



BUILDING DROUGHT RESILIENCE WITH FIRST NATIONS OF TREATY 6

PHASE 1- NEEDS ASSESSMENT



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Words for Water

Across the diverse First Nations that are signatories to Treaty No. 6, the importance of water is reflected in the languages spoken on the land. Each cultural group holds its own word for water, distinct in sound, but united in meaning, reflecting deep relationships with water as life-giving and sacred:

Cree: *nîpîy*

Salteaux: *nibi*

Nakota: *mni*

Dene: *tu*

Acronyms

The following acronyms are used throughout this report.

ATV	All-Terrain Vehicle
FN	First Nations
GIS	Geographic Information System
ISC	Indigenous Services Canada
NSWA	North Saskatchewan Watershed Alliance
OCAP	Ownership, Control, Access, Possession
SOP	Standard Operating Procedure

1.0 INDIGENOUS PERSPECTIVES OF WATER AND LIFE¹

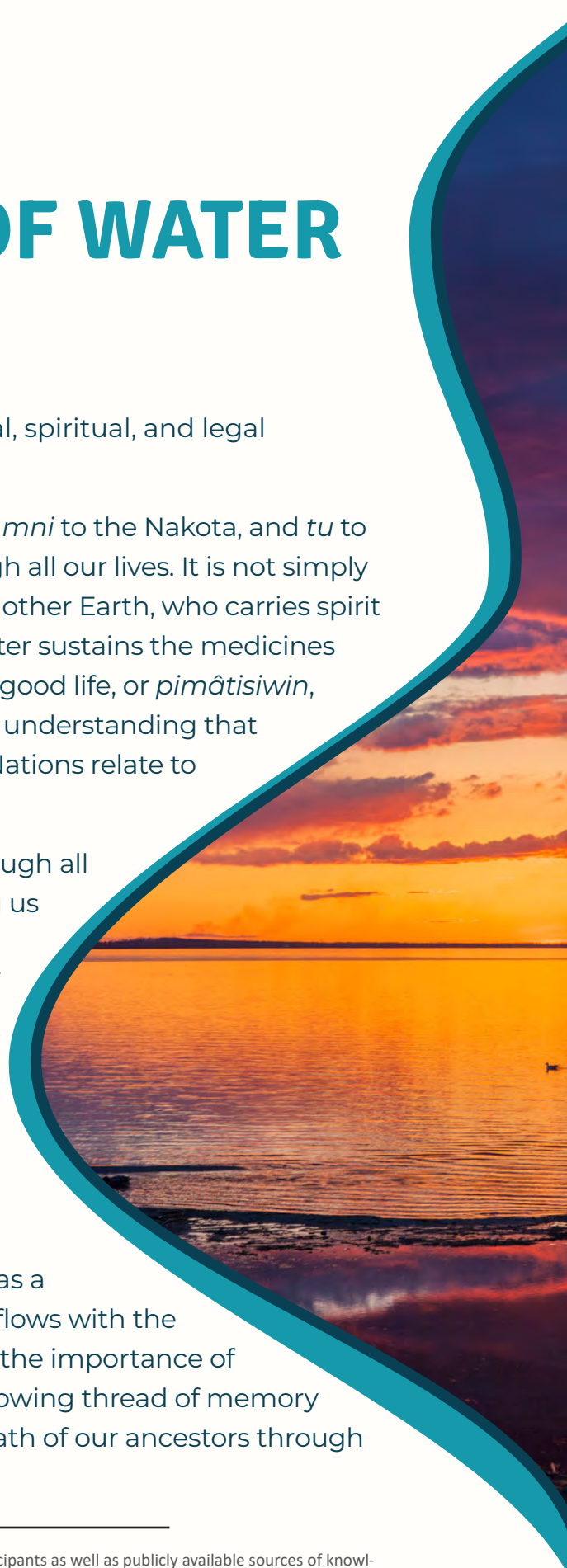
Across Treaty No. 6 territory, water holds cultural, spiritual, and legal significance for all First Nations.

Water, or *nîpîy* to the Cree, *nibi* to the Saulteaux, *mni* to the Nakota, and *tu* to the Dene, is the sacred current that flows through all our lives. It is not simply a resource; it is a living relative, the lifeblood of Mother Earth, who carries spirit and breath that connects all peoples as one. Water sustains the medicines born of our lands and teaches us how to live the good life, or *pimâtisiwin*, in balance with the Earth. *Nîpîy pimâtisiwin*, the understanding that Water is Life, is foundational to how many First Nations relate to the land, to each other, and to the Creator.

For the Cree, *nîpîy* is the life force that flows through all Creation, guiding good relations, and reminding us that kinship extends beyond people to the land, animals, and waters. The Saulteaux speak of *nibi* as a sacred female presence, whose protection is carried by women through ceremony and prayer, honouring the deep connection between water and healing. Women are the keepers of water, carrying responsibility for the water outside and inside themselves.

Among the Nakota, *mni* holds a powerful place as a sacred force that renews both land and spirit. It flows with the life force that sustains all people and teaches us the importance of balance and respect. The Dene call water *tu*, a flowing thread of memory and life, carrying movement and the sacred breath of our ancestors through every river and lake.

¹ This text was written to incorporate some of the wisdom shared by workshop participants as well as publicly available sources of knowledge, including writings by Indigenous scholars, oral teachings recorded in reports, and community-led initiatives. Every effort was made to respectfully reflect widely shared teachings and values. We recognize that each Nation holds its own knowledge and teachings about water. This text is intended as a starting point for dialogue, not a replacement for local voices or lived experience.



When our ancestors entered into Treaty 6, they did so with these teachings in mind. The Treaty is a sacred commitment made with the Crown and with Creation. From our perspective, the Treaty includes responsibilities to protect water, to ensure the health of the land, and to support our ability to live in accordance with our knowledge systems. Access to clean, safe, abundant water is not only a Treaty right, but also a Treaty responsibility. Water is a gift from the Creator to the people.

Colonial policies have disrupted these teachings, diverting rivers, draining wetlands, and polluting waters, breaking the bonds that once sustained our ceremonies, medicines, and ways of life. Today, *pahkwahcaw*, or drought, and climate change threaten to further silence the voice of water in our communities. These dry times are not just environmental conditions; they are spiritual disruptions, cultural disconnections, and growing threats to Treaty rights.

Yet, resilience is found in our knowledge and responsibility to protect water as our sacred relative. By centering Indigenous laws and teachings, we reclaim the strength to live in harmony with Mother Earth and restore connections with the land and each other. Through ceremony, stewardship, and the wisdom of our Elders, we uphold the spirit of *nîpîy pimâtisiwin*, ensuring that water continues to flow for all our relations, today and for generations yet unborn.

These teachings are not relics of the past. They continue to guide how we understand and respond to the challenges facing our lands and waters today, including *pahkwahcaw*. By grounding this project in Indigenous perspectives, we begin the work of building solutions that reflect both ancient wisdom and contemporary realities.



2.0 INTRODUCTION

Building on these deep-rooted understandings of water, this report turns to the practical need for drought resilience across Treaty No. 6 First Nations in Alberta.

