

# The Journey and Impact of Operators Without Borders (OWB)

## Introduction

Operators Without Borders (OWB) symbolizes a commitment to global water and wastewater management, particularly in disaster-stricken areas. Born from a recognition of the urgent need for skilled water treatment expertise in crisis situations, OWB stands as a testament to the power of volunteerism and expertise in addressing critical environmental challenges. This vision has materialized into a successful reality, with OWB now boasting over 60 utility operators as volunteers. As OWB continues to grow, its story serves as an inspiration and a model for collaborative, skill-based environmental initiatives worldwide.

## A Message from Chair, Valerie Jenkinson:

The growth of OWB since its inception has been astounding and it is all thanks to the generosity and caring of our wonderful volunteers. Whether it is in deploying, post-disaster, to assist water and wastewater utilities in developing countries or providing expertise by instructing courses we are truly thankful for their service. Those volunteers have to date donated over \$2 million dollars of volunteer services.

Not all those who have signed up to volunteer have as yet been called upon. COVID shut us down from deploying operators and since then there has not been disasters where services have been called for. This is of course good news but we hope those who have not yet had an opportunity to serve will stick with us for when the need arises.

OWB has also expanded both our membership base and our list of donors. Without these benefactors we would be unable to do any of the work we do.

## Overcoming Early Challenges

OWB's journey was not without challenges. Initial financial constraints were a significant hurdle. However, the organization's prudent financial management, coupled with a dedicated volunteer force, and generous donors and members has enabled the organization to gradually build financial stability. Fundraising efforts, such as memberships, donations at conferences, and grant proposals have played a crucial role in sustaining and expanding OWB's operations. Following Valerie's presentations at various conferences, this growth was further accelerated by a surge in volunteer registrations from Canada and the United States.

## Volunteer Operations and Disaster Response

OWB's volunteer teams, led by experienced individuals, are strategically assembled to address the unique challenges of each disaster situation. Deployments are strategically planned and involve teams of skilled individuals from diverse backgrounds, ensuring a comprehensive response to each unique

situation. These teams not only assist in immediate disaster recovery but also contribute to long-term capacity building through mentorship, operational assessments, and recommendations.

## The Catalyst: Hurricanes Irma and Maria

The inception of OWB traces back to the aftermath of hurricanes Irma and Maria in 2017, as recounted during a keynote speech by Bernard Ettinoffe, General Manager of Dominica Water and Sewerage Company (DOWASCO), at a conference in Guyana. Hurricane Maria, regarded as the worst natural disaster on record in Dominica, was the tenth most intense Atlantic hurricane on record, the most intense tropical cyclone worldwide of 2017, and the deadliest storm of the hyperactive 2017 Atlantic hurricane season.

After talking to Mr. Ettinoffe whom Valerie had known and worked with for many years. the critical need for skilled assistance in Dominica's water utility sector was recognized. Valerie's vision was to mobilize skilled water and wastewater operators from Canada and the United States for voluntary assistance in disaster recovery and capacity building in developing countries. Robert Haller, the Executive Director of the Canadian Water and Wastewater Association provided a platform to recruit volunteers and raise funds at CWWA's Annual Conference.

The first deployment to Dominica included certified operators Marcel Misuraca (OCWA), Jason Mank (OCWA), and Glen Ketchum (EPCOR). A silent auction raising \$4000 to pay for volunteer airfares and expenses. The efforts of the volunteers aided in restoring water services to three villages and repairing the main wastewater treatment facility.



*Photo 1. An old water distribution pipe that was damaged during Hurricane Maria lies on a river bed in Dominica. Photo courtesy of Marcel Misuraca (OCWA)*

This success highlighted the potential impact of Canadian operators' skills and led to the formal establishment of OWB, with a commitment to provide voluntary disaster recovery assistance and capacity building in developing countries' water and wastewater sectors.

## Funding Success and New Initiatives

### United Nations Environmental Programme (UNEP) Collaboration

In 2023 OWB secured funding through the Caribbean Regional Environmental Programme's Caribbean Regional Fund for Wastewater Management (CReW+) initiative. CReW+ is a partnership project funded by the Global Environment Facility (GEF) that is being implemented jointly by the United Nations Environment Programme (UNEP) and the Inter-American Development Bank (IDB) in 18 countries of the greater Caribbean region. This achievement was realized in collaboration with the Caribbean Water and Sewerage Association (CAWASA).

