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Evaluation of the Visitor Safety Program

February 2022



Cover: Preparation for visitor rescue on the West Coast Trail,
Pacific Rim National Park Reserve

Ce document est disponible en français.

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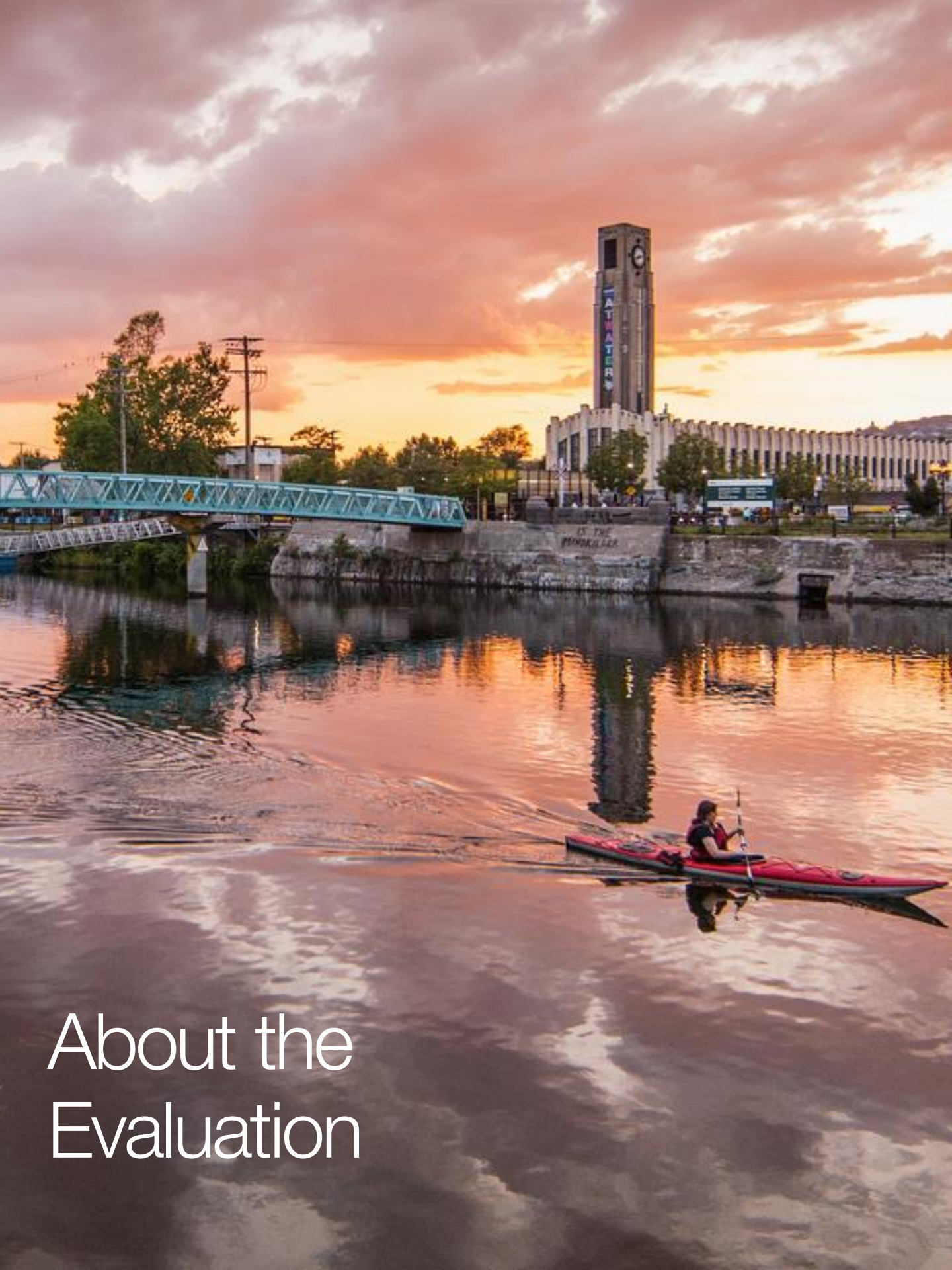
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Acronyms and Abbreviations

Table 1: Acronyms and Abbreviations

Acronyms	Names in Full
IEM	Incident and Event Management
LEB	Law Enforcement Branch
MoU	Memoranda of Understanding
NHS	National Historic Site
NMCA	National Marine Conservation Area
NUP	National Urban Park
OTS	Occurrence Tracking System
SAR	Search and Rescue
SIR	Serious Incident Report
RCM	Resource Conservation Manager
VARA	Visitor Activity Risk Assessment



About the Evaluation

About the Evaluation

The data contained in this report was collected in 2018-19. The evaluation had been scheduled for approval and publication in 2020; however, with the significant effects of the COVID-19 pandemic on Parks Canada's operations, evaluation activities were put on hold while the Agency focused on business continuity, resumption and managing its system of national parks and national historic sites. As a result, the report, management responses and action plans were approved in February 2022. Despite this delay, the findings, recommendations and associated action plans remain relevant.

Evaluation Scope

The evaluation examined the effectiveness and efficiency of the program, consistent with requirements under the 2016 *Policy on Results*, and covers the period between 2013-14 and 2018-19.

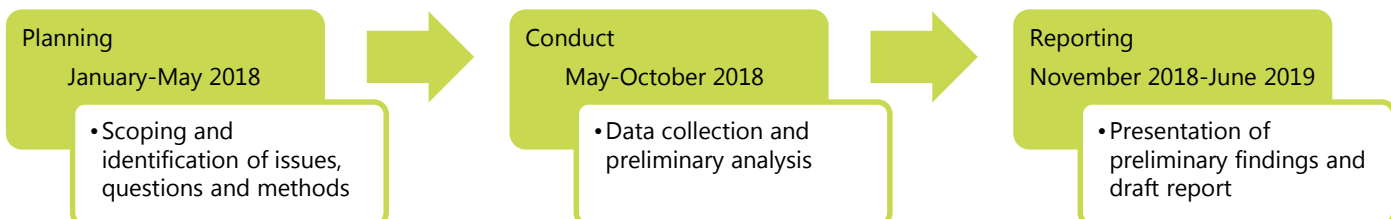
The scope of the evaluation includes the four activity areas of the Visitor Safety Program: planning, mitigation, response, and monitoring and evaluation. Results achieved since the introduction of the Directive on Visitor Safety (2013) were the main focus. As the Visitor Safety Program is focused on activities that visitors undertake in Parks Canada places, the scope excludes occupational health and safety, motor vehicle incidents, human-wildlife co-existence and compliance with Parks Canada's rules and regulations.

