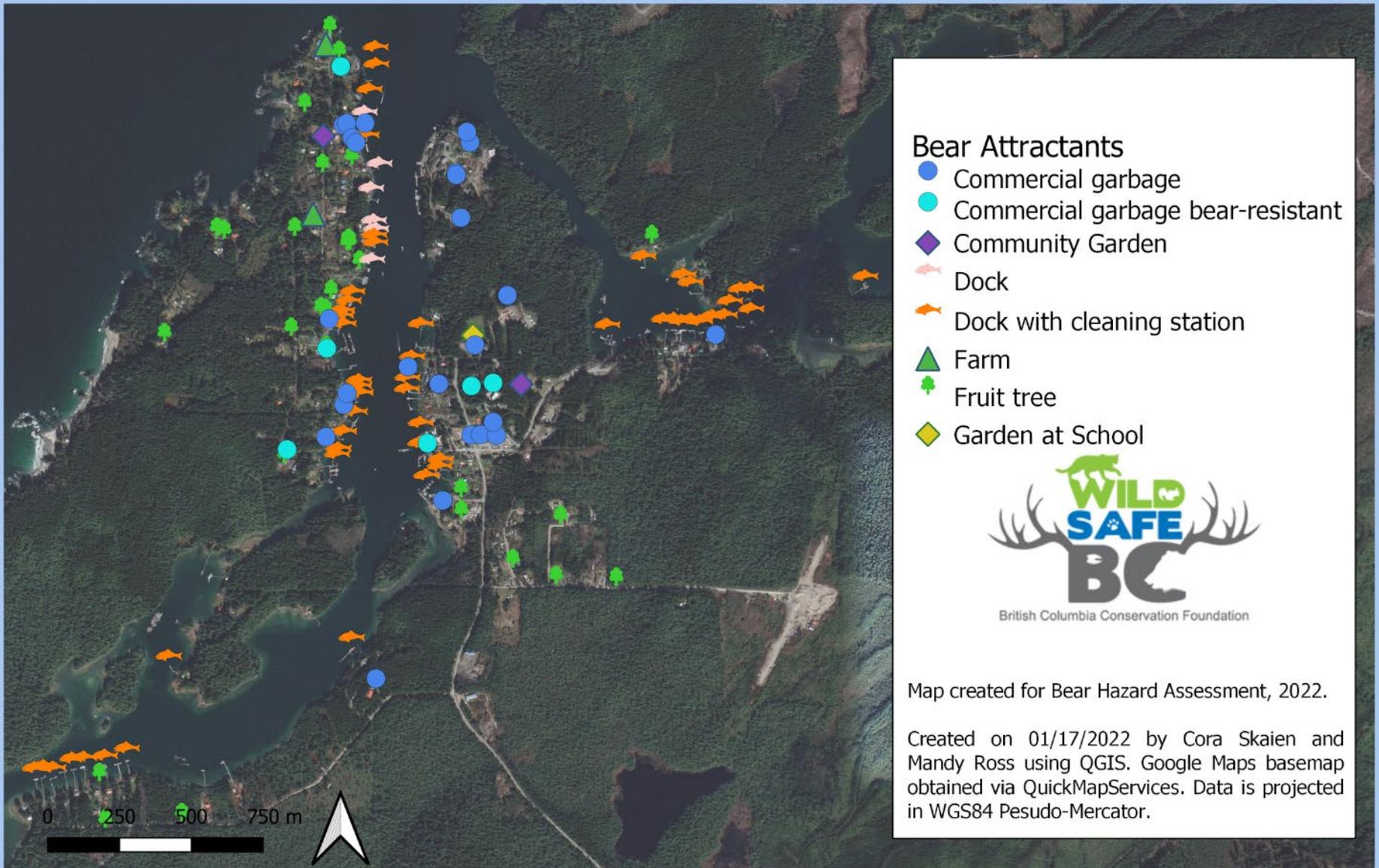


Figure 6. Attractants associated with black bear reports made to the COS in Fort Bamfield, 2017-2020. No attractants were associated with the calls between 2014 and 2016.

Other attractants identified in the Bamfield reports included: backyard chickens, compost, BBQs and pet food. Additional attractants not represented in the reports were fish refuse in the intertidal zone and fish coolers. To spatially display the unnatural attractants in Bamfield and Anacla, chronic attractants (relatively permanent attractants) were mapped as well as waypoints for commercial and municipal garbage. Private and commercial fish cleaning stations, farms, and community gardens were also mapped (Figure 7; Figure 8). Residential garbage and backyard chicken coops were not mapped.

# Bear Attractants in Bamfield



# Bear Attractants in Anacla

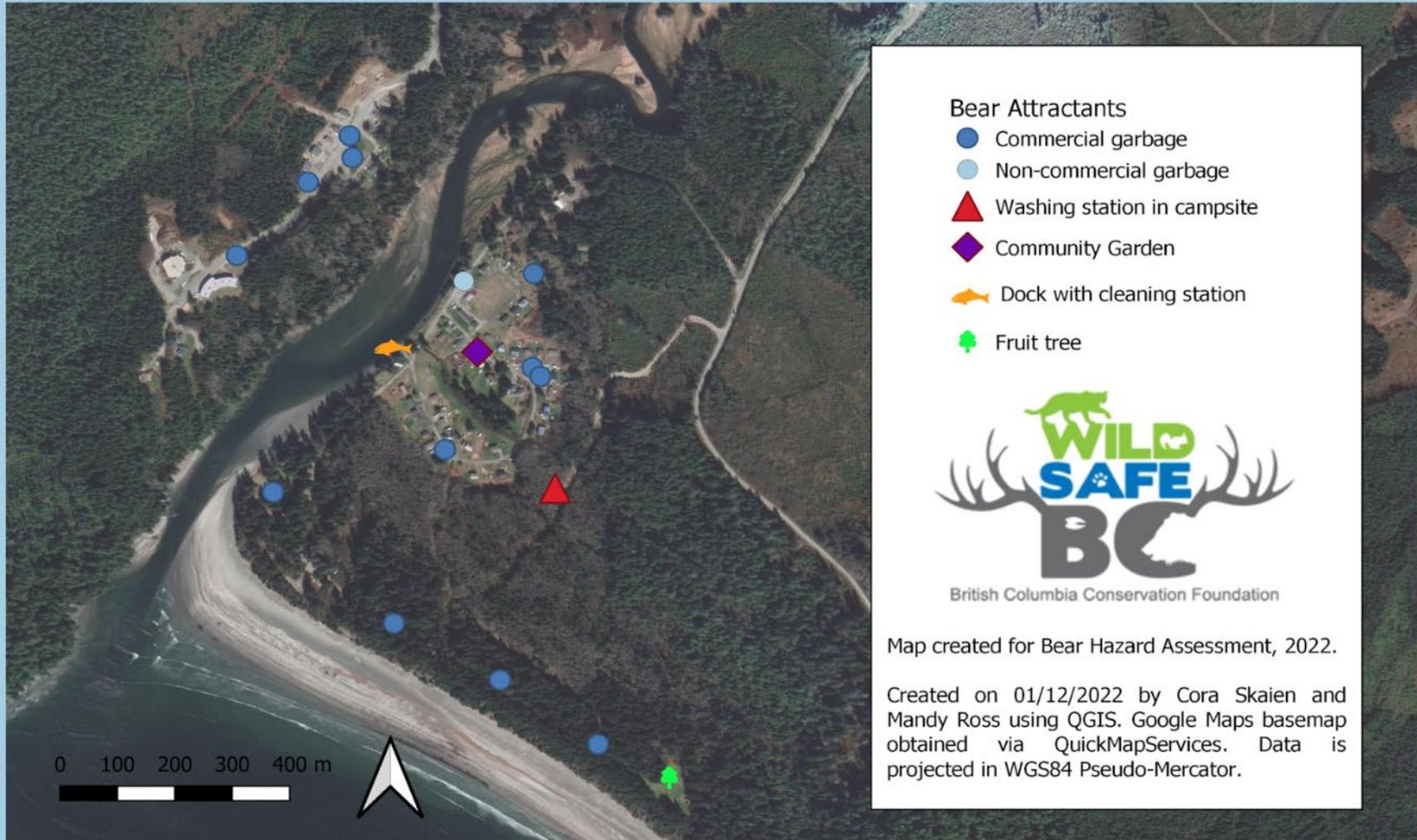


Figure 8. Bear attractants in Anacla, BC in 2021.

## Solid Waste Management

There are two different solid waste streams in Bamfield; recycling and garbage. Green waste is not currently diverted from the garbage stream. Local government does not currently provide individual bins for households or businesses in Bamfield or Anacla. Since West Bamfield is only accessible by boat, the waste management procedures and contracts differ from East Bamfield and Anacla.

**West Bamfield:** The Lady Rose Marine Services is contracted by the ACRD to do regular solid waste collection from the Westside Government dock with the M.V Francis Barkley. The Lady Rose Marine Services has a contract with Waste Management Connections of Canada to provide the bins for both garbage and recycling.

There are a variety of different 6-yard front loading metal bin models used. The model of bins in service vary because they are exchanged with empty ones. The bins either have plastic or metal lids. Some of the bins with metal lids have a bear-bars to make them bear-resistant. Bear-bars only function when they are locked with a clip or carabiner in the up position. The community bins are not bear-resistant as there are no clips or carabiners by which to secure them. There are two community bins; one for garbage and the other for household recycling. The community is expected to bring their garbage and recycling to the community bins. The bins are not monitored and are accessible 24/7, free of charge. During the busy summer months, the garbage bin is collected and replaced by an empty bin three times a week and one to two times a week in the winter. The recycling bin is removed once a month in the summer and every two months in the winter (Stacy Vanschi, LadyRose Marine Group, personal communication, 5 January 2021). The frequency of pick-up is limited to the schedule of the M.V Francis Barkley. It is not uncommon for the garbage bin to fill up and overflow before collection day. During peak months, with the permission of the ACRD, the Lady Rose Marine Services Group is able to add an extra garbage bin to the dock if required.

The other bin that is delivered by the Lady Marine Services Group is at the Coast Guard and is picked up by the M.V Francis Barkley either monthly or every 6 weeks.

Residents store garbage and recycling on their property before they take it to the bin. Improperly stored garbage has been an ongoing source of human-bear conflict.

**East Bamfield and Anacla:** Waste Management is contracted by the ACRD to manage the solid waste from the transfer station and the commercial and municipal bins in East Bamfield and Anacla. The bins are emptied once a month in the winter, every second week in the spring, and every week in the summer (Jeff Siemens, Waste Management, personal communication, 5 January 2021). GFL is responsible for removing the recyclables from the transfer station monthly. Residents and commercial businesses that do not use the waste management company must take their garbage to the transfer station.

