

Certification Advisory Committee Recommendations Report (2023)

Recommendation Summary and Implementation Update

Background

Water and wastewater infrastructure is essential to protecting public health, safeguarding the environment and supporting economic development across Manitoba. The uninterrupted operation of drinking water and wastewater systems depends on the availability of certified water and wastewater facility operators who possess the appropriate education, experience and certification required under The Water and Wastewater Facility Operators Regulation. Manitoba like many jurisdictions is experiencing ongoing challenges recruiting and retaining certified operators, particularly in small, rural, northern and remote communities. These challenges can impact service continuity and long-term infrastructure sustainability.

In 2022, the former Minister of Environment and Climate directed the Water and Wastewater Certification Advisory Committee (CAC) to examine the root causes of the operator shortage and to recommend solutions. The CAC, which includes members who have experience with the regulation, management or operation of water or wastewater facilities, submitted its Recommendation Report in September 2023.

Certification Advisory Committee's Key Findings

The CAC concluded that the shortage of certified water and wastewater operators in Manitoba is the result of interconnected, systemic issues, rather than a single factor. Operator shortages are driven by a combination of low public awareness of the profession, challenges with operator retention, limited access to training and a certification process that can be a challenge to navigate. Based on extensive engagement with representatives of municipalities, provincial departments, educational institutions and industry organizations, the CAC organized the challenges facing the industry and their recommendations into four core themes:

1. Awareness of the Industry as a Career Path and Attracting Candidates

Water and wastewater operations are not well understood as a potential career path by students, job seekers or municipal decision-makers. Manitoba has limited post-secondary education programming focused on the water and wastewater industry and the operator certification pathway can be difficult to navigate. As a result, many operators enter the profession incidentally rather than intentionally.

2. Retaining Candidates

Retention challenges are driven by competition for operators between municipalities, limited succession planning and the high level of responsibility associated with operating critical public health infrastructure. Smaller communities face additional pressures due to limited staffing capacity and financial resources, which can make it difficult to provide adequate backup and professional support.

3. Access to Training and Resources

There are limited education and training opportunities for operators in Manitoba, and those that do exist can be costly and are not always aligned with the systems used in Manitoba communities. Many exam preparation and continuing education resources are produced by U.S.-based organizations which can result in materials containing terminology different from what is commonly used in Canada. Rural and remote communities face additional barriers related to travel, connectivity and staffing coverage during training periods.

4. Pathway to Certification

The certification process can be perceived as complex and requires written exams containing content that is not always relevant to Manitoba operating environments, particularly for systems used in smaller communities. Operators report steep increases in difficulty between certification levels, long waiting periods to rewrite failed exams and high costs associated with maintaining certification through continuing education. Limited online tools and guidance contribute to challenges navigating the certification process.

Across all themes, a central recommendation was the creation of an online toolkit of resources to provide operators with information to better understand the industry and provide facility owners with resources to support the operators they employ. The toolkit would serve as a hub for awareness and resource materials, remain accessible to all interested parties, and would help address challenges faced in communities throughout the province. The full list of the CAC's recommendations is included in Appendix A.

Progress to Date

Manitoba Environment and Climate Change reviewed the CAC's report in conjunction with other relevant program areas from across government to identify actions that could be taken to advance the CAC's recommendations. The following actions are being advanced to address several recommendations in the short-term: the development of an online toolkit, a review of the certification exams and updates to the department's website.

Online Toolkit Development

The CAC identified the creation of a centralized online toolkit as a foundational action to support water and wastewater facility owners and operators. The toolkit is intended to provide clear, accessible information related to certification requirements, training resources and certification exam information. The toolkit is intended to be a fluid document, evolving to meet the needs of industry.

The Manitoba Environmental Industries Association was engaged to develop the toolkit to ensure that its contents would be meaningful and relevant to the water and wastewater industry. Working together with the Manitoba Water and Wastewater Association, the toolkit was developed following a series of industry engagement sessions, where water and wastewater facility owners and operators were able to provide their input on what would be helpful in a toolkit of resources.

