



# Evaluation of the First Nations Solid Waste Management Initiative

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## Acronyms and Abbreviations

AOK	Aundeck Omni Kaning First Nation
CFMP	Capital Facilities and Maintenance Program
CMM	Confederacy of Mainland Mi'kmaq
DASH	Diversion Starts at Home Project
ECCE	Environment and Climate Change Canada
EPHO	Environmental public health officer
ETAC	Evaluation Technical Advisory Committee
FNLMA	<i>First Nations Land Management Act</i>
FNSWMI	First Nations Solid Waste Management Initiative
GBA Plus	Gender-based analysis plus
INAC	Indigenous and Northern Affairs Canada
ISC	Indigenous Services Canada
IZWTAG	Indigenous Zero Waste Technical Advisory Group
LED	Lands and Economic Development
MTSA	Municipal-type service agreement
NAC	National Advisory Committee
SDI	Sustainable Development Institute
SWM	Solid waste management
TSAG	First Nations Technical Services Advisory Group

# 1. Executive Summary

This evaluation of the First Nations Solid Waste Management Initiative was outlined in the fiscal year 2019-20 Indigenous Services Canada (ISC) Five Year Evaluation Plan, and conducted in compliance with the Treasury Board of Canada Policy on Results. The evaluation was undertaken to provide a neutral and evidence-based assessment of: relevance, effectiveness and efficiency.

## 1.1 Background

In Budget 2016, the federal government recognized the challenges faced by many First Nations in managing solid waste on reserve and the environmental, health, and safety risks of inadequate solid waste management. It launched a \$409 million, five-year First Nations Solid Waste Management Initiative, starting in 2016-2017.

## 1.2 Evaluation Scope and Methodology

The evaluation covers the period from April 2016 to September 2020. Data collection occurred between November 2019 and January 2021. Since the Initiative is relatively new and has primarily output-level performance data available, the evaluation took a formative approach – examining program relevance, performance, and efficiency with a view to determining progress toward outcomes and potential improvements.

The evaluation was led by an evaluation team from the Evaluation Directorate within ISC, supported by an external consultant firm.

Research for the evaluation consisted of a comprehensive document review, literature review, analysis of the Initiative's administrative data, interviews, and case studies of FNSWMI projects in individual First Nations and ISC regions. Data collection paused for six months in 2020 owing to the COVID-19 pandemic. One of the steps the evaluation took toward co-development was establishing an Evaluation Technical Advisory Committee that represented stakeholders from ISC, First Nations, and Indigenous organizations. The committee members provided their input and it was integrated at the four key stages of the evaluation: the evaluation questions and evaluation initiation, the methodology report, the evaluation preliminary findings, and the draft evaluation report.

## 1.3 Key Findings

### 1.3.1 Relevance

The FNSWMI responds to longstanding needs in First Nations for dedicated funding in support of adequate solid waste management. While most First Nations receive either direct or indirect funding through this Initiative and funding was broadly dispersed among remote communities and those living near urban centres, two issues persist: (1) significant gaps remain in responding to First Nations' needs, particularly for ongoing and adequate funding for the operations and maintenance of solid waste management systems; and (2) First Nations living near urban centres and which are members of a tribal council are slightly more likely to access funding. The evaluation found evidence to suggest that: there was a balanced spread of funding across First Nations; the program had successes in promoting the program and reaching out to Indigenous partners; yet there are perceptions and real concerns about remote First Nations struggling to access funding. As such, the program needs to continue its successful outreach

practises and redouble efforts to reach First Nations that are less likely to receive funding or who have struggled with their solid waste systems.

The FNSWMI has a partial program theory. However, a community focused lens, including a gender/distinctions-based analysis, are missing and the addition of these lenses would allow the program to examine all of its assumptions, risks, and drivers that affect attainment of outcomes accordingly.

### **1.3.2 Effectiveness**

ISC has been generally effective in its delivery of FNSWMI. The Initiative has contributed to greater awareness and increased education of solid waste management in First Nations as well as to improving First Nations' solid waste management systems.

The performance data gaps prevented a full appreciation of what has been accomplished as a result of this program. While ISC staff have been effective at tracking program spending and outputs, which did provide some insights, the FNSWMI lacked a performance measurement system that would allow for a more rigorous assessment of how the program's progress compared against its expected outcomes.

Relying on other lines of evidence, the evaluation can suggest that there have been improvements to some First Nations' solid waste management systems. There were examples of increased technical expertise and capacity, upgrades to infrastructure, and reduction of contaminated sites.

However, there are notable areas that impeded the FNSWMI. The issues that were consistently mentioned among respondents were: (1) the operations and maintenance funding formula is inadequate and funding needs to be stabilized; (2) in some instances, a lack of emphasis on awareness and education to enhance engagement and First Nations staff training, that would help change community solid waste practices; (3) the proposal submission process is complex and funding delays occur as a result; (4) there are gaps in solid waste federal regulations and a lack of clarity regarding practices, approval permits and enforcement authority, and (5) there has been little post-closure monitoring of contaminated sites.

Overall, there continues to be a demand for FNSWMI. This program was able to address some of solid waste management needs of, First Nations, but not all needs.

### **1.3.3 Efficiency**

The evaluation findings supported that the proposal-based model used for FNSWMI funding is appropriate for major capital components, but other components require more stable, longer-term funding mechanisms. These include components such as operations and maintenance, planning, capacity development, and community engagement and education, for which longer-term grants or core funding are the preferred funding mechanism.

### **1.3.4 Service Transfer**

Although the transfer of services to Indigenous partners is one of ISC's strategic priorities and was an intended goal in the original conception of the FNSWMI, only small steps toward service transfer have been taken. In order for full service transfer to occur, the following enabling conditions need to be present: sustainable and reliable funding; strengthened delivery capacity

of Indigenous technical organizations and tribal councils; clarified program administration; and an enabled policy and regulatory environment.

### **1.3.5 Best Practices**

Best practises found during the evaluation were also noted:

- Community-based planning can be inclusive and effective for identifying solid waste management needs and solutions.
- Ongoing training and capacity development in First Nations are essential.
- Enlisting the services of Indigenous technical organizations as well as tribal councils in the FNSWMI has proven promising. These organizations bring technical expertise in solid waste management, collaborative approaches, act as an interface between First Nations and ISC, and stimulate community engagement.
- The costs of delaying action on solid waste are greater in the long run than providing adequate funding for waste management now, with respect to health and environmental impacts of poorly disposed waste.

## **2. Recommendations**

ISC should adopt an approach to improving solid waste management systems in First Nations that considers the full lifecycle of solid waste management and incorporates the broader social, cultural, and economic context of each First Nation. Under such an approach, ISC should:

1. Allocate sufficient, reliable, long-term funding for the FNSWMI. The funding should provide adequate financial support to First Nations for the ongoing costs of operating and maintaining solid waste management systems.
2. Strengthen delivery of FNSWMI through the following:
  - a. Examine and implement methods that will enhance community-led planning practices, decision-making practices, incentivise knowledge transfer from consultants to First Nations, and boost the funding directed to capacity building, engagement, and training.
  - b. Strengthen coordination between Lands and Economic Development sector and Community Infrastructure sector to better serve First Nations by simplifying and streamlining the approval and delivery process for solid waste management infrastructure projects;
  - c. Apply GBA Plus to solid waste projects, program design and delivery; and
  - d. Develop and implement a performance measurement system to monitor progress toward the program's outcomes, which should include the enhanced monitoring of solid waste management investments.
3. Assess and revise the National and Regional contracting and procurement policies to encourage and support First Nations, First Nation-owned companies, and Indigenous organizations to deliver their own service.
4. Continue working with Environment and Climate Change Canada, Indigenous stakeholders, and provinces to plan, develop, or modify regulations to support effective solid waste management in First Nations.

5. In keeping with the Department's commitment to support Indigenous communities and organizations to exercise jurisdiction in the design, delivery, and management of services, work with First Nation partners to chart a path toward sustainable service transfer of solid waste management responsibilities.

## 3. Background

### 3.1 Program Profile

In Budget 2016, the federal government recognized the challenges faced by many First Nations in managing solid waste on reserve and the environmental, health, and safety risks. It launched the \$409 million, five-year First Nations Solid Waste Management Initiative (FNSWMI), starting in 2016-2017. For First Nations located near municipalities, the focus would be on diverting waste from reserve lands to municipal facilities and on recycling and composting programs to reduce the volume of waste going to landfills. For remote First Nation communities, investments would support construction of properly engineered landfills and efforts to meet environmental standards, and limit potential environmental and health impacts.

Indigenous and Northern Affairs Canada (the department responsible at the time) allocated \$112 million for 2016-2017 and 2017-2018 using a streamlined attestation process that gave the Initiative its initial financial authority. Indigenous Services Canada (ISC) sought approval from Treasury Board for funding (\$297 million) for the subsequent three years of the five-year allocation from Budget 2016. The scope and activities of the Initiative remained the same.

The Initiative was designed to expand on and formalize the need to invest in solid waste management, which was being funded in an *ad hoc* manner using existing larger funding authorities:

- Capital Facilities and Maintenance Program: the main pillar of the Government of Canada's effort to support community infrastructure for First Nations on reserve;
- Lands and Economic Development Services Program: a funding program that enables the provision of lands, environmental and economic development support services to communities; and
- Contaminated Sites (On-Reserve) Program: a funding program that enables First Nations to cost-effectively manage contaminated sites to reduce and eliminate, where possible, risk to human and environmental health and liability associated with contaminated sites.

While none of these programs had an explicit focus on solid waste management, their use enabled the Initiative to be quickly established, building upon capacity already developed inside and outside of the department.

#### 3.1.1 Program Outcomes

The FNSWMI is part of the Lands and Environmental Management Branch, in the Lands and Economic Development Sector. The Land, Natural Resources and Environment Management Program has an overarching logic model, as well as two separate logic models for the FNSWMI specifically, but these have not been used for performance monitoring. Therefore, in collaboration with the Initiative team within the Environment Directorate, the evaluators developed a new draft logic model to guide the evaluation. Table 1 below provides a summary of the Initiative's expected program outcomes, while the full logic model is found in Appendix 1.



**Table 1: Summary of FNSWMI Expected Program Outcomes**

<b>Ultimate Outcomes</b>	Increased control of solid waste management in First Nation communities	Improved environmental conditions in First Nations		Improved safety and health for First Nation communities
<b>Intermediate Outcomes</b>	Increased community participation in SWM and diversion systems	Improved management of solid waste in First Nations (modern, environmentally sustainable systems)		Reduction of contaminated sites
<b>Immediate Outcomes</b>	Improved community planning for SWM  Increased awareness of health, safety and environmental risks	Increased awareness of SWM practices and programs by community members  Increased technical knowledge of SWM staff	Increased community access to SWM infrastructure  Contaminated or improper sites no longer used  Improved maintenance of waste assets	Increased community access to diversion programs  Hazardous waste and recyclables are moved off reserve/disposed of  Increased collaboration between First Nations on SWM
<b>Program Components</b>	Waste management planning	Capacity building and training	Infrastructure and operations	Programs and partnering

The FNSWMI is also expected to contribute to broader outcomes that require interventions beyond those of the Initiative, including sustainable economic development and increased economic capacity and reduction of federal liabilities related to fewer contaminated sites, and increased protection of sources of drinking water.

### 3.1.2 Description

The FNSWMI is proposal-based and funds eligible projects to improve on-reserve solid waste management systems as well as transfer stations off reserve, and support of municipal-type service agreements (MTSAs). Other sources of funding for solid waste management include the Capital Facilities and Maintenance Program, which can fund all types of infrastructure, and the First Nation Infrastructure Fund (FNIF)<sup>1</sup>. While funding under the Initiative was available only for one-year projects in 2016-2017 and 2017-2018, the Initiative permitted multi-year projects starting in 2018-2019.

Eligible recipients of Initiative funding include:

- All First Nation communities in Canada
- Tribal councils
- First Nation technical service organizations
- Related not-for-profit organizations (excluding charities)
- Collaborative organizations operating on behalf of First Nations

<sup>1</sup> The FNIF is a program that addresses long-standing community infrastructure needs that had not been funded under previous programming (e.g., roads, broadband connectivity, solid waste, fire protection). It has not funded solid waste projects since the Initiative was introduced.

Examples of the solid waste management activities funded under the Initiative are found in Appendix 2.

### **3.1.3 Program Management, Governance and Partners**

#### **Roles and Responsibilities**

The Initiative reports through headquarters and is delivered in collaboration with ISC regional offices. Before the end of each fiscal year, headquarters provides regions with a notional funding allocation and requests that regions prepare investment plans accordingly. Regional staff review community proposals and select projects for inclusion in their plan for the year. The Director General of the Lands and Environmental Management Branch approves the allocation of funding to regions annually.

Regional directors are responsible for approving projects, sometimes with the assistance of regional infrastructure committees (as in Alberta). Regional offices enter into the final funding agreements with First Nations and monitor project spending and progress. They also provide support to First Nations, including guidance in project management and engineering services, as required, to ensure project milestones and deliverables are met.

#### **Governance**

Two types of committees advised the FNSWMI. An Indigenous partner-led National Advisory Committee (NAC) weighs in on policy development, implementation and long-term vision, while Regional Advisory Committees in some regions supported the National Committee and considered regional concerns.

#### **Partners**

Tribal councils, technical bodies and other First Nation organizations are resourced to support First Nations and build capacity, including education, tool and capacity development, as well as providing aggregate services such as coordinating diversion of household hazardous waste, end-of-life vehicles, and white goods.

#### **Human Resources**

For the first year of the Initiative, seven new full-time equivalents (FTEs) were staffed within headquarters and ISC regional offices to plan, implement and deliver the FNSWMI. Staffing increased to ten FTEs in Year 2 and to 13.9 FTEs in Years 3-5, to match resources to increased investments and complexity of projects.