2.1 PURPOSE

First Nations across Treaty No. 6 territory are experiencing the growing impacts of climate change: drier summers, unpredictable seasons, and increasing pressure on local water sources. In response, the Needs Assessment for Drought Resiliency in Treaty No. 6 First Nations (Needs Assessment) was launched to support stronger, more resilient First Nations communities.

This project began by recognizing that First Nations face unique and often layered challenges when it comes to drought resilience. These challenges reflect not only environmental realities, but also the historic and ongoing impacts of jurisdictional complexity, infrastructure gaps, and the need for planning tools that are both effective and culturally grounded. The Needs Assessment is the starting point in a larger process; one that aims to strengthen water security and climate adaptation through meaningful collaboration and planning.

At its core, the project involves co-drafting a drought planning needs assessment that draws on existing materials while centering the knowledge, experiences, and priorities of First Nations in Treaty No. 6. It also seeks to raise awareness about drought risks and spark conversations within and between communities, creating opportunities for collective action and shared learning.

2.2 BACKGROUND

Drought is not a new challenge in the Canadian Prairies. Communities across the region have felt its effects, sometimes for many years at a time, throughout history. Within living memory, there are numerous examples of multi-year droughts that have disrupted daily life, harmed ecosystems, and strained water systems. But the history goes back even further. Tree-ring records spanning over 800 years reveal that the Prairies have experienced droughts lasting not just years, but decades, some stretching as long as 25 to 50 years². These historic lessons underscore the need to both understand and prepare for potential drought conditions.

2 Sauchyn, D., Vanstone, J. R., & Perez-Valdivia, C. (2011). Modes and forcing of hydroclimatic variability in the upper North Saskatchewan River basin since 1063. *Canadian Water Resources Journal*, 36(3), 205–218. <https://doi.org/10.4296/cwrj3603845>

While municipalities, industries, and regional water managers have begun advancing drought adaptation, First Nations are often excluded from these conversations. This lack of inclusion, despite the disproportionate impacts faced by First Nations, has left a major gap in Alberta's drought preparedness.

This Needs Assessment begins to address this long-standing gap in drought planning by centering the voices and experiences of First Nations within Treaty No. 6 territory and identifying the resources most needed to support their resilience.



2.3 UNDERSTANDING DROUGHT: DEFINITIONS AND DIMENSIONS

Drought is more than a lack of rain; it is a layered challenge with social, cultural, environmental, and economic dimensions that affects different communities in different ways. Understanding the various forms of drought is essential to effective planning and response, especially when considering the broad impacts on land, water, and people. This project recognizes four main types of drought, each capturing a different aspect of how water shortages can unfold across the landscape and within communities.

In the context of this project, typical scientific categories, such as *meteorological drought* and *hydrological drought* have been paired with a plain-language phrase to make the concepts more accessible and intuitive.

Types of Drought

Dry Skies – Meteorological Drought



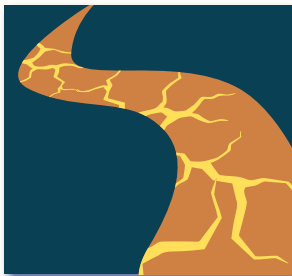
This is the most familiar form of drought, defined by a prolonged period of below-average rain and/or snow. Meteorological drought is often the first signal of trouble, marked by unusually dry weather patterns that can last for weeks, months, or even years. While it doesn't always lead to immediate impacts, it sets the stage for the other forms of drought to follow.

Dry Earth – Agricultural Drought



When dry skies persist, they often lead to reduced soil moisture, resulting in what is known as agricultural drought. This form directly affects crops, pastures, and the ability to grow food. Even short-term moisture deficits during key growing periods can devastate yields and threaten food security, particularly in regions that rely on rain-fed agriculture.

Dry Waters – Hydrological Drought



Over time, reduced precipitation and increased evaporation can lead to lower water levels in rivers, lakes, reservoirs, and aquifers. This is known as hydrological drought. It can take longer to emerge than meteorological or agricultural droughts, but its impacts are far-reaching, affecting drinking water supplies, water availability for industry and agriculture, and aquatic ecosystems.

Dry Nations – Community, Socio-Economic Drought



The final and often most visible layer of drought is its effect on people and communities. Socio-economic drought occurs when water shortages begin to disrupt daily life by impacting households, businesses, health, and local economies. For First Nations, this can be further compounded by existing infrastructure limitations, jurisdictional complexities, and long-standing inequities in water access and governance.

Taken together, these dimensions of drought remind us that water shortages are not just environmental issues, they are community challenges that call for coordinated, inclusive, and forward-thinking responses. Recognizing these different types of droughts helps ensure that preparedness and planning efforts are comprehensive and responsive to the full scope of potential impacts.

3.0 PROJECT APPROACH

The development of this Needs Assessment was guided by the voices and knowledge of First Nations across Treaty No. 6 territory, gathered through workshops, one-on-one conversations, and collaborative dialogue. At the heart of the process is a commitment to ensuring that the assessment reflects the lived experiences, priorities, and knowledge systems of the communities it is meant to serve.

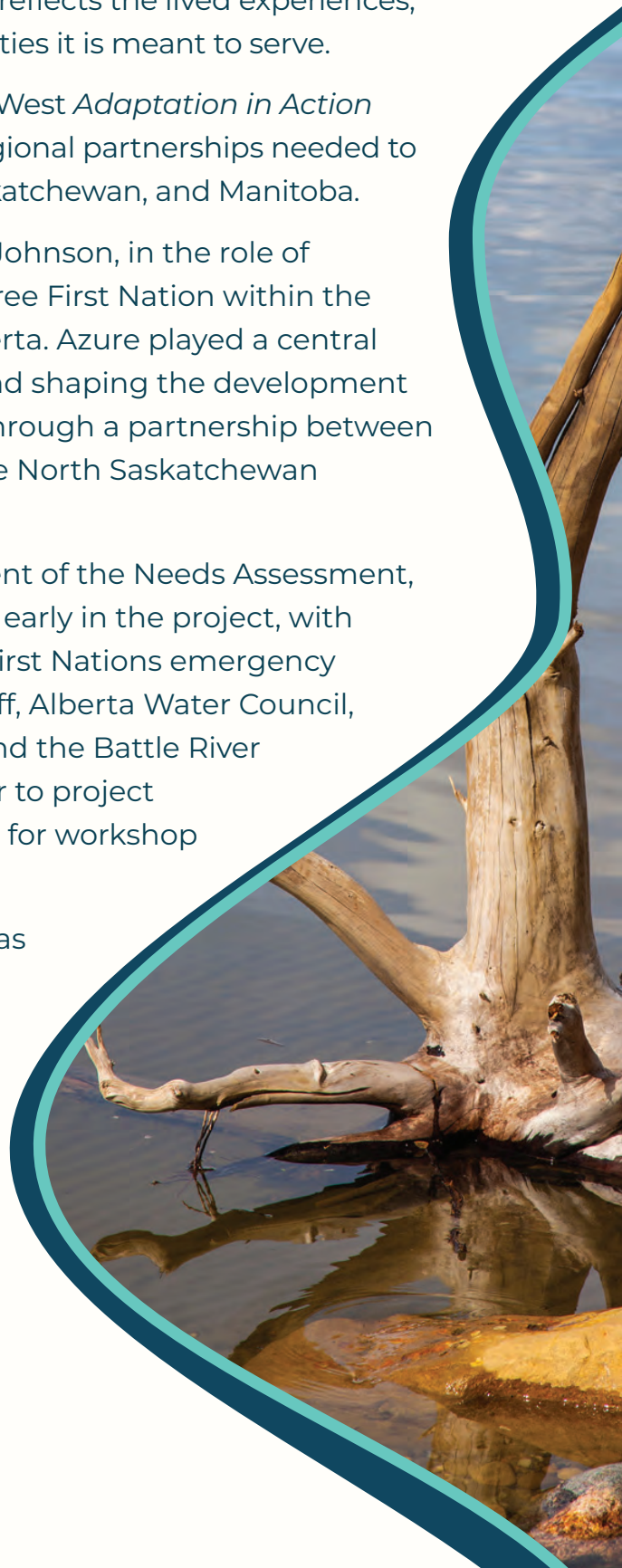
The project was generously funded by the ClimateWest *Adaptation in Action Program*, which helps develop and support the regional partnerships needed to respond to a changing climate across Alberta, Saskatchewan, and Manitoba.