Evaluation Methods

Data from multiple lines of evidence was collected for the evaluation. These included:

- document and file review;
- analyses of multiple databases related to visitor safety (Incident and Event Management, Serious Incident Reports, and financial data);
- site visits to six national parks and four national historic sites;
- a media scan of relevant news articles related to external factors and visitor safety;
- a comparative analysis of other jurisdictions; and
- over 70 interviews with Agency staff as well as partners and stakeholders.

Figure 1: Timeline – Evaluation of the Visitor Safety Program



Program Description



Visitor Safety at Parks Canada

Program History

The Visitor Safety Program was developed to manage and mitigate the risks associated with those natural hazards while promoting visitor self-reliance and safe practice of activities. The program has undergone significant structural changes in the past decade, impacting its management and delivery.

Prior to 2008, public safety in national parks was the responsibility of the Resource Conservation Manager. Typically, one park warden was assigned the role of managing a team of public safety specialists as well as coordinating and delivering search and rescue services.

In 2008, the Law Enforcement Branch (LEB) was created, at which point park wardens became focused primarily on enforcement and were no longer responsible for public safety. The LEB was created under the Protected Areas Establishment and Conservation Directorate, and, in 2010, accountability for the Visitor Safety Program was transferred to the External Relations and Visitor Experience Directorate. A cross-functional approach to the delivery of visitor safety was implemented, and the Visitor Safety and Fire Operations Coordinator was created. This position, reporting to the field unit Resource Conservation Manager, is responsible for

visitor safety coordination and the management of incident response teams.

Directive on Visitor Safety

Since 2013, the Visitor Safety Program has been guided by the Directive on Visitor Safety (the Directive), which outlines the accountabilities, responsibilities, and requirements for visitor safety at Parks Canada places, including national parks, national marine conservation areas, and national historic sites. The four main activity areas of the Directive are planning, mitigation, response, and monitoring and evaluation. The logic model on the following page illustrates the outputs and outcomes associated with the Directive.



Image: Signage at the tip of Point Pelee National Park

Logic Model

Figure 2: Visitor Safety Logic Model

PCA Activities	Planning	Proactive Measures	Reactive Measures	Monitoring and Evaluation
Outputs	Governance framework	Guidance on proactive measures	Guidance on reactive measures	Database of incidents
	Completed protocols, tools, and templates	Information and education	Spectrum of reactive measures	Trends analysis of incident data
	Training	Assets designed, renovated, and maintained	Incident reports	Reviews of national and local program performance
	MoUs and other agreements	Dissuasive measures		
	Maintenance of assets			
Immediate Outcomes	Risks are identified and prepared for. PCA employees are trained and empowered to: - proactively work to prevent incidents; - safely and effectively react to incidents when they do occur; - refer incidents to the appropriate authority when required.	Visitors are made aware of the impact of their actions when they visit Parks Canada places. Risk of incidents is reduced. Incidents are prevented from occurring.	Visitors are made aware of the impact of their actions when they visit Parks Canada places. Response to incidents is appropriate and timely.	Continual improvements in effectiveness efficiency of program delivery.
Intermediate Outcomes	Parks Canada liability is minimized.	Frequency and severity of incidents is minimized. Parks Canada liability is minimized.		
Departmental Result	Parks Canada’s places are safely enjoyed in ways that leave them unimpaired for future generations.			



Key Findings



Effectiveness: Program Outputs

Expectations

Findings

Planning: Visitor safety plans are in place for all heritage areas

More visitor safety plans were approved for national parks and canals than for national historic sites.

Training: Staff is recruited, trained and certified according to standards and service requirements

Improvements could be made with respect to clear and consistent visitor safety training requirements and tracking.

Coordination: Third party operators, volunteer organizations and partners have appropriate protocols/services in place

The Agency relies largely on informal working relationships with search and rescue partners. Visitor safety requirements for third-party operators were deemed to be sufficient.

Mitigation: Heritage places have appropriate infrastructure, signage, public education and dissuasive measures related to ensuring visitor safety

Evidence of continuous improvements to visitor safety mitigation measures was observed.

Response: Heritage places have reactive measures related to visitor safety that are appropriate and timely

Available evidence, though primarily qualitative, was favourable towards the appropriateness and timeliness of reactive measures.

Monitoring & Reporting: Visitor safety information is identified and recorded in appropriate systems, reports on trends and results are produced, and plans and procedures are periodically reviewed.

The Incident and Event Management system was an effective tool to monitor visitor safety incidents. Improvements could be made with respect to annual reporting on visitor safety action plans.

Planning: Visitor Safety Plans

Expectation: Visitor safety plans are in place for all heritage areas

More visitor safety plans were approved for national parks and canals than for national historic sites.

The Directive on Visitor Safety (2013) (hereafter referred to as the Directive) states that all heritage places shall develop a visitor safety plan (section 6.1). The visitor safety plan for a heritage area is to be developed through a planning process*, beginning with a Visitor Activity Risk Assessment (VARA) to identify risk control measures requiring attention. The resulting summary of risk management actions and draft visitor safety plan, including the level of service to be provided by the field unit, are then brought to the field unit management team for approval by the Field Unit Superintendent.

A file review of visitor safety plans (see Table 2 below) indicated that the number of approved plans across

the system is low. Notably, only 38% of national historic sites (NHS) had a visitor safety plan.

While key informants were supportive of the requirement for visitor safety plans, over half reported the planning tool as being cumbersome and repetitive, with the VARA process not always corresponding with the reality of the site. A file review of a sample of VARAs corroborated these observations.

An opportunity also exists to ensure that the visitor safety planning process is applied in a consistent manner across the network to minimize discrepancies in the identified levels of service outlined in the visitor safety plans, particularly between similar heritage places.

