

3rd Annual AFN Water Symposium and Tradeshow

We help the world
**communicate, innovate,
lead healthy lives and stay safe.**



A WATER RESILIENCE STORY

Calian delivers a range of services in Canada and internationally. We focus on Emergency Management for natural disasters and infrastructure, Engineering, Health, Nuclear Preparedness, Training, and Cybersecurity.

A water story

Three situations:

- ▶ Environment
- ▶ Waterways and flooding risks
- ▶ Water infrastructure

Three steps for resilience:

- ▶ Using local strengths and capacity
- ▶ Developing partnerships
- ▶ Three community meetings



A water story

Three community planning meetings with:

- Chief and council
- Elders
- Emergency management team
- Select First Responders
- Water operator
- Youth representative
- Coordinators for health, family services, mental health
- A few active community members



MAPPING OUT COMMUNITY STRENGTHS & CAPACITY

Benefits

- Community feeling empowered
- Starting to design a plan, roles & responsibilities
- Beginning to leverage local capacity
- Efficient planning

Process

- Think outside the box in cataloguing community members' knowledge, skills, experience
- Developing a map to link them
- Validating the map with the community

MAPPING OUT COMMUNITY STRENGTHS & CAPACITY

People

- 5 firefighters
- 8 first responders
- 3 local mental health workers
- 2 emergency managers
- 1 water operator
- 16 community members willing to take training
- Good relationships with neighbouring communities

Values and knowledge

- Strong leadership and a clear governance model
- Traditional knowledge of the environment
- Community members willing to volunteer
- Strong family ties
- Many community members involved in a previous evacuation

CONSIDERING GAPS AND SERVICE NEEDS

Needs

- Investigating the health of the fish and quality of water in the river
- Mitigating and preparing for flooding
- Ensuring the consistent quality of drinking water and preparing for any emergencies related to the water infrastructure

Gaps

- Access to funding to carry out the work
- Access to environmental testing, technology and expertise
- Emergency management planning experience
- Emergency management equipment
- Training for community members
- More operators needed
- Support for communications planning

Gaps in environment health



Concerns about:

- Fish behaving differently
- Proximity of industry and agriculture
- Ability to test for possible contaminants
- If the fish are unhealthy, what else could be unhealthy?

Important considerations:

- Fish are an important local food source and cultural symbol
- Losing access to fish causes financial strain on families
- The community is unsure how to approach and work with industry players
- Wanting to include traditional environmental knowledge and local voices in the environmental assessment process

Gaps in flood management

Concerns about:

- Flooding over the main road in and out
- Possible evacuations – separating families
- Taking care of vulnerable populations (health plans, parents of young children, mental health)
- Protecting infrastructure, people, relationships, and the environment

Important considerations:

- Providing mental health support in a stressful situation
- Maintaining day-to-day services during an emergency
- Communicate clearly with everyone
- Make sure community members are prepared
- Planning the recovery phase
- Properly protecting traditional land, medicines, and ceremonial grounds
- Elders knowledge of other routes out of the community
- Helping the emergency management team



Gaps in water & wastewater management



Concerns about:

- Being prepared for any emergency
- Limiting contaminants in the water
- Supporting the current water operator

Important considerations:

- Constant access to clean drinking water is critical for several community members, the health center, businesses, etc. The river was an alternate water source until contamination concerns.
- One operator is not enough, especially in an emergency
- Ensuring community awareness
- Being able to address issues and restore services quickly and efficiently

CONSIDERING SOLUTIONS

Hopes/ideal situation

- Being able to rely on internal resources: increase number of trained community members to keep solutions local
- Building local capacity for environmental and water quality testing
- Minimizing risks related to flooding by rerouting the main road in/out
- Including health, mental health, and more into community resilience planning
- Include local knowledge in planning
- Plan ahead of time and plan for recovery

Priority actions

- Finding an environmental specialist willing to work with community members
- Developing emergency management and communications plans that addresses flooding and other risks
- Training community members
- Training new water operators

CONSIDERING SOLUTIONS

In house solutions

- Collecting information from the community about their observations on fish and river health
- Designing training for community members on evacuating
- Designing information messages for the radio and more
- Connecting with other communities to learn from them

Support needed for

- Finding funding
- Environmental testing
- Designing overall plans
- Designing additional training
- Training new water operators

Support sourced in:

Neighbouring communities, communities with similar backgrounds, municipalities, companies

Results



Integrating Best Practices and local knowledge

Whole community approaches

Proven strategies, industry standards and best practices, and **innovative community-based solutions** that use local knowledge can go hand in hand.

Developing strategic partnerships

By leveraging local strengths, skills, and capacity, communities can strategically select partners to fill gaps, support each other and learn together.

Developing Partnerships – IRTC



Calian has been engaged with IRTC for 3 years

Hazard and Risk Assessment

Working with communities to understand the risks that natural and human-driven threats present to people and property.

Emergency Operations Centre

Developing procedures and protocols for activating emergency plans and the operations centre to manage an emergency.

Search and Rescue (SAR) Training

Providing SAR training to the community for navigation, search areas, and information sharing with other departments and agencies

E-Learning Introductory Operations Course

Designed to prepare learners at an introductory level for operational roles within an Emergency Operations Centre (EOC) or Incident Command Post (ICP) working in the community.

Emergency Management Planning & Real-Time Learning

Developed comprehensive emergency plans to support coordinated emergency for six communities (Peguis, Dauphin River, Pinaymootang, Little Saskatchewan, Kinonjeoshtegon and Lake Manitoba). We then supported real-time learning for the first implementation of this plan during an evacuation situation.

All services delivered in the community, in partnership with the community

Leveraging partnerships for resilience means...

- Identifying and using existing strengths in the community
- Listening to community members and local knowledge
- Supporting community members to do the work
- Identifying gaps and building long-term, trusting relationships to meet unmet needs
- Learning from the success of others
- Selecting partners who are willing to learn together
- Working with partners who are willing to share their knowledge with the community to increase local capacity
- Preparing as many people as possible to ensure back-ups when needed
- Addressing community needs holistically & integrating resilient design – everything is connected