The project began with the recruitment of Azure Johnson, in the role of Indigenous Project Lead. Azure is from Samson Cree First Nation within the Treaty No. 6 territory, living near Pigeon Lake, Alberta. Azure played a central role in engaging with Nations, gathering input, and shaping the development of the Needs Assessment. This role is supported through a partnership between the Confederacy of Treaty Six First Nations and the North Saskatchewan Watershed Alliance (NSWA).

To support planning, logistics, and the development of the Needs Assessment, a small technical advisory committee was formed early in the project, with participation from the Confederacy of Treaty Six First Nations emergency management, Indigenous project lead, NSWA staff, Alberta Water Council, Lakeland Industry and Community Association, and the Battle River Watershed Alliance. The technical group met prior to project workshops to review materials and offer guidance for workshop planning.

Two Treaty No. 6 territory-wide workshops served as the primary engagement forums. The first, held on November 28, 2024, brought together 25 participants from eight Nations:

- Alexis Nakota Sioux Nation,
- Enoch Cree Nation,
- Ermineskin Cree Nation,
- Frog Lake First Nation,
- Kehewin Cree Nation,
- Paul First Nation,
- Samson Cree Nation, and
- Whitefish Lake First Nation #128.



A second workshop, held on April 30, 2025, expanded participation to include 21 participants from 11 Nations, including:

- Alexis Nakota Sioux First Nation,
- Cold Lake First Nation,
- Enoch Cree Nation,
- Ermineskin Cree Nation,
- Goodfish Whitefish Nation,
- Kehewin Cree Nation,
- Montana First Nation,
- O'Chiese First Nation,
- Samson Cree Nation,
- Sunchild First Nation, and
- Whitefish Lake First Nation #128.

In addition to these workshops, the Project Lead and NSWA staff conducted one-on-one conversations with participants to gather deeper insight and ensure that individual perspectives were captured. Further discussions were also held with staff from the Confederacy of Treaty Six First Nations to ensure alignment with regional emergency management efforts and community readiness.

Originally, the second workshop was intended to be a networking workshop with First Nations and a few municipalities, with the intent to connect emergency management experts among First Nations with municipalities. The general sentiment of the workshop participants and the organizers was that much more discussion within and among First Nations on the drought preparedness topic was required before being ready for external networking. As a result, the intent of the second workshop pivoted to continue the exploration of First Nations drought resiliency and water security needs alongside a review of the insights from the first workshop.

Together, these efforts formed the first steps of a collaborative and inclusive process, one rooted in respect for local knowledge, mutual learning, and shared commitment to building drought resilience for First Nations across Treaty No. 6.



Elder Leo Bruno
sharing about
the Battle River.

4.0 DROUGHT RESILIENCY NEEDS ASSESSMENT

4.1 QUOTES FROM THE WORKSHOPS

Throughout the two workshops, participants shared powerful reflections that underscored the urgency and relevance of drought planning in their communities. The following quotes capture the importance of this work in the words of those directly impacted, highlighting lived experience, concern for future generations, and the need for action rooted in Indigenous perspectives.

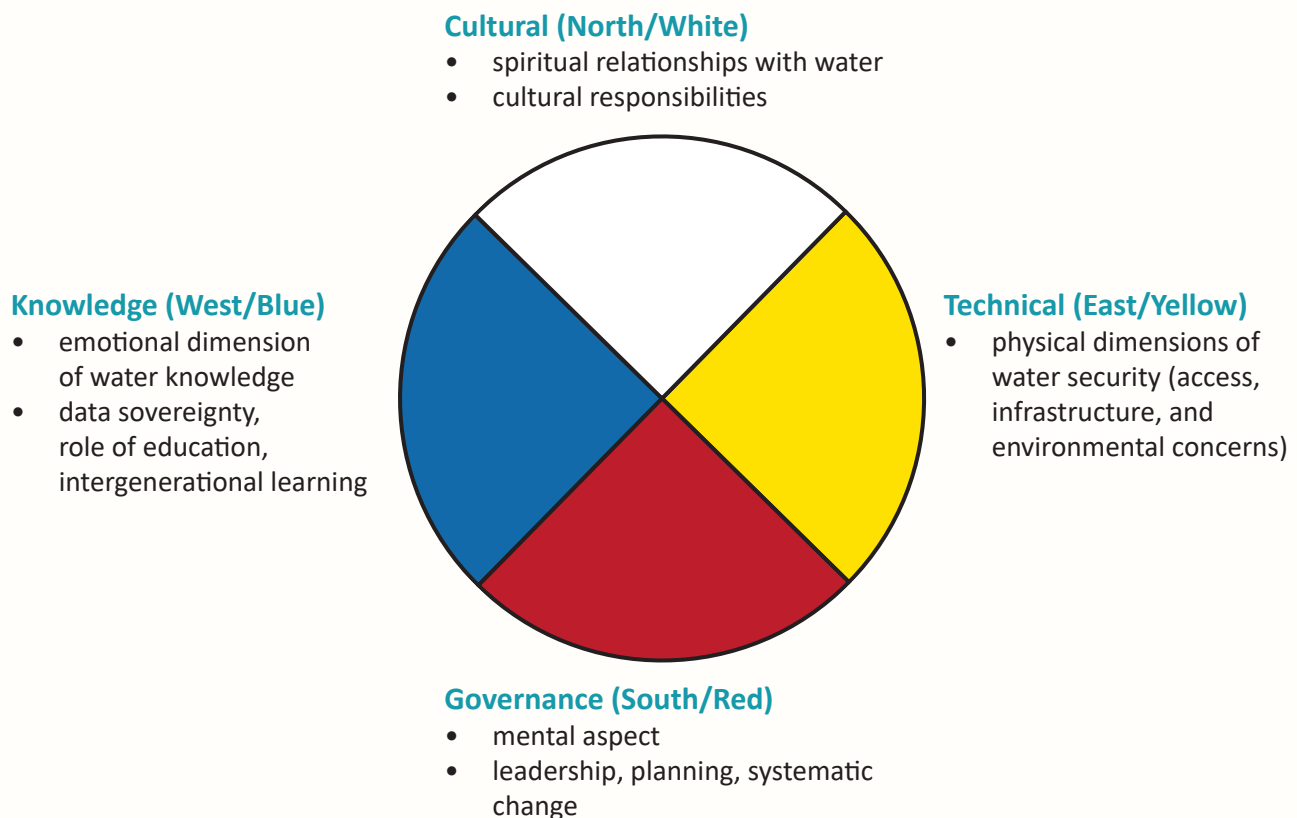
- ~ *“Drought preparation gives us a sense of security in case our water supply is cut off”*
- ~ *“In an emergency, will our water sources get shut off first?”*
- ~ *“Our vision for water is that we are part of the water. Nipi means one with water”*
- ~ *“I feel we’re not prepared for climate change”*
- ~ *“If you don’t have water, nobody lives”*
- ~ *“As long as the grass grows and the water flows”*
- ~ *“You need to set the narrative differently, by adopting some humility. When we see documents that say “Alberta owns the water”, where is the humility?”*
- ~ *“The water line went down in February 2024, so water trucks delivered our water”*
- ~ *“The issue isn’t necessarily the drought – it’s the access to the water”*



