



January 26, 2022

Chief Wilbert Marshall, Chair

The regular meeting of the AFNWA Board will be held Wednesday 26 January 2022 via Zoom at: <https://zoom.us/j/6852920354?pwd=K3ZOZnNzcFdDN05UWldMWFYxOVF4Zz09>

### **In Camera Reports**

1C Approval of Minutes of the In-Camera Meeting held on 24 November 2021 and In-Camera Meeting held on November 30, 2022

2C Business Arising from Minutes – Update on Federal Budget Submission

3C **Enterprise Risk Management Framework and Risk Register**

**Motion:** That the AFNWA Board approve the recommendation as outlined in the confidential report dated January 18 2022

4C **Personnel / Contract Matter** (report to follow)

**Motion:** That the AFNWA Board approve the recommendation as outlined in the confidential report dated January 21 2022

### **Regular Reports**

1. a) Ratification of In-Camera Motions  
b) Approval of the Order of Business and Approval of Additions and Deletions

2. Approval of Minutes of the Regular Meeting held on 24 November 2021

3. Business Arising from Minutes  
a) Transition Implementation Plan Update (20-01-2022)

4. **MOU with First Nations Financial Management Board**

**Motion:** That the AFNWA Board approve the MOU with FNFMB in the substantive form attached

5. **Health and Safety Policy**

**Motion:** That the AFNWA Board approve the Health and Safety Policy in the substantive form attached

6. **Third Quarter Financial Results**

**Motion:** That the AFNWA Board approve Third Quarter Financial Results in the substantive form attached

7. **Annual General Meeting Resolution**

**Motion:** That the AFNWA Board approve the resolution in the substantive form attached

8. **Water and Wastewater Quality Regulatory & Nujo'tme'k Samuqwan Safety Plans Framework**

**Motion:** That the AFNWA Board approve the Water and Wastewater Quality Regulatory & Nujo'tme'k Samuqwan Safety Plans Framework in the substantive form attached

**Information Reports**

1-I Transition Implementation Plan Update (2022.01.20)

2-I Elders Advisory Lodge Update

Original signed by \_\_\_\_\_

James MacKinnon  
Board Secretary



## **Atlantic First Nations Water Authority MINUTES**

**24 November 2021**

**PRESENT:**

Chief Wilbert Marshall, Chair  
Chief Ross Perley, Vice Chair  
Chief Andrea Paul, Director  
Chief Terry Paul, Director  
Chief Darlene Bernard, Director  
Chief Arren Sock, Director  
Chief Leroy Denny, Director  
Regional Chief Paul Prosper, Director  
Regional Chief Roger Augustine, Director  
Todd Hoskin, Director  
Methilda Knockwood-Snache, Chair of Elders  
Advisory Lodge

**REGRETS:**

**STAFF:**

Carl Yates, interim CEO, AFNWA  
James MacKinnon, interim COO, AFNWA  
Chantal Leblanc, Manager of Corporate Services/  
CFO  
Adam Gould, Manager of Communications &  
Outreach  
Rayleen MacDonald, Administrative Assistant

**GUESTS:**

Dr. Graham Gagnon, Dalhousie Centre for Water  
Research Studies (CWRS)  
Dr. Megan Fuller, CWRS

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**CALL TO ORDER**

The interim CEO, upon direction of the Chair, called the regular meeting to order at 9:41AM via the Zoom virtual platform. The Board moved In Camera at 10:46AM and the regular meeting reconvened at 11:31 AM

Elder Methilda Knockwood-Snache provided an opening prayer.

**1.a) RATIFICATION OF IN-CAMERA MOTIONS**

There were no motions In-Camera for this meeting.

**1.b) APPROVAL OF THE ORDER OF BUSINESS AND APPROVAL OF ADDITIONS AND DELETIONS**

Agenda discussed as Members signed on to meeting. In the interest of time allotted to the guest presenters from Dalhousie Centre for Water Resource Studies, it was suggested that we present Information Item # 1-I (Water and Wastewater Regulations/Safety Plan Update), first.

**MOVED BY Chief Darlene Bernard, SECONDED BY Chief Wilbert Marshall that the AFNWA Board hear the Information Item #1-I first in the agenda.**

**MOTION PUT AND PASSED.**

**2. APPROVAL OF MINUTES – 07 October 2021**

**MOVED BY Todd Hoskin, SECONDED BY Chief Ross Perley that the AFNWA Board approve the October 07, 2021, Regular Minutes.**

**MOTION PUT AND PASSED.**

**3. BUSINESS ARISING FROM MINUTES**

- a) Transition Implementation Plan Update (verbal)

This Item was moved In-Camera for this meeting due to confidentially reasons.

#### 4. Flex-time Policy

Chantal Leblanc presented on the AFNWA Flex-Time Policy.

As staff continues to come together in a physical office space for the first time as a team and with acknowledgement of the changes that the Covid-19 pandemic has brought upon our workplace environments, AFNWA Management would like to recognize the flexibility that is necessary and accommodated in current workplaces.

After nearly 20 months of working from home, we must acknowledge that there is a transition period for our staff and their families to be back in an office environment full time. While we have provided the flexibility of being able to work from home up to two days a week, management also believes that a formal flextime policy would be an appropriate testament to our commitment to maintaining a reasonable work-life balance for staff as they navigate the post-pandemic world.

Example flex-time schedules were presented.

There were no questions or comments on the Flex-time policy.

**MOVED BY Todd Hoskin, SECONDED BY Chief Ross Perley that the AFNWA Board approve the Flex-time policy in its substantive form attached.**

**MOTION PUT AND PASSED.**

#### 5. Second Quarter Financial Results

Chantal Leblanc presented the Second Quarter Financial Results as approved by the Audit and Finance Committee (via email) on November 22nd, 2021.

AFNWA has completed Q2 (6 months ending September 30, 2021) under budget by approximately \$461k. Total cash expenses recorded were \$1,777,673 versus budgeted total expenses of \$2,240,920. The differences are summarized as follows:

- Payroll, under budget by approx. \$110k. There were several timing differences for people hired later than was budgeted, resulting in a net \$50k difference. The remaining \$60k is a combination of a Workers Compensation Board (WCB) rate that is lower than anticipated, a decrease in total group insurance and pension contribution expenses (again, as a result of timing differences), and lesser relocation expenses than what was anticipated to be required in order to recruit staff.