### Training and Development Across the Caribbean

The funding facilitated travel for delivering Level 1-2 exam preparation training in both wastewater treatment and wastewater collection in Belize, St. Lucia, Barbados, and Grenada. Additionally, OWB was funded to conduct train the trainer workshops in each country. Key contributors include Stacy Passaro, Ron Enns, Ian McIlwham, Chris Kerman, Shantelle Clark, Jim Courchaine, Skylar Lipson, and Suzanne Joseph from CAWASA. The Environmental Operators Certification Program (EOCP) contributed to the travel expenses of its members Chris Kerman and Ron Enns.

### Expansion of Incident Command System (ICS) Training in the Caribbean

A key initiative for OWB was the delivery of ICS training. To date over ~~400~~ 500 operators and disaster personnel have been trained at Level 100 across the Caribbean, South America and Poland/Ukraine. The IDB granted funding for Greg Solecki to deliver ICS training Levels 200 and 300 in Jamaica, Belize, and the Bahamas. ICS, essential for emergency response coordination, has been rated "Excellent" by participants, who have acknowledged its significant benefits to their organizations.



Photo 2. Greg Solecki delivering ICS training people to Caribbean water operators

### Webinar Contributions

OWB has also provided numerous speakers for CAWASA's weekly webinars, sharing knowledge with Caribbean operators across the region.

### Collaborative Efforts in Haiti

Rotary International's HANWASH Initiative

It would be unusual if you had not seen the devastating effects of the unrest in Haiti in the news in the last few months. The situation deteriorated rapidly and the capital, Port'o Prince has become

increasingly lawless and dangerous. In such, we cannot deploy volunteers yrt we continue to work remotely supporting the HANWASH initiatives. Board member Madeleine Butschler is playing a pivotal role in OWB's collaboration with Rotary International's initiative: Haiti National Clean Water, Sanitation, and Hygiene Strategy (HANWASH). This project aims to ensure access to safe drinking water for all Haitians. Butschler has been involved in the Monitoring and Evaluation Committee, contributing to various initiatives including community engagement in hygiene/sanitation and early stages of community science development, particularly in recharge mapping for aquifers. She is also exploring culturally effective templates for standard operating procedures (SOPs) and other technical documentation.

#### Success in Pignon

HANWASH's implementation in Pignon, featuring district metered areas training by OWB's Carl Yates, followed by volunteer Mike Taylor providing on-going technical support, has led to a significant reduction in non-revenue water (NRW) from 80% to 35%, aiming for a 30% target. However, the deployment of personnel is currently hindered by unrest and violence in the region, with hopes for improved conditions in the future.

These developments highlight OWB's expanding influence and effectiveness in addressing water and wastewater management challenges globally, particularly in regions prone to natural disasters and lacking robust infrastructure.



Photo 3. Upgrades completed to well in Pignon, Haiti

## Expanding Global Reach

While initially focused on the Caribbean, OWB is broadening its reach globally, including pilot projects in Africa and collaborative efforts for providing ICS training in Ukraine. This expansion reflects OWB's adaptability and responsiveness to global water and wastewater challenges.

### Nakuru Wastewater Training and Certification Initiative

OWB has embarked on a significant initiative in Nakuru, Kenya, focusing on wastewater training and certification. This initiative is a collaboration of the Global Wastewater Initiative (GWI) of UNEP, headquartered in Nairobi, Kenya, and Water Professional International (WPI). The Nakuru Water and Sewerage Company (NAWASCO) was chosen as the pilot site for this project.

#### Customized Training Approach

The process began with volunteer Stacy Passaro delivering two virtual sessions to gauge the knowledge level of the participants, allowing for a tailored training approach. Following this, Valerie Jenkinson and volunteer Ian McIlwham conducted in-person exam preparation workshops. These workshops, spanning a week each for wastewater treatment and collection, culminated in the participants taking the certification exam. Although for most of the 16 participants the exam served as a practice test due to their background in water rather than wastewater, two individuals successfully passed their wastewater collection exam. This achievement marks a significant milestone, as they are potentially the first operators in Africa to receive such certification.

#### Plans for Further Training and Expansion

OWB plans to continue delivering water and wastewater training in Nakuru and subsequently expand to other major utilities in Kenya and Uganda. This expansion underlines the organization's commitment to enhancing water and wastewater management expertise in the region. [In June Ian McIlwham will travel to Nakuru to deliver additional wastewater collection training as well as providing advice on their wastewater facilities. He will be accompanied by Mike Hewitt who will deliver Level 1 Water Distribution exam preparation training. We look forward to our continued involvement with Nakuru.](#)

#### Engagement with Stakeholders in Kenya

During their time in Kenya, GWI arranged two stakeholder meetings at which Valerie Jenkinson presented, one for UN staff and the other with various water stakeholders including the African Development Bank, UN Habitat, and UNICEF. These meetings were highly successful and the presentation garnered significant interest, with many stakeholders expressing their desire to partner with OWB and GWI in capacity-building initiatives.