4.2 THEMES AND INSIGHTS FROM WORKSHOP DIALOGUE

The conversations held during the two workshops revealed a wide range of insights, concerns, and community-driven priorities. Participants discussed drought not just as an environmental issue, but as a deeply interconnected challenge that touches on culture, infrastructure, policy, sovereignty, and everyday life.

To organize and reflect the breadth of insights gathered during the Treaty No. 6 drought resiliency workshops, the themes have been grouped using a framework inspired by Mario Swampy of Samson Cree Nation, who described the stewardship of water using the Medicine Wheel (Table 2). This holistic model connects four key aspects of being - spiritual, physical, mental, and emotional, with the four cardinal directions, each associated with a distinct focus.



The Cultural (North/White) group highlights spiritual relationships with water and cultural responsibilities. The Technical (East/Yellow) group captures the physical dimensions of water security, including access, infrastructure, and environmental concerns. The Governance (South/Red) group reflects the mental aspect, including leadership, planning, and systemic change. Finally, the Knowledge (West/Blue) group emphasizes the emotional dimension of water knowledge, data sovereignty, and the role of education and intergenerational learning. This framework honours Indigenous worldviews and provides a respectful and practical way to guide future drought planning efforts.

Table 2. Workshop Themes.

Group	Direction	Focus	Drought Themes
Cultural	North (White)	Spiritual	1. Culture and Relationship to Water
Technical	East (Yellow)	Physical	2. Water Sources, Access, and Use 3. Environmental and Water Quality Concerns 4. Data Sovereignty and Monitoring 5. Infrastructure and Natural Solutions
Governance	South (Red)	Mental	6. Policy, Governance, and Decision-Making 7. Funding and Systems Change
Knowledge	West (Blue)	Emotional	8. Emergency Planning and Resilience 9. Knowledge, Education, and Capacity Building

1. Culture and Relationship to Water

Participants reflected on how drought and changing water conditions are impacting cultural connections to the land and water. Questions were raised about how diminished water availability may be affecting Treaty rights and spiritual relationships with water.

- Desire to see more Indigenous place names and knowledge more widely used.

“How has the impacted water changed the relationship between Treaty people and the water?”

2. Water Sources, Access, and Use

Participants emphasized the importance of mapping and protecting both traditional and modern water sources. Discussions also explored how leased lands may limit traditional uses and whether lease conditions can be adapted to protect water and Treaty rights. Discussion items included:

- Need for more mapping and reclaiming traditional water sources.
- There is an interest in understanding water licensing and potentially using irrigation as a way to adapt to drought.
- Concerns about agricultural and leased land on reserves restricting traditional use.

“Can leases have conditions placed on them (e.g., no fertilizer or pesticides, no hydrocarbon extraction)?”

“Does leased land prevent traditional land use? Can community members still hunt/fish/gather on leased land?”

- Recognition of infringements when drought prevents harvesting, fishing, and gathering.

“If low water availability impacts the ability to fish, harvest traditional plants, and engage in traditional activities, then Treaty rights are being infringed on.”

Communities expressed concern about the reliability of their water supply systems, especially in emergencies, and about the need for better planning and infrastructure for water storage and distribution. Concerns expressed include:

- Variety of water systems across communities (wells, cisterns, piped networks).
- Different forms of supply need different procedures for protecting water.
- Uncertainty about how much water is available, how much is needed, and how it is actually being used.
- Questions about trust in external water suppliers.

“In an emergency, will our water sources get shut off first?”

- Concerns about growing populations (e.g., people returning to reserves) and straining systems.

“Treaty means irrigating crops during a drought. How about give us the funding so we can build a dam to store water now?”

3. Environmental and Water Quality Concerns

Participants raised issues about declining water quality during drought conditions, including the exposure of industrial waste and contamination from nearby burial sites. Insights included:

“What happens to water quality during a drought?”

- Concerns about chemical residue from drying tailings ponds.
- Migration of contaminants from cemeteries near waterbodies.
- General worry about water quality decline during drought.

