



## **April 1, 2017–March 31, 2020 Business Plan**

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## Executive Summary

The Walkerton Clean Water Centre (Centre) was established in October 2004 in response to Associate Chief Justice Dennis O'Connor's recommendations in the Report of the Walkerton Inquiry. As a board governed provincial agency of the Government of Ontario, the Centre's activities align with Ontario Regulation 304/04 made under the *Development Corporations Act*, a Memorandum of Understanding with the Minister of the Environment and Climate Change (Minister), the Agencies & Appointments Directive, and other applicable government directives. The Centre operates out of a facility that serves as a platform for the provision of education, training, information and advice to drinking water system owners, operators and operating authorities provincewide.

During 2016 – 17, the Centre continued to deliver on the objects identified in Ontario Regulation 304/04 and achieved a number of goals. Specialized training, including workshops and practical events, and mandatory training required by the Ministry of the Environment and Climate Change (Ministry) was developed, administered and delivered across Ontario. Since its inception, the Centre has trained more than 67,000 participants.

Important targets have been set for the 2017 – 2020 fiscal years. Under the new curriculum development plan, the Centre will continue to provide education and training while improving quality standards and offering more practical training options each year. Education and training will focus on the most vulnerable, small and remote drinking water systems. A gap analysis was used to identify new course topics and to help determine appropriate training formats and course development priorities. The Centre will develop standardized processes for training development, review and refresh, and will research new training delivery methods.

Drinking water technologies will continue to be demonstrated in the Technology Demonstration Facility and fact sheets, refereed publications, presentations and pilot testing results will be shared on the Centre's website and at conferences. The Centre will continue to investigate the expansion of support services through the development of an online information clearing house. The Centre's programs will continue to provide education, training, information and advice to owners, operators and operating authorities of drinking water systems and the public.

This business plan outlines the Centre's direction for the future and illustrates its focus on continual improvement. The business plan is evidence of the Centre's commitment to educating and supporting drinking water system owners, operators and operating authorities as they address drinking water system risks to safeguard Ontario's drinking water.

## Mission and Vision

During 2015–16, the Centre undertook a strategic planning project to review program direction and implement a new strategic plan. The Centre took a collaborative approach to developing the new strategic plan including a comprehensive client consultation conducted in five locations across the province. The client consultation resulted in feedback from drinking water system owners, operators, operating authorities, First Nation drinking water system owners and operators, inspectors, regulators and Ministry representatives. The primary focus of the client consultations was drinking water system vulnerabilities.

The following mission and vision were developed as part of the strategic planning project:

**Mission:** The Centre exists for the purpose of educating and supporting our clients as they address their water system risks in order to safeguard Ontario's drinking water.

**Vision:** An agency known for its innovative and practical approach to building knowledge and capacity for those responsible for water systems, emphasizing system vulnerabilities.

## Objects

Ontario Regulation 304/04, made under the *Development Corporations Act*, provides the Centre's objects. The objects of the Centre are to do the following, either alone or in conjunction with other organizations:

- To co-ordinate and deliver education and training for owners, operators and operating authorities of drinking water systems.
- To provide information, education and advice to owners, operators and operating authorities of drinking water systems and to the public about,
  - i. the treatment of water necessary to ensure that drinking water is safe,
  - ii. the equipment and technology used to ensure that drinking water is safe,
  - iii. the operational requirements necessary to ensure that drinking water is safe, and
  - iv. other environmental issues related to drinking water.
- To sponsor research into any activities related to its objects.
- To provide advice to the Minister on research and development priorities to achieve and maintain safe drinking water.
- To conduct such further activities, consistent with its objects, as are described in any policy direction issued by the Minister or as set out in any agreement with the Minister.

## Strategic Directions

The Centre implemented a new strategic plan that was developed during 2015–16. This strategic plan affects how the Centre will function in the future, the potential scope of its operations, and the manner in which it will serve its clients. The themes of the strategic plan include:

- addressing drinking water system vulnerabilities;
- modernizing training and learning approaches and methodologies;
- aligning organizational structures, functions and processes to support strategic priorities;
- enhancing work culture and principles; and
- measuring strategic achievement.

Over the next three years, the Centre will implement elements of the strategic plan (subject to the mandate review completion) to provide and/or augment relevant programs and support the drinking water goals and objectives of the Government of Ontario. These projects include:

- increased investment in curriculum to address identified risks and regulator and client feedback;
- implementation of new learning methods;
- increased investment in technology demonstration to address identified risks and regulator and client feedback;
- enhanced support to clients through the helpline, pilot testing and the information clearing house; and
- greater focus on Ontario Regulation 319/08 made under the *Health Protection and Promotion Act* and indigenous clients.