The transfer station is surrounded by an approximately eight foot tall chain-link fence with three strands of barbed wire on top and a three strand temporary electric fence around the perimeter (Figure 8 A). There is no barbed wire over the gate and it is not electrified. Two large bins for metal recycling are

located behind the transfer station, outside of the chain-link, but are not considered an attractant. The transfer station is unmanned but regularly maintained by a staff member. It is open 24/7 and is free to the public. All of the garbage bins at the transfer station, and the commercial and municipal bins in the community, are supplied by Waste Management. There is a mixture of different brands of front loading 6-yard metal bins. The older models are not bear-resistant but some do have bear-bars which require the use of clips to secure them (Figure 8 B). The newer certified bear-resistant bins have a user-friendly latching lid system and also have a bear bar that require clips/carabiners to secure them (Figure 8 C).



*Figure 9. A) transfer station chain-link fence and temporary electric fence. B) Garbage bin with locking bear-bar. C) Certified bear-resistant bin with latching system.*

At the time of this field survey in 2021, none of the bins in the transfer station were bear-resistant. There was a mixture of certified bear-resistant bins, bins with only the bear-bars, and non-bear-resistant bins in various locations around East Bamfield and Anacla. In order for the bins to be bear-resistant the bars must be secured in the up position by clips or carabiners. There have been numerous incidents of bears accessing bins because the bear-bars were not secured in place with carabiners. This was brought to the attention of Waste Management and carabiners were placed on a number of the bins in October 2021. The carabiners were not tethered to the bins order to avoid theft. There are no instructions for the public on how to properly secure bear resistant bins.

Grease barrels are not picked up by Waste Management. Cooking grease was either burned on site or donated as biofuel to run vehicles. Grease barrels were secured behind closed doors for most businesses, however the storage of grease at the BMSC was flagged as high risk (Figure10 A and B).



Figure 10. Photos of BMSC taken in 2020 A) shed where grease is stored at BMSC. B) Grease jugs inside shed at BMSC

There are very few public garbage receptacles around town, largely because they fill up quickly becoming a bear attractant and are expensive to maintain. There is a two bag, bear-resistant certified Haul All 'Hide-a-Bag' with latched handles on the Eastside dock. It is owned and maintained by the Huu-ay-aht Business Corporation. The bin is emptied regularly by staff, although it can fill up quickly and overflow in the summer months allowing bears to gain access. The Eileen Scott Park no longer has a public garbage bin for campers and park users. Campers are required to take their garbage to the transfer station. There are small waste paper baskets in the washrooms that are emptied as needed and taken to the transfer station at the end of the day by park staff. There is a non-bear-resistant pop-can recycling bin in the park which is maintained by park staff.

## Landscaping and Food Production

### Orchards and fruit trees

Fruit trees in Bamfield appeared to be primarily on residential and commercial properties rather than on public land. There are very few productive fruit trees at Anacla, there is however one productive apple tree at the Parks Canada trail head which is adjacent to the Pachena Campsite. The fruit trees in Bamfield range from young recently planted to mature heritage trees. The main types of domesticated fruit trees included apple, crabapple, pear and plum. Plum trees tend to produce at the end of July and early August, at the height of the tourist season. Apple and pear trees begin to produce towards the end of the summer during peak fishing season and when bears start entering into hyperphagia and require high amounts of caloric intake.

There are a number of infrequently visited or vacant lots in Bamfield where fruit trees are not maintained. All participants to the survey (100%) were aware that fruit trees represent an attractant to bears. The main reasons for not managing fruit trees identified by respondents was lack of physical ability (2%) and time (10%). A number of renters (5%) expressed concerns that their landlords did not manage the trees on their property, while the majority did not have any barriers to managing their trees (77%). Additionally, a common view held among the community is that bears should have access to fruit trees because fruit is a natural food source. There is currently no gleaning organization in Bamfield to

assist people with picking fruit and pruning. There are also no bylaws governing landscaping or fruit tree management.

### **Native berry bushes/common landscaping plants**

Native shrubs and berry bushes are often incorporated into the landscaping. Most properties in Bamfield and Anacla have native shrubs like salal (*Gaulthoria shallon*), thimbleberry (*Rubus parviflorus*) and blackberry on the fringes of clearings such as lawns, paths and driveways. These are known attractants and the management of these bushes varies greatly between property owners. Gunnera, a popular ornamental plant used in landscaping in Bamfield, has recently been discovered as a bear attractant. The large gunnera leaves have been a known source of cover for bears. In 2020, a juvenile bear began destroying gunnera across West Bamfield by rolling on it and pulling it up by the roots.

With increasing development in Bamfield and Anacla, efforts have been underway to provide Bear Smart landscaping information to developers.

### **Other Attractants**

#### **Community gardens**

Electric fencing is becoming more popular in Bamfield to protect vegetable gardens and hobby farms. The community gardens at Eileen Scott Park and Anacla and the elementary school garden have a metal wire fencing surround but do not have any electric fencing.

#### **Birdseed**

Historically bird feeders have not been a big problem since many people avoid using them because they are an attractant. Respondents that use feeders were mixed in their answers as to what they would do or had already done to reduce attractants to their feeders. Respondents would place feeders out when bears are less active (10%); keep the ground below feeders free of seeds (10%); use small amounts of seed at a time (15%); use bird baths instead to enjoy birds (5%); plant flowers that attract birds to feed birds naturally (12%).

#### **Fishing cleaning station**

Bamfield is a popular sports fishing destination. Peak fishing times often coincide with bears entering into hyperphagia in September. In Bamfield there are approximately 60 docks where fish are cleaned; either at a cleaning station or on boats (Figure 7). There are no docks at Anacla. There continues to be a problem with fish refuse from the cleaning stations washing up in the intertidal zone and attracting bears. This problem has improved at some public docks since permanent metal signage was installed around town by the Bamfield Bear Aware Program with funding from a community grant-in-aid and WildSafeBC. Efforts have been made to encourage people to walk or wheelbarrow refuse to deeper water and throw it in the water on an out-going tide. Compliance has been difficult due to private fish cleaning stations located in shallow water. Poor cleaning of the actual cleaning stations themselves (on

docks and on boats) have led to bears foraging at the end of docks and climbing onto boats. All respondents to the survey (100%) knew that fish refuse represents an attractant for bears.

Barriers encountered by respondents to properly managing fish refuse were: cleaning stations being in shallow water; not sure where would be an appropriate place to throw fish remains; and lack of a cleaning stations that resulted in cleaning fish on their boat. A quarter of respondents (25%) have moved or would be willing to move their cleaning station to the side of the dock with deeper water, and another 12% supported the installation of signs that explain why and where to safely throw fish remains.

### **Outdoor freezers**

Outdoor freezers for the storage of fish and other food are still common in Bamfield. There have been incidents where bears have been destroyed in Bamfield for accessing freezers. Fishermen camping at the Eileen Scott Campground bring freezers with portable generators to store their fish while they camp. Efforts have been made to educate people about securing their freezers indoors. Only a minority of respondents to the survey (10%) did not believe that their freezer was an attractant. Bears have the ability to smell even cleaned and bleached freezers and access freezers that are locked. It is imperative that more community education is needed to reach 100% awareness of this issue. There is currently no bylaw that prohibits people from storing freezers outside and unsecured.

### **Compost**

There is a history in Bamfield of conflict associated with bears accessing composters and compost heaps. It is for this reason that many people have chosen not to compost. Some people near the water throw their compost into the ocean, which if done improperly can wash back up into the intertidal and become an attractant. Efforts have been made to educate people about proper compost management to reduce odors. Bear-resistant Jora composters were made available to the community through the cost-sharing program; four were purchased by community members. There has been considerable interest, from the public and some businesses on the west side, to purchase bear-resistant composters. However despite the subsidy, the cost is prohibitive to many. Electric fencing is an economical way to secure compost. In 2021, the cost-share program subsidized one electric fence to go around a composter (Figure 11). Encouraging bear-smart composting would not only reduce conflict but it would serve to divert green waste from the local community garbage bin which is often functioning beyond its capacity.



*Figure 11. Composter protected by electric fencing that was subsidized through the cost-share program, 2021.*

### **Backyard chickens**

Since the beginning of the pandemic, East and West Bamfield have seen a significant increase in the number of households with backyard chickens. In 2021, the majority of coops in Bamfield were broken into by bears. Currently only two households use electric fencing to secure their chicken coops, one of which was subsidized by the 2021 cost-share program (Figure 12). In-person interviews and survey respondents identified the following barriers to using electric fencing: cost, lack of familiarity, and not knowing where to purchase it. There are currently no bylaws that govern how backyard chickens are housed and cared for in Bamfield.



*Figure 12. Chicken coop protected by an electric fence that was subsidized by the cost-share program, 2021.*

### **Bear Habitat and Travel Corridors**

Habitat use by bears is influenced by food availability, the presence of suitable denning sites, and the presence of other bears. Bamfield and Anacla are surrounded by forest and dense understory which allows bears to easily access the entire community because of abundant travel corridors and security cover. Bears have well-developed corridors and often use dirt roads, footpaths and hiking trails for foraging and to move between desirable areas. They travel along the shorelines and swim across Grappler and Bamfield Inlet and the Pachena River.

Suitable denning sites must provide shelter, security and keep bears dry. Dens are made from wide diameter trees which can be made from stumps, root boles, logs and hollow trees (Davis et al., 2011). Wide-diameter trees suitable for denning in the CWHvh Biogeoclimatic zones are often cedar and are not uniformly represented throughout old growth forests and are seen rather in clusters. Certain ecological conditions conducive to growth must be met in order to allow the development of large trees. Since there is a direct relationship between base diameter and height, identifying clusters of the tallest trees in the forest canopy can help indicate areas that might be suitable for denning sites (Appendix 1). Dens can also be found within the town boundaries in second growth forests that were logged over 60 years ago when it was common practice to leave behind taller stumps (Appendix 2).

Important early season natural bear foods in the CHHvh Biogeoclimatic zone include horsetails (*Equisetum Spp.*), skunk cabbage (*Lysichiton americanus*) and young shoots and tubers which are often found in wetter low-lying areas, estuaries, ditches on road sides. Later in the spring young shoots and flowers from native shrubs like salal (*Gaultheria shallon*), salmonberry bushes (*Rubus spectabilis*), blueberry bushes (*Vaccinium spp.*) become a staple of their diet (MacHutchons, 2001). These can be found along forest edges, disturbed sites and roadsides. Bears will also consume non-native species like dandelion and clover found in grassy meadows and lawns. Throughout the season they forage in the cobble and rocky intertidal flipping over rocks for invertebrates such as shore crabs (*Hemigrapsus spp.*), mussels (*Mytilus spp.*), clams (*Siliqua spp.*), barnacles (*Balanus spp.*), Talitrid amphipods (Wickham and Proudfoot 2014). While bears will travel and forage along most of the shorelines in Bamfield, not all intertidal areas share the same level of high-quality forage. For the purpose of this report only intertidal areas that are frequented by bears in close proximity to human settlement were mapped (Figure 13; Figure 14).

In the summer their diets switch to berries such as salal (*Gaultheria shallon*), salmon berries (*Rubus spectabilis*), blueberries (*Vaccinium spp.*) and red huckleberry (*V. parvifolium*) (MacHutchon, 2001). The invasive Himalayan blackberry (*Rubus armeniacus*) is also abundant during the late summer. Berry loads may be naturally higher in areas where the canopy is more open allowing more sunlight to reach bushes. Road networks and the perimeters of properties in town provide ideal berry habitat often attracting bears into town. Bears are also drawn into town during the summer by fruiting trees like plums and early apples.