4. Data Sovereignty and Monitoring

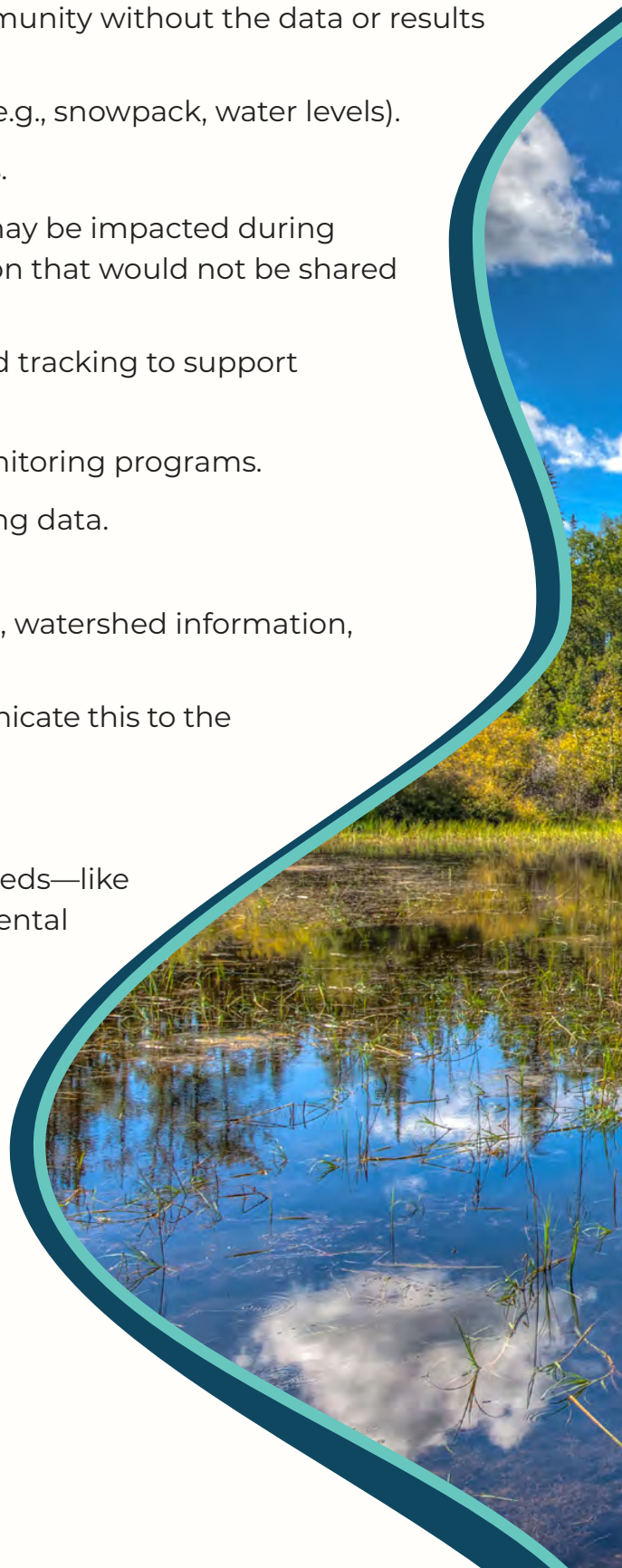
Communities expressed a strong interest in having better access to and control over their water data. The importance of data sovereignty, guided by OCAP principles, was emphasized. Comments included:

- Data sovereignty is critical using OCAP Principles.
- Frustration with lack of data sharing from neighboring municipalities.
 - Monitoring occurring in First Nation community without the data or results being shared.
- Need to identify existing data and fill gaps (e.g., snowpack, water levels).
- Desire for community-facing reporting tools.
 - Community to identify sacred sites that may be impacted during drought (note: this is protected information that would not be shared outside of community).
- Interest in using drones, mapping, and trend tracking to support decision-making.
- Need for a comprehensive First Nations monitoring programs.
 - Identify where the Nations can find existing data.
 - Where and how to fill in the data gaps.
 - Specifically interested in local water levels, watershed information, snowpack levels.
 - Reporting to community, need to communicate this to the community.

5. Infrastructure and Natural Solutions

Infrastructure solutions must balance practical needs—like dust control and fire suppression—with environmental stewardship. Communities encouraged the consideration of natural assets in planning and shared other thoughts relating to infrastructure, including:

- Desire to learn from global drought solutions and look for examples of cost-effective drought solutions being used in dryer locations (e.g., Africa).
- Importance of local fill-up stations.



“Do the municipalities know how important these fill-up stations are to water security for First Nations?”

- Recognition of the hidden costs tied to boil water advisories (e.g., appliance wear and replacement).
- Calls to integrate native species and control invasive plants in drought strategies.
 - o Natural assets and species must be considered in planning for drought resiliency, such as native plants that could be planted to help, or invasive plants that should be removed.

6. Policy, Governance, and Decision-making

Effective drought response starts with locally-led policy development. Participants highlighted the need for policies that align with Indigenous worldviews, respect for sovereignty, and proactive environmental protection. Participants also reinforced that communities must lead their own planning and responses. The principle of autonomy was emphasized in relation to governance, data, and decision-making. Insights included:

“One story. Autonomy is very important.”

- Drought planning and policy begins with community planning; need a manual of planning Standard Operating Procedures.
 - o Nations need to build these policies. There are useful templates used elsewhere that could be emulated.
- Desire to protect traditional water bodies through planning.
 - o Planning that prepares for emergencies. For example, identifying traditional water bodies, and begin protection of those water bodies.
 - o Need to include examples of protecting the environment through drought policy and plans (e.g., policy of no ATV access within 300m of lake).
- Sovereignty over environmental policy and land access rules.
 - o Keeping ISC informed, but work is led from within First Nations communities.
- Potentially recognizing Mother Earth with legal personhood.

“Mother Earth needs to be afforded personhood status; the communities do not currently have the capacity or resources to treat Her the way She deserves.”

7. Funding and Systemic Change

Current funding structures were seen as narrow and unresponsive to broader drought-related needs. Participants advocated for better relationships with funders and a recognition of the connection between drought and health.

Workshop feedback included:

- Calls for ISC to better understand and support drought response.
- Opportunities to link drought impacts to health-related funding streams.
 - There is a deep connection between drought and health.
 - A stronger connection between health and drought may afford more funding availability.
- Interest in investigating low-cost solutions from around the world.
- Current funding focuses on water treatment facilities, not on drought aid.

8. Emergency Planning and Resilience

The connection between drought and fire risk was a significant concern. Communities noted the need for shared emergency water planning and support across departments and Nations. Participant comments included:

- Need for emergency water sources and fire suppression planning.
- Gaps in capacity and funding to operate existing emergency equipment.
 - *“Many of the communities have equipment for firefighting and emergency response, but not the money and capacity to operate them.”*
- Recognition of inter-community cooperation during emergencies.
- Connect Drought plans with Fire Management.
 - Understanding the need for water in fire suppression.
- Maps for alternative sources of water for emergencies, including water shortage and fires.

9. Understanding, Education, and Capacity Building

There is a strong desire to build understanding of what drought means and how it affects First Nations at the local level. Participants emphasized the need for accessible education for youth, leadership, and community members, as well as opportunities for training in areas like water monitoring, mapping (GIS), and innovation. Participant insights:

- Build community understanding of historical drought conditions, traditional practices, and impacts.

“What did historical impacts look during dry years (e.g. 1930s). Were there any traditional practices of saving and using water?”

- Calls for community engagement on legislation like the Water Act and education on the Government of Alberta processes associated with licencing of water.
- Knowledge transfer, including Youth, Elders, Leaders, and Nation-to-Nation sharing.
 - Need for youth-focused, accessible knowledge platforms and school-based education.

“Can the school systems be used to educate the children about drought? What are the best ways we can get information to Indigenous youth?”

- Need for capacity building to monitor and protect water sources and the aquatic environment (e.g. GIS training).
- Explore water innovation and find ways to stay current with new technologies.
- Need to understand if and how drought impacts or changes waste treatment.

Clear, culturally-relevant communication was identified as critical—both within Nations and with external partners. Participants noted that current communication tools often exclude Elders and create barriers to engagement.

- Need for accessible communication during emergencies and regarding specific water-related issues (e.g., water quality events, exceedances, shortages).
- Identified a need to build stronger, more effective relationships with municipal neighbours.
- Need to explore and improve outreach with First Nation's Elders who may not use technology to communicate.
- Frustration with government language that is difficult to interpret, with a need for simpler, more plain language products.