### 1. Education and Training

The Centre will continue to develop, administer and deliver the Ministry's mandatory courses required for drinking water operator certification, as well as specialized training that provides the continuing education units required for certificate renewal. Customized training for vulnerable drinking water systems and decision-makers may also be developed. The Centre's training supports drinking water system owners, operators and operating authorities across Ontario by providing technical, scientific and regulatory information related to drinking water.

As part of the strategic plan, the Centre will focus on addressing the needs of vulnerable drinking water systems. A list of vulnerabilities that relate to these systems has been compiled and the Centre's curriculum has been examined to identify gaps. Deficiencies in the training programs will be addressed to eradicate identified gaps. Stakeholders will be consulted throughout the process to ensure that programs meet their education, training tools and program delivery needs.

Efforts will be made to modernize the Centre's training approaches and methodologies. The Centre will develop a standardized process to ensure a consistent approach to training development and review processes. Research will be undertaken to optimize training delivery methods and tools. Client feedback will be integral to the process.

The Centre's Training Advisory Committee will continue to provide input into education and training programs. The committee provides advice to the Centre and reviews the annual training plan, including training priorities and direction for the development of new training. The committee is comprised of drinking water specialists with many years of experience who volunteer their time and expertise.

## **2. Information and Advice**

The Centre's Technology Demonstration Facility features conventional and advanced drinking water treatment systems, monitoring and control instruments, a distribution system and other equipment used to treat and distribute drinking water. The Centre will continue to use the facility to demonstrate drinking water technologies and provide technical and scientific information and advice to drinking water system owners, operators, operating authorities and the public through tours.

Pilot testing will continue to fill information gaps regarding the treatment, technology and operational requirements necessary to ensure that drinking water is safe. Results may improve existing training, contribute to new courses or be shared through conference proceedings and articles in relevant publications.

Publications and fact sheets will be produced and shared on the Centre's website to summarize technical information and improve knowledge transfer. Fact sheets will be developed through literature reviews and pilot testing and will address topics selected and prioritized in consultation with the Research Advisory Committee.

The Centre will continue to investigate the expansion of support services offered to clients through the development of an information clearing house. The online reference library will contain information vetted by Centre staff for use by operators, owners and operating authorities of drinking water systems in Ontario.

The Centre will continue to respond to technical calls from clients and the public, which are handled by knowledgeable staff. Details of the technical calls received are tracked in a helpline tracker spreadsheet.

## **3. Sponsored Research**

The Centre will continue to assess research gaps and needs to achieve and maintain safe drinking water and may advise the Minister on research priorities. The Centre's Research Advisory Committee, comprised of volunteers who contribute their time and drinking water expertise, play an important role in this program. They review the Centre's annual research plan and provide advice with respect to Ontario's drinking water research priorities. The Centre is prepared to respond to direction from the Minister and can provide grants for high-priority drinking water research related to its objects.

# Overview of Current and Future Programs and Activities

## 1. Education and Training

### Mandatory Training

Mandatory training is required to become a drinking water operator in Ontario. The Centre will continue to develop, administer and deliver the Ministry's three mandatory courses:

- The Entry-Level Course for Drinking Water Operators provides new operators with a basic understanding of water characteristics and pathogens, treatment and distribution processes, and the regulations that govern water quality. This course complements the on-the-job training that new operators receive from their employers.
- The Diligence in Drinking Water Operations course is the mandatory certificate renewal course that the Centre has offered since January 1, 2015. The Centre will be developing the next version of the mandatory certificate renewal course, to be effective January 2018 through December 2020.
- The Operation of Small Drinking Water Systems course meets the training requirements for a trained person as identified in Ontario Regulation 170/03 made under the *Safe Drinking Water Act, 2002*.

### Specialized Training

To meet operators' need for continuing education, the Centre will continue to deliver established training and events, including:

- The Standard of Care — Safe Drinking Water Act course, tailored to municipal councillors and decision-makers in municipalities that own drinking water systems.
- The Practical Training for Small Drinking Water System Owners and Operators course, geared toward small drinking water systems regulated under Ontario Regulation 170/03 made under the *Safe Drinking Water Act, 2002*, and Ontario Regulation 319/08 made under the *Health Protection and Promotion Act*.
- The Basics for Small Drinking Water Systems course.
- The annual Small Systems Workshop, providing hands-on training modules related to operating and maintaining small drinking water systems to owners, operators and operating authorities.
- An annual Maintenancefest event, held in Walkerton, to maximize access to the Technology Demonstration Facility and enhance practical skills for participants through a variety of training modules. Several new two-hour training modules will be added each year, based on client feedback, to ensure that this event remains popular. Regional Maintenancefest events may be delivered if requested.
- In-kind support to students of the 16 Ontario colleges that have agreements with the Ministry to deliver the Entry-Level Course for Drinking Water Operators as part of their curriculum. This support will allow students to access practical training at the Technology Demonstration Facility. Training may be provided to other interested postsecondary institutions.