- Contracts, under budget \$220k. This difference is primarily a result of the amounts allocated for Dillon Engineering Consultants which was \$160k less than expected in this quarter. However, the full contract remains on time and on budget with the October and November invoices making up the difference. Other less material differences resulted from a lower amount in legal expenses as our work paused during the federal writ period, and a decrease to overall IT contracts as we continue to move more services in house.
- We note that the Covid-19 pandemic continues to impact our ability to host in-person meetings and workshops which is reflected in our travel expenses.
- Accounting and Legal is significantly lower than anticipated but we note that these expenses are still anticipated through Q3 and Q4 as we continue our work on an Accounting Framework and formalizing Transfer Agreements.
- Finally, the Louise Street office space was readied for occupancy on October 18<sup>th</sup> which was 2 weeks later than anticipated. Vendor invoices for leasehold improvements and furniture arrived in late September and early October. The Bird Construction invoice for the leasehold improvements was received in November for a sum of \$63k which will be reflected in Q3. We note that our staff is entirely moved into the new premise which is reflected with the overall Equipment and Leasehold Improvements budget being nearly fully expended, as of the time of writing this report.

There were no questions or comments on the Q2 results.

**MOVED BY Chief Arren Sock, SECONDED BY Chief Darlene Bernard that the AFNWA Board approve the Second Quarter Financial Results in its substantive form attached.**

**MOTION PUT AND PASSED.**

## **6. DATE OF NEXT MEETING**

The next regular Board meeting is scheduled for 26 January 2022 @ 9:30 AM

The Special Board meeting for the Federal Budget Submission is scheduled for November 30<sup>th</sup>, 2021, at 4:00PM

The meeting was adjourned at 11:55 AM

Original signed by  
 \_\_\_\_\_  
*James MacKinnon*  
 Board Secretary

Original signed by  
 \_\_\_\_\_  
*Chief Wilbert Marshall*  
 Chair

The following Information Items were submitted:

- 1-1 Water and Wastewater Regulations/Safety Plan Update
- 2-1 Elders Advisory Lodge Update



**ITEM # 4**  
**AFNWA Board**  
**26 January 2022**

**TO:** Chief Wilbert Marshall, Chair, and Members of the AFNWA Board

**SUBMITTED BY:** original signed by  
Carl Yates, interim CEO

**DATE:** January 21, 2022

**SUBJECT:** **MOU with First Nations Financial Management Board**

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**ORIGIN**

Transition Implementation Plan approved by AFNWA Board on June 24, 2020.  
Board Motion at meeting of May 26, 2021

**RECOMMENDATION**

It is recommended that the Board approve execution of the Memorandum of Understanding with the First Nations Financial Management Board [FNFMB] and Indigenous Services Canada in the substantive form attached

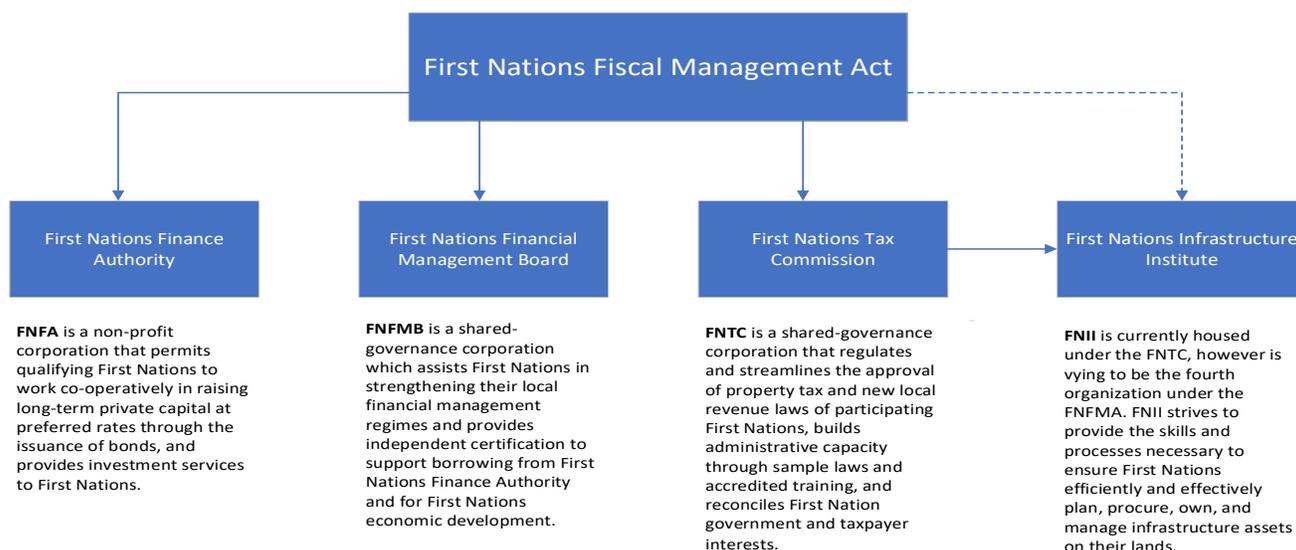
**BACKGROUND**

The concept of economic oversight of AFNWA has been discussed over the last several years but has taken on more significance with the signing of the Framework Agreement with Indigenous Services Canada [ISC] and Board approval of the Transition Implementation Plan [TIP] in June 2020. This is in recognition that the utility needs to be transparent and accountable to the federal government [its funding agency] and the First Nations communities it will serve.

**DISCUSSION**

Since the Board meeting of May 26, 2021 senior management has held several meetings with senior management at FNFMB and ISC staff to advance the concept of FNFMB serving as the primary economic oversight agency under the First Nations Fiscal Management Act [FNFMA]. As noted in the Board report presented at the May 26, 2021

meeting, the AFNWA prefers a simplified “One Window” approach for economic oversight and views the FNFMB as the prime agency to fulfill that role. It is acknowledged however that the FNFMB could call on its sister agencies under the FNFMA, as noted in the chart below, to provide support in relevant areas. For example, the newly formed agency First Nations Infrastructure Institute [FNII] could play a role in reviewing large scale infrastructure projects once formally incorporated under the FNFMA. As well, the First Nations Finance Authority [FNFA] could authorize debentures for capital financing once the AFNWA is certified under the FNFMB standards for non-profit organizations.



It is recognized that the FNFMB will require additional resources if it is tasked with the role economic oversight agency both in the interim and for the long term. Through our introductions, FNFMB are retaining the service of Mr. Peter Gurnham, the Chair of the NS Utility and Review Board who is retiring from his position in March 2022. They are also in then process of making an application to ISC for funding as they develop an oversight framework and future Business Plan. The oversight framework will be an ongoing subject of discussion over the coming months with the goal for completion by March 31, 2023. In order to formalize our discussions to that end, an MOU has been developed with all three parties requesting approval from their respective governing authority. In that regard, management

is requesting approval to execute the MOU in the substantive form attached.

