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Federal Drinking Water Compliance Program (FDWCP)

Summative Evaluation Report

Approved by

Senior Management Board

Finance, Evaluation and Accountability (SMB-FEA)

Health Canada

November 19, 2008

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HEALTH CANADA'S MANAGEMENT ACTION PLAN (MAP)

Evaluation of Federal Drinking Water Compliance Program (FDWCP)

Recommendations	Management Response	Management Action Items	Contact Person/ Office of Primary Interest	Completion Date
<p>Program relevance:</p> <p># 1: Develop and implement an overarching, coordinated federal approach for drinking water management, inspection and compliance, including clarifying/defining the overall responsibility for regulatory oversight.</p> <ul style="list-style-type: none"> The Program should work more proactively with the appropriate federal players to develop this federal approach (or framework). This approach should include the identification/ definition of the issues and challenges regarding drinking water safety for federal drinking water purveyors in terms of: <ul style="list-style-type: none"> Establishing an inventory of drinking water systems, testing regimes and compliance; Issues related to surveillance; and, Best practices, gaps and challenges, feasible solutions and first steps (e.g., taking a risk-based approach). 	<p>As head of the Federal Drinking Water Compliance Program (FDWCP), Workplace Health & Public Safety Programme (WHPSP) is responsible to follow-up on the clarification of roles & responsibilities relating to drinking water regulatory oversight.</p> <p>As federal authority to enforce the Canada Labour Code, Human Resources and Social Development Canada (HRSDC) is responsible to clarify its framework for drinking water inspection and compliance assessments.</p> <p>Federal Departments are responsible for the provision of safe drinking water i.e. water that meets applicable requirements.</p> <p>With the exception of First nations on reserve, Health Canada does not have drinking water management, inspection or compliance functions, other than ensuring the provision of safe drinking water to Health Canada employees.</p>	<p>Action a) : Chair/ coordinate consultation process with HRSDC & Treasury Board Secretariat (TBS) aimed at developing and implementing a responsibility structure regarding regulatory oversight, inspection and management of drinking water.</p> <p>Action b) : Alert HRSDC/ authority for the enforcement of the Canada Labour Code to consultant's findings and recommendations, including the need to develop a federal framework for drinking water management, inspection and compliance</p> <p>Action c) : Provide to HRSDC tools developed during the FDWCP. Functional tools were developed to facilitate the production of an inventory of drinking water systems, identify gaps and challenges etc.</p> <p>Action d) : From the consensus developed during the consultation process in Action a), obtain the Branch Executive Committee's approval of Health Canada's role with regard to drinking water. If an agreement is not reached on the distribution of responsibilities between HRSC, TBS and HC during the consultation process in Action Item (a), present findings to Senior Management Board.</p>	<p>Director General WHPSP, Regions and Programs Branch (RAPB), Health Canada (HC)</p> <p>Director, Public Service Health Program (PSHP) Implementation Bureau, WHPSP, RAPB, HC</p> <p>Director, PSHP Implementation Bureau, WHPSP, RAPB, HC</p> <p>Director General WHPSP, RAPB, HC</p>	<p>December 31, 2008</p> <p>September 30, 2008</p> <p>September 30, 2008</p> <p>December 31, 2008</p>

Recommendations	Management Response	Management Action Items	Contact Person/ Office of Primary Interest	Completion Date
Clarification of the Program's mandate, roles and responsibilities, and design:				
# 2: Clarify the Program mandate, objectives, roles and responsibilities, and priorities for a federal approach for drinking water management.	The Public Service Health Program (PSHP), as described by the Occupational Health and Safety Policy and its accountability framework, is a corporate resource administered by Health Canada under delegation of the Treasury Board. It develops and delivers defined occupational health services to protect the occupational health of employees for which the Treasury Board is the employer.	Action e): Define PSHP mandate, objectives, roles & responsibilities with regards to drinking water, as agreed to during the Action a) consultation process, and in concurrence with the TBS approved program design	Director, PSHP Implementation Bureau , WHPSP, RAPB, HC	March 31, 2009*
# 3: Revise the program logic model taking into account any revised mandate and objectives, also ensuring the logic model fits within the larger, more overarching federal program. <ul style="list-style-type: none"> Conduct a literature search to confirm the Program's logic and ensure it is theoretically anchored and linkages between the Program objectives, activities and related outputs will lead to the expected results (outcomes) achievement. 	PSHP offers workplace investigations and approved advisory services for industrial hygiene. (Source: Accountability Framework, Occupational Health Services for the Public Service (Public Service Health Program), June 2, 2003.	Action f): Develop & implement the new WHPSP Results-based Management Accountability Framework (RMAF), integrating the revised drinking water program (i.e., activities, outputs and expected outcomes) into PSHP's segment of the logic model. Conduct a literature search for key PSHP logic model components, including key elements required to achieve the expected outcomes for <i>the revised drinking water program</i> (i.e., to ensure sound program theory, logic and linkages to results/outcomes).	Director, PSHP Implementation Bureau, WHPSP, RAPB, HC	March 31, 2009*
# 5: Clarify, document and communicate the Program's roles and responsibilities within Health Canada and WHPSP, the Interdepartmental Working Group on Drinking Water (IWGDW), and federal government providers of drinking water generally.	Potable water is an aspect of occupational health, as specified in sections 9.4 to 9.29 of the Canada Occupational Health and Safety Regulations (SOR/86-304)	Action g): Post on the HC intranet site the PSHP & the Public Health Bureau (PHB) roles and responsibilities with regards to drinking water Action h): Update the roles & responsibilities of PSHP & PHB with regards to drinking water, in the document titled Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction	Director General WHPSP, RAPB, HC Director General WHPSP, RAPB, HC	March 31, 2009* September 30, 2008 * Subject to TBS approval of program design

Recommendations	Management Response	Management Action Items	Contact Person/ Office of Primary Interest	Completion Date
<p>Program success and Related performance measurement:</p> <p># 6: Develop and implement a robust performance measurement strategy, including:</p> <ul style="list-style-type: none"> The identification of performance indicators for outputs and outcomes; and, A data collection and reporting strategy that includes data sources, responsibility for collection, anticipated resources required for collection and reporting, and reporting format and frequency. 		<p>Action i): Develop PSHP performance indicators for drinking water, with associated data collection and reporting measures & frequency, consistent with WHPSP logic model and accountability framework; incorporate into the Results-based Management Accountability Framework (RMAF)</p>	Director, PSHP Implementation Bureau, WHPSP, RAPB, HC	<p>March 31, 2009*</p> <p>* Subject to TBS approval of program design</p>
<p>Future priorities:</p> <p># 4: Explore possible mechanisms for addressing the most pressing needs identified by client departments during the needs assessment undertaken in 2007 (within an agreed-to mandate).</p>	<p>It is the clients' (departments and agencies) responsibility to seek advice and information with WHPSP when a need relating to occupational health is identified.</p> <p>The PSHP has the knowledge and capacity to identify, assess, investigate and provide advice to occupational health risks for federal employees. PSHP recognizes that the quality of potable water is an element of occupational health and workplace.</p>	<p>Action j): Answer clients' requests by providing tools, advice and consultation.</p> <p>Action k): Review the August 2007 Needs of Federal Drinking Water Providers Report, identify priority challenges that meet the revised PSHP drinking water initiative mandate and develop the action plan for addressing these needs as part of PSHP's mandate.</p>	<p>Director, PSHP Implementation Bureau, WHPSP, RAPB, HC</p> <p>Director, PSHP Implementation Bureau, WHPSP, RAPB, HC</p>	<p>Ongoing</p> <p>December 31, 2008</p>

Evaluation of the Federal Drinking Water Compliance Program (FDWCP)

Final Report

April 30, 2008

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Health Canada

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EXECUTIVE SUMMARY

Introduction

This report presents the results of the evaluation of the Federal Drinking Water Compliance Program (FDWCP). The evaluation covers the period from the 2003 inception of the FDWCP to the present. The evaluation was undertaken by Goss Gilroy Inc. (GGI) Management Consultants over the period of August 2007 to March 2008.

Program Description

The Federal Drinking Water Compliance Program (FDWCP) was established in 2003, as a part of the federal response to the Walkerton Inquiry. At the time, there was no requirement for drinking water inspection on federal property and no comprehensive inspection and compliance program. While most departments had some form of monitoring and inspection activities, these were inconsistent and data were neither collected nor managed in a coordinated manner. The Program objective was to provide leadership and assistance to federal departments in meeting their regulatory obligations for the provision of safe drinking water through the implementation of a comprehensive inspection and compliance program. The program was expected to address issues of legal liability and presented an opportunity for the federal government to demonstrate leadership and commitment to the provision of safe drinking water by federal purveyors of drinking water.

A total budget of \$5 million (gross) over 5 years or \$1 million (gross) per year was approved for the FDWCP. The activities of the FDWCP to promote the provision of safe drinking water by federal departments were threefold: develop and implement the elements of a compliance program; provide support and advice to federal purveyors of drinking water; and develop and implement an inspection program to ensure compliance with the Guidelines for Canadian Drinking Water Quality (GCDWQ). During fiscal year 2003-2004, Health Canada management revised the third segment of the Program mandate to ‘facilitating the development of and implementation of an inspection and compliance program’. This was done in light of Health Canada’s lack of authority to enforce compliance with the GCDWQ by federal drinking water providers.

With its five-year fund coming to an end on March 31st, 2008, the FDWCP will cease to exist in its present form. According to program management, the Program's mandate related to water will be transferred to the Industrial Hygiene Field Support unit of the Public Service Health Program Implementation bureau. This integration is designed to bring together all industrial hygiene related activities under a single unit and ensure that the FDWCP work related to providing advice, support and guidance to federal departments and agencies on water related issues continues.

Evaluation Purpose

The purpose of the evaluation is to contribute to the decision-making process for the FDWCP regarding the future directions and activities of the Program and to fulfill a commitment to Treasury Board Secretariat. The overall objectives of the evaluation of the FDWCP are to:

- Assess the relevance of the Program;
- Review the appropriateness of the design and implementation of the FDWCP; and
- Determine the Program's success.

The evaluation questions addressed in the study are presented below.

Relevance:

- 1) What are the risks associated with fulfilling the federal government's obligations to provide potable water to employees or others using federal facilities?
 - a) What role does the FDWCP play in risk mitigation?
 - b) Is there a continuing need for FDWCP?
 - c) Are there other federal, provincial, municipal programs that address these risks?
- 2) To what extent is the FDWCP consistent with federal government priorities?

Program Design and Implementation:

- 3) Is the FDWCP appropriately designed, funded and mandated to attain the expected outcomes?
- 4) Is the FDWCP designed to address the priority needs of federal drinking water providers to meet the GCDWQ? How can the Program be improved?
- 5) To what extent was the Program implemented as planned?
- 6) Are the roles and responsibilities with respect to program implementation defined and understood?
 - a) How appropriate are the roles and responsibilities with respect to achieving the desired outcomes of the Program?
- 7) What are some of the challenges and successes that have arisen in implementing the FDWCP?
 - a) How have the challenges been addressed?
 - b) What lessons can be learned from the successes and challenges to date?

Progress/Success

- 8) To what extent have the expected outputs been achieved?
 - a) Tools and guidance
 - b) A federal community of practice
 - c) A common set of data elements for compliance database
 - d) Response protocol for information sharing, notification and investigation

- 9) To what extent is there increased awareness among federal departments of the risks and good practices associated with drinking water systems?
- 10) To what extent is there improved coordination and collaboration for resource sharing?
- 11) To what extent is there improved federal capacity to comply with GCDWQ, Canada Labour Code (CLC) and due diligence?
- 12) To what extent is there an improved capacity to respond to waterborne outbreaks?
- 13) What challenges still exist for federal drinking water providers in meeting obligations to maintain effective water management in areas of federal jurisdiction (i.e., to employees and to others who live on or visit federal lands)?

Evaluation Methods

The evaluation study was conducted between August 2007 and March 2008. The analysis for the evaluation relied on multiple lines of evidence to discern the most reliable findings. The lines of evidence were generated using the following data collection methods: interviews, document review and literature review. The findings are based on the review and analysis of information from: 57 documents, 15 peer-reviewed articles, and interviews with 32 individuals (including representatives external to the federal government, Health Canada representatives, and federal purveyors of drinking water).

Conclusions and Recommendations

Table 1 highlights the conclusions and recommendations that resulted from the evaluation. The recommendations are grouped into four broad categories: Program relevance; clarification of the Program's mandate, roles and responsibilities and design; Program success and related performance measurement; and, future priorities.

Table 1
Evaluation Conclusions and Recommendations

Category	Conclusions	Recommendations
<i>Program relevance</i>	<p>At present, no single overall body in the federal house is active in providing regulatory oversight for the provision of safe drinking water for all federally owned lands and buildings.</p> <ul style="list-style-type: none"> Issues with current drinking water safety in federal buildings and on federal lands are largely unknown, leaving the federal government open to potential legal risks and individual health risks related to water quality management. <p>The ‘revised’ FDWCP mandate and main activities did not permit the Program to satisfactorily address the risks facing federal providers of drinking water.</p> <ul style="list-style-type: none"> There remains a significant gap in the area of ensuring compliance with the GCDWQ, the CLC and due diligence. <p>There is a continuing need for the Program to play a role in coordinating the federal players responsible for the provision of safe drinking water.</p> <p>Safe drinking water is clearly consistent with the mandate of Health Canada and WHPSP and the priorities of the Government as expressed in the 2004 and 2005 Speeches from the Throne and the 2004 Budget.</p> <ul style="list-style-type: none"> While water was declared a sustainable development priority by the government in 2003 the focus on water has not been emphasized in subsequent government communications regarding priorities since 2005. 	<p>Recommendation #1: Develop and implement an overarching, coordinated federal approach for drinking water management, inspection and compliance, including clarifying/defining the overall responsibility for regulatory oversight.</p> <ul style="list-style-type: none"> The Program should work more proactively with the appropriate federal players to develop this federal approach (or framework). This approach should include the identification/definition of the issues and challenges regarding drinking water safety for federal drinking water purveyors in terms of: <ul style="list-style-type: none"> > Establishing an inventory of drinking water systems, testing regimes and compliance; > Issues related to surveillance; and, > Best practices, gaps and challenges, feasible solutions and first steps (e.g., taking a risk-based approach).