New training programs may also be developed, such as an advanced training program for drinking water operators, training for decision-makers, and customized training for vulnerable drinking water systems. A set of vulnerabilities that relate to these systems will be established and the curriculum will be modified or developed to close identified gaps. Direction for new training programs will be determined by evaluating information from multiple sources, including: subject-matter-expert instructors; drinking water sector associations and committees; students and faculty from colleges and universities; municipal training coordinators and compliance officers; course evaluations; pilot testing and literature reviews; the Ministry; and Centre employees.

The Centre will also modernize training approaches and methodologies. A process will be developed to ensure a consistent approach to training development, review and refresh procedures. New training delivery methods and tools will be researched and opportunities to offer e-learning and virtual classroom training will be explored. E-learning may increase client satisfaction by providing flexible learning hours and locations, which may result in savings for clients by eliminating travel costs and reducing scheduling disruptions; however, it may not be the most effective teaching method for all learners or topics.

### **First Nation Training**

The Centre will provide additional training opportunities to indigenous operators through a collaborative effort with First Nation organizations. The Centre is in the process of negotiating a Memorandum of Understanding with First Nation partners to provide training to indigenous operators and First Nation leadership beginning in 2017. In partnership with the Ministry and First Nation training organizations, the Centre will provide the Entry-Level Course for Drinking Water Operators at no cost, including all expenses associated with attending the training, to participants from First Nation communities. These training opportunities will be provided, wherever possible, in locations which will minimize travel for indigenous operators and will be delivered by instructors who are indigenous or have extensive experience training indigenous operators. Training delivery will be tailored to reflect the learning needs of participants and content may be modified to relate more closely to the experience of operators in First Nation communities. This partnership will help to build long-term training capacity within indigenous organizations.

Additional support, including access to the Centre's helpline, information clearing house and pilot testing services, may be provided to operators with the intent of building capacity in First Nation communities. The Centre will continue to participate in and support the Government of Ontario's mandate to work with First Nation communities and the federal government to improve drinking water on reserves.

## **2. Information and Advice**

The Centre will continue to use the Technology Demonstration Facility to demonstrate drinking water technologies to drinking water system owners, operators, operating authorities and the public through the delivery of hands-on training. New technologies may be added to the facility when they become available and are adopted by drinking water facilities. The Centre has developed a technology demonstration master plan to address clients' feedback and fill gaps identified by a risk based gap analysis using the Centre developed vulnerabilities inventory. Pursuant to this master plan, the Centre will procure an ion exchange pilot plant system and various bench top and online instruments such as a spectrophotometer and multi parameters online meters (pH, conductivity

and dissolved oxygen meters).

The Centre will complete literature reviews and pilot testing to fill information gaps regarding the treatment, technology and operational requirements necessary to ensure that drinking water is safe. Pilot testing may be initiated in response to client inquiries or to address identified gaps, with a focus on issues faced by small and First Nation drinking water systems. The Centre will prioritize pilot testing using a risk-based approach to address drinking water system vulnerabilities. When complete, final reports will be prepared and the results may be used to improve existing training or contribute to new courses. Information may also be disseminated through conference proceedings and articles in relevant water publications. This ensures information is shared with the operators and decision-makers overseeing drinking water systems in Ontario.

Clients identified the need to address the high level of natural organic matters found in raw water sources in Northern Ontario. Consequently, the Centre will undertake the development of a knowledge base on natural organic matter removal in Northern Ontario. This two-year project will include bench/pilot scale testing in selected sites in Northern Ontario. Relevant case studies will be developed to support drinking water systems with high levels of natural organic matter water. Results of this project will also be widely disseminated through conference presentations, publications and insertion to training materials when possible.

The Centre will continue investigating the development of information clearing house services, including expanded helpline assistance and an online reference library. A pilot version of the reference library is being evaluated to determine the future utility of the project and the amount of staff time required to support this resource. The reference library will include fact sheets produced in-house that summarize technical information with the aim of improving the Centre's knowledge transfer capabilities. Fact sheets address topics selected and prioritized in consultation with the Research Advisory Committee.