Table 2: Visitor Safety Plan Completion Rates

Heritage Place	Approved Visitor Safety Plans (%)	Draft Visitor Safety Plans (%)	Heritage Places with Visitor Safety Plan (%)
National Parks (46 total)	59%	41%	100%
National Historic Sites (162 total)	23%	15%	38%
Canals (9 total)	56%	33%	100%
Total = 217	32%	21%	53%

*See Annex 1 - Visitor Safety Planning Process Map.

Training

Expectation: Staff is recruited, trained and certified according to standards and service requirements

Improvements could be made with respect to clear and consistent visitor safety training requirements and tracking.

The 2005 Evaluation of Public Safety recommended the creation of clear training standards as well as ongoing monitoring of training to ensure consistent application across the Agency. Visitor Safety Training Guidelines were created, which outline basic training requirements by incident type: lost or missing person, marine rescue, swift water rescue, mountain rescue or ground rescue. While these standards helped to clarify expectations with respect to training, there remains a need for a clear, consistent method for tracking and monitoring visitor safety training.

Almost half of key respondents noted concerns, including time constraints for receiving training due to the seasonal nature of the positions, relying on prior training received, either from the former Warden training program or from provincial government training programs, and the logistical and financial challenges of providing training in remote locations were raised.

Although composed of Parks Canada staff, the volunteer nature of the incident response teams (referred to as Duty Officers) creates challenges with respect to training. High turnover rates in the membership of volunteer Duty Officers also requires having to train new volunteers on a frequent basis.

In addition, as current guidelines outline required training by incident type rather than by position, it is left to the discretion of each field unit to determine the level of appropriate training for staff, leading to inconsistent application across the system of heritage places.

These findings point to the need to focus on two areas for improvement with respect to training: a) to ensure that staff working in visitor safety, especially Duty Officers, receive adequate training to perform their tasks and b) to ensure that clear and consistent records of visitor safety training are being maintained and monitored.

These issues are addressed in recommendations 1 & 2.

Coordination: Search & Rescue Partners and Third Party Operators

Expectation: Third party operators, volunteer organizations and partners have appropriate protocols/services in place

The Agency relies largely on informal working relationships with search and rescue partners. Visitor safety requirements for third-party operators were deemed to be sufficient.

Search & Rescue Partners

The Directive (Section 7.4) states that Memoranda of Understanding (MoU) or letters of agreement should be established with other groups, whether national, provincial or local, detailing the protocols and collaboration between the parties with respect to search and rescue operations and agreements on level of service.

Evidence showed that while working relationships with partners were strong, few formal agreements were in place. A majority of key informants confirmed that situational tabletop exercises*, or mock exercises with partnering organizations, were taking place on an annual basis. Since the conduct of the evaluation, templates were distributed to assist field units in the development of reciprocal agreements or MoUs with emergency response partners.

Third Party Operators

Section 7.7 of the Directive also states that any contract with third-party operators providing an activity or a service must be reviewed to ensure the level of competency to provide the service, appropriate insurance coverage, implementation of prevention measures and compliance with federal, provincial and local safety standards.

As the responsibility for the management of business licences generally falls to visitor experience or realty staff, these are outside of the purview of the responsible manager for visitor safety. Still, a majority of visitor safety staff considered the process for establishing and reviewing business licences at their site acceptable from the point of view of ensuring appropriate safety clauses, however differences between field units were noted with respect to regular visitor safety review of third-party contracts and business licences.

*Situational tabletop exercises are sessions where team members meet in an informal setting to discuss their roles during an emergency and their responses to a particular emergency situation.

Mitigation

Expectation: Heritage places have appropriate infrastructure, signage, public education and dissuasive measures in place

Infrastructure

In a 2017 Visitor Satisfaction Survey commissioned by Parks Canada, visitor safety concerns related to infrastructure (i.e., boardwalks, trails) were cited as suggested areas for improvement.

Overall, the condition of assets improved in recent years due to Federal Infrastructure Investment project funding. Despite these recent investments, in the absence of ongoing funding, there is a risk that the condition of assets will degenerate.

Signage and Public Education

At the time of the evaluation, what constituted an appropriate amount of signage was not

defined by the Agency and therefore left to the discretion of the field unit. While signage was generally seen as sufficient, there was evidence of outdated signage in some field units. Staff generally agreed that sufficient safety messaging is being communicated to visitors.

Several best practices in visitor safety public education were identified by field staff, including the use of partnered programs (i.e., AdventureSmart, Avalanche Canada, and CoastSmart (see below) as well as Parks Canada social media channels, such as the Mountain Parks Safety Facebook site. A minority of respondents perceived visitor safety messaging as not being direct enough but were unsure as to what types of safety messaging are most effective.

Dissuasive Measures

Dissuasive measures in visitor safety are defined as visitor registration requirements, permits or orientation sessions. Some key informants noted that these measures are highly effective for disseminating safety messages because of the level of interpersonal interaction.

A review of backcountry registration activities for a total of 41 national parks or national marine conservation areas (NMCAs) showed that a majority (29) had some form of required registration.

It is important to note that as the shift towards online registration for back-country activities continues to increase and move away from interpersonal interaction, ensuring the effectiveness of online safety messaging will be essential.

CoastSmart

CoastSmart is a public safety pilot project in the Pacific Rim region of British Columbia. The pilot is led by Parks Canada, the District of Tofino and the District of Ucluelet and was funded through Public Safety Canada's Search and Rescue New Initiatives Fund. The goals of CoastSmart are to reduce public risk and enhance coastal safety, near-water and in the surf zone by using consistent signage and visitor information along the Pacific coast.



Response

Expectation: Heritage places have reactive measures related to visitor safety that are appropriate and timely

Though evidence was unavailable at the time of the evaluation to assess the response to visitor safety incidents from a quantitative perspective, key respondents across the Agency agreed that response measures were appropriate and timely, both for heritage places that manage incident response internally and for those that rely more heavily on local response partners. Findings related to visitor safety liability (pg. 23) did not suggest any issues with respect to the Agency's response to visitor safety incidents.

Previously noted concerns related to training could potentially impact the response to visitor safety incidents, as could lower staff coverage during the shoulder seasons of early spring and late fall, when seasonal employees are generally not on strength.