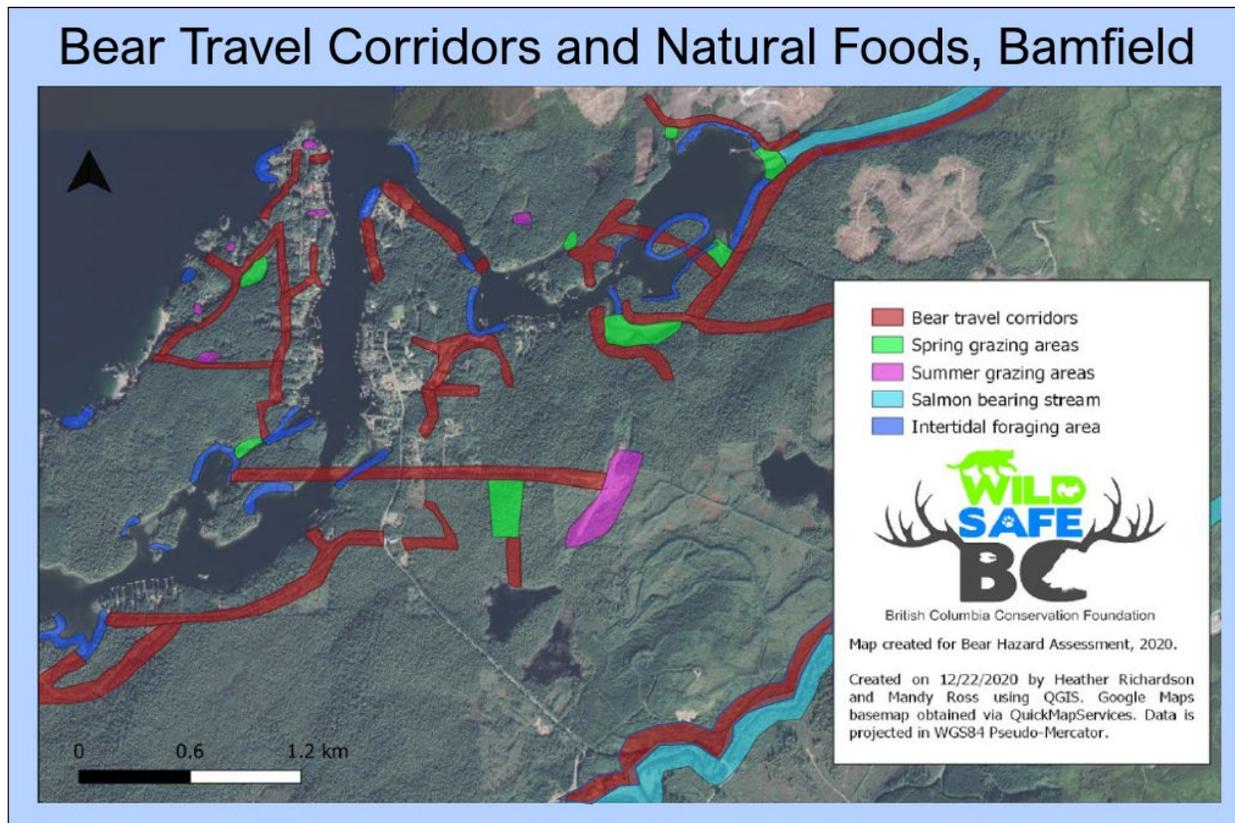


Figure 13. Bear travel corridors and natural feeding area in Bamfield, BC, 2020.

Apples and pears ripen at the same time that bears are entering hyperphagia in early fall. The main salmon-producing stream in the Bamfield study area is the Sugsaw (Figure 13). It is situated at the end of Grappler Inlet which has a high bear population and is sparsely populated with people. The already relatively high numbers of bears in Grappler Inlet increases between late September and early November corresponding with the returning chum salmon (*Oncorhynchus keta*). Historically (Middle 1950s to late 1980s), escapement counts in the Sugsaw included a few thousand chum and less than 100 Chinook (*Oncorhynchus tshawytscha*). More recent counts indicate a decline in escapement with no returning Chinook and approximately 1000 chum in 2012 and 300 in both 2019 and 2020 (Diana McHugh, Department of Fisheries and Oceans, personal communications, 2 February 2021).

The Pachena River divides Upper and Lower Anacla and empties out on Pachena beach next to the Pachena Bay Campground (Figure 14). The total escapement for 2021 was estimated at 830 coho and a few Chinook and chum. Salmon returns usually occur between late September and early December (Amelia Vos, Lands and Marine Coordinator, personal communication, 13 January 2022). Bears graze in the estuary during spring and summer and there is usually an increase in bear activity in the river system between late September and November corresponding with the returning salmon. Despite the close proximity of the Pachena River to human settlement human-bear conflict in the river system is not

common. Good sightlines resulting from the open topography of the estuary and river banks near human settlement are likely factors that help reduce conflict.

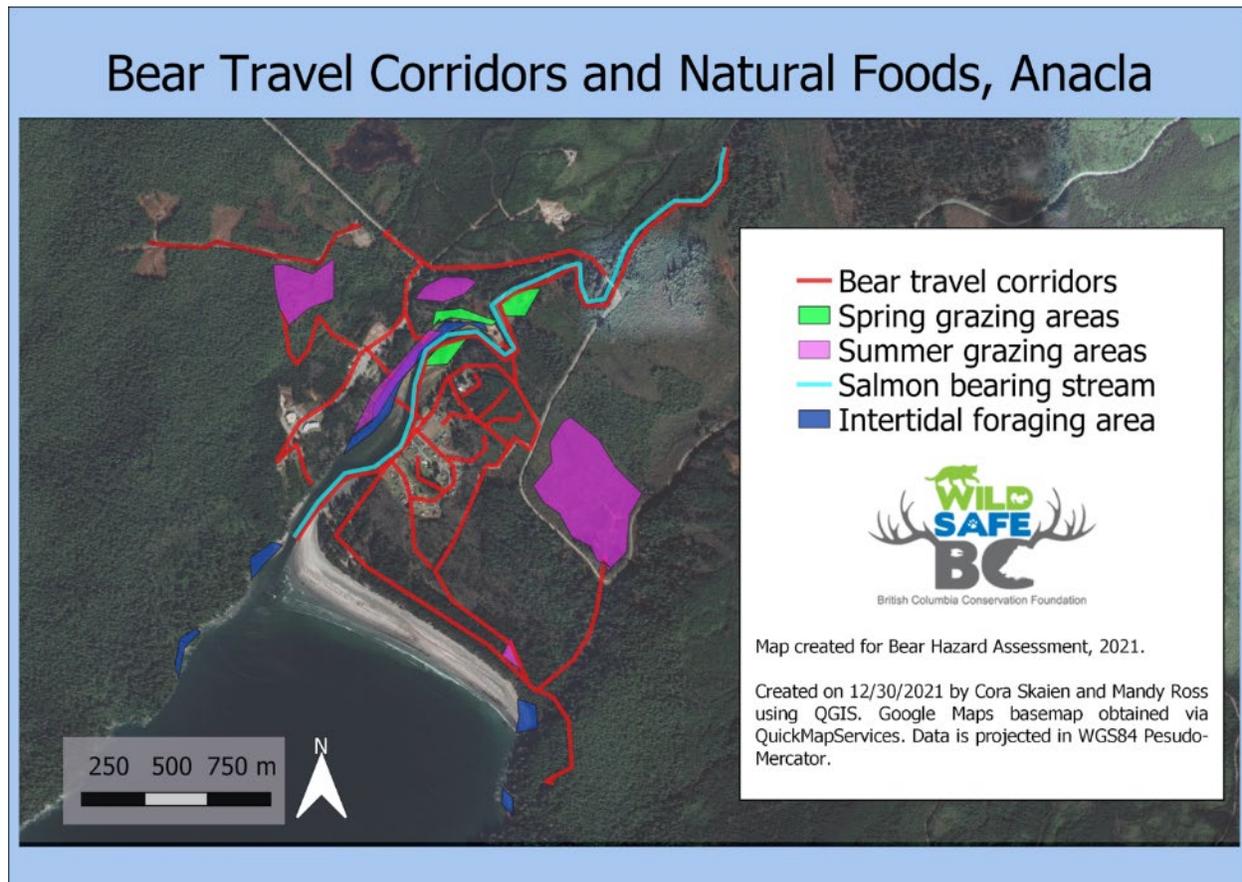


Figure 14. Bear travel corridors and natural feeding area in Anacla, B.C, 2021.

## Risk Areas

Risk areas for human-bear conflict have been identified as areas where bear habitat, corridors, and attractants overlap with human-use areas. Risk area ratings (low, medium, high) represent the potential for a negative human-bear encounter and are subjective in nature. The goal of providing ratings is to help identify areas that should be prioritized in the HBCMP as they present a higher degree of conflict or potential negative consequences. While no part of Bamfield or Anacla is immune to human-bear conflict, it is suggested that certain areas may be of higher risk as a result of:

- Presence of attractants
- Proximity to quality bear habitat and cover
- Evidence of past bear activity
- Human safety concerns and use by children

## Bamfield Risk Areas

There are nine areas in Bamfield that have been identified as increased risk of human-bear conflicts and they are summarized in Table 3, mapped in Figure 15 and described in further detail in this section.