4.3 DROUGHT RESILIENCY NEEDS FOR FIRST NATIONS

The Needs Assessment is organized around a series of guiding questions, adapted in part from the drought resiliency themes and strategies identified Alberta Water Council's Building Resilience to Multi-Year Drought guidebook³. These questions reflect core aspects of drought preparedness and were informed by the themes raised in workshop discussions with participating Treaty No. 6 First Nations. Each question points to a need, whether for knowledge, tools, infrastructure, or support, that communities may identify and address in their own way. The resources developed in response to each question, such as educational materials, templates, or technical examples, are designed to be used or adapted depending on the context and priorities of each Nation. While the list of questions is not exhaustive, it provides a strong foundation for supporting diverse community approaches to drought resilience, grounded in Indigenous knowledge systems and local decision-making.

1. Culture and Relationship to Water

Strategy 1.1: Reaffirm and protect the spiritual and cultural connections to water

- What cultural teachings and stories about water are important to the community?
- How is water protected or honoured through ceremonies, protocols, or traditional practices?
- Who holds cultural knowledge about water (e.g., Elders, women, knowledge keepers), and how is that knowledge shared or supported?

³ Alberta Water Council. (2021). *Building resiliency to multi-year drought in Alberta*
<https://www.albertawatercouncil.ca/publications/building-resiliency-to-multi-year-drought-in-alberta/>

- Are traditional water sites (e.g., springs, lakes, wetlands) mapped, named, or protected in your community?
- How can youth be supported to learn about and participate in cultural water teachings?
- What policies or community values guide respectful behaviour around water?
- How has drought or water degradation impacted the ability to carry out ceremonies or harvesting practices?
- What support is needed to strengthen cultural practices related to water (e.g., funding, spaces, language)?

Strategy 1.2: Identify and safeguard culturally significant water sites

- What places in your territory are considered culturally or spiritually important water sources?
- Are these places at risk from drought, development, or contamination?
- Is there a process for documenting or mapping these places in a way that respects community protocols?
- How can these sites be protected (e.g., community rules, signage, partnerships)?

Strategy 1.3: Strengthen community roles and responsibilities related to water

- Who are the water protectors or water carriers in the community and is their role known to community members?
- How are women's responsibilities around water upheld or supported?
- How are teachings about water passed on to children and youth?
- What opportunities exist to uplift community members as leaders in water protection?

2. Water Sources, Access, and Use

Strategy 2.1: Optimize existing water supplies

- How is drinking water protected?
- What measures (e.g., policies, plans) are in place to protect the watershed of your drinking water sources?
 - What groups exist to protect water or watersheds?

- What do these groups do?
- How does someone get involved with these groups if they are interested?
- Do any networks of people exist to protect your water sources?
- How do people in your community typically respond when there is a water shortage?
- Are there individuals or households who face barriers in accessing community water sources (e.g., elders, remote households)?

Strategy 2.2: Identify and use alternative water supplies

- Are there other new or unique ways a community gets water when there's a drought (e.g., using rainwater or digging new wells)?
- How easy is it for a community to get access to these other water sources?
- Where are water fill-up stations?
- How important are fill-up stations for a community's water needs?
- Who operates and is responsible for the water fill-up stations?
- Is the organization responsible for the fill-up station aware of the community reliance on the water fill-up station?
- Are there agreements or other mechanisms in place to ensure access to water fill-up stations (or other water sources)?

Strategy 2.3: Implement and encourage water conservation and reduction strategies and programs

- What programs or ideas are there in your community to help households use less water?
- How effective are the community's water conservations programs (i.e., have these programs reduced water use in the community)?
- Is there work planned, being done, or completed to fix or upgrade water infrastructure (e.g., pipes and wells) to conserve water?
- Are there programs or other efforts to manage runoff and storm water (e.g., using rain barrels)?



3. Environmental and Water Quality Concerns

Strategy 3.1: Recognize the effects of drought on the natural environment

- What happens to fish populations in times of drought?
- How are medicines connected and/or related to the aquatic environment?
- How should a community adapt its use of medicines or fishing in times of drought?

Strategy 3.2: Maintain and restore riparian areas and wetlands

- How does your community take care of rivers, streams, and wetlands?
- Are there any special projects to restore or protect these areas?
- Does the community know of any areas in the community or traditional territories that would be critical to wildlife during a drought (e.g., springs) and how are they protected?
- Are there protocols or ceremonies that guide your community's relationship to wetlands or riparian zones?

Strategy 3.3: Provide incentive programs to encourage drought-tolerant landscaping

- Does your community offer any rewards or help to people who plant drought-resistant plants or gardens?
- What are some Indigenous planting methods that help conserve water?

Strategy 3.4: Ensure First Nation farmers know where to get resources

- How does your community make sure farmers know where to get help, like water or equipment, during a drought?
- Can everyone who works on farms, including families and workers, easily find the resources they need during dry times?
- What are the best tips or methods your community teaches farmers about getting ready for droughts?

4. Emergency Planning and Resilience

Strategy 4.1: Develop emergency management plans

- Does the community have an emergency response plan?
- Does the emergency response plan include preparations for droughts or floods?

- How are fires and fire-related emergencies incorporated into your community's emergency response planning?
- Are back-up sources of water for fire management identified in the event of a drought or water shortage?
- Does the Emergency Response Plan identify fire management SOP when no water is available in the event of a drought or water shortage?
- Do you have a map of these alternative water sources for fighting fires?
- How does the emergency response plan align with or support planning from other government services?
- What lessons have been learned from previous emergencies (e.g., fires, droughts)?
- Are Elders involved in emergency planning and guidance during crisis events?
- How does the community support traditional firekeeping knowledge and its role in wildfire resilience?

Strategy 4.2: Declaring a state of emergency

- When would your community decide to call a state of emergency because of a drought?
- What procedures and processes are used to call and manage a state of emergency?
- How would the state of emergency be shared with community members?
- How would community members expect their Leadership; Chief and Council to support the community and community members?

Strategy 4.3: Provide resources for people experiencing drought-related stress

- What help is available for people who are feeling stressed or worried because of a drought?
- Are there support systems in your community for people affected by droughts?
- Is there emergency preparedness education available to the community or leadership?



5. Infrastructure and Natural Solutions

Strategy 5.1: Maintain and invest in key water infrastructure

- What infrastructure exists to store or transport water in your community (e.g., pipes, tanks, pumps)?
- What condition is this infrastructure in?
- Are there people in your community trained and available to operate this equipment?
- Are there plans or funding in place to upgrade water-related infrastructure?
- How do infrastructure plans reflect Indigenous values or priorities?

Strategy 5.2: Integrate natural infrastructure in drought planning

- Are there any natural areas (e.g., wetlands, forests) in your community that help store water or reduce drought impacts?
- How has the community worked with natural infrastructure to reduce drought risk and how can that work inform future drought preparedness?
- Are there examples from other communities using natural infrastructure that your community could learn from?

Strategy 5.3: Reduce wildfire and dust impacts through traditional and modern solutions

- Are there areas in your community that are at risk from dust storms or wildfires during droughts?
- What practices are in place to reduce dust and fire risks?
- What infrastructure or tools are needed to better manage these risks?