Image: Hiking in Gros Morne National Park

Monitoring & Reporting

Expectation: Visitor safety information is identified and recorded in appropriate systems, reports on trends and results are produced, and plans and procedures are periodically reviewed.

Evidence shows that the Incident and Event Management system was an effective tool to monitor visitor safety incidents.

Incident Monitoring

In 2017, recognizing the need for a national system that could be used to consistently track and report on visitor safety incidents, the Agency put an Incident and Event Management (IEM) system in place. The Incident and Event Management System replaced the Occurrence Tracking System (OTS), which had been used to track visitor safety incidents, human-wildlife conflicts and compliance incidents.

Globally, IEM users reported that the system was a useful tool that allowed for enhanced visualisation and tracking of incident occurrence through a mapping feature.

Field unit staff noted that National Office was proactive in addressing issues with the new system, most notably by allowing users to access the system offline to improve system speed, and by developing an interactive dashboard tool aimed at improving program management.

An opportunity exists to ensure that data entry into the IEM system is done in a consistent manner. An analysis of the database found that the completion of certain fields was done by some field units and not others. Inconsistencies in entry can impact the reliability and usability of the data.



Image: Gordon Island at Thousand Islands National Park

Monitoring & Reporting

Expectation: Visitor safety information is identified and recorded in appropriate systems, reports on trends and results are produced, and plans and procedures are periodically reviewed.

Visitor Safety Reporting

The Directive states that visitor safety plans should be fully reviewed every five years. As many visitor safety plans had not yet been in place for five years, it was not possible to assess this expectation. Two heritage places, however, were reaching the five-year mark and were planning a review.

The Directive also outlines conditions under which a visitor safety plan should be updated, such as with the emergence of new or changing activities, an unforeseen trend in visitor safety incidents or changes to resources which impacts the ability to deliver on the identified level of service. A minority of respondents reported making updates to their plan on an annual basis, even to plans which were still in draft form.

Improvements could be made with respect to annual reporting on visitor safety action plans.



Image: Diver in Fathom Five National Marine Conservation Area

The Directive does not require the Agency to track the implementation of the visitor safety plans. For example, action plans were developed as part of the planning process and are included as an annex to the visitor safety plans; however, no reporting requirements on these action plans were put in place. A requirement for annual reporting on visitor safety plans would allow field units to document progress made on their action plans as well as identify mitigation strategies that were successful and formally learn from those which were not.

This issue is addressed in recommendation 3.



Effectiveness: Program Outcomes

Expectations

Findings

The frequency and severity of incidents are minimized

Anecdotal evidence pointed to the reduction in the frequency and severity of visitor safety incidents since the adoption of the Directive; however, there was little quantitative evidence to support the achievement of this outcome over the five-year period.

Parks Canada liability is minimized

The Agency had a lower level of liability compared with the monetary size of the legal claims made.

Program Outcomes

Objective 1: The frequency and severity of incidents are minimized

The impact of the Visitor Safety Directive in minimizing the frequency and severity of incidents was difficult to measure.

While a majority of respondents felt that the program had led to the reduction in the frequency and severity of visitor safety incidents since the adoption of the 2013 Directive, quantitative data over the five-year timeframe of the evaluation was limited.

Available data consisted of two years of IEM data on visitor safety incidents with which to observe frequency rates. From 2017 to 2018, the total number of visitor safety incidents decreased from 1,579 to 1,398. While this would indicate a marked reduction, it should be noted that the Agency had experienced above-average visitation rates in 2017 due to free admission

as part of Canada 150 celebrations.

IEM data for 2017 and 2018 provided some preliminary observations with respect to the visitor safety incident rate in 19 national parks with the highest visitation (see Figure 3 below). By calculating the incident rate, it was observed that national parks with a visitor safety team had a lower average incident rate than parks which had only a seasonal coordinator, 8 per 100,000 visitors and 15 per 100,000 visitors respectively. This discrepancy could be explained in part by the fact that parks with visitor safety teams respond primarily to complex back-country incidents, which would result in a lower overall incident count. Without a longer time-series, it is not possible to make any conclusions on incident frequency beyond these early observations.

Figure 3: Visitor Safety Incident Rate in High-Visitation National Parks per 100,000 Visitors, 2017 and 2018



Program Outcomes

Objective 1: The frequency and severity of incidents are minimized

Evidence shows that different recording systems held discrepancies in data related to serious visitor safety incidents.

With respect to the severity of incidents, the Agency has two systems for recording serious incidents* related to visitor safety: the IEM system and Serious Incident Reports (SIR), a database of reports submitted by field units and compiled by the Chief Security Officer. Serious incidents in IEM include those coded as red (injuries demanding urgent medical attention) or black (fatality). Motor vehicle incidents were not included.

As shown in Table 3, there were inconsistencies between the number of reported serious incidents and fatalities related to visitor safety when comparing IEM with SIR data. As previously noted, it is important to ensure consistency in reporting to ensure information available is reliable.

*A serious incident is defined as a situation that could lead to significant consequences to an individual and/or Parks Canada assets, services, ecological or historical resources. Visitor safety-related serious incidents would consist of fatalities and serious injuries. Motor vehicle incidents and self-inflicted injuries were not included.

Table 3: Serious Visitor Safety Incidents and Fatalities, 2015-2018

Year	IEM - # Serious Visitor Safety Incidents	SIR - # Serious Visitor Safety Incidents	IEM - # Visitor Safety Fatalities	SIR - # Visitor Safety Fatalities
2015	<i>not available</i>	33	12*	4
2016	<i>not available</i>	46	6*	11
2017	36	41	13	14
2018	18	42	11	15

Source: Parks Canada Asset Serious Incident Reports, 2015-2018

Figures on fatalities are a subset of figures of all serious visitor safety incidents.

*Statistics from Occurrence Tracking System (OTS)

Program Outcomes

Objective 2: Parks Canada liability is minimized

A review of legal files from 2013-14 to 2018-19 for visitor safety incidents* demonstrated that the Agency had a lower level of liability compared with the monetary size of the legal claims made. Twenty-one visitor safety-related legal claims were made against the Agency during the five-year period, and the cases that have been closed to date were primarily settled out of court or did not continue. Slips and falls made up a large proportion of visitor safety legal claims, followed by accidents resulting from activities or natural hazards.

