



**RES'EAU**  
**WATERNET**

An NSERC Small Water System Strategic Network

# *Water* The Life of a Community

**Madjid Mohseni**

**AFN National Water Symposium & Trade Show**

February 6-8, 2018

Vancouver, BC

Putting rural community water systems

**FIRST**

[www.reseauwaternet.ca](http://www.reseauwaternet.ca)

# Acknowledgement

- Participating First Nation communities
  - Elders, community leaders, band members, water operators
- Water professionals
  - Government, Industry, NGOs, researchers

# Water: The Life of a Community

## **Context:**

- UN Declaration of the Right of Indigenous People (UNDRIP)
- Truce & Reconciliation Commission's 94 Calls to Action

How to make things right when it comes to drinking water?

How to recast our business models and problem solving approaches?

What does the future Indigenous water community look like?

# Water: The Life of a Community

## Objectives:

- To test our collective understanding of the UN Declaration of the Right of Indigenous People and the TRC's 94 calls to action **as they relate to water**
- Seek perspectives of local leaders and community members, including professionals and researchers, who influence the implementation of sustainable healthy water solutions within First Nations communities
- Enhance the RES'EAU Community Circles Model to Strategic Innovation

# Water: The Life of a Community

## **Keys to the success of the initiative**

- ensuring delegates from participating First Nations were given space to share with non-Indigenous professionals, researchers, NGOs, and policy makers
- building breakthroughs in awareness and understanding that support the recasting of systems necessary to address complex water issues as they exist at the local level and beyond
- Identifying actionable, implementable steps to actualizing the UNDRIP and TRC recommendations to improve the ecosystem?

# Water: The Life of a Community

## Gatherings in 3 Locations:

- St Eugene's Mission Resort, ʔAQ'AM
- Anderson Creek Facility, near Boston Bar
- Sty-Wet-Tan Great Hall First Nations Longhouse, UBC

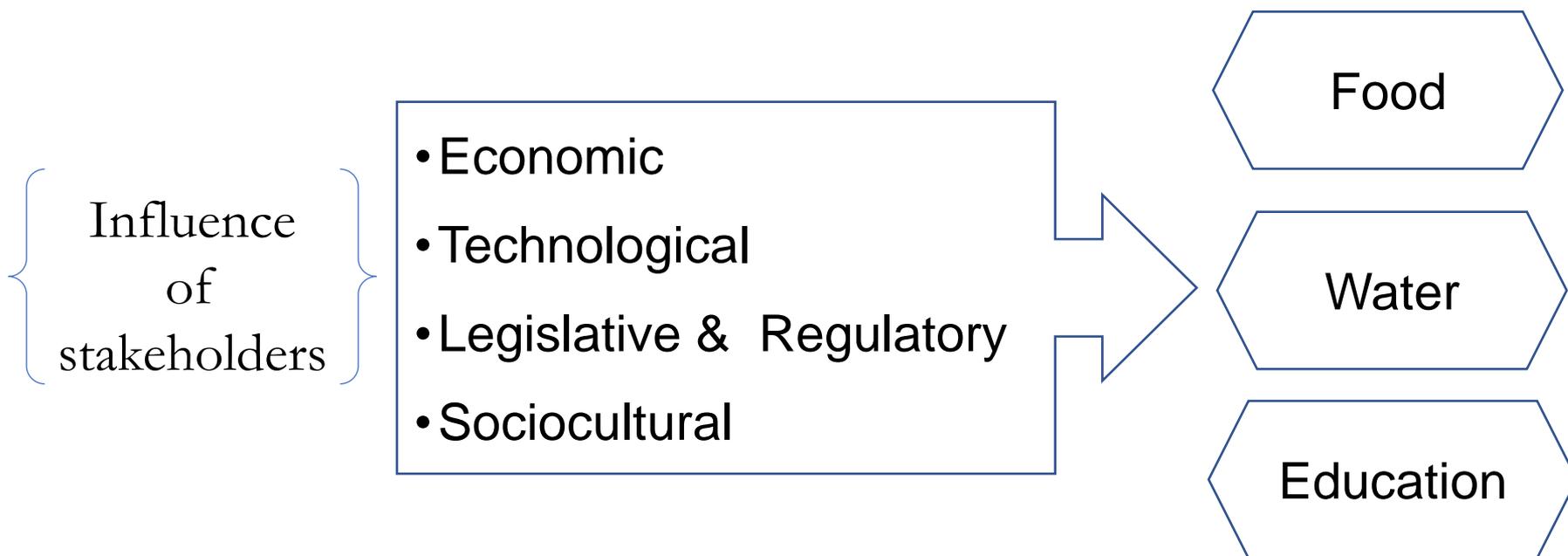
Over 100 representatives from ʔAQ'AM (the Ktunaxa Nation), Neskonlith Indian Band, T'it'q'et Administration, Snuneymuxw First Nation, Lhoosk'uz Dené Nation, Siska First Nations, Ts'msyen Nation, Lytton Indian Band, the First Nations Operators Water Network (FNOWN) of BC and Yukon, First Nations Health Authorities (FNHA), Indigenous and Northern Affairs Canada (INAC), Assembly of First Nations (AFN)

