



Exploring Careers in Water and Wastewater Operations

Information for Educators, Parents and Role Models

Choice, Challenge, Contribution and Community

Every year governments contribute many millions of dollars in developing, maintaining and renewing Canada's water infrastructure. These treatment facilities and distribution and collection networks are only as good as the people behind the scenes who operate, maintain and renew water infrastructure on a daily basis. In sum, we are looking for people committed to contributing to the challenge of providing safe drinking water to our communities and protecting our environment.

Water careers offer choice and the possibility of long-term stable options for those who believe in the importance of, and want to make an impact on, the health and environment of our communities and country.

We trust that in using the *Working with Water* videos you too can now see how these careers offer choice, challenge, balance and flexibility. We hope you are confident discussing these careers as a viable, vital and rewarding career option with young people within your school, family or community.

Learn more

Recruitment and renewal of the water and wastewater operations workforce is an important priority for governments and local employers. Many local facilities offer field trips and open houses. Career exploration site-visits can often be arranged and some facilities offer job shadowing opportunities. Check with your local facility to see if any of these options are available to you.

Success and satisfaction... It's possible!

As western Canada's water professionals we recognize the critical role you play as an educator, parent or role model in supporting the young people in your life to make informed life-work choices. We also recognize there is a dizzying array of occupational opportunities and options and that offering informed direction is often challenging.

Every day every person in every community needs to have safe, clean drinking water. They also need someone to collect and treat that water after it's been used. We are those people! We know water careers are dependable, secure careers with many opportunities for advancement and mobility and that this work supports success and satisfaction. Accelerating rates of retirement and a continuing transformation of our industry, being driven by new technologies and updated regulation, mean we are looking for more good people to join us.

- Exploring Possibilities
- Water Supply and Treatment Careers
- Water Distribution Careers
- Wastewater Collection Careers
- Wastewater Treatment Careers
- Process Control and Laboratory Careers
- Utility Management and Infrastructure Career Insights
- Opportunities and Options

The video segments are stand-alone or can be used with a companion print guide available as a downloadable PDF file. The video segments are available via *YouTube* by searching *Working with Water* or through the *Western Canada Water Careers* web portal located at www.wcwwa.ca.

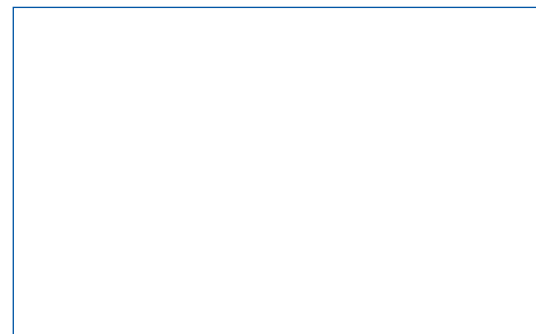
DVD copies of *Exploring Careers in Water and Wastewater Operations* for schools and career centres in western Canada can also be requested directly from the *Western Canada Water* office by calling 1-877-283-2003 or email at member@wcwwa.ca.

Want more information?

For more information about specific certification requirements in your province or territory, please see:

- Western Canada Water – Careers section www.wcwwa.ca
- Alberta Water & Wastewater Operators Association www.awwoa.ab.ca
- Saskatchewan Water and Wastewater Association www.swwa.ca
- Manitoba Water and Wastewater Association www.mwwa.net
- Northern Territories Water and Waste Association www.ntwwa.com
- Circuit Rider Trainer Professional Association (First Nations) www.crtpa.com

Or, for more information please contact



The Water and Wastewater Career Attraction Project is a joint initiative of western Canada's water and wastewater professional organizations.

A career exploration toolkit

Through the *Exploring Careers in Water and Wastewater Operations* toolkit we have brought together four generations of water and wastewater professionals. These are real working professionals doing real jobs. These water professionals have generously shared insights about their work and the roles work plays in their lives. The toolkit has been designed to help you extend guidance and support during the career exploration and research process.