### **3.1.4 Budget**

The table below shows how the \$409 million was allocated by spending category over the five years.

**Table 2: Actual Expenditures of the FNSWMI, 2016-2017 to 2019-2020.**

Spending Categories	\$ Amounts by Fiscal Year				Total
	2016-2017	2017-2018	2018-2019	2019-2020	
Grants & Contributions	14,242,814	79,659,838	109,205,834	100,734,498	303,842,984
Operations and Maintenance	282,302	191,897	141,090	243,521	858,810
Salaries	502,526	1,077,598	1,268,765	1,359,956	4,208,845
<b>Total</b>	<b>15,027,642</b>	<b>80,929,333</b>	<b>110,615,689</b>	<b>102,337,975</b>	<b>308,910,639</b>

Source: Environment Directorate, ISC

## 4. Methodology

### 4.1 Evaluation Scope

The evaluation covers the period from April 2016 to September 2020. ISC's Senior Management Committee approved the terms of reference for the evaluation in November 2019, and data collection occurred between November 2019 and January 2021.

Since the Initiative is relatively new, starting its fifth year of implementation in April 2020, and with primarily output-level performance data available, the evaluation took a formative approach – examining program relevance, performance, and efficiency with a view to determining progress toward early outcomes and potential improvements.

### 4.2 Engagement with Indigenous Stakeholders

The evaluation team used a participatory and consultative approach through engagement with an Evaluation Technical Advisory Committee (ETAC). Members of this committee, which represents stakeholders from ISC and Indigenous communities and organizations, commented on the purpose and scope of the evaluation, the key evaluation questions and its methodology. Committee members were asked to: review the methodology report, including the data collection instruments; validate the evaluation preliminary findings following data collection; and review the draft evaluation report.

### 4.3 Evaluation Issues and Questions

The following questions guided the methodology of this evaluation. (A complete list of questions, indicators and evaluation methods is found in Appendix 3.)

#### Relevance

1. To what extent is the FNSWMI responsive to the needs of First Nations in terms of the design, delivery model and the activities supported? To what extent have gender equality and the needs of diverse segments of the population been considered?
2. Does the Initiative have a program theory that can reasonably be expected to achieve the desired results?

## **Performance**

3. To what extent is the Initiative achieving results?
4. How sustainable are the Initiative's achievements?
5. How effective are the relationships between partners?
6. To what extent is the FNSWMI being effectively managed by ISC?

## **Efficiency**

7. Is the design and delivery of the Initiative appropriate to achieving its expected outcomes?
8. What is the best funding model for achieving the Initiatives outcomes?

## **Other Evaluation Issues**

9. How can the Initiative work toward ensuring eventual devolution of solid waste management responsibilities from the department to First Nations?
10. What lessons and best practices can be learned from the implementation of this initiative or from other initiatives or jurisdictions?

## **4.4 Data sources**

The evaluators drew from multiple lines of evidence using several data collection methods to allow for triangulation and to inform their conclusions and recommendations.

### **4.4.1 Literature review**

Evaluators conducted a focused review of literature pertaining to solid waste management in First Nations. Sources included peer-reviewed journal articles, reports from reputable organizations, news articles and online media. An investigation of similar initiatives in other countries with comparable issues relating to solid waste management for Indigenous and/or resource-poor communities was part of the review. *Stiles Associates Inc.* updated and finalized the draft literature review conducted by ISC evaluators.

### **4.4.2 Document review**

ISC evaluation and Stiles Associates Inc. conducted a focused review of key documents. It included legislation, Treasury Board submissions, management plans, work plans, progress reports, presentations, government studies/reports, project files, program tracking tools, performance data, briefing notes, meeting minutes and correspondence. These documents helped the evaluators determine how ISC funded and supported activities during the time under review.

### **4.4.3 Administrative data review**

The evaluation team analyzed administrative and financial data to shed light on the evaluation questions and describe the Initiative's reach. To create a FNSWMI master database, data from the following three sub-databases were compiled:

- Environment Directorate project data (provided April 3, 2020 for projects funded April 1, 2016 to December 31, 2019)
- First Nations Community Profile (data was pulled on May 6, 2020)
- Integrated Capital Management System (data was pulled on April 30, 2020)

#### **4.4.4 Key informant interviews**

Semi-structured interviews were conducted with a purposeful sample (n=28) of key informants.

- GOC staff from ISC (regional offices and headquarters) and Environment and Climate Change Canada (14)
- Indigenous partners and technical organizations, including members of the NAC for the FNSWMI (12)
- Subject matter experts in solid waste management and Indigenous issues (2)

In addition, 42 interviews in seven regions were conducted for the case study research, for a total of 70 interviews for the entire evaluation.

#### **4.4.5 Case studies**

Case studies are useful to help understand how different elements – including implementation, context and other factors – come together to produce outcomes. The initial case study design called for First Nation communities to be the unit of analysis. However, owing to the COVID-19 pandemic, few communities identified in the original sampling framework were able to participate and ISC regions were added to the analysis. Ultimately, all case studies covered the region, and three of the studies also covered a First Nation community in that region. The communities and regions selected were:

- Millbrook First Nation in Atlantic region;
- Communauté Anicinape de Kitcisakik in Quebec region; and
- Aundeck Omni Kaning First Nation in Ontario region.

The other regions included in the case study sample were Saskatchewan, Alberta, British Columbia, and Yukon. Given the constraints imposed by the COVID-19 pandemic, the evaluators were unable to travel to any case study sites or ISC regions. The methods used were interviews and focus group discussions (conducted remotely by telephone or video conference) and document review. In two cases, local community liaisons were contracted to assist in arranging interviews and providing photographs and video footage of solid waste management facilities. Draft case study reports were shared with stakeholders in communities and regions for their review and comment.

## 4.5 Limitations

Limitation	Mitigation
COVID-19 pandemic prevented travel to communities, limited ability to interact and observe. ISC also suspended field research, including virtual communication, in First Nation communities at the beginning of the pandemic.	After a delay of about five months, the evaluation team received permission to continue with field research and conduct of the interviews and case studies was launched. The case studies were conducted virtually. In two cases, local residents were engaged to act as community liaisons.
Owing to the COVID-19 pandemic and other factors, fewer First Nations communities than expected were able to participate in the case study research.	ISC regions were added as units of analysis in the case study line of evidence.
Communities with higher capacity tended to participate in case studies and interviews.	Evaluators gathered perspectives of communities with lower capacity through tribal councils and Indigenous technical organizations.
Absence of performance measurement system meant there was no information on results at the immediate, intermediate and ultimate levels.	Evaluators created a draft logic model and used interviews, case studies and administrative data to construct a picture of program effectiveness.

## 4.6 Roles and Responsibilities

ISC Evaluation was the project authority for the evaluation. Data collection and analysis was done jointly by ISC Evaluation and *Stiles Associates Inc.* The draft evaluation report was prepared by *Stiles Associates Inc.* and reviewed by ISC Evaluation.

## 5. Findings: Relevance

### 5.1 Responsiveness to Needs of First Nations

The FNSWMI responds to longstanding needs in First Nations for dedicated funding in support of solid waste management. However, significant gaps remain in responding to First Nations' needs, particularly for ongoing and adequate funding for the operations and maintenance of solid waste management systems.

All lines of evidence point to the need to address solid waste management in First Nations. For decades, solid waste management systems in First Nations have lagged far behind those in nearby municipalities. Before 2016, 66% of First Nations did not receive funding for solid waste management infrastructure. An ISC spokesperson noted that many First Nation communities had outstanding issues 30 years ago and that departmental files contained studies going back three decades that recommended action to clean up communities. "It is only now that they are being cleaned up and waste disposal is being addressed."

As far back as the 1990s, the Indian and Northern Affairs Canada's (INAC) Environmental Issues Inventory program identified many on-reserve landfills as presenting a medium to high-risk environmental liability. In 2017, there were more than 1,400 waste disposal sites on First Nations reserves, the majority unmanaged refuse sites.<sup>2</sup> Thirteen percent of these contained hazardous waste and many were close to community housing. Open-air dumping and burning of garbage – common practices in many First Nation communities – can pose risks to human health by contaminating groundwater and by releasing toxic substances such as furans and dioxins into the soil.<sup>3</sup>

Findings from academic research suggest it is not sufficient for the federal government to allocate funding to general public works in First Nations and expect it to be invested in solid waste management.<sup>4</sup> The Public Works Department of a First Nations community is typically responsible for such community services. However, funding allocated to this department is often diverted to other urgent priorities such as clean water and housing. As Zagozewki et al suggest, ensuring that funding actually goes to solid waste management may require funding that is targeted solely for that purpose.<sup>5</sup>

For the first time, through the FNSWMI, the federal government provided dedicated solid waste management funding, replacing previous *ad hoc* spending. The Initiative addressed the need to restore the community pride and well-being that comes from living in a clean, safe environment. Evidence from case studies and interviews showed that the FNSWMI allowed some First Nations to begin dealing with accumulated waste such as end-of-life vehicles, discarded tires, scrap metal or oil.

According to guidance from ECCC, funding support for solid waste management is especially needed in First Nations in northern and remote regions since they face unique challenges in waste management owing to climate, geology, population size and distribution, socio-economic factors, and access to services and facilities.<sup>6</sup>

### 5.1.1 Gaps in Addressing Needs

Evidence from interviews and case studies showed that despite the positive aspects of the FNSWMI in responding to needs in solid waste management, First Nations lack adequate, ongoing funding for the proper operation and maintenance of their solid waste management systems. This view was expressed not only by representatives of First Nations and Indigenous organizations, but also by ISC respondents.

At the outset of the Initiative, ISC began a needs assessment process based on community waste profiles. However, this exercise was never completed. Therefore, it is uncertain whether the communities with the greatest needs in solid waste management received adequate support or whether the funding provided by the department always responded to the most pressing community priorities in First Nations. Representatives from two regional First Nations

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<sup>2</sup> INAC. 2016. Evaluation of the Contaminated Sites On-Reserve (South of the 60th Parallel) Program.

<sup>3</sup> Zagozewski, Rebecca et al. 2011. "Perspectives on Past and Present Waste Disposal Practices: A Community-Based Participatory Research Project in Three Saskatchewan First Nations Communities." Environmental Health Insights 5: 9-20

<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

<sup>6</sup> ECCC (2017). *Solid waste management for northern and remote communities: planning and technical guidance document*. Available at: [http://publications.gc.ca/collections/collection\\_2017/eccc/En14-263-2016-eng.pdf](http://publications.gc.ca/collections/collection_2017/eccc/En14-263-2016-eng.pdf) (accessed on January 8, 2020).

Indigenous technical organizations expressed the view that insufficient consultation was carried out in needs assessments to ensure that projects aligned well with First Nation needs. In another region, an ISC representative considered staff capacity to be insufficient for ensuring that investments were strategic in targeting First Nations in the most need.

## 5.2 Reach of the Initiative

About half of First Nations received direct FNSWMI funding, and many more were funded indirectly. Funding was broadly dispersed across First Nations with differing levels of administrative capacity and among both remote First Nations and those closer to urban centres. First Nations closer to urban centres and those supported by tribal councils are slightly more likely to receive FNSWMI funding. This difference is attributed to some First Nations having less capacity to draft proposals and poor internet connectivity that impedes access to the application process for some First Nations.

The reach of the FNSWMI was extensive. The Initiative directly funded 305 First Nations to implement a project for solid waste management. In addition, 536 First Nations indirectly received funding from FNSWMI. This indirect funding includes financial support to tribal councils that provided services related to solid waste management on behalf of their member First Nations as well as funding from the FNSWMI to help defray some operations and maintenance costs for solid waste management systems in First Nations.

### 5.2.1 Access to Funding

Efforts were made by the FNSWMI to reach remote First Nations and those with lower capacity. Especially during its first two years, regional offices conducted outreach to raise awareness about the Initiative, including endeavours to reach out to communities with highest risk. Indigenous technical organizations and tribal councils were a useful means of communicating the Initiative to many First Nations (except for some First Nations not affiliated with a tribal council). For example, the Alberta regional office made use of solid waste management training events held by the First Nations Technical Services Advisory Group (TSAG). The Alberta regional office also promoted the Initiative through other Indigenous organizations. In Manitoba, the ISC regional office hired the Centre for Indigenous Environmental Resources (CIER) to provide training sessions for remote First Nations in two regions on how to apply to the program.

The evaluators analyzed administrative data comparing those First Nations that directly received FNSWMI funding against their general assessment risk rating<sup>7</sup>, which can be considered as a proxy for a community's administrative capacity – including capacity to apply for, and access, project funding. Overall, it appears that a greater proportion of First Nations with low and medium administrative capacity received funding than those with high administrative capacity.

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<sup>7</sup> The General Assessment is a risk rating, or measure of the risk related to a funding recipient's management of a funding agreement, determined by aggregating risk scores in the areas of governance, planning, financial management, program management and other considerations. Risk scores are rated as "low", "medium" and "high" – with a "low" risk score indicating high administrative capacity, and a "high" risk score indicating low administrative capacity. General Assessments are completed at least annually for each organization, using information collected throughout the year in managing the funding agreement(s). General Assessment (GA) Workbook – 2014. <https://www.sac-isc.gc.ca/eng/1390855955971/1618143236981> (accessed April 28, 2021).



**Table 3: FNSWMI Project Funding to First Nations by General Assessment Risk Rating, 2016-2020**

First Nations' General Assessment Risk Rating	Number of First Nations in this Category in Canada	Number of First Nations in this Category Funded	Percent of First Nations in this Category Funded
<b>High</b> (low administrative capacity)	13	8	62%
<b>Medium</b> (medium administrative capacity)	98	59	60%
<b>Low</b> (high administrative capacity)	508	238	47%

Source: developed from FNSWMI administrative data

### Remoteness analysis

Administrative data show that FNSWMI project funding has gone toward a relatively balanced proportion of First Nation communities when compared to their zones (1, 2, 3 and 4), which are based on their distance from the nearest town with services and whether there is year-round road access (see Table 4).