### **3. Sponsored Research**

The Centre's Research Advisory Committee meets quarterly to provide their advice to the Centre on Ontario's drinking water research priorities. Members of the Research Advisory Committee were selected from applications received through calls for interest in 2011, 2014 and 2015. The group will review the Centre's annual research plan, which identifies research priorities necessary to achieve and maintain safe drinking water, provides status updates on the Centre's ongoing pilot testing and suggests improvements worthy of the Centre's consideration. The Centre will continue to assess research gaps and needs regarding safe drinking water and may advise the Minister on research priorities.

The Centre will continue to work with postsecondary institutions to support graduate students and post-doctoral fellows by offering access to the Technology Demonstration Facility, which in turn provides the Centre with exposure to more research projects. The Centre may also provide grants for research into any activities related to its objects and continue to sponsor the following research projects:

- *RES'EAU WaterNET — Phase II.* RES'EAU WaterNET research network is a program devoted exclusively to developing innovative and affordable solutions for providing drinking water to small, rural and First Nation communities. The Centre

supports RES'EAU WaterNET, which is leading the second phase of a project to address the key questions that challenge small drinking water owners, operators and operating authorities.

- *Natural Sciences and Engineering Research Council of Canada (NSERC) Industrial Research Chair in Water Treatment.* The Centre supports the NSERC Industrial Research Chair in Water Treatment and researchers from the University of Waterloo on a research theme related to developing strategies to deal with cyanotoxins. The scope of the research focuses on cyanotoxins method detection validation and the effect of various types of activated carbon on cyanotoxins removal.

## **Resources Needed to Meet Goals and Objectives**

The Centre relies on ongoing funding from the Government of Ontario to deliver its programs and services. Although the Centre's internal controls continue to regulate overall expenditures, the revenue generated through training registrations is not sufficient to recover total operating costs.

The Centre places particular emphasis on supporting vulnerable drinking water systems, which are often the most costly to serve. For example, to ensure that a comprehensive range of training is available to operators across Ontario, the Centre delivers training under circumstances where the low number of participants does not cover the cost to deliver the training. Other training providers may not be interested in delivering training to these individuals due to the associated costs. The Centre requires continued financial support from the Government of Ontario to ensure that its programs support the most vulnerable drinking water systems across the province.

Another aspect of the Centre's objects is the ability to sponsor high-priority drinking water research. The Centre assesses research gaps and needs, and may advise the Minister on research priorities. The funding received from the Government of Ontario ensures the Centre will be able to support research projects that address the issues in achieving and maintaining safe drinking water. It also enables the Centre to respond to direction from the Minister if required.

The Government of Ontario funding allows the Centre to install new technologies in the Technology Demonstration Facility as they become available and adopted by drinking water treatment facilities. Through the Technology Demonstration Facility, the Centre offers unique education and training opportunities to owners, operators and operating authorities of drinking water systems. The facility allows the Centre to demonstrate leading-edge drinking water treatment technologies and conduct pilot testing.

## Risk Identification, Assessment and Mitigation Strategies

The following tables highlight some of the risks identified by the Centre as well as mitigation strategies for each risk. The Centre has assessed each potential risk as a low risk.