Plus many representatives from private sector and NGOs



# Apprehending The Context

Effect of Environment – the economic, social, political, and technological forces acting on the First Nations food, education, and water



# Food

## Economic

...**The creation of lower Columbia River dam cut off the salmon supply, resulting in changes in diets as well as economic relationships with neighboring nations.** ...FNs were given tinned salmon to make up for the loss of fish in their diet. This continued until WW2, when the salmon was sent overseas instead.... The loss of the salmon broke down the economic relationship between the Ktunaxa Kootenay nations and those over the mountain...

## Socio-cultural

....economic life of Ktunaxa FN was focused on fishing, using fish traps and hooks, and travelling on the waterways in the sturgeon-nosed canoe.... **The 1964 Columbia River Treaty cut off the critical salmon supply, resulting in changes in local diet and diminished trade with neighbouring nations,** and important wetlands were drained to make room for development and farming

# Education

...the policy behind the residential schools was 'take the Indian out of the child'...

... The proper historical writings have not been kept ...but most of the teaching was oral...there is an urgent need to reconnect youth to what is important in their community... **the Elders did their best to hand down the teachings on the sacredness of water...the teachings about water have been sleeping and the youth are responsible for waking them up.** Youth from across their nations are waking them up. As one can witness the youth can belt out a song at a pow wow. ...love and respect all things...never give up...

# Water

## Economic

“Water is important. But it’s being polluted. Why? Because of money, progress...they will never understand how we feel about the land, about the water. about what it means to us... they take it for granted... bad water means communities cannot attract professionals such as teachers and nurse to work there, .... improvements are delayed or derailed due to long project development and approval times, ....**It’s all about empowerment – community level decision making in determining what is right and good for the community...**

# Water

## Technological

Importance of getting kids interested in science and engineering, so that FN kids can become the next generation of water system engineers.... our issues, they are inherited problems from across generations, the result of a legacy of engineering approaches that discounted FN communities.... **operators want to start taking more ownership of our system**, not only relying on circuit riders when crisis occurs, but getting our own operators and engineers... **operators need to be involved in the design and development of drinking water systems. Too many systems are designed by outsiders that aren't operable**

# Water

## Legislative and regulatory

All decisions about water must be made through a lens of community health, as well as in the context of importance of water in indigenous cultures. .... you cannot push forward any legislation. you can't come on to our land and tell us what to do..... it's really hard to respect a government that has no respect for water.... communities are overwhelmed and over worked with multiple issues (community issues, municipal issues, provincial and federal issues) – this needs to be kept in mind when understanding water issues relating to a community....