*Table 3. Summary of risk areas for Bamfield.*

ID	Location of hazard	Risk Level
1	BMSC	High
2	Eileen Scott Park & Campground	High
3	Boardwalk	High
4	Transfer Station	Medium
5	Elementary School	Medium
6	Westside Commercial Center	Medium
7	Eastside Commercial center at corner of Frigate Rd and Bamfield Rd	Medium
8	Mills Peninsula	Low
9	Brady's Beach	Low

## Risk Areas, Bamfield

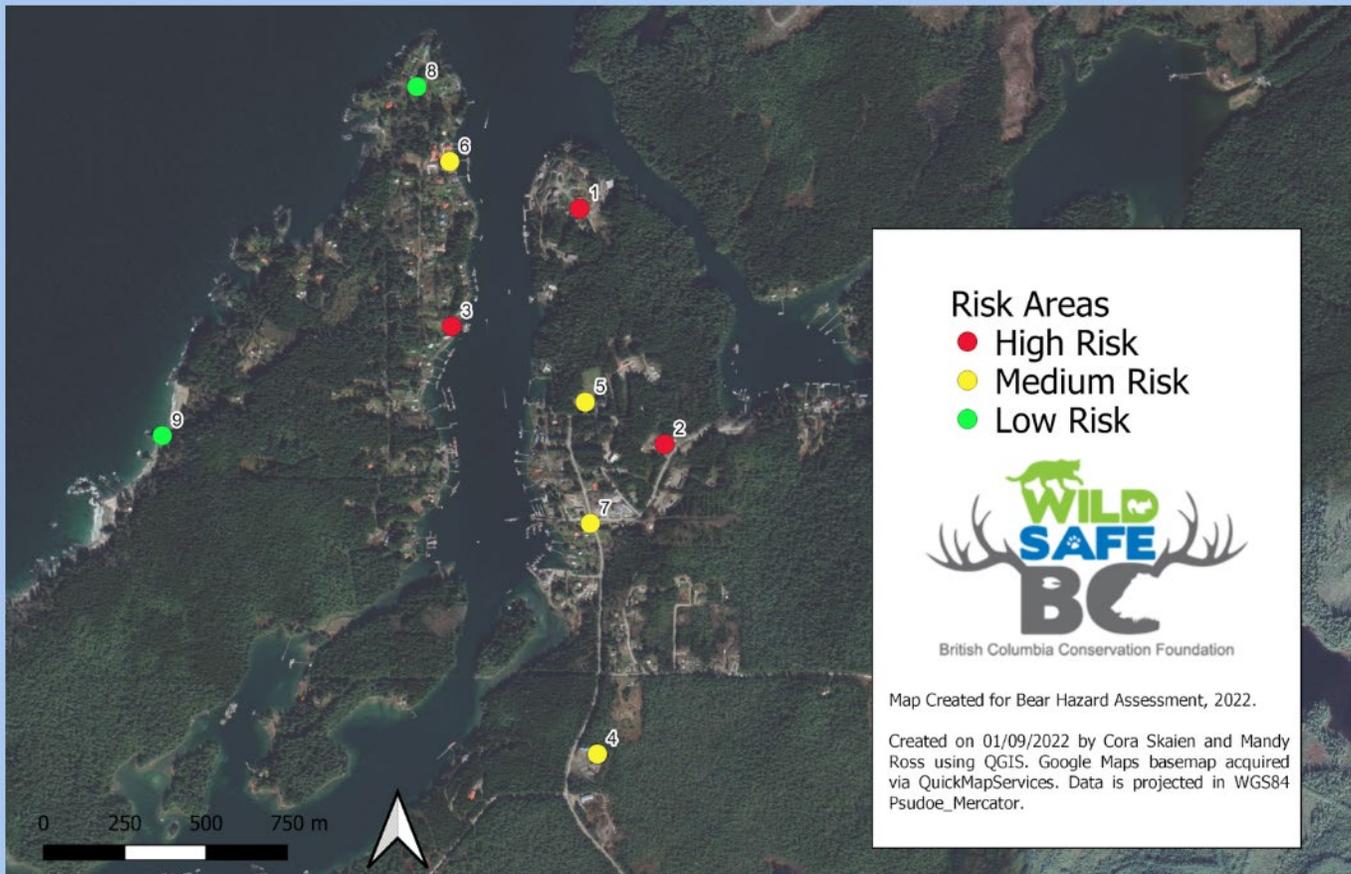


Figure 15. Map of risk areas in Bamfield, rated from low to high risk.

**1) The Bamfield Marine Sciences Centre (BMSC).** The BMSC is a busy marine science centre that houses students from elementary to university age year-round. The BMSC is surrounded by mature forest and/or shoreline. Bears regularly transit through the grounds using roads and paths as corridors. The path near the dive shed, leading south towards the dock, is a known corridor for bears to use. The area is surrounded by dense berry bushes and is a confined space with a rocky cliff face on one side and a railing and drop off on the other (Figure 16 A). There are poor sightlines due to the bend in the path and the area is poorly lit at night. The path to the director’s cabin is a narrow with railings on both sides. The bend in the path and the

tall salal create poor sightlines. This is a known corridor for bears to use between the forest and the foreshore (Figure 16 B).



Figure 16. BMSC, 2020. A) Path south of the dive shed. B) Path to director's cabin.

There have been a number of negative bear encounters associated with the area behind the kitchen that backs onto forest (Adam Larson, BMSC Maintenance, personal conversation, 28 August 2020). This location was identified as a risk area by COS in a routine assessment (Andrew Riddell, personal conversation, 5 January 2021). Next to the back door of the kitchen is a plastic non-bear-resistant shed where cooking grease is stored (Figure 10A and B). The kitchen door is opaque, preventing a person from being able to see the outside space before they open the door. The Waste Management commercial bin has a bear-resistant bar which is secured regularly by clips. The bin contains food waste which can become very odorous in the warmer months. The bin is located approximately four meters behind the shed which means there are no sightlines from the kitchen door to the bin. The BMSC intends to divert food waste from the garbage stream and is currently clearing the land to build a commercial composter nearby.

The experimental tanks on the foreshore can often contain different types of marine organisms. This is a busy area for foot traffic because of the proximity to the main stairs, the offices and the teaching lab. The tanks closest to the main building are completely contained inside a chain-link fence (Figure 17A), however the tanks located next to the teaching lab and across from the offices are only partially enclosed in fencing (Figure 17B). The sightlines are poor because of the surrounding buildings. It is also near the forest and the foreshore where bears often forage because of the nutrients from the out-flow pipe. Bears have been known to walk through this area.

There is a lack of attractants management signage around the station, particularly at the cabins and dorms. The proximity of BMSC to the forest and the marine shoreline, the presence of students, past conflicts, and the available attractants makes this a high-risk area.



Figure 17. A) Foreshore tanks fully enclosed in chain-link fence, 2020. B) Foreshore tanks partially enclosed by chain-link fence, 2020.

**2) Eileen Scott Community Park/Campsite.** The community park is surrounded by forest and has a playground, skate park, community garden and campsite. Bears are known to pass through the campsite on their way to Grappler as highlighted through the qualitative data of the Community Bear Interaction Survey conducted in 2020. There is an administration building with washrooms that are used by campers and park users. There is a campsite attendant present during peak time (May 15 to September 15) who works approximately 40 hours a week between 8 am to 6 pm. There is a park manager that works almost full time during peak season and a few hours a month the rest of the year.

The administrative building has forest on one side and the washrooms at the back that open onto a landscaped area with trees and grass. At the time of the survey in 2020 there was an outside sink with no plumbing that emptied into an open ditch and freezers along the side of the building. After consultation with the WildSafeBC coordinator the Parks Committee made a number of improvements including moving the sink to an area with good sightlines and plumbing and removed the freezers from the side of the building.

There are no public garbage bins and yet there is no place for campers to safely store their garbage. Campers are asked to take their garbage to the public transfer station. There are small waste baskets in the washrooms that people regularly place food waste in. The campground staff are responsible for emptying the waste baskets daily. The bathrooms are a confined space with poor sightlines from the entry door.

There are two bear-resistant metal bins that were purchased through the cost-sharing program for campers to store their food in (Figure 18A). These bins are not big enough to accommodate more than one cooler each. Campers regularly bring freezers with portable generators to store their food and fish (Figure 18B). There is no safe place for freezers to be secured and there is very little signage instructing campers about attractant management.



Figure 18. A) Bear-resistant Food Locker for campers, 2020 B) Camper with fish freezer on truck with portable generator, 2020.

The community garden and hockey rink back onto forest, with the playground in front of the hockey rink (Figure 19A and B). There is an eight foot tall fence that goes around the community garden (Figure 19A). The bottom of the fence is wooden and the upper part is metal mesh; it is not electrified. There is no history of bears being attracted to the garden. Behind the garden is a pathway that goes through the forest toward the fire hall. This pathway is frequently used by people and is also a bear corridor. There is a non-bear-resistant recycling receptacle for bottles and cans, which is maintained by the park manager and summer staff (Figure 19C). Landscape maintenance such as lawn mowing and bush trimming is contracted out and done on an as needed basis. The regular bear activity, proximity to the forest, attractants and use by children make this a high-risk area.



Figure 19. Photos taken at the Eileen Scott Park in 2020. A) Community garden. B) Playground. C) Can recycling.

**3) Boardwalk.** One of the most popular attractions in Bamfield is the boardwalk which runs along the foreshore of the Bamfield Inlet. The boardwalk is the most densely populated area in town with commercial and residential properties along the length of it. In most places it is only 3 feet wide with



railings on both sides. There are poor sightlines in places where there are bushes and sharp turns. Berry bushes frequently line the edges of the boardwalk (Figure 20). Many of the properties have fruit trees, docks and fish cleaning stations, coolers and outdoor freezers. Bears have been known to use the boardwalk as a corridor to move between desirable locations accessing both natural and unnatural attractants. The bears that have been destroyed near the boardwalk have been associated with attractants such as garbage, fruit trees and dogs; with discarded fish refuse in the intertidal likely the initial attractant that brought them into the area. If a person were to encounter a bear along the boardwalk the confined space would make it difficult for either party to escape.

*Figure 20. Boardwalk with overhanging branches of apples and blind corner in the distance, 2020.*

The boardwalk passes through Cougar Pass, a small forested public park, about the size of a city lot, which has been associated with higher levels of bear activity. Cougar Pass and the culvert adjacent to it are popular corridors used by bears to access the foreshore (Figure 21A). Conflict has occurred on the boardwalk near this area before; likely due to fish refuse in the intertidal. In 2021 WildSafeBC “Bear-in-Area” signs were placed at either entrance to Cougar Pass in response to concerns over high bear activity (Figure 21B and C).



*Figure 21. A) Cougar’s Pass on the Boardwalk. B&C) Bear signs at either end of the entrances to Cougar’s Pass*

The Fisheries dock is a popular area for fishermen to moor their boats and clean their fish. The fish refuse often accumulates in the intertidal here. While education and signage has reduced this issue, it is still a common occurrence. The main focus of WildSafeBC (previously Bear Aware) Community Coordinator has been to educate lodge owners and homeowners along the boardwalk about attractant management and to encourage the purchases of bear-resistant bins, composters, and electric fences, through the cost-sharing program. Permanent metal signs have been put on public and private docks to encourage fish refuse to be discarded in deep water (Figure 22A and B). Since these efforts, there has been a noticeable reduction in fish refuse in the intertidal. This has however led to an increase in sealions feeding on carcasses that accumulate at the end of the dock in the deep water (Figure 22C).



Figure 22. A) Permanent metal signs on boardwalk. B) Sign indicating an appropriate deep-water area to throw fish refuse. C) Sea lion eating salmon carcasses that have accumulated in the deeper water at the end of the Fisheries dock, 2021.

With the rise in tourism, higher visitor higher traffic will likely lead to an increase in unmanaged attractants in and around the boardwalk area. The combination of the proximity to the foreshore, berry bushes, unnatural attractants and the use by children, makes the boardwalk a high-risk area.