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Strategic	The Centre operates in alignment with its legislated objectives and direction from the Minister.	<p>The Centre misunderstanding its objects and/or a direction issued.</p> <p>Insufficient employee skill sets to respond to direction from the Minister.</p>	<p>The Minister may take formal action that may include adjusting the composition of the board of directors or issuing a policy direction requiring the Centre to act.</p>	<p>The Centre and the Ministry have a Memorandum of Understanding that is periodically reviewed and updated. Any changes are communicated to Centre employees.</p> <p>The Centre prepares an annual business plan that aligns with legislated objectives. The board of directors approves the final business plan for submission to the Minister. The board of directors reviews the Centre's strategic directions on an ongoing basis.</p> <p>Following the Agencies &amp; Appointments Directive, the Centre prepares and submits an annual report, which reports on the objectives outlined in the business plan.</p> <p>The Centre's CEO and the Director of the Business and Fiscal Planning Branch of the Ministry meet quarterly.</p> <p>Centre employees and Ministry employees communicate regularly.</p> <p>Centre employees receive training from the Ministry.</p>	Current	The Centre and the Ministry	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Strategic	Maintain public trust.	<p>Confusing/insufficient communications with stakeholders.</p> <p>The actions of an individual, or one individual's negative experience caused by a Centre employee, may affect the public perception of the Centre. The loss of public trust may negatively affect demand for the Centre's services.</p>	<p>The Centre may lose the confidence of its clients, which may decrease demand for specialized training.</p> <p>Any loss of public trust may have a lasting negative impact on reputation.</p>	<p>The Centre follows the guidelines of the Memorandum of Understanding's Communications Protocol. The Centre continues to develop relationships with its clients. The Ministry reviews the Centre's annual marketing and outreach plan.</p> <p>The Centre keeps its website updated with relevant information and posts its annual report and business plan.</p> <p>The research and training advisory committees add another level of stakeholder interaction.</p> <p>The Centre provides guidance to employees on appropriate customer service practices and procedures.</p> <p>All instructors complete the Centre's mandatory train-the-trainer program.</p>	Current	The Centre	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Accountability/ Governance	Comply with the Memorandum of Understanding, all applicable Ontario Public Service directives, policies and procedures, as well as applicable legislation.	<p>Not being aware of new/revised applicable Ontario Public Service directives, policies and procedures, and legislation.</p> <p>Insufficient resources to ensure compliance.</p> <p>Inadequate guidance regarding the actions required to comply.</p> <p>Non-compliance by choice.</p>	<p>The Centre may lose the confidence of the Ministry, stakeholders, the public and employees.</p> <p>Legal costs.</p> <p>Lasting negative reputation.</p> <p>Board of directors/ management changes.</p>	<p>Applicable directives are reviewed regularly and are available to employees. The Ministry provides clarification if required.</p> <p>The Centre has an employee handbook, Health and Safety manual and Continuity of Operations Plan.</p> <p>The Centre has a financial delegation of authority that specifies authorization limits.</p> <p>The Centre follows customer service guidelines and employees have been trained on the <i>Accessibility for Ontarians with Disabilities Act, 2005</i>.</p> <p>The Centre meets the requirements of the <i>French Language Services Act</i>.</p> <p>The Ministry of the Attorney General counsel serves the Centre.</p> <p>A third party audits the Centre's financial statements every year.</p> <p>The Minister may request an audit of the Centre at any time and the Centre's operations are reviewed at least once every three years.</p>	Current	The Centre and the Ministry	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Operational	Meet the needs of clients.	<p>Lack of technical ability or training expertise of Centre employees and instructors, resulting in the dissemination of inaccurate information/ advice.</p> <p>Programs not updated with relevant new information.</p> <p>Increased demand for alternative forms of training delivery, i.e., e-learning.</p> <p>Centre does not deliver on its objects.</p>	<p>The Centre may lose the confidence of clients, the public and stakeholders, resulting in decreased demand for services.</p> <p>Negatively affects relationship with the Ministry.</p>	<p>The Centre tracks performance indicators to monitor service delivery.</p> <p>A quality assurance program ensures a consistently high level of content, methodology and teaching approach in the Centre's training programs. This program includes the collection of feedback from clients and a requirement for all instructors to complete a mandatory train-the-trainer program.</p> <p>The Centre's Training Advisory Committee reviews the annual training plan, and the Research Advisory Committee reviews the annual research plan.</p> <p>The Centre maintains currency of training content through literature reviews, pilot testing and professional development for employees.</p> <p>The Centre has conducted client consultations and will conduct a full curriculum review to ensure that relevant topics are covered, such as climate change, new Ministry guidelines and policies, and topics of importance to operators of small drinking water systems regulated by Ontario Regulation 319/08 made under the <i>Health Protection and Promotion Act</i>.</p> <p>Centre staff teams will manage the roll out of expanded pilot testing and information clearing house services, which are similar to programs currently offered. The Centre will build on experience offering similar services. The Centre will regularly report to the board of directors on the expanded services.</p> <p>The Centre is continuing to investigate the possibility of offering e-learning programs.</p>	Current	The Centre	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Operational	Meet the needs of First Nation clients.	First Nation drinking water challenges.	Lack of progress in improving drinking water in First Nation communities.	<p>The Centre will establish partnerships and funding support to work in concert with federal, provincial and First Nation partners to establish new programs.</p> <p>The Centre will continue to deliver training to remote and underserved areas of the province.</p>	Current	The Centre	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
Workforce	Hire and retain appropriately skilled and adequately trained employees and instructors.	Centre employees and instructors may not be adequately trained.	Lack of adequately qualified/ trained employees may affect the Centre's ability to perform duties and deliver services.	<p>The Centre advertises job opportunities to a wide audience, hires through rigorous competition and provides mandatory training and orientation for new hires.</p> <p>The Centre is committed to professional development and considers opportunities for relevant continued learning, including Ontario Public Service training, in conjunction with employee performance planning reviews.</p> <p>The Centre has established job classifications, salaries, benefits and other remuneration that are similar to those established for public servants employed under Part III of the <i>Public Service of Ontario Act, 2006</i>.</p> <p>All instructors who deliver training on behalf of the Centre are required to complete the Centre's mandatory train-the-trainer program.</p> <p>The Centre encourages feedback and suggestions from employees to foster an engaged workforce.</p> <p>The Centre has an internal human resources function and maintains up-to-date human resources policies and procedures.</p>	Current	The Centre	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
IT and Infrastructure	<p>To ensure reliability, security and integrity of data and Information Technology system.</p> <p>To ensure compliance with privacy and security laws.</p>	<p>Unauthorized access to data, personal information or Information Technology systems.</p> <p>Less than expert oversight over IT systems.</p> <p>System failure, such as fire, virus or prolonged power failure.</p>	<p>Violation of privacy laws if personal information is lost or stolen, resulting in embarrassment to the Centre and the potential for litigation.</p>	<p><b>Mitigating Actions — IT</b></p> <p>The web/database server containing client information is physically secured in a locked cabinet at a tier 1 data centre. Only registered staff of the IT provider are able to access the cabinet where the server resides and are subject to key card and finger print reader access.</p> <p>All web forms that clients access require a secure encrypted connection to the web server.</p> <p>The web server itself is protected from Internet traffic with a dedicated firewall.</p> <p>Web server data is backed up to a remote physically secured server at another data centre facility so data can be recovered quickly in the event of a catastrophic failure.</p> <p>All credit card information is securely passed to a third party company that specializes in secure financial transactions. No personal financial information is stored on the Centre's web server.</p> <p>Security clearance of external IT provider.</p> <p>There is restricted, password protected access to the Centre's database, which includes course registration information.</p> <p>There are regular updates of workstation passwords.</p> <p>The Centre has an in-house IT Specialist to actively manage IT systems.</p>	Current	The Centre and the Ministry	Low