#### Acknowledgement of Support

OWB extends its gratitude to the Water Environment Federation (WEF) for providing funding that facilitated the purchase of training materials and covered Ian McIlwham's travel expenses. Additionally, WPI is acknowledged for funding Valerie Jenkinson's travel expenses to Kenya. This support underscores the collaborative effort among various organizations in advancing water management skills and capacity in developing regions.

In conclusion, the Nakuru initiative represents a key step in OWB's efforts to enhance water and wastewater management capabilities in Africa. Through its training programs, stakeholder engagement, and collaborative approach, OWB is making a tangible impact in the region, paving the way for further development and expertise in the water sector. A similar initiative is being planned for the Philippines in 2024.

#### Initiatives and Collaborations in Ukraine and Poland

##### WASH Cluster Ukraine and Water Quality Advisory Committee Involvement

OWB is actively engaged in addressing water quality issues in Ukraine, particularly in the context of the ongoing war. Ian McIlwham, a key member of OWB, serves on the Water Quality Technical Advisory Group, which is tasked with formulating recommendations for Ukraine's water standards under war conditions. This involvement underscores OWB's commitment to providing expert guidance in challenging environments.

##### Guidance on Decentralized Systems

Ian McIlwham has contributed significantly by authoring a paper on decentralized systems. This paper discusses the advantages and disadvantages of such systems and offers insights into what considerations should be made when purchasing them. This guidance is particularly aimed at Ukraine's water utilities, which are exploring the use of decentralized systems in the future.

## Engagement and Planning in Poland



*Photo 4. Valerie Jenkinson with Polish colleagues Ryszard and Yuri in Gdansk, Poland, developing plans to assist Ukraine*

In the summer of 2022, Valerie Jenkinson met with Ryszard Gajewski, the General Manager of Gdansk Water in Poland, and Yuri from the Ukrainian Water Association, for an overview of the weeklong assessment they conducted in Ukraine. This was followed by a meeting with the Deputy Mayor of Gdansk. These meetings were aimed at formulating an effective plan to assist Ukrainian water utilities. Although the increase in bombing has caused some delays, OWB remains prepared to assist as soon as conditions allow.

Valerie was also a guest speaker at the Polish Water Association conference in May 2023.

### Development of Strategy for Water Quality in Extreme Situations

A major initiative led by Greg Solecki and Ian McIlwham focused on developing a strategy and training workshop addressing water quality issues in scenarios involving chemical warfare and nuclear contamination. This initiative is critical given the current situation in Ukraine. The agenda for this workshop was approved, and Greg and Ian developed content which will subsequently be translated for effective delivery of the workshop. OWB is collaborating closely with the Ukraine Water Association and the U.S. Centre for Disease Control on this project.

### Chemical, Biological, Radiological and Nuclear (CBRN) Water Contamination Workshop

A notable achievement was the two-day Chemical, Biological, Radiological and Nuclear (CBRN) Water Contamination workshop led by OWB volunteers Greg Solecki, Ian McIlwham, and Janine De Boer, with coordination assistance through UN WASH. This workshop attracted 110 participants from various water utilities and related ministries. The feedback was overwhelmingly positive, with attendees applying the learnings in the field in response to the Kakhovka Dam explosion.

### Incident Command System (ICS) Workshops

Further expanding their educational outreach, Greg delivered a Level 100 ICS workshop, which saw an impressive registration of 335 participants from Ukraine and Poland, far exceeding the expected 100. This workshop was facilitated with simultaneous translation into Polish and Ukrainian, reflecting the organization's commitment to accessibility and inclusivity.



*Photo 3. OWB's Greg Solecki delivering a ICS-200 course in Gdansk to Polish and Ukrainian operators*

Building on this success, Greg delivered a Level 200 ICS workshop in Gdansk, Poland, from September 25 to 27. Funding from the Canadian-Ukraine Association allowed this workshop to take place. Their funding paid travel expenses, not only for the instructor, but for all Ukrainian delegates, some of whom had to travel by bus, train and by foot for over 26 hours through a war-torn country. The funding also covered simultaneous translation into both Polish and Ukrainian over the three days of the workshop. The extensive workshop materials were translated into Polish by Gdansk Water and into Ukrainian by OWB volunteers in Canada. The search for sufficient translators was challenging but ultimately successful, thanks to outreach to OWB members, the UBC Ukrainian student group, the Canadian



Ukrainian university network in Ottawa, and a network of individual contacts. This reflects the organization's dedication to overcoming logistical hurdles to provide crucial training and support in regions experiencing water sector crises.