6. Policy, Governance, and Decision-making

Strategy 6.1: Conduct a water shortage risk assessment

- What would happen if the community or community members ran out of water (answer separately for different water systems, e.g., network system, cisterns, wells)?

- Which members of the community would be affected first or the hardest in times of water shortage?
- What are the biggest risks to the community's water supply?
- How does the community handle the identified risks?
- Do neighbouring communities know how important their water fill-up stations are to your community?
- Are there long-term plans in place to reduce these risks?

Strategy 6.2: Develop a water shortage response plan

- How much water does the community use currently?
- How might water use change in the next 10-15 years?
- In an emergency scenario where the water supply is reduced by 50%, how would the community adapt to a reduced water supply?
- What are the essential and non-essential water uses within the community?
- How would the community ensure individuals were adhering to reduced water use policies or rules?
- How would a water shortage response plan be shared with community members?
- Has the community conducted any exercises or simulations to test response plans?

Strategy 6.3: Develop a drought management plan

- What plans are in place to mitigate drought locally?
- Aside from impacts to drinking water, how might drought affect your community (e.g., agriculture, fishing)?
- Is the community or community leadership involved with any regional drought committees/networks?
- Are youth typically enabled and involved in community planning and plan implementation?
- Are Elders consulted when planning for drought or water issues?

Strategy 6.4: Develop policy tools

- Are there community-defined responsibilities for water use during drought?

- How are these responsibilities understood and implemented?
- Are there any traditional laws in your community about water use?
- Has your community developed policies to protect important water sources?
- What are potential bylaws that could be adjusted and implemented in communities?
- How do policies reflect both contemporary and traditional knowledge?

7. Funding and Systematic Change

Strategy 7.1: Identify funding to support community response and disaster relief

- What funding is available from Indigenous Services Canada to support drought-related emergencies?
- What other sources of funding are available to support the community with drought plans and disaster relief?
- Is there health-related funding that could be applied to community drought preparations?
- What challenges does the community face with accessing funding for drought planning and response?
- What lessons in Indigenous drought response can be adapted from other places?
- Are there grant writers or administrative support available to help the community apply for drought-related funding?
- What kinds of long-term funding models could make the community more resilient?
- How can funding systems be redesigned to align with Indigenous timelines and decision-making?

8. Data Sovereignty, Monitoring, and Reporting

Strategy 8.1: Strengthen Indigenous leadership in water monitoring and data governance

- Who currently collects water-related data in the community?
 - Is the data owned and controlled by the community?

- What data-sharing agreements are in place with outside organizations?
- Are there training opportunities for community members to lead or participate in monitoring efforts?
- How is traditional knowledge incorporated into water monitoring?
- Does the community have access to the tools and equipment needed for effective monitoring?
- What challenges exist in accessing or using monitoring data?
- How are data being used to support community decision-making?
- What are the community's priorities for water-related data in the future?
- Who owns the data collected, and how is permission to use it granted or denied?

Strategy 8.2: Know your water supply

- Where does the community get its water from?
- Are there any unique or traditional ways your community checks if there is enough water?
- How much water is being used in the community?
- How is water be conserved?

Strategy 8.3: Identify and monitor drought indicators

- How does the community know when there is a drought or water shortage?
- Who is responsible for tracking the indicators of drought?
- What data or other information is required to indicate drought?
- Do neighbouring communities collecting data related to local drought (e.g. water levels)?
- Can the community network with or rely on other communities in times of drought or water shortage?
- How are youth and other community members involved in environmental or drought monitoring?



- What training or other professional development is required to support the community's monitoring needs (e.g., GIS training and field monitoring)?
- Does the community have the necessary equipment to monitor drought and environmental conditions (e.g., drones, water sampling kits)?

Strategy 8.4: Identify and track performance measures and related impacts to the community

- How does your community identify whether water shortages or drought conditions are affecting daily life, farming, or the environment?
- How does the community measures how well drought plans are working?

Strategy 8.5: Evaluate drought response and lessons learned

- How has your community faced drought in the past?
- What lessons were learned from earlier community responses to drought or water shortage?
- How does your community share what they learned from past droughts?

9. Knowledge, Education, and Capacity Building

Strategy 9.1: Raise awareness and engagement among community members and leaders.

- How does your community teach people about drought, water shortage, water conservations?
- What programs integrate traditional teachings with contemporary water stewardship practices?
- How can community-to-community learning be supported?
- What role do ceremonies play in teaching about water and drought?

Strategy 9.2: Prepare communication materials

- What are the most effective information delivery methods for the community?
- What language or technology needs to be accommodated in drought communications?
 - How does the community share information amongst community members?

Strategy 9.3: Build local capacity through training and skill development

- What training opportunities exist for community members to learn about water stewardship or drought planning?
- Are there programs that help youth develop skills in water monitoring, conservation, or emergency preparedness?
- How does the community support leadership development related to water issues?
- What partnerships could support mentorship or peer-learning around drought resilience?

Strategy 9.4: Embed drought education into schools and community programs

- Are there school programs that teach about water, climate change, or drought?
- How can traditional teachings about water be included in school or after-school programming?
- What resources or support do educators need to talk about drought in meaningful ways?



5.0 PATHWAYS TO DROUGHT RESILIENCE

Workshop discussions and accompanying research revealed that many First Nations communities are seeking practical and culturally grounded ways to prepare for drought. Some of these solutions can be addressed in the next phase of this project, while others require long-term systemic change, such as the recognition of Indigenous rights to water governance and the building of trust between First Nations and non-Indigenous communities.

The Needs Assessment has helped clarify which resources are currently lacking and what types of support could meaningfully enhance drought resilience in First Nations communities. The following recommended actions were identified by workshop participants as key priorities for moving forward.

1. Elders Forum and Pipe Ceremony

An Elders Forum will create a respectful space for knowledge sharing and intergenerational dialogue focused on water and drought. Elders carry teachings, lived experience, and spiritual insight that are essential to shaping culturally grounded drought responses. This gathering would:

- Provide guidance on spiritual and cultural approaches to water protection and drought resilience.
- Document stories, teachings, and oral histories with prior informed consent and under the direction of the participating Elders and communities.
- Encourage mentorship between Elders, youth, and knowledge keepers on the responsibilities tied to water stewardship.

It is essential that proper cultural protocols are followed, including:

- Pipe Ceremonies held before any formal discussions or recordings, to set intentions and invite spiritual guidance.
- Respectful governance of data collected from the Forum, ensuring it is stored, shared, and used only with the permission of those who contributed it, and that it remains the property of the individual or Nation that provided it.
- Cultural safety and community control over how stories and advice are used, ensuring traditional knowledge is not extracted or misrepresented.

2. Drought and Water Education Materials

The development of tailored education materials will help raise awareness and build understanding across community members, leadership, and youth. These materials will be:

- Topic-specific, addressing key concerns raised in the needs assessment.
 - e.g., “What is drought?”, “Understanding water monitoring,” “Protecting traditional water sources,” or “Emergency response planning”
- Audience-appropriate, using plain language, culturally relevant imagery, and traditional teachings where appropriate.
- Multi-format, including posters, videos, guides, classroom materials, and online tools.
- Available to all First Nations communities, with options to adapt for local knowledge, language, and governance preferences.