*Visitor safety incidents do not include any motor vehicle incidents or incidents related to compliance and/or law enforcement (e.g. contravening the Agency's rules and regulations, physical disputes, etc.).

Parks Canada had a lower level of liability compared with the monetary size of the legal claims made.



Images: Signal Hill National Historic Site, Newfoundland; Cyclists on Norquay road with Mount Rundle in the background, Banff National Park



Program Accountability, Responsibilities and Unintended Outcomes

Expectations

Findings

Accountability and Responsibilities:

Visitor safety accountability and responsibilities are developed, clear and contributing to effective delivery of the program

Evidence shows that communications between the responsible groups at the program guidance and program implementation levels were infrequent, and that the cross-functional nature of visitor safety laid out in the Directive had not been fully realised with respect to response teams.

Unintended Outcomes:

Actions are taken to address unintended outcomes, positive and/or negative, which can be attributed to the program

An unintended outcome was found to be the seasonal and shared nature of the Visitor Safety and Fire Operations Coordinator position, resulting in barriers to effective delivery such as insufficient time for visitor safety planning, training and the entry/monitoring of incident data.

Program Accountability & Responsibilities

Expectation: Visitor safety accountability and responsibilities are developed, clear and contributing to effective delivery

Though program accountability and responsibilities were well documented and generally understood, evidence shows that communication between groups responsible for program guidance and program implementation was infrequent.

In 2013, with the adoption of the Directive on Visitor Safety, Parks Canada provided direction and guidance for the governance of the Visitor Safety Program, with overall program accountability residing with the Vice-President, External Relations and Visitor Experience, as well as the Field Unit Superintendents.

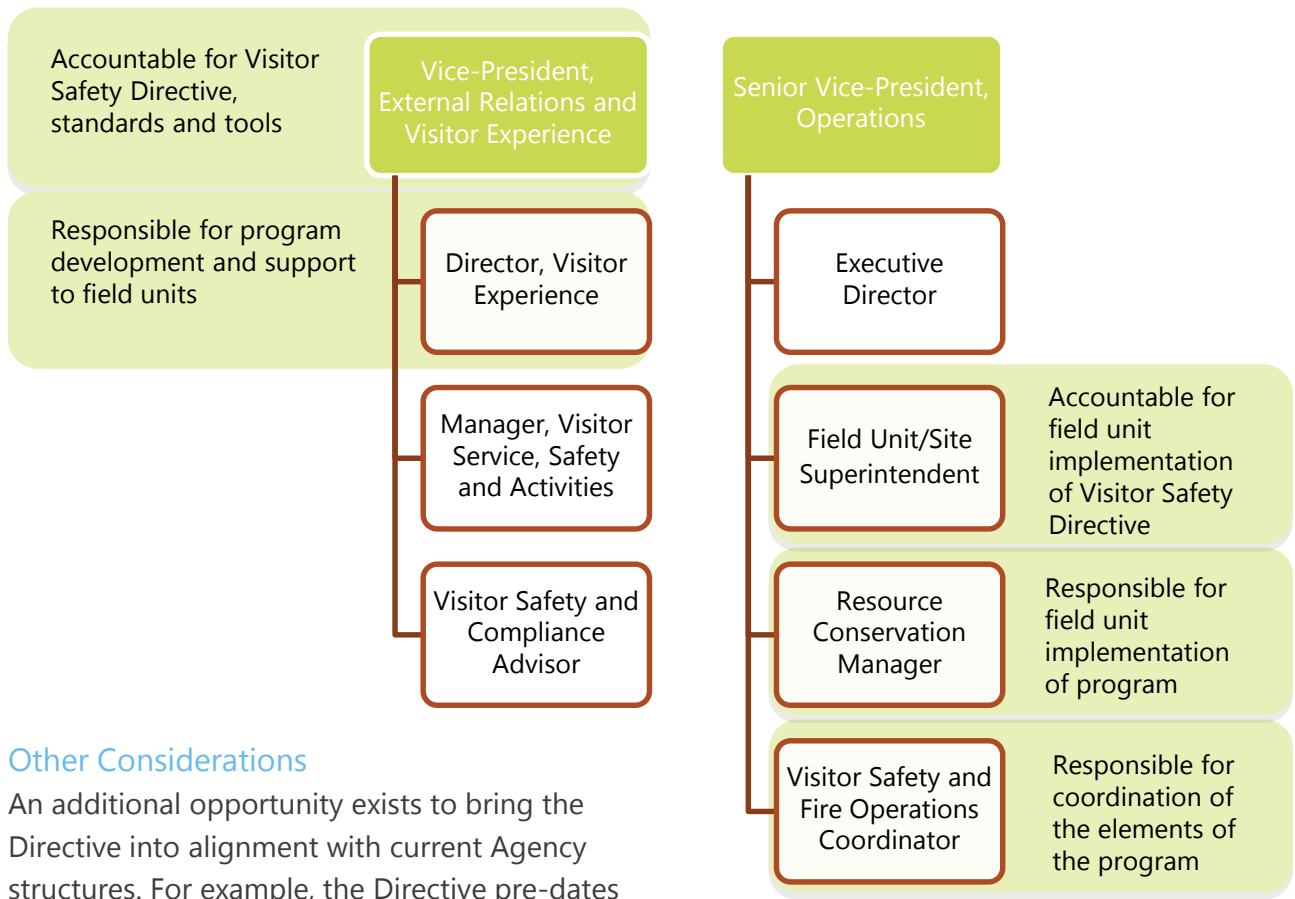
The Director, Visitor Experience Branch, is responsible for the development and maintenance of the program and associated tools as well as for the provision of support to field units on risk assessment and planning, interpretation of the directive and guidance of program implementation. Within field units, the Resource Conservation Manager (RCM) is responsible for the development of the visitor safety plan and overall program implementation. Accountability and responsibilities for visitor safety are illustrated on the following page.

Communications between the Visitor Experience Branch and the RCM community were frequently cited as impacting the effective delivery of the Visitor Safety Program. While the Visitor Experience Branch has regular communication with the Visitor Experience community in the field units, support and communication between the Visitor Experience Branch and the RCM community were noted as being less present.