**4) Transfer station.** The transfer station is surrounded by forest on three sides. Alder and other brush are within 10 feet of the fence on the south and east side. There is forest across the main road from the entrance. There is also forest across the main road to the west, directly on two sides and across the street from it. There is an eight foot tall chain link fence around the transfer station. The 6-yard, metal, front-loading bins and recycling bins are located on the inside of a chain-link fence (Figure 23A). Bears used to climb over the fence to access garbage, so three strands of barbed wire were installed on the top of the fence in 2017. Bears continued to breach the fencing by climbing under it, leading to a food-conditioned bear being destroyed by COS in 2018. In response to this, a temporary three strand electric fence was installed around the perimeter of the chain-link fence; the gate is not electrified (Figure 9A; Figure 23 A). Once the electric fence was installed, bears were no longer able to gain access to the transfer station by climbing over or under the chain-link fence. The electric fencing was a temporary measure; the poly-wire has a lifespan of five years due to ultra-violet light breakdown (Jeff Marley, Margo Supplies, personal communication, 10 June 2020). In the fall of 2021, the fence collapsed in a number of places because of broken plastic insulators and posts. The bottom two wire strands can

be easily shorted out by vegetation so regular weeding under the electric fence is critical to maintain an effective charge.

The gate is not electrified and does not have barbed wire on top, making it a potential point of entry for a motivated bear to climb over or under it. It is not uncommon for the public to leave the gate open which has allowed bears to gain access to the bins. The metal latch that closes the gate does not always securely latch (Figure 23 B; Suzanne Rompree, personal communication, 2019). A carabiner has been used in the past to secure the latch but since it was never tethered to the gate it was repeatedly misplaced or stolen.

People sometimes leave their garbage outside the fenced area even though they have free access to the transfer station. There is a lack of instructive and informative signage about bears. While the measures taken to secure the transfer-station have reduced the risks, it remains a medium-risk area.



Figure 23. A) Transfer station non-electrified gate and fence, 2020. B) Latch on gate.

**5) Elementary school.** The elementary school field backs onto forests with a dense understory and fringe of salal and other berry bushes. There is a four foot tall perimeter chain-link fence around most of the field. The field is in use during the school months and other community members use it in the summer as well. Bears have been known to occasionally graze at the far end of the field on dandelions while passing through to the foreshore in front of Nova Harvest (Figure 24A). The school grounds and field are maintained year-round. (Steve Demotany, School Custodian, personal communications, August 2020).



Figure 24. Elementary school, 2020. A) school field backing onto fringe of forest and salal. B) Waste Management bin with bear-bar and no clips. C) Non-bear-resistant can from School District 70.

There are good sightlines from the playground. The school vegetable garden is adjacent to the school building and is surrounded by an eight foot tall metal mesh fence; the fence is not electrified. Compost is well maintained in a bear-resistant Jora composter located inside the garden fencing. The students help with the garden during the school year but it is the full responsibility of the teacher during summer months. There is no history of bears being attracted to the garden (Kirsten Russel, School Teacher, personal communication, 12 January 2021).

There is a Waste Management commercial bin located in the parking lot (Figure 24B). At the time of the field survey the bin was an older model of the 6-yard front loading bin with the bear-resistant-bar. Clips are not used to secure the bear-bar. Outside the entrance door to the school is a small, single bag, metal garbage bin, secured to the ground via metal rails (Figure 24C). This garbage bin is owned by School District 70 and is not bear-resistant. The bin has been breached by bears several times. It is emptied daily by the custodian and people have been instructed not to put smelly food waste in it (Steve Demotany, School Custodian, personal communications, August 2020). Even with the diligence of school staff, the combination of proximity to the forest cover/natural food source, past bear activity and accessible garbage, makes this area a medium-risk.

**6) The east side commercial area at the corner of Frigate Rd. and Bamfield Rd.** There is considerable human activity around the commercial area. While the vegetation in the town centre is sparse, neighbouring properties have swaths of trees and berry bushes which are used by bears to access the intertidal zone during the early mornings or at night. There are a number of docks with fish cleaning stations in this area. Despite signage instructing people to discard fish refuse into deeper water there continues to be a problem with it accumulating in the intertidal. This problem is largely due to cleaning stations being located too close to shore.

There is one business in this area that uses a commercial dumpster from Waste Management. The other businesses have garbage cans that are either stored inside at night or taken to the transfer station daily. Grease from restaurants is secured in sheds. There is a bear-resistant “Hide-a-Bag” 2 bag bin available to the public at the end of the HUU-ay-aht Dock (Figure 25). Human-bear conflict in the town center is uncommon due to high human activity and sparse vegetation cover. However, unsecured and

overflowing garbage is increasingly becoming a problem which has allowed bears to access garbage at the end of the dock and in the town centre. Although human-bear conflict is not a common occurrence in the town center the proximity to people makes this a medium-risk area.



Figure 25. Hide-A-Bag bear resistant bin located at the end of the Eastside Huu-ay-aht dock.

**7.) The west side commercial core** by the Government dock is the busiest area in West Bamfield. There is little vegetation cover in the center of town and bear activity is low. Bears use corridors established through native shrubs and trees on residential properties adjacent to the commercial core. Unmanaged fruit trees on properties close to the store have attracted bears onto the boardwalk, mostly in the months of August and September.

The main road (unnamed right of way) between the Coast Guard and the Bamfield Inn is used by the community to access the boardwalk, grocery store, west side Government dock and M.V Francis Barkley. The Coast Guard bin is located next to this right of way, on the inside of a four-foot-tall perimeter chain-link fence (Figure 25A). The bear-bar is secured with a clip or carabiner. Food waste is placed in the bin and can become very odorous during summer months.



Figure 26. A) Waste Management of Canada non-bear-resistant bin at Coast Guard Station. B) Public garbage bin overflowing at the west side Government Dock. C) Bags of garbage left on the dock because bin was removed and not replaced. Green Recycling bin distance, 2020

There are two community bins located at the end of the west side Government dock; one garbage and one household recycling. During the busy summer months the garbage bin is swapped with an empty

one three times a week by the M.V. Francis Barkley. There are times when the bins are removed and not replaced until the next sailing. When there are no bins available, people, often boaters, will leave their garbage directly on the dock (Figure 25 C). The bins are not bear-resistant. Some bins have bear-resistant-bars but clips or carabiners are not used to secure them. During the busy summer months the garbage overflows and the lids are not able to close (Figure 25 B). Although it is not a common occurrence bears have been known to accessed these bins; most recently in the fall of 2021. The community stores refundable bottles and cans in the closed storage shed at the end of the dock. The sightlines to the end of the dock are obscured by the bins and poor lighting at night. If a person were to encounter a bear at the end of the dock, it would have no escape route. The high volume of people and unsecured garbage in the core are the main risk factors making this a medium risk area.

**8) Mills Peninsula.** The northern tip of the Mills Peninsula is an open grassy area which provides early forage of flowers and late summer forage of berries. Bears regularly use the tall berry bushes that line driveways and property boundaries as corridors around and across the narrow peninsula. There is a heavily forested area on the southern part of the peninsula with corridors connecting the grassy areas to Scotts Bay, an area with high value intertidal forage. This area is popular with families and children who frequent the fishing lodges and rentals.

There is a hobby farm enclosed in electric fencing that has not had issues with bears. Conflict in this area has been with attractants such as garbage, fruit trees and fish refuse from lodges. Highly productive unmanaged fruit trees have brought bears into very close contact with visitors (Figure 26). Some effort has been made to manage garbage with bear-resistant bins, electric fencing and signage, however these problems continue to persist. This would be considered a low-risk area.



*Figure 27. Highly productive, unmanaged plum tree on Mills Peninsula in the summer of 2019.*

**9) Brady’s Beach:** Brady’s Beach is an increasingly popular beach destination and unofficial campground (Figure 27A). The beach is Crown Land and there is no official oversight. It is a sandy beach with patches of cobble rock and private old-growth forest above the high tide line. Bears travel along the beach, but mostly during the night and early morning when they are less visible. Paw prints in the sand from sows and cubs have been seen on more than one occasion next to tents, coolers, camping stoves and campfires.

The facilities on Brady’s beach include a fresh water pipe stand and a composting toilet at the entrance to the beach. The composting toilet is maintained daily during the summer and there is no garbage can. There is currently no place for people to secure their garbage or store their food safely on the beach. People are expected to secure attractants by hanging food and garbage in a tree but there are no signs informing people of this. Some campers leave behind garbage and food waste and wash greasy dishes at the water standpipe. The WildSafeBC Bamfield Coordinator regularly visits campers on the beach; distributing *Bare Campsite* brochures and providing information about attractant management.

The town has not decided whether to officially allow camping on Brady’s Beach. Some community members have objected to posting signage instructing campers how to manage their attractants because they think it will encourage more camping. A general ‘You are in Bear Country’ sign, asking people to secure their garbage, was placed at the entrance to the beach (Figure 27B) and literature about the Bare Campsite Program is posted near the composting toilet. Since past conflict and bear activity is relatively low, it is considered a low-risk area.



Figure 28. Brady’s Beach 2020. A) Brady’s Beach with campers in the far distance. B) Signage at Brady’s Beach entrance.

### Anacla Risk Areas

There are seven areas in Anacla that have been identified as increased risk of human-bear conflicts and they are summarized in Table 4, mapped in Figure 29 and described in further detail in this section.

*Table 4. Summary of risk areas for Anacla.*

ID	Location of hazard	Risk Level
1	Pachena Campground	High
2	Paawats	Medium
3	Boat Ramp	Low
4	Field with stream	Low
5	Community Garden	Low
6	Playing field	Low
7	Playground	Low