**Table 4: FNSWMI Projects Funded by Level of Remoteness, 2016-2020<sup>8</sup>**

Remoteness of First Nations	Percent of All First Nations in Canada Located in this Zone	Percent of First Nations in this Zone Funded by FNSWMI
<b>Zone 1:</b> within 50 km of nearest service centre <sup>9</sup>	31%	31%
<b>Zone 2:</b> 50 to 350 km to nearest service centre	47%	50%
<b>Zone 3:</b> More than 350 km from nearest service centre	5%	4%
<b>Zone 4:</b> No year-round road access	17%	15%

Source: developed from FNSWMI administrative data

Notwithstanding the analysis above, some respondents perceived that the FNSWMI may have been less effective in addressing the needs of remote First Nations and those with lower administrative capacity. Some ISC respondents and Indigenous organization representatives said that isolated First Nations, including some with critical needs (non-engineered landfills without leachate collection systems), were slow or unable to access the program. Respondents said this is especially true for First Nations who are not part of a tribal council or served by a technical organization funded under the Initiative and for remote First Nations that require significant capital investments to fix major problems.

In one region, specifically, representatives of Indigenous organizations said that cutbacks to tribal councils from previous governments led to the loss of technical expertise and hindered the ability of the tribal councils to support First Nations under the FNSWMI. According to representatives of two Indigenous organizations outside that province, the FNSWMI was more

<sup>8</sup> The remoteness analysis may mask disparities within ISC regions with respect to proportions of funding going to communities in different zones.

<sup>9</sup> For zones 1, 2, and 3, distances are measured from the nearest service centre with year-round road access.

effective at assisting reserves closer to urban centres that could develop MTSAs and haul their waste to municipal landfills. Some ISC and subject matter experts said that more southern First Nations than northern remote First Nations were able to access the program. This difference was attributed to some First Nations having less capacity to draft proposals and internet connectivity issues that impeded access to needed documents.

### 5.3 Completeness of Program Theory

The FNSWMI has a partial program theory, but certain key conditions are missing, which inhibit the Initiative's ability to examine all assumptions, risks, and drivers that affect attainment of its outcomes.

Program theory, or theory of change, refers to the way an initiative is expected to produce its results. A theory of change builds on a program's logic model – the outputs and outcomes hierarchy – and it outlines the mechanisms of change, as well as the assumptions, risks, drivers of change and context that support or hinder the process of change. The FNSWMI has a logic model, which ISC Evaluation developed with FNSWMI program staff input, but does not yet have an explicit theory of change. The Initiative does have some of the components of a program theory since the funding categories reflect the solid waste management programming cycle as described in the literature, with emphasis on the infrastructure pieces. There is also some planning, capacity development and training, and partnership development (mainly MTSAs). The literature shows that solid waste management also requires behavioral change and, as will be shown later in the report, these aspects – promotion, education, training, awareness and engagement campaigns – have been less present in the implementation of the Initiative.

A more complete theory of change would borrow from systems thinking in planning and implementing interventions through the FNSWMI. The initiative is ultimately working toward improved health, safety and environmental conditions in First Nations. According to Hernandez et al, such change requires 'holistic, integrated approaches that address the causes of inequalities' rather than a narrow framing of technical solutions.<sup>10</sup> A systems approach would consider the larger picture at the community level, including the social, economic and cultural situation and their interconnections, rather than narrowly focusing on short-term technical fixes such as an engineered landfill or waste transfer station. The key to implementing a systems approach appears to be community-based planning and management, as experience in the BC region suggests.

#### ***BC Region Incorporates Aspects of a Systems Approach***

In BC region, a team comprised of ISC staff, a community planner and an engineer collaborate with community-based solid waste management working groups on project planning and implementation. The solid waste management working groups are composed of a cross-section of demographic groups in the community and provide advice to chief and council on solid waste management project planning and implementation. By having this mix of representatives, the BC approach allows for engagement with multiple perspectives and encourages a better understanding of inter-relationships.

<sup>10</sup> Hernández, Alison et al. 2017. *Engaging with complexity to improve the health of indigenous people: a call for the use of systems thinking to tackle health inequity. International Journal for Equity in Health.*

A more comprehensive theory of change would also require incorporating or strengthening the following components, which are discussed in detail elsewhere in the report:

- Sufficient, long-term funding for operations and maintenance
- Defining a path toward transfer of solid waste management responsibilities to Indigenous communities and organizations
- Comprehensive national needs assessment
- Continuous community engagement and education
- Ongoing training for operators
- Ensuring that monitoring of decommissioned landfills is being conducted

## 5.4 Gender-Based Analysis Plus

FNSWMI managers did not conduct gender-based analysis plus (GBA Plus) in the design of the FNSWMI nor in regional delivery of the Initiative. Some efforts were made by First Nations and Indigenous organizations to reflect the needs of elders and youth in their communities.

Gender-based analysis policy was developed originally in 1999 and revised in 2006 by ISC's predecessor department, Indian and Northern Affairs Canada.<sup>11</sup> Although these policies have been in place for many years, they have not been formally adapted into federal government program budget requirements until recently. ISC staff at headquarters and in the regions said that gender-based analysis was not conducted for the FNSWMI and specific criteria were never established to ensure the needs of different groups were addressed by FNSWMI projects. A member of the NAC said that such analysis is vital as it is the most vulnerable – children and the elderly – who are most at risk from the effects of poor waste management, such as air pollution from burning garbage or contamination of the local water supply.

Efforts were made in some projects to involve sub-groups within communities such as elders and youth in programming, or to address their distinct needs. According to one respondent, the BC regional office's team approach to solid waste management delivery included community engagement to prepare and launch new solid waste programs, input from experts and elders, and door-to-door communication to gain insights and customize solutions based on community needs. Several Indigenous organizations, including in Atlantic Canada, British Columbia, and Quebec, developed initiatives targeting youth. Examples include tools to increase solid waste management education in schools and the eco-patrollers initiative in Quebec that hired youth in some First Nations communities to raise awareness about solid waste management. Initiatives supported by First Nations organizations in Atlantic Canada and Ontario worked to incorporate assistance in getting waste to the curbside for elders and others with disabilities. Although these examples are commendable, overall, the Initiative missed potential opportunities and benefits had ISC applied GBA Plus consistently in each project.

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<sup>11</sup> INAC. 2006. Gender-Based Analysis Policy.

## 6. Findings: Effectiveness

### 6.1 Results

The Initiative has made significant progress in delivering funding in support of solid waste management in First Nations. A lack of performance data prevents a full appreciation of what has been achieved, especially with the delivery approaches varying significantly between regions, which produced differing results.

While the FNSWMI's administrative data explain where and how investments were made, they do not show what impact those investments have had in First Nations. Owing to the lack of an effective performance measurement system, the evaluation team relied largely on evidence from the case studies and interviews to assess the results of the Initiative. The sections below examine the results achieved against the expected outcomes at the intermediate level of the FNSWMI's draft logic model, while also covering expected outcomes at the immediate level.

#### 6.1.1 Increased Community Participation in Solid Waste Management and Waste Diversion

The FNSWMI has contributed to greater awareness and increased education of solid waste management in First Nations. In regions that emphasized more awareness and education, there was typically an increase of community participation in recycling and other solid waste management efforts. However, where there was less emphasis on awareness and education, there typically was insufficient community engagement and First Nation staff training, and greater difficulty to bring about change in community practices. In some instances, there was over-emphasis on an external consultant's plan, whose reports were not well suited to local conditions in the First Nations receiving the service.

The FNSWMI, through the efforts of ISC regional offices, tribal councils, and Indigenous technical organizations, has contributed to greater awareness and a higher profile for solid waste management in First Nations, especially among political and administrative leaders. An example is growing participation in the annual solid waste management forum held by the First Nations Technical Services Advisory Group (TSAG) in Alberta and more discussion of solid waste management at TSAG's Chief's steering committee. According to respondents from the First Nations of Quebec and Labrador Sustainable Development Institute (SDI), whereas solid waste management was not a priority for First Nation councils during the first year of the FNSWMI, there is growing appreciation of what can be achieved and more personnel have been hired. Institute respondents say that their training sessions, annual solid

#### **Atlantic First Nations Engage Communities in Waste Diversion**

In 2018, through FNSWMI funding, Millbrook First Nation in Nova Scotia undertook the Diversion Starts at Home Project (DASH). The pilot project was run by a local garbage company, G-Man Waste Removal, owned by members of the First Nation. To improve diversion, the DASH or "bin" project provided education, and indoor and outdoor recycling systems to all households in the community. Before the new indoor and outdoor recycling bins were dropped off, summer students hired for community outreach met with each household to talk to them about compost and recycling and provided them with information materials. Residents said the project led to increased waste diversion and a cleaner community. Since 2018, through the Confederacy of Mainland Mi'kmaq, the bin project has been rolled out to six other First Nations.

waste management forums, and other events are creating a community of First Nation people who know each other and share knowledge, expertise, and best practices.

In the area of improved community planning for solid waste management, FNSWMI supported solid waste management plans, feasibility studies, environmental management plans, and data collection projects to inform on-reserve solid waste management, including planning for recycling and composting. In some cases, the plans integrate land use, source water protection, and solid waste management.

A weakness of some of the solid waste management planning work is that it is often conducted by external consultants and engineering firms. Thus, knowledge and capacity around solid waste management planning may not be strengthened in the community. Another consequence is that consultants' reports may be too technical, may not be entirely appropriate for each community, and therefore may not be used. For example, a consulting firm produced a lengthy and detailed solid waste management plan, at significant cost, but case study respondents were uncertain that the First Nation made full use of the plan. A representative from an Indigenous organization said that the FNSWMI needs to direct less money toward consultants and more to the communities themselves. This person said that the progress made in solid waste management in First Nations has come not from consultants but from community efforts. An ISC spokesperson agreed that although the services of engineers were a requirement in some cases, more engineers received money through the Initiative in his region than did First Nations, and some of these engineers knew little about solid waste management in First Nations.

Education and public outreach fall into the capacity building and training category of FNSWMI funding, a category that also includes training of waste facility operators. This category as a whole accounted for 22% of FNSWMI investments (over half of these in Quebec), and community education accounted for a smaller portion of these investments. When attempting to establish better solid waste management, the literature emphasizes the importance of activities to raise public awareness and promote the adoption of environmentally sound waste management practices, including educational programs and public outreach.<sup>12</sup> For example, a World Bank report states: "The success of sustained solid waste management is critically linked with public engagement and trust. Waste managers rely on citizens to consciously reduce the amount of waste they generate, separate or manage specific waste types at home, dispose of waste properly, pay for waste management services, and approve new disposal sites."<sup>13</sup>

Although there were examples of strong community engagement in BC and the Atlantic region, some ISC regions funded few, if any, projects centred on community engagement and education. In Saskatchewan and Alberta, Indigenous organizations expressed the view that not enough resources from FNSWMI went toward education and community engagement to bring about the behavioural changes needed for improved waste management. An ISC representative in Alberta said the region has not yet had a chance to work with First Nations on outreach, education, and programming to effectively use new solid waste management facilities, but that it hopes to do so in the next stage of the Initiative.

"There is very little focus [in the FNSWMI] on the services associated with solid waste management and too much focus on the infrastructure."  
– ISC respondent

<sup>12</sup> ECCC. 2017. *Solid waste management for northern and remote communities: planning and technical guidance document*; World Bank. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*.

<sup>13</sup> World Bank. 2018. *What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050*.

According to representatives of Indigenous organizations and subject matter experts in Quebec, Manitoba, and Alberta, there were gaps in developing the capacity of local operators to maintain new infrastructure such as landfills and transfer stations. Subject matter experts suggested that training programs, such as those delivered by the Solid Waste Management Association of North America, should be developed by Indigenous organizations so they are adapted to the realities of First Nations, particularly where many participants may be dealing with trauma. Some Indigenous respondents emphasize the importance of renewing capacity within First Nations for trained operators of solid waste management facilities, owing to high levels of turnover among solid waste management operational staff. Without such trained staff, large investments in new infrastructure can be jeopardized.

For example, in one Manitoba First Nation, a new landfill facility seen as a model of waste reduction in 2019 was described by an Indigenous representative as “a mess” a year following the loss of trained staff to operate it. This person said changing the perception of the waste station operator positions will be key to retaining staff. In some Manitoba First Nations the title for the waste operator position was changed to “land and water protectors” to denote the importance of the position to preserving the environment.

### **6.1.2 Improved Management of Solid Waste in First Nations Using Modern, Environmentally Sustainable Systems**

The majority of FNSWMI funding has been spent on infrastructure such as landfills, transfer stations, and garbage trucks that are bringing First Nations closer to the solid waste management standards of neighboring municipalities. Support for solid waste management coordinators and technical expertise in First Nations, and Indigenous organizations have increased First Nations’ capacity to implement solid waste management projects. Increased access to recycling and other diversion programs along with efforts to move hazardous waste off reserve have contributed to cleaner communities.

The FNSWMI has increased community access to solid waste management infrastructure, which comprised 59% of Initiative investments. This includes waste and recycling bins, garbage trucks, landfill closures, waste transfer stations, recycling centres, and facilities and equipment for safe storage and disposal of hazardous waste. ISC and First Nation representatives said these investments are bringing many First Nations closer to the solid waste management standards of neighbouring municipalities. In Aundeck Omni Kaning (AOK) First Nation in Ontario, the closure of the old landfill has meant less garbage in the community, less pollution going into Lake Huron from landfill seepage, and fewer people from off reserve dumping garbage illegally. Investments made in facilities in Dease River First Nation, BC and in Kitcisakik, Quebec have led to cleaner communities, and fewer problems with bears and other animals scavenging in garbage. In BC, where ISC had begun significant work in solid waste management ten years before the FNSWMI, investments have allowed the closure of all but one non-engineered landfill located in First Nations, and all others have high-functioning solid waste management systems with local governance.