**FINANCIAL and BUDGET IMPLICATIONS**

There are no direct expense implications within the 2021/22 Operations Budget other than staff time. Funds for the operation of the FNFMB are expected to be covered by the federal government through one or more federal agencies.

**ALTERNATIVES**

The Board could ask Staff to explore other possible agencies for economic oversight. This is not recommended based on the qualifications of FNFMB and their relationships with First Nations communities and the federal government.

**ATTACHMENT**

Draft MOU between AFNWA, FNFMB and ISC

Report Prepared by:	<u>original signed by</u> Carl Yates, interim CEO, 902-603-0312
Financial Reviewed by:	<u>original signed by</u> Chantal Leblanc, CFO/ Manager of Corporate Services 902-603-0312

This Memorandum of Understanding is effective from the XXth day of XX, 2022.

BETWEEN:

Atlantic First Nations Water Authority Inc.

- and

First Nations Financial Management Board

- and

Her Majesty the Queen in right of Canada, as represented by  
the Minister of Indigenous Services

Collectively referred to hereinafter as the "Parties."

**Note: This draft is without prejudice and is not yet agreed upon by the Parties. Any Party may suggest additions or deletions to the draft until this Memorandum of Understanding is executed.**

**WHEREAS:**

1. The Minister of Indigenous Services has the mandate to ensure that services under her responsibility, including services relating to water and wastewater, are provided to Indigenous individuals who, and Indigenous governing bodies that, are eligible to receive those services and to take the appropriate measures to give effect to "the gradual transfer to Indigenous organizations of departmental responsibilities" with respect to the development and provision of those services;
2. The Atlantic First Nations Water Authority Inc. [AFNWA] is a federal not-for-profit corporation with the mission to provide safe, clean drinking water and wastewater in all participating First Nations communities, delivered by a regional water authority owned and operated by First Nations;
3. As a result of a Service Transfer Agreement between Canada and AFNWA currently under co-development, Canada will provide funding to AFNWA to upgrade, operate and maintain water and wastewater systems within Participating First Nations;
4. AFNWA seeks to establish a culturally appropriate, service oriented and technically strong First Nations water authority which will own, operate, and maintain water and wastewater facilities;
5. AFNWA is guided by the application of Two-Eyed Seeing which integrates science-based decision making with respect for traditional indigenous knowledge;

6. The mandate of the First Nations Financial Management Board (“FMB”) includes supporting First Nations when working with other governments in areas of governance and finance, including accountability and shared fiscal responsibility; and,
7. The Parties seek to have the FMB define and provide the services of an independent economic oversight agency to oversee and approve the capital and operations expenditures, to run the AFNWA and provide oversight on other financial matters.

**NOW THEREFORE, BE IT RESOLVED:**

That the Parties agree to collaborate to advance the objective to establish an independent economic oversight and monitoring agency to oversee the economic activities of the AFNWA.

**1. Deliverables:**

- 1.1 To define the roles and responsibilities of each of the Parties with respect to this Memorandum of Understanding, namely the AFNWA as the water and wastewater service provider, the FMB as the Economic Oversight Agency and Canada as the entity responsible for providing funding to support the establishment of a monitoring and oversight mechanism until regulatory authority can be developed;
- 1.2 To establish a work plan in respect to this Memorandum of Understanding, designed to ensure the Economic Oversight Agency is established and functioning no later than April of 2023;
- 1.3 To develop a business plan which will support the establishment and ongoing operation of the Economic Oversight Agency in accordance with best practices established in Canada for the operation of independent utility regulators; and,
- 1.4 To establish the funding model for the development and ongoing operation of the Economic Oversight Agency to provide monitoring and oversight of the economic activities of the AFNWA.

**2. Term**

This Memorandum of Understanding will come into effect on the date of the last signature and shall remain in effect until terminated by one of the Parties in accordance with the termination provision.

**3. Termination**

Any Party to this Memorandum of Understanding may terminate this agreement by providing thirty (30) days of notice in writing.

**4. Non-Binding**

The Parties acknowledge that this Memorandum of Understanding is not a legally binding agreement and does not create any contractual or financial obligations for any Party.

**5. Non-Derogation**

This Memorandum of Understanding shall not diminish, derogate, abrogate or infringe any existing aboriginal, treaty, legal, inherent or any other rights of First Nations.

**6. Communication**

All communication and notices to any of the Parties to this Memorandum of Understanding shall be in writing and addressed as follows:

**To AFNWA:**

Chief Executive Officer  
13 Treaty Trail  
Millbrook, NS, B6L 1W1  
Email: [finance@afnwa.ca](mailto:finance@afnwa.ca)  
cc: [Carl.Yates@afnwa.ca](mailto:Carl.Yates@afnwa.ca)

**To FMB:**

Chief Executive Officer  
300-100 Park Royal South  
West Vancouver, BC, V7T 1A2  
Email: [Geordie\\_Hungerford@fnfmb.com](mailto:Geordie_Hungerford@fnfmb.com)

**To ISC:**

X  
X  
X  
X

**IN WITNESS WHEREOF,**

The undersigned have executed this Memorandum of Understanding:

\_\_\_\_\_  
ATLANTIC FIRST NATIONS WATER AUTHORITY INC. DATE:

\_\_\_\_\_  
FIRST NATIONS FINANCIAL MANAGEMENT BOARD DATE:

\_\_\_\_\_  
HER MAJESTY THE QUEEN IN RIGHT OF CANADA, AS  
REPRESENTED BY THE MINISTER OF INDIGENOUS SERVICES DATE:



**ITEM # 5**  
**AFNWA Board**  
**26 January 2022**

**TO:** Chief Wilbert Marshall, Chair, and Members of the AFNWA Board

**SUBMITTED BY:** original signed by  
Chief Andrea Paul, Chair, AFNWA Environment Health and Safety Committee

**DATE:** January 21, 2022

**SUBJECT:** **AFNWA Occupational Health and Safety Policy**

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**ORIGIN**

Transition Implementation Plan [TIP] approved by the Board at the June 24<sup>th</sup>, 2020 meeting, AFNWA Joint Occupational Health and Safety Committee.

**RECOMMENDATION**

It is recommended that the AFNWA Board approve the attached AFNWA Occupational Health and Safety Policy for submission to the AFNWA Board of Directors for endorsement.

**BACKGROUND**

AFNWA's Joint Occupational Health and Safety Committee, comprised of both management and non-management staff, has been established to identify opportunities and to recommend initiatives to promote physical and psychological health and safety at the workplace. The Committee also promotes continuous improvement in the operation and effectiveness of the AFNWA Health and Safety Program. The Committee's first task was to collaborate and draft an Occupational Health and Safety Policy for the Environment, Health and Safety Committee's review.