As well, although the Visitor Safety Program was intended to create cross-functional response teams, Resource Conservation staff remain primarily responsible for carrying out the program. This is not only as a result of the history of the program under the previous Warden structure but also because of the nature of the skills and availability of Resource Conservation staff to respond to incidents when they occur.

Program Accountability and Responsibilities

Figure 4: Visitor Safety Program Accountability and Responsibilities



Other Considerations

An additional opportunity exists to bring the Directive into alignment with current Agency structures. For example, the Directive pre-dates the creation of the Senior Vice-President, Operations, and Executive Director positions as well as the Rouge National Urban Park. As well, heritage canals are not well reflected by the Directive, as these heritage places have no Site Manager, Resource Conservation Manager or Visitor Safety and Fire Operations Coordinator (hereafter referred to as the Coordinator). Visitor safety work for heritage canals generally rests with other staff members as a result.

This issue is addressed in recommendation 4.

Unintended Outcomes

Evidence shows that the creation of a seasonal position shared between visitor safety and fire management led to issues related to program effectiveness and work-related stress.

At the field unit level, visitor safety staff generally consists of one seasonal Coordinator position (exceptions are the visitor safety teams in the mountain parks and Pacific Rim National Park Reserve). This position coordinates the program elements and the group of internal staff who volunteer as Duty Officers, responding to incidents using a protocol and schedule established by the site.

Staff reported that the seasonal nature of the position led to implementation issues, such as insufficient time for planning, training and inputting and monitoring of incident data. As a result of Nature Legacy Initiative funding, the majority of the Coordinator positions have been temporarily extended to full-year positions until 2022-23, but longer-term funding has yet to be identified.

The Coordinator position is further complicated by the split role occupied between visitor safety and fire management. The latter role, in the event of a large wildfire, could result in the Coordinator being temporarily reassigned to another field unit, further limiting time for visitor safety duties.

Work-related stress was reported in some of the field units consulted. Reasons for this stress related to insufficient time, the nature of the work, and the reliance on volunteer staff to serve as duty

officers, where high turnover rates were increasing the cost of training as well as the risk that less-experienced staff could be responding to incidents.

The Agency has responded by developing support systems for staff involved in traumatic incidents in order to provide support before, during and after critical incidents as well as to promote resiliency and long-term mental health. While these support systems are critical, they do not address the ongoing resource shortage for a majority of field units operating with one Coordinator. Documents reviewed highlighted that a detailed assessment, for example, a complexity rating of sites similar to the one completed for Fire Management, is not conducted for visitor safety. The use of an assessment for visitor safety would allow for available capacity to be distributed based on complexity/needs of sites. This issue is addressed in recommendation 5.



External Factors

Expectations

External factors affecting visitor safety are being taken into account in order to enhance the effectiveness of the program.

Findings

External factors having an impact on the effectiveness of the Visitor Safety Program include the impact of increased visitation on safety as well as the changing demographics of, and activities undertaken by, Parks Canada's visitors.

Climate change and technological advancements were also identified as factors beyond the control of the program which can negatively impact visitor safety.

The extent to which the Visitor Safety Program can address external factors is limited due to the scale of the factors and the degree of influence the program has over them.

External Factors

Increased Visitation

According to Parks Canada's visitation statistics, attendance at Parks Canada places increased by 20 percent from 2012-13 to 2016-17 to reach almost 25 million person-visits. This increased visitation was noted as impacting the management of visitor safety. In addition, the impact of increased visitation in some national parks was attenuated through the use of shuttle buses and online parking reservations, while others produced preparedness plans which outlined anticipated situations, mitigation strategies and response protocols.

Changing Visitor Demographics

Over a third of interviewees identified changing visitor demographics as having an impact on visitor safety, with a concern that traditional safety messaging strategies may not be well-adapted to the changing clientele. Also identified was a need for more data on changing visitor demographics (i.e., non-official languages spoken, seniors) to increase the ability to develop messaging strategies adapted to different audiences.

Technology & Activities

A reliance on technology coupled with an increasing interest in back-country activities have also had an impact on the Visitor Safety

Program. Enhancements in technology have assisted rescues through the use of satellite location devices. Education efforts in the mountain parks have focused on the proper use of these technologies.

A media scan conducted for the evaluation provided examples of how, in the heritage areas where visitor safety teams are in place, technology is being used in innovative ways to provide safety messaging to visitors and assisting in search and rescue. The use of digital signage, social media pages and technology to locate visitors wearing tracking devices were some examples of how technology is contributing to a safer visitor experience.



Image: The shuttle to the tip picking up visitors outside the Visitor Centre, Point Pelee National Park

External Factors

Climate Change

The impacts of climate change also pose a significant risk to visitor safety. A review of relevant documentation highlighted that climate change will affect how, when and where search and rescue resources are deployed in the future. A review of media articles and site visits provided examples of efforts underway in various Parks Canada places to adapt to the impacts of climate change. For example, following severe flooding which destroyed a number of docks, one national park invested in dock replacements that would be better equipped to adapt to changing water levels. Other heritage areas have developed a flood protection plan to identify strategies aimed at protecting the cultural heritage of the site. The visitor safety impacts of climate change at Parks Canada places go well beyond the control of the program and will need to be considered as part of the Agency's broader strategy on climate change adaptation.

Evidence shows that Parks Canada places are putting in place measures to adapt to the impacts of climate change.



Images: Tip of Point Pelee National Park; Boardwalk in Pacific Rim National Park Reserve



Program Efficiency

Expectations

Findings

Closely connected programs:
Duplication with similar programs is avoided and efficiencies are made between closely connected programs.

Closely connected programs such as Compliance and Human-Wildlife Co-existence were found to be working well alongside the Visitor Safety Program.

Efficient Use of Resources:
Costs are known and verified; adjustments to program delivery are being considered and applied to enhance efficiency.

Expenditures were stable for the period under review though some limitations to available financial data were noted; Cost-saving measures such as search and rescue cost-recovery were rare in the North American context.

Closely Connected Programs

Expectation: Duplication is avoided and efficiencies are made between closely connected programs

Because of the potential for overlap between visitor safety and other programs such as compliance and human-wildlife co-existence, the degree to which the Visitor Safety Program avoids duplication of effort with these programs was examined. For example, if a visitor improperly stores food which leads to an injury from a wildlife encounter, potential overlap between distinct programs could occur.