The FNSWMI has contributed to increased technical knowledge of staff in First Nations about effective solid waste management. The Initiative provided funding for solid waste coordinators in tribal councils and some larger First Nations, although only in the Ontario region. These coordinators assisted First Nations in completing funding applications, conducted training, and provided other technical support. In Quebec, the First Nations of Quebec and Labrador

Sustainable Development Institute holds an annual two-day colloquium on solid waste management for its member First Nations, which features workshops, presentations, and tours of community solid waste management infrastructure. The Ontario First Nations Technical Services Corporation provides training on waste diversion, landfill monitoring, maintaining waste transfer stations, and handling and managing household hazardous waste to its member First Nations. It also helps communities to connect with provincial recycling programs. In BC, the Indigenous Zero Waste Technical Advisory Group (IZWTAG) has adapted the circuit rider training program, an ISC program originally designed to provide hands-on training for First Nations water system operators. IZWTAG's circuit riders provide mentorship and training to solid waste management system operators and can be on site quickly with support when issues arise.

The FNSWMI has contributed to increased community access to diversion programs and moved hazardous waste and recyclables off reserve or disposed of them properly. As of April 2019, the Initiative reported that 132 communities removed hazardous and recyclable materials from the waste stream to off-reserve programs. Examples include:

- In Manitoba, the FNSWMI supported the Garden Hill, Wasagamack, and St. Theresa Point First Nations to remove end-of-life vehicles from their communities. This included building the skills of community members, vehicle removal, and the development of partnerships that will enable future shipments of materials out of communities.
- In Saskatchewan, many tonnes of waste such as used tires, vehicles, white metals and hazardous materials have been transported out of communities.
- In British Columbia, one First Nation used a mobile 'eco-depot' trailer to allow communities to have a recycling system in place in a year, rather than having to wait to build a waste transfer station.
- In Ontario, the tribal council United Chiefs and Councils of Mnidoo Mnising hired a waste coordinator to serve its six member First Nations. Among the coordinator's duties are providing education on blue box programs, and recycling of tires, white metals, electronics, and other materials.
- In Alberta, the TSAG has also been supporting First Nations to participate in provincially supported diversion programming. Respondents said that although community participation and diversion have improved, much remains to be done.

However, some diversion projects have not moved ahead, despite being considered priorities by First Nations. In the Atlantic region, studies were completed early in the Initiative in member communities of the Confederacy of Mainland Mi'kmaq (CMM) for the construction of waste diversion centres. But four years later, none had been approved by ISC.

### **6.1.3 Reduction of Contaminated Sites**

In some regions, the FNSWMI has made progress in reducing contaminated sites. However, there has been little post-closure monitoring of closed sites, and other regions have yet to fully address and support the reduction of contaminated sites.

As of April 2019, through the FNSWMI, 32 waste sites were decommissioned, 54 waste sites were assessed for risks to the environment, human health and safety, and six sites were added to the contaminated sites inventory. Progress has varied by region. In Ontario, old landfills have been decommissioned and extensive work undertaken to protect the surrounding lands and waters from contamination. For example, in AOK First Nation in Ontario, waste from a smaller and older landfill was moved to the existing landfill, which was then compacted, graded,

mounded, covered with a clay cap, and vegetated with topsoil and grass. The entire landfill was fenced and gated. By contrast, in Alberta, the regional office informed First Nations that landfill closures were not a priority for the initial phase of FNSWMI and would be addressed in the next round. Some First Nation respondents in Alberta said they had hoped for more control and elimination of older dump sites in this first phase of the Initiative. In Ontario, an Indigenous organization said that some communities where closing of landfills should have been high priorities were left out.

Based upon interview responses, there appear to be gaps in post-closure monitoring when landfills are decommissioned through the FNSWMI. Despite risks to the environment and human health, regular testing of water and soil quality is not conducted consistently. For example, although the funding agreement with AOK First Nation in Ontario specifies that the First Nation should submit annual reports to ISC on water quality from test wells at its decommissioned landfill, community administrators were unaware of this requirement. ISC representatives said that the Initiative funds this type of monitoring only on a one-time basis.

#### **6.1.4 Indirect Outcomes**

Solid waste business opportunities have not been fully taken advantage of, such as the hauling of waste to municipal landfills by First Nations, due to some ISC regional policies. In other cases, there were examples of First Nations companies directly benefiting from solid waste economic opportunities.

Among the expected indirect outcomes of the FNSWMI is sustainable economic development, and the Initiative has contributed to results in this area. For example, the Initiative indirectly supported Four Nations Welding, owned by a member of Samson Cree Nation, which manufactures roll-off bins for multiple First Nations in Alberta. The FNSWMI also supported Kanaskiy Services Ltd., owned by Swan River First Nation and managed by a member of Sucker Creek First Nation. This company produces goods to support recycling. At Little Red River Cree Nation in northern Alberta, the First Nation's own company, Caribou Mountain, won the contract to build a waste transfer station and a landfill. In Millbrook First Nation in Nova Scotia, a project funded under the Initiative paved the way for the locally owned G-Man Waste Removal to win the contract to haul the community's waste by strengthening relationships and credibility.

But economic development and solid waste management are areas where ISC policies and practices vary from region to region, and not always to the advantage of First Nations. An ISC representative said that First Nations in Alberta were able to haul their own waste, unlike First Nations in Ontario. First Nations in Ontario such as AOK First Nation would like to have contracts for hauling their solid waste rather than having to contract with external private haulers for the service. In Saskatchewan, First Nations respondents said they would like to become shareholders in the companies contracted to remove waste bins from communities. They said if there was more flexibility to build local systems staffed by local Indigenous firms, there would be more success and community uptake in waste diversion. A First Nations spokesperson in the Atlantic agreed that modifications to ISC policies are needed to ensure that First Nations have a higher level of involvement and benefit from solid waste management economic opportunities.

Overcoming obstacles that prevent First Nations from being able to provide services such as waste hauling would require adjustments to the capital funding policies of ISC's Capital Facilities and Maintenance Program (CFMP) in regions such as Ontario and the Atlantic. ISC



representatives said that operations and maintenance funding support for MTSAs, whereby a First Nation's solid waste is removed to a municipal landfill, fall under these capital funding rules. They require a First Nation to request bids from third parties to provide services such as waste haulage. The First Nation must select the lowest bidder, which means that an external contractor could underbid an on-reserve contractor. Some communities could use their own economic development corporation to bid on service contracts, but not all First Nations have such corporations.

## 6.2 Sustainability of Achievements

The FNSWMI faces significant risks to the sustainability of its achievements, especially in the absence of an adequate funding formula for operations and maintenance costs, post-project or life cycle monitoring, and the lack of funding for ongoing monitoring of decommissioned landfills.

Representatives from all sectors agree that the major risk to the sustainability of the Initiative's achievements is the inadequacy of the funding formula for operating and maintaining solid waste management systems. Interviewees said that solid waste management is a municipal-type, essential service for First Nations that needs to be funded 100%. An ISC spokesperson said that the current asset-based funding formula "will be the death of everything that FNSWMI has accomplished," that the formula has zero to do with the reality of what it costs to run a solid waste management system, and that there is no way for First Nations to succeed under this regime. A study conducted by an Indigenous technical organization found that most municipalities in Ontario spend \$120,000 per year on average to maintain their solid waste management programs. But ISC, between the Capital Facilities and Maintenance Program and the FNSWMI, provides Ontario First Nations with amounts that are typically less ranging from only \$8,000 to \$25,000 per year in operations and maintenance funding to sustain both diversion programs and a landfill. Operations and maintenance support from the Initiative can be higher in other regions, but is still inadequate, according to many interviewed for the evaluation.

A 2017 study for INAC made this recommendation: "INAC should update funding formulae based on recent reliable solid waste management system cost data as they become available, holistic waste management practices (recycling and composting) and best practice standards."<sup>14</sup> The Auditor General recently made a similar finding with respect to water infrastructure.<sup>15</sup> ISC's inadequate funding formula for operations and maintenance costs is therefore not limited to the waste sector.

Many respondents across all stakeholder groups suggested that First Nations should receive regular funding for solid waste management, including for operations and maintenance, using formulas similar to those used for schools and other infrastructure, based on population or an agreed average cost. Some First Nations and tribal councils are open to considering charging residents user fees, but these would likely cover only a portion of the operations and maintenance costs and their viability would depend on factors such as remoteness, economic health of communities, and household incomes.

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<sup>14</sup> Sonnevera international corp., Kelleher International. 2017. Review of Operations and Maintenance Funding for INAC-Funded Waste-Related Infrastructure and Assets.

<sup>15</sup> Auditor General of Canada. 2021. Report 3: Access to Safe Drinking Water in First Nations Communities—Indigenous Services Canada.

Another risk to sustainability of the Initiative's achievements is the low level of monitoring conducted by ISC staff in regions. Some First Nation representatives in Ontario reported having fewer visits from ISC officers in recent years and limited follow-up by ISC after project completion. In Alberta, a spokesperson from an Indigenous organization said the regional office needs to gather feedback from First Nation waste operators on how well solid waste management is working and how it can be improved. An Indigenous organization representative in Quebec said that while there was good follow-up by the regional office on whether projects were completed and infrastructure built, there was little follow-up to see whether the solid waste management infrastructure was operational and achieving results. According to ISC regional staff, there is no formal mechanism in place to follow up and track the success of supported initiatives beyond the completion of individual projects. This speaks to the absence of a performance measurement system.

As discussed, another important gap identified by ISC regional staff in Ontario is the lack of funding for ongoing monitoring of decommissioned landfills. The current operations and maintenance funding formula can only fund existing landfills or refuse sites. An ISC representative said the FNSWMI cannot fund the monitoring of contaminated sites unless they have been deemed a waste site and are not eligible for funding through the contaminated sites program.

### **6.3 Effectiveness of Relationships**

Most relationships among the various stakeholders are effective. In particular, Indigenous technical organizations and tribal councils have effective relationships with the First Nations they serve. ISC headquarters and regional offices collaborate well in program delivery. Relationships between Indigenous stakeholders and some regional offices could be improved. The role of the National Advisory Committee could be clarified and better use of the expertise of its members could be made. Relationships between First Nations and adjacent municipalities vary widely across the country.

Cases studies and interviews showed that First Nations were well served with support, technical advice, and training from Indigenous technical organizations and tribal councils. The waste coordinators funded in tribal councils had an important role, especially for smaller First Nations with lower capacity. Training and support delivered through organizations such as the Centre for Indigenous Environmental Resources in Manitoba helped many First Nations apply for funding and implement solid waste management projects. Knowledge-sharing was facilitated by annual solid waste forums and conferences held by the Sustainable Development Institute in Quebec and TSAG in Alberta, and through publications such as the *Merganser* newsletter from IZWTAG in BC, which reports on First Nations solid waste programs in the province.

Relationships between ISC headquarters and regional offices were effective in planning the annual distribution of FNSWMI funds to each region and collaborating to deliver the Initiative on the ground. By and large, relationships between ISC regional offices and First Nations have been effective. Where there is dissatisfaction on the part of First Nation stakeholders, it has been related to issues discussed elsewhere in the report, including delays in project approvals, lack of clarity on approval processes and funding decisions, and having to navigate between officers in the Environment Directorate and officers in Community Infrastructure or Capital Funding.

According to an ISC representative, the NAC for the FNSWMI was used to communicate the results of the Initiative, discuss eligibility criteria, and consult about any gaps. The spokesperson said, however, that there was uncertainty about the exact role of the committee. When interviewed, some members of the NAC agreed that the role of the committee was unclear, recounting meetings that included many presentations, but limited opportunity for discussion or to provide technical advice. One said they were informed “after a project had been implemented and they were not asking us for feedback – they were reporting on what had happened and how much money they had spent.” Regional Advisory Committees were established to provide regional information to the NAC. These functioned in some regions. However, an ISC spokesperson said some regional committees were never set up.

An important relationship is that between First Nations and neighbouring municipalities that have landfills and where First Nations would like to establish municipal-type service agreements (MTSAs) to bring their solid waste to the municipal landfill. These relationships have varied in effectiveness across the country. Numerous First Nations have established good relationships and negotiated MTSAs for solid waste, for example between the community of Kitcisakik and the regional municipality in Vallée de l’Or in Quebec. However, in other regions some municipalities are less open to collaboration on solid waste management. In some cases, municipal representatives have exhibited openly racist attitudes and behaviours, according to an ISC respondent.

In Manitoba, where the province is moving to regional waste disposal sites, considerable effort was expended during the first phase of the FNSWMI to increase First Nations’ access to these sites. But no new MTSAs were established between First Nations and municipalities. Many Ontario municipalities have been reluctant to enter MTSAs, owing to the province’s long process for approval of new landfills and the concern on the part of municipalities of running out of space for their own solid waste. ISC regional office staff are closely involved in supporting First Nations in negotiations for MTSAs.

There are mixed views on how much emphasis the FNSWMI should place on developing MTSAs. According to a subject matter expert, the agreements are key to overall improvements in solid waste management for First Nations and that collaboration with neighboring municipalities can be a component of reconciliation. However, an Indigenous organization expressed the view that the Initiative places too much emphasis on MTSAs, transfer stations, and working with municipalities and not enough emphasis on supporting First Nations to pursue innovative approaches to recycling and waste diversion.

## **6.4 Management Effectiveness**

ISC has delivered funding to support solid waste management projects across all regions. However, improvements are required in best aligning investments with community assets and needs, implementing GBA Plus, performance measurement, streamlining funding processes, and internal coordination between the sectors involved in implementing this program.