These materials should be developed in collaboration with Indigenous educators, Elders, and youth, and reviewed for cultural appropriateness and scientific accuracy.

3. Outreach to First Nations Communities

Direct outreach is necessary to support the growing interest from communities and build on the momentum of the workshop process. This includes:

- Raising Awareness and Building Relationships
 - Engage with First Nations who did not participate in the initial workshops.
 - Provide an overview of the project and share materials developed to date.
 - Invite Nations to express interest in participating in future planning and toolkit development.
- Community-Specific Water Understanding
 - Work with communities to document their current water situation, including:
 - Sources of drinking and ceremonial water.
 - Existing water monitoring and access to data.
 - Environmental and infrastructure challenges.
 - Emergency management capacity (e.g., firefighting water access, backup systems).

- Respect community autonomy in choosing how and when to share this information.
- Support Nations in creating or updating their own water-related maps, inventories, or assessments.

4. Develop a First Nations Drought Resource Toolkit

The toolkit will be a flexible, modular resource that communities can use, adapt, or expand according to their needs. It will:

- Be grounded in the needs assessment framework and organized by the nine drought planning themes and accompanying strategies.
- Include practical tools such as:
 - o Checklists
 - o Planning templates
 - o Funding directories
 - o Communication guides
 - o Policy and bylaw examples
- Provide case studies and examples of Indigenous-led drought resilience in Alberta and beyond.
- Integrate Indigenous laws, knowledge systems, and languages as appropriate and with permission.
- Be available in print and digital formats and potentially be supported by facilitators who can assist communities in adapting and applying the materials.
- Some of the topics which were requested for inclusion by workshop participants were boil water advisories, drought tolerant landscaping, emergency planning and state of emergencies, risk assessments, and resources specific to farmers.



6.0 ACKNOWLEDGEMENTS

Workshop discussions and accompanying research revealed that many First Nations communities are seeking.

Workshop Participants

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Funders



Project Delivery



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TREATY SIX FIRST NATIONS**



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Photo credits

p3, Lac Ste Anne - Bill Trout

p4, lilypads - Bill Trout

p6, Buffalo at Elk Island National Park - Mufty Mathewson

p8, stump in water - Bill Trout

p9, Elder Leo Bruno - Scott Millar

p10, Bluebird in water - Dianne Fuson

p14, Pond near Elk River - Bill Trout

p17, Ice on North Saskatchewan - Bill Trout

p20, Ruddy duck - Roger Kirchen

p23, Fall wetland - Bill Trout

p26, Jasper - Karen Albert

p28, Red-necked grebes - Roger Kirchen

p31, Lac Ste Anne - Bill Trout

p33, Chickakoo Lakes - Bill Trout

Appendix 1:

Lessons Learned Through the Project

Throughout the course of this project, a number of valuable lessons emerged from working collaboratively with Treaty No. 6 First Nations on drought planning. These reflections offer insights into how future projects can be strengthened to better align with Indigenous worldviews, practices, and community realities.

1. Worldviews: Relationships Over Transactions

Many First Nations emphasized that work on water and drought must be grounded in relational rather than transactional approaches. Water is not merely a resource but a sacred relative, known as *nîpîy* (Cree), *nibi* (Saulteaux), *mni* (Nakota), or *tu* (Dene), that is honoured through ceremony and care. The work must reflect a holistic worldview in which everything is connected: people, land, animals, water, and spirit. Building relationships with communities, with water, and with the land was identified as foundational to any long-term success.

2. Trust: Built Over Time

Trust cannot be assumed; it must be earned. Participants expressed varying levels of trust in non-profit organizations, government, and industry based on past experiences. Projects must clearly demonstrate that they are being undertaken for and in collaboration with First Nations, not about them or for outside entities. Trust is built slowly through consistent, respectful engagement, and often requires years of relationship-building, not just months of project work.

3. Water Security vs. Drought Preparedness

For many communities, the concept of drought preparedness is inseparable from broader issues of water insecurity. Limited access to clean and reliable water, aging infrastructure, and jurisdictional ambiguity all shape the experience of drought. As a result, drought planning must account for the structural barriers to water security and be closely tied to emergency management planning and capacity-building.

4. Sharing: Respectful Collaboration Between Nations

This project created opportunities for First Nation-to-First Nation sharing, which was consistently identified as a strength by participants. Bringing together diverse voices helped surface shared concerns and spark ideas for collaboration. Having a First Nations Indigenous Project Lead was vital in building cultural safety and trust. This role created space for internal community direction while also helping to facilitate external relationships.

5. Capacity: Addressing Real Constraints

Many Nations face capacity constraints, including limited staff, funding, and time to engage in external projects. Travel and logistical barriers can make participation difficult, especially for remote communities. Providing transportation support, meals, and culturally safe spaces helped improve participation. Projects must recognize and support the full costs of engagement, including time for reflection and follow-up.

6. Ceremony and Protocol: Foundational, Not Optional

Ceremony is not a formality; it is a spiritual and ethical grounding for work on water. Elders emphasized that future meetings should begin with a pipe ceremony to set intentions and call forward guidance from the spirit world. Additionally, the respectful collection and documentation of cultural knowledge must follow proper community protocols, including consent, ownership, and protection of sacred information.

7. Language and Meaning

Drought-related terms such as “resilience” or “preparedness” may carry different meanings in First Nations contexts. Using Indigenous language, like *nîpîy pimâtisiwin* (Water is Life) and *pahkwahcâw* (drought), helps ground the work in local cultural frames. Language is a gateway to values, and its inclusion affirms Indigenous leadership in defining both the problem and the path forward.

8. Time and Decision-Making

Community decision-making processes often involve consultation with Elders, families, knowledge keepers, and leadership, and these processes require time. Fast-paced funding cycles or externally imposed deadlines often conflict with these timelines. Respecting the pace of community governance, and allowing Nations to set their own schedules, is a sign of good-faith partnership.

9. Data Sovereignty Must Be Built In

Data about water, whether technical or story-based, is sacred. Communities emphasized the importance of OCAP® principles (Ownership, Control, Access, Possession) for all data collection and use. Projects must define from the beginning how data will be governed, who owns it, and how it will be shared. This includes monitoring data, workshop materials, recordings, and community maps.

10. Healing as a Desired Outcome

Water connects to ceremony, memory, and wellbeing. Drought is not just an environmental event; it is a spiritual disruption and a source of grief. Projects that honour this complexity can also support healing: reconnection to water teachings, intergenerational learning, and the resurgence of traditional practices. Drought planning rooted in Indigenous knowledge is therefore also a path to resilience, restoration, and cultural renewal.

These lessons should guide not only future phases of this project but also the broader approaches funders, governments, and non-profit partners take when engaging with Indigenous communities. By centering relationships, protocols, and Indigenous leadership, future work can better align with *nîpîy pimâtisiwin*, the understanding that Water is Life.