The *Exploring Careers in Water and Wastewater Operations* toolkit is comprised of a series of eight short video segments ranging from seven to eight minutes. Video segments are:





What are Water and Wastewater Operations (WWO) Careers?

Water operations involve tasks of commissioning, operating and maintaining facilities to provide safe drinking water. After water is used in our communities wastewater operations involve the tasks necessary to collect, treat and return water to the environment so it can be used by others.

Certified Operators complete many of the tasks of WWO. Certified Operators are currently regulated under provincial and territorial legislation in Canada. They follow a North American industry standard for training and certification. Many provinces have reciprocity agreements that support inter-provincial mobility. A standardized industry approach



to operator certification means Certified Operators have the possibility of moving from jurisdiction to jurisdiction throughout North America (i.e., occupational mobility).

Typically Certified Operators work as water treatment plant operators, wastewater treatment plant operators, water distribution system operators or as wastewater collection operators and in associated management roles. Other skilled personnel work in instrumentation, laboratory operations, process control and facility maintenance roles. Additionally, trades persons, other maintenance personnel, engineering professionals and a variety of service contractors and suppliers support operations through infrastructure expansion, design and new construction.

A more detailed explanation about what Certified Operators do in each of these areas is outlined in the *Exploring Careers in Water and Wastewater Operators* guide.

Are these careers in demand?

Early in this decade (2010+), WWO careers are in high demand. Large numbers of the *Baby Boom* generation are eligible to retire throughout the decade. A significant portion of these *Baby Boomers* work with municipalities and other forms of local government and have excellent pension and benefit packages.

All indications at this time suggest the economic turmoil many have experienced since 2008 is anticipated to have minimal impact on the retirement decisions of WWO professionals. Employers throughout western Canada have been reporting challenges in finding suitably qualified applicants to fill many available WWO roles.

What is the required education and training?

All Certified Operators are required to have a provincially recognized Grade 12 diploma, GED or equivalent as a pre-requisite to certification. Many larger municipalities or utility corporations expect various levels of post-secondary education as a condition of employment.

Each province in western Canada has specialized programs in water technology at polytechnical schools, institutes of technology and comprehensive community colleges. Please refer to the Western Canada Web for a current list of available post-secondary programs in water and wastewater technology.

While Grade 12 graduation is the minimum entry requirement, many employers require employees to have specialized post-secondary education in fields such as water technology, chemistry, engineering technology, power engineering, instrumentation, engineering or computing science. It is always best to verify local employment pre-requisites with the human resources department or operations managers of the specific employer(s) of interest.

In all cases of Certified Operators, there is mandatory entry-level training to ensure that new hires are 'certification preparation ready.' There are currently four levels of certification for Certified Operators. Certification levels are determined by a mix of job experience, ongoing training and a provincially-determined certification of the specific facility in which an operator is employed.



What about flexibility and advancement?

In an era where the cost of post-secondary education is ever increasing, WWO careers offer flexibility and choice to earn while one learns. In addition to necessary employment-related education and certification, many Certified Operators hold technical institute diplomas, journeyman certifications or university degrees in math, science, arts and other programs.

Larger municipal employers and utility corporations often have programs to support staff while they earn as they learn. Many persons have also used employment with a municipality as a means of supporting post-secondary studies while gathering exposure to a range of public works occupations, including water and wastewater operations.

WWO careers support many options for lifestyle and family. Many of these options are discussed in the *Working with Water* video segments.

There are considerable opportunities for advancement based on merit and experience. Many employers have reported there is considerable advancement potential emerging as many openings are happening throughout organizations with workforce turnover fuelled by growing numbers of retirements.

How might someone know this work is for them?

A person may be interested in a WWO career if they:

- Enjoy working with technology
- Enjoy working inside and outside doing applied work
- Enjoy earning while learning
- Enjoy working with others in a team work environment
- Enjoy stability and the knowledge their skills are in demand
- Enjoy tangible, concrete task outcomes of work
- Are an attentive, creative problem-solver
- Are diligent and consistent
- Are committed to continuous learning
- Derive satisfaction from knowing they are providing a valuable service to the community