**DISCUSSION**

The policy provides high level direction to AFNWA staff to ensure health and safety is considered in all tasks, whether in an office or in the field. The policy also commits the AFNWA to dedicating the proper resources (human and financial) to conform with the policy, inclusive of training.

The policy also dictates that AFNWA management and employees are collectively and individually responsible to maintain a safe and healthy workplace, as well as mandating each employee to report to their supervisor or to the Health and Safety Coordinator any uncontrolled hazardous condition, injury, illness or injury related to the workplace.

All levels of management and the workforce are to be held accountable for carrying out their health and safety responsibilities and must comply with all applicable laws.

**BUDGET IMPLICATIONS**

All safety requirements for the current fiscal year are covered in the 2021-2022 AFNWA Operating budget. Futures needs have been contemplated and accounted for in AFNWA's Federal Budget submission in December 2021.

**ALTERNATIVES**

None

**ATTACHMENT**

AFNWA Occupational Health and Safety Policy

Report Prepared by:	original signed by _____ James MacKinnon, interim COO, 902-603-0312
Financial Reviewed by:	original signed by _____ Chantal Leblanc, CFO/Manager of Corporate Services 902-603-0312

## **Draft AFNWA - Occupational Health and Safety Policy**

The Board of Directors and the Chief Executive Officer of Atlantic First Nations Water Authority (AFNWA) are committed to the establishment and maintenance of a healthy and safe workplace, and to the integration of health and safety into all workplace activities. Pursuant to this commitment, the following shall be deemed as the Health and Safety Policy of AFNWA.

AFNWA management is committed to make available adequate resources to ensure conformance to this Health and Safety Policy.

AFNWA management is dedicated to mitigating the risk of work-related injury and/or illness.

AFNWA management and employees are responsible to maintain a safe and healthy workplace. All levels of management and the workforce are to be held accountable for carrying out their health and safety responsibilities.

All AFNWA employees have a direct responsibility for health and safety as an essential part of their work

AFNWA recognizes the employee's duty to identify hazards. Employees will offer suggestions or ideas to improve the health and safety program.

AFNWA employees will be required to adhere to health and safety initiatives, and to cooperate with the AFNWA Joint Workplace Health and Safety Committee or representative(s), and with others exercising authority under the applicable laws.

It is the duty of each employee to report to their supervisor and/or Safety and Security Coordinator, as soon as reasonably possible, any uncontrolled hazardous condition, injury, illness, or incident related to the workplace.

Employees must protect their health and safety by complying with applicable legislation and conforming to policies, procedures, processes, requirements, and instructions as prescribed by AFNWA.

AFNWA will make every reasonable effort to provide a healthy and safe work environment consistent with an Internal Responsibility System.

AFNWA will manage the risk that worksite hazards present by identifying these hazards, communicating the hazards and controls, and monitoring the effectiveness of the hazard controls with the cooperation of our employees.

AFNWA will, when reasonably practical, eliminate or reduce hazards and provide Personal Protective Equipment (PPE). Employees will use approved site-specific PPE, clothing, devices, and materials for their own and other persons' protection.

AFNWA, as a minimum, will comply with the most current Canada Labour Code and other applicable Regulations issued by the jurisdictions they operate in.

AFNWA is committed to providing all necessary training and instruction to ensure that appropriate work practices are followed on the job, and to promote their use. Managers also have a general responsibility for ensuring the safety of equipment and the facilities they oversee.

AFNWA, through all levels of management, will collaborate with employees to create a healthy and safe work environment.

Daily pre-work hazard consultation among the site workforce will be held with documentation shared between management and workers. Regular and ad-Hoc reviews of the effects of this Health and Safety Policy will be conducted by management and workers.

Carl Yates, M.A.Sc., P.Eng  
interim CEO  
Atlantic First Nations Water Authority

Date:

NOTE: This policy statement was developed in cooperation with employees.



Item # 6  
AFNWA Board  
26 January 2022

**TO:** Chief Wilbert Marshall, Chair, and Members of the  
AFNWA Board

**SUBMITTED BY:** original signed by  
Chief Terry Paul, Chair of the AFNWA Audit & Finance  
Committee

**DATE:** January 21, 2022

**SUBJECT:** **Third Quarter Financial Results**

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### **ORIGIN**

Approval of the 2021-2022 AFNWA Operations budget on July 28, 2021, Board meeting; Governance Manual approved at the November 6, 2020, Board meeting.

### **RECOMMENDATION**

It is recommended that the AFNWA Board approve the Third Quarter Financial Results in the substantive form below.

### **BACKGROUND**

The governance manual specifies that the responsibility for review and recommendation of the quarterly financial statements is delegated to the Audit and Finance Committee, with final approval from the Board.

## **DISCUSSION**

AFNWA has completed Q3 (9 months ending December 31, 2021) under budget by approximately \$1.15M. The differences are summarized as follows:

- Payroll, under budget by approx. \$165k which is due to a combination of things, including a reduction in the anticipated WCB rate, and timing differences with staff being hired later than expected which carried an associated decrease in total group insurance and pension contribution expenses.
- Contracts, under budget \$600k. This difference is a combination of most contracts being under budget. The most material items are the IT contract which has been handled internally, the Legal contracts which are anticipated to increase over the next 6 months, as well as \$140k remaining on the Asset Management Plan contract which should be billed through Q4. Finally, there was \$150k allocated to projects with FNIHB which are just getting underway.
- We note that the Covid-19 pandemic continues to impact our ability to host in-person meetings and workshops which is reflected in our travel expenses that are currently \$150k under budget, as well as our professional development budget which is approx. \$50k under budget.
- Accounting and Legal is significantly lower than anticipated (\$80k) but we note that these expenses are still anticipated through Q4 and carryover to the Fiscal 2022/3023 year as we continue our work on an Accounting Framework and formalizing Transfer Agreements.
- Finally, the Advertising and Promotions budget is approx. \$100k under budget but we expect that the bulk of this work will be done through Q4 and a carryover to Q1 of Fiscal 2022/2023.
- We note that the leasehold improvements and office furniture purchases are now complete as we are entirely settled into the Louise Street and Treaty Trail locations. We do not anticipate any further charges to these accounts and anticipate the final cost at fiscal year-end to be within 10% of the budgeted amount.

All other items are materially on budget and AFNWA continues to meet financial targets for all contracted work and TIP items.

