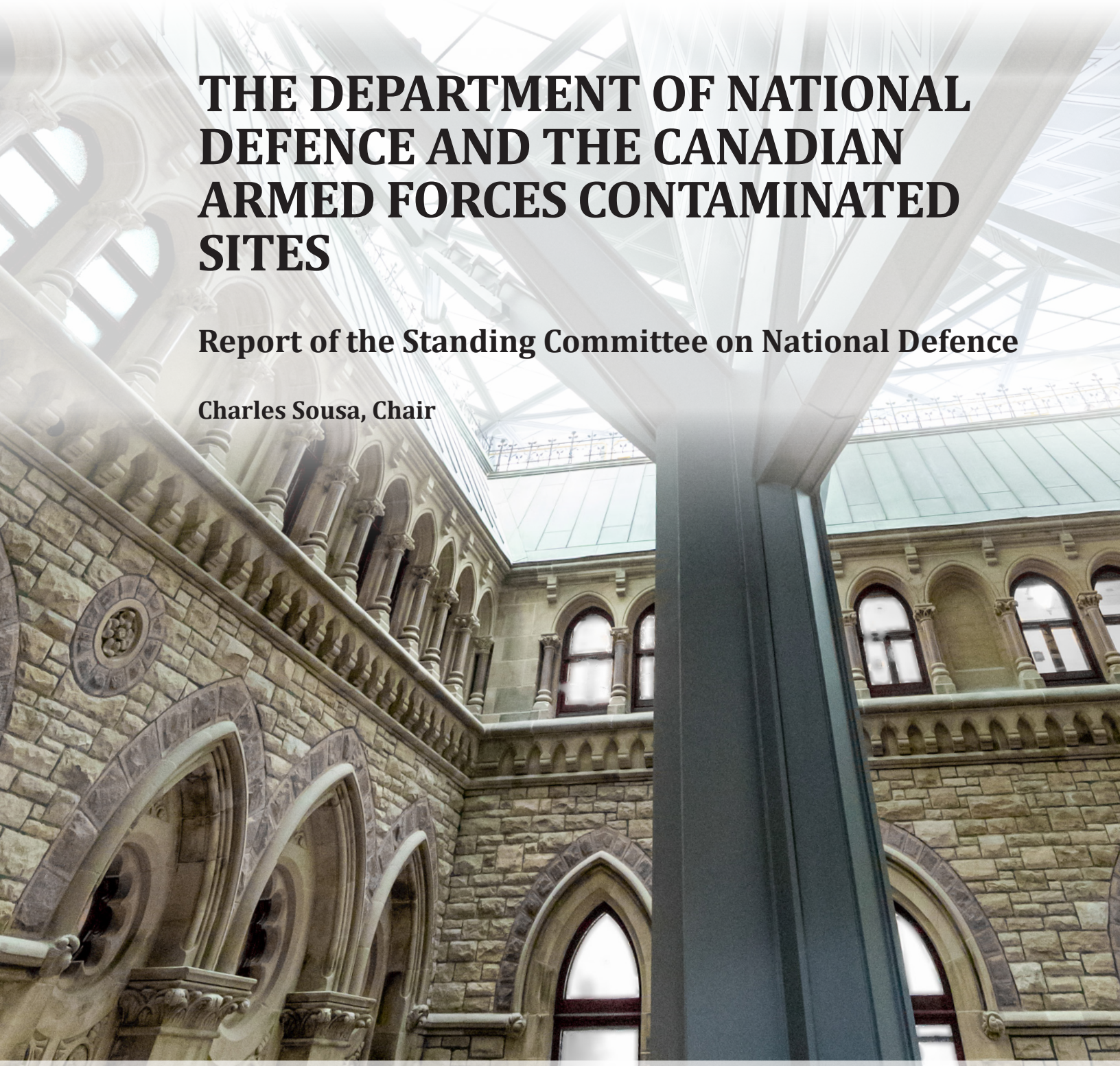
HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

THE DEPARTMENT OF NATIONAL DEFENCE AND THE CANADIAN ARMED FORCES CONTAMINATED SITES

Report of the Standing Committee on National Defence

Charles Sousa, Chair



OCTOBER 2026
45th PARLIAMENT, 1st SESSION

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Chair

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NOTICE TO READER

Reports from committees presented to the House of Commons

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

To assist the reader:
A list of abbreviations used in this report is available on page xi

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THE STANDING COMMITTEE ON NATIONAL DEFENCE

has the honour to present its

FIFTH REPORT

Pursuant to its mandate under Standing Order 108(2), the committee has studied the Department of National Defence and Canadian Armed Forces contaminated sites and has agreed to report the following:

TABLE OF CONTENTS

LIST OF ABBREVIATIONS XI

LIST OF RECOMMENDATIONS 1

THE DEPARTMENT OF NATIONAL DEFENCE AND THE CANADIAN ARMED FORCES CONTAMINATED SITES 3

- Introduction 3
- Contaminants and Associated Risks 5
  - Identifying Past Contaminant Use and Associated Risks 5
  - Detecting Per- and Polyfluoroalkyl Substances in the Drinking Water of the City of Saguenay, Quebec 8
  - Assessing Risks Relating to Agent Orange and Other Toxic Defoliants at Canadian Forces Base Gagetown 9
  - Finding Trichloroethylene in the Groundwater of the City of Shannon, Quebec 11
  - Discovering Unexploded Explosive Ordnances in or near the Cities of Terrebonne and Shannon, Quebec 12
  - Detecting Contaminants in Canada's Arctic and North 13
- Existing Federal Measures Relating to Contaminants 14
  - Protecting Human Health or the Natural Environment 14
  - Identifying, Classifying and Reporting on Federal Contaminated Sites 15
  - Managing and Remediating Certain Contaminated Sites 18
  - Supporting Affected Canadian Armed Forces Members and Veterans 22
- Proposed Federal Actions Relating to Federal Contaminated Sites, Diagnoses and Toxic Defoliants 24
  - Recognizing Presumptive Conditions and Occupational Illnesses 25
  - Launching An Inquiry, Providing Compensation and Conducting a Study Relating to Canadian Forces Base Gagetown 26
  - Reviewing Contaminated Sites 26

Centralizing and Coordinating Processes for Managing and Remediating Contaminated Sites 27
Enhancing Transparency in Relation to Contaminated Sites 28
Decontaminating Former Military Installations and Supporting Affected Communities 28
Establishing a Registry Concerning Exposure to Contaminants 29
Using Artificial Intelligence 29
The Committee's Conclusions and recommendations 30

APPENDIX A: LIST OF WITNESSES 33

APPENDIX B: LIST OF WITNESSES 35

APPENDIX C: LIST OF BRIEFS 37

APPENDIX D: LIST OF BRIEFS 39

REQUEST FOR GOVERNMENT RESPONSE 41

LIST OF ABBREVIATIONS

AI	Artificial Intelligence
CAF	Canadian Armed Forces
CFB	Canadian Forces Base
DND	Department of National Defence
PFAS	Per- and polyfluoroalkyl substances
TBS	Treasury Board of Canada Secretariat
TCE	Trichloroethylene
VAC	Veterans Affairs Canada
U.S.	United States

LIST OF RECOMMENDATIONS

As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.

Recommendation 1

That the Government of Canada recognize that occupational illnesses relating to military service may develop long after service has ended, and assess medical evidence to establish if appropriate presumptive diagnoses exist for veterans who served in known hazardous or contaminated environments, strengthening the timely access for veterans to health care benefits and support. **30**

Recommendation 2

That the Government of Canada strengthen proactive transparency and information sharing among the Department of National Defence, the Canadian Armed Forces and relevant authorities to ensure timely access to information and data. **30**

Recommendation 3

That the Government of Canada proactively inform personnel and families currently and previously living and/or working on Department of National Defence and Canadian Armed Forces sites, bases and wings of environmental risks and assessment results. **31**

Recommendation 4

That the Government of Canada expand proactive monitoring, sampling and early detection efforts for contaminated sites, including in communities on or near current and former military installations, and expedite current decontamination measures in relation to chemical agents and dioxins. **31**

Recommendation 5

That the Government of Canada invest in research, development and advanced technologies, including artificial intelligence, to improve contaminant detection, risk analysis and remediation planning. **31**

Recommendation 6

That the Government of Canada engage more closely with municipalities to address the social and environmental impacts arising from its contaminated sites. **31**

Recommendation 7

That the Government of Canada adopt a standardized list of illnesses resulting from exposure to chemicals. **31**

Recommendation 8

That the Government of Canada establish a unified federal coordination body comprising the Department of National Defence, Crown-Indigenous Relations and Northern Affairs Canada, Transport Canada and the Treasury Board of Canada Secretariat to streamline the identification, assessment and remediation of military legacy sites across Arctic communities. **31**

Recommendation 9

That the Government of Canada ensure that all future Arctic defence infrastructure investments include dedicated funding lines specifically allocated for both the remediation of historical military contamination at the proposed project site and the prevention of new environmental liabilities. **31**

Recommendation 10

That the Government of Canada, in direct partnership with Northern municipalities and Indigenous governments, conduct a comprehensive inventory audit of unlisted military legacy sites, including historical dumpsites, fuel drum caches and scrap metal, for full inclusion in the Federal Contaminated Sites Inventory. **32**

Recommendation 11

That the Government of Canada prioritize immediate containment and remediation for Northern military legacy sites where climate change and permafrost thaw accelerate the active migration of hazardous chemicals and heavy metals into municipal lands and water sources. **32**

THE DEPARTMENT OF NATIONAL DEFENCE AND THE CANADIAN ARMED FORCES CONTAMINATED SITES

INTRODUCTION

According to the Treasury Board of Canada Secretariat's (TBS's) Federal Contaminated Sites Inventory, as of 30 June 2026, Canada had about 24,400 federal sites where contaminants are present that pose, or could pose, an immediate or long-term risk to human health or the natural environment, or both. The concentrations of the contaminants at these sites may exceed recommended concentrations specified in relevant federal policies and regulations. Moreover, Environment and Climate Change Canada notes that federal contaminated sites are located either on land that is federally owned or leased, or on land "where the federal government has accepted responsibility for the contamination." The Department of National Defence (DND) or the Canadian Armed Forces (CAF) manage some of these contaminated sites (hereafter, DND/CAF contaminated sites), which are located on current and former bases, wings and other military installations (hereafter, military installations). As of 30 June 2026, there were 2,750 DND/CAF contaminated sites in Canada.[1]

In recent decades, individuals exposed to contaminants, advocacy organizations, academics, researchers and others have expressed concerns about the risks that past and ongoing exposure to contaminants at DND/CAF contaminated sites pose, or could pose, to human health or the natural environment. The contaminants that are, or may be, on such sites include toxic metals, dichlorodiphenyltrichloroethane, petroleum hydrocarbons, per- and polyfluoroalkyl substances (PFAS), radioactive waste and trichloroethylene (TCE). As well, some sites may have unexploded explosive ordnances and other materials, including those that Canada's military and foreign militaries have used for military training purposes.