Category	Conclusions	Recommendations
<p><i>Clarification of the Program's mandate, roles and responsibilities and design</i></p>	<p>The 'original' mandate of the Program as outlined in official government documents regarding the development of an inspection and compliance program, was not implemented as initially planned.</p> <ul style="list-style-type: none"> • The 'original' mandate was considered by Health Canada management to be outside the authoritative scope of Health Canada/WHPS • Funding was inadequate to implement an inspection and compliance program <p>There have been many challenges associated with implementation:</p> <ul style="list-style-type: none"> • Lack of clarity with respect to program design • Lack of authority to implement the 'original' mandate of the Program <p>At present, the design, funding and revised mandate appear to be appropriate for achieving the specific immediate outcomes of: increased awareness; and improved coordination and collaboration.</p> <p>However, the program design and elements of the logic model related to the achievement of the two specific capacity building immediate outcomes are questionable. It appears that these outcomes are less likely to occur in the shorter term.</p> <p>At present, the roles and responsibilities of the FDWCP are not well defined, documented or communicated.</p>	<p>It is recommended the Program address the ambiguity that exists around the Program's mandate, roles and responsibilities, and design:</p> <ul style="list-style-type: none"> • Recommendation #2: Clarify the Program mandate, objectives, roles and responsibilities, and priorities for a federal approach for drinking water management, highlighted above. • Recommendation #3: Revise the program logic model taking into account any revised mandate and objectives, also ensuring the logic model fits within the larger, more overarching federal program. <ul style="list-style-type: none"> > Conduct a literature search to confirm the Program's logic and ensure it is theoretically anchored and linkages between the Program objectives, activities and related outputs will lead to the expected results (outcomes) achievement. • Recommendation #5: Clarify, document and communicate the Program's roles and responsibilities within Health Canada and WHPS, the IWGDW, and federal government providers of drinking water generally.
<p><i>Program success</i></p>	<p>Significant progress has been made towards the achievement of the outputs described in the Program's logic model.</p> <p>FDWCP activities (and related outputs) appear to be contributing to: 1) the immediate outcome of increased awareness among federal departments of good practices and risks associated with drinking water systems; and 2) the immediate outcome of improved coordination and collaboration for resource sharing.</p> <p>The extent to which the Program has influenced the capacity of federal departments to comply with the GCDWQ, CLC and due diligence is unclear.</p>	<p>See Recommendation #6, below.</p>

Category	Conclusions	Recommendations
	<ul style="list-style-type: none"> The evaluation found that the development of increased capacity to comply with the GCDWQ, CLC and due diligence is largely dependent on increased awareness and improved coordination and collaboration. There are likely to be other contributing factors to the development of capacity, including attendance at training sessions, and senior management priority allocated to drinking water within the department, for example. <p>It does not appear that the Program has influenced the capacity of federal departments to respond to waterborne outbreaks.</p>	
<i>Related performance measurement</i>	<p>The collection and examination of performance measures was not undertaken by the Program and is required to adequately assess the program logic and likely achievement of expected results/outcomes (i.e., for immediate, intermediate and long-term outcomes).</p> <p>Progress towards all outcomes would have to be more fully examined once a performance measurement framework, and associated data collection, is in place.</p>	<p><i>Recommendation #6:</i> Develop and implement a robust performance measurement strategy, including:</p> <ul style="list-style-type: none"> The identification of performance indicators for outputs and outcomes; and, A data collection and reporting strategy that includes data sources, responsibility for collection, anticipated resources required for collection and reporting, and reporting format and frequency.
<i>Future priorities</i>	<p>The challenges facing federal providers of drinking water appear to be well understood and documented by the Program and major federal providers of drinking water.</p> <p>The majority of clients indicated that the Program was able to meet their needs at least to some extent, specifically citing the development of tools and resources and the provision of advice for drinking water management.</p> <p>There were many needs expressed by client departments where additional work by the Program would be warranted.</p>	<p><i>Recommendation #4:</i> Explore possible mechanisms for addressing the most pressing needs identified by client departments during the needs assessment undertaken in 2007 (within an agreed-to mandate).</p>

1.0 INTRODUCTION

This report presents the findings of the evaluation of the Federal Drinking Water Compliance Program (FDWCP). The evaluation was undertaken by Goss Gilroy Inc. (GGI) Management Consultants over the period of August 2007 to March 2008. The evaluation was overseen by a Steering Committee comprised of representatives from the FDWCP, the Healthy Environments and Consumer Safety Branch (HECSB) and the Departmental Performance Measurement and Evaluation Directorate (DPMED).

The report is organized as follows:

- Section 1 presents a description of the Program and the overall context and purpose of the evaluation;
- Section 2 presents the evaluation issues and questions;
- Section 3 presents the methodology for the evaluation, including the limitations;
- Section 4 presents the key findings, conclusions and recommendations by main evaluation issue and question;
- Section 5 presents the overall recommendations;
- Appendix A presents a list of acronyms used throughout the report;
- Appendix B presents the evaluation matrix; and,
- Appendix C presents details regarding the sample selection for interviews.

1.1 Program Description

1.1.1 Context¹

Since the Walkerton and North Battleford Inquiries, all provinces and territories have made their drinking water requirements more stringent, hence the standard of care in drinking water management has changed in Canada. These inquiries identified weaknesses in traditional practices. As a result, due diligence now requires a multi-barrier approach to protecting drinking water to establish preventive, risk management measures from source to tap, and requires a deeper understanding of drinking water related health risks and related measures to eliminate or reduce these risks. Many assertions in these inquiries are directly relevant to federal drinking water providers and have broadened the requirements of due diligence.

¹ Taken from the Terms of Reference for the Evaluation of the FDWCP, December 8, 2006.

In the wake of Walkerton, the federal government recognized the need for a consistent federal approach to drinking water management. It recognized that a significant foundation had to be established, and gaps identified in order to address basic needs and prepare for the evolution of enhanced federal due diligence in drinking water management.

The Federal Drinking Water Compliance Program (FDWCP) was established in 2003, as a part of the federal response to the Walkerton Inquiry. At the time, there was no requirement for drinking water inspection on federal property and no comprehensive inspection and compliance program. While most departments had some form of monitoring and inspection activities, these were inconsistent and data were neither collected nor managed in a coordinated manner. The rationale for the FDWCP was to promote the provision of safe drinking water by federal departments by: developing and implementing elements of a compliance program; supporting and advising federal purveyors of drinking water; and developing and implementing an inspection program to ensure compliance. As well, the Program was expected to address issues of legal liability and presented an opportunity for the federal government to demonstrate leadership and commitment to the provision of safe drinking water by federal purveyors of drinking water.

New funding was made available under the First Nations Water Management Strategy. Although this funding was largely directed towards existing First Nations drinking water management programs, a small fraction was directed to the Workplace Health and Public Safety Program (WHPSP) of the Healthy Environments and Consumer Safety Branch of Health Canada. This marked the beginning of the FDWCP.

During fiscal year 2003-2004, Health Canada management revised the third segment of the Program mandate to 'facilitating the development of and implementation of an inspection and compliance program'. This was done in light of Health Canada's lack of authority to enforce compliance with the Guidelines for Canadian Drinking Water Quality (GCDWQ) by federal drinking water providers.

Current Direction

With its five-year fund coming to an end on March 31st, 2008, the FDWCP will cease to exist in its present form. According to program management, the Program's mandate related to water will be transferred to the Industrial Hygiene Field Support unit of the Public Service Health Program (PSHP) Implementation bureau. This integration is designed to build on the synergies that exist between the two programs and bring together all industrial hygiene related activities under a single unit. Moreover, the integration will ensure that the work related to providing advice, support and guidance to federal departments and agencies on water related issues continues in close collaboration with stakeholders.

1.1.2 Program Objectives and Activities

The ‘original’ objective of the FDWCP was to provide assistance to federal departments in meeting their regulatory obligations for the provision of safe drinking water through the implementation of a comprehensive inspection and compliance program.

Main activities identified to be undertaken for the ‘original’ FDWCP mandate were:²

1. Develop and implement the elements of a Federal Drinking Water Compliance Program;
2. Provision of support, advice to federal purveyors of drinking water including a communications strategy for employers and employees; and
3. Development and implementation of an inspection program to ensure compliance with the GCDWQ.

After re-focusing the Program commitments during fiscal year 2003-2004, efforts converged to carrying out the first two ‘original’ activities. These were combined with the implementation of due diligence measures to facilitate enhanced federal compliance with GCDWQ. The Program, however, did not continue to focus on the third main activity for the ‘original’ FDWCP objective (noted above), but rather focused on ‘facilitating’ the development and implementation of an inspection and compliance program.

1.1.3 Program Logic Model

The program logic model³ presented in Exhibit 1.1 was developed in 2006 during the pre-planning stage of the FDWCP program evaluation. It was aimed at structuring activities carried out since 2003-2004 and linking them with program outputs and resulting outcomes. The three main activities undertaken by the FDWCP, based on its ‘revised’ mandate from 2003 to 2007, are:

- Providing support and advice;
- Coordinating stakeholders; and
- Facilitating the development and implementation of an inspection and compliance program.

² Mandate, objective and main activities as noted in official government documents.

³ Health Canada, Terms of Reference for the Evaluation of the FDWCP, December 8, 2006, page 8.

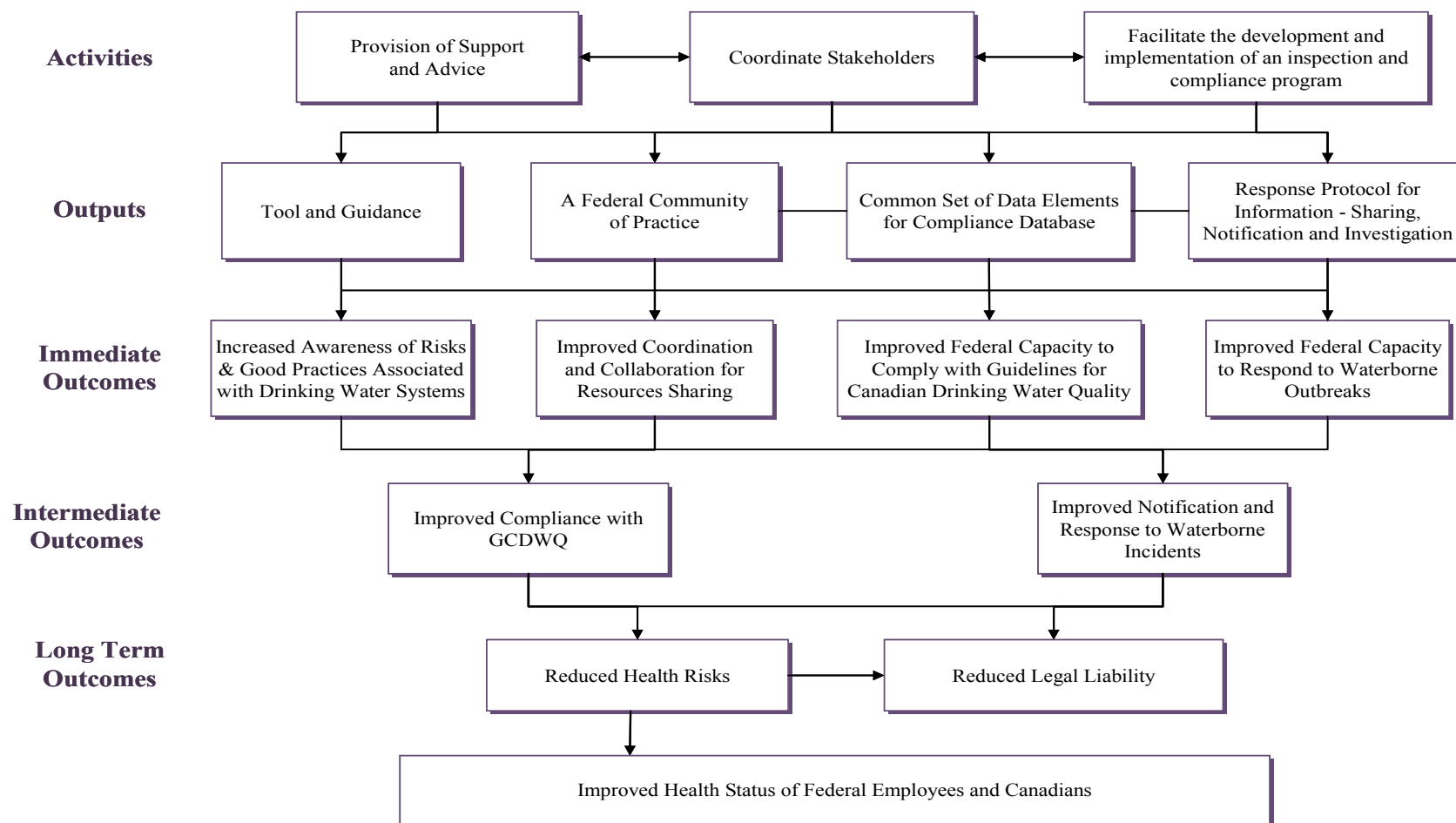
1.1.4 Target Population

In terms of target population, the immediate intended beneficiaries of the Program are federal departments and agencies with responsibilities for the provision of drinking water to their employees. Federal employees and individuals who visit federal lands or facilities are the ultimate beneficiaries of the Program in that they will have access to safe drinking water. Although all federal departments and agencies are obligated to provide potable water for federal employees and others using their facilities as per the Canada Labour Code (CLC) and its regulations, a substantial proportion of water systems fall within the responsibility of approximately 13 federal drinking water providers. Examples of these providers include the Department of National Defence, Correctional Services Canada, Public Works and Government Services Canada, Department of Fisheries and Oceans, Canada Border Services Agency, Parks Canada Agency, Department of Foreign Affairs and International Trade (DFAIT), the Royal Canadian Mounted Police (RCMP), and Agriculture and Agri-Food Canada (AAFC).⁴

⁴ Ibid, page 7

Exhibit 1.1

Federal Drinking Water Compliance Program (FDWCP) Logic Model



1.1.5 Program Funding

A total budget of \$5 million (gross) over 5 years or \$1 million (gross) per year was approved for the FDWCP. After departmental deductions, there is a total annual envelope of \$761,459.⁵

FDWCP actual expenditures for operating and maintenance (O&M) as well as salaries during fiscal years 2003/04 to 2007/08 are outlined in Exhibit 1.2.⁶

Exhibit 1.2					
FDWCP Expenditures – O&M and Salary					
	03/04	04/05	05/06	06/07	07/08
O&M	\$75,805	\$248,289	\$292,198	\$227,010	\$307,516
Salaries	\$145,000	\$290,756	\$254,600	\$254,600	\$254,600
Total	\$220,805	\$539,045	\$546,798	\$481,610	\$562,116

Exhibit 1.3, below represents the costs of projects undertaken to support the three main FDWCP activities (i.e., the provision of support and advice, coordination of stakeholders, and facilitation of the development and implementation of an inspection and compliance program.