Report Prepared by: original signed by  
Chantal LeBlanc, Manager of Corporate Services & CFO  
902-603-0312

Report Approved by: original signed by  
Carl Yates, interim CEO, 902-603-0312

	FINANCIAL RESULTS				BUDGET		
	Q1 2022	Q2 2022	Q3 2022	YTD Q3	YTD Q3	Q4	FY
<b>Payroll</b>	275,699	342,804	509,479	<b>1,127,982</b>	<b>1,294,791</b>	571,914	<b>1,866,704</b>
<b>Contracts</b>	323,059	571,194	691,303	<b>1,585,556</b>	<b>2,188,045</b>	336,750	<b>2,524,795</b>
<b>Meeting &amp; Travel Expense</b>	722	41,766	28,362	<b>70,850</b>	<b>217,500</b>	71,000	<b>288,500</b>
<b>Board Compensation</b>	10,000	12,250	38,250	<b>60,500</b>	<b>90,000</b>	50,000	<b>140,000</b>
				-	-		-
<b>General &amp; Administrative Expenses</b>				-	-		-
Accounting & Legal	-	5,067	15,551	<b>20,618</b>	<b>99,800</b>	60,200	<b>160,000</b>
Advertising & Promotions	10,380	26,108	8,145	<b>44,634</b>	<b>150,000</b>	100,000	<b>250,000</b>
Bank and services charges	814	755	1,165	<b>2,735</b>	<b>3,500</b>	1,500	<b>5,000</b>
Insurance	137	4,806	-	<b>4,943</b>	<b>15,000</b>	35,000	<b>50,000</b>
Professional Development	440	3,424	9,357	<b>13,221</b>	<b>61,000</b>	39,000	<b>100,000</b>
Rent	-	5,833	29,333	<b>35,166</b>	<b>52,167</b>	46,333	<b>98,500</b>
Safety & PPE Supplies	-	6,397	-	<b>6,397</b>	<b>20,000</b>	30,000	<b>50,000</b>
Technology Services / Software	5,167	13,318	21,612	<b>40,097</b>	<b>25,000</b>	5,000	<b>30,000</b>
Telephone & communications	3,267	4,904	5,226	<b>13,397</b>	<b>19,700</b>	10,300	<b>30,000</b>
Utilities	-	426	5,883	<b>6,309</b>	<b>18,750</b>	17,250	<b>36,000</b>
<b>Total General &amp; Admin</b>	<b>20,205</b>	<b>71,039</b>	<b>96,272</b>	<b>187,516</b>	<b>464,917</b>	344,583	<b>809,500</b>
<b>Office Expenses</b>							
Business Fees & Licenses	842	324	5,721	<b>6,887</b>	-	-	-
Repair & Maintenance	351	675	16,213	<b>17,238</b>	<b>15,575</b>	4,425	<b>20,000</b>
Office Supplies/Expense	4,440	10,775	13,930	<b>29,145</b>	<b>24,000</b>	6,000	<b>30,000</b>
<b>Total Office Expenses</b>	<b>5,632</b>	<b>11,774</b>	<b>35,864</b>	<b>53,270</b>	<b>39,575</b>	10,425	<b>50,000</b>
				-	-		-
<b>TOTAL EXPENSE</b>	<b>635,317</b>	<b>1,050,828</b>	<b>1,399,529</b>	<b>3,085,674</b>	<b>4,294,828</b>	1,384,672	<b>5,679,500</b>
<b>Fixed Asset Purchases</b>							
Office Equipment & Furniture	6,398	81,594	8,265	<b>96,257</b>	<b>56,000</b>	44,000	<b>100,000</b>
Leasehold Improvements	5,500	1,964	66,988	<b>70,524</b>	<b>55,500</b>	-	<b>55,500</b>
<b>Total Fixed Asset Purchases</b>	<b>11,898</b>	<b>79,631</b>	<b>75,253</b>	<b>166,782</b>	<b>111,500</b>	44,000	<b>155,500</b>
				-	-		-
<b>TOTAL FUNDING REQUEST</b>	<b>647,215</b>	<b>1,130,458</b>	<b>1,474,782</b>	<b>3,252,456</b>	<b>4,406,328</b>	1,428,672	<b>5,835,000</b>
<b>Funding Source - ISC Q35C 2021</b>							<b>1,829,000</b>
<b>Funding Source - ISC Q35C 2022</b>							<b>3,000,000</b>
<b>Funding Source - ISC Q35K 2021</b>							<b>815,000</b>
<b>Funding Source - SET FNIHQB Q23C 2021</b>							<b>11,000</b>
<b>Funding Source - FNIHQB 2022</b>							<b>180,000</b>
<b>Total Funding Confirmed</b>							<b>5,835,000</b>

**ATLANTIC FIRST NATIONS WATER AUTHORITY INC.**  
**(the “Corporation”)**

**DIRECTORS’ RESOLUTIONS**

**CERTIFICATE AND ARTICLES OF INCORPORATION**

BE IT RESOLVED that:

the Certificate of Incorporation of the Corporation issued by the Director (the “Director”) appointed under the *Canada Not-for-profit Corporations Act* (the “NFA”) dated July 18, 2018, and the Articles of Incorporation of the Corporation attached thereto, be inserted in the Minute and Record Book of the Corporation (the “Minute Book”).

**REGISTERED OFFICE AND DIRECTORS**

BE IT RESOLVED that:

the notice of the Initial Registered Office Address and First Board of Directors of the Corporation, filed with the Director on July 18, 2018, be and is hereby authorized, approved, ratified and confirmed and a copy of the notice be and is hereby directed to be inserted in the Minute Book.

**OFFICERS**

BE IT RESOLVED that:

the following persons be and are hereby appointed officers of the Corporation to hold office for a term of 4 years or until a successor is appointed, whichever occurs first:

Chair of the board	- Chief Wilbert Marshall
Vice Chair	- Chief Ross Perley
Secretary	- James MacKinnon, interim COO
Treasurer	- Chantal LeBlanc, Manager of Corporate Services, CFO

**BY-LAWS**

BE IT RESOLVED that:

The By-laws which are annexed hereto be and the same is hereby made by-laws of the Corporation and a copy of such by-laws is directed to be signed by any officer of the Corporation then submitted to Corporations Canada and inserted in the Minute Book.

### **APPOINTMENT OF INTERIM PUBLIC ACCOUNTANT**

BE IT RESOLVED that:

Grant Thornton is hereby appointed interim public accountant of the Corporation to hold office until the close of the first members meeting.

### **ISSUANCE OF MEMBERSHIPS**

BE IT RESOLVED that:

The following is hereby admitted as a Class A member of the Corporation and a Class A membership of the Corporation be issued:

- Atlantic Policy Congress of First Nations Chiefs Secretariate

### **BANKING**

BE IT RESOLVED that:

the banking resolution, in the form required by Bank of Montreal, a copy of which is annexed hereto, is hereby approved.