During the 44th Parliament, the House of Commons Standing Committee on National Defence (hereafter, the Committee) adopted a motion to undertake a study of: the long-term human health risks associated with exposure to contaminants at DND/CAF contaminated sites; the federal decision-making framework for identifying, assessing

1 In September 2025, the Canadian Coast Guard became a civilian special operating agency within the Department of National Defence (DND) following its transfer from Fisheries and Oceans Canada. DND now manages federal contaminated sites associated with the Canadian Coast Guard.

and classifying a health risk to CAF members and families, DND employees and individuals in nearby communities in relation to such exposure; DND's and Veterans Affairs Canada's (VAC's) approaches to attributing occupational illnesses caused by exposure to contaminants at these sites; DND's and the CAF's efforts to remediate these sites; DND's responsibilities under the Federal Contaminated Sites Action Plan; and actions that Canada's allies are taking to address contaminated sites. Furthermore, during the 45th Parliament, the Committee adopted a motion to complete the study by holding a meeting with municipalities located near DND/CAF contaminated sites.

Between 26 November 2024 and 29 April 2026, the Committee held five meetings on the study and heard from 21 witnesses. Those appearing during a meeting comprised officials from five federal departments and two municipalities, three veterans, two CAF family members and three academics.[2] Moreover, the Committee received seven briefs.[3] As well, in July 2026, DND submitted a written response to the Committee that provided updated statistics and other information relating to DND/CAF contaminated sites, as well as DND's contribution agreements with some provinces and municipalities.[4]

This report summarizes witnesses' comments made when appearing before the Committee or in a brief, as well as publicly available information. The first section focuses on the types of contaminants that are, or may be, at DND/CAF contaminated sites in Canada, as well as associated risks to human health or the natural environment. The second section outlines existing federal measures concerning contaminant-related protections, obligations and supports. The third section proposes federal actions designed to recognize health conditions, provide compensation and establish a registry to support individuals and communities affected by contaminants at or near DND/CAF contaminated sites, launch various reviews and inquiries regarding such sites, and create, use or improve processes and tools relating to the management and remediation of these sites The report's final section contains the Committee's conclusions and recommendations.

2 This report uses the title and organizational affiliation that a witness had when appearing before the House of Commons Standing Committee on National Defence or when submitting a brief.

3 Briefs were received from Eileen Beauchamp, Brats in the Battlefield Association Inc., the City of Iqaluit, Major (Retired) Michel Tremblay and Erin Zimmerman. Eileen Beauchamp, as well as Gary Goode as Chair of Brats in the Battlefield Inc., submitted a brief during the 44th Parliament and another during the 45th Parliament. Eileen Beauchamp, Gary Goode and Erin Zimmerman also appeared as witnesses.

4 In May 2026, the Committee asked DND to provide updated information relating to DND's and the Canadian Armed Forces' contaminated sites, as well as DND's contribution agreements with some provinces and municipalities. On 30 July 2026, the Committee received the information in a document entitled *Request for Information (RFI)*.

CONTAMINANTS AND ASSOCIATED RISKS

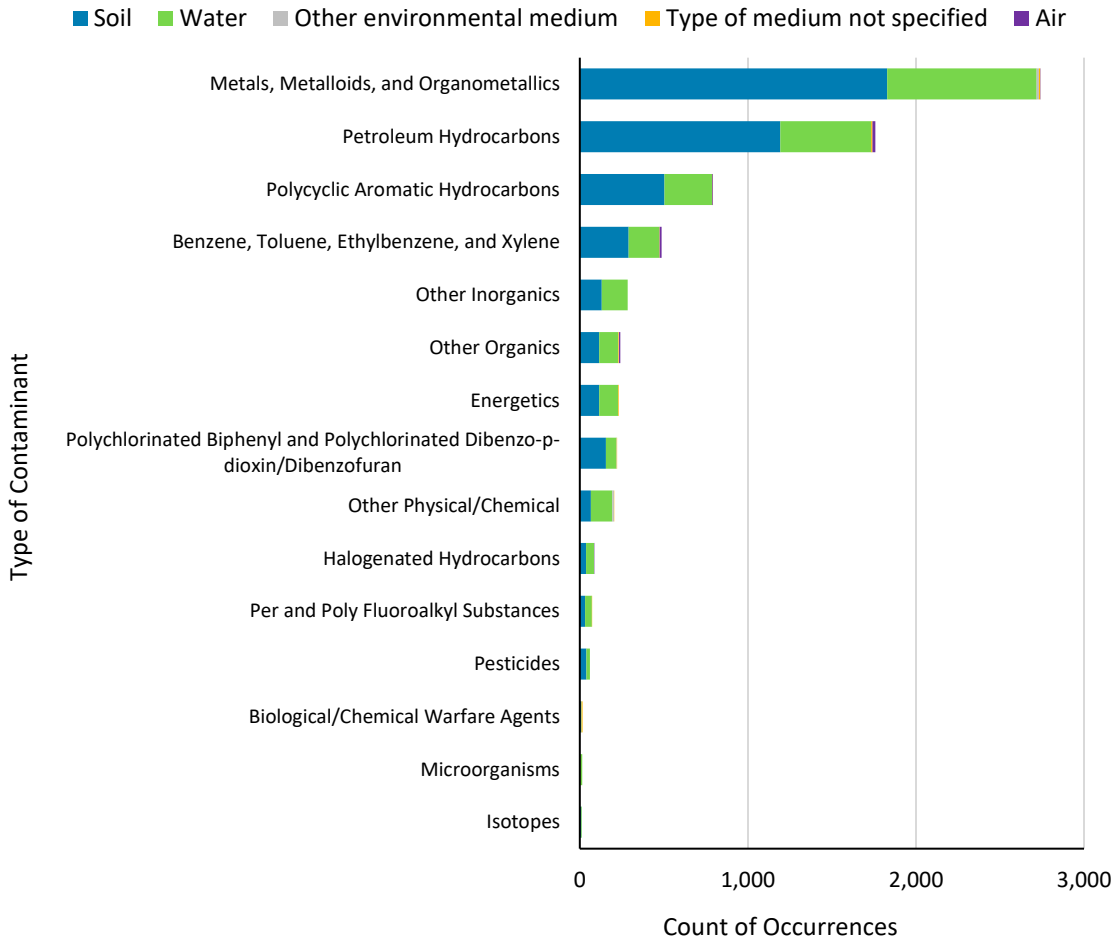
Witnesses drew attention to selected contaminants that are, or may be, at DND/CAF contaminated sites in Canada, as well as related risks to human health or the natural environment. They also identified specific locations where specific contaminants have been discovered.

Identifying Past Contaminant Use and Associated Risks

Witnesses noted that certain contaminants at federal contaminated sites are the result of past activities. Greg Carreau, Director General of Health Canada's Safe Environments Directorate, commented that, in the 20th century, a high number of contaminants were used across Canada, which "introduced risks" to human health or the natural environment. According to Greg Carreau, the types and concentrations of contaminants vary across these sites. Peter Hammerschmidt, DND's Assistant Deputy Minister of Infrastructure and Environment, stated that DND acknowledges that "past practices" have "left a legacy of contamination on military bases and other sites where the Canadian Armed Forces have trained or operated."

Figure 1 shows the types of contaminants, by number of occurrences and by environmental medium, that were at DND/CAF contaminated sites as of 30 June 2026.

Figure 1—Types of Contaminants, by Number of Occurrences and by Environmental Medium, at Department of National Defence and Canadian Armed Forces Contaminated Sites (as 30 June 2026)



Notes: In September 2025, the Canadian Coast Guard became a civilian special operating agency within the Department of National Defence (DND) following its transfer from Fisheries and Oceans Canada. DND now manages federal contaminated sites associated with the Canadian Coast Guard.

"Environmental medium" refers to the various components of the natural environment, such as air, soil and water.

"Soil" comprises "sediment," "soil" and "surface soil."

"Water" comprises "groundwater" and "surface water."

"Other environmental medium" refers to environmental mediums other than air, soil and water, such as plants and fish.

"Type of medium not specified" refers to contaminant samples for which the type of environmental medium is not identified.

Source: Treasury Board of Canada Secretariat, "Find Contaminated Sites by Reporting Organization," *Federal Contaminated Sites Inventory*, Database, accessed 30 June 2026.

Witnesses also outlined factors that influence whether exposure to a contaminant is a human health risk. Greg Carreau said that such factors include the duration and frequency of exposure, as well as the exposed individual's age and overall health status. As well, Brigadier-General Colleen Forestier, Director General of Clinical Services at the CAF's Canadian Forces Health Group, indicated that the risk depends on whether the contaminant is "a chemical, a physical, a biological or a radiological hazard." Brigadier-General Forestier also pointed out that being close to a contaminant does not necessarily constitute an exposure, adding that exposure to a contaminant "does not necessarily constitute having any ill health effects, even if it's a known hazard."