Exhibit 1.3				
FDWCP O&M Expenditures – Main Activities⁷				
Main FDWCP Activities	04/05	05/06	06/07	07/08
Provision of support and advice	\$25,000	\$26,384	\$17,900	\$10,686
Coordinate stakeholders	\$67,289	\$92,695	\$91,300	\$105,600
Facilitate the development and implementation of an inspection and compliance program	\$156,000	\$173,119	\$117,810	\$191,230
Total O&M	\$248,289	\$292,198	\$227,010	\$307,516

⁵ Ibid, page 7

⁶ Based on program variance and budget reports for each fiscal year. Fluctuations in O&M dollars between fiscal years are due to the transfer of dollars to cover other corporate and administrative costs.

⁷ Ibid. Not available for 2003/04.

2.0 PURPOSE OF THE EVALUATION

The purpose of the evaluation is to contribute to the decision-making process for drinking water activities within the Public Service Health Program regarding the future directions and activities related to drinking water. Also, the evaluation was undertaken to respond to a commitment to Treasury Board (TB) to conduct an evaluation.

2.1 Evaluation Objectives and Scope

The overall objectives of the evaluation of the FDWCP are to:

- Assess the relevance of the Program;
- Review the appropriateness of the design and implementation of the FDWCP; and
- Determine the Program's success.

The evaluation of the FDWCP provides management of the Workplace Health and Public Safety Program (WHPSP) information to guide their decision-making, to enhance their ability to report on FDWCP progress, and to identify areas for improvement. It also informs federal purveyor departments and the public of the overall success of the Program to date, in terms of progress towards achieving its overarching goal of assisting federal purveyors to provide safe drinking water that meets the Guidelines for Canadian Drinking Water Quality (GCDWQ).

The evaluation findings will also be a consideration in Treasury Board's decision regarding the renewal of the Program, as a part of a submission from the Public Service Health Program (i.e., within the WHPSP), in fiscal year 2008/09.

2.2 Evaluation Issues and Questions

This section describes the main evaluation issues and associated questions examined for the evaluation. Evaluation issues are the broad areas that need to be examined within an evaluation, while evaluation questions are the more specific questions that need to be answered to be able to address each evaluation issue.

The main issues examined through this evaluation are as follows: \

- Relevance
- Program Design/Implementation
- Success



Relevance

- 1) What are the risks associated with fulfilling the federal government's obligations to provide potable water to employees or others using federal facilities?
 - a) What role does the FDWCP play in risk mitigation?
 - b) Is there a continuing need for FDWCP?
 - c) Are there other federal, provincial, municipal programs that address these risks?
- 2) To what extent is the FDWCP consistent with federal government priorities?



Program Design/Implementation

- 3) Is the FDWCP appropriately designed, funded and mandated to attain the expected outcomes?
- 4) Is the FDWCP designed to address the priority needs of federal drinking water providers to meet the GCDWQ? How can the Program be improved?
- 5) To what extent was the Program implemented as planned?
- 6) Are the roles and responsibilities with respect to program implementation defined and understood?
 - a) How appropriate are the roles and responsibilities with respect to achieving the desired outcomes of the Program?
- 7) What are some of the challenges and successes that have arisen in implementing the FDWCP?
 - a) How have the challenges been addressed?
 - b) What lessons can be learned from the successes and challenges to date?



Progress/Success

- 8) To what extent have the expected outputs been achieved?
 - a) Tools and guidance
 - b) A federal community of practice

- c) A common set of data elements for compliance database
 - d) Response protocol for information sharing, notification and investigation
- 9) To what extent is there increased awareness among federal departments of the risks and good practices associated with drinking water systems?
 - 10) To what extent is there improved coordination and collaboration for resource sharing?
 - 11) To what extent is there improved federal capacity to comply with GCDWQ, CLC and due diligence?
 - 12) To what extent is there an improved capacity to respond to waterborne outbreaks?
 - 13) What challenges still exist for federal drinking water providers in meeting obligations to maintain effective water management in areas of federal jurisdiction (i.e., to employees and to others who live on or visit federal lands)?

2.3 Time Frame for the Evaluation Study

The evaluation study was conducted between August 2007 and March 2008. Planning and instrument development took place between August and October 2007, followed by the data collection for the three lines of evidence that took place between November and December 2007. The data analysis and report writing were completed between December 2007 and March 2008.

3.0 METHODOLOGY

3.1 Evaluation Design

The evaluation approach was designed to assess the delivery mechanisms and, through interviews, documents and a literature review, identify any risks, gaps and future drinking water quality management needs of federal purveyors of water. The evaluation assessed the various aspects of the Program's activities, processes, and preliminary results according to the evaluation issues and questions and the extent to which the Program is on track to achieving the desired outcomes. Finally, the proposed approach provides recommendations regarding possible corrections and emerging priority areas for the Program.

The evaluation focuses on the evaluation issues above, and utilizes multiple lines of inquiry to address the evaluation questions. Exhibit 3.1 (page 13) presents the scope of each line of evidence, as well as the tools developed, the inclusion criteria and the data limitations and mitigation strategies. Appendix B (page 48) presents an evaluation matrix that identified the performance indicators for each evaluation question, as well as the data collection method for each indicator.

3.2 Lines of Evidence

There are three main lines of evidence for the evaluation findings:

- 1) Interviews
- 2) Document review
- 3) Literature review

3.2.1 Interviews

Interviews were carried out to inform most evaluation questions (e.g., validate the causal links in the logic model; provide feedback on achievement of outcomes). In all, 32 interviews were conducted with two types of respondents:

- 1) Stakeholders external to the federal government; and,
- 2) Federal government clients and stakeholders.

1) Stakeholders external to the federal government.

Five interviews were conducted with stakeholders external to the federal government. External stakeholders are those who are knowledgeable of drinking water management best practices and risks, the requirements of drinking water oversight, and likely to have an opinion on the overall relevance and design of a program with the overall objectives of the FDWCP.

2) Federal government clients and stakeholders.

Twenty-seven (27) interviews were conducted with federal government clients and stakeholders. Specifically, 11 clients were interviewed (clients were defined as members of the Interdepartmental Working Group on Drinking Water (IWGDW) as they represent the federal departments who are major providers of drinking water), 2 federal departments or agencies that have not accessed FDWCP services, and 14 representatives from Health Canada, including FDWCP representatives.

For the most part, key informants were identified purposefully according to the interview sample selection criteria outlined in the evaluation work plan. Participants were deliberately selected using this approach due to their particular knowledge and/or experience with drinking water and/or the Program itself. Additional details (including the rationale for their inclusion) are presented in Appendix C (page 54).

3.2.2 Document review

Fifty-seven documents were reviewed in order to better understand the activities undertaken to date by FDWCP and the related outputs produced. Two main categories of documents were consulted: program documents and other documents. Program documents are those generated by the Program in the implementation and delivery of the FDWCP. Other documents are those prepared by organizations outside of the Program. As well, progress towards immediate, intermediate and long-term outcomes was assessed through the document review.

3.2.3 Literature Review

Fifteen articles were reviewed for the literature review to collect information on issues relating to relevance and program design. The targeted literature for the review: 1) described the risks associated with drinking water management, 2) identified best practices and key characteristics of successful/appropriate drinking water management programs (including but not limited to government programs, and inspection and compliance programs).

Literature was identified following a protocol identified in the evaluation work plan, which included searching with pre-determined search terms in peer reviewed journals. The literature abstracts were reviewed according to the inclusion and exclusion criteria in the protocol. The sub-set of sources meeting the criteria was then reviewed and salient findings documented in a database of evaluation findings by evaluation question.

3.3 Limitations/Challenges

One of the main challenges facing the evaluation was the lack of quantitative data corresponding to the elements in the logic model. Thus, while quantitative evidence was used where possible, qualitative evidence was drawn on extensively.

One of the overall limitations of the evaluation design is the heavy reliance on qualitative data from interviews. Interviews can only offer anecdotal and opinion-based evidence against the evaluation issues. Thus, the utilization of multiple lines of evidence was critical to confirm (or refute) findings from the interviews. As well, interview-based evidence has been triangulated with available documented evidence and literature.

Please refer to Exhibit 3.1 (page 13) for the key limitations and mitigation strategies used for each data collection method used.

Exhibit 3.1 Summary of Data Collection Methods

	Document Review	Literature Review	Interviews
Scope	213 documents identified for possible review. 57 documents reviewed that contributed key evidence.	62 abstracts selected for possible review. 15 articles reviewed for risks facing drinking water providers, drinking water management or both.	See Appendix C for information related to the total population. 32 individuals were interviewed: <ul style="list-style-type: none"> • 5 external stakeholders, • 27 federal government clients and stakeholders.
Tools Developed	Evaluation findings database included fields for document review linked to evaluation questions	Evaluation findings database included fields for document review linked to evaluation questions	Four interviews guides prepared (one for each of: external stakeholders, HC personnel, clients, non-clients). Evaluation findings database included fields for document review linked to evaluation questions
Inclusion Criteria	<ul style="list-style-type: none"> • Information directly relevant to the provision of drinking water and/or drinking water management. • Provided evidence related to the evaluation questions. • Produced since 2003. • Final versions consulted wherever possible (rather than draft versions). • For non-program documentation, broadly consulted and represents a consensus of opinion. 	<ul style="list-style-type: none"> • Provided evidence related to the evaluation questions. • Publications in peer reviewed journals. • Canadian sources treated with priority. • Publication dates from 2000 onward. • Relates to a government's obligations to provide potable drinking water. 	<ul style="list-style-type: none"> • Those with knowledge related to the evaluation questions. • Familiarity with drinking water management, risks and the federal government's obligation to provide potable drinking water. • Familiar with the FDWCP (where reasonable to expect this familiarity). • For clients and non-clients, must be providers of drinking water. • Have been in their position for at least one year.
Limitations/Challenges	<ol style="list-style-type: none"> 1) Lack of quantitative data related to assessment of compliance and risk. 2) Timelines limited – could not review all of the relevant documents. 	<ol style="list-style-type: none"> 1) The literature review did not uncover a comparable program within Canada or internationally. 	<ol style="list-style-type: none"> 1) Small number interviewed. 2) Key informants are biased towards own experience and findings are anecdotal.
Mitigation of Limitations	<ol style="list-style-type: none"> 1) Evaluation relies on a qualitative assessment of risk only. 2) The most relevant documents were selected for review. 	<ol style="list-style-type: none"> 1) All article abstracts were systematically reviewed to determine relevance for inclusion. 	<ol style="list-style-type: none"> 1) Major drinking water providers targeted. Also, targeted interviewees with knowledge of drinking water management. 2) Consultant-led interviewee selection approach or census approach used to mitigate. Also, spoke to a mix of respondents speaking from different points of view

3.4 Approach to Analysis

Findings from all lines of evidence were captured in an Access database, by evaluation question and indicator. In addition to the source (i.e. interview, document review or literature review), the interview type (e.g., external stakeholder versus client) and document type (e.g., program documents versus other documents) were referenced so that all findings pertaining to one particular type or source could be viewed and analyzed separately as well as in aggregate with other sources. Exhibit 3.2 (page 15) presents a summary of the data collection methods and the related evidence that was used to answer each evaluation question.

Although this approach to analysis helps organize the information, the analysis has remained qualitative. The interview responses were analyzed and reported upon to identify key themes (i.e., areas of consistent findings) that emerged from the findings. However, while the findings report frequency information (actual numbers and percentage) for all interview responses presented, these numbers must be treated with caution as only a small number of individuals were consulted overall (n=32) using a purposive sampling approach for the most part.

In preparing the draft report, all lines of evidence have been triangulated and synthesized by each main evaluation issue and question. The evaluation team sought to identify a pattern of findings, or themes, across all lines of evidence for each question, as no line of evidence is generalizable on its own. Where a discrepancy was noted, efforts were made to present the diverse findings and seek a rationale for the opposing views/findings.

Exhibit 3.2
Summary of the Evaluation Issues, Questions and Data Collection Methods

Evaluation Issues and Questions	Document Review	Literature Review	Interviews
<i>Relevance</i>			
1. What are the risks associated with fulfilling the federal government's obligations to provide potable water to employees or others using federal facilities? a) What role does the FDWCP play in risk mitigation? b) Is there a continuing need for FDWCP? c) Are there other federal, provincial, municipal programs that address these risks?	✓	✓	✓
2. To what extent is the FDWCP consistent with federal government priorities?	✓		✓
<i>Design/Implementation</i>			
3. Is the FDWCP appropriately designed, funded and mandated to attain the expected outcomes?	✓	✓	✓
4. Is the FDWCP designed to address the priority needs of federal drinking water providers to meet GCDWQ? How can the Program be improved?	✓		✓
5. To what extent was the Program implemented as planned?	✓		✓
6. Are the roles and responsibilities with respect to program implementation defined and understood? a) How appropriate are the roles and responsibilities with respect to achieving the desired outcomes of the Program?	✓		✓
7. What are some of the challenges and successes that have arisen in implementing the FDWCP? a) How have these challenges been addressed? b) What lessons can be learned from the successes and challenges to date?	✓		✓
<i>Progress/Success</i>			
8. To what extent have the expected outputs been achieved? a) Tools and guidance b) A federal community of practice c) A common set of data elements for compliance database d) Response protocol for information sharing, notification and investigation	✓		✓
9. To what extent is there increased awareness among federal departments of good practices and risks associated with drinking water systems?	✓		✓
10. To what extent is there improved coordination and collaboration for resource sharing?	✓		✓
11. To what extent is there improved federal capacity to comply with GCDWQ, CLC and due diligence?	✓		✓
12. To what extent is there an improved capacity to respond to waterborne outbreaks?	✓		✓
13. What challenges still exist for federal drinking water providers in meeting obligations to maintain effective water management in areas of federal jurisdiction (i.e., to employees and to others who live on or visit federal lands)?	✓		✓

3.5 Ethical/Human Subject Protection: Issues and Protocol

All information provided by key informants has been treated in accordance with the provisions of the Access to Information Act and the Privacy Act. Any information collected by Health Canada that would qualify for protection under the Acts has been treated in a confidential manner, and only aggregate results have been reported. Moreover, Goss Gilroy Inc. is guided by, and must follow, professional and ethical guidelines concerning research. All responses have been analyzed in aggregate.

4.0 KEY FINDINGS

The findings in this evaluation have been organized to address each evaluation question. For each question, a brief description of why the question was posed is provided. Next, evidence from the document review, literature review and/or interviews is provided to form a response to the evaluation question. The conclusion and any recommendation(s) specific to the question are then presented.

4.1 Relevance

Evaluation Question 1

What are the risks associated with fulfilling the federal government's obligations to provide potable water to employees or others using federal facilities?

- a) What role does FDWCP play in risk mitigation?
- b) Is there a continuing need for FDWCP?
- c) Are there other federal, provincial, municipal programs to address risk?

This question was posed to position the FDWCP in the overall context of drinking water risks and drinking water management. The role of, and continuing need for, the Program was also explored.