Risk Category/ Type	Objective	Potential Risk Source	Potential Impact	Mitigating Action			Assessment of Risk H/M/L
				Description	Current/ Planned	Mitigating Action Owner	
				<p><b>Mitigating Actions — Infrastructure</b></p> <p>The Centre secures confidential information in a locked area and follows procedures for the collection and storage of confidential information.</p> <p>There is controlled access to the Centre:</p> <ul style="list-style-type: none"> <li>• There is security card access to the Centre's office.</li> <li>• The Centre uses surveillance cameras at the main entrances to the building.</li> <li>• Access to the Technology Demonstration Facility is limited.</li> </ul> <p>The Centre's Continuity of Operations Plan Committee actively works to identify and manage risks.</p> <p>The Centre's Joint Health and Safety Committee may identify situations that may be a source of danger or hazard to workers, make recommendations for the improvement of health and safety, maintenance and monitoring of programs, measures and procedures, and obtain information respecting potential or existing hazards.</p> <p>The Centre has the Freedom of Information Guide available to employees at all times, and provides training to review the <i>Freedom of Information and Protection of Privacy Act</i>.</p> <p>The Centre's employment contracts include conflict of interest and confidentiality clauses.</p>			

## Environmental Scan

The following table summarizes the most important strengths, weaknesses, opportunities and threats in the Centre's business environment that may affect operations. The Centre has tailored the programs and services described in this business plan to address the identified internal and external environmental factors and ensure that it will be able to continue to deliver on its objects.

<p style="text-align: center;"><b>Analysis of Strengths, Weaknesses, Opportunities and Threats</b></p>	<p style="text-align: center;"><b>Internal Strengths (S)</b></p> <ol style="list-style-type: none"> <li>1. Strong presence in Ontario's drinking water sector</li> <li>2. Ontario leader in providing information regarding drinking water technologies</li> <li>3. Quality assurance program ensures a consistently high level of content, methodology and teaching approach in the training program</li> <li>4. Established operational processes</li> <li>5. Experience delivering training to indigenous operators</li> </ol>	<p style="text-align: center;"><b>Internal Weaknesses (W)</b></p> <ol style="list-style-type: none"> <li>1. High cost associated with training delivery in some locations</li> <li>2. Lack of awareness regarding some of the services provided by the Centre, including pilot testing and information clearing house</li> </ol>
<p style="text-align: center;"><b>External Opportunities (O)</b></p> <ol style="list-style-type: none"> <li>1. Steady demand for training from drinking water system owners, operators and operating authorities</li> <li>2. Opportunities to deliver increased training to indigenous operators</li> <li>3. Opportunities to deliver expanded pilot testing and information clearing house services</li> </ol>	<p style="text-align: center;"><b>Areas of Future Growth (S/O)</b></p> <p>S1/O1. Advertise training services to maintain demand</p> <p>S1/O3. Elevate profile of pilot testing and information clearing house services, building on positive reputation</p> <p>S2/O3. Publicize expanded services to build awareness among existing and potential clients</p> <p>S3/O1. Maintain the satisfaction of existing clients through the quality assurance program</p> <p>S4/O1. Follow established processes to meet any increased demand for training</p> <p>S4/O3. Use established processes to quickly expand information clearing house services</p> <p>S5/O2. Build on experience working with First Nation communities to offer increased training opportunities</p>	<p style="text-align: center;"><b>Strengthen Internally (W/O)</b></p> <p>W1/O1. Offer training through various venues to manage expenses and meet client expectations</p> <p>W1/O1. Investigate new training formats, including e-learning, to control costs and meet client demand</p> <p>W1/O3. Provide information and advice through expanded clearing house services accessible provincewide</p> <p>W2/O3. Promote services offered by the Centre to stimulate demand</p>
<p style="text-align: center;"><b>Potential External Threats (T)</b></p> <ol style="list-style-type: none"> <li>1. Decreased demand for specialized training due to client dissatisfaction or budget constraints</li> </ol>	<p style="text-align: center;"><b>Address Potential External Threats (S/T)</b></p> <p>S2/T1. Market Technology Demonstration Facility to stimulate demand for hands-on training</p> <p>S3/T1. Uphold training quality standards through the quality assurance program to ensure client satisfaction</p>	<p style="text-align: center;"><b>Address Areas of Potential Decline (W/T)</b></p> <p>W1/T1. Explore cost-effective training methods, including e-learning, to ensure client satisfaction</p>