OWB's global expansion illustrates their commitment to aiding water sectors worldwide, adapting to various challenges, and extending their expertise wherever it is needed. Another virtual ICS-200 course is being planned for February 2024 to accommodate those Ukrainian participants who successfully passed their Level 100 but were unable to leave Ukraine to attend the workshop in Gdansk

These initiatives by OWB in Ukraine and Poland reflect the organization's dedication to addressing water quality and management challenges in conflict zones. Through strategic planning, expert guidance, and international collaboration, OWB is poised to make a significant impact in improving water infrastructure and standards in these regions, even amidst challenging circumstances.

## Pivotal Moments and Future Outlook

Key milestones in OWB's history, such as the acquisition of charitable status and partnerships with various global organizations, have been instrumental in its growth. The organization's ability to pivot to virtual training during the COVID-19 pandemic highlighted its resilience and innovation. Looking ahead, OWB continues to evolve, aiming to extend its impact and reach, and guided by a vision of global cooperation and skill-sharing in water and wastewater management.

### Honours from Leading Water and Environmental Organizations

Operators Without Borders has received significant recognition in the water and environmental sectors. The WEF has named OWB as one of its three Charities of Choice. [Water & Wastewater Equipment, Treatment & Transport Show \(WWETT\), again made OWB their Charity of Choice at their Conference and Trade Show in Indianapolis, donated a booth and accommodation s well as sending an \\$8000USD donation.](#) Additionally, the EOCP selected OWB as their Charity of Choice, demonstrating ongoing support since OWB's inception. These endorsements reflect the organization's impactful work and growing reputation in the field.

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### Support from National and International Bodies

OWB's influence extends beyond national borders, gaining support from various international organizations. Water Professionals International (WPI, formerly ABC), the Canadian Water and Wastewater Association (CWWA), the Western Canada On-Site Wastewater Management Association, [Clearflow, the Ontario Clean water Agency \(OCWA\) and Kerr Wood LeidalWastewater Education Organization, and the Water & Wastewater Equipment, Treatment & Transport \(WWETT\) Show have and the Public Works Association of BC have](#) all recognized and supported OWB's initiatives.

### Global Recognition and Generosity

On a global scale, Isle Utilities, headquartered in the United Kingdom, has acknowledged OWB through "The Water Action Platform" and "The Water Network", renowned for their outstanding podcasts. During a Christmas event, they recognized OWB as their charity, generously matching donations up to £10,000. This gesture of support underscores OWB's growing international acclaim and the value of its contributions to water management and environmental sustainability.

### US Fiscal Sponsor

OWB is delighted to team with Wastewater Education a 501-C in the US. Wastewater Education is now OWB's Fiscal Sponsor in the US which means they can accept donations on behalf of OWB and issue tax receipts in the US. We especially thank the Executive Director of WE, Dendra Best for the countless hours of support she has given OWB.

### Individual and Utility Members and Donors

OWB has continued to grow our corporate and individual membership base and doors. We thank all those who have generously become a member or donated to OWB. We received good news from the Canada Revenue Agency that backdated to our 2023 memberships the membership fee will now be tax deductible.

### OWB Australia

OWB is pleased to report that in December 2023 at the IWA conference in Perth, the organization launched OWB Australia. Board Member Madeleine Butschler represented OWB at the launch alongside Board member Ben Kele, the owner of Arris PTY Ltd Australia who provided significant assistance and resources through his company which focuses primarily on the decentralised water market. Ben is also the Chair of Wastewater Education. The goal of OWB Australia is to provide more efficient services to developing countries in Asia.

### Registration on the UN Partner Portal

OWB's efforts to solidify its global presence have been further enhanced by its registration on the UN Partnership portal. Completing this process involved providing comprehensive documentation, signifying the organization's maturity and adherence to international standards.

### Governance Committee's Role in OWB's Success

The successful completion of the UN application is a testament to the dedication and effectiveness of OWB's Governance Committee. Chaired by Madeleine Butschler, the committee — including Carl Yates, Ian McIlwham, and Janine De Boer — played a crucial role in this achievement. Their efforts in developing and implementing necessary policies and procedures have been pivotal in advancing OWB's mission and ensuring its ongoing success. This includes an updating of OWB's Prevention of Sexual and Exploitation and Abuse (PSEA) policy to align with UNICEF's policies.