Moreover, witnesses identified various sources of exposure to contaminants during CAF members' military service, as well as the timeline for experiencing health conditions associated with such exposure. Colonel (Retired) David Salisbury, a medical doctor and veteran who appeared as an individual, remarked that the sources include: modern weapon systems and vehicles that contain certain toxic metals and composites, as well as hazardous fuels and solvents; old buildings that release asbestos, benzene and other toxic chemicals when they are destroyed; and waste-disposal burn pits that emit carcinogenic toxins. As well, Colonel (Retired) Salisbury referred to military installations as "miniature industrial sites" where exposure is "often poorly documented" and poses "new and complex health challenges." Steven Harris, Senior Assistant Deputy Minister of VAC's Service Delivery Branch, underscored that some CAF members and veterans exposed to contaminants during their military service may experience "immediate" health-related effects or develop illnesses years after the exposure.

Witnesses also described medical conditions that have followed exposure to contaminants at 15 Wing Moose Jaw in Saskatchewan. Referencing "personal investigation, discussions and interviews" with affected individuals, Shaunna Plourde, a DND health services clerk and CAF spouse who appeared as an individual, emphasized that "devastating patterns" were found to exist among individuals exposed to contaminants in seven buildings located at 15 Wing Moose Jaw: more than 50 deaths and approximately 200 illnesses. Shaunna Plourde also characterized "Building 143" at 15 Wing Moose Jaw as contaminated, and noted diagnoses of cancers, neurological disorders, thyroid issues or other conditions among those who worked there. Furthermore, Dave Hovington, a DND chief fire inspector and veteran who appeared as an individual, highlighted the "personal cost" of exposure to chemicals in firefighting foams when serving as a CAF firefighter at 15 Wing Moose Jaw

and other military sites, and highlighted a diagnosis of cardiac amyloidosis and multiple myeloma following such exposure.

Witnesses underscored health conditions associated with exposure to contaminants that are, or may be, at certain military housing units located at or near 4 Wing Cold Lake in Alberta. In a brief submitted to the Committee, Major (Retired) Michel Tremblay, a First Nations veteran, suggested that the water systems for those housing units may be contaminated with PFAS or TCE. According to the brief, some CAF members, veterans and other possibly exposed individuals are experiencing health conditions that include diabetes, thyroid issues, and skin and other cancers.

Detecting Per- and Polyfluoroalkyl Substances in the Drinking Water of the City of Saguenay, Quebec

Witnesses discussed PFAS at federal contaminated sites that are the result of firefighting foams, and drew attention to associated human health risks. Noting that PFAS are found in a wide range of commercial and household products, Peter Hammerschmidt said that their use in firefighting foams has had impacts both on and off military installations. Greg Carreau attributed the presence of PFAS at certain DND/CAF contaminated sites to the "legacy use of aqueous film-forming foams" to contain fires or train firefighters. As well, Greg Carreau underlined that individuals exposed to PFAs and other chemicals in firefighting foams have a risk for developing cancers or other diseases that exceeds the risk among the general population.

Furthermore, witnesses commented on PFAS at Canadian Forces Base (CFB) Bagotville in Quebec and in the drinking water of the nearby community of La Baie in the City of Saguenay, Quebec. Peter Hammerschmidt remarked that regular tests for PFAS at all DND/CAF sites, which have been conducted since 2010, led to these contaminants being detected at CFB Bagotville, where firefighting foams were frequently used for firefighting training and other activities. Dr. Sébastien Sauvé, Professor of Environmental Chemistry at the Université de Montréal, observed that, in 2022, analyses of drinking water samples from La Baie revealed concentrations of PFAS between 100 and 300 nanograms per litre, which exceeds Health Canada's recommended concentrations of 30 nanograms per litre. As well, Dr. Sauvé asserted that, in summer 2022, the Université de Montréal's environmental chemistry laboratory informed DND, Health Canada, the Government of Quebec and the City of Saguenay about PFAS in La Baie's drinking water. According to Dr. Sauvé, the information was not made public until early winter 2023.

Witnesses mentioned ongoing efforts to address the PFAS in La Baie's drinking water. Peter Hammerschmidt referenced collaboration between DND and the City of Saguenay,

including through a contribution agreement under which, in 2023, the Government of Canada committed to allocate a maximum of $15.5 million to fund a short-term water treatment solution to the contamination of the drinking water. In December 2025, DND announced that it had amended the contribution agreement with the city to provide an additional $29.9 million, "for a total of approximately $45.4 million, to continue funding" the short-term water treatment solution over a 10-year period. According to DND's July 2026 written response, $11.7 million in federal funding had been allocated as of 31 March 2026 to this short-term water treatment solution.[5]

Assessing Risks Relating to Agent Orange and Other Toxic Defoliants at Canadian Forces Base Gagetown

Witnesses made comments about the past spraying of Agent Orange and other toxic defoliants[6] (hereafter, defoliants) at CFB Gagetown in New Brunswick. Eileen Beauchamp, a veteran's family member who lived at CFB Gagetown and who appeared as an individual, contended that, between 1956 and 1984, more than 6,500 barrels of defoliants and other herbicides were sprayed on about 181,000 acres at CFB Gagetown.[7] Gary Goode, a veteran who appeared as Chair of Brats in the Battlefield Association Inc., pointed out that members of the Black Watch (Royal Highland Regiment) of Canada who served at CFB Gagetown "spent weeks" training in areas that were contaminated with dioxins and other contaminants because of repeated sprayings of defoliants and other herbicides.

Moreover, witnesses discussed the United States (U.S.) military's spraying of defoliants at CFB Gagetown in 1966 and 1967, and the Government of Canada's 2007 announcement of a one-time, tax-free ex gratia payment of $20,000 for eligible individuals potentially affected by the spraying. Gary Goode identified several sites at CFB Gagetown that have high concentrations of dioxins because of the spraying. According to DND's *The Use of*

5 DND, *Request for Information (RFI)*, 30 July 2026, p. 2.

6 "Defoliant" refers to a chemical, including an herbicide, that is used on trees and plants to make all of their leaves fall off. Agent Orange is a toxic defoliant that comprises a mixture of herbicides and highly toxic dioxins. See Government of Canada, Canadian Centre for Occupational Health and Safety, *Pesticides – General*.

7 During the 44th Parliament, the Committee received a copy of a DND document entitled A-2004-00207 relating to the spraying of defoliants and other herbicides at Canadian Forces Base (CFB) Gagetown. Pages 83 and 84 in that document indicate that 6,504 barrels of defoliants and other herbicides were sprayed on approximately 181,000 acres at CFB Gagetown between 1956 and 1984 as part of CFB Gagetown's annual "Herbicide Spray Programme." A copy of those two pages is included in a brief that Eileen Beauchamp submitted to the Committee in 2024. See DND, *Access to Information Request: A-2004-00207*, 2004, pp. 83–84; and Eileen Beauchamp, *Brief to the Standing Committee of NDDN on the Department of National Defence (DND) and the Canadian Armed Forces' (CAF) approach to addressing current and legacy contamination sites*, 2024, pp. 9–10.

Herbicides at CFB Gagetown from 1952 to Present Day, concentrations "above Canadian guidelines of dioxins in soil were found" at several CFB Gagetown sites, including the Clones bivouac site, the Murphy bivouac site and the Enniskillen range.[8] Concerning the payment, Eileen Beauchamp mentioned that the payment's "sunset clause ended claims in December 2011, excluding individuals who developed illnesses later."

Witnesses also described potential human health conditions associated with exposure to defoliants. In a 2025 brief submitted to the Committee, Brats in the Battlefield Association Inc. stated that defoliants can be a risk if inhaled, ingested or absorbed through the skin. With a focus on CFB Gagetown, Eileen Beauchamp noted personal experiences with "multiple cancers and other illnesses" following exposure to defoliants, and suggested that "countless" others with ties to CFB Gagetown have experienced similar health conditions. Furthermore, in a 2026 brief submitted to the Committee, Brats in the Battlefield Association Inc. maintained that a DND document entitled A-2004-00207 indicates that, as early as 1964, the Government of Canada and the Government of New Brunswick were aware of the risks to human health and the natural environment associated with the spraying of defoliants at CFB Gagetown.

As well, witnesses questioned the methodology and conclusions of a Government of Canada fact-finding project undertaken between 2005 and 2007 to investigate the spraying of defoliants and other herbicides at CFB Gagetown. In Eileen Beauchamp's opinion, the resulting report[9] has "significant gaps" because the project's scope was mainly "Agent Orange applications in 1966 and 1967, [but] ... spraying [also] occurr[ed] before and after these years." Eileen Beauchamp also cited concerns about the sampling methods used to test fish found near CFB Gagetown for dioxins, contending that the removal of the skin before other body parts were tested for dioxins may have affected the results' validity because dioxins tend to accumulate in the skin's fat cells. As well, Eileen Beauchamp asserted that the project's investigators did not consider the potential long-term health effects associated with exposure to dioxins.

Witnesses also referenced a 2023 study by the State of Maine Legislature's Gagetown Harmful Chemical Study Commission. In a 2026 brief submitted to the Committee,

8 DND's *The Use of Herbicides at CFB Gagetown from 1952 to Present Day* provides an overview of the findings related to the Government of Canada's fact-finding project undertaken between 2005 and 2007 to investigate the spraying of defoliants and other herbicides at CFB Gagetown . As well, the document mentions the Canadian Council of Ministers of the Environment's "soil quality guideline" for dioxins: 4 parts per trillion.

9 In 2007, Dr. Dennis Furlong, Independent Fact-Finding and Outreach Coordinator, published a report entitled *CFB Gagetown Herbicide Spray Programs 1952–2004 Fact-Finders' Report*. That report outlines the methodology and conclusions of a Government of Canada fact-finding project undertaken between 2005 and 2007 concerning the spraying of defoliants and other herbicides at CFB Gagetown.

Eileen Beauchamp mentioned that the study's focus included the identification of barriers to recognizing the short- and long-term health effects that U.S. Maine National Guard veterans may have experienced from potential exposure to defoliants at CFB Gagetown. In January 2024, the Commission published a report that calls for a new investigation of the spraying of defoliants at CFB Gagetown to reassess the effects on the health of potentially exposed individuals. The Commission's report also asserts that the report resulting from the Government of Canada's 2005–2007 fact-finding project contains data and analysis that are "incorrect," "biased" or "incomplete."