1 Risks related to the provision of safe drinking water

There are a myriad of risks related to the provision of safe drinking water. The literature cites not only contaminants but also situations where risks to drinking water are increased. Contaminants in drinking water and water sources can consist of microbiological agents (e.g., pathogenic bacteria and viruses, protozoan parasites), aquatic biota (e.g., blue-green algae), inorganic chemicals (e.g., metals such as copper and lead, substances such as cyanide, nitrate or fluoride), organic chemicals (e.g., trihalomethanes (THM), Dichloro-Diphenyl-Trichloroethane (DDT), tetrachloride, dieldrin), or radiochemicals (including those that are naturally occurring as well as man-made.⁸ The literature points to a number of situations that have been shown to increase risks to the provision of safe drinking water and include: severe weather (e.g., rainfall), water

⁸ McKay, Jennifer and Moeller, Anthony. "Is risk associated with drinking water in Australia of significant concern to justify mandatory regulation?" in *Environmental Management* Vol. 28, No. 4, pp. 469-481. 2001. Findings also supported by Schuster, Corrine J. et al. "Infectious disease outbreaks related to drinking water in Canada, 1974-2001" in *Canadian Journal of Public Health* July/August 2005, Vol. 96, No. 4, pp. 254-258.

treatment failures, inadequate water distribution systems, location (e.g., source water that is vulnerable to outside influences such as animals and nearby land uses, distribution systems' proximity to sewers), and human error.⁹

Key informants knowledgeable of risks to drinking water reiterated many of the risks highlighted above. However, more relevant to the federal government context, respondents mentioned that the following circumstances exacerbate risks:¹⁰

- Geographic diversity, small sites and/or remote locations (mentioned by four clients, and three HC personnel);
- Lack of funding to carry out inspections, training and drinking water management generally (mentioned by five clients and one HC personnel);
- Lack of direction or assistance regarding how departments can meet the GCDWQ (mentioned by two clients and one HC personnel);
- Lack of awareness, knowledge and understanding of departments' responsibilities for safe drinking water (mentioned by one client and one HC personnel).

Two main risks were identified for the federal government should an outbreak occur. First, there are liability risks (cited by two HC respondents, and inferred in other interviews that refer to the fundamental obligation to provide potable water). Second, there are risks related to the loss of public confidence and loss of reputation (cited by two HC respondents). Both of these risks were also highlighted in the literature extensively¹¹.

Moreover, inadequate management of drinking water systems today results in the risk that the costs to remediate the problems will become much higher in the future. One HC respondent provided the example of a federal drinking water provider who chooses to provide bottled water rather than spend the required capital funds to improve the drinking water system/fix the problem.

A related public health risk pertaining to the provision of safe drinking water is an unclear picture of the extent to which there is a problem or ongoing risk to human health (finding is supported by a preponderance of the literature as well as key informants). While incidents such as the Walkerton and North Battleford outbreaks are widely known and have been instrumental in raising awareness related to risks of drinking water safety, the current state of national

⁹ Supported by: S.E. Hrudef et al. "A fatal waterborne disease epidemic in Walkerton, Ontario: comparison with other waterborne outbreaks in the developed world" in *Water Science and Technology* Vol. 47, No. 3, pp. 7-14, 2003; Schuster et al. (2005); Whelan JJ and Willis K, "Problems with provision: barriers to drinking water quality and public health in rural Tasmania, Australia" in *Rural and Remote Health*, Vol 7, No. 627, (Online), 2007.

¹⁰ Note that some respondents mentioned more than one circumstance.

¹¹ For example, in Whelan and Willis (2005) and Moore LF and Watson SB, "The Ontario Water Works Consortium: a functional model of source water management and understanding" in *Water Science and Technology*, Vol. 55, No. 5, 2007.

surveillance data (poor/missing) and water quality reporting requirements at the federal level (nonexistent) do not allow for adequate communication of the risks. “Incomplete knowledge itself presents a large unknown, and in regards to risk assessment methodology its partial absence or incompetent display should be categorized as a substantial and significant risk.”¹² Key informants (5 of 11 clients or 45%, and 3 of 14 HC personnel or 27%) also highlighted this risk voicing their concerns with inadequate monitoring and reporting mechanisms at the federal level (due to lack of staff, lack of systems).

With a poor appreciation of the incidence and consequences of contaminated drinking water, it is difficult to identify the extent of the need for more aggressive preventive actions (including remedial action). As illustrated in England and Wales, once “the water quality data was being produced through the new monitoring schemes, ... there were now the facts to prove exactly where the problems were and their severity. The new more robust data was the most rigorous way to demonstrate ... that funds were required to facilitate remedial action.”¹³

Characteristics of a drinking water management program

In developed countries, there are two basic models of drinking water management programs: 1) nationally enforceable standards (as in the United States and the United Kingdom); and 2) national guidelines adopted in whole or in part into provincial or territorial regulations (as in Canada and Australia).¹⁴ However, whether a program is regulated or not does not in itself ensure safe drinking water. In fact, regulatory programs tend to be more reactive than proactive as they place an emphasis on testing as opposed to management.¹⁵

The literature review suggests that the focus of drinking water management should be on continuous improvement to ensure that the three main systems of drinking water provision are safe: 1) source water systems, 2) water treatment systems and 3) water distribution systems.¹⁶ This continuous improvement includes processes related to the five elements of the multi-barrier approach (including the first three highlighted above), but also including 4) monitoring and 5) response.¹⁷

¹² McKay and Moeller, 2001. Page 478.

¹³ May, A. “The benefits of drinking water quality regulation – England and Wales” in *Water Science and Technology* Vol. 54, No. 11-12, 2006. Page 389.

¹⁴ Hoffbuhr, Jack W., “The regulatory paradox” in *American Water Works Association Journal* May 2001, Vol. 93, No. 5, p. 8.

¹⁵ Ibid. Page 8.

¹⁶ IWGDW, *Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction – Version 1*, August 23, 2005. Page 18.

¹⁷ Ontario Ministry of the Attorney General Part Two Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water. Prepared by The Honourable Dennis R. O'Connor. May 2002.

The Water Safety Plan (WSP) concept development by the World Health Organization¹⁸, speaks to risk management in three main components: 1) system assessment; 2) operational monitoring; and 3) management plans that are consistent with the multi-barrier approach and the Hazard Analysis and Critical Control Point (HACCP)¹⁹.

Based on the literature, the documents and feedback from external expert key informants, a comprehensive water inspection and compliance program should also include:

- Guidance, tools and training^{20 21 22} for providers of drinking water (1 of 5 or 20% of respondents);
- A requirement to monitor water quality following international best practices, as well as a requirement to report findings regularly to a responsible body (4 of 5 or 80% of respondents);
- The identification of a responsible department and/or agency²³ within the federal government for matters pertaining to drinking water with the authority to enforce the regulations (2 of 5 or 40% of respondents); and,
- Access to financial resources²⁴ for training, inspections, reporting, and remediation.

1a) Federal government role in risk mitigation

Evidence gathered through the documents reviewed highlights that, within the Canadian context, the responsibility for the provision of safe drinking water to the public rests with the provinces and territories. Within federal building and lands, responsibility for the provision of safe drinking water rests with the federal government itself.

Currently, the legislative mechanism related to drinking water is the Canada Labour Code (CLC), under the departmental responsibility of Human Resources and Social Development Canada (HRSDC). HRSDC also has the authority for the enforcement of the Code. Under the CLC, “every employer shall ... provide, in accordance with prescribed standards, potable water”²⁵. Potable water is defined as water that meets the standards set out in the *Guidelines for*

¹⁸ World Health Organization, Water Safety Plans Managing drinking-water quality from catchment to consumer, 2005. Page 19.

¹⁹ The principles of HACCP are based on developing an understanding of the system, prioritizing risks and ensuring that appropriate control measures are in place to reduce risks to an acceptable level.

²⁰ Part Two: Report of the Walkerton Inquiry, Chapter 1: An Overview, Recommendation 62, p. 27

²¹ From Source to Tap, Federal-Provincial-Territorial Committee on Environmental and Occupational Health and the Canadian Council of Ministers of the Environment, May 2002, p. 6

²² Workshop on Federal Water Quality Training Needs – Final Report, Marbek Resource Consultants Ltd., May 2006, p. 5

²³ Part Two: Report of the Walkerton Inquiry, Chapter 1: An Overview, p. 14

²⁴ Ibid., Recommendation 78, p. 30

²⁵ Canada Labour Code (R.S. 1985, c. L-2), PART II, OCCUPATIONAL HEALTH AND SAFETY, Duties of Employer, Section: 125. (1), (j).

*Canadian Drinking Water Quality 1978*²⁶. However, employers are not required to report their compliance (or non-compliance) with the prescribed standards to any responsible authority outside of their own department.

Health Canada has a mandate to protect the health of Canadians. Within the HECSB, WHPSP has responsibility for the FDWCP (related to the provision of safe drinking water to federal employees). The WHPSP is responsible for helping Canadian private and public sector employers maintain and improve the health of their workers by providing leadership and policy development in areas that affect workplace health.²⁷

Public Service Health Program (PSHP)/WHPSP under appropriation provides services to their mandated clients (federal departments and agencies identified in Schedule 1, Part 1). These services include potable water hazards identification (through a work site investigation that may include surveys and recommendations for the control of occupational hazards) under Workplace Investigations service lines to departments and agencies for which Treasury Board is the employer. However, Health Canada/WHPSP has no legislative requirements to provide public health inspection services to these clients²⁸, nor any authority to ensure compliance (via inspections or any other mechanism) with the CLC.

Moreover, Health Canada/WHPSP has limited capacity for undertaking assessments of federal buildings or lands related to drinking water on any kind of large scale. Rather, the regional offices of the Public Health Program (PHP)/WHPSP will assist departments and agencies (upon request and based on cost recovery²⁹) with drinking water related issues. Services can include water testing, water management plans, and potable water system assessment. These services are generally provided once a Memorandum of Understanding (MOU) has been signed between the federal department or agency in question and WHPSP.³⁰

The Treasury Board Occupational Safety and Health Directive (effective January 1, 2006), Part IX (Sanitation) does not make direct reference to the GCDWQ, although it defines potable water as water of a quality which satisfies the requirements of Health Canada for drinking water. Also, the Directive provides minimal focus on and discussion of drinking water (e.g., is limited to storage containers, provision of cups for drinking and drinking water fountains). In its 2005 report, the Commissioner of the Environment and Sustainable Development (CESD), commenting on the previous Sanitation Directive from 1989³¹, stated that “the Sanitation Directive is not sufficient to provide guidance to departments and agencies, as it does not clearly outline the steps of a risk-based approach to ensure that drinking water is safe and meets the guidelines.” The CESD Report recommended that the Treasury Board Secretariat embed the

²⁶ Canada Occupational Health and Safety Regulations (SOR/86-304), Part IX, Section 9.24.

²⁷ http://www.hc-sc.gc.ca/ahc-asc/branch-dirigen/hecs-dgesec/whpsp-psstsp/index_e.html

²⁸ Health Canada, Public Health Services to Federal Entities, May, 2006. Page 1.

²⁹ Unless the inspection is a direct result of a complaint or an emergency. (Source: Health Canada, Public Health Services to Federal Entities, May, 2006. Page 4.)

³⁰ It is important to note that services provided by FDWCP are not subject to cost recovery.

³¹ The 2006 Directive relating to sanitation is very similar to the 1989 version but with fewer details, according to the CESD Report, 2005, Chapter 4, Section 4.8.

document “Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction” (Guidance Document) in any future iteration of related Directives.³²

With regards to the TBS role, the Directives and Standards – General (Chapter 2, dated 1993) located on the TBS website states that “Treasury Board, supported by the inspection, technical and advisory services of Labour Canada, and by the survey, investigation and consultative services of Health and Welfare Canada, will monitor the application of occupational safety and health standards in the Public Service.”

Also, the TBS Sustainable Development Strategy states that the Secretariat, under the guidance of the Interdepartmental Water ADM Committee (IWAC), will “develop a baseline on expenditures and results”³³ related to water (to be completed by February 2004). The CESD report indicates that while the TBS did not meet all its objectives, it did collect information from all departments and agencies involved except one.

Most federal departments and agencies have at least some responsibilities related to drinking water. Those who own buildings or land have responsibility for the drinking water once it enters their jurisdiction. “As part of their legislative responsibilities, federal [departments and agencies] must ensure that safe drinking water ... [is] from approved sources for the consumption of their employees and public use on their premises.”³⁴ An analysis of the evaluation findings (from all sources) revealed three main categories of awareness and capacity of federal drinking water providers:

- Those that are aware of their responsibilities and have begun to take steps and apply resources to the management of drinking water under their jurisdiction (e.g., staff, inspections, upgrading infrastructure, training);
- Those that are aware of their responsibilities, but do not have adequate resources to change how they manage drinking water; and,
- Those that are not aware of their responsibilities.

Appropriateness of ‘original’ FDWCP mandate and role

From the discussion above, there is clearly a need for a federal approach for drinking water management, inspection and compliance. The ‘original’ mandate of the FDWCP was to develop and implement a water inspection and compliance program including:

³² CESD Report, 2005. Chapter 4, page 17.

³³ TBS, Sustainable Development Strategy 2004-06. Page 10.

³⁴ Health Canada, Public Health Services to Federal Entities, May, 2006. Page 2.

- 1) A policy and procedure guide for monitoring and inspection of potable water systems;
- 2) A communications and response protocol for investigation of waterborne outbreaks; and
- 3) A comprehensive inspection and compliance database.

However, there is a gap between the original areas of focus and characteristics of drinking water management as described above (e.g., in particular the required resources, the identification of a federal body with authority to ensure compliance, and training).

Moreover, there are additional needs identified by federal departments and agencies themselves. These are highlighted below in Section 4.2 (page 26) within the context of the FDWCP program as it is currently designed.

‘Revised’ mandate and role of FDWCP

As described above, Health Canada/WHPSP does not have the legislative authority to enforce the requirements for drinking water compliance laid out in the CLC. As well, key informants (3 of 13, 23% of HC personnel interviewed) indicated that funding levels are inadequate to develop and implement an inspection and compliance database that is national in scope.

According to one program interviewee (1 of 13, 8% of HC personnel interviewed), Health Canada/WHPSP program personnel responsible for the implementation of the FDWCP also understood that the federal government’s capacity to comply (e.g., overall awareness and knowledge, and ability to access resources) with the CLC and the GCDWQ was low. Thus, program management revised the mandate of the FDWCP without TBS approval.