# Water

## Socio-cultural

Anything that benefits First Nations benefits all Canadians; however, right now the opposite is true,...and **reconciliation is about improving things for all of Canada, & improving water quality for FNs benefits all Canadians** because overall water quality and sustainability will be preserved...the teachings about water have been sleeping and the youth are responsible for waking them up....youth from across their nations are waking them up. ..as one can witness the youth can belt out a song at a pow wow...

# Apprehending The Context

Effect of Environment – the economic, social, political, and technological forces acting on the First Nations food, education, and water

## Implications

**Influence of Stakeholders**  
(regulators, special interests groups, trade associations, innovators,...)

- Economic
- Technological
- Legislative & Regulatory
- Sociocultural

Food

Water

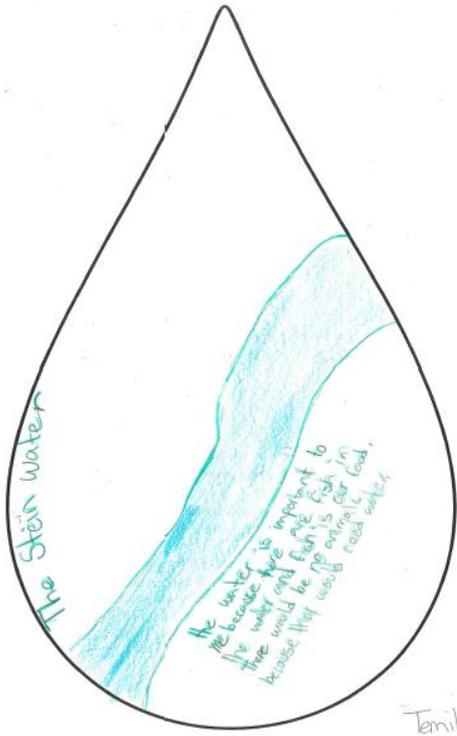
Education



## *Message from the Youth!*

*We, the youth of the Nlhakapamux Nation are urgently requesting the assistance of our country's leaders to stop wasting and polluting our most important natural resource (water) quo! It must be protected and made accessible for everyone!*

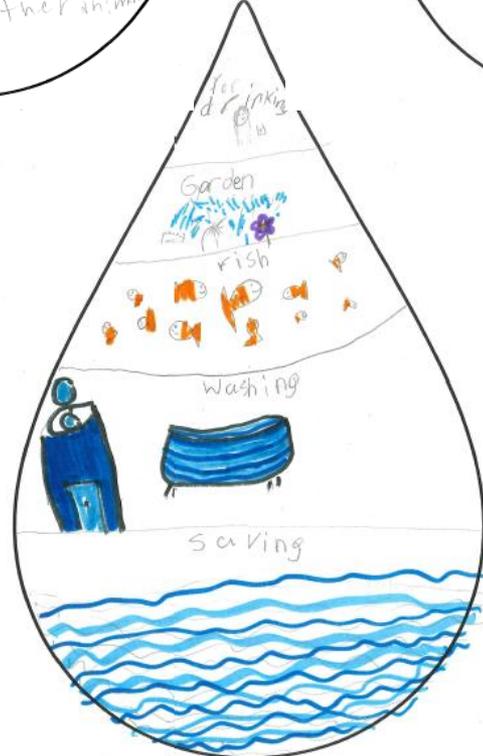
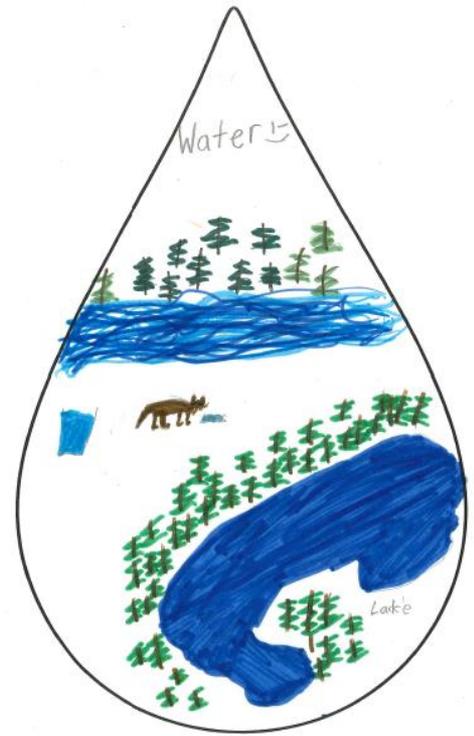
Aaron  
Age 12