Finding Trichloroethylene in the Groundwater of the City of Shannon, Quebec

Witnesses drew attention to TCE's presence at some DND/CAF contaminated sites and its spread to nearby communities. Describing defence as a "business that requires the use of a number of different types of chemicals," Peter Hammerschmidt noted that certain DND/CAF contaminated sites have TCE, which is "used to degrease metal parts" or assemble military vehicles. Greg Carreau pointed out that individuals living near those sites may be exposed to TCE through the air, or in their food or water. Moreover, Mayor Sarah Perreault, who appeared on behalf of the City of Shannon, Quebec, commented on the TCE found at CFB Valcartier in Quebec, as well as in the groundwater of the nearby City of Shannon, between the late 1990s and the early 2000s. With a focus on the land where about 1,100 military housing units will be built at CFB Valcartier and in the city, Mayor Perreault stated that "[i]t's possible that the land is contaminated, but [that] it will not pose a safety risk."

Furthermore, witnesses outlined several actions that the Government of Canada, the Government of Quebec, the City of Shannon and others have taken to address TCE in the city's groundwater. According to Mayor Perreault, these actions have included: ensuring that all residents have stopped drinking contaminated water; sealing contaminated residential wells; installing a new water system; establishing wells to monitor TCE in the groundwater; and creating a monitoring committee comprising representatives from DND, the CAF, Environment and Climate Change Canada, the Government of Quebec, the City of Shannon and others. Mayor Perreault mentioned that, between 2004 and 2010, the Government of Canada allocated approximately $35.0 million to install a system to supply drinking water to the residences affected by the contaminated water.

Witnesses also discussed human health risks associated with exposure to TCE. Greg Carreau underlined that TCE is a "well-studied chemical solvent that can cause cancer." Concerning the City of Shannon's residents, Mayor Perreault indicated that the Regroupement des Citoyens de Shannon filed a class action lawsuit against the

Government of Canada concerning TCE in the city's groundwater, including with the goal of having the Government recognize the causal link between drinking water contaminated with TCE and cancer among the city's residents. However, Mayor Perreault asserted that the water samples from the groundwater were "too small to prove" such a link. Mayor Perreault also said that, between 2023 and 2025, the Government provided financial compensation to affected individuals after the Quebec Court of Appeal "recognized the federal government's responsibility … for the [TCE] contamination" of the city's groundwater.[10]

Witnesses emphasized that the contamination of the City of Shannon's groundwater with TCE has had both a psychological impact on the city's residents and a negative impact on its relationship with DND. Mayor Perreault explained that, because certain homes were "extremely contaminated" with TCE, a "negative experience has stayed" with some city residents. As well, Mayor Perreault pointed out that the contamination of the groundwater "fuelled concerns and shattered relationships [between DND and the city] that were already weak." In Mayor Perreault's opinion, DND's "extensive" hierarchy, lack of "agility" and inadequate communication with the public affect the city's ability to collaborate with DND in addressing TCE contamination, and in constructing military housing units and related infrastructure.

Discovering Unexploded Explosive Ordnances in or near the Cities of Terrebonne and Shannon, Quebec

Witnesses focused on unexploded explosive ordnances discovered at former military training sites located in the City of Terrebonne, Quebec. Serge Villandré, the City of Terrebonne's Chief Administrative Officer who appeared on behalf of the city, discussed the former Saint-Maurice Firing Range, which DND and Canada's military used during the Second World War and until 1967 for ammunition testing and military training. According to Serge Villandré, the degradation of unexploded explosive ordnances and other military materials that are, or may be, present at the former Saint-Maurice Firing Range, which was classified as "surplus" in 2014, pose a risk to nearby "wetlands, peatlands and mature forests" that host "nearly two dozen special-status flora and fauna species."

As well, witnesses underlined the discovery of unexploded ammunition on a parcel of land that DND transferred to the City of Terrebonne in 2014 for the Urbanova Interchange Project. Serge Villandré suggested that, although DND assessed the

10 For more information about the Government of Canada's compensation relating to trichloroethylene contamination of the City of Shannon's groundwater, see Proactiō, *TCE contamination of groundwater in Shannon: Spieser v. Attorney General of Canada*.

contamination risk for that land as “very low,” unexploded ammunition was discovered during the project’s preliminary construction phase, which led to a two-year delay because of the need for “safe excavation and disposal of these historic ammunitions.”

Witnesses drew attention to unexploded ammunition at former military training sites in or near the City of Shannon, Quebec. Mayor Perreault said that such ammunition has been discovered near some residences and “where people used to walk 15 or 20 years ago.” Furthermore, Mayor Perreault noted that residents continue to use, for recreational activities, areas that DND has “closed off” to the public but is unable to “complete[ly] clos[e]” because their closure is “too complicated to supervise.”

Detecting Contaminants in Canada’s Arctic and North

Witnesses discussed contaminants in Canada’s Arctic and North. Dr. Feiyue Wang, Professor and Canada Research Chair at the University of Manitoba, commented that some contaminants found there are “either transported from the south or [are] from local sources such as mining and, in this case, military operations.” Providing an example, Dr. Wang referenced the “extensive rocket-launching activities” that the Government of Canada and the U.S. military conducted between the 1950s and the 1980s in Churchill, Manitoba. Dr. Wang also observed that some contaminants are at sites that “tend to be forgotten” and that are “poorly documented and …. monitored” for contaminants. Furthermore, Dr. Wang mentioned that, because Canada’s Arctic and North are mostly covered with snow and ice, some sites in those regions have contaminants that are “more persistent” when compared to their persistence in Canada’s southern regions.

Witnesses focused on federal contaminated sites in the City of Iqaluit, Nunavut. In a brief submitted to the Committee, the City of Iqaluit highlighted that many of these sites “are connected to historical military, defence, and sovereignty-related activities in [Canada’s Arctic and] North.” According to the brief, some sites, including the Iqaluit Upper Base, were used for military activities during the Cold War. As well, the brief stated that the City of Iqaluit collaborates with DND and other federal entities to remediate current and legacy federal contaminated sites located in the city, noting that, as of 14 May 2026, many of the “active” and “suspected” federal contaminated sites were managed by Transport Canada or by Crown-Indigenous Relations and Northern Affairs Canada. In relation to that collaboration, the brief added that “[t]he City sees an opportunity to continue this collaborative work: to address contamination in a coordinated way, and to ensure that new defence-related development does not create new contaminated sites for future generations.”

EXISTING FEDERAL MEASURES RELATING TO CONTAMINANTS

Providing the Committee with observations about existing federal measures relating to contaminants, witnesses drew attention to: legislative and related measures designed to protect against contaminant-related risks to human health or the natural environment, the methods used to identify, classify and report on federal contaminated sites; measures relating to the management and remediation of such sites; and the health care services and disability benefits available to CAF members and veterans, respectively, experiencing health conditions because of their exposure to contaminants during their military service.

Protecting Human Health or the Natural Environment

Witnesses outlined several federal legislative measures designed to protect human health or the natural environment from contaminants, including the *Canadian Environmental Protection Act, 1999*.[11] Greg Carreau commented that the statute contains provisions designed to protect human health and the natural environment from contaminants. Moreover, Greg Carreau said that the Domestic Substances List established under the statute outlines the chemicals that are authorized for use in Canada, and stated that federal entities and private-sector entities must notify Environment and Climate Change Canada and Health Canada if they plan to use, in Canada, a chemical that is not on that list.

Furthermore, witnesses described the Chemicals Management Plan and the *New Substances Notification Regulations (Chemicals and Polymers)*, which are focused on the risks that chemicals pose, or could pose, to human health or the natural environment. Characterizing the Chemicals Management Plan as a "long-standing program that's been working through the many industrial chemicals that have been developed over the last 100 years," Seth Cain, Director of Environment and Climate Change Canada's Contaminated Sites Division, observed that the plan aims to address such risks. From a regulatory perspective, Colonel (Retired) Salisbury pointed out that, of the more than 10 million chemicals "introduced into the [natural] environment each year," the Government of Canada assesses about 450 new chemicals annually under the *New Substances Notification Regulations (Chemicals and Polymers)*.

Witnesses also mentioned federal regulation of PFAS. Greg Carreau remarked that some PFAS are regulated under the *Canadian Environmental Protection Act, 1999*, and

11 In addition to the *Canadian Environmental Protection Act, 1999*, federal measures aimed at protecting human health or the natural environment from designated contaminants include the *Arctic Waters Pollution Prevention Act*, the *Fisheries Act* and the *Impact Assessment Act*.

indicated that the Government of Canada's 2024 report about PFAS provides an assessment of the possible impacts on human health or the natural environment of unregulated PFAS. As well, Greg Carreau underscored the report's finding that a "certain amount of uncertainty" exists about these impacts, and noted that, as of 26 November 2024, the Government of Canada had committed to undertaking further assessments of their potential impacts.

Moreover, witnesses drew attention to DND's human health and ecological risk assessments designed to evaluate possible risks to human health or the natural environment arising from exposure to contaminants. Saleem Sattar, Director General of Environment and Sustainable Management at DND, stated that DND's human health risk assessments focus on identifying risks to the health of individuals exposed to contaminants, adding that its ecological risk assessments involve analyzing the effects of contaminants on potentially affected animals and plants.

Witnesses also discussed measures aimed at protecting CAF members from exposure to contaminants. Major-General Erick Simoneau, Deputy Commander of the CAF's Military Personnel Command, stressed that CAF commanders must ensure adherence to all relevant policies and regulations designed to protect members' health, including from exposure to contaminants. Furthermore, Major-General Simoneau said that DND, the CAF, VAC, Statistics Canada, and the Canadian Institute for Military and Veteran Health Research jointly "conduct multi-year population level comparisons" of members' health, which allow DND and the CAF to "identify potential hazards, mitigate risk[s] and provide the highest level of support."