Despite this, no issues were noted from key informants, as these programs were found to be working well alongside one another. However, for cross-cutting files such as training, as previously noted, national guidelines are outlined by type of incident, but no mechanism currently exists to compare training requirements with those for similar programs, such as the Fire Management Program.

Evidence shows that the Visitor Safety Program is working well alongside other related programs.



Images: A visitor takes a photograph of a bull bison from the safety of their vehicle along the Elk Island Parkway, Elk Island National Park; A visitor uses a bear proof food bin at Two Jack Lakeside Campground to store food, Banff National Park

Efficient Use of Resources: Overview

Evidence shows that program expenditures were stable over the evaluation period, but some program costs are not reflected in the available financial figures.

Program Expenditures

A detailed financial analysis of visitor safety budgets and expenditures was limited due to factors such as no specific budget for visitor safety at the field unit level, sharing of assets between programs, and salaries not consistently coded due to the shared nature of the Coordinator position with Fire Management.

Despite these limitations, Table 4 (see below) illustrates how visitor safety expenditures stayed relatively constant over the four years under review. Data from the Agency's financial system demonstrated that estimated annual expenditures on visitor safety have averaged \$11 million per year, representing an estimated 0.9 per cent of total Agency expenditures¹. When compared solely with Parks Canada's operating expenditures of approximately \$506 million², expenditures on visitor safety rises to 2.2 per cent of overall expenditures.

¹ Based on 2017-18 actual expenditures (approximately \$1.3 billion). Source: Park Canada's 2017-18 Departmental Results Report.

² Receiver General for Canada (2018). Public Accounts of Canada, Volume II, Section 4: Environment and Climate Change.

Table 4: Visitor Safety Program Expenditures, 2014-15 to 2017-18

Heritage Area	2014-15*	2015-16	2016-17	2017-18
National Urban Park	\$68,987	\$80,796	\$46,622	\$72,135
National Marine Conservation Areas	\$74,356	\$57,807	\$55,426	\$84,987
National Historic Sites	\$617,590	\$612,592	\$2,107,874	\$528,771
Canals	\$749,316	\$1,199,840	\$967,451	\$1,141,893
National Parks	\$8,345,022	\$8,727,732	\$8,892,885	\$9,392,457
Total	\$10,034,518	\$10,678,766	\$12,070,258	\$11,220,245

*Total expenditures for 2014-2015 also includes \$179,248 from the previous financial code for visitor safety. This code was deleted in 2014-2015.

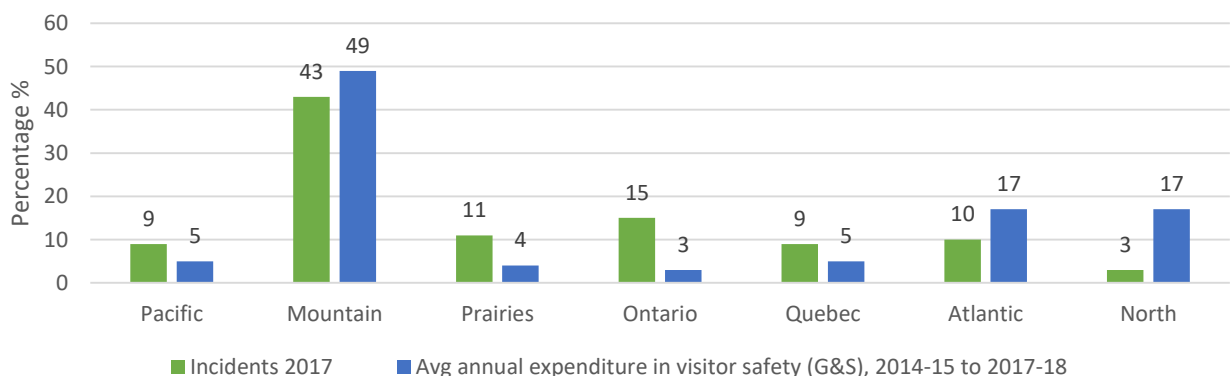
Efficient Use of Resources: Goods and Services

Evidence shows that program expenditures align proportionally with regional share of visitor safety incidents, with the exception of northern parks.

To gauge the relative adequacy of resourcing, four-year average figures for visitor safety expenditures in goods and services were compared with the number of visitor safety incidents in 2017 (see Figure 5 below).

As would be expected, expenditures are higher relative to the share of incidents where rescue is costlier and requires more specialised equipment (i.e. helicopters), such as in the mountain parks and remote areas in the north. In Ontario, parts of Quebec and the Prairies, the proximity to local emergency services could explain the lower expenditures relative to the share of incidents. For the Atlantic region, the cost of the Surf Guard in Prince Edward Island National Park represents 66 per cent of goods and services expenditures. When this expenditure is removed from the dataset, Atlantic goods and services average expenditures decrease from 17 per cent to 6 per cent.

Figure 5: Share of Visitor Safety Incidents and Goods & Services Expenditures by Geographical Region (percentage %)*



All figures displayed as percentages. The green incident bars total 100 per cent; blue expenditure bars total 100 per cent. Based on figures from 45 national parks, Chilkoot Trail NHS and Rouge NUP.

Efficient Use of Resources: Search and Rescue Fees

A benchmarking exercise was conducted in order to provide further context on how search and rescue costs are being managed by similar organizations. Table 5 below summarises the data collected on search and rescue cost-recovery policies in other jurisdictions. In the North American context, search and rescue fees are not recovered by federal agencies, and the majority of provinces and states also do not charge fees. The exceptions are Sépaq in Quebec and the state of New Hampshire, where visitors may be billed for search and rescue costs in cases where visitor negligence was found to be a contributing factor.

Table 5: Search and Rescue Cost-Recovery Policies in Other Jurisdictions

No SAR Fee		SAR Fee May Be Applied	
North America			
• Parks Canada Agency • Canada Coast Guard (Maritime SAR) • Department of National Defence (Aeronautical SAR) • Alberta Parks • British Columbia Parks • Ontario Parks • United States National Park Service		• Sépaq (Quebec) • New Hampshire Fish & Game	
International			
• Australia Office of the Environment & Heritage • New Zealand Police (responsible for SAR)		• Majority of European Countries require visitors have insurance to pay for SAR costs	

Resource Issues Faced by Northern Parks

Evidence shows that northern parks face unique challenges related to search and rescue operations.