The toolkit officially launched in March 2026, on the Manitoba Water and Wastewater Association website. At launch, the toolkit addresses and/or aligns with the following recommendations:

- Develop a toolkit of resources for facility owners to properly evaluate facility requirements and develop job descriptions that reflect those requirements.
- Provide training resources through an online toolkit that is available to any operator in Manitoba.
- Encourage owners and operators to apply for Operator in Training status immediately upon hiring.

The toolkit will continue to evolve as more resources are added over time. Future additions to the toolkit are expected to address additional CAC recommendations, which may include:

- Leverage the resources and networking of existing organizations to promote the occupation.
- Improve public perception of the facility operator role, to emphasize the technical skills required for these roles and their importance in every community.
- Establish shared service agreements between communities to share water and wastewater facility operators, emphasizing regional cooperation across smaller communities.
- Explore ways to standardize the level of compensation for operators to help attract and retain operators.
- Ensure that owners are aware that they can recover recruitment, training, and succession costs through rate recovery for those who are subject to the Public Utilities Board (PUB).
- Investigate incentives for training and retention.
- Identify a direct path to connecting prospective operators with Business, Mining, Trade and Job Creation to access resources to improve their basic skills, such as literacy and workplace/job readiness.
- Partner with industry organizations engaged in workforce development.

Review of Certification Exams

The CAC recommended a comprehensive review of Manitoba's water and wastewater operator certification exams to ensure they are relevant to Manitoba systems and aligned with Canadian terminology and standards. Manitoba Environment and Climate Change has begun reviewing the most recent versions of the certification exams to ensure the content is appropriate for Manitoba operators. The subject matter experts supporting the exam review have experience in water and wastewater facility regulation, as well as expertise in adult training and education, with experience reviewing exam materials for other technical certifications.

A total of 18 exams are being reviewed. Once the review is complete, the department will determine if the exams will be adopted for use in Manitoba. The review is expected to be completed in spring 2026 with adoption of exams in summer 2026. The certification exam review will address or be a step toward addressing the following recommendations:

- Ensure a Manitoba governing body reviews and revises the certification exams to make them relevant to the water and wastewater treatment systems in Manitoba.
- The certification authority should review the current exams and the newer, standardized exams.
- Once the exam review is complete, Manitoba should consider adopting the standardized exams to be more consistent with other jurisdictions.

Website Updates

The department is in the process of updating the provincial website for the operator certification program. These updates are part of a broader website renewal initiative; the department expects the updates to be implemented in spring 2026. The website updates align with the recommendation to:

- Upgrade the provincial website on a regular basis to ensure information from the regulator is easy to find and understand.

Going Forward

The department continues to work closely with the CAC to identify actions to address their recommendations. The CAC is currently working to further prioritize their recommendations to help guide longer term actions and improvements that will have the greatest impact on operators and the communities they serve. The CAC emphasized that resolving operator shortages will require coordinated, sustained action, spanning public awareness, training, certification and workforce support. A consistent theme throughout the recommendations was the need for clear guidance, accessible resources and ongoing collaboration among government, municipalities, educational institutions and industry partners. By continuing to work together, Manitoba and its partners can help support a strong and stable operator workforce, ensuring Manitoba's water and wastewater systems remain safe, resilient and well supported for generations to come.

Appendix A: Summary of CAC recommendations by theme and which recommendations are addressed or align with current actions.

Issue 1: Awareness of the Industry as a Career Path and Attracting Candidates	
CAC Recommendations:	Addressed by Current Actions
Incorporate water and wastewater facility operations into the school curriculum at all levels (K-12, post-secondary). Current organizations to support this could include, but not be limited to, the Department of Education, Sector Council Program, and Red River College Polytech.	
Engage with Manitoba based universities and Manitoba college career centres; many programs fit well into the educational requirements of certification.	
Utilize Prior Learning and Assessment Recognition (PLAR) to identify education programs that qualify as continuing education units and post-secondary education for certification.	
Leverage the resources and networking of existing organizations (e.g., Manitoba Water and Wastewater Association, Manitoba Environmental Industries Association, Association of Manitoba Municipalities, Manitoba Municipal Administrators, Western Canada Water, Canadian Water and Wastewater Association, etc.) to promote the occupation.	
Delegate an organization as the authority of certification to administer the certification process in Manitoba, raise awareness of the industry, and provide support to facility operators and facility owners. This organization would maintain a toolkit of services and would support all facility owners.	
Improve public perception of the facility operator role. Create a shift from the misconception that facility operators perform only “maintenance duties,” and recognize facility operator as a respected, desirable occupation. Emphasize the technical skills required for these roles and their importance in every community.	
Promote diversity by working with immigration and Indigenous employment agencies to raise awareness of facility operator career opportunities to help attract newcomers and Indigenous workers.	
Develop a toolkit of resources for facility owners to properly evaluate facility requirements and develop job descriptions that reflect those requirements.	X