Identifying, Classifying and Reporting on Federal Contaminated Sites

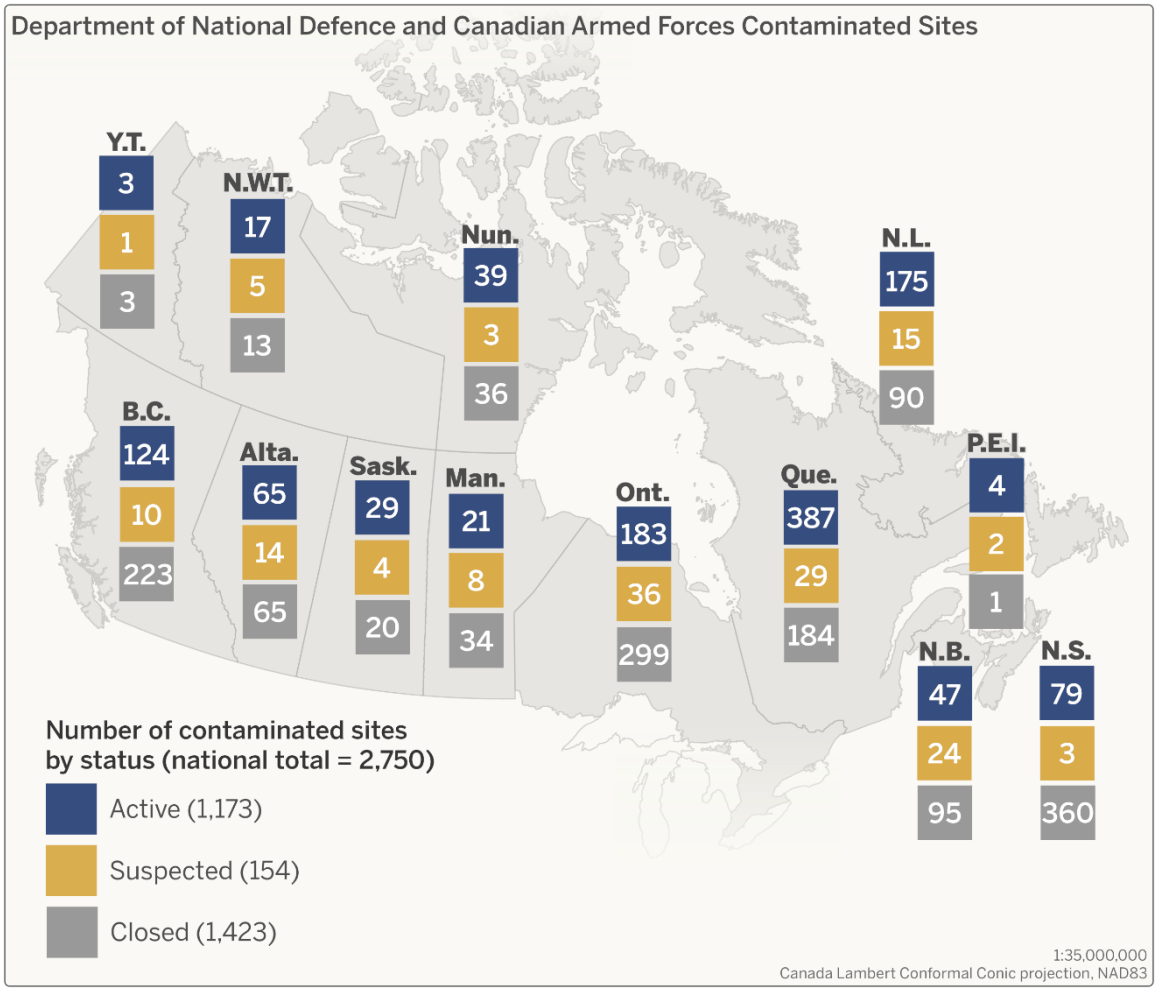
Witnesses described the steps that DND, the CAF and other federal custodian organizations[12] (hereafter, federal custodians) must take to identify, classify and report on a federal contaminated site in accordance with TBS's *Directive on the Management of Real Property*, as well as for the purposes of the Federal Contaminated Sites Inventory. According to Peter Hammerschmidt, these steps include: using previous knowledge of contaminants to identify sites that are potentially contaminated; reviewing documentation to determine possible sources of contamination, as well as past military and non-military

12 "Federal custodian organizations" are federal entities that are responsible for managing their respective contaminated sites in accordance with the Federal Contaminated Sites Action Plan and other measures relating to the management of those sites. See Government of Canada, *Partners of the Federal Contaminated Sites Action Plan*.

activities on the site; testing samples to identify contaminants that could pose a risk to human health or the natural environment; assessing the types and concentrations of contaminants at the site; classifying the site as “active,” “suspected” or “closed”; and reporting on the site’s classification for purposes of the inventory.

Figure 2 shows, as of 30 June 2026, the total number of DND/CAF contaminated sites in each province and territory, as well as the number of those sites that were classified as “active,” “suspected” or “closed.”

Figure 2—Department of National Defence and Canadian Armed Forces Contaminated Sites, by Classification and by Province/Territory (as of 30 June 2026)



Notes: "DND/CAF Contaminated Sites" refers to contaminated sites managed by the Department of National Defence or the Canadian Armed Forces.

In September 2025, the Canadian Coast Guard became a civilian special operating agency within the Department of National Defence (DND) following its transfer from Fisheries and Oceans Canada. DND now manages federal contaminated sites associated with the Canadian Coast Guard.

"Active" sites are confirmed to be contaminated and require remediation efforts to be undertaken.

"Suspected" sites require an assessment to be undertaken to determine whether they are contaminated.

"Closed" sites require no further actions to address contamination.

Source: Treasury Board of Canada Secretariat, "Find Contaminated Sites by Reporting Organization," *Federal Contaminated Sites Inventory*, Database, accessed 30 June 2026; and Statistics Canada, *Table 1.8 – Abbreviations and codes for provinces and territories, 2021 Census*.

Witnesses identified some possible challenges encountered when identifying, classifying and reporting on certain DND/CAF contaminated sites. Shaunna Plourde contended that some test results relating to air, soil and water samples collected from these sites are either "hidden" or modified to indicate that "there's nothing wrong." According to Dave Hovington, test samples relating to certain sites "sometimes disappear from records after buildings are demolished or hazards are moved to less visible locations." Providing an example from 2024, Dave Hovington asserted that soil and water samples from 15 Wing Moose Jaw's Hangar 6 were tested for contaminants after repair workers "unearthed soil with an extremely strong smell of fuel" at a hydrant located near that hangar. According to Dave Hovington, as of 5 December 2024, "no one seem[ed] to know where these samples went and what the results [were]."

Moreover, witnesses commented on the Federal Contaminated Sites Inventory, which includes information about PFAS and other emerging contaminants. Sarah Evans, Executive Director at TBS's Office of the Comptroller General, underlined that Environment and Climate Change Canada and Health Canada work with "relevant regulators" to ensure that the inventory has such information, adding that, beginning in 2024–2025, the inventory provides information about PFAS at some "active" federal contaminated sites. As well, Sarah Evans observed that the inventory contains each federal custodian's contact information so that "Canadians can request additional information regarding specific contaminated sites."

Witnesses also identified possible limitations with the Federal Contaminated Sites Inventory. Eileen Beauchamp suggested that the data and other information in the inventory do not "fully capture" the risks to human health or the natural environment associated with the "scope of legacy contamination at CFB Gagetown" and other military installations. In Eileen Beauchamp's opinion, the inventory's limitations prevent "effective tracking of exposure-related health outcomes," which "undermin[es] efforts to study long-term impacts" and to provide supports to affected individuals, including CAF members and veterans.

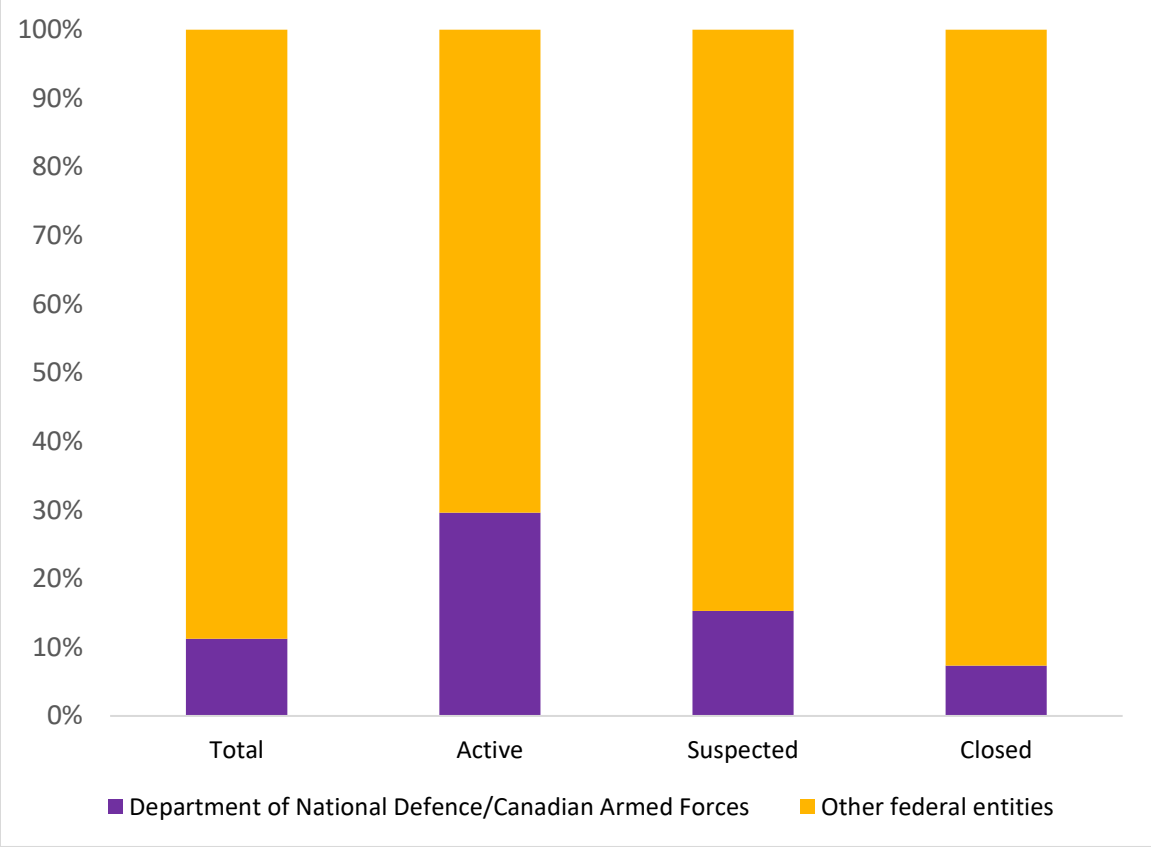
Managing and Remediating Certain Contaminated Sites

Witnesses provided an overview of federal measures relating to the management and remediation of federal contaminated sites, including the Federal Contaminated Sites Action Plan. Seth Cain explained that, in 2005, the Government of Canada established the plan as a "15-year program" to provide funding and technical support to help federal

custodians manage and remediate their contaminated sites. According to Seth Cain, the plan was renewed in 2019, for another 15 years, with the overall objective of reducing both the risks to human health and the natural environment arising from these sites and associated federal liabilities.