### **6.4.1 Effective Aspects of FNSWMI Implementation**

As discussed in section 5.2 (Reach of the Initiative), managers at ISC headquarters and in regional offices were effective in creating awareness of the FNSWMI. Hundreds of First Nation communities have applied for and received funding, and other FNSWMI funding has been

directed to tribal councils and Indigenous technical organizations acting in support roles for First Nations. Regional offices created a prioritization plan of contaminated sites each year using the national classification system for contaminated sites. The Initiative also created a priority ranking tool for two types of major capital project proposals, i.e., new construction of landfills and transfer stations; and upgrades of existing landfills and transfer stations.

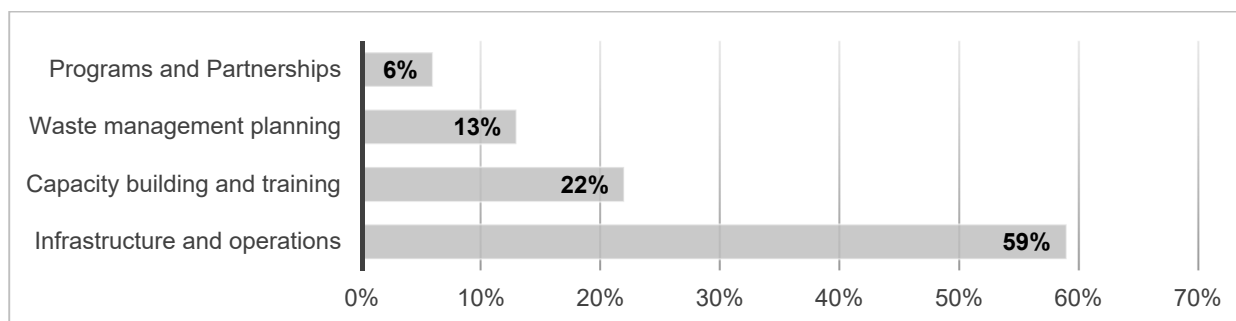
By and large, regional delivery of the Initiative has worked well since regional offices have direct connections to the First Nations and Indigenous organizations in their regions. Regional offices had the flexibility to respond to the differing needs of individual First Nations as they arose – from closing dumpsites in Ontario to funding the demolition of the remaining buildings from a residential school in Yukon. Representatives from Indigenous organizations in Quebec, Manitoba and BC praised the FNSWMI’s flexibility. A spokesperson for one organization said the Initiative allowed for changes to accommodate unforeseen events, facilitated program access and accountability. A representative of another organization praised how the funding could be moved around between different categories.

Using the Integrated Capital Management System and the Environmental Management Branch project database, Initiative managers track solid waste management spending in each First Nation or organization and many other variables. As of September 2020, \$320.5 million of \$408.9 million in confirmed funds had been invested through the FNSWMI to support 955 projects. According to program managers, the remaining \$88.4 million was on track to be spent by March 31, 2021, the end date of the Initiative’s first five years.

ISC Evaluation analyzed administrative data as of April 30, 2020 to determine the distribution of investments among different types of projects. Using data received from ISC HQ Environment showing 16 different project categories, the evaluation team coded the projects and categorized them using the four project types: capacity building and training, infrastructure and operations, programs and partnerships, and waste management planning (fuller descriptions of the four project types are found in Appendix 2).

As shown in Figure 1, almost 60% of projects were in infrastructure and operations. The next largest percentage were in capacity building and training, the majority (57%) of which took place in Quebec. Thirteen percent of projects were in waste management planning, and only 6% of projects were in programs and partnerships. In both of these latter categories, Ontario region carried out more such projects in waste management planning and programs and partnerships than any other region.

**Figure 1: FNSWMI Projects by Type, 2016-2020**



Source: FNSWMI administrative data

## 6.4.2 Challenges to Management Effectiveness

There were reoccurring issues that impeded FNSWMI from meeting its ultimate outcomes: lack of comprehensive needs assessment, and lack of GBA Plus integration, complex proposal submission process, and funding delays in part caused by disconnections between sectors. Some of the factors that contributed towards these issues were a lack of: uniform standards, policies, and approaches across all regions, a working logic model, and integration of the Environmental public health officers.

### Needs assessment

Each region took a different approach to assessing solid waste management needs in First Nations and determining where investments would be directed. The ISC BC region based its funding decisions on First Nations' priorities and needs, as well as provincial enforcement orders with the goal of creating functioning, locally-driven solid waste management systems that included infrastructure, human resources and governance. In Quebec, the regional office used a 2016 profile of solid waste management conditions in First Nations prepared by the First Nations of Quebec and Labrador Sustainable Development Institute to guide funding decisions. In Alberta, the regional office conducted a province-wide needs assessment and developed its own ranking system that gave more points to First Nations with the highest needs.

While assessing needs at the regional level was a necessary step, a national comprehensive needs assessment based on community waste profiles and featuring community engagement was never completed. The department would now benefit from arriving at standard national criteria to determine greatest need in order to prioritize investments within and among regions. Completing the inventory of community waste profiles and combining this with risk-based criteria would allow managers to compare, for example, the needs of remote communities with potentially hazardous landfills to other communities where investments may be less urgent. ISC staff and subject matter experts agreed that in a renewed FNSWMI, a more systematic approach is required to prioritize the communities with highest needs. An assessment methodology could be co-developed with Indigenous organizations.

### Absence of standard procedures and policies

While the absence of standard procedures and policies gave regional offices latitude in making decisions, it also produced regional differences in how needs were assessed, and funding allocated. For instance, funding for operations and maintenance costs was allocated differently by region (although universally said to be inadequate). Some regions funded closure of old landfills, whereas others did not. In some regions, First Nation spokespersons expressed dissatisfaction with what they described as a lack of clarity and transparency around the allocation of funding.

### Obstacles in the funding process

Although representatives from First Nations and Indigenous technical organizations agreed that applying for funding for infrastructure projects was appropriate, they also considered the application process too complex, requiring unnecessary steps, and taking too long for approvals. They said the proposal process places a heavy burden on smaller communities with limited staff and those not affiliated with a tribal council. A tribal council representative noted that infrastructure projects were more difficult to set up than planning or education projects. This person said "For some projects I would be bounced between multiple people and it took months to get something started and to secure funding, even for the smallest of projects." A spokesperson from a technical organization said there are too many hoops for First Nation communities to be able to navigate the process. This person suggested a simplified process to

allow, for instance, a First Nation to combine in one application a feasibility study and a solid waste management plan since they are similar.

A factor that complicates and lengthens the application process is that First Nations and Indigenous organizations must deal with officers from different directorates or branches. Within ISC, the Environment Directorate and the Community Infrastructure sector report to different assistant deputy ministers and have different priorities and work plans. The funding for a solid waste management project may come from a different branch than the one deciding on approvals.

Respondents said that disconnects between different ISC sectors have led to long delays in infrastructure approvals. An ISC regional respondent said delays in receiving funding can oblige a First Nation to cash manage its projects, putting them in difficulty if they must draw bridging funds from their general budget. Managers in the ISC headquarters environment directorate are aware of these issues and are open to examining internal relationships. They say their objective is to be able to provide a single-window service for the FNSWMI so that applicants are not obliged to deal with multiple ISC officers. One ISC respondent would like to see better coordination between Lands and Economic Development and Community Infrastructure sectors to eliminate the complications experienced in securing project funding. ISC's Quebec region moved the environment team under the Community Infrastructure sector. In this structure, the environment team continues to manage FNSWMI for the region, while creating a new bond between the environment team and engineers in the Community Infrastructure sector. The two groups now work under the same director.

#### **Lack of performance measurement**

A logic model was developed for the FNSWMI about three years into implementation, but the subsequent step of developing a performance measurement system with indicators to measure progress toward results was never undertaken. Reporting done by Initiative managers in the Environmental Management Branch is based on administrative data and essentially tracks inputs and outputs. The Initiative collects financial and project-level data on every element that is needed to report on Treasury Board targets, and it reports quarterly on every project in progress. The absence of a performance measurement system means there is no baseline for the state of solid waste management systems in First Nation communities. While managers can see how money was invested, the Initiative is unable to tell the full story of what those investments have achieved by way of improved solid waste management. There is a need for ISC to be able to accurately describe the state of solid waste management in First Nations across Canada as well as the results of projects (for example, the number of tons of garbage diverted from First Nations landfills). A performance measurement system would provide an opportunity to complete, and regularly update, community waste profiles as part of renewed program funding.

#### **Lack of GBA Plus analysis**

As discussed in section 5.4, ISC did not conduct GBA Plus analysis of the FNSWMI. It is important for the Initiative to use this analytical tool in future programming and to encourage Indigenous partners and communities to use GBA Plus checklists and tools in their projects.

#### **Role of FNIHB environmental health officers**

Environmental public health officers (EPHOs) from the First Nations and Inuit Health Branch of ISC play a role in the FNSWMI. They inspect solid waste facilities in First Nations communities, including transfer stations, engineered and non-engineered landfills, and provide guidance to chief and council and facility operators on how to address potential risks to public health.

Inspecting solid waste facilities is just one of eight service delivery lines in the mandate of EPHOs. ISC interviewees said that owing to time and human resource shortfalls, solid waste falls lower on the priorities of EPHOs than other responsibilities such as inspecting water and wastewater facilities, food facilities and restaurants, schools and daycares, and disease control. Moreover, some ISC respondents said that even before the COVID-19 pandemic, the normal complement of over 100 EPHOs was short by 54 officers. They said data from FNIHB indicates that about half of solid waste facilities were inspected in 2017-2018.

EPHOs are often unaware of which solid waste management projects are going to be funded, although this varies by region. In Alberta EPHOs are part of the funding and decision-making process. However, in other regions, such as Manitoba, EPHOs do not see FNSWMI proposals or the projects being funded. A FNIHB spokesperson said that Lands and Economic Development regional staff need to be encouraged to consult with regional environmental public health managers.

## 6.5 Regulatory Framework

Gaps in federal regulations, including a lack of clarity, practises, approval permits, and enforcement authority, continue to be obstacles to improving solid waste management in First Nations. Further work is required by ISC in collaboration with Environment and Climate Change Canada to update and revise regulations.

In 2009, the Auditor General of Canada reported that "... while regulations under the *Indian Act* require a permit issued by INAC to operate a landfill site or burn waste on reserve lands, the Department has issued few permits and is not equipped to conduct inspections, monitor compliance, and enforce the regulations. Consequently, garbage is often not confined to licensed landfill sites and there is no monitoring of the impacts on drinking water sources and air quality."<sup>16</sup> The findings from this evaluation show that conditions in 2021 are largely unchanged from over a decade ago.

Most case studies conducted for the evaluation showed the absence of adequate federal regulation for the management of solid waste on reserve has resulted in illegal dumping in many First Nations. Even in First Nations that have put in place their own bylaws to curb illegal dumping, enforcement can be difficult and expensive. Representatives from the ISC Ontario regional office said that while First Nations are implementing their own bylaws to deal with solid waste pollution on reserve, they have no means to charge delinquent third parties, monitor and enforce bylaws. One First Nation discovered that the maximum fine that could be levied under the *Indian Act* for illegal dumping was \$100.

Lack of regulations also means there is no clear standard for the construction of new infrastructure on reserve under the FNSWMI. A respondent from the Alberta regional office said it usually applies the provincial regulations, but only when funding permits. For its 2009 report, the Auditor General found that about 200 First Nations in British Columbia, Saskatchewan, and Ontario should have been issued permits by INAC for landfills but were not. The Auditor General found that only 14 permits had been issued (all in Saskatchewan) under the *Indian Reserve Waste Disposal Regulations*.<sup>17</sup> This evaluation found that this situation persists: ISC

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<sup>16</sup> Auditor General of Canada. 2009. Fall Report: Chapter 6 – Land Management and Environmental Protection on Reserves.

<sup>17</sup> Auditor General of Canada. 2009. Fall Report: Chapter 6 – Land Management and Environmental Protection on Reserves

regional offices generally do not issue permits and the Saskatchewan region is still the sole region to use permits and contractual obligations to regulate solid waste on reserves. A representative from that office said there is potential to make greater use of the department's regulatory controls in other regions.

In some cases, ISC regional offices have approved the siting of solid waste management facilities such as landfills off-reserve, where provincial regulations apply. In northern BC, the Yukon regional office supported this option to build a transfer station serving a First Nation. This approach has also been used in Saskatchewan. When First Nation solid waste facilities are non-compliant on provincial crown land in Saskatchewan, the province seeks first to point out violations, but may resort to enforcement action such as cancelling the permit to operate, or summary offence charges. The province does not remedy non-compliance with education or training.

The *First Nations Land Management Act* (FNLMA) allows for signatory First Nations (of which there are over 150) to create and enact their own land codes through which they can develop solid waste management regulations. However, designing and implementing a FNLMA regime requires significant funding, dedicated resources, technical knowledge and training.

ISC has been working with Environment and Climate Change Canada to develop an approach to close the environmental protection regulatory gap. In 2020-2021, the Initiative allocated \$1M for work in this area, including support for Indigenous organizations to begin discussions on the environmental regulatory gap and develop potential solutions.

## 7. Findings: Efficiency

### 7.1 Funding Model

The current proposal-based model used by the FNSWMI is appropriate for major capital components of the FNSWMI, but other components would be better served with more stable, longer-term funding mechanisms such as a 10-year grant or core funding.

There was a consensus among those interviewed for this evaluation that the proposal-based model for project applications is appropriate and has worked well for major infrastructure and capital spending such as landfill decommissioning, building new facilities such as waste transfer stations, and purchasing costly equipment such as garbage trucks. However, delivery of the proposal-based model can be improved, according to many. Some ISC regions expressed concerns with the lateness of annual allocation of regional funding envelopes for infrastructure. A solution could be to spread infrastructure funding to First Nations over more than one year to allow sensible timelines for larger, multi-phase projects.