## Performance Measures

Below are the performance indicators and targets for the Centre's key programs and services. These performance indicators focus on the Centre's objects and help to measure the Centre's success in meeting its targets. The Centre also uses a more comprehensive set of measures internally.

**Table 1. Performance Indicators**

Initiative	Goal	Performance Indicators	Targets
Education and Training	Meet the needs of drinking water professionals by coordinating and delivering a comprehensive range of education and training provincewide.	<p><b>Number of training participants</b> This performance indicator is an important measure of the demand for specialized training and the Ministry's mandatory courses. The estimated number of training participants in 2016–17 was 6,500. This number fluctuates due to variable (but predictable) registration for the mandatory certificate renewal course.</p> <p><b>Evaluation of training quality — Quality Assurance Index (QAI)</b> The QAI is calculated through two equally weighted phases: evaluations distributed at courses/training events that allow participants to rate (very poor, poor, satisfactory, good, or excellent) the overall course, instructor, and course content; and audits by Centre employees and instructors of courses, instructors and adult education principles. Good "G" and excellent "E" ratings form the basis of the index (QAI = (%G+E overall + %G+E instructor + %G+E content)/3/100). The maximum score of 1.000 indicates all evaluations were good or excellent in terms of overall course, instructor and course content. The estimated index for all courses 2016–17 was 0.900.</p> <p><b>Number of hands-on courses</b> This performance indicator measures the number of hands-on courses offered. In 2016–17, the Centre offered 25 hands-on courses.</p>	<p>2017–18 7,000 participants 2018–19 7,500 participants 2019–20 6,500 participants</p> <p>2017–18 QAI &gt;0.85 2018–19 QAI &gt;0.85 2019–20 QAI &gt;0.85</p> <p>2017–18 28 courses 2018–19 32 courses 2019–20 36 courses</p>

Initiative	Goal	Performance Indicators	Targets
Information and Advice	Provide information and advice about drinking water through the Technology Demonstration Facility and use the facility as a platform for hands-on training.	<p><b>Technical tours of the Technology Demonstration Facility</b>  This performance indicator measures the number of individuals, including owners, operators and operating authorities of drinking water systems, and the public, who visited the Technology Demonstration Facility for information and advice on drinking water technologies. It includes participants from hands-on training courses and technical tours. The estimated number of individuals provided with technical tours during 2016–17 was approximately 330.</p> <p><b>Number of publications</b>  This performance indicator measures the number of Centre publications, including fact sheets, refereed publications and external presentations. Publication ensures information is shared with the operators and decision-makers overseeing drinking water systems in Ontario. The estimated number of publications during 2016–17 was 10.</p>	<p>2017–18 5 per cent increase over 2016–17  2018–19 5 per cent increase over 2017–18  2019–20 5 per cent increase over 2018–19</p> <p>2017–18 10 publications  2018–19 10 publications  2019–20 10 publications</p>

## **Initiatives Involving Third Parties**

### **Contract Instructors**

Contract instructors play an important role in the Centre's ability to fulfill its objects. The Centre maintains a Vendor of Record list of individuals qualified to provide training services on behalf of the Centre and has entered into Vendor of Record agreements with each of these individuals to ensure accountability. These vendors provide services related to the development, review and delivery of training materials and ensure flexibility in the delivery of a wide range of subject matter.