### **FINANCIAL YEAR END**

BE IT RESOLVED that:

the financial year of the Corporation shall end on March 31 each year.

### **FINANCIAL STATEMENTS**

BE IT RESOLVED that:

The 2020 financial statements of the corporation in the form presented at the meeting of the Board of Directors on July 28, 2021 be and are hereby approved; and any two or more directors are hereby authorized to sign the financial statements on behalf of the Corporation.

### **APPOINTMENT OF SIGNING OFFICERS**

BE IT RESOLVED that:

In accordance with the provisions of the by-laws of the Corporation, all contracts, documents and instruments in writing requiring a signature of the Corporations, as well as all cheques, drafts, or orders for the payment of money and all notes and acceptance and bills of exchange, may be signed by any two of its officers or directors until such time that such appointment is revoked. In addition, the directors may, from time to time, direct the manner in which, and the person or person by whom, any particular instrument or class of instruments may or shall be signed.

### **LOCATION OF REGISTERED OFFICE AND MAILING ADDRESS**

BE IT RESOLVED that:

the location of the registered office of the Corporation be 13 Treaty Trail, Millbrook First Nation, NS, B6L 1W1. And the mailing address for the Corporation be the same as the registered office address.

### **PERMITS AND LICENSES**

BE IT RESOLVED that:

any director or officer of the Corporation, acting alone, be and is hereby authorized to make, on behalf of the Corporation, any and all applications for any and all licenses or permits necessary or desirable for carrying on the business of the Corporation in any province or territory of Canada, or in any other jurisdiction.

### **FIRST MEMBERS MEETING**

BE IT RESOLVED that:

a special meeting of the first members of the Corporation be held on a date to be determined for the purpose of confirming the by-laws, electing directors, appointing a public accountant, and transacting such other business as may properly come before the meeting.

### **COUNTERPARTS**

BE IT RESOLVED that:

this resolution may be executed in counterparts, each of which, when executed and delivered, shall be deemed to be an original, and all of which, when taken together, shall constitute one and the same document and delivery of an executed counterpart of this resolution electronically shall be equally effective as delivery of an original executed counterpart of this resolution.

*[the remainder of this page is intentionally left blank - signature page follows]*

The undersigned, being all the directors of the Corporation, hereby sign this written resolution in lieu of a meeting of directors pursuant to subsection 140(1) of the *Canada Not-for-profit Corporations Act*.

**DATED** and effective as of the 28 day of July, 2021.

Original signed by

---

**[Chief Wilbert Marshal]**

Original signed by

---

**[Chief Ross Perley]**

Original signed by

---

**[Chief Terry Paul]**

Original signed by

---

**[Chief Andrea Paul]**

Original signed by

---

**[Chief Aaren Sock]**

Original signed by

---

**[Chief Darlene Bernard]**

Original signed by

---

**[Chief Leroy Denny]**

Original signed by

---

**[Regional Chief Paul Prosper]**

Original signed by

---

**[Mr. Todd Hoskin]**



Item # 8  
AFNWA Board  
26 January 2022

**TO:** Chief Wilbert Marshall, Chair, and Members of the AFNWA Board

**SUBMITTED BY:** original signed by  
Chief Andrea Paul, Chair, AFNWA Environment Health and Safety Committee

**DATE:** January 21, 2022

**SUBJECT:** **Water and Wastewater Quality Regulatory & Nujo'tme'k Samuqwan Safety Plans Framework**

---

### **ORIGIN**

Transition Implementation Plan approved by AFNWA Board on June 24, 2020, and report presented at Board meeting of November 24, 2021

### **RECOMMENDATION**

It is recommended that the AFNWA Board endorse the water and wastewater quality regulatory and Nujo'tme'k Samuqwan safety plans framework developed by the Dalhousie Centre for Water Resources Study [CWRS] and direct management to develop implementation plans to realize their prescribed objectives.

### **BACKGROUND & DISCUSSION**

At the Board meeting of November 24, 2021, staff and CWRS presented an overview of work undertaken to develop a framework for water and wastewater quality regulations and Nujo'tme'k Samuqwan safety plans. The regulatory aspect included the recognition that Environment and Climate Change Canada would continue the role of regulator for compliance with the federal Wastewater Systems Effluent Regulations [WSER]. In recognition that there is no national regulatory agency or national regulations for drinking water at present, CWRS presented options for an interim oversight agency until such time that a national regulator is identified. It is expected that national regulations

and a corresponding regulator will emerge after the repeal and replacement of the Safe Drinking Water for First Nations Act. CWRS suggested that the First Nations and Inuit Health Branch of ISC, with support of the ISC-Regional Office, could play an interim oversight role for AFNWA to ensure conformance to the Guidelines for Canadian Drinking Water Quality [GCDWQ]. CWRS are also developing a set of interim regulations consistent with the GCDWQ and based to a large extent on those utilized in Nova Scotia. The safety plans for water and wastewater quality assurance are consistent with the World Health Organization model and incorporates a Wabanaki worldview.

With feedback from AFNWA staff, Indigenous Services Canada and the Elders Advisory Lodge, CWRS completed their work with recommendations for implementation as described in the attached presentation and final report.

### **FINANCIAL and BUDGET IMPLICATIONS**

Funds for the development of the CWRS report were contained in the 2021/22 Operations budget. Funds for the implementation of the regulatory and Nujotme'k Samuqwan safety plans framework are included in future Operations and Capital budgets.

### **ALTERNATIVES**

The Board could ask staff to adopt other regulations for drinking water. Conformance to WSER is mandated through the Fisheries Act. Alternatives are not recommended as the proposed recommendations will place AFNWA in a best practice position and in conformance with legal requirements.

### **ATTACHMENT**

CWRS Power Point presentation  
CWRS final draft report, dated January 18, 2022

Report Prepared by: original signed by  
Carl Yates, interim CEO, 902-603-0312

Financial Reviewed by: original signed by  
Chantal Leblanc, CFO/ Manager of Corporate Services  
902-603-0312

# *Drinking water and wastewater interim compliance framework*

Megan Fuller & Graham Gagnon

Civil and Resource Engineering  
Dalhousie University

November 24, 2021



# Presentation Outline

- Process overview
- Interim framework recommendations
  - Internal standard of care (risk-based management)
  - Compliance standards
- Compliance oversight
  - Interim
  - Gaps
- Integration of risk-based management and compliance standards



# **An overview of the process**

## Background

2006 Report of the expert panel on safe drinking water for First Nations

2012 Water and wastewater regulatory benchmarks for First Nations communities in Atlantic Canada

## References and resources

Provincial water governance legislation and regulations

Wabanaki world views and Two-Eyed Seeing

World Health Organization's Water & Sanitation Safety Planning

## Framework

10 risk-based management recommendations

14 compliance standards

### Internal standard of care

#### Nujo'tme'k Samuqwan

Drinking water + wastewater proactive risk reduction

3<sup>rd</sup> party audit – contracted by AFNWA

### Wastewater

ECCC – Fisheries Act (*WSER*)