For other components of solid waste management, most Indigenous organizations and many ISC staff consider 10-year grants or core funding to be more appropriate. In this view, these components should be assumed to be ongoing, regular aspects of solid waste management and should not require repeated proposals. They include operations and maintenance costs, planning, capacity development, and community engagement and education. A spokesperson for an Indigenous technical organization said that core funding or a longer-term grant would be



a better way of funding the program to allow communities to invest in exactly what they need, when they need it. An ISC representative said that this approach would allow First Nations to build capacity and self-reliance. With longer-term, stable funding, more First Nations or tribal councils could hire a solid waste coordinator, who would provide program continuity despite frequent leadership changes in communities. A tribal council respondent said that longer-term funding would allow their organization to hire a solid waste coordinator who would be proactive in developing projects and education plans, and in examining opportunities for First Nations to save or make money. ISC is moving toward more block funding and 10-year agreements, and this approach should continue to be pursued for First Nations that qualify for longer-term funding arrangements.

## 8. Findings: Other Issues

### 8.1 Service Transfer

Although service transfer for solid waste management is a departmental priority objective and was part of the design of the FNSWMI, only small steps have been taken towards this planned direction. There is further work to be done in creating the necessary enabling conditions.

In 2016, the foundational document for the FNSWMI foresaw a gradual approach to devolution (or service transfer) whereby First Nations would assume full care and control of delivery of infrastructure within three to ten years. The foundational document notes that the Initiative's ultimate goal is to support First Nation self-determination by transferring solid waste management from government to First Nations. In this approach, funding in the first three years would allow critical needs to be addressed while also co-developing reform options with First Nations, to be implemented through years four to ten. Solid waste management assets would first need to be brought up to an acceptable standard, requiring significant investment over the ten years, well beyond the existing targeted funding.

To advance the goal of service transfer, the program needs to support the following conditions: (1) develop and implement First Nation-led hubs, institutions, authorities and other aggregations, (2) remove of barriers to financing, (3) guarantee support of operations and maintenance and minor capital assets, and (4) incentives for the use of service agreements where possible. The foundational document anticipated that the Initiative would require significant human resources within the department in its early years – almost 14 full-time equivalents (FTEs) per year for three years – so that resources match increased investments and complexity of projects. In this scenario, as First Nation communities and organizations increased their capacity, federal FTEs would move into First Nation organizations, reducing the overall departmental need for operations and maintenance funding, and increasing the need for grants and contributions.

In the 2019-2020 departmental plan, ISC states that among its planned results is that Indigenous people control the design, delivery and management of services.<sup>18</sup> In the plan, ISC commits to supporting Indigenous communities and organizations to exercise jurisdiction in the design, delivery and management of services, noting that this result is aligned with the United

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<sup>18</sup> ISC. 2019. Departmental Plan 2019-20.

Nations Declaration of the Rights of Indigenous Peoples and the Truth and Reconciliation Commission's Calls to Action.<sup>19</sup>

Overall, few ISC representatives had much to say when asked about service transfer. One ISC respondent acknowledged that all departmental programs should be developing a plan to transfer program delivery to Indigenous partners, but noted that implementing a credible plan for devolution requires time and consultation with partners. In 2019, a FNSWMI presentation stated that the Initiative was exploring new funding models to transfer regional office functions to First Nation organizations and considering new institutional approaches such as regional First Nations waste management authorities.<sup>20</sup> In the first phase of the FNSWMI, ISC devolved the responsibility for the delivery of education and waste diversion programming to CMM for eight First Nations in the Atlantic Region and to the First Nations Land Management Resource Centre, which has coordinated over 40 solid waste projects in regions across Canada. While CMM has demonstrated success in the Atlantic region, it would need stronger capacity to manage and deliver infrastructure projects, including engineering capacity for approving plans and inspecting infrastructure.

First Nations and Indigenous technical organizations had varied reactions to the prospect of service transfer. Some respondents expressed caution, since they have seen past instances of devolution where services were downloaded without adequate resources. Other representatives among First Nations and Indigenous technical organizations want more action on this front. The representative of a national Indigenous organization said that investments in new ISC staffing within Lands and Economic Development at the beginning of the Initiative should have gone to strengthening regional Indigenous organizations to build capacity as a natural step toward devolution. All Indigenous respondents said that for service transfer to happen, there is significant work to be accomplished by the department to create the necessary enabling conditions. These include:

- **Sustainable and reliable funding:** Indigenous organizations in several regions said effective service transfer requires sustainable, predictable and reliable funding.
- **Strengthened delivery capacity of Indigenous technical organizations and tribal councils:** Many Indigenous technical organizations and tribal councils have suffered funding cuts in recent years and need to regain technical capacity, and specifically in solid waste management.
- **Clarity about FNSWMI administration:** Representatives of technical organizations said they want to understand more clearly how the FNSWMI is administered, its internal processes and how funding decisions are made as a first step in assuming solid waste management responsibilities.
- **Development of an enabling policy and regulatory environment:** There are several jurisdictional and policy issues to address that stand in the way of service transfer. These include provisions of the *Indian Act* as well as the First Nations Land Management Regime and self-government agreements. ISC respondents say that the FNSWMI has limited control over some aspects of the program owing to its use of funding authorities from other programs. For instance, it cannot make decisions on service delivery related to funding

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<sup>19</sup> Ibid.

<sup>20</sup> First Nations Solid Waste Management Initiative - FNSWMI 101, Lands and Economic Development Sector, April 24, 2019. PowerPoint presentation.

spent through the infrastructure process since that authority resides with the Capital Funding Management Program.

## 8.2 Best Practices

Lessons and promising practices emerged from implementation of the FNSWMI and from the literature that are worth considering for continuing or wider application in the next phase of the Initiative.

**Community-based planning can be inclusive and effective for identifying solid waste management needs and solutions:** Based on nearly a decade of work on solid waste management in collaboration with First Nations, the BC regional office developed a promising practice that fits with the department's Indigenous Community Development National Strategy.<sup>21</sup> It based its funding decisions on First Nations priorities and needs, as well as provincial enforcement orders with the goal of creating functioning, locally driven solid waste management systems that included infrastructure, human resources and governance. A team comprised of ISC staff, a community planner and an engineer worked in collaboration with Community-based Solid Waste Management Working Groups on project implementation. In this model, the planning process went beyond consultation and emphasized the engagement of stakeholder groups at the community level in First Nations.

**Success in solid waste management is tied to good communication and ongoing education for First Nation community members:** According to one ISC respondent, the need for better communication and promotion inside communities was a recurring theme at NAC meetings. In communities where education, toolkits, and training were provided and there was good communication, there seem to have been more successful programs. Examples of this type of effort come from the Sustainable Development Institute in Quebec, which has produced videos and an activities book for children on solid waste, recycling, composting and related topics. Based on ecological and scientific knowledge, and highlighting six Indigenous languages, the book and complementary materials are educational tools for Indigenous students to learn about their languages, as well as science and technology.

**Ongoing training and capacity development in First Nations are essential:** Training and capacity development are essential for managers and operators of solid waste management systems in First Nation communities. Capacity development involves strengthening First Nations and Indigenous organizations, which may include, but go well beyond, training. Both components need to be ongoing to embed good solid waste management practices within public works departments of First Nations and overcome high turnover among waste system operators. Promising practices have been implemented in BC by the Indigenous Zero Waste Technical Advisory Group, which has developed training for operators, technical manuals, and a circuit rider program, all of which are critical supports for small communities.

**Indigenous technical organizations and tribal councils can play a major role, including acting as centres of excellence:** Enlisting the services of Indigenous technical organizations as well as tribal councils in the FNSWMI has proven to be a promising practice. They bring technical expertise in solid waste management, collaborative approaches, act as an interface between First Nations and ISC, and stimulate community engagement. Indigenous technical organizations are essential to sharing knowledge and technical expertise among First Nations

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<sup>21</sup> Indigenous Community Development National Strategy. <https://www.sac-isc.gc.ca/eng/1550512330682/1550512404487> (Accessed April 28, 2021).

within regions. Currently, the Sustainable Development Institute in Quebec acts as a centre of excellence in solid waste management. The Sustainable Development Institute has developed a comprehensive regional portrait of solid waste management in First Nations in Quebec, created webinars and toolkits on solid waste management practices, and organizes an annual symposium on solid waste management.

**Appropriate local solutions do not always need to be high-tech:** Appropriate and innovative solutions can be low-tech. For example, in BC, mobile 'eco-depots' provide an all-in-one operation for the collection, sorting, and storage of recyclables in at least eight communities in the Hazelton region. The mobile eco-depot combines roadside collection and sorting of recyclables with movable storage and hauling of materials in a cube van outfitted with large bags and containers. Household recyclables are taken weekly, and large bulky items are taken monthly to a regional depot.<sup>22</sup> The literature supports this lesson: "Technology is not a panacea, however, and is usually only one factor to consider when managing solid waste. Locally appropriate solutions must be selected and the best technology is often not the newest or most advanced."<sup>23</sup>

**Partnerships for solid waste management can contribute to reconciliation:** Strong partnerships and relationships with municipalities and provincial bodies can be part of reconciliation efforts, and can help overcome prejudicial attitudes on the part of municipal or provincial staff toward First Nations communities. Through work with the provincial stewardship organization Divert Nova Scotia, CMM assisted with the development of educational materials that are inclusive of Mi'kmaq worldviews for schools across the province. People involved in the waste management projects in Millbrook First Nation said they have received support from municipal authorities who have attended community workshops and worked with the First Nation when it struggled to comply with waste diversion regulations.

**The costs of delaying action on solid waste management are greater in the long run:** This lesson comes from a comprehensive study by the World Bank.<sup>24</sup> "Uncollected waste and poorly disposed waste have significant health and environmental impacts. The cost of addressing these impacts is many times higher than the cost of developing and operating simple, adequate waste management systems." The study cites research in Southeast Asia that estimated the economic cost of uncollected household waste that is burned, dumped, or discharged to waterways to be US\$375/tonne. "For the same region, the World Bank estimated the integrated waste management costs for basic systems meeting good international hygienic standards to be US\$50–US\$100/tonne." In other words, it is about four to eight times cheaper to act decisively on proper solid waste management.

## 9. Conclusions and Recommendations

### 9.1 Conclusions

The FNSWMI is a major step forward in responding to longstanding needs in First Nations communities for dedicated funding in support of adequate solid waste management. However, significant gaps remain in responding to First Nations' needs, particularly for ongoing and adequate funding for the operations and maintenance of solid waste management systems.

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<sup>22</sup> Boate, Nolan and Chu, Emily. 2019. Mobile Eco-Depots Adopted in Northern B.C. *The Merganser*. Fall.

<sup>23</sup> World Bank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.

<sup>24</sup> World Bank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050.

Most First Nations received either direct or indirect funding through this Initiative, and the funding was broadly dispersed among both remote communities and those close to urban centres. Those First Nations that are closer to urban centres and supported by a tribal council are slightly more likely to receive funding. There are perceptions and real concerns that remote First Nations are struggling to access funding, to draft proposals and with poor internet connectivity. While there are areas that need improvement, the program has had some successes in promoting the program and partnering with Indigenous organizations to achieve results across regions. As such, the program needs to continue its successful outreach practises and redouble efforts to reach First Nations that are less likely to receive funding or who have struggled with their solid waste systems.

FNSWMI did support some First Nations by increasing technical expertise and capacity, upgrading infrastructure, reducing contaminated sites, increasing the awareness and education level of solid waste management in First Nations, increasing community access to diversion programs, and reducing the amount of solid waste in First Nations.

However, the performance data gaps prevented the evaluation from telling the full story and scale of impact of this program, including data on and integration of GBA Plus. FNSWMI's implementation was impeded by a few aspects, most notably: operations and maintenance funding formula is inadequate and funding needs to be stabilized. In some instances, a lack of emphasis on awareness and education to enhance engagement and First Nation staff training, which will help change community solid waste practices. There has been little post-closure landfill monitoring, despite risks to the environment and human health, regular testing of water and soil quality is not conducted consistently. In other cases, when an indigenous partners were attempting to access the program, they found it had a complex proposal submission process and were confronted with funding delays. Respondents suggested that proposal issues were, in part, caused by disconnects in coordination and communication between the Lands and Economic Develop and the Community Infrastructure sectors.

Additionally, the evaluation found that some solid waste business opportunities have not been fully taken advantage of, such as hauling their waste to municipal landfills, by First Nations due to some ISC regional policies. In instances where indigenous partners are operationalizing their solid waste management system there has been a lack clarity and practices around approval permits and enforcement authority in federal regulations solid waste, which has led to some waste sites to be degraded over time. And, there was little post-closure monitoring of landfill sites to help maintain First Nation's facilities.

While the proposal-based model is widely considered to be appropriate for major capital components of the FNSWMI, other components would be better served with more stable, longer-term funding mechanisms such as a 10-year grant or core funding.

Although the transfer of control of services to Indigenous partners is one of ISC's strategic priorities and it was an intended goal in the original conception of the FNSMWI, only small steps toward service transfer have been taken. In order for full service transfer to occur, the following enabling conditions need to be present: sustainable and reliable funding; strengthened delivery capacity of Indigenous Technical Organizations and Tribal Councils; clarified program administration; and an enabled policy and regulatory environment.