Figure 3 shows, as of 30 June 2026, the proportions of the total number of federal contaminated sites in Canada, and of the number of "active," "suspected" and "closed" sites, that were managed by two groups: DND and the CAF, and other federal entities.

Figure 3—Status of Federal Contaminated Sites that are Managed by the Department of National Defence and the Canadian Armed Forces, and by Other Federal Entities (as of 30 June 2026) (%)



Notes: "Other federal entities" are federal entities other than the Department of National Defence and the Canadian Armed Forces that, as of 30 June 2026, were managing federal contaminated sites. As of that date, there were 31 "other federal entities."

In September 2025, the Canadian Coast Guard became a civilian special operating agency within the Department of National Defence (DND) following its transfer from Fisheries and Oceans

Canada. DND now manages federal contaminated sites associated with the Canadian Coast Guard.

"Total" comprises all "active," "suspected" and "closed" federal contaminated sites.

"Active" refers to sites that are confirmed to be contaminated and that require remediation efforts to be undertaken.

"Suspected" refers to sites that require an assessment to be undertaken to determine whether they are contaminated.

"Closed" refers to sites that require no further actions to address contamination.

Source: Treasury Board of Canada Secretariat, "Find Contaminated Sites by Reporting Organization," *Federal Contaminated Sites Inventory*, Database, accessed 30 June 2026.

Witnesses also pointed out that federal custodians report annually on the liabilities associated with their contaminated sites.[13] Sarah Evans said that these liabilities are "rolled up as part of the [P]ublic [A]ccounts [of Canada] and reported as a liability of the Crown." With a focus on the liabilities relating to DND/CAF contaminated sites, DND's July 2026 written response estimated that, as of 31 March 2025, the "estimated cost of addressing known contamination" at those sites was about $754.0 million.[14] DND's *Defence Climate and Sustainability Strategy 2023–2027* indicates that, for the 2023–2027 period, the annual reduction target for liabilities relating to DND/CAF contaminated sites is 10.0%. In 2022–2023, 2023–2024 and 2024–2025, the liabilities associated with those sites were reduced by 11.0%, 10.3% and 11.0%, respectively.[15]

Moreover, witnesses mentioned federal funding in relation to the Federal Contaminated Sites Action Plan. Sarah Evans highlighted that activities funded through the plan include assessments of federal contaminated sites to determine their types of contamination and related concentrations, as well as efforts needed to remediate those sites. Peter Hammerschmidt estimated that, since 2005 and as of 26 November 2024, DND and the CAF had received roughly $1.2 billion in funding to manage and remediate DND/CAF contaminated sites in Canada, and had spent about 90% of that amount. Providing examples of their efforts, Peter Hammerschmidt drew attention to: approximately $575.0 million to decontaminate 21 former Distant Early Warning Line sites; about $143.0 million to undertake a decontamination project at 5 Wing Goose Bay in Labrador;

13 The liabilities for contaminated sites refers to the financial costs incurred by federal custodians to assess, monitor and address the types and concentrations of contaminants at their respective contaminated sites. For more information, see Government of Canada, *Directive on Accounting Standards: GC 3260 Liability for Contaminated Sites*.

14 DND, *Request for Information (RFI)*, 30 July 2026, p. 2.

15 See DND, "Table 6.3: Defence activities are carried out in a safe and environmentally responsible manner," *Departmental Results Report 2024–25*.

and roughly $273.0 million to remediate a number of DND/CAF contaminated sites, which contributed to more than 250 sites becoming classified as "closed."

Witnesses also described the support that federal departments, including Environment and Climate Change Canada and Health Canada, provide to federal custodians through the Federal Contaminated Sites Action Plan. Regarding Environment and Climate Change Canada, Seth Cain noted that federal custodians receive administrative support, guidance, training and scientific advice concerning the risks that their contaminated sites pose to the natural environment. Greg Carreau commented that Health Canada provides federal custodians with guidance, training and scientific advice about the human health risks associated with contaminants at their sites, adding that specific guidance exists for assessing and addressing the risks of such contaminants as PFAS, TCE and dioxins, all of which have been linked to past military activities.

As well, witnesses discussed the TBS's *Directive on the Management of Real Property*. Sarah Evans underlined that the directive establishes the "administrative policy framework for the management of federal real property," including federal contaminated sites, and outlines federal custodians' responsibilities, such as a requirement to follow the Canadian Council of Ministers of the Environment's guidelines and standards concerning the management of such sites. Moreover, Peter Hammerschmidt stated that the directive requires federal custodians to prioritize the management and remediation of federal contaminated sites that pose the "highest risk" to human health or the natural environment, and, for the purposes of the Federal Contaminated Sites Inventory, to "certify annually" that they are providing "complete and accurate" information concerning the status of their sites.

Witnesses also focused on transparency in relation to managing federal contaminated sites. Sarah Evans emphasized that TBS's *Directive on the Management of Real Property* requires federal custodians to be "transparent about whatever information they have," including with respect to contaminants at sites they manage or intend to sell for public or private use. Concerning DND/CAF contaminated sites, Peter Hammerschmidt noted recent DND and CAF actions designed to enhance transparency concerning management of their sites, such as protocols introduced in 2019 that require them to provide timely notifications to relevant parties when contaminants have been identified at military installations or have spread from those sites to nearby communities.

Furthermore, witnesses highlighted that, as required by TBS's *Directive on the Management of Real Property* and other measures relating to the management of federal contaminated sites, federal custodians audit their processes to assess risks, ensure compliance with requirements and identify areas for improvement. Sarah Evans

said that DND and the CAF have their "own internal audit function," with audits conducted by a third-party auditor. Moreover, Sarah Evans commented that the Office of the Auditor General may audit the management of federal contaminated sites, as the Office's Commissioner of the Environment and Sustainable Development did prior to an April 2024 report about federal contaminated sites in Canada's North.

Witnesses also mentioned DND's and the CAF's approaches to informing CAF members and family members, DND employees and others about the human health risks associated with exposure to contaminants at DND/CAF contaminated sites. Erin Zimmerman, a DND employee and veteran who appeared as an individual, asserted that DND and the CAF do not regularly inform these individuals about potential contaminants at some sites where they live or work. As well, Erin Zimmerman suggested that a "lack of transparency and communication" concerning these sites "has left and will continue to leave irreversible impacts for these communities." Focusing on a specific location, Shaunna Plourde said that, prior to relocating to 15 Wing Moose Jaw in Saskatchewan, neither DND nor the CAF provided information about contaminants found on or near multiple sites, including hangars, fire halls and certain military housing units. As well, Shaunna Plourde contended that some CAF members have "witnessed unsafe practices such as chemicals being disposed of improperly and without protective equipment."

Witnesses commented on DND's contribution agreements with some provinces and municipalities through which federal funding is allocated to support the implementation of projects designed to manage or remediate non-federal sites contaminated as result of defence- or military-related activities. According to DND's July 2026 written response, as of 30 July 2026, DND had four contribution agreements: with the City of Saguenay, Quebec, to allocate up to $45.4 million over 10 years to install and operate temporary water treatment units in the community of La Baie; with the Government of Quebec to provide a maximum of $48.2 million over seven years to remediate former Mid-Canada Line radar sites in Quebec; and with the City of North Bay, Ontario, to allocate up to $119.0 million over 16 years to remediate PFAS contamination at the North Bay Jack Garland Airport, and a maximum of $8.0 million over two years to establish a PFAS treatment facility at the North Bay Water Treatment Plant.[16]

Supporting Affected Canadian Armed Forces Members and Veterans

Witnesses provided views about the health care services available to CAF members, including those potentially exposed to contaminants during their military service.

16 DND, *Request for Information (RFI)*, 30 July 2026, p. 2.

Major-General Simoneau stated that service providers within the CAF's health care system can access "comprehensive records" concerning a member's health, such as clinical assessments, treatments and "any potential risk and exposure to hazards," with these records shared with VAC during a releasing member's transition to civilian life. Brigadier-General Forestier pointed out that CAF base and wing commanders are responsible for protecting the health of CAF members, DND employees and others at military installations, adding that the Canadian Forces Health Group provides guidance and "professional expertise" to these commanders regarding "occupational and environmental health hazards," as well as available health care services.

Furthermore, witnesses focused on federal efforts to assess and monitor the health of releasing CAF members and veterans, including those potentially exposed to contaminants during their military service. Major-General Simoneau indicated that DND and the CAF "document everything" relating to an exposure and "take appropriate mitigation actions," and stressed that they communicate with VAC if a releasing member is suspected to have developed an illness or other health condition due to exposure to contaminants during military service, with VAC then determining entitlements to benefits or other supports. Steven Harris highlighted actions designed to improve VAC's "understanding of the long-term health effects and impacts of military service on veterans," including research projects with DND, Statistics Canada, university-based researchers and others, as well as efforts to collect "data and new research on Canadian veteran populations" to understand better the "links between military service–including exposures [to contaminants]–and certain medical conditions."