In one respect, FDWCP program management expanded the focus on one area of the ‘original’ mandate (i.e., towards providing leadership and assistance to federal departments in meeting their regulatory obligations for the provision of safe drinking water). However, the implementation of a comprehensive inspection and compliance program was refocused from the development of a program, to facilitating the development of a program. The main outputs resulting from this ‘revised’ program mandate and activities were:

- Guidance and advice provided to federal departments and agencies regarding their drinking water obligations and how to comply with the GCDWQ;
- Tools for effective drinking water management and improved compliance; and,
- A coordinated federal community of practice for sharing best practices.

The decision to adjust the role and focus of the Program was supported by HC personnel interviewed for the evaluation. More than half (7 of 13, 54%) indicated that the ‘original’ mandate was inappropriate³⁵. Interviewees noted that the Program description in the official government documents that included the development and implementation of a water inspection and compliance program – the characteristics of which would include monitoring, oversight and enforcement – was inconsistent with FDWCP’s authority and budget.

1b) Continuing need for FDWCP

The evaluation findings suggest that there is a continuing need for the federal government to address issues related to drinking water safety. Moreover, in order to comply with the CLC, federal departments and agencies have an ongoing need for guidance, support, information, tools, training, and opportunities to share information and best practices. This need was supported by both documents and interviews.

The CESD 2005 report found that departmental procedures to provide potable water to their employees and meet the GCDWQ were inconsistent, noting that such procedures ranged from comprehensive to unclear.³⁶ The report also pointed to a need for “clearer central guidance.”³⁷ As well, the Needs Workshop³⁸ report documented the ongoing need for various supports, including (but not limited to) tools, guidance and advice, training, and centralized information, all of which are consistent with the FDWCP. This document also highlighted others areas of focus for ongoing efforts of the Program, including a policy and policy resolution, technical capacity and communication services.

In interviews, all clients (n=11, 100%) and HC personnel (n=14, 100%) indicated that there is an ongoing need for the FDWCP to continue providing the services currently available, as well as to expand the suite of services it offers³⁹.

1c) Other federal, provincial, municipal programs to address risk

According to HC personnel interviewees (13 of 14, 92%), there are very few sources of the types of services highlighted above available to federal government departments and agencies (other than those provided by Health Canada). While provinces and territories provide similar services related to the provision of drinking water, federal departments and agencies fall under a separate jurisdiction.

³⁵ It is likely that this proportion would have been higher if all HC personnel interviewed were knowledgeable of the ‘original’ mandate of the program. However, the evaluation did not seek specifically to explore the awareness with and opinions of the original mandate with all key informants, but rather only those most familiar with the program.

³⁶ CESD Report, 2005. Pages 16-17.

³⁷ Ibid., Page 17.

³⁸ The FDWCP held a Needs Workshop in June 2007 with major providers of drinking water (members of the IWGDW) to assess their ongoing needs with respect to drinking water management.

³⁹ Please see findings for Evaluation Question #4 (page 31) for more details on suggestions for improvements to meet needs.

Conclusions

The ‘original’ mandate of the Program as outlined in official government documents regarding the development of an inspection and compliance program, was not feasible.

A revision of the FDWCP mandate was necessary as Health Canada/WHPSP’s authority is not consistent with the mandate outlined in official government documents.

The subsequent ‘revised’ FDWCP mandate and main activities also did not permit the Program to satisfactorily address the risks facing federal providers of drinking water. There remains a significant gap in the area of ensuring compliance with the GCDWQ, the CLC and due diligence.

At present, no single overall body in the federal house is active in providing regulatory oversight for the provision of safe drinking water for all federally owned lands and buildings. Issues with current drinking water safety in federal buildings and on federal lands are largely unknown, leaving the federal government open to potential legal risks and individual health risks related to water quality management.

Therefore, there is a continuing need for the Program to play a role in coordinating the federal players responsible for the provision of safe drinking water.

Recommendations

Recommendation #1

Develop and implement an overarching, coordinated federal approach for drinking water management, inspection and compliance, including clarifying/defining the overall responsibility for regulatory oversight.

- The Program should work more proactively with the appropriate federal players to develop this federal approach (or framework).
- This approach should include the identification/ definition of the issues and challenges regarding drinking water safety for federal drinking water purveyors in terms of:
 - Establishing an inventory of drinking water systems, testing regimes and compliance;
 - Issues related to surveillance; and,
 - Best practices, gaps and challenges, feasible solutions and first steps (e.g., taking a risk-based approach).

Recommendation #2

Clarify the Program mandate, objectives, roles and responsibilities, and priorities for a federal approach for drinking water management, highlighted above.

Evaluation Question 2

To what extent is the FDWCP consistent with federal government priorities?

It is of interest to understand the extent to which the Program continues to reflect the priorities of the government, from both a departmental and whole of government perspective. Answering this question provides a rationale for the continued involvement of Health Canada in this Program.

Speeches from the Throne from 2004 and 2005, as well as the Budget Speech from 2004 mentioned actions to address clean and safe water. However, since 2005, there have been no mentions of clean water with the exception of the provision of safe drinking water for First Nations. The CESD report (2005) noted that the federal government declared water as a sustainable development priority in 2003. The development of the 2004 Federal Water Framework also emphasizes this priority with the first of its four key outcomes: human health. Of the eight clients who were able to provide an opinion on the consistency of the Program with government priorities (3 of 11 clients were not certain or did not feel they were adequately familiar with the mandate to comment), most (6 of 8, or 75%) felt the Program is consistent with current federal government priorities.

For HC respondents, only two were not certain about the Program's consistency with federal government priorities. The majority (10 of 12, or 83%) felt the Program is consistent, citing either Health Canada's mandate to protect the health of Canadians (including Canadians at work) or the federal government's focus on the environment. Of the two who did not feel it was a priority, one did mention the environment priority, but that the current focus is on clean air and contaminated sites and not on drinking water.

Conclusions

Safe drinking water is clearly consistent with the mandate of Health Canada and WHPSP and the priorities of the Government as expressed in the 2004 and 2005 Speeches from the Throne and the 2004 Budget. While water was declared a sustainable development priority by the government in 2003 the focus on water has not been emphasized in subsequent government communications regarding priorities since 2005.

Recommendations

See Recommendation #1

4.2 Program Design and Implementation

Evaluation Question 3

Is the FDWCP appropriately designed, funded and mandated to attain the expected outcomes?

This question was posed to determine the extent to which the ‘revised’ mandate and related activities of the FDWCP are appropriate to meet the expected outcomes as outlined in the program logic model. Findings related to the appropriateness of the ‘original’ mandate are not presented here.

Design of the FDWCP to attain expected outcomes

A majority of FDWCP clients (8 of 11, 73%) and HC personnel (8 of 14, 57%) interviewed indicated that the Program’s design was appropriate. This assessment was based on 1) FDWCP’s revised mandate and current funding envelope; and 2) the expectation that increased awareness and coordination/collaboration will lead to increased action. In the words of one respondent, “[The] design is based on the belief that increased awareness will lead to increased action in a non-regulatory environment.”

Only one of eleven (9%) clients felt that the design was not appropriate, citing that Health Canada should have the authority to ensure compliance. Two of eleven (18%) clients did not feel they had adequate knowledge of the design of the FDWCP to comment.

Some HC personnel (4 of 14, 29%⁴⁰) identified opportunities to be more proactive in HC regions and at headquarters to approach and assist departments that lack internal capacity for drinking water management. Three (of 14, 21%) HC personnel did not feel they had adequate knowledge of the design of the FDWCP to comment.

An analysis of the findings related to the success of the FDWCP in achieving its desired outcomes (see Section 4.3, page 35) suggests that the immediate outcomes related to improved capacity (i.e., the capacity to comply with the GCDWQ, CLC and due diligence and the capacity to respond to waterborne outbreaks) are more likely to occur in the longer term. This would suggest that either the program design or the program logic is flawed.

⁴⁰ Note that one of the four who identified opportunities to be more proactive also felt that the design was appropriate overall and is therefore included in the 57% figure.

Funding of the FDWCP to attain expected outcomes

With respect to the Program's funding, the majority of client interviewees (7 of 11, 64%) were not sufficiently familiar with it to comment on its appropriateness. However, most HC personnel (8 of 14, 57%) found the Program's funding to be at least somewhat appropriate – that is, adequate to continue the Program's current focus on raising awareness; facilitating coordination and collaboration among federal providers; and developing tools. Of those who did not feel the funding was appropriate, three (of 6, 50%) commented that the present funding is inadequate for developing a compliance and inspection database, conducting inspections and funding remediation.

Mandate of the FDWCP to attain expected outcomes

Regarding the Program's revised mandate, most client interviewees (8 of 11⁴¹, 73%) and HC personnel (10 of 14, 71%) found it to be appropriate. Of those who felt the mandate was appropriate, eight HC personnel respondents (of 10, 80%) commented that there is a need for someone to address the issue of regulation and compliance, whereas only one client (of 8, 13%) commented that the regulation piece is lacking.

Conclusions

At present, the design, funding and revised mandate appear to be appropriate for achieving the specific immediate outcomes of: increased awareness; and improved coordination and collaboration.

However, the program design and elements of the logic model related to the achievement of the two specific capacity building immediate outcomes are questionable. It appears these outcomes are less likely to occur in the shorter term (this view is borne out in the discussion below on success in Section 4.3, page 35). The ongoing collection and examination of performance measures was not undertaken by the Program and is required to adequately assess the program logic and likely achievement of expected results/outcomes (i.e., for immediate, intermediate and long-term outcomes).

Recommendations

Recommendation #3

Revise the program logic model taking into account any revised mandate and objectives, also ensuring the logic model fits within the larger, more overarching federal program.

⁴¹ The balance (n=3 of 11, 27%) of respondents could not comment due to lack of knowledge of the mandate.

- Conduct a literature search to confirm the Program’s logic and ensure it is theoretically anchored and linkages between the Program objectives, activities and related outputs will lead to the expected results (outcomes) achievement.

Evaluation Question 4

Is the FDWCP designed to address the priority needs of federal drinking water providers to meet GCDWQ? How can the Program be improved?

This question was posed to more closely explore the extent to which the Program is designed to meet the needs of clients (as opposed to question 3, which explored the conceptual framework for the Program’s design). It also seeks to identify opportunities for improvement.

Eight of eleven (73%) client respondents indicated that the FDWCP had at least partially met their needs, which ranged from basic advice – in the case of departments just beginning their drinking-water efforts – to specific resources, in the case of departments with previous knowledge and experience. In the words of one interviewee, “FDWCP has played a major role in assisting with the development of guidelines for federal facilities and the development of a training module that addresses the Canada Labour Code and Due Diligence. The latter will definitely be useful in providing potable drinking water.”

The document review provided examples of additional needs not already being addressed by the Program. Eighteen participants from 12 departments with responsibilities for drinking water attending the 2007 needs workshop identified the following remaining needs.⁴²

- 1) ***Centralized resources, tools and information.*** Specifically, a need was identified for a repository of common training materials, a federal registry for current and emerging threats, and an inventory of departmental potable water systems were highlighted.
- 2) ***Policy and policy resolution.*** Specifically, a need was identified for more clearly defined roles and responsibilities for potable water services and more policies created to address risk communications.
- 3) ***Technical capacity.*** Specifically, the Program could be improved if it provided 1) data acquisition and storage systems to regularly monitor and record information on water quality and potable water systems; and/or 2) services for micro-systems and remote facilities.

⁴² Assembled from the Needs Workshop Report (2007), notes from meeting/conference calls of the WHPSP Water Network Committee, and results of the Workshop on Federal Water Quality Training Needs (dated May 18, 2006).

- 4) **Guidance and advice.** Specifically, the delivery of workshops on the Guidance Document and guidance on the legal responsibilities relating to properties leased from or by the Federal Government.
- 5) **Training.** Specifically, a need was identified for information on the Canada Labour Code, legal/ due diligence obligations, the findings of the CESD. As well, a need was identified for materials that reference the most current version of the GCDWQ. A consistent approach for decentralized departments to follow was also a suggested topic for training. Finally, a need was identified for an administrative system that could track and verify training has been obtained by operators (recommended web-based platform).
- 6) **Communications services.** Specifically, a need was identified for a communications plan to inform several audiences of key messages and provide for specific communications protocols.

Client interviewees echoed the findings in the needs workshop report. The most cited need expressed by clients who identified their needs are not being met and made suggestions for improvement (3 of 10, 30%) was the need for more human resources (e.g., to assist with the execution of interdepartmental work and issues related to training).

Several HC personnel (10 of 14, 71%) also indicated that certain client needs were not being met. These needs were also consistent with the needs workshop report cited above. The most often cited need was for tools, such as training materials, mentioned by two respondents (of 10, 20%).

Findings from these lines of evidence suggest there are a number of outstanding gaps in services available to clients. Responding to these gaps would ensure the Program is design to address the priority needs of federal drinking water providers.

Conclusions

The majority of clients indicated that the Program was able to meet their needs at least to some extent, specifically citing the development of tools and resources and the provision of advice for drinking water management.

There were many needs expressed by client departments where additional work by the Program would be warranted.

Recommendations

Recommendation #4

Explore possible mechanisms for addressing the most pressing needs identified by client departments during the needs assessment undertaken in 2007 (within an agreed-to mandate).

Evaluation Question 5

To what extent was the FDWCP implemented as planned?

As this is the first evaluation of the FDWCP, a question was posed to determine the extent to which the Program was implemented as planned. The evaluation also probed to understand why deviations from the plan occurred as well as the extent to which these deviations were appropriate.

A review of the documents relating to the initial plans for the FDWCP indicates that the original vision for the Program was to be much broader and, in fact, deal more directly with establishing a compliance program. This “Compliance Program” would be implemented by all departments with responsibilities for drinking water and would be coordinated by WHPSP (including the provision of advice). Specifically, the Program would include: policies and guidance on regular inspection and monitoring activities; certification of inspectors (departments would conduct inspections in their own facilities); training programs for inspectors; collection and analysis of data on compliance; and annual compliance reports.

In order to implement this Compliance Program as described, \$19 million over 5 years would be required. However, official government documents confirm that only \$5 million over 5 years would be available to “develop and implement a water inspection and compliance program.”

Two of the five HC personnel (40%) who provided a response regarding implementation⁴³ stated that there was no clear plan for implementation at the start up of the Program in 2003. This was likely due to the fact that the funding available would not enable the implementation of the plan articulated in the Proposal presented in 2002.⁴⁴ In addition, the role of other departments in undertaking the inspections themselves was not taken into account in the mandate of the FDWCP. Thus, the Program as described in official government documents was not feasible to implement in that Health Canada/WHPSP does not have the authority to undertake inspections

⁴³ The remaining nine (64% of the 14 possible respondents) either stated the question was not applicable to them or that they did not know.