### **Postsecondary Institutions**

Students enrolled in Ontario college programs that include the delivery of the Ministry's Entry-Level Course for Drinking Water Operators as part of their curriculum are offered practical training at the Technology Demonstration Facility. The Centre also provides training to students of Ontario universities. This training will continue to be delivered to postsecondary students when requested.

### **RES'EAU WaterNET Research Network**

The Centre is providing financial and in-kind support to the RES'EAU WaterNET research network for the second phase of a project to address key questions facing small drinking water system owners, operators and operating authorities. The Centre also provided financial and in-kind support to the first phase of this project. The Centre entered into a transfer payment agreement with the University of British Columbia over a five-year period. The transfer payment agreement expires on August 31, 2018 and ensures accountability and compliance with the Transfer Payment Accountability Directive. Project progress is monitored through status reports that are required by the Centre.

### **University of Waterloo**

The Centre is providing funding to researchers at the University of Waterloo for an ongoing research project. A description of this project is provided on page 10. The Centre entered into a transfer payment agreement with University of Waterloo over a five-year period. The transfer payment agreement expires on March 31, 2018 and ensures accountability and compliance with the Transfer Payment Accountability Directive. Project progress is monitored through status reports that are required by the Centre.

### **Ontario First Nations Technical Services Corporation and Keewaytinook Okimakanak**

The Centre is in the process of negotiating a Memorandum of Understanding with Ontario First Nations Technical Services Corporation and Keewaytinook Okimakanak to provide training to First Nation leadership and drinking water operators from First Nation communities. Through this collaborative effort, training delivery will be tailored to reflect the learning needs of participants and content may be modified to relate more closely to the experience of operators in First Nation communities. Ontario First Nations Technical Services Corporation is the founding organization in Canada whose purpose is to provide technical and advisory services to all First Nation communities in Ontario, and to foster self-reliance for its people. Keewaytinook Okimakanak is a non-political Chiefs Council serving Deer Lake, Fort Severn, Keewayin, McDowell Lake, North Spirit Lake and Poplar Hill First Nations.

## **Implementation Plan**

The business plan is shared with Centre employees after approval is received from the Minister.

The Centre's management team uses the information provided in the business plan to develop departmental work plans that track program progress against performance targets. The management team meets periodically to review these work plans and performance measures. Managers then use the departmental work plans to develop individual objectives for their direct reports. Objectives form a major component of the performance planning and review process for each employee. Objectives help to ensure that the responsibilities of employees align with the Centre's objectives. They also engage employees by illustrating how they contribute to the success of the Centre.

## Marketing and Outreach Plan

The Centre's communications meet the terms of the Communications Protocol held with the Ministry. The Centre develops an annual marketing and outreach plan and provides it to the Ministry for review. The marketing and outreach plan builds on the Centre's mission. It builds knowledge about the Centre as the provider of the highest quality training in the drinking water industry and its ability to provide information, education and advice to owners, operators and operating authorities of drinking water systems and to the public. Following is a summary of the marketing and outreach plan.

The marketing and outreach plan focuses on external communications initiatives that build awareness of the Centre's services and help develop relationships with target audiences, including:

- Tribal Councils, First Nations and their operators
- Northern Ontario drinking water system owners, operators and operating authorities
- Small drinking water system owners, operators, and operating authorities
- Operators of drinking water systems
- Decision-makers (drinking water system owners/operating authorities)

The Centre tailors marketing goals and objectives to address client feedback and ensure that messaging is consistent with the direction provided by the strategic plan.

The Centre will continue to use traditional and digital media to promote its programs and connect with target audiences. Targeted communication materials will be used to raise awareness and promote the Centre and its programs. These materials include print and digital advertisements, articles, email, social media and website postings.

The Centre will maintain its online presence and promote its website, [wcwc.ca](http://wcwc.ca), by including website links in print and digital advertisements. The website will be regularly updated with relevant information, including new fact sheets developed through literature reviews or pilot testing and technical resources specific to small drinking water systems added to the small systems zone. Analytics detailing online and print activity will be monitored and reported to management and the board of directors regularly.

Centre employees will attend conferences, trade shows and events related to drinking water to interact with target audiences and share information at the Centre's trade booth and through presentations.

The Centre will renew its memberships for both the Walkerton and Hanover chambers of commerce and may participate in local events. Local media may be contacted regarding potential interviews, advertising, or speaking opportunities.

The Centre will meet the requirements of the Open Data Directive by establishing and maintaining an inventory of its datasets and publishing data in a manner that is consistent with the Open Data Directive, the *Archives and Recordkeeping Act, 2006*, the *Freedom*

*of Information and Protection of Privacy Act, the French Language Services Act, the Accessibility for Ontarians with Disabilities Act, 2005, and other applicable legislation.*