Witnesses also outlined some challenges that VAC encounters in accessing the medical records of veterans potentially exposed to contaminants during their military service. Providing an example, Nathan Svenson, VAC's Acting Senior Director of Disability and Healthcare Policy, remarked that VAC lacks the authority to request access to a veteran's medical records in a civilian health care system and cannot "proactively go out and get current health outcome information from … the general public, which includes all veterans." However, Nathan Svenson noted that VAC can access information about health status when veterans include such information in their applications for disability benefits.

As well, witnesses discussed VAC's approach to assessing applications for disability benefits. Steven Harris said that, when assessing applications regarding medical conditions that may be linked to military service, VAC consults health care service providers and "reviews each application, as well as the applicant's service and medical records," to confirm such a link. Shawn MacDougall, VAC's Senior Director of Strategic Planning and Oversight, mentioned that VAC uses internal eligibility guidelines concerning medical conditions to assess the applications, and indicated that VAC's

internal database, which contains information about DND/CAF sites where exposure to contaminants may have occurred, is used when applications are assessed. Furthermore, Steven Harris stated that VAC may reassess "denied" applications if applicants seek a reassessment because either "their health has deteriorated" or "new developments, new research or discoveries" relating to their medical condition have occurred.

Witnesses also commented on the number of applications for disability benefits that VAC usually receives from releasing CAF members and veterans in relation to exposure to contaminants during their military service, as well as the timeline for approval. According to Steven Harris, applications involving medical conditions linked to such exposure are "rare." He also underscored that, although the intended timeline for a decision to be made about an application is 16 weeks, the "average time" is 19 weeks.

Witnesses drew attention to the experiences of some releasing CAF members and veterans who have medical conditions presumed to be associated with exposure to contaminants during their military service, but who are ineligible for VAC's disability benefits. Erin Zimmerman described having used "personal savings" to access medical treatments for "visual impairment and neurological conditions" presumably linked to such exposure at 15 Wing Moose Jaw. Dave Hovington stated that, notwithstanding timely payments from the Saskatchewan Workers' Compensation Board for medications and time off for treatments and oncologist appointments, VAC had not, as of 5 December 2024, provided disability benefits for the diagnoses of cardiac amyloidosis and multiple myeloma presumably associated with exposure to PFAS and other contaminants that occurred during service as a CAF firefighter.

PROPOSED FEDERAL ACTIONS RELATING TO FEDERAL CONTAMINATED SITES, DIAGNOSES AND TOXIC DEFOLIANTS

Witnesses provided the Committee with proposed federal actions in eight areas: presumptive conditions and occupational illnesses among CAF members, veterans, and current and former DND employees; an inquiry, compensation and a study regarding the spraying of defoliants at CFB Gagetown; a review of DND/CAF contaminated sites; centralization and coordination of processes for managing and remediating such sites; transparency concerning the management and remediation of DND/CAF contaminated sites; the decontamination of former military installations, and supports for nearby communities; a registry relating to CAF members' and veterans' exposure to contaminants during their military service; and artificial intelligence's (AI's) potential role in identifying new contaminants and related exposure risks.

Recognizing Presumptive Conditions and Occupational Illnesses

Witnesses requested that VAC recognize presumptive diagnoses of the medical conditions experienced by releasing CAF members and veterans who were, or may have been, exposed to contaminants during their military service. Colonel (Retired) Salisbury encouraged VAC to acknowledge a causal link between such exposures and resulting presumptive conditions. Erin Zimmerman urged VAC either to use the International Labour Organization's List of Occupational Diseases or to follow relevant recommendations from the Canadian Centre for Occupational Health and Safety when assessing applications for VAC's disability benefits, including those regarding medical conditions presumed to be associated with exposure to contaminants during military service. Furthermore, Eileen Beauchamp's 2026 brief suggested that DND and VAC should "adopt a unified and regularly updated list of presumptive illnesses associated with toxic chemical exposure" at DND/CAF contaminated sites.

As well, witnesses called for the Government of Canada to enact legislation similar to the United States' *Honoring our PACT Act of 2022* (the PACT Act), which extends the U.S. Department of Veterans Affairs' health care services and disability benefits to U.S. veterans with presumptive conditions[17] who were exposed to Agent Orange or other contaminants during their military service. Eileen Beauchamp advocated the enactment of similar legislation in Canada to improve "support systems" for releasing CAF members and veterans who were, or may have been, exposed to contaminants during their military service.

Witnesses proposed that occupational illnesses experienced by DND employees and other civilians be recognized when those illnesses may be linked to exposure to contaminants at military installations. Eileen Beauchamp asked for a mechanism to recognize occupational illnesses among DND employees and other civilians, and encouraged DND to adopt a "cohesive list of illnesses and diseases" related to such exposure.

17 The United States' *Honoring our PACT Act of 2022* defines "presumptive conditions" as medical conditions considered to be automatically linked to military service. According to the U.S. Department of Veterans Affairs, these presumptive conditions include medical conditions associated with exposure to contaminants, such asthma, chronic obstructive pulmonary disease, lymphoma, melanoma, pulmonary fibrosis, reproductive cancers and respiratory cancers. See United States, Department of Veterans Affairs, *The PACT Act and your VA benefits*.

Launching An Inquiry, Providing Compensation and Conducting a Study Relating to Canadian Forces Base Gagetown

Witnesses urged the Government of Canada to launch an independent public inquiry, with participation from all relevant parties, to assess the risks to human health or the natural environment arising from the spraying of defoliants at CFB Gagetown. Gary Goode requested such an inquiry into "CFB Gagetown's harmful chemical use" and the conclusions of the Government of Canada's 2005–2007 fact-finding project to investigate the spraying of defoliants and other herbicides at CFB Gagetown, with CFB Gagetown "thoroughly investigated again and tested" for dioxins and other contaminants linked to the spraying. Similarly, Eileen Beauchamp's 2024 brief called for an independent public inquiry "to address discrepancies and inconsistencies between the peer review documents and the final report" relating to the 2005–2007 fact-finding project.

As well, witnesses advocated compensation for individuals affected by the spraying of defoliants at CFB Gagetown. Concerning the one-time, tax-free ex gratia payment announced in 2007, Eileen Beauchamp's 2024 brief encouraged the Government of Canada to remove the payment's "sunset clause" and to "establish a compensation framework for [those experiencing] long-term and late-onset illnesses." Gary Goode asked that individuals affected by exposure to defoliants at CFB Gagetown receive "full compensation" for the harm caused by the spraying of those "carcinogenic defoliants," and that the Government "full[y] acknowledg[e]" that "millions of litres and kilograms" of defoliants were sprayed at CFB Gagetown.

Witnesses suggested that a study be conducted among veterans exposed to defoliants to assess the long-term human health risks associated with the exposure. Referencing a study of New Zealand veterans exposed to Agent Orange during the Vietnam War that raised questions about such risks, Eileen Beauchamp's 2026 brief requested a similar study of Canadian veterans exposed to defoliants during their military service.[18]

Reviewing Contaminated Sites

Witnesses urged the Government of Canada to launch an independent and comprehensive review of all current and legacy DND/CAF contaminated sites. Erin Zimmerman asked that the proposed review be "directed" by the President of the Treasury Board, with the Canadian Centre for Occupational Health and Safety's and

18 For more information, see R.E. Rowland, L.A. Edwards and J.V. Podd, "Elevated sister chromatid exchange frequencies in New Zealand Vietnam War veterans," *Cytogenetic and Genome Research*, Vol. 116, No. 4, April 2007, pp. 248–251.

Health Canada's "oversight and involvement" to "ensure impartiality and effectiveness in moving forward." As well, Erin Zimmerman encouraged the Government to have "a dedicated budget line item in the next [federal] budget" to fund the proposed review.

Witnesses advocated a review of DND/CAF contaminated sites at 4 Wing Cold Lake and in the City of Iqaluit, Nunavut. Regarding 4 Wing Cold Lake, Major (Retired) Tremblay's brief proposed that DND and the CAF should conduct "a base-wide contamination audit" or review all actions taken to address contaminants there and in nearby residential areas. The brief called for the review's scope to include "pilot projects, remediation trials, and infrastructure work that may have affected [the] health" of CAF members and their families living at 4 Wing Cold Lake or in the City of Cold Lake. The City of Iqaluit's brief requested DND, the CAF and other federal entities to collaborate with the City of Iqaluit to identify all defence- and military-related contaminants that are, or may be, on current and legacy federal contaminated sites located in the city.

Centralizing and Coordinating Processes for Managing and Remediating Contaminated Sites

Witnesses proposed centralizing the processes for managing and remediating DND/CAF contaminated sites, as well as for assessing associated risks to human health or the natural environment. Describing the current processes as "fragmented" and perhaps contributing to "delayed recognition of occupational-health concerns," Erin Zimmerman's brief called for the creation of a "centralized environmental-health coordination structure" that would: integrate all human health– and natural environment–related data concerning DND/CAF contaminated sites; support occupational health reviews; "improve historical continuity"; identify "exposure pathways" for contaminants that are, or may be, at those sites; and coordinate communication among DND, the CAF, VAC, provincial and territorial governments, public health authorities and others regarding the management and remediation of DND/CAF contaminated sites and risks to human health or the natural environment associated with those sites.

Witnesses suggested the creation of a federal entity to coordinate federal efforts to manage and remediate current and legacy DND/CAF contaminated sites in the City of Iqaluit, Nunavut. The City of Iqaluit's brief requested a federal entity that would coordinate a "unified" federal approach involving Crown-Indigenous Relations and Northern Affairs Canada, DND, the CAF, TBS and Transport Canada to manage and remediate those sites.