⁴⁴ FDWCP Proposal Presentation to WHPSP Extended PMC, September 12, 2002. This presentation was delivered in preparation for the Treasury Board submission in 2003.

and/or enforce compliance. This finding was confirmed by three of the five HC personnel (60%) who responded who felt that the ‘original’ mandate in the official government documents was inconsistent with the authority held by program officials.

A Question and Answer document regarding the FDWCP prepared in December 2003 indicated that the short term objectives of the Program were revised by Health Canada management from the Proposal prepared in 2002 to include: support the IWGDW; undertake a needs assessment to identify where support could best be provided to assist departments to improve their compliance with GCDWQ; and, coordinate the development of policies and protocols to enhance WHPSP’s technical advice to federal departments.

One HC program respondent (of 5, 20%) explains that, given the impossibility of implementing the Program as outlined in the official government documents, program officials decided to focus on creating a tool that would facilitate the collection of appropriate drinking water system information from a diversity of departments, in time, hoping this would lead to voluntary departmental participation in contributing core information to a federal drinking water compliance database. Thus, the initial focus of the FDWCP was to establish the foundation (i.e., enablers) for the Program, before creating tools that would serve to implement the Program. However, the ‘original’ FDWCP mandate of “developing an inspection and compliance program” was not achieved.

Conclusions

The ‘original’ FDWCP mandate (i.e., to develop a comprehensive inspection and compliance program) was not implemented as originally planned.

The ‘original’ FDWCP mandate was considered by Health Canada management to be outside the authoritative scope of Health Canada/WHPSP, and funding was inadequate to implement an inspection and compliance program. Thus, the FDWCP implementation was adjusted and the activities were refocused towards guidance and tools.

Evaluation Question 6

Are the roles and responsibilities with respect to program implementation defined and understood?

- a) How appropriate are the roles and responsibilities with respect to achieving the desired outcomes of the Program?

The clarity of roles and responsibilities was explored with a view to further understanding the implementation and ongoing operation of the Program. As well, the appropriateness of the roles and responsibilities speaks to the Program's ability to achieve its desired outcomes. This second question was addressed above during presentation of the findings related to the Program design (evaluation question 3).

The document review was not able to locate documented descriptions or definitions regarding the roles and responsibilities of the FDWCP and its personnel. Notably, the official government documents and the FDWCP framework and mandate do not address roles and responsibilities with respect to program implementation. The majority of program presentations and correspondence documents examined for this evaluation issue has no reference to, and did not address, the roles and responsibilities of the FDWCP with respect to program implementation⁴⁵. A few program documents only partially address the roles and responsibilities of the FDWCP.

In total, 11 of 14 (79%) of HC personnel provided feedback on whether roles and responsibilities are well defined. Although many acknowledged certain aspects related to the roles and responsibilities that are effective (i.e. defined, documented, etc.), all HC personnel who responded to this question (n=11; 100%) felt that in some respect the roles and responsibilities require improvement with regard to better definition, better documentation or better communication. In total, 10 of 14 (71%) of clients felt they could offer an opinion regarding the appropriateness of the roles and responsibilities. Of these, only a couple (2 of 10; 20%) firmly felt the FDWCP roles and responsibilities are well defined, appropriate and understood. The others (8 of 10; 80%) were either unsure or stated that they are not clear.

The impediments to defining and/or communicating the roles and responsibilities with respect to program implementation explained by HC personnel are related to: Health Canada/WHPSP's limited authority for ensuring compliance among federal department clients; the unwillingness of some clients to collaborate with Health Canada/WHPSP (i.e. sharing information); or issues related to the dissemination of information (i.e. from head offices to the regions). It appears there are varying levels of understanding in regards to Health Canada/WHPSP's responsibilities among client groups.

Conclusions

At present, the roles and responsibilities of the FDWCP are not well defined, documented or communicated.

45 Including: Presentation from the Environmental Health Officer Educational Workshop (November 2006); Presentation on the FDWCP made by Health Canada (March 2005); Presentation "Sampling and Beyond...A Presentation to Correctional Services Canada" by Health Canada; Presentation "Proposal for a Working Forum" by Health Canada; Presentation "Federal Waterborne Threats Protocol and Web-based Waterborne Threats Notification Modules" by IWGDW (November 2006); Presentation "Public Health Inspection Tracking System (PHITS)" by the Public Health Bureau (August 2005); Presentation "Information Gathering Exercise on Electronic Drinking Water Data Management Systems" by IT/Net Group Inc. to the IWGDW (May 2007); Presentation for the RCMP Atlantic Region Workshop by Health Canada (December 2005); Presentation "Implementation of a Drinking Water Management System for Non-Residential Municipally Supplied Buildings" by Health Canada (2007); Presentation on the FDWCP by the Interdepartmental Working Group on Drinking Water (May 2007).

Recommendations

Recommendation #5

Clarify, document and communicate the Program's roles and responsibilities within Health Canada and WHPSP, the IWGDW, and federal government providers of drinking water generally.

Evaluation Question 7

What are some of the challenges and successes that have arisen in implementing the FDWCP?

- a) How have these challenges been addressed?
- b) What lessons can be learned from the successes and challenges to date?

This question was posed to document what has been learned from the implementation of the Program so that future program development efforts can benefit from the experience of the FDWCP.

Challenges Arising in Implementing FDWCP

Some common challenges facing federal drinking water providers in the FDWCP implementation found in the document review (2007 Needs Workshop Report and 2005 CESD Report) and confirmed by interviews with HC personnel include: the provision of drinking water is not a core business area for departments/lack of buy-in (cited by 4 of 14 HC respondents; 29%); Treasury Board not engaged in matters related to drinking water⁴⁶ (1 of 14, 7%); competition with other priorities for resources (1 of 14; 7%); drinking water management is not consistent across federal departments (1 of 14; 7%); and departments' capacity to address drinking water issues is uneven (1 of 14; 7%). Other key challenges highlighted in the 2007 Needs Workshop Report include: the regulatory structure is out of date and compliance needs clarification; the unclear status of the Guidance Document; the lack of information required for federal-provincial-territorial discussions; and the lack of federal standards and support for a

⁴⁶ Types of engagement suggested by needs workshop participants included: TBS attendance at the IWGDW to raise TBS awareness of the issues; engagement to assist with addressing the regulatory structure issue; development of a TB Directive on drinking water to provide a source of guidance for the federal water purveyors on how the GCDWQ should be interpreted and applied. The CESD report indicated that the TBS Sanitation Directive "is not sufficient to provide guidance to departments and agencies." The CESD report also recommended that TBS embed the Guidance Document in future Directives related to drinking water.

proactive life-cycle management. According to WHPSP manual and other internal documents, other key challenges identified are: the pressure to meet obligations with limited resources, tools and skills; lack of federal coordination (until recently); the diversity of data systems in place; and the array of settings, issues, and technologies.

In total, 10 of the 14 (71%) HC personnel interviewed discussed challenges that arose in the implementation of the FDWCP. More than half of those who responded (60%; 6 of 10) attributed implementation problems to a lack of clarity of the mandate or a lack of authority held by Health Canada/WHPSP to implement a program as described in official government documents. Two of these respondents (20%) underlined that there was no clear plan for implementation; one explains that program officials had to re-define their approach. Furthermore, as explained by almost half of these respondents (40%; 4 of 10), the roles of those involved in implementing the Program were unclear, which made it very difficult to communicate with and inform clients.

Several HC personnel (40%; 4 of 10) found that cooperation – either from client departments or inter-departmental working group and the Secretariat – was an impediment to the implementation of the FDWCP. They explained that obtaining “buy in” from departments or “selling prevention”⁴⁷ to client departments was (and continues to be) challenging, as was establishing and maintaining the cooperation of the working group. Other impediments identified by HC personnel include: lack of an effective regulatory regime to compliment and reinforce the Program; and the numerous differences between departments that make it difficult to streamline services and ensure client needs are met.

Successes Arising in Implementing FDWCP

Key informants largely referred to the successes of the Program in the context of what the Program has achieved to date (e.g., tools such as the Drinking Water Management System Approach and questionnaire). More information on these findings is presented below in Section 4.3 (Success, page 36).

7a) How Challenges were Addressed

Most of the challenges highlighted above could not be addressed directly as they lay outside the scope of influence of the Program. Thus, the challenges were not addressed, *per se*. In fact, these challenges directly contributed to the level of success of the Program personnel in the achievement of desired outcomes.

⁴⁷ For example, some departments are said to be reluctant to provide information on their systems or to use assessment tools to identify gaps.

7b) Lessons Learned

Four of the HC personnel who responded (40%; 4 of 10) provided suggestions on the lessons that can be learned from the successes and challenges to date. Two (of 4, 50%) offered that it should have been seen as critical to immediately revise/clarify the Program mandate. One (of 4; 25%) suggested that it would have been beneficial to consult with federal departments at the onset to get a comprehensive understanding of their needs prior to implementing the Program. Other lessons learned (each cited by one of the four respondents) include: acknowledging the importance of working continuously toward a common goal; establishing and maintaining good communications; and acknowledging that partnerships are essential to the success of the Program. It was also pointed out that it is important to demonstrate leadership and a willingness to manage risk (for the whole system: "source to tap"); and to recognize the weaknesses and limitations of the Program (i.e. incapacity to collect data from all departments).

Conclusions

There have been many challenges associated with the implementation of the Program, in particular the lack of clarity with respect to program design and the fact that Health Canada/WHPSP does not have the authority to implement the 'original' mandate of the Program as outlined in official government documents.

4.3 Success

Evaluation questions 8 to 12 flow directly from the expected outputs and outcomes on the FDWCP logic model for the 'revised' mandate. They are posed to respond to one of the objectives of the evaluation, which was to assess the extent to which there has been progress towards the achievement of outputs and outcomes.

It is important to note that there is currently no formal ongoing performance measurement activity being conducted by the Program. Other than the evaluation plan outlined in the Evaluation Terms of Reference, there is no plan (e.g., Results-Based Management and Accountability Framework) for performance measurement. Thus, for each of the expected outputs and outcomes discussed below, no performance data exist aside from what was located in the documents. One of the key sources in the documentation was the "FDWCP Interim Program Evaluation Report" prepared by the Program in October 2007. Information presented in this document related to the achievement of outputs appears to be fairly complete, however, the information does not correspond to any pre-determined indicators of success. Information in the document related to the achievement of outcomes is limited to findings from other document sources (e.g., CESD Report 2005 and Needs Workshop Report 2007) and again, does not correspond to performance indicators of success as performance indicators for the logic model were not identified/developed and collected.

Thus, the lack of established, collected or reported performance measures has resulted in limiting the available evidence to assess the success of the Program to: qualitative evidence from interviews; and findings derived from a review of the documents.

Recommendation #6

Develop and implement a robust performance measurement strategy, including:

- The identification of performance indicators for outputs and outcomes; and,
- A data collection and reporting strategy that includes data sources, responsibility for collection, anticipated resources required for collection and reporting, and reporting format and frequency.

Evaluation Question 8

To what extent have the outputs been achieved?

- a) Tools and guidance
- b) A federal community of practice
- c) A common set of data elements for compliance database
- d) Response protocol for information sharing, notification and investigation

8a) FDWCP Tools and Guidance

The large majority (9 of 11, 82%) of client respondents indicated awareness of, and use of, FDWCP tools and guidance documents, including a questionnaire, a video on water sampling, and a gap analysis. Most client interviewees (6 of 11, 55%) indicated that the tools and guidance documents were of high quality, timely, appropriate and/or useful. A few of those who did not use FDWCP tools and guidance documents indicated that the tools/documents were not relevant to their departments/agencies. Reasons cited for dissatisfaction with the tools/guidance documents included difficulty 1) navigating the Health Canada's website as it relates to drinking water; and 2) cross-referencing program documents with the summary table.

In addition to the interviews, program documentation highlights the FDWCP's success in producing tools and guidance documents. For example, according to information contained in one FDWCP presentation, tools being provided include the following: a Drinking Water Management Framework, which comprises a questionnaire to assist departments to get to know their systems and identify priorities; and protocols developed for sites specific for drinking water operations in certain areas.⁴⁸ The FDWCP Interim Program Evaluation Report prepared in

⁴⁸ FDWCP, WHPSP, 2005-06 Overview.

October 2007 also indicates the development of 1) a Guidance Document⁴⁹, which provides departments with a description of drinking-water related responsibilities and activities that should be reflected in departmental policies and program operations that deal with drinking water; 2) a drinking water system questionnaire, which provides a field level means of collecting information on drinking water systems from source-to-tap, as well as relevant drinking water related information for buildings supplied by municipal drinking water; 3) a drinking-water management system, which helps responsible authorities compile comprehensive documentation of drinking-water management activities and demonstrate due diligence; and 4) an e-learning tool, which covers legal responsibilities under the CLC, appropriate use of the GCDWQ, and an overview of source-to-tap elements of drinking-water management.

8b) A Federal Community of Practice

All client respondents (11 of 11, 100%) indicated that they had participated in workshops, describing them as informative, useful, relevant and well organized. However, it was not always clear to the respondents whether the workshops were hosted by the Program or by the IWGDW. A few respondents indicated that improvements could be made to the workshop content – specifically, more targeted workshops were suggested, as were workshops with less technical detail.

Most client respondents (7 of 11, 64%) said that they had shared information, ideas and/or solutions with other departments, thus indicating that a federal community of practice had been created. Of those that did not share, one noted that his department was “too far ahead of most other departments to make sharing beneficial.”

The document review found program documentation that underscores the FDWCP’s success in producing a federal community of practice. Minutes from various meetings held between 2005 and 2007 indicate that DFAIT, Indian and Northern Affairs Canada – First Nations and Inuit Health Branch (INAC-FNIHB), RCMP and Parks Canada all expressed a desire to share information regarding drinking water, while documentation from workshops⁵⁰ indicates the identification of opportunities to promote networking and enhance integration and consistency in drinking-water management across the federal departments and agencies.⁵¹ The FDWCP Interim Program Evaluation Report prepared in October 2007 also indicates the development of a federal community practice, specifically via 1) annual, national workshops for federal drinking water

⁴⁹ Formally known as “Guidance for providing safe drinking water in areas of federal jurisdiction. Version 1 prepared in 2005 by the IWGDW and supported by the FDWCP.

⁵⁰ Workshops include the Drinking Water Workshop Discussion with PWGSC (Feb. 2005), the Federal Drinking Water Providers First Annual Workshop (Feb. 2005), the Environmental Health Officer Educational Workshop (Nov. 2006), and the Workshop on Federal Water Quality Training Needs (May 2006)

⁵¹ In particular, Draft I of the Environmental Health Officer Educational Workshop (November 2006) states that “[The] FDWCP [is] establishing a federal community of practice via National Workshops; Federal Water Works newsletters; interdepartmental working groups and initiatives; [the] Interdepartmental Water Quality Training Board; Assessment of data management systems, [and] fostering uptake of an FPT strategy for communicating information on drinking water incidents.”

providers (three workshops held to date in 2005 and 2007); 2) semi-annual newsletters (4 volumes to date distributed to 257 federal recipients); and 3) the Interdepartmental Water Quality Training Board, a sub-working group of the IWGDW focused on collaborative initiatives supportive of training.