Temika



We need water to help us survive. It's a good thing to have it helps plants grow and keeps us hydrated. Water helps with our hygiene. We can also use water for swimming and other fun activities. It gives us food like fish and other animals.



# Path to Reconciliation

**There are many people who are part of this water community** that we have been talking about. The private sector needs to remember that these are real people with families who need to be understood, and heard...And then we have the public sector, and they move at the opposite speed (of business) sometimes – [we need to] balance out the two so they can work together. The community itself needs to remember that there are people that are out there that are willing to help us – to accept them into our community and to be ready to accept that change. ...

**Proposition (i)** Cross-Sector Strategic Partnership can bring about values to the communities

.... we need to have the community on side in order for innovation to occur. The biggest challenges we face in are on the social side of things. People don't want [disinfection by chemicals]...

“...the time is long past where external agencies determine what is best for the [specific communities]...”

**Proposition (ii)** Undermining community's concerns inhibits the diffusion of solutions

...Too often innovation is oriented towards short-term goals. We cleverly create technologies that consume resources and solve problems, then move on to the next technology to resolve the messes made by the previous technologies, and unwisely consume more resources along the way. We need to create a climate of sustainable innovation...

...viable relationships and partnerships can reduce the cost of research and development, while improving efficiency and sustainability...

**Proposition (iii)** Pushing R&D to focus on reducing costs of existing solutions may drive out innovation and decrease quality of interactions within the Strategic Partnership

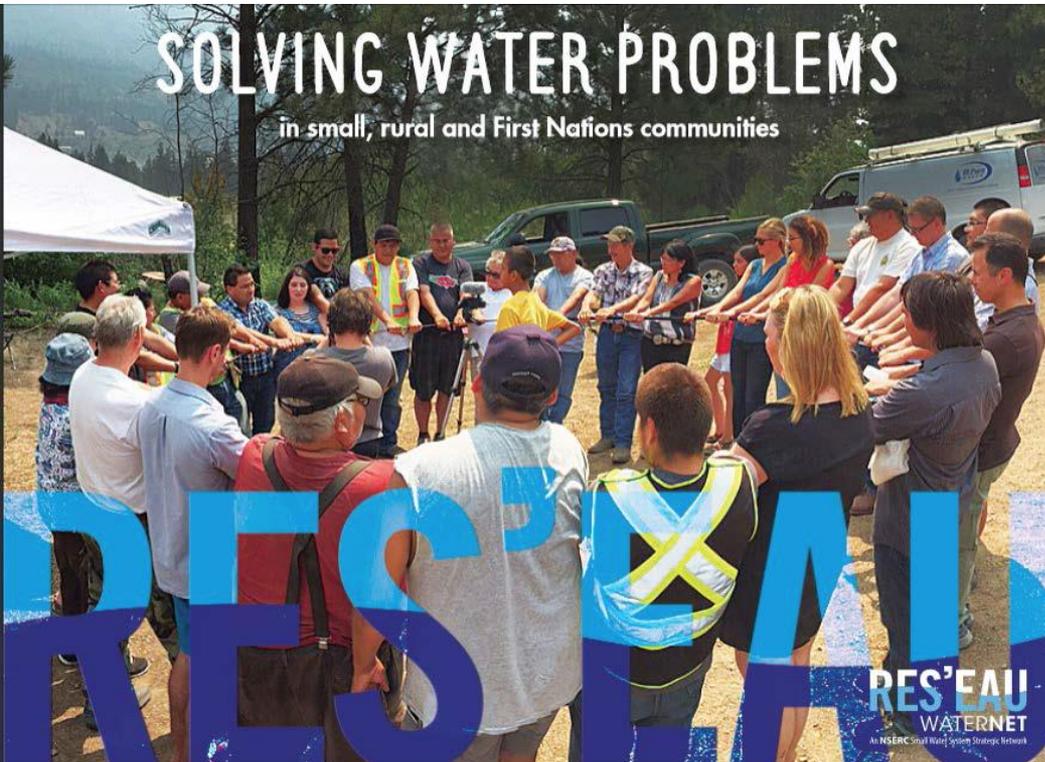
...concepts such as risk, health, efficiency, affordability, acceptability, profitability, economies of scale and size, etc. must be revisited through the new lenses... Even the definition of acceptable water quality (and which players decide and enforce it) must be reconsidered...