Effluent quality monitoring and reporting for **certain systems**

In effect since 2013

### Drinking water

**No regulator or regulations**

Interim framework sets compliance **standards** and details compliance **activities**

3<sup>rd</sup> party oversight + ISC (RO + FNIHB)



# Compliance Standard Recommendations

Multibarrier component

Recommendation

Compliance Activity

**Water withdrawal and use**



Surface water withdrawals must comply with the **Fisheries Act** and **Species at Risk Act**



Intake designs should be reviewed by **DFO** Fisheries Protection Program to approve intake structures

**Source water protection**



Source water protection plan (SWPP) should be developed for each water source in community



Develop and maintain **SWPP**, include updates in **Annual Report**

**Receiving body protection**



All wastewater effluent must meet appropriate **Fisheries Act** regulations and provisions

## Multibarrier component

## Recommendation

## Compliance Activity

## Facility requirements

All upgrades and new facilities should adhere to the ACWWA Water Supply Guidelines and Wastewater Guidelines

**Construction plans** should be reviewed by ISC for Environmental Assessment and Lands Review. Construction will be reviewed in the **Annual Report**.

## Facility classification

Facilities should be classified by *Water and Wastewater facilities and public drinking water supplies regulations* (Nova Scotia Environment Act)

Facility classification will be included in the **Annual Report**. Any upgrades or modifications that impact classification will be noted in the Annual Report.

## Treatment and distribution requirements

Requirements should be determined by Nova Scotia's *Treatment standards for municipal drinking water systems*

Treatment requirements and performance will be verified through **Annual Report** and biannual **Inspections & Audits**

## Operator certification

Nova Scotia's Water and wastewater facilities and public drinking water supplies regulations under the standard

Certifications will be reported in the **Annual Report** and biannual **Inspections & Audits**

Multibarrier component

Recommendation

Compliance Activity

Monitoring

**Drinking water compliance monitoring**

Raw water

Treatment processes

Distribution system

All monitoring should follow Nova Scotia’s Part I Guidelines for monitoring municipal public drinking water supplies

Annual paired sampling; 5-year baseline of GCDWQ analytes; continuous monitoring based on source water type

Continuous and daily and weekly grab samples of key water quality parameters to confirm treatment efficacy and raw water quality

Weekly, quarterly, and annual sampling requirements for microbiological, metals, and DPB

A summary of all monitoring activities must be included in an **Annual Sampling Plan** the **Annual Report** and on-site records should be evaluated during biannual **Inspections & Audits**

**Wastewater compliance monitoring**

**WSER** sampling frequency and parameters required under **Fisheries Act**

Monitoring records must be kept in case of **ECCC** inspection or audit

Multibarrier component

Recommendation

Compliance Activity

**Compliance reporting**

Annual reporting

Ad hoc reporting

Immediate

All reporting should follow Nova Scotia *Treatment standards for municipal drinking water systems* and Nova Scotia *Part I guidelines for monitoring*

Routine reporting of operational efficacy, water quality, and system changes

Notification of any new or relevant information, changes in sampling plans, modifications to processes, etc.

Notification of exceedances, process by-pass, line breakage, low free chlorine residual, any incident of non-compliance

Reporting practices range from annual routine reporting to immediate reporting for emergency and incident conditions. When necessary, reporting practices will include communication regarding **Drinking Water Advisories (DWA)**