8c) A Common Set of Data Elements for a Compliance Database

The FDWCP-commissioned report, “Information Gathering on Electronic Drinking Water Data Management Systems, Requirements and Application Catalogue” (Health Canada, 2007), presents an analysis of several drinking water data management systems currently in use within the federal government. The report identifies the functional requirements of a system, as well as the type of information that is required by users (i.e., what types of data should be collected and entered into the system). Functional and data requirements are broken down by regional/national management needs and water purveyors. This report is intended to assist federal departments in making informed decisions related to the formal collection of water data and to organize and facilitate the flow of information.

In addition to this document, the FDWCP has also developed a database (in partnership with Statistics Canada via a MOU). It is currently populated with 42 data sets that were largely generated with the pilot test of the questionnaire. Currently, the Program is moving towards a database that is an interpretive tool that can identify risks, priorities and make site-specific recommendations.

A few client respondents (2 of 11, 18%) pointed to progress towards the development of a compliance database by indicating that they either “generally contribute data” or that they “respond to some surveys on certain issues.” However, the remainder of client respondents did not indicate knowledge of a design/development strategy for a compliance database. Correspondingly, only a few HC personnel (2 of 14, 14%) were aware of a national compliance database.

The development of a national database to track compliance poses a significant challenge due to a number of factors, including:

- 1) Unwillingness on the part of departments/agencies with existing databases to abandon their systems (cited by 2 of 14, 14% HC personnel; 1 of 11, 9 % of clients);
- 2) Confidentiality issues (cited by 1 of 14, 7% HC personnel);
- 3) Hesitancy by departments and agencies who do not wish to share data with others for fear that vulnerabilities will be exposed and they will not have the resources to undertake the necessary remediation (cited by 1 of 14, 7% HC personnel); and,
- 4) Health Canada/WHPSP does not have the authority to compel departments or agencies to share data (cited by 1 of 14, 7% HC personnel).

8d) Response Protocol for Information Sharing, Notification and Investigation

The response protocol was developed by the Water, Air, Climate Change Bureau (Health Canada) in consultation with the Federal/Provincial/Territorial Committee on Drinking Water and supported financially by the FDWCP.

Most client respondents (7 of 11, 64%) indicated awareness of a response protocol, but only one indicated that he had been consulted in its creation. By contrast, only four of 14 respondents (29%) from HC programs indicated awareness of the development of protocols.

Notably, some of the clients (4 of 11, 36%) who indicated awareness of a response protocol remarked that the protocol is not useful for them. In the words of one respondent, “[The protocol] appears good in theory, but maybe not in practice as you would have to coordinate with local units as it would be a waste of time to do it nationally.” Another said “the protocol is really written for departments that deal with a lot of municipal systems.” Other clients remarked their department already had a response protocol.

Conclusions

Significant progress has been made towards the achievement of the outputs described in the Program’s logic model.

Note that Questions 9, 10, 11, and 12 relate to the achievement of immediate outcomes.

Evaluation Question 9

To what extent is there increased awareness among federal departments of good practices and risks associated with drinking water systems?

It is important to note that performance measures/indicators for increased awareness have not been defined, collected or reported to date. Therefore, the evidence that speaks to the extent to which awareness has been raised is limited to the opinions of key informants.

The document review indicated that the reach of the Program increased during 2005 but decreased slightly between 2005 and 2007. In particular, the total number of individuals and departments/agencies attending the three annual, national workshops for federal drinking water providers is presented below (Exhibit 4.1).

Exhibit 4.1 Workshop Attendance		
Date of National Workshop	# of attendees	# of departments represented
February 2005	122	13
November 2005	131	15
January 2007	130	14

Source: FDWCP Interim Program Evaluation Report, Oct. 2007

Active participation on the agendas and contribution to workshop content is described in Exhibit 4.2. Notably, the participation by federal departments experienced a sharp decline between 2005 and 2007.

Exhibit 4.2 Workshop Participation			
Date of National Workshop	Federal Departments	Academia/ Experts	Other Jurisdictions
February 2005	6	3	3
November 2005	14	3	1
January 2007	5	5	1

Source: FDWCP Interim Program Evaluation Report, Oct. 2007

Although a few client respondents (2 of 11, 18%) noted that “not everyone who needs to be more aware [of the risks and good practices associated with drinking water systems] has been made more aware,” most (8 of 11, 73%) indicated that their awareness of such risks and practices had increased over the last four years. Of that group, the majority (7 of 11, 64%) said that their increased awareness was at least partly attributable to FDWCP activities. Furthermore, most clients (7 of 11, 64%) indicated that their departments had instituted internal policies related to drinking water safety, and the large majority (9 of 11, 82%) of clients indicated that they had used tools organized/prepared by FDWCP – thus indirectly indicating improved awareness.

Among HC personnel, all respondents (14, 100%) believed that there had been improved awareness of the risks and good practices associated with drinking water systems over the last four years, and half of that group (7 of 14, 50%) indicated that this improvement was at least partly attributable to FDWCP activities such as the development of tools, provision of advice, convening of workshops and development and circulation of newsletters. As evidence of

increased awareness, one HC personnel interviewed (1 of 14, 7%) pointed to a greater demand by departments for field staff to provide services related to drinking water, while another (1 of 14, 7%) called attention to the “good quality questions on the drafts; good/technical questions from [those] calling for assistance; and greater awareness of technical issues.”

Conclusions

FDWCP activities (and related outputs) appear to be contributing to the immediate outcome of increased awareness among federal departments of good practices and risks associated with drinking water systems. However, this would have to be more fully examined once a performance measurement framework, and associated data collection, is in place.

Evaluation Question 10

To what extent is there improved coordination and collaboration for resource sharing?

Although one interviewee noted that he/she is “not sure of the extent to which [improved coordination and collaboration for resource sharing] can be attributed to the Program,” and another remarked that “the impact of FDWCP on communication and information sharing may be limited to its annual workshop,” all but one client respondent indicated that there had been improved coordination and collaboration since the inception of the Program. As well, most client respondents (7 of 11, 64%) said that they had shared information, ideas and/or solutions with other departments, and some client respondents (5 of 11, 45%) indicated that they had specifically shared inspection and/or compliance data with FDWCP and/or the WHPSP regions. Furthermore, all client respondents (11 of 11, 100%) indicated that they had participated in workshops (although it was not always clear whether the workshops were hosted by the Program or by the IWGDW.) By contrast, only 21% (3 of 14) of HC personnel could definitively say that there had been improved coordination and collaboration for resource sharing since the inception of the Program.

Document review information examined largely corroborates clients’ view that coordination and collaboration has improved. For example, Analysis of Program Activities by Strategic Outcome states that HC’s 2005 workshop was attended by 131 federal drinking water representatives, and that this mechanism facilitated “dialogue amongst drinking water providers with the objective of providing opportunities to share their experiences and practices related to drinking water management.” Another example is cited in the IWGDW’s Overview of Project Work and Results (August 2006), which states, “Departments have recognized [the] opportunity to work together to develop and deliver training associated with the due diligence of providing potable water.”

Conclusions

The Program activities (and related outputs) appear to be contributing to the immediate outcome of improved coordination and collaboration for resource sharing. However, this would have to be more fully examined once a performance measurement framework, and associated data collection, is in place.

Evaluation Question 11

To what extent is there improved federal capacity to comply with the GCDWQ, CLC and due diligence?

As noted previously, almost all client respondents (10 of 11, 91%) lacked knowledge of a design/development strategy for a compliance database. The majority of clients noted that their departments have implemented preventive measures (8 of 11, 73%) and/or some sort of documented procedures, requirements and/or testing regimes (6 of 11, 55%) that meet the GCDWQ.

From the documents reviewed, findings from the 2005 CESD Audit state, “The six federal departments and agencies we looked at had different internal procedures and requirements for testing. This resulted in mixed compliance with the guidelines, with some sites surpassing the guidelines, and others not testing at all... Such a range of compliance with the [GCDWQ] points to the lack of central guidance in areas of federal responsibility.”⁵² This statement suggests that federal departments and agencies have not uniformly increased their capacity to comply with the GCDWQ.

Conclusions

The extent to which the Program has influenced the capacity of federal departments to comply with the GCDWQ, CLC and due diligence is unclear. However, the evaluation found that the development of increased capacity to comply with the GCDWQ, CLC and due diligence is largely dependent on increased awareness and improved coordination and collaboration. Also, there are likely to be other contributing factors to the development of capacity, including attendance at training sessions, and senior management priority allocated to drinking water within the department, for example. This would have to be more fully examined once a performance measurement framework, and associated data collection, is in place.

⁵² CESD Report, 2005. Page 2.

Recommendations

See Recommendation #3 regarding revising the program logic model to revisit the timing of outcomes.

Evaluation Question 12

To what extent is there an improved capacity to respond to waterborne outbreaks?

It appears that a general approach for dealing with waterborne threats on a federal level is lacking. As mentioned earlier, most client respondents (7 of 11, 64%) indicated awareness of the response protocol; however, only one client indicated that his department would be using the protocol. Notably, 45% (5 of 11) of the remaining interviewees remarked that their departments had their own notification and response systems in place to respond to waterborne outbreaks.

The notion that a general approach for dealing with waterborne threats is lacking is echoed in the Federal Water Works, Volume 2 (2006), newsletter: “While there has been progress in developing national approaches for responding to outbreaks of both respiratory and food borne illness, the general approach for dealing with waterborne threats on a federal level can best be described as *ad hoc* and incomplete.”

Conclusions

It does not appear that the Program has influenced the capacity of federal departments to respond to waterborne outbreaks. This would have to be more fully examined once a performance measurement framework, and associated data collection, is in place.

Recommendations

See Recommendation #3 regarding revising the program logic model to revisit the timing of outcomes.

Evaluation Question 13

What challenges still exist for federal drinking water providers in meeting obligations to maintain effective water management in areas of federal jurisdiction (i.e., to employees and to others who live on or visit federal lands)?

This question seeks to identify the challenges that need to be overcome as the Program moves forward and undertakes the next steps in the achievement of its outcomes.

The majority of client respondents (6 of 11, 55%) cited a lack of financial resources as the primary remaining challenge to drinking water compliance. These clients feel limited in terms of their ability to cover costs related to testing, training and follow-up remediation work. Other major challenges cited by respondents included lack of training (5 of 11, 45%), a dearth of human resources (3 of 11, 27%), and lack of a consistent approach to drinking water management and related issues (3 of 11, 27%).

Among HC respondents who responded to this question, the most commonly cited (6 of 14, 43%) challenge was funding. A few respondents also indicated that the inspection component of compliance (2 of 14, 14%) and collaboration among parties invested in drinking-water compliance (2 of 14, 14%) – e.g., the Water, Air, Climate Change Bureau, the IWGDW, TBS, etc. – are key challenges.

Document review information also suggests a number of key challenges. According to the Needs of Federal Drinking Water Providers – Final Workshop Summary Report (August 2007), common challenges facing federal drinking water providers include the following:

- Low profile of potable water
- Competition with other priorities for resources
- Establishing mechanisms for centralized resources & tools
- Delivering cost-effective services for micro-systems & remote facilities
- Numerous possible management scenarios
- No clear picture of water facilities & associated needs
- Training consistency and availability
- Access & retention of qualified operators & project managers
- Keeping up with technologies, best practices & threats
- Long timeframes & significant efforts required for funding submissions
- Organizational issues for operations & operational funding

Other challenges highlighted in recent internal program correspondence (March 2007) include 1) missing data at the federal level – i.e., baseline information – to advance the implementation of a multi-barrier approach to providing safe drinking water; and 2) lack of knowledge on the status of drinking-water quality management undertaken by federal departments with responsibilities to drinking water.

Conclusions

The challenges facing federal providers of drinking water appear to be well understood and documented by the Program and major federal providers of drinking water.

5.0 OVERALL RECOMMENDATIONS

The following recommendations are based on the findings and analysis of evidence that were developed to address the FDWCP evaluation questions. The recommendations are grouped into four broad categories:

- Program relevance;
- Clarification of the Program's mandate, roles and responsibilities and design;
- Program success and related performance measurement; and,
- Future priorities.

Program relevance

Recommendation #1

Develop and implement an overarching, coordinated federal approach for drinking water management, inspection and compliance, including clarifying/defining the overall responsibility for regulatory oversight.

- The Program should work more proactively with the appropriate federal players to develop this federal approach (or framework).
- This approach should include the identification/definition of the issues and challenges regarding drinking water safety for federal drinking water purveyors in terms of:
 - ▶ Establishing an inventory of drinking water systems, testing regimes and compliance;
 - ▶ Issues related to surveillance; and,
 - ▶ Best practices, gaps and challenges, feasible solutions and first steps (e.g., taking a risk-based approach).

Clarification of the Program's mandate, roles and responsibilities and design

It is recommended the Program address the ambiguity that exists around the Program's mandate, roles and responsibilities, and design:

Recommendation #2

Clarify the Program mandate, objectives, roles and responsibilities, and priorities for a federal approach for drinking water management, highlighted above.

Recommendation #3

Revise the program logic model taking into account any revised mandate and objectives, also ensuring the logic model fits within the larger, more overarching federal program.

- Conduct a literature search to confirm the Program's logic and ensure it is theoretically anchored and linkages between the Program objectives, activities and related outputs will lead to the expected results (outcomes) achievement.

Recommendation #5

Clarify, document and communicate the Program's roles and responsibilities within Health Canada and WHPSP, the IWGDW, and federal government providers of drinking water generally.

Program success and related performance measurement

Recommendation #6

Develop and implement a robust performance measurement strategy, including:

- The identification of performance indicators for outputs and outcomes; and,
- A data collection and reporting strategy that includes data sources, responsibility for collection, anticipated resources required for collection and reporting, and reporting format and frequency.

Future priorities

Recommendation #4

Explore possible mechanisms for addressing the most pressing needs identified by client departments during the needs assessment undertaken in 2007 (within an agreed-to mandate).