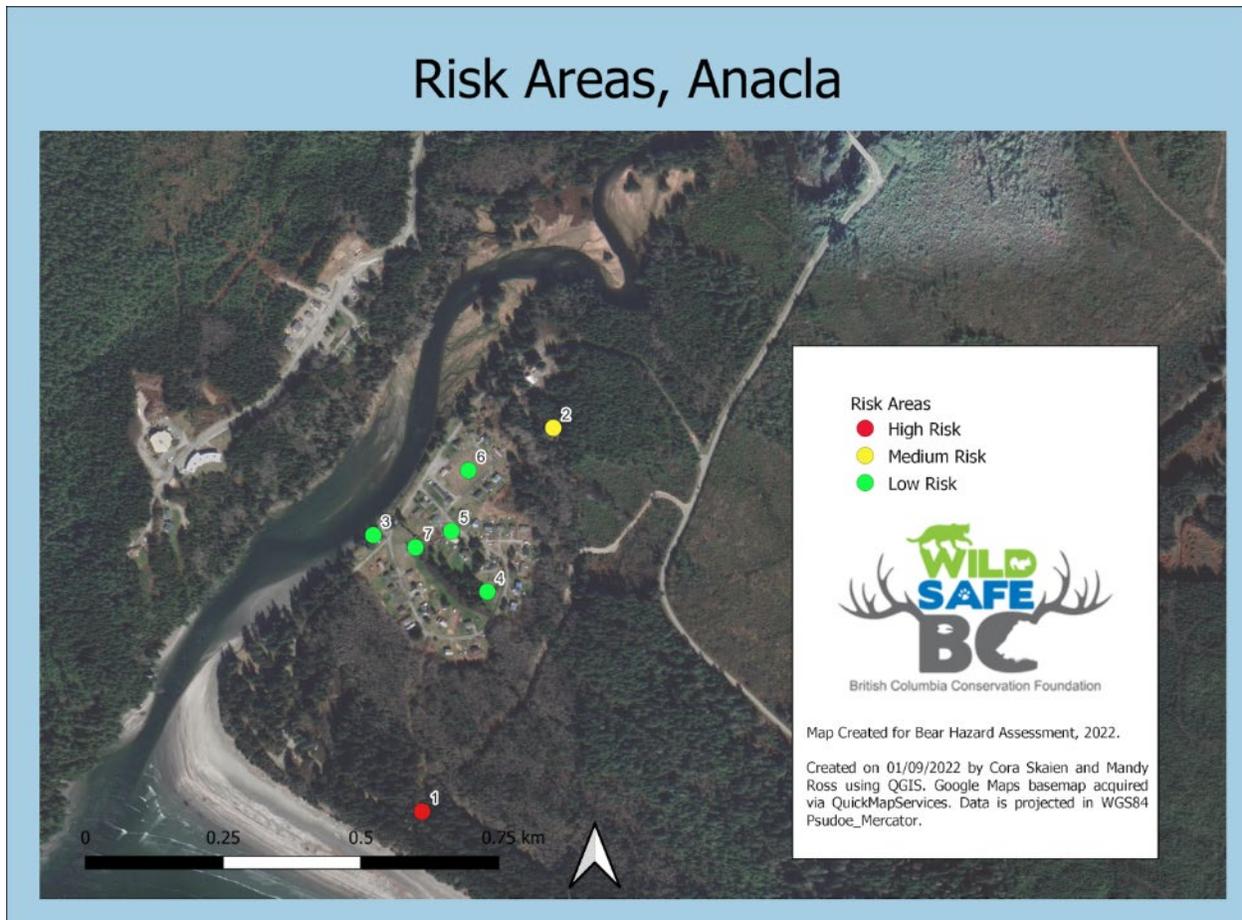


Figure 29. Map of risk areas in Anacla, rated from low to high risk.

**1) Pachena Campground** is a popular tourist destination for RV and tent camping between June and October. The campground was expanded in 2021 increasing the existing number of sites from 75 to 132. This added capacity is expected to increase the number of visitors to just under 10,000 per year (Sarah Johnson, Human Resources for Huu-ay-aht Group of Businesses, personal communication, 13 January 2022). The Campground's proximity to prime bear habitat, large turnover of visitors and history of human-bear conflict make this a high-risk area. The campsite is surrounded by forest with the Pachena River to the west and Pacific Rim West Coast Trail to the east. The campground backs onto the lower Anacla Village. The campground is forested with salal and other dense shrubs allowing bears to transit through the campsite. Sightlines are obscured by salal around busy area such as the office building and bathrooms (Figure 29).



There is no place for campers to store their food or coolers securely. Water stand pipes are located along the roads of the busier areas. Grey water collects at the base of the standpipes and food waste could be seen from people rinsing dishes. There are some permanent WildSafeBC ‘Caution Bear-in-Area’ signs at the busier locations such as the office and bathrooms (Figure 32A). General information about what to do with wildlife encounters is included on the ‘Emergency Response for Campers’ sign (Figure 31B). Nothing is mentioned about Bear Smart or Bare Camping on the ‘Welcome to Pachena Bay Campground’ sign (Figure 32B and C). There are no signs in the campground that provide detailed instruction about how to camp safely in bear country. There are no signs in the newly expanded campsite area.

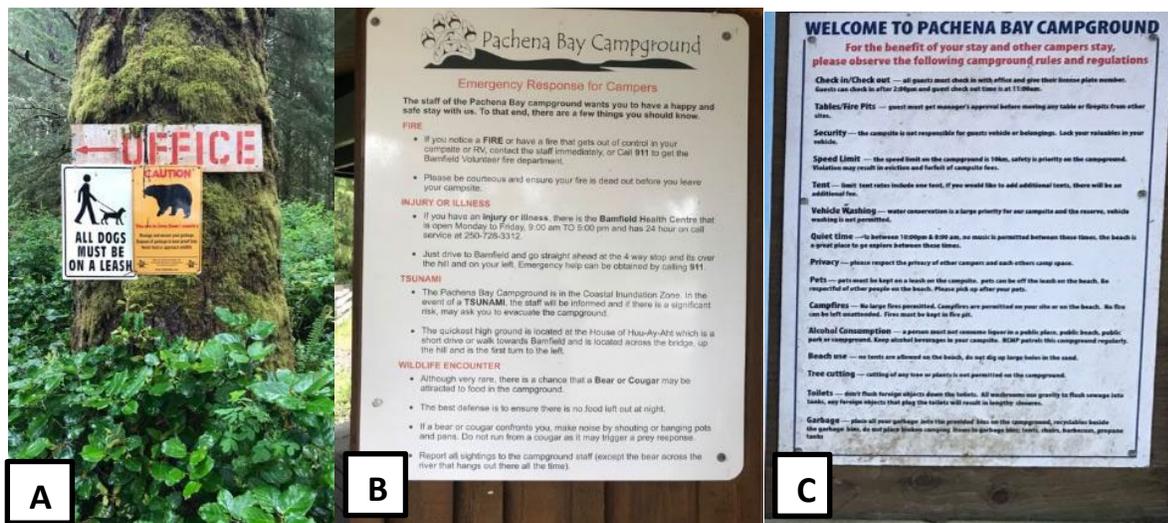


Figure 32. Examples of signage found in the campground.

**2) Paawats**, the preschool/daycare is located in the forest near a bearing corridor. Despite the operator’s careful consideration of Bear Smart practices this is considered a medium-risk area. There is no history of bear conflict, but the bear activity, number of children passing through, and proximity to prime bear habitat, are all factors that support the medium-risk designation.

The perimeter of the outside play area is fully enclosed with a 4 foot fence (Figure 33A and B). Despite the location in the forest there has been a considerable amount of clearing to allow sightlines around the perimeter of building and play area (Figure 31C). There are no exterior garbage receptacles and garbage is stored inside and removed every Wednesday by the Community Maintenance Crew (Clara Clappis, Early Childhood Education Coordinator, personal communication, 28 May 2021).



Figure 33. A) Paawats Preschool and daycare building and fence for exterior playground. B) Back fence. C) View of forest and cleared sightlines from over the back of the fence.

**3) Boat Launch.** The boat launch area is located on the westside of the lower Anacla Village (Figure 34A). It provides access to the mouth of the Pachena River and estuary where there is high bear activity (Figure 34B). This area is used for launching boats and cleaning fish and shell fish. There is no significant history of conflict occurring due to discarded fish refuse. The strong current and fast-moving water prevent refuse from accumulating. The proximity to bear habitat, the village and the cleaning of fish make this area a low-risk area.



Figure 34. A) Boat launch. B) Image of bear in the estuary across the Pachena River from the boat launch, 2021.

**4) Field with Stream.** The swath of green space next to the stream that runs through the lower Village is considered a low-risk area (35A). It has been identified as a bear corridor and has had significant bear activity in the past. The Community Maintenance Crew is responsible for mowing and maintenance, on an as- needed basis (Torrance Gilmour, Infrastructure Manager of Operations, personal communications, 17 January 2022). There are berry bushes on the edges where the open areas meet the forest cover. It is the proximity of this green space to houses, a playground and the community garden, that make it a risk area.



Figure 35. A) Green space and stream through lower Anacla, 2021.

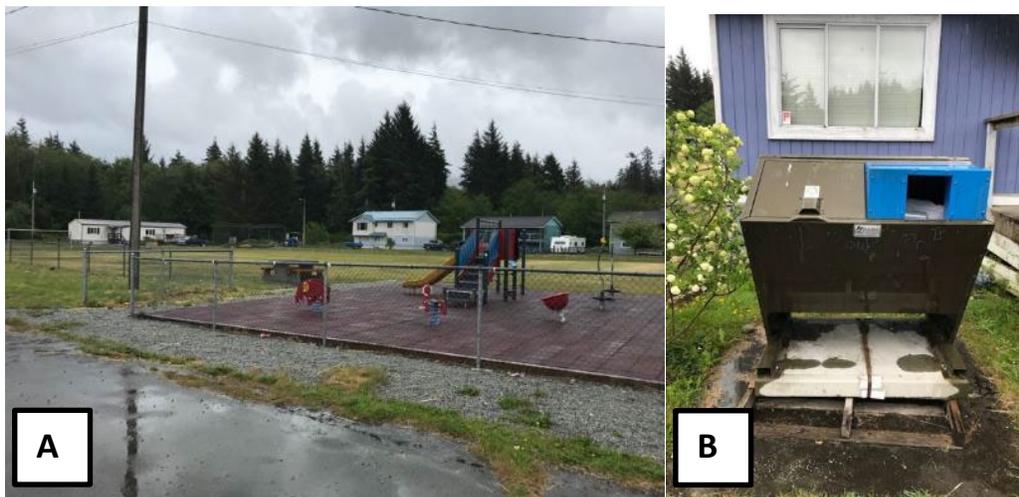
**5) Community Garden.** The community garden is located in the middle of a residential part of Lower Anacla and at the end of the greenspace and stream. The garden is fully enclosed by a 4 foot hardware cloth fence with clear sightlines in the surrounding area (Figure 36A). Open compost piles are located inside the fence but are well maintained and odor free (Figure 35B). There is no history of bears entering the community garden. This is considered a low-risk area.



Figure 36. Photos of the Community Garden. A) Gate entrance with fence. B) A well-maintained open compost bin. C) Green houses and garden inside fence.

**6) The playing field and playground** is surrounded by a by a non-continuous 4 foot chain-link fence. The playing field backs onto houses. There is a public Waste Management bin located in the northeast corner across the road from the field (Figure 37A). Until October 2021 this bin was broken which allowed repeated access to it by bears. This bin has since been replaced by a bear-resistant bin. There is a two bag 'Hide-a-Bag' bin located at the entrance near the playground (Figure 37B). The left-hand side of the bin is bear-resistant and the blue, right-hand side has an opening for recyclables. While bear-resistant, the opening on the right-hand side is large enough for bears to reach in and grab items. It is

important that this side only be used for items that do not contain food waste. This bin is emptied by the Community Maintenance Crew every Wednesday. The field is also maintained by the same maintenance crew and is mowed on an as-needed basis (Torrance Gilmour, Infrastructure Manager of Operations, personal communications, 17 January 16, 2022). There has not been a history of human bear-conflict within the playground and playing field but frequent use by children and a history of bears accessing the non-bear-resistant bins makes this a low-risk area.



*Figure 37. Playground and playing field with municipal garbage bin in the distance 2021. B) Hide-a-Bag bear-resistant garbage/recycling bin, 2021.*

**7) The playground** is located in a field and backs onto the stream, community garden and treed part of the green belt (Figure 38). This area is well maintained and the grass is kept mowed on an as is basis by the Community Maintenance Crew (Torrance Gilmour, Infrastructure Manager of Operations, personal communications, 17 January 2022). Apart from the treed green space, the rest of the area surrounding the play structure has good sightlines. There are no human sources of attractants like garbage cans. The high activity and frequent use by children makes this a low-risk area.



Figure 38. Playground backing onto stream, greenspace and community garden, 2021.