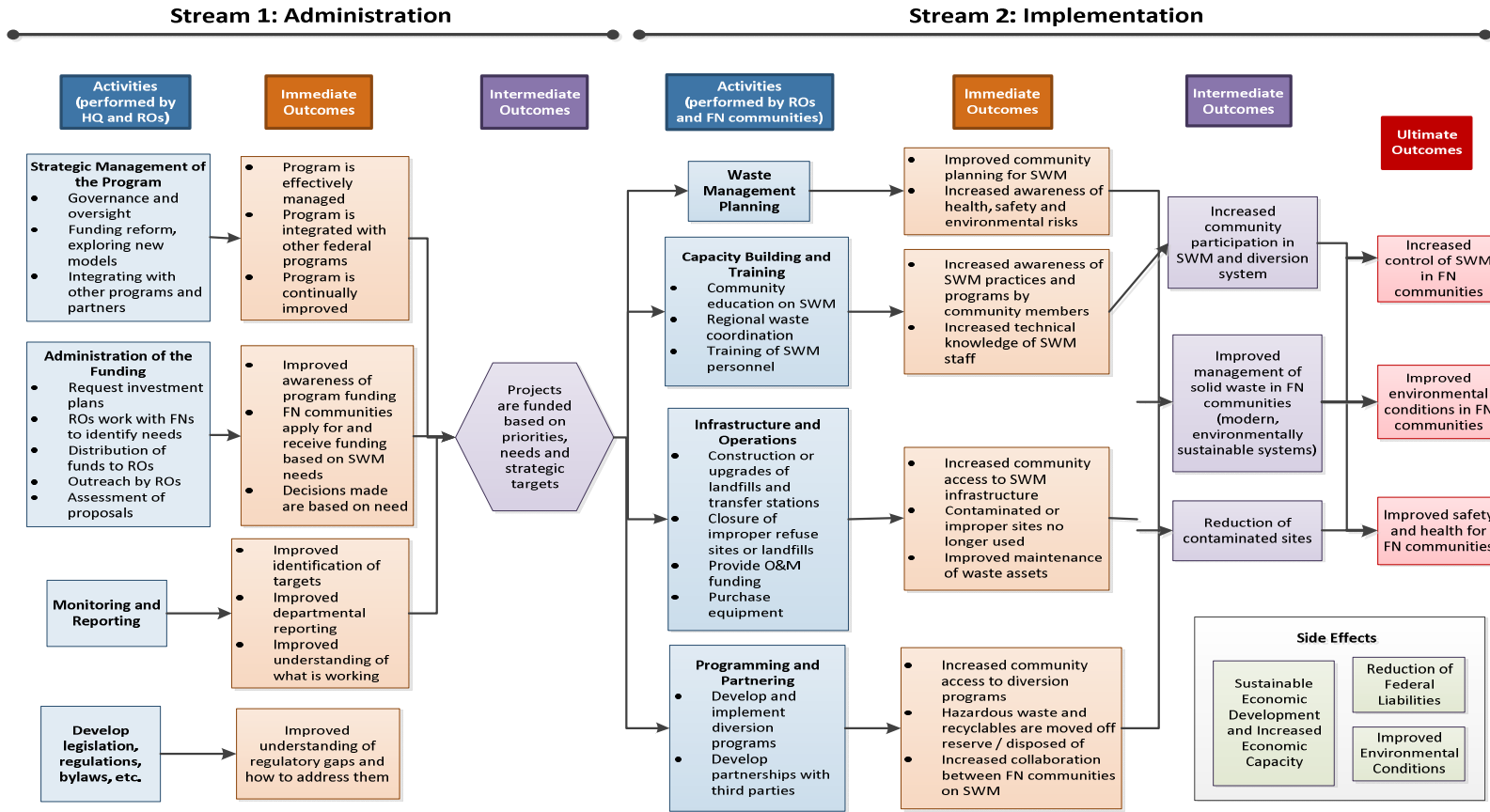
## 9.2 Recommendations

Based on the evidence presented and the above conclusions, the evaluators recommend that:

ISC adopt an approach to improving solid waste management systems in First Nations that considers the full lifecycle of solid waste management and incorporates the broader social, cultural, and economic context of each First Nation. Under such an approach, ISC should:

1. Allocate sufficient, reliable, long-term funding for the FNSWMI. The funding should provide adequate financial support to First Nations for the ongoing costs of operating and maintaining solid waste management systems.
2. Strengthen delivery of FNSWMI through the following:
  - a. Examine and implement methods that will enhance community-led planning practices, decision-making practices, incentivise knowledge transfer from consultants to First Nations, and boost the funding directed to capacity building, engagement, and training.
  - b. Strengthen coordination between Lands and Economic Development sector and Community Infrastructure sector to better serve First Nations by simplifying and streamlining the approval and delivery process for solid waste management infrastructure projects;
  - c. Apply GBA Plus to solid waste projects, program design and delivery; and
  - d. Develop and implement a performance measurement system to monitor progress toward the program's outcomes, which should include the enhanced monitoring of solid waste management investments.
3. Assess and revise the National and Regional contracting and procurement policies to encourage and support First Nations, First Nation-owned companies, and Indigenous organizations to deliver their own service.
4. Continue working with Environment and Climate Change Canada, Indigenous stakeholders, and provinces to plan, develop, or modify regulations to support effective solid waste management in First Nations.
5. In keeping with the Department's commitment to support Indigenous communities and organizations to exercise jurisdiction in the design, delivery, and management of services, work with First Nation partners to chart a path toward sustainable service transfer of solid waste management responsibilities.

# Appendix 1: Logic Model for the First Nations Solid Waste Management Initiative



Source: ISC. 2019. Evaluation of the First Nations Solid Waste Management Initiative, Final Terms of Reference. December.

## Appendix 2: FNSWMI Eligible Funding Components

Category	Example Activities
Planning	<ul style="list-style-type: none"> <li>• Land use and waste management plans</li> <li>• Feasibility studies and design studies</li> <li>• Environmental site assessments and investigations (e.g., groundwater)</li> <li>• Waste site operation plans</li> <li>• Waste site closure and monitoring plans</li> </ul>
Capacity and Training	<ul style="list-style-type: none"> <li>• Training of waste management operators</li> <li>• Training of waste site operators</li> <li>• Regional waste coordination (for example, to coordinate recycling programs)</li> <li>• Promotion of the development and use of First Nations-led tools and resources</li> <li>• General community waste education and awareness, including materials development and outreach</li> <li>• In-school programming</li> </ul>
Programs and Partnerships	<ul style="list-style-type: none"> <li>• Facilitation of municipal type service agreements</li> <li>• Diversion programming development and implementation (recycling, organic composting, hazardous waste)</li> <li>• Seed funding for innovative partnerships and programs with First Nations organizations, industry associations and other key partners</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>• Construction or upgrade of existing landfill sites and transfer stations</li> <li>• Decommissioning / remediation of refuse sites and legacy landfills; post-closure monitoring</li> <li>• Operations and maintenance funding for newly constructed or upgraded sites, including salaries for landfill and transfer station operators</li> <li>• Equipment</li> </ul>

Source: ISC. 2019. Evaluation of the First Nations Solid Waste Management Initiative. Final Terms of Reference, December 3



### Appendix 3: Evaluation Design Matrix

Issues / Questions	Indicators	Data Collection Methods
<b>Relevance (Need)</b>		
<b>To what extent does the program continue to address a demonstrable need or priority and is responsive to its target group?</b>		
<p>1. To what extent is the First Nations Solid Waste Management Initiative responsive to the needs of First Nations in terms of the design, delivery model and the activities supported?</p> <p>a. To what extent have gender equality and the needs of diverse segments of the population been considered in program design/delivery (e.g. mothers in households)?</p> <p>b. Is ISC using strategies to help First Nations communities with administrative challenges access the program and develop successful applications? Are remote communities sufficiently engaged? Can Indigenous technical organizations play a role in supporting applications?</p>	<ul style="list-style-type: none"> <li>• Evidence from foundational documents, policy on the program and published literature and studies on solid waste management (SWM) on First Nations reserves in Canada and other jurisdictions</li> <li>• Statistics on SWM systems or other data on environmental and health conditions in First Nations communities</li> <li>• Opinions of program managers (both at HQ and Regional) and stakeholders involved in design</li> <li>• Perspectives of individuals from First Nations communities involved in delivering the Initiative</li> <li>• Evidence that the Initiative is responsive to the needs of diverse groups within First Nations (e.g. gender, culture, language)</li> <li>• Differences in progress towards outcomes for different groups (by: gender/sex, language, culture)</li> <li>• Sex disaggregated data in Initiative performance monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Literature review</li> <li>• Document review</li> <li>• Administrative data review</li> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>
<p>2. Does the Initiative have a program theory that can reasonably be expected to achieve the desired results?</p>	<ul style="list-style-type: none"> <li>• Evidence from foundational documents, policy, logic models, etc. on the programs.</li> <li>• Evidence from literature, studies on SWM on First Nations reserves and what works, best practices, etc.</li> <li>• Views of program managers, subject matter experts</li> </ul>	<ul style="list-style-type: none"> <li>• Literature review</li> <li>• Document review</li> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>

Issues / Questions	Indicators	Data Collection Methods
<b>Performance (Results)</b>		
<b>To what extent is progress being made toward achievement of expected outcomes?</b>		
<p>3. To what extent is the First Nations Solid Waste Management Initiative being effectively managed by ISC?</p> <p><b>Immediate outcomes</b></p> <ol style="list-style-type: none"> <li>Program is effectively managed</li> <li>Program is integrated with other federal programs</li> <li>Program is continually improved</li> <li>Improved awareness of program funding</li> <li>FN communities apply for and receive funding based on SWM needs</li> <li>Decisions made are based on need</li> <li>Improved identification of targets</li> <li>Improved departmental reporting</li> <li>Improved understanding of what is working</li> <li>Improved understanding of regulatory gaps and how to address them</li> </ol> <p><b>Intermediate outcome</b></p> <ol style="list-style-type: none"> <li>Projects are funded based on priorities, needs, and strategic targets</li> </ol>	<ul style="list-style-type: none"> <li>Perspectives of program managers at ISC and other departments on effective management of Initiative and integration with other federal programs</li> <li>Perspectives of all eligible funding recipients regarding improved awareness of program funding</li> <li>Evidence from program documents (decisions, use of Priority Ranking Framework, community profiles, statistics on the state of SWM and environmental / health conditions on First Nations reserves) that decisions are based on need</li> <li>Documentary evidence of analysis of regulatory gaps</li> <li>Initiative performance reports and opinions of program managers (HQ/Regional) regarding performance measurement</li> <li>Perspectives of First Nations organizations and technical experts in environment, health and/or SWM</li> </ul>	<ul style="list-style-type: none"> <li>Document review</li> <li>Administrative data review</li> <li>Key informant interviews</li> <li>Case studies</li> </ul>
<p>4. To what extent is the Initiative achieving results?</p> <p><b>Immediate outcomes</b></p> <ol style="list-style-type: none"> <li>Improved community planning for SWM</li> <li>increased awareness of health, safety and environmental risks</li> <li>Increased awareness of SWM practices and programs by community members and knowledge of SWM by staff</li> <li>Increased community access to SWM infrastructure, contaminated sites no longer used and improved maintenance of waste assets</li> <li>Increased community access to diversion programs, hazardous waste and recyclables moved properly disposed of</li> <li>Increased collaboration between FN communities on SWM</li> </ol>	<p><b>For immediate outcomes</b></p> <ul style="list-style-type: none"> <li>Perspectives from Regional ISC staff, individuals responsible for project delivery and leaders in First Nations communities and partner organizations delivering services for funded projects</li> <li>Review of community plans (for inclusion of SWM plans)</li> <li>Perspective from community members regarding changes in their awareness of health, safety and environment risks</li> <li>Perspectives from community members regarding changes in their SWM practices and regarding their access to diversion programs and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>Document review</li> <li>Administrative data review</li> <li>Key informant interviews</li> <li>Case studies</li> </ul>

Issues / Questions	Indicators	Data Collection Methods
<p><b>Intermediate outcomes</b></p> <p>g. Increased community participation in SWM and diversion system</p> <p>h. Improved management of solid waste in FN communities (modern, environmentally sustainable systems.)</p> <p>i. Reduction of contaminated sites</p>	<ul style="list-style-type: none"> <li>• Perspectives of technical staff and project management regarding increased technical knowledge from training</li> <li>• Site visits or reports on closure of contaminated or improper sites</li> <li>• Perspectives of SWM personnel and other evidence regarding maintenance of waste assets</li> <li>• Perspectives of MTSA partners</li> </ul> <p><b>For intermediate outcomes</b></p> <ul style="list-style-type: none"> <li>• Evidence of improved management of solid waste in First Nations communities (data sources: project progress reports, annual reports, reporting on DRF indicator)</li> <li>• Perspectives of SWM personnel, community leaders and community members</li> <li>• Evidence of community participation in SWM and diversion (including reports)</li> <li>• Evidence of continued closure of contaminated and improper sites over time (data sources: annual reports, project reports)</li> </ul> <p><b>For ultimate outcomes</b></p> <ul style="list-style-type: none"> <li>• Increased control of SWM in FN communities</li> <li>• Improved environmental conditions in FN communities</li> <li>• Improved safety and health for FN communities</li> </ul>	
<p>5. How sustainable are the Initiative's achievements? Are sufficient funds available to communities for continuing beyond feasibility or design stages, or for operating and maintaining facilities? How does ISC follow up on infrastructure investments?</p>	<ul style="list-style-type: none"> <li>• Program documentation</li> <li>• Perspectives of SWM personnel, community leaders, community members and Regional Office (ISC)</li> </ul>	<ul style="list-style-type: none"> <li>• Document review</li> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>
<p>6. Have there been any unexpected or unintended impacts (positive or negative) on any segments of the population? If so, how were these addressed, if at all?</p>	<ul style="list-style-type: none"> <li>• Perspectives of SWM personnel, community leaders, community members and Regional Office (ISC)</li> </ul>	<ul style="list-style-type: none"> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>
<p>7. How effective are the relationships between partners (e.g. between headquarters and regions, regions and stakeholders, provinces, municipalities, and</p>	<ul style="list-style-type: none"> <li>• Opinions of program managers, regional managers and staff, stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>