APPENDIX A

LIST OF ACRONYMS

AAFC: Agriculture and Agri-Food Canada
ADM: Assistant Deputy Minister
CESD: Commissioner of the Environment and Sustainable Development
CLC: Canada Labour Code
DDT: Dichloro-Diphenyl-Trichloroethane
DPMED: Departmental Performance Measurement and Evaluation Directorate
DFAIT: Department of Foreign Affairs and International Trade
DWMS: Drinking water management system framework
FDWCP: Federal Drinking Water Compliance Program
FNIHB: First Nations and Inuit Health Branch
FPT: Federal-Provincial-Territorial
FTEs: Full-Time Equivalents
GCDWQ: Guidelines for Canadian Drinking Water Quality
HACCP: Hazard Analysis and Critical Control Point
HC: Health Canada
HECSB: Healthy Environments and Consumer Safety Branch
HRSDC: Human Resources and Social Development Canada
INAC: Indian and Northern Affairs Canada
IWAC: Interdepartmental Water ADM Committee
IWGDW: Interdepartmental Working Group on Drinking Water
MOU: Memorandum of Understanding
O&M: Operating and Maintenance
PHITS: Public Health Inspection Tracking System
PHP: Public Health Program
PMC: Program Management Committee
PSHP: Public Service Health Program
PWGSC: Public Works and Government Services Canada
RCMP: Royal Canadian Mounted Police
TB: Treasury Board
TBS: Treasury Board Secretariat
THM: Trihalomethanes
WHPSP: Workplace Health and Public Safety Program
WSP: Water Safety Plan

APPENDIX B

EVALUATION MATRIX

Exhibit B.1
Evaluation Information Summary Table

						Timing/Frequency of Measurement (7)	
Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Ongoing Performance Measurement	Summative Evaluation
Relevance:							
1. What are the risks associated with fulfilling the federal government's obligations to provide potable to employees or others using federal facilities? a) What role does the FDWCP play in risk mitigation? b) Is there a continuing need for FDWCP? c) Are there other federal, provincial, municipal programs that address these risks?	<ul style="list-style-type: none"> Risks documented in reviews, reports, official government documents, program documents, other literature, interviews FDWCP role identified in official government/program documents, interviews Roles for other players identified in reviews, reports, official government documents, program documents. Other federal, provincial and municipal program identified through document review and interviews Risk areas identified by independent audits and inspections, interviews Stakeholders indicate continuing need for FDWCP. Explanations offered by stakeholders to support continuing need for FDWCP 	Official government documents; Walkerton Inquiry Part II	Document review: <ul style="list-style-type: none"> FDWCP Framework Strategic planning documents Walkerton Inquiry Part II From Source to Tap CESD 2005 Audit Interviews: <ul style="list-style-type: none"> External Clients Non-clients Federal stakeholders Literature review	Document review; Interviews; Literature Review	GGI		X
2. To what extent is the Program consistent with federal government priorities?	<ul style="list-style-type: none"> Level of consistency between FDWCP objectives and activities, and priorities of the Government of Canada. 	Official government documents	Document review: <ul style="list-style-type: none"> Official government documents CESD 2005 Audit Needs workshop results Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders 	Document review; Interviews	GGI		X

Exhibit B.1
Evaluation Information Summary Table

Evaluation Information Summary Table							
						Timing/Frequency of Measurement (7)	
Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Ongoing Performance Measurement	Summative Evaluation
Design/Implementation							
3. Is the FDWCP appropriately designed, funded and mandated to attain the expected outcomes?	<ul style="list-style-type: none">• Extent to which the Program design conforms to the design outlined in preliminary program documentation• Program personnel indicate program logic is plausible, design is appropriate, funding is appropriate, mandate is appropriate• Stakeholders indicate program design is appropriate; mandate is appropriate	Official government documents	Document review: <ul style="list-style-type: none">• Strategic planning documents, logic model• From Source to Tap• CESD 2005 Audit• FDWCP Progress Report Interviews: <ul style="list-style-type: none">• External• Clients• Federal stakeholders Literature review	Document review; Interviews, Literature Review	GGI		X
4. Is the FDWCP designed to address the priority needs of federal drinking water providers to meet GCDWQ? How can the Program be improved?	<ul style="list-style-type: none">• #/% Respondents indicate program meets their needs, suggestions for improvement• #/% Respondents identify areas where needs not met, suggestions for improvement• FDWCP case study follow-up findings, participants demonstrate priority needs addressed• Independent reviews and audits identify priority needs not being met and areas for improvement	Not applicable	Document review: <ul style="list-style-type: none">• Needs Workshop Report• CESD 2005 audit• CGDWQ• FDWCP Annual Workshop Feedback• Walkerton Inquiry Part II Interviews: <ul style="list-style-type: none">• Clients• Non-clients Federal stakeholders	Document review; Interviews	GGI		X
5. To what extent was the FDWCP implemented as planned?	<ul style="list-style-type: none">• Differences notes between logic model/program documentation and program description in official government documentation• Reasons for noted differences articulated by program personnel	Not applicable	Document review: <ul style="list-style-type: none">• Terms of Reference• Strategic and operational planning documents• Official government documents Interviews <ul style="list-style-type: none">• Federal stakeholders (FDWCP personnel)	Document review; Interviews	GGI		X

Exhibit B.1
Evaluation Information Summary Table

Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Timing/Frequency of Measurement (7)	
						Ongoing Performance Measurement	Summative Evaluation
6. Are the roles and responsibilities with respect to program implementation defined and understood? a) How appropriate are the roles and responsibilities with respect to achieving the desired outcomes of the Program?	<ul style="list-style-type: none"> Official government documents, program documentation clearly define roles and responsibilities Program personnel indicate roles and responsibilities are well defined and understood by stakeholders #/% Stakeholders indicate roles and responsibilities are well defined, appropriate and understood #/% Program personnel, stakeholders agreeing roles and responsibilities enable the achievement of outcomes 	Official government documents	Document review: <ul style="list-style-type: none"> Official government documents FDWCP framework CESD 2005 Audit Presentations, correspondence Interviews: <ul style="list-style-type: none"> External Clients Federal stakeholders 	Document review; Interviews	GGI		X
7. What are some of the challenges and successes that have arisen in implementing the FDWCP? a) How have these challenges been addressed? b) What lessons can be learned from the successes and challenges to date?	<ul style="list-style-type: none"> Program documentation identifies challenges and associated responses Program personnel identify challenges and associated responses Program personnel identify successes and lessons learned from implementation to date Scope and magnitude of challenges, as identified by stakeholders 	Not applicable	Document review: <ul style="list-style-type: none"> Annual workshop evaluations Needs workshop results WHPSP federal entities planning document WHPSP manual and other internal documents Interviews: Federal stakeholders (excluding TBS, HRSDC)	Document review ; Interviews	GGI		X
Progress/Success							
8. To what extent have the expected outputs been achieved?							

Exhibit B.1
Evaluation Information Summary Table

Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Timing/Frequency of Measurement (7)	
						Ongoing Performance Measurement	Summative Evaluation
a) Tools and guidance	Tools and guidance <ul style="list-style-type: none"> Evidence that tools and related guidance documents were developed and disseminated from program documentation, including training materials and schedules, newsletters, website, communication and distribution plans and statistics, minutes from meetings, etc. Number of inquiries, responses, number of stakeholder initiatives supported % Clients indicate awareness and use of tools, guidance documents, etc. Stakeholder indicate tools and guidance documents are of high quality, timely, appropriate and useful/reasons for not using tools/guidance documents 	Program documents; indicators tracked from 2004	Document review: <ul style="list-style-type: none"> Training needs assessments Guidance document CESD 2005 Audit Training products activities and plans Newsletters Presentations and correspondence Minutes from meetings Drinking Water System Questionnaire Drinking Water System examples Others as available Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders (excluding TBS, HRSDC)	Document review; Interviews	GGI	X	X
b) A federal community of practice	A federal community of practice <ul style="list-style-type: none"> Evidence of meetings, network of departmental contacts, workshop attendance, #/% of departments participating in FDWCP events, evidence of other departments sharing ideas/solutions 	Program documents; indicators tracked from 2004	Document review: <ul style="list-style-type: none"> Minutes from meetings (IWGDW, WQ TB) Workshop proceedings and evaluations Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders (excluding TBS, HRSDC)	Document review; Interviews	GGI	X	X

Exhibit B.1
Evaluation Information Summary Table

Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Timing/Frequency of Measurement (7)	
						Ongoing Performance Measurement	Summative Evaluation
c) A common set of data elements for compliance database	A common set of data elements for a compliance database <ul style="list-style-type: none"> Evidence of design/development strategy for database/tools Evidence of progress towards development of the database (e.g., data collected from departments, consultations with IM professionals) 	Program documents; indicators tracked from 2004	Document review: <ul style="list-style-type: none"> Strategy documents Assessment study on departmental drinking water info management tools Input from departments Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders (excluding TBS, HRSDC) 	Document review; Interviews	GGI	X	X
d) Response protocol for information sharing, notification and investigation	Response protocol <ul style="list-style-type: none"> Evidence of consultation and/or participation in FTP committee and IWGDW for development of protocols Evidence of status of development of protocols – drafts/finals 	Program documents; indicators tracked from 2004	Document review: <ul style="list-style-type: none"> Minutes from meetings, correspondence Draft/final versions of protocol Presentations in support of protocol Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders (excluding TBS, HRSDC) 	Document review; Interviews	GGI	X	X
9. To what extent is there increased awareness among federal departments of good practices and risks associated with drinking water systems?	<ul style="list-style-type: none"> #/% Departments participating in initiatives /using tools organized/prepared by FDWCP #/% Departments with internal policies relating to drinking water safety Stakeholders indicate increased awareness of risks and good practices Ability of stakeholders to attribute increased awareness (where it exists) to FDWCP activities 	Not available	Document review: <ul style="list-style-type: none"> Workshop, training board, presentation lists of attendance, agendas Correspondence from clients Newsletter distribution list Interviews: <ul style="list-style-type: none"> Clients Non-clients Federal stakeholders (excluding TBS, HRSDC) 	Document review; Interviews	GGI	X	X

Exhibit B.1
Evaluation Information Summary Table

Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Timing/Frequency of Measurement (7)	
						Ongoing Performance Measurement	Summative Evaluation
10. To what extent is there improved coordination and collaboration for resource sharing?	<ul style="list-style-type: none"> Evidence of meetings, network of departmental contacts, workshop attendance, #/% of departments participating in FDWCP events, coordinated projects Program personnel and/or stakeholders indicate improved coordination and collaboration with concrete examples #/% Departments sharing inspection/compliance data with FDWCP/WHPSP regions #/% Departments sharing resources, information Evidence of a mechanism to manage and coordinate data Program personnel and/or stakeholders indicate coordinated data collection and management with concrete examples 	Not available	Document review: <ul style="list-style-type: none"> Minutes, agendas from meetings, workshops Training Board TORs Interdepartmental MOUs Attendance at meetings, workshops Correspondence to and from clients Interviews: <ul style="list-style-type: none"> Clients Federal stakeholders (excluding TBS, HRSDC)	Document review; Interviews	GGI	X	X
11. To what extent is there improved federal capacity to comply with GCDWQ, CLC and due diligence?	<ul style="list-style-type: none"> Evidence of a compliance database in use #/% Departments with a database, documented procedures, requirements and testing regimes that meet the GCDWQ #/% Departments implementing preventive measures, evidence of preventive measures Program personnel and/or stakeholders indicate improved federal capacity with concrete examples 	CESD 2005 Audit	Document review: <ul style="list-style-type: none"> 2005 CESD Audit Compliance database (if available) Interviews: <ul style="list-style-type: none"> Clients Non-clients Federal stakeholders (excluding TBS, HRSDC)	Document review; Interviews	GGI		X
12. To what extent is there an improved capacity to respond to waterborne outbreaks?	<ul style="list-style-type: none"> Evidence that response protocols exist #/% of respondents aware of and trained in application of response protocols and content, how they are to be used Evidence that departments agree to participate in protocol, # departments engaged # Departments with notification and response systems in place to respond to waterborne outbreaks 	OAG 2005 Audit	Document review: <ul style="list-style-type: none"> Newsletters Documents produced by program/with program assistance, FPT/IWGDW Committee consultation Interviews: <ul style="list-style-type: none"> Clients Non-clients Federal stakeholders (excluding TBS, HRSDC)	Document review; Interviews	GGI	X	X

Exhibit B.1
Evaluation Information Summary Table

Evaluation Issues and Questions (1)	Indicators (2)	Baseline Measure (3)	Data Source (4)	Collection Method (5)	Responsibility for Collection (6)	Timing/Frequency of Measurement (7)	
						Ongoing Performance Measurement	Summative Evaluation
13. What challenges still exist for federal drinking water providers in meeting obligations to maintain effective water management in areas of federal jurisdiction?	<ul style="list-style-type: none"> • Program personnel and/or stakeholders identify remaining challenges • Challenges as identified in program documentation 	Not applicable	Document review: <ul style="list-style-type: none"> • Internal program correspondence • Minutes • Needs workshop results • CESD 2005 Audit Interviews: <ul style="list-style-type: none"> • Clients • Non-clients Federal stakeholders	Document review; Interviews	GGI		X

APPENDIX C

SUMMARY OF SAMPLE SELECTION FOR INTERVIEWS

Exhibit C.1 Summary of Sample Selection for Interviews			
Interview Type	Rationale	Total N	# interviewed
<i>External Stakeholders</i>			
Academics	Knowledgeable of drinking water management best practices and risks, the requirements of drinking water oversight, and would have an opinion on the overall relevance and design of a program with the overall objectives of the FDWCP.	Unknown	1
Drinking Water Associations	Knowledgeable of drinking water management best practices and risks, the requirements of drinking water oversight, and would have an opinion on the overall relevance and design of a program with the overall objectives of the FDWCP.	8 to 10	1
Members of the FPT Committee on Drinking Water	Knowledgeable of drinking water management best practices and risks, the requirements of drinking water oversight, and would have an opinion on the overall relevance and design of a program with the overall objectives of the FDWCP.	13	3
<i>Federal Government Clients and Stakeholders</i>			
Clients	To better understand clients' needs with respect to drinking water compliance and inspection and the extent to which the FDWCP is designed and delivered to meet those needs. Departments that are significant drinking water providers, as defined by their involvement on the IWGDW. Thus one representative from all non-Health Canada or central agency members of the Interdepartmental Working Group for Drinking Water (IWGDW) were contacted to be interviewed.	19	11
Representatives of departments/agencies that have not accessed FDWCP services/tools	To understand their awareness of drinking water regulations and requirements, the role of FDWCP/Health Canada, and their sources of information related to drinking water.	180	2
Health Canada Program Representatives	In order to better understand how the FDWCP fits and its role within the overall federal framework for drinking water management. These interviewees were also asked to consider the overall appropriateness of the design of the Program and, where possible, progress towards the achievement of outcomes. Interviewees include representatives of the Water, Air, Climate Change Bureau, and the Workplace Health and Public Safety Program (WHPSP) (including representatives from FDWCP, the Public Health Bureau, Regional Public Health Coordinators, and Regional Managers)	21	14