# Propositions - summary

- **Proposition (i)** Cross-Sector Strategic Partnership can bring about values to the communities
- **Proposition (ii)** Undermining community's concerns inhibits the diffusion of solutions
- **Proposition (iii)** Pushing R&D to focus on reducing costs of existing solutions may drive out innovation and decrease quality of interactions in the Strategic Partnership

# Strategic Implication

Shift from politics of stakeholder interests to  
**Power of Strategic Partnership Processes**



The **RES'EAU *Community Circle*** is a unique precision problem-solving model for drinking water in small, rural and indigenous communities. It proposes the customization of solutions, with decisions, practices, technologies and services being tailored to the individual community.

It is not from the benevolence of the individuals, or sectors that we don't fall, but from their regards for their own fall. When the linkage breaks we all fall.



Communities



Government



Research



Industry

# a community circle approach

to Solving Water Problems in Small Systems

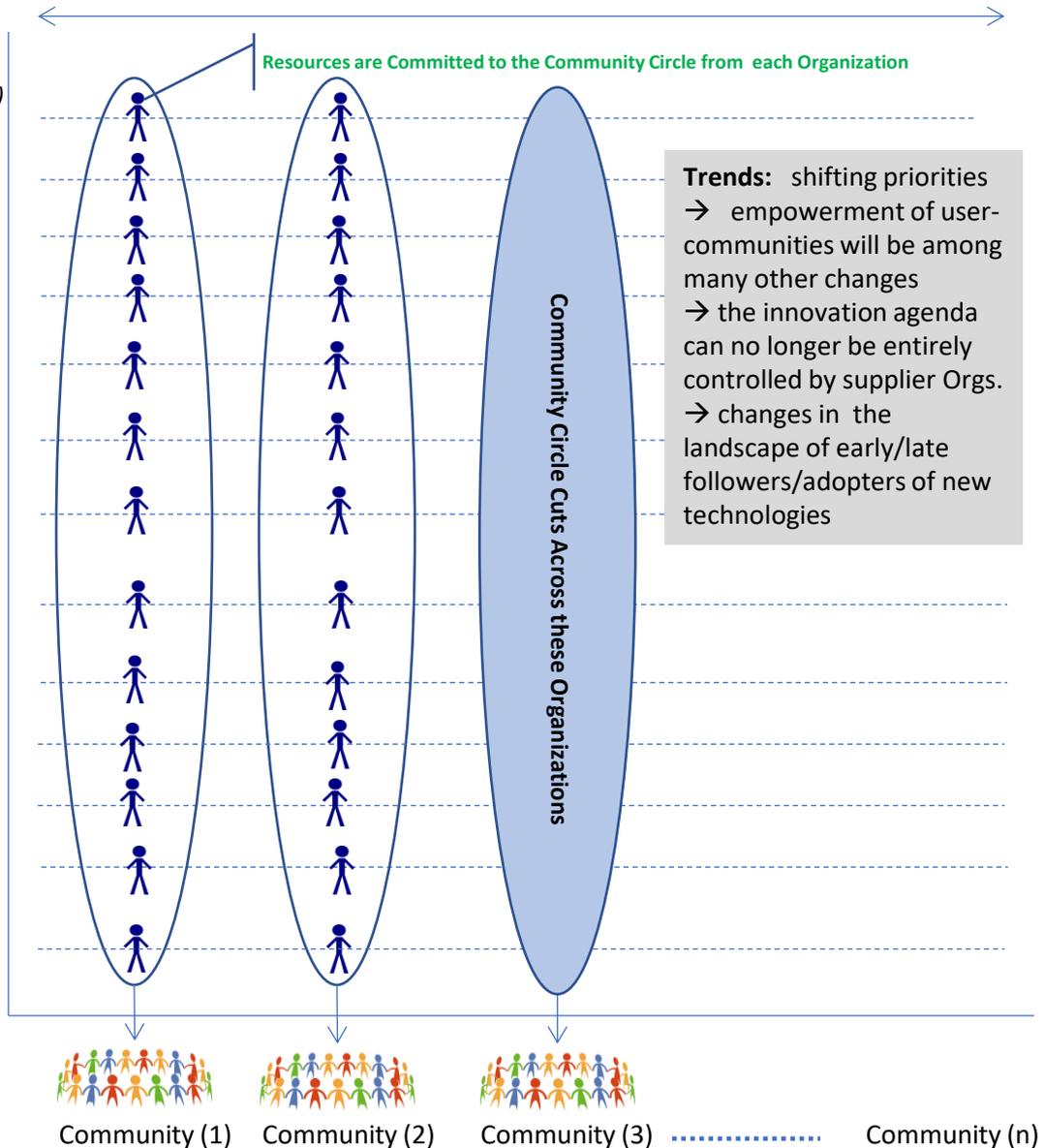


# The Task force

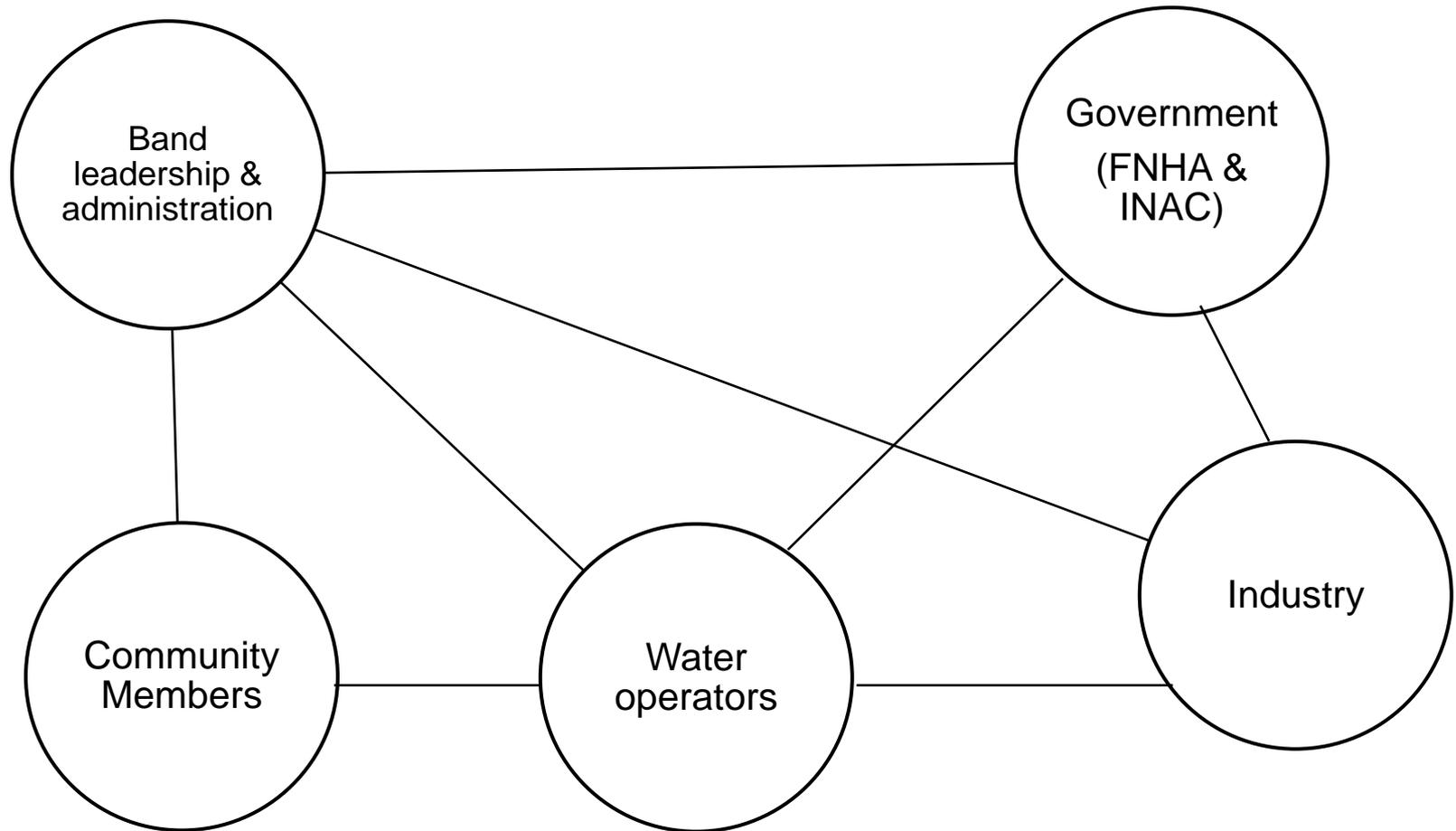
Services and Products provided by each individual organization

- Indigenous Services Canada (primary sponsor)*
- First Nations Health Authority/ Officers*
- First Nations Operators Water Network of BC and Yukon*
- BC Centre for Disease Control*
- Health Canada*
- Provincial Health Authorities / Drinking Water Officers*
- BC Ministry of Community Development –  
Local Government Infrastructure and Finance*
- Major Consulting firms in BC : (e.g. KWL, Urban Systems,  
Opus Dayton Knight, Associated Engineering)*
- Local Small Manufacturing Firms: e.g. BI Pure Water*
- Major equipment and process suppliers: e.g. Trojan, Veolia*
- Small Water Users Association of BC*
- BC WWA, CWWA, CWQA*
- Major Universities: (e.g. UBC, EPM, GUELPH, LAVAL)*