Enhancing Transparency in Relation to Contaminated Sites

Witnesses encouraged DND and the CAF to enhance transparency in relation to their management and remediation of DND/CAF contaminated sites. Erin Zimmerman's brief requested that federal custodians, including DND and the CAF, use "transparent, accessible, and publicly [accessible] systems" to communicate "[e]nvironmental warnings, contamination notices, remediation activities, and significant occupational-health concerns" to relevant parties, including CAF members and family members affected by exposure to contaminants at such sites. Similarly, Eileen Beauchamp's 2026 brief suggested that the Government of Canada should implement a "more transparent, accountable, and compassionate approach" to managing and remediating these sites, and should provide enhanced supports to affected individuals. Mayor Perreault asked DND and the CAF to maintain public trust in the Government of Canada by being "more responsive when it comes to communicating and being transparent" with the public about the spread of contaminants from DND/CAF contaminated sites to nearby communities.

Witnesses called for transparent communication between the Government of Canada and others level of government regarding the management and remediation of DND/CAF contaminated sites. Serge Villandré urged all relevant parties to be aware of the economic, environmental and social impacts associated with managing and remediating such sites, and particularly mentioned the former Saint-Maurice Firing Range located in the City of Terrebonne, Quebec.

Decontaminating Former Military Installations and Supporting Affected Communities

Witnesses requested the decontamination of former military training sites located in or near certain communities, as well as compensation for the costs that communities incurred to decontaminate legacy DND/CAF contaminated sites. Serge Villandré encouraged DND to decontaminate the former Saint-Maurice Firing Range, including to facilitate the decontaminated land's use to construct housing units, schools, an industrial park and other infrastructure in the City of Terrebonne, Quebec. Moreover, Serge Villandré urged the Government of Canada to compensate the city for the $1.7 million contract that it awarded for decontamination of the parcel of land that DND transferred in 2014 for the Urbanova Interchange Project. That said, during a study on the National Defence portfolio's *Supplementary Estimates (C) 2025–2026*, DND submitted a document to the Committee that indicates that the "sales conditions" associated with the land required the

City of Terrebonne to "undertake all costs" relating to identifying and removing unexploded explosive ordnances, with DND being responsible for their disposal.[19]

Finally, witnesses advocated actions that would address current and legacy DND/CAF contaminated sites in the City of Iqaluit, Nunavut, as well as prevent the spread of defence- and military-related contaminants in Canada's Arctic and North. The City of Iqaluit's brief proposed enhanced collaboration among the City of Iqaluit, DND, the CAF and others to achieve two objectives: manage and remediate such sites; and ensure that "new defence-related development does not create new contaminated sites for future generations." As well, the brief suggested that DND, the CAF and others should implement measures designed to protect the inhabitants and natural environment of Canada's Arctic and North from exposure to such contaminants. The brief also called for federal funding to be allocated to prevent future contamination that could result from constructing new, and modernizing existing, military and dual-use installations in the City of Iqaluit.

Establishing a Registry Concerning Exposure to Contaminants

Witnesses requested that releasing CAF members and veterans who have occupational illnesses, especially those applying for VAC's disability benefits, have access to a registry with information on the sites where DND or the CAF used or stored contaminants, and on medical conditions presumed to be associated with exposure to those contaminants. Eileen Beauchamp's 2024 brief urged DND, the CAF and VAC to establish such a registry in order to: inform "future health outcome studies or analyses" relating to CAF members' exposure to contaminants during their military service; and enhance VAC's "record collection and verification process" for assessing disability benefit applications. The brief also asked for an annual report regarding the proposed registry, to be submitted to TBS and the Canadian Council of Ministers of the Environment, containing information about the "status of the registry, emerging trends and patterns," as well as "obstacles to data collection or verification" and proposed "next steps" for the registry.

Using Artificial Intelligence

Witnesses suggested the use of AI to analyze data relating to contaminants at federal contaminated sites, and to assess the risks that these contaminants pose, or could pose, to human health or the natural environment. Dr. Wang advocated using AI to collect and analyze data relating to such sites, which would help scientists and researchers both to

19 See House of Commons, Standing Committee on National Defence, *Evidence*, 25 March 2026 (Christiane Fox, Deputy Minister, Department of National Defence); and DND, "Question Taken on Notice," 5 May 2026.

identify “compounds” of contaminants from air, soil and water samples and to assess possible human health risks associated with exposure to those contaminants. Similarly, Dr. Phil Ferguson, Associate Professor and the Magellan Industrial Research Chair at the University of Manitoba, proposed using AI “appropriately” to collect data relating to contaminated sites and to “look for patterns” in those data. Moreover, Dr. Sauvé encouraged the use of AI to assist in “finding the most cost-efficient solutions” for remediating DND/CAF and other contaminated sites.

THE COMMITTEE’S CONCLUSIONS AND RECOMMENDATIONS

Canada has tens of thousands of current and legacy federal contaminated sites, some of which are managed by DND or the CAF and are contaminated because of past military or non-military activities. Certain contaminants at these sites may pose an immediate or longer-term risk to human health or the natural environment. DND and the CAF are currently taking a range of actions to identify, classify, manage and remediate the sites, as well as protect the health of individuals at or near the sites. However, some CAF members, veterans, current and former DND employees, and civilians continue to experience challenges relating to exposures to contaminants during their military service or professional careers, with implications for timely access to health care and financial supports.

In light of the foregoing, the Committee recommends:

Recommendation 1

That the Government of Canada recognize that occupational illnesses relating to military service may develop long after service has ended, and assess medical evidence to establish if appropriate presumptive diagnoses exist for veterans who served in known hazardous or contaminated environments, strengthening the timely access for veterans to health care benefits and support.

Recommendation 2

That the Government of Canada strengthen proactive transparency and information sharing among the Department of National Defence, the Canadian Armed Forces and relevant authorities to ensure timely access to information and data.

Recommendation 3

That the Government of Canada proactively inform personnel and families currently and previously living and/or working on Department of National Defence and Canadian Armed Forces sites, bases and wings of environmental risks and assessment results.

Recommendation 4

That the Government of Canada expand proactive monitoring, sampling and early detection efforts for contaminated sites, including in communities on or near current and former military installations, and expedite current decontamination measures in relation to chemical agents and dioxins.

Recommendation 5

That the Government of Canada invest in research, development and advanced technologies, including artificial intelligence, to improve contaminant detection, risk analysis and remediation planning.

Recommendation 6

That the Government of Canada engage more closely with municipalities to address the social and environmental impacts arising from its contaminated sites.

Recommendation 7

That the Government of Canada adopt a standardized list of illnesses resulting from exposure to chemicals.

Recommendation 8

That the Government of Canada establish a unified federal coordination body comprising the Department of National Defence, Crown-Indigenous Relations and Northern Affairs Canada, Transport Canada and the Treasury Board of Canada Secretariat to streamline the identification, assessment and remediation of military legacy sites across Arctic communities.

Recommendation 9

That the Government of Canada ensure that all future Arctic defence infrastructure investments include dedicated funding lines specifically allocated for both the

remediation of historical military contamination at the proposed project site and the prevention of new environmental liabilities.

Recommendation 10

That the Government of Canada, in direct partnership with Northern municipalities and Indigenous governments, conduct a comprehensive inventory audit of unlisted military legacy sites, including historical dumpsites, fuel drum caches and scrap metal, for full inclusion in the Federal Contaminated Sites Inventory.

Recommendation 11

That the Government of Canada prioritize immediate containment and remediation for Northern military legacy sites where climate change and permafrost thaw accelerate the active migration of hazardous chemicals and heavy metals into municipal lands and water sources.

APPENDIX A:
LIST OF WITNESSES

The following table lists the witnesses who appeared before the committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the committee's webpage for this study.

Organizations and Individuals	Date	Meeting
City of Shannon	2026/04/29	34
Sarah Perreault, Mayoress		
City of Terrebonne	2026/04/29	34
Serge Villandré, Chief Administrative Officer		

APPENDIX B: LIST OF WITNESSES

The following table lists the witnesses who appeared before the committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the committee's webpage for this study.

44th Parliament – 1st Session

Organizations and Individuals	Date	Meeting
Department of Health	2024/11/26	127
Greg Carreau, Director General, Safe Environments Directorate		
Department of the Environment	2024/11/26	127
Seth Cain, Director, Contaminated Sites Division		
Treasury Board Secretariat	2024/11/26	127
Sarah Evans, Executive Director, Investment Management Directorate, Office of the Comptroller General		
Department of National Defence	2024/12/03	129
BGen Colleen Forestier, Director General, Health Services, Clinical		
Peter Hammerschmidt, Assistant Deputy Minister, Infrastructure and Environment		
Saleem Sattar, Director General, Environment and Sustainable Management		
MGen Erick Simoneau, Deputy Commander, Military Personnel Command		
Department of Veterans Affairs	2024/12/03	129
Steven Harris, Senior Assistant Deputy Minister, Service Delivery		
Shawn MacDougall, Senior Director, Strategic Planning and Oversight		
Nathan Svenson, Acting Senior Director, Disability and Healthcare Policy		

Organizations and Individuals	Date	Meeting
As an individual	2024/12/05	130
Philip Ferguson, Associate Professor		
Dave Hovington, Chief Fire Inspector		
Shaunna Plourde, Health Services Clerk		
Sébastien Sauvé, Full Professor		
Feiyue Wang, Professor		
Erin Zimmerman		
As an individual	2024/12/10	131
Eileen Beauchamp		
Col (Ret'd) David Salisbury, Medical Doctor		
Brats in the Battlefield Association Inc.	2024/12/10	131
Gary Goode, Chairman		

APPENDIX C:
LIST OF BRIEFS

The following is an alphabetical list of organizations and individuals who submitted briefs to the committee related to this report. For more information, please consult the committee's webpage for this study.

Beauchamp, Eileen

Brats in the Battlefield Association Inc.

City of Iqaluit

Tremblay, Michel

Zimmerman, Erin

APPENDIX D:
LIST OF BRIEFS

The following is an alphabetical list of organizations and individuals who submitted briefs to the committee related to this report. For more information, please consult the committee's webpage for this study.

44th Parliament – 1st Session

Beauchamp, Eileen

Brats in the Battlefield Association Inc.

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* (Meetings Nos. 34 and 43 to 44) from the 45th Parliament, 1st Session and (Meetings Nos. 127 and 129 to 131) from the 44th Parliament, 1st Session is tabled.

Respectfully submitted,

Charles Sousa
Chair