## Summary and Next Steps

There has been significant progress towards obtaining Bear Smart Community designation. However, human-bear conflicts are an ongoing challenge that will remain as long as bears and humans share the landscape. This BHA identifies ongoing hazards in the community that may lead to human-bear conflicts. The next step would be to develop a Human-Bear Conflict Management Plan (HBCMP) to identify opportunities to address these ongoing issues and further reduce conflicts while increasing safety in the community. Some of the hazards and proposed solutions that should be reviewed are:

**Non-bear-resistant commercial and municipal dumpsters.** A number of the commercial garbage bins on the east and west side are either broken or not bear-resistant. In order for the bear-resistant bins to be secure the bear-bars must be fixed in the ‘up’ position with a clip or carabiner. It is difficult to ensure proper user compliance with bear-bars. Clips or carabiners need to be tethered to bins with a metal cord as they may go missing. There needs to be proper signage on each bear-resistant bin instructing people how to properly secure it. Replacing bins in the community with the more user-friendly bins that have a latching system rather than just the bear-bars would help reduce user error. This tethering system with signage has been used in other regions of the Pacific Rim (Figure 39) but still requires community champions to check on them.



Figure 39. Decal used on dumpsters in the communities of Tofino, Ucluelet and Hitacu.

**Overflowing dumpster on the west side Government dock, Pachena Bay Campsite and other area.** There is a need for higher frequency of garbage pick-up during peak season. Measures should be developed ensure that recycling is separated from the garbage stream. Diverting green waste from the garbage stream will help reduce quantity and odor, however, compost would need to be managed properly and stored in bear-resistant containers.

**Commercial/vacation rental and residential garbage that are improperly stored or not bear-resistant.** People should be encouraged to store garbage in a well-built garage or shed until it is taken to the transfer station or dumpster. To reduce odor, garbage should be kept clean and smelly foods should be frozen and not placed in the bin until the day the bin is removed.

**Transfer station.** The electric fence surrounding the transfer station was designed to be temporary. The life span of the temporary electric fence is approximately five years and it was installed in 2018 (Jeff Marley, Owner of Margo Supplies, personal communications, November 2019). A permanent electric fence which either electrifies the gate or is installed above the gate, would provide a higher level of security. There should be an automatically closing gate with a carabiner/clip on a chain to prevent the gate latch on the gate from being left open.

**Fruit trees.** There are a number of fruit trees that have been left unmanaged. Plans should be developed to help address unmanaged fruit trees on public and private property. Developing a fruit gleaning group to assist people with pruning and picking fruit might be an option.

**Compost.** There are many non-bear-resistant composters and compost heaps in Bamfield. Providing education about compost management, subsidized/affordable bear-resistant composters and community composters would help reduce this conflict.

**Campgrounds.** There must be safe locations to store attracts such as food, garbage, freezers and coolers in campsites. Adopting the [Bare Campsite Program](#) would help reduce conflict in the Eileen Scott and Pachena Bay Campground. The unofficial campsite at Brady's beach requires public consultation to determine if it will continue to be used as a public campsite. This will inform appropriate recommendations to help mitigate conflict there.

**Signage.** There is a lack of signs in high traffic areas for tourists. Signs were the number one item that the local conservation officer said would help reduce conflict in Bamfield (Andrew Riddell, personal communication, 5 January 2021).

**Trails.** Trails at BMSC, near playgrounds, the campground and the boardwalk that are adjacent to prime bear habitat need to be addressed.

**Fish waste.** Fish refuse from cleaning stations and boats accumulating in the intertidal zone needs to be addressed. More education and signage will continue to help reduce this problem.

**Bylaws.** There is a lack of bylaws associated with attractant management including backyard livestock, fruit tree maintenance, securing garbage/compost, fish refuse and outdoor freezers. Along with bylaws, resources are required to enforce bylaws that are developed.

A HBCMP requires participation of Bamfield and Anacla and other stakeholders to develop long term solutions which could include: the addition of local bylaws, promotion of fruit gleaning groups, updating the Official Community Plan and other planning documents, consultation with school districts, and engagement of tourism agencies and the business community.

In order to develop the HBCMP, it is recommended that the ACRD support and initiate a Human-Bear Conflict Working Group in order to review the BHA and develop the HBCMP with stakeholder input. This would include local government staff, WildSafeBC, COS, and other community representatives that would be impacted by the plan and that can assist in supporting its execution.

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## Appendix 1. Map of Bamfield Huu-ay-aht Community Forest

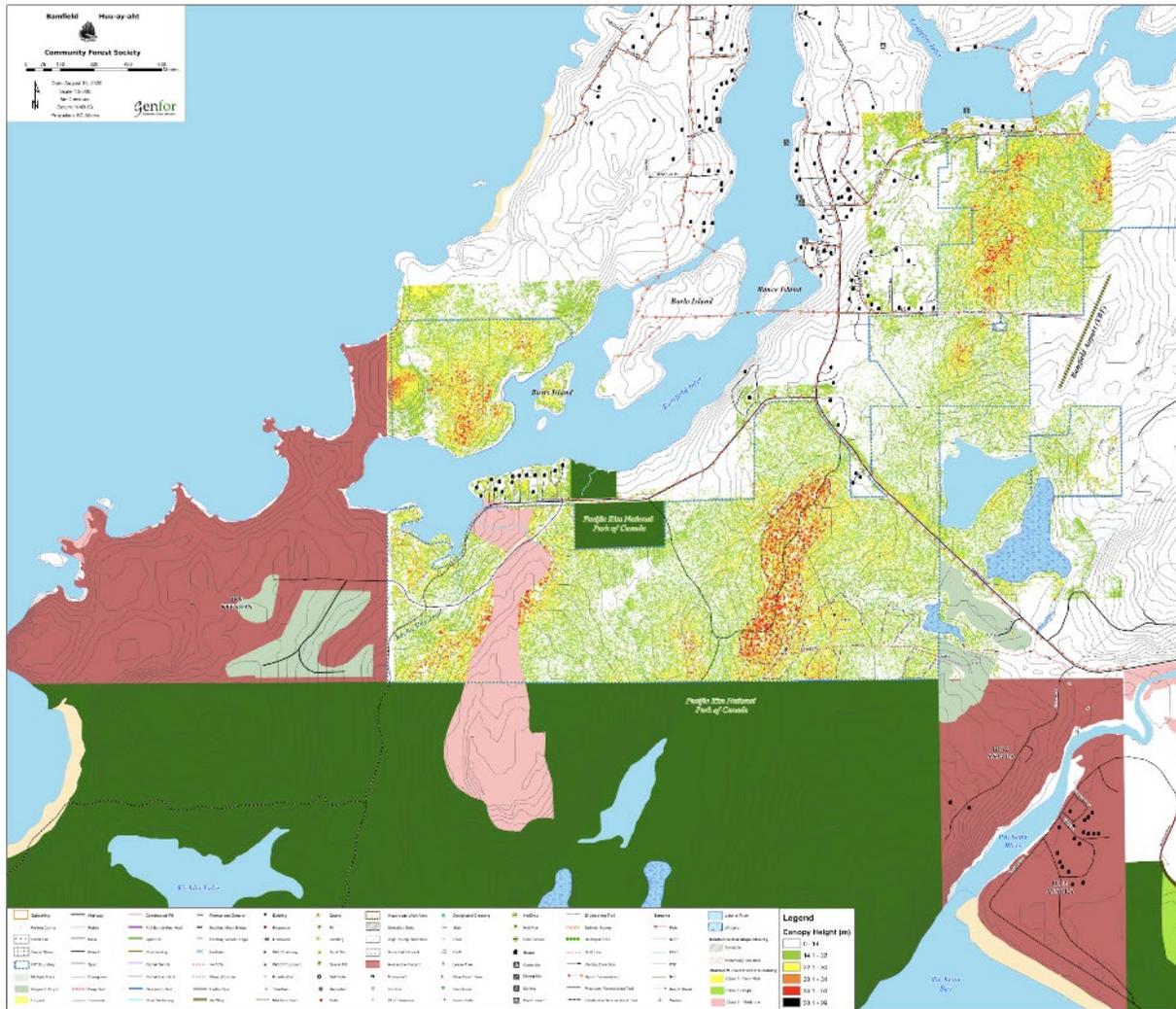


Figure A 1. Map of Bamfield Huu-ay-aht Community forest. Red dots indicate the clusters of tall forest canopy and possible appropriate denning habitat.

## Appendix 2: Map of forest stand age in and around Bamfield

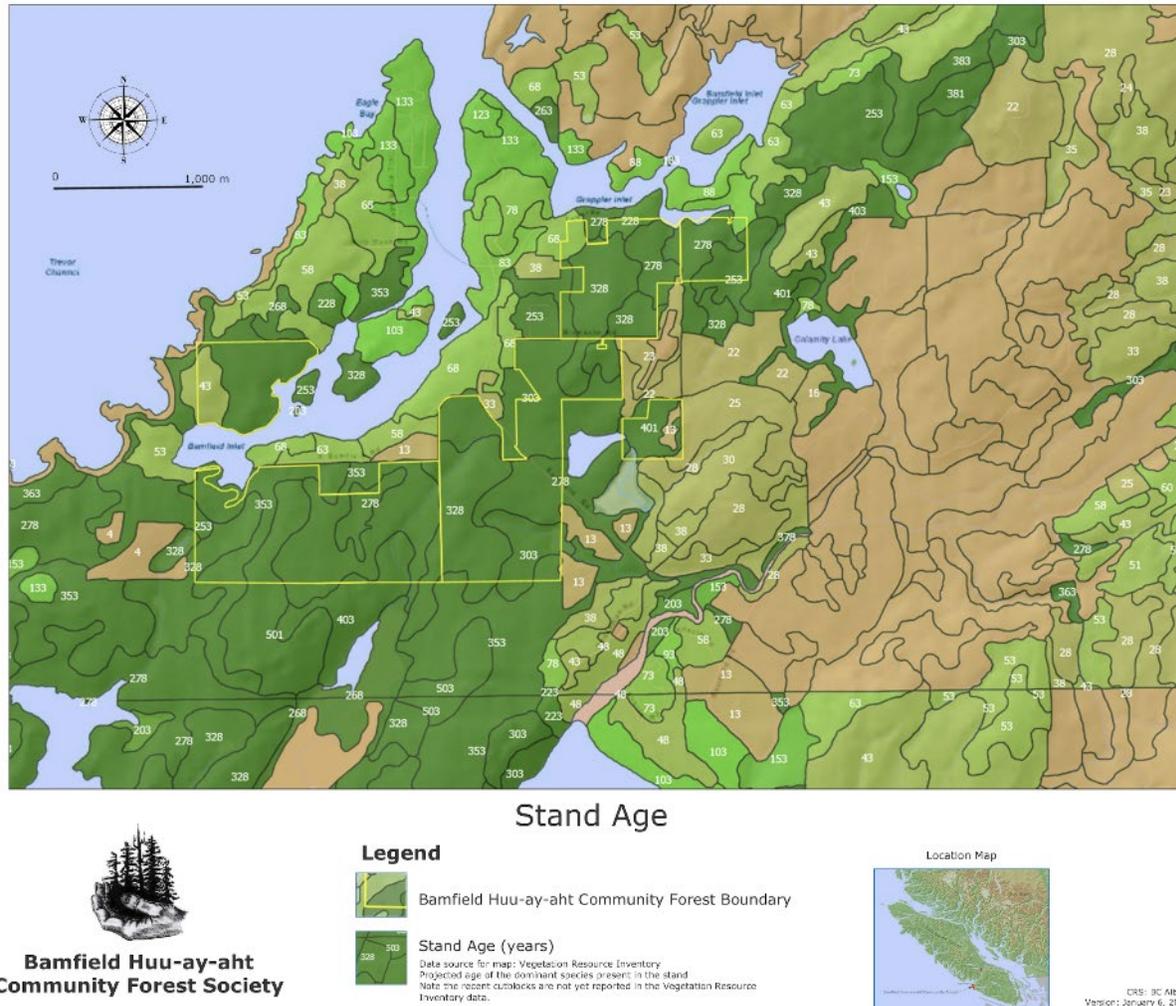


Figure A 2. Map of the age of the forest stands in and around Bamfield.