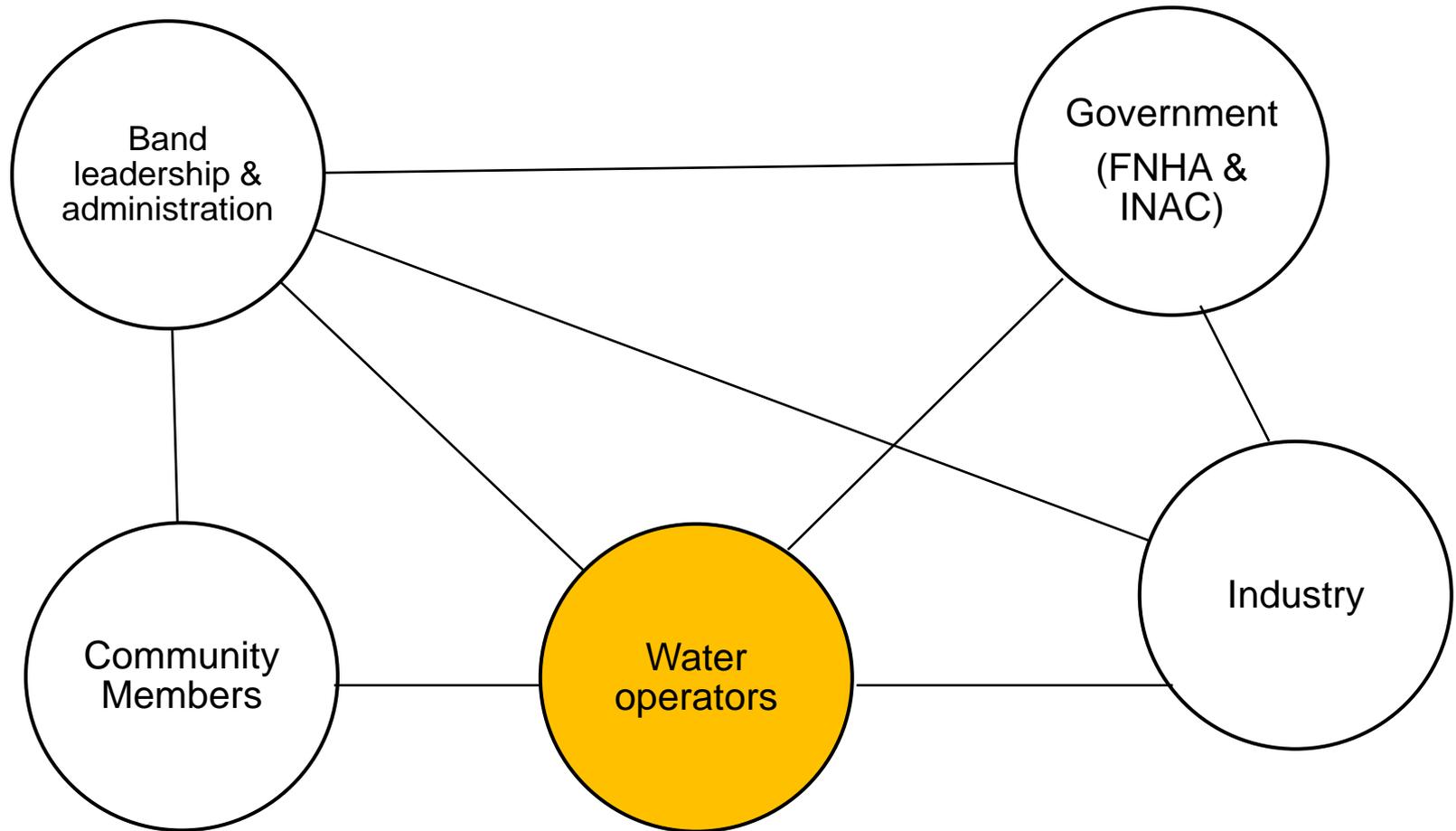
**Goal:**  
**Design, implement, operate & maintain,  
 evaluate, follow-through, and validate  
 solutions towards safe and clean drinking  
 water**



# Interconnectivity of different partners



# Interconnectivity of different partners



# Role of Operators



DESIGN

APPROPRIATE TECHNOLOGY  
BUILDS COMMUNITY OWNERSHIP



OPERATION

ENSURE SYSTEM IS FUNCTIONING



MAINTENANCE

LONG-TERM SYSTEM FUNCTIONING



MANAGEMENT

ASSET MANAGEMENT & BUDGETING

# Why Operators?

Well trained, skilled operators ensure safe water is provided to the community

Operators are the “face” of water in their community

Operators are educators & advocates for their community's health

# RES'EAU-WaterNET

Van Anda  
Improvement District



Indigenous and  
Northern Affairs Canada





## THANK YOU