In summary, OWB's recognition by prominent organizations and successful registration on the UN Partner Portal mark significant milestones in its journey. These achievements not only highlight the organization's impact and relevance in water management and environmental sustainability but also underscore its commitment to governance and international cooperation.

I thank our phenomenal Board of Directors, Robert Haller, Ben Kele, Kathy Obad, Madeleine Butschler, Kevin Carter, Carl Yates and Jason Mank for all the work they do throughout the year to make all of our work possible. They are owed my gratitude. I especially thank Kathy Obad who, despite not being from our industry has served for the last few years as our Treasurer. Kathy transformed our operations and

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recently we passed an Educational Audit by the Canada Revenue Agency with flying colours. Kathy is now stepping down from her role but has made a huge contribution in her role. Thank you Kathy.

Finally I would like to recognize the resilience of our partners and the peoples of Ukraine and Haiti. I was asked recently by one of the participants in our Ukraine workshops if the people in Canada and the US had forgotten Ukraine. It nearly broke my heart but I was proud to tell him that no we have not forgotten and stand beside them.. The work that we continue to do with your support shows they are not alone.

## Operators Helping Operators



*Photo 4. Valerie Jenkinson stands with operators at a pumping station in Haiti. She noted that Operators Without Borders is an organization of "operators supporting operators."*

OWB represents a dynamic and impactful response to global water and wastewater management challenges. Through its diverse initiatives, strategic collaborations, and commitment to capacity building, OWB has established itself as a vital contributor to global environmental sustainability. Its journey, marked by challenges and triumphs, serves as a powerful testament to the importance of skilled volunteerism and expertise in addressing some of the world's most pressing water-related issues.

Table 1. Operators Without Borders Initiatives

Country	Activities
Dominica	Disaster recovery after Hurricane Irma; restored service to 5 pumping stations, the wastewater treatment plant, and water supply to three villages. Delivered weekly 2-hour training workshops for laboratory personnel over a 10-week period.
The Bahamas	Initiated safety repairs to facilities; established and implemented a sampling program for 300 salinated wells and helped reinstate closed wells after Hurricane Dorian.
Barbados and Belize	Conducted an operational assessment covering all aspects of water and wastewater operations, resulting in over 100 recommendations.
Belize	Conducted safety training for the 120 operational staff of the Water Authority in confined space, trenching and excavating, chemical spills and other safety issues.
Caribbean region in conjunction with the Caribbean Water and Sewerage Association	Provided water certification exam prep training during COVID-19, a 2.5-hour weekly training workshop for operators in preparation for taking their certification exams.
Grenada, Barbados, Belize, and St Lucia	Conducted week-long in-person exam preparation workshops in preparation for operators to sit their wastewater treatment and wastewater collection exams.
Caribbean and Latin America region	Incident Command System Level 100 workshops, training over 400 people.
Bahamas, Barbados, Jamaica, Trinidad & Tobago	Incident Command System disaster response workshops, training participants to Level 300
Nakuru, Kenya	Pilot test certification training in conjunction with the Global Wastewater Initiative; trained 16 operators one week in exam prep Level 1 Wastewater Treatment and another week in Level 1 Wastewater Collection, resulting in 2 operators obtaining their certification (the first to do so in Africa)
Haiti	In conjunction with the Rotary International HANWASH project, developed a template and assisted in developing SOPs; delivered a workshop on district metered areas and assisted in its implementation, resulting in a reduction in non-revenue water from 80% to 35% within months
Ukraine	Member of the Ukraine WASH Cluster and the Water Quality Technical Advisory Team – designed and delivered a 2-day workshop on CBRN contamination of water supplies (attended by over 100 water utility operators); delivered two Level 100 ICS courses remotely, and one classroom Level 200 workshop, in Gdansk, Poland in September 2023. For the Level 100

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	workshop, 335 participants signed up. For the Level 200 workshop, Ukrainian participants travelled for 26 hours across a war zone to attend the training.
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#### **About the Author**



Mike Hewitt is a business development consultant with 20 years of experience in operations management, water treatment, environment, and emergency response. Through Almaquin Enterprises Limited, he provides services like business development, technical writing, data analysis, and water treatment consulting. His clientele spans several sectors, including military, aviation, oil and gas, mining, environmental management, and facilities operations and maintenance. Additionally, Mike volunteers with Operators Without Borders.