Issue 2: Retaining Candidates

CAC Recommendations:	Addressed by Current Actions
Establish shared service agreements between communities to share water and wastewater facility operators. Place emphasis on regional cooperation and support for the operation of water and wastewater facilities in smaller communities. This will help increase awareness of the industry and the service that operators provide within the communities. Templates for shared services agreements can be a resource available in an online toolkit.	
Explore ways to standardize the level of compensation for operators to help attract and retain operators.	
Ensure that owners are aware that they can recover recruitment, training, and succession costs through rate recovery for those who are subject to the Public Utilities Board (PUB).	
For non-PUB regulated systems, explore options for funding infrastructure and training such as additions to operations costs. Ensure any infrastructure upgrades include a plan for supporting the workforce needed to operate and maintain the upgrades.	
Consider grants to either the facility owner or operator, for operator training.	
Investigate incentives for training and retention. Any successful incentives can be included as a toolkit resource for the benefit of others.	

Issue 3: Access to Training and Resources

CAC Recommendations:	Addressed by Current Actions
Implement existing curriculum and training that educational institutions have already developed.	
Partner with industry organizations engaged in workforce development such as the Manitoba Water and Wastewater Association, Manitoba Construction Sector Council, Workplace Employment Manitoba, or Manitoba Environmental Industries Association.	
Allocate government funding to deliver a Manitoba applicable training program for operators.	
Partner with post-secondary institutions to offer local training programs.	
Offer a mix of online learning and in-class sessions. Include support for IT requirements so participation does not require operators to be away from their communities for extended periods.	
Support development of local, hands-on training programs in the communities across Manitoba.	
Establish and promote mentorship opportunities for facility operators. Consider the First Nations Circuit Rider Training Program as a model for mentorship and training for Manitoba communities.	
Provide training resources through an online toolkit that is available to any operator in Manitoba.	X

Issue 4: Pathway to Certification

CAC Recommendations:	Addressed by Current Actions
Identify a direct path to connecting prospective operators with Business, Mining, Trade and Job Creation to get resources to improve their basic skills, such as literacy and workplace/job readiness.	
Consider a certification route based on an individual's competency to operate smaller, less complex systems and not solely dependent on their ability to pass an exam. There must be a balance between conventional and practical operator assessments. Explore options for practical "hands-on" exams instead of the standard written exams; this practice is common in other skilled trades. The governing authority of certification would need to establish requirements for certification to operate a specific facility.	
Ensure a Manitoba governing body or agency reviews and revises the certification exams to make them relevant to the water and wastewater treatment systems in Manitoba. These changes could include removing unfamiliar or confusing language or terminology, using questions that are relevant to a Canadian context, and adjusting the difficulty.	X
The authority for certification should review the current exams, as well as the newer, standardized exam. There are currently 16 different certification exams; ideally, four exams would be reviewed each year, resulting in a review of all exams every four years.	X
Once the review of exams is complete, Manitoba should consider adopting the standardized exam to be more consistent with other jurisdictions. This will ensure continued reciprocity and that operators are writing the most up-to-date exams.	X
Encourage owners and operators to apply for Operator in Training status immediately upon hiring.	X
Change the cooling off period for retaking a failed exam to one month to align with the Canadian best practices (this would require a regulation change).	
Upgrade the provincial website on a regular basis to ensure information from the regulator is easy to find and understand.	X
The governing certification body should explore IT solutions to track and manage certification in one location, including automatic reminders for renewal and at other milestones on the certification pathway.	