The impact of visitor safety search and rescue in isolated northern parks was identified as an area of interest in the context of the evaluation. Search and rescue costs are high relative to the number of incidents (see page 34) given the remoteness and often difficult terrain of these heritage areas. These search and rescue operations were reported as having a negative impact on field unit budgets as no national fund for these operations had been established at the time of the evaluation.

A review of IEM data showed that 22 visitor safety incidents occurred in seven

northern parks in 2017, including three high-altitude rescues.

Northern parks currently rely on expertise and visitor safety staff from the mountain parks to perform highly technical rescues. This places considerable strain on the visitor safety teams in the mountain parks, who also manage the avalanche monitoring and prevention program during the winter months.

In recognition of this, as a temporary mitigation measure, the Agency has restricted permits for mountain climbing during the winter months in northern parks.



Image: Lower Falls of Mercy River, Aulavik National Park

Recommendations and Management Response



Recommendations and Management Response:

Recommendation 1: Visitor Safety Training

The Vice-President, External Relations and Visitor Experience, with collaboration and support from the Protected Areas Establishment and Conservation, Operations and Human Resources directorates, should clarify training requirements and develop a common repository for visitor safety training to ensure clear and consistent records are being maintained and monitored.

Management Response

Agree. The Vice-President, External Relations and Visitor Experience, will work with counterparts in the Operations, Protected Areas Establishment and Conservation, and Human Resources and Employee Wellness Directorates to clarify visitor safety training requirements. The Human Resources and Employee Wellness Directorate will lead the development of a database (repository) for visitor safety training records.

Deliverable and timeline		Responsible positions
1.1 Review visitor safety training requirements.	November 2022	VP ERVE
1.2 Complete an analysis for establishing a national visitor safety training database.	March 2022	VP HREW In collaboration with ERVE, PAEC, Operations, OCIO
1.3 Develop and implement a database to retain and track visitor safety training records.	March 2023	VP HREW In collaboration with ERVE, PAEC, Operations

Recommendation 2: Coordination of Training

The Senior Vice-President, Operations, should ensure that staff participating in visitor safety activities receive the appropriate training to carry out those activities.

Management Response

Agree. The Senior Vice-President, Operations will follow the training recommendations established collaboratively by the External Relations and Visitor Experience Directorate and document the training received by employees participating in visitor safety activities at the field unit level in the repository developed by the Human Resources and Employee Wellness Directorate as part of Recommendation 1.

Deliverable and timeline		Responsible positions
2.1 Ensure field unit managers and supervisors have clear understanding of the training necessary for visitor safety staff by including an indicator in the performance agreement.	April 2022	Executive Director, National Operations and Programs, in collaboration with Learning, Performance and Recognition Team, HREW Directorate
2.2 Send out an annual communication to Executive Directors and Field Unit Superintendents outlining the required visitor safety training, where the training can be found and how to provide a record of the completed training.	April 2022	Executive Director, National Operations and Programs
2.3 Document the trainings received by visitor safety staff in the repository developed by the HREW Directorate.	April 2023	Executive Director, National Operations and Programs

Recommendation 3: Monitoring and Reporting

The Senior Vice-President, Operations, should require Field Unit Superintendents to report annually on the progress made implementing visitor safety plans, including the identification of functional leads and specific timelines for priority actions.

Management Response

Agree. The Senior Vice-President Operations Office will request that Field Unit Superintendents report annually on visitor safety plans, including the identification of timelines. Field Unit Superintendents will also be asked to update any changes to their visitor safety leads for the field unit.

Deliverable and timeline		Responsible positions
3.1 Annual communication on visitor safety will include a request to report on the field unit's visitor safety plan(s) and to confirm the visitor safety lead(s).	April 2022	Executive Director, National Operations and Programs
3.2 In light of the new Business Planning exercise for the Agency, the Senior Vice-President Operations Office will suggest that visitor safety plans be incorporated into a Business Plan Template checklist.	October 2021	Director, Business & Financial Services

Recommendation 4: Program Accountability

Given the number of directorates involved and the cross-functional nature of the role of the Senior Vice-President, Operations, the External Relations and Visitor Experience, Protected Areas Establishment and Conservation and Operations directorates should review and update the accountability structure in the Directive on Visitor Safety to ensure it is clear, accurate and contributing to the effective delivery of the program. Consideration should be given to clarifying responsibilities as well as enhancing communications between responsible parties.

Management Response

Agree. The Vice-President, External Relations and Visitor Experience, will work in collaboration with counterparts in the Operations and Protected Areas Establishment and Conservation Directorates to review the accountability structure in the Directive on Visitor Safety.

Deliverable and timeline		Responsible positions
4.1 Confirm roles and responsibilities outlined in the Visitor Safety Program.	November 2022	VP ERVE In collaboration with PAEC and Operations
4.2 Update the accountability structure of the Directive on Visitor Safety and define communication protocols to ensure effective sharing of information for all directorates involved.	December 2022	VP ERVE In collaboration with PAEC and Operations

Recommendation 5: Visitor Safety Capacity

The Vice-President, External Relations and Visitor Experience, in coordination with the Senior Vice-President, Operations, and the Vice-President, Protected Areas Establishment and Conservation, should review and revise approaches used and risks considered to attribute available visitor safety resources at the field unit level. This will contribute to strengthening the Visitor Safety Program in the areas of planning, training, and monitoring and reporting.

Management Response

Agree. The Vice-President, External Relations and Visitor Experience, will work with the Senior Vice-President, Operations, and the Vice-President, Protected Areas Establishment and Conservation, to review each year the allocation of visitor safety resources across the Parks Canada network for the previous year and will determine collaboratively whether adjustments to allocations or other measures such as planning, training, monitoring or reporting may be needed.

Deliverable and timeline		Responsible positions
5.1 Hold and document an annual review of the year in visitor safety at a regular point in time every year to assess previous year and focus on allocation of capacity and lessons learned on planning, training, monitoring and reporting.	December 2022	VP ERVE In collaboration with PAEC and Operations

Annex



Annex 1: Visitor Safety Planning Process Map