## Appendix 3: Human-Bear Interaction Survey

1. Which of the following best describes your feelings toward bears?

- I like having bears in the area
- I like having bears in the area, but I worry about conflicts they may cause
- I like having bears in the area, but worry about human safety
- I don't like having bears in the area
- I have no particular feeling about bears
- Don't know

2. To what extent do you disagree or agree with each of the following statements regarding bears? (For each statement, circle the number that best represents your response.)

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It is important to maintain bear populations so that future generations can enjoy them	1	2	3	4	5
Bears should exist in their own right regardless of their interactions with humans	1	2	3	4	5
I believe that bears are important to keep natural ecosystems in balance	1	2	3	4	5
Learning to co-exist with bears is a normal part of living here	1	2	3	4	5
I believe that bears cause excessive damage in the area where I live	1	2	3	4	5
Bears pose a risk to people's safety in my community.	1	2	3	4	5
Bears are nuisance animals in my community.	1	2	3	4	5
I support the selective killing of bears in the area where I live if they cause damage to property.	1	2	3	4	5
Bears are important for their cultural value.	1	2	3	4	5
Bears are important for generating local economic revenues.	1	2	3	4	5
I am afraid of encountering a bear.	1	2	3	4	5

3. In the community where you live, are you concerned about black bears affecting:

	Never	A Little	Some what	Much	A great deal	NA
Your own personal safety	1	2	3	4	5	0
Your children's safety	1	2	3	4	5	0
Your pet's safety	1	2	3	4	5	0
The safety of vulnerable people	1	2	3	4	5	0
The safety of elderly people	1	2	3	4	5	0
The safety of your livestock	1	2	3	4	5	0

4. Over the past three years, please indicate if you have become more or less fearful about black bears in your community.

- More fearful.
- Less fearful.
- About the same.
- Not sure.

5. In your opinion, in the past three years, how has the number of bears that enter your community changed?

- Decreased
- Remained the same
- Increased
- Fluctuates yearly
- Don't know

6. In your opinion, in the past three years, how has the level of conflicts with bears in your community changed?

- Decreased
- Remained the same
- Increased
- Fluctuates yearly
- Don't know

7. What do you believe is the cause for the changes in the number of conflicts with bears in your community?

---

8. Usually, which month of the year do you experience the highest number of bear interactions?

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| <input type="checkbox"/> January  | <input type="checkbox"/> July      |
| <input type="checkbox"/> February | <input type="checkbox"/> August    |
| <input type="checkbox"/> March    | <input type="checkbox"/> September |
| <input type="checkbox"/> April    | <input type="checkbox"/> October   |
| <input type="checkbox"/> May      | <input type="checkbox"/> November  |
| <input type="checkbox"/> June     | <input type="checkbox"/> December  |

9. What areas in your community do bears tend to frequent most often (i.e., feeding areas, travel corridors, areas with attractants). Please offer as many details as you can.

---

10. Have you seen bears on your property or on your street in the past three years?

- Never
- 1-3 times
- 4-6 times
- 7-10 times
- More than 10 times

11. What did bears do on your property or street? Select all that apply.

- General sighting, just passing through
- Accessing garbage
- Eating fruit (apples, plums etc)
- Eating berries from ornamental planted trees (eg Oregon Ash, Crabapple)
- Eating birdseed
- Damaging a beehive
- Eating pet or livestock food
- Accessing recyclables
- Eating grease or drippings from a barbeque
- Accessing the contents of a freezer
- Accessing the contents of a smokehouse
- Accessing discarded fish remains
- Eating produce from a home garden
- Entering a structure such as a shed, garage or home
- Damaging property such as a shed or other structure
- Other \_\_\_\_\_

12. Have you called the Conservation Officer Service through the Report All Poachers and Polluters (RAPP) line to report bears accessing non-natural attractants, involved in negative interactions, being aggressive, and/or being in populated areas where they can pose risk to human safety?

- Yes
- No

13. If no, why? (select all that apply)

- I have not experienced this type of interaction with bears
- I did not feel it was necessary
- I feared the bear would be killed
- I did not know this resource was available
- It takes too long to report a bear issue
- It takes too long for the conservation officer to come
- Other, please specify \_\_\_\_\_

14. The Bear Smart Community Program is a voluntary, preventative conservation measure that encourages communities, businesses and individuals to work together to address the root causes of human-bear conflicts. How important is it to you that the community where you live becomes Bear Smart?

- Not important  Slightly Important  Moderately Important
- Important  Very Important  Unsure

15. What barriers prevent you from taking actions to prevent bears from accessing your garbage?

- Not aware that garbage is attractive to bears
- No shed/garage/bear-resistant enclosure on my property
- No freezer space for storing garbage indoors
- No vehicle to go to the transfer station regularly
- Transfer station too far away
- Transfer station open at inconvenient hours
- Physical challenges to manage and store garbage properly
- Pick-up time inconvenient or too early to put the garbage out in the morning of pick up
- Have to put bin out for collection early due to work or holiday schedule
- Other \_\_\_\_\_

16. What are you currently doing, or would be willing to do, to prevent bears from accessing your garbage?

- Store garbage securely in a shed, garage or indoors
- Freeze kitchen waste, and wait until collection day to put in bin
- Install a bear-resistant enclosure to store garbage
- Use bear-resistant garbage containers
- Go more often to transfer station
- Put out the garbage the morning of collection day only
- Other \_\_\_\_\_

17. What barriers prevent you from taking actions to avoid attracting bears to your compost?

- Not applicable
- Not aware that compost is attractive to bears
- Too much effort
- No time to manage the compost properly
- No space to store compost
- Costly to manage compost properly
- Unsure how to maintain compost to reduce odours
- Other \_\_\_\_\_

18. What are you currently doing, or would be willing to do, to reduce attracting bears to your compost?

- Not applicable
- Use bear-resistant composter
- Use electric fence around regular compost
- Manage compost to prevent it from smelling
- Not add meat or fish products to it
- Other \_\_\_\_\_

19. What barriers prevent you from taking actions to prevent bears from accessing the fruit on your trees?

- Not applicable
- Not aware that fruit trees are attractive to bears
- Lack of time to manage fruit trees
- Too expensive to manage fruit trees
- Too expensive to have fruit trees removed
- Not physically able to manage fruit trees
- Other \_\_\_\_\_

20. What are you doing, or would be willing to do, to prevent bears from accessing the fruit on your trees?

- Not applicable
- Learn how to best manage my fruit trees
- Pick ripe fruit immediately
- Pick unripen fruits and let them ripen inside
- Clean-up windfall as soon as possible
- Prune tree to a height and density manageable for harvest and consumption
- Knock off blossoms to reduce fruit production
- Remove trees that are not used
- Connect with a fruit gleaning organization to help with harvest
- Other \_\_\_\_\_

21. What barriers prevent you from taking actions to avoid attracting bears to your bird feeder?

- Not applicable
- Not aware that bird seed is attractive to bears
- Lack of time to manage my bird feeder
- Other \_\_\_\_\_

22. What are you currently doing, or would be willing to do, to reduce attracting bears to your bird feeder?

- Not applicable
- Only place feeders when bears are less active (December to March)
- Keep the ground below the feeders free of seeds
- Use small amounts of seeds at a time
- Use bird baths and bird houses instead to enjoy birds
- Plant flowers that attract and naturally feed birds
- Other \_\_\_\_\_

23. What barriers prevent you from taking actions to avoid attracting bears to your pet and pet food?

- Not applicable
- Not aware that pets and pet food is attractive to bears
- Pets not allowed indoors per landlord rules
- Pet food too smelly to store indoor
- No storage for pet food indoor
- No fenced backyard
- Dogs off leash to better exercise them
- Other \_\_\_\_\_

24. What are you currently doing, or would be willing to do, to reduce attracting bears to your pet and pet food?

- Not applicable
- Bring pets indoors at night
- Feed pets indoors or clean up food after they have eaten
- Store pet food inside
- Ensure dogs are on a leash or under complete control when out for a walk
- Fence backyard
- Carry bear spray when walking pet in wildlife country
- Other \_\_\_\_\_

25. What barriers prevent you from taking actions to avoid attracting bears to your freezer?

- Not applicable
- No space indoors
- No access to a secure building for storage
- Cost of building a secure building
- Don't believe my freezer is an attractant
- Other \_\_\_\_\_

26. What are you currently doing, or would be willing to do, to reduce attracting bears to your freezer?

- Not applicable
- Keep freezers indoors or in a secure building
- Get rid of the freezer if not in use
- Other \_\_\_\_\_

27. What barriers prevent you from taking actions to avoid attracting bears to your backyard chickens?

- Not applicable
- Cost of proper fencing and electric fencing
- Unsure of where to purchase electric fencing
- Lack of time to build a proper enclosure and maintain it
- Need advice or guidance on how to keep wildlife out of my chicken coop
- Don't believe my chicken coop is an attractant
- Other \_\_\_\_\_

28. What are you doing, or would be willing to do, to reduce attracting bears to your backyard chickens?

- Not applicable
- Install and maintain an electric fence around the coop
- Built enclosure so to avoid attracting any wildlife, including rats
- Clean daily uneaten food by chickens
- Store food indoors in an airtight, wildlife-resistant container and in locations not accessible by wildlife.
- Other \_\_\_\_\_

29. What barriers prevent you from taking actions to avoid attracting bears to your fish cleaning station?

- Not applicable
- Not aware that fish remains are attractive to bears
- Too much effort
- Cleaning station is too close to the intertidal
- Not sure where is an appropriate place to throw fish remains
- Do not have a cleaning station and clean on my boat
- No way to clean the cleaning station properly
- Other \_\_\_\_\_

30. What are you doing, or would be willing to do, to reduce attracting bears to your fish cleaning station?

- Not applicable
- Install signs that explain why and where to throw fish remains
- Use wheelbarrow to transport fish across dock to deeper water
- Move cleaning station to side of dock with deeper water
- Use cleaning tools to scrub down station after use
- Use communal cleaning station
- Other \_\_\_\_\_