Issues / Questions	Indicators	Data Collection Methods
private sector companies)? How open are potential local partners such as municipalities to collaboration on SWM?		
<b>Performance (Efficiency)</b>		
<p>8. Is the design and delivery of the Initiative appropriate to achieving its expected outcomes?</p> <p>a. Is the breakdown of funding streams and eligible costs appropriate to achieve the expected outcomes (eligible funding streams are waste management planning, capacity building and training, infrastructure and operations, programs and partnerships)?</p> <p>b. Is funding being allocated according to the varying SWM needs of First Nations communities?</p> <p>c. Are there costs associated with solid waste management in communities that are not being covered by this Initiative?</p>	<ul style="list-style-type: none"> <li>• Opinions of program managers, regional managers and staff, stakeholders on possible administrative and financial efficiencies for the delivery of the Initiative.</li> <li>• Evidence from administrative/operational documents</li> <li>• Perspectives of First Nations representatives responsible for managing the Initiative regarding appropriateness of funding streams, eligible costs, and possible gaps in eligible expenses</li> </ul>	<ul style="list-style-type: none"> <li>• Document review</li> <li>• Administrative data review</li> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>
<p>9. What is the best funding model for achieving the Initiatives outcomes (e.g. the current proposal-based funding model, core funding, 10-year grants) and at what point should alternative funding models be considered?)</p>	<ul style="list-style-type: none"> <li>• Opinions of program managers, regional managers and staff, stakeholders.</li> <li>• Perspectives of First Nations representatives responsible for managing the Initiative in their communities</li> </ul>	<ul style="list-style-type: none"> <li>• Literature review</li> <li>• Key informant interviews</li> <li>• Case studies</li> </ul>
<b>Other Evaluation Issues</b>		
<p>10. How can the Initiative work towards ensuring eventual devolution of SWM responsibilities from the department to First Nations, as mandated by the Department? What are the barriers and opportunities to devolution? How ready is the program for this eventual devolution?</p>	<ul style="list-style-type: none"> <li>• Evidence from literature, studies on SWM on First Nations reserves, pilot projects for alternative delivery</li> <li>• Opinions of program managers, regional managers and staff, stakeholders.</li> <li>• Perspectives of First Nations representatives responsible for managing the Initiative in their communities</li> </ul>	<ul style="list-style-type: none"> <li>• Literature Review</li> <li>• Key informant interviews</li> <li>• Case Studies</li> </ul>
<p>11. What lessons and best practices (including new technologies, innovative programs or governance mechanisms) can be learned from the</p>	<ul style="list-style-type: none"> <li>• Evidence from literature, studies on SWM on First Nations reserves and what works, best practices, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Literature review</li> <li>• Document review</li> <li>• Key informant interviews</li> </ul>

Issues / Questions	Indicators	Data Collection Methods
implementation of this Initiative or from other initiatives or jurisdictions?	<ul style="list-style-type: none"> <li>• Opinions of program managers, regional managers and staff, academics, technical organizations involved in the Initiative, and other stakeholders.</li> <li>• Evidence from program documents, evaluations, audits, etc. of comparable proposal-based programs implemented by the Department</li> </ul>	<ul style="list-style-type: none"> <li>• Case studies</li> </ul>

## Appendix 4: Management Response and Action Plan

### FINAL Management Response and Action Plan

#### Project Title: Evaluation of the First Nations Solid Waste Management Initiative

##### FINAL Management Response

This Management Response and Action Plan has been developed to address recommendations resulting from the Evaluation of the First Nations Solid Waste Management Initiative (“the Initiative”), which was finalized by the ISC Evaluation Directorate in August 2021.

The Lands and Environmental Management Branch recognizes the findings outlined in the evaluation regarding the performance and delivery of the First Nations Solid Waste Management Initiative. Specifically, the need to:

- provide adequate financial support for the ongoing costs of operating and maintaining solid waste management systems;
- strengthen the delivery of the Initiative, including the increase of resources directed to capacity building, engagement and training;
- continue developing partnerships, inside and outside of the federal government, that will assist in the development of regulatory tools to support effective solid waste management; and,
- work closely with First Nations partners to chart a path towards sustainable service transfer of solid waste management responsibilities.

The evaluation provides five recommendations to improve the delivery and effectiveness of the First Nations Solid Waste Management Initiative. All recommendations are accepted, and the attached Action Plan identifies specific activities to move towards meeting these recommendations.

Over the next two years, the Department will proceed with a phased response to develop and implement operational and policy improvements to the First Nations Solid Waste Management Initiative. This approach will involve engagement with partners and relevant stakeholders, with changes to be implemented following these discussions. A status update on this Management Response and Action Plan will be conducted by Evaluation Directorate regularly and presented to the Departmental Performance Measurement Evaluation Committee to monitor progress and activities.

The phased approach recognizes program complexities and provides time to engage First Nations and other partners in a meaningful development process.

## Action Plan

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
<p>1. Allocate sufficient, reliable, long-term funding for the FNSWMI. The funding should provide adequate financial support to First Nations for the ongoing costs of operating and maintaining solid waste management systems.</p>	<p>We do concur.</p>	<p>Assistant Deputy Minister, LED</p>	<p>Start Date: Sept 2021</p>
	<p>We agree that ongoing and sufficient funding is needed to support the operation and maintenance needs of communities for their waste management systems. In 2021, the federal government announced the renewal of the First Nations Solid Waste Management Initiative with an investment of \$560 million over 7 years. Targeted funding for solid waste management projects will therefore be available until March 31,2028. Additionally, ongoing financial support for the operations and maintenance of waste management assets and services on First Nations reserves has been approved for the 2021-2022 year.</p> <p>1. The First Nations Solid Waste Management Initiative, with program partners, will develop and conduct a needs assessment in order to determine the current state of solid waste management in First Nations communities. The assessment will be updated regularly and used to inform future solid waste management investments and funding requests.</p>	<p>Director General, LEMB</p>	<p>Completion: Sept 2023</p>

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
	<p>2. The First Nations Solid Waste Management Initiative will begin the development of an Operations and Maintenance Framework, including a National Service Standard for solid waste management in First Nation reserves. This Framework will be used, <i>inter alia</i>, to implement and manage new funding to support the operations and maintenance of solid waste management systems in First Nations communities. An engagement process with program staff, Regional Operations and First Nations partners will be initiated to identify and address the needs of First Nations communities.</p>		
<p>2. Strengthen delivery of FNSWMI through the following:</p> <p>a. Examine and implement methods that will enhance community-led planning practices, decision-making practices, incentivize knowledge transfer from consultants to First Nations, and boost the funding directed to capacity building, engagement, and training.</p>	<p>We do concur.</p> <p>We agree that additional steps are required to further enhance community-led planning and decision-making practices, encourage education and training, and increase the amount of overall funding directed towards these activities. The First Nation Solid Waste Management Initiative will prioritize education and awareness programs within First Nations to support effective governance, planning and decision-making.</p> <p>2 (a.1) The First Nations Solid Waste Management Initiative will develop a strategy for ISC regional offices to support First Nation</p>	<p>Assistant Deputy Minister, LED</p>	<p>Start Date: Sept 2021</p> <p>Completion: Sept 2023</p>



Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
<p>b. Strengthen coordination between Lands and Economic Development sector and</p>	<p>partners to develop the capacity to actively participate in community planning to meet their solid waste management needs.</p> <p>2 (a.2) The First Nations Solid Waste Management Initiative will work with Indigenous partners to prioritize funding allocated towards capacity building, engagement and training within First Nations communities.</p> <p>2 (a.3) The First Nations Solid Waste Management Initiative will consult with its national advisory committee, regional advisory committees, and Indigenous Services Canada regional offices to explore and deliver ongoing training opportunities targeting First Nations capacity.</p> <p>2 (a.4) The First Nations Solid Waste Management Initiative will develop a process by which Indigenous Services Canada regional offices can more easily incorporate additional funding into solid waste infrastructure projects to enhance the education and training available to First Nations.</p> <p>We agree that effective planning and coordination between the Lands and Economic Development sector and the Community Infrastructure sector is key to ensuring consistency across the country for efficient</p>		

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
<p>Community Infrastructure sector to better serve First Nations by simplifying and streamlining the approval and delivery process for solid waste management infrastructure projects;</p> <p>c. Apply GBA Plus to solid waste projects, program design and delivery; and</p>	<p>project approval and delivery. Currently, the processes of interaction between the two branches varies across the country.</p> <p>2 (b.1) The First Nations Solid Waste Management Initiative will develop an addendum to the Terms and Conditions of the Capital Facility Maintenance Program for waste specific projects. This will enable consistency in the delivery of solid waste funding across regional offices.</p> <p>2 (b.2) The First Nations Solid Waste Management Initiative, in collaboration with the Capital Facilities and Maintenance program, will streamline the approval processes required to fund solid waste infrastructure projects. This will simplify how infrastructure funding flows and allow projects to begin sooner.</p> <p>The incorporation of GBA Plus principles to program design and delivery was not readily available when the First Nations Solid Waste Management Initiative was launched in 2016. With the extension of the Initiative for the next seven years, the Initiative will take this opportunity to apply GBA Plus to all aspects of the program delivery.</p> <p>2 (c.1) First Nations Solid Waste Management Initiative will engage departmental GBA Plus expertise on how to apply GBA Plus to the</p>		

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
<p>d. Develop and implement a performance measurement system to monitor progress toward the program's outcomes, which should include the enhanced monitoring of solid waste management investments.</p>	<p>Initiative, from program design and delivery, to implementation of individual waste management projects.</p> <p>We agree that an enhanced performance measurement system would be beneficial to monitor progress towards the program's outcomes. While the First Nations Solid Waste Management Initiative adheres to existing departmental data collection and reporting requirements, a performance measurement system should be developed.</p> <p>2 (d.1) The First Nations Solid Waste Management Initiative, in collaboration with program partners, will develop and conduct a needs assessment in order to determine the current state of solid waste management in First Nations communities. This assessment will assist in forming the baseline which will inform the Initiative's new performance measurement strategy.</p> <p>2 (d.2) The First Nations Solid Waste Management Initiative will begin an engagement process to work with Indigenous partners to develop additional program indicators that measure program success. The indicators will be based on First Nations' solid waste priorities and capabilities in their communities.</p>		

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
	<p>2 (d.3) The First Nations Solid Waste Management Initiative will update the Asset Condition Reporting System inspection reports to better evaluate solid waste management systems. The information collected in these reports will be used to help inform program success and opportunities for continual improvement.</p>		
<p>3. Assess and revise the National and Regional contracting and procurement policies to encourage and support First Nations, First Nation-owned companies to deliver their own service.</p>	<p>We do concur.</p>	<p>Assistant Deputy Minister, LED</p>	<p>Start Date: Sept 2021</p>
	<p>We agree with the need to increase the opportunities for First Nations to deliver waste management services. The Government of Canada has committed to a mandatory requirement to award at least five percent of federal contracts to Indigenous businesses by 2024. A minimum five percent target for contracts procured by Indigenous peoples and businesses will also be supported by community outreach and engagement. The First Nations Solid Waste Management Initiative will review and revise, as needed, existing contracting and procurement policies to support First Nations and Indigenous-owned organizations to deliver their own solid waste management systems. Many First Nation communities already have Indigenous-owned businesses that provide waste management systems; these should be supported across the country.</p>	<p>Director General, LEMB</p>	<p>Completion: Sept 2023</p>

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
	<ol style="list-style-type: none"> <li>The First Nations Solid Waste Management Initiative will identify measures to enable the Tendering Policy on Federally Funded Capital Projects to maximize the ability for First Nations and Indigenous-owned organizations to deliver their own solid waste management systems.</li> <li>The First Nations Solid Waste Management Initiative will coordinate with Indigenous partners and the National Advisory Committee to confirm that effectiveness of the identified measures.</li> </ol>		
<p>4. Continue working with Environment and Climate Change Canada, Indigenous stakeholders, and provinces to plan, develop, or modify regulations to support effective solid waste management in First Nations.</p>	<p>We do concur.</p> <p>We agree with this recommendation and recognize that there is a need to review and address regulations or other regulatory tools that impact solid waste management on reserve.</p> <ol style="list-style-type: none"> <li>The First Nations Solid Waste Management Initiative will continue to support work by Indigenous organizations and other partners to address regulatory gaps related to waste disposal on reserve.</li> <li>The First Nations Solid Waste Management Initiative will complete the engagement with</li> </ol>	<p>Assistant Deputy Minister, LED</p> <hr/> <p>Director General, LEMB</p> <hr/>	<p>Start Date: Sept 2021</p> <p>Completion: Sept 2023</p>

Recommendations	Actions	Responsible Manager (Title / Sector)	Planned Start and Completion Dates
	partners and produce a report that will outline regulatory issues that need to be addressed.		
5. In keeping with the Department's commitment to support Indigenous communities and organizations to exercise jurisdiction in the design, delivery, and management of services, work with First Nation partners to chart a path toward sustainable service transfer of solid waste management responsibilities.	<p>We do concur. (do, do not, partially)</p> <p>We agree with this recommendation and intend to, over a two-year period, implement an engagement process with departmental colleagues and our First Nation partners (i.e., National and Regional Advisory Committees) to identify opportunities for service transfer of solid waste management responsibilities.</p> <ol style="list-style-type: none"> <li>1. The engagement with First Nation partners on sustainable service transfer of solid waste management responsibilities will be completed and a report produced that outlines opportunities for service transfer.</li> <li>2. Based on the report identified above, the First Nations Solid Waste Management Initiative will begin to develop an action plan that will prioritize projects that target service transfer of solid waste management responsibilities. The action plan will be developed in partnership with National and Regional Advisory Committees.</li> </ol>	Assistant Deputy Minister, LED	Start Date: Sept 2021
		Director General, LEMB	Completion: Sept 2023