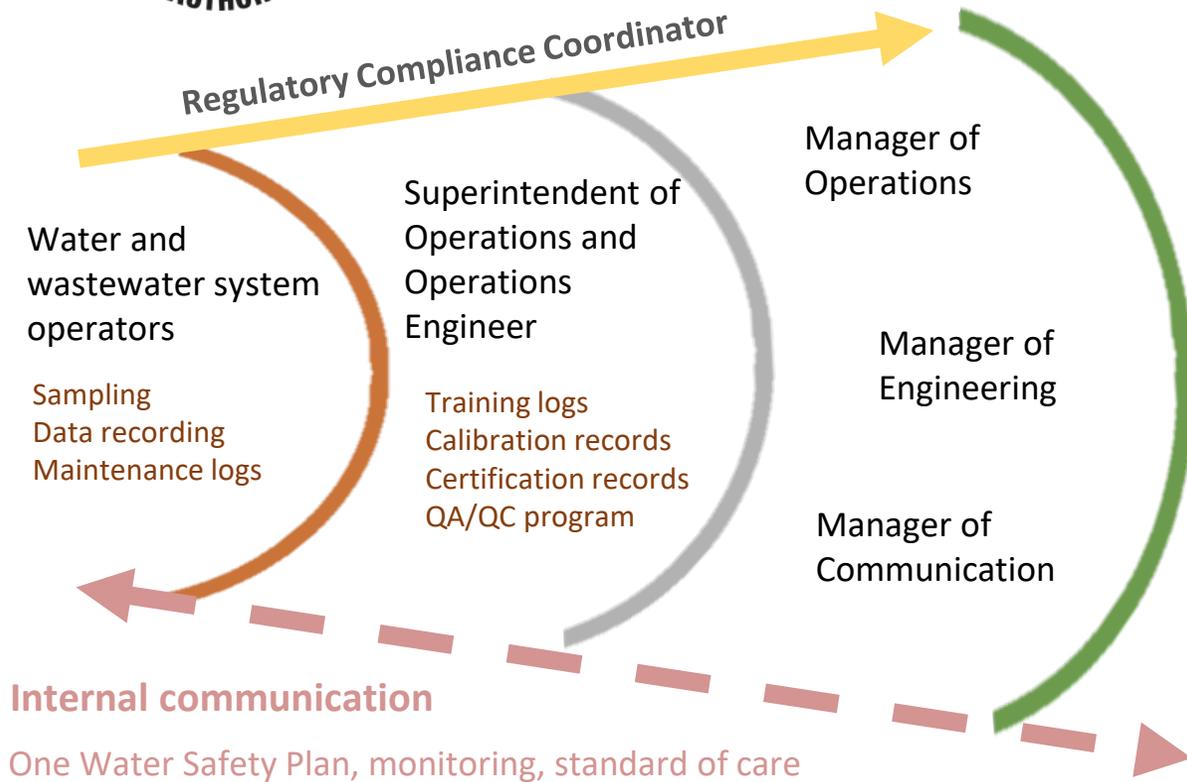
**Wastewater compliance monitoring**

**WSER** reporting frequency and parameters required under **Fisheries Act**

Reporting must be done directly to **ECCC** via ERRIS

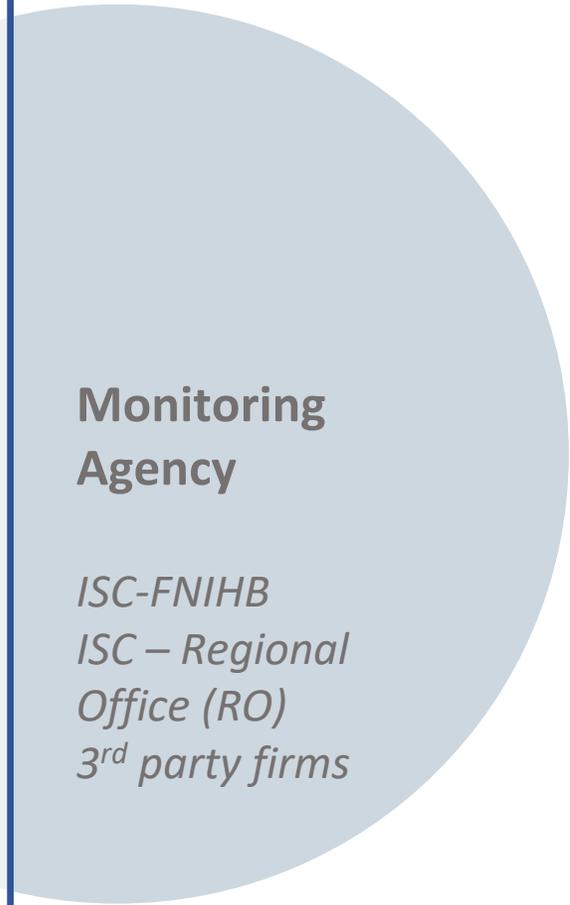


# Compliance Oversight



**External communication**

- Annual sampling plan
- Source water protection plan
- Annual report
- Inspection/audit
- New builds/system upgrades
- Ad hoc reporting
- Immediate reporting criteria
- Drinking water advisories
- Corrective action plans



**Compliance Activity**

**Interim Oversight**

**Gap**

**Annual sampling plan**

FNIHB will be consulted/informed

No entity responsible or accountable for reviewing and approving plans

**Source water protection plan**

FNIHB + RO will be consulted/informed

No entity responsible or accountable for reviewing and approving plans

**Annual report**

3<sup>rd</sup> party firm, contract held by ISC; ISC will review firm's report; ISC will receive copies of Annual reports

No entity responsible or accountable for reviewing and approving reports; no entity responsible for identifying non-compliance or approving corrective action plans

**Inspection/audit**

3<sup>rd</sup> party firm, contract held by ISC; ISC will review firm's report; ISC will receive copies of audits

No entity responsible or accountable for reviewing and approving reports; no entity responsible for identifying non-compliance or reviewing corrective action plans

**New builds/system upgrades**

ISC-RO project authorization for Environmental Assessment and Lands Review

**Ad hoc reporting**

FNIHB will be consulted for public health related concerns; ISC will be informed of remedial actions

No entity responsible or accountable for receiving or reviewing ad hoc reports

**Immediate reporting criteria**

FNIHB advises/recommends for public health; RO offers feedback on corrective actions

No entity responsible or accountable for addressing non-compliance or approving corrective action plans

**Drinking water advisories**

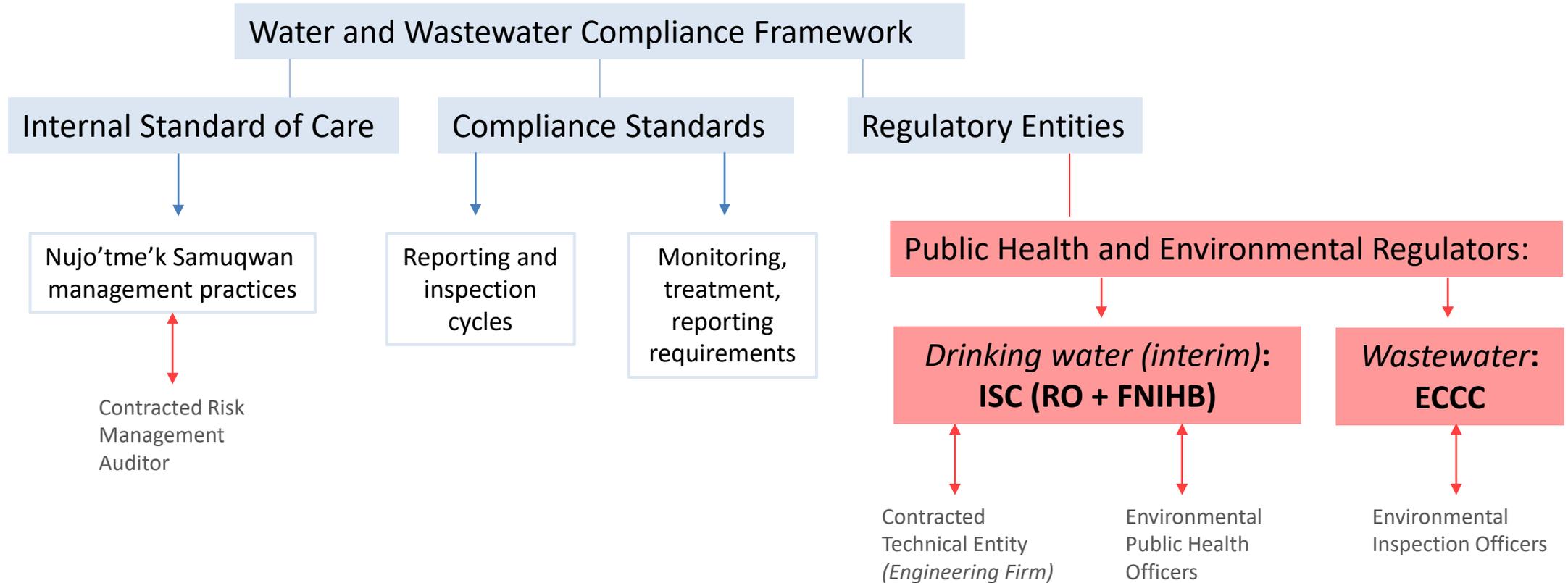
FNIHB advises/recommends for public health; RO offers feedback on corrective actions

No entity responsible or accountable for issuing/removing DWA



# **Integration of risk-based management and compliance standards**

# Proposed Compliance Framework for Drinking water and wastewater



# Integrated oversight

## Nujo'tme'k Samuqwan audit cycle – 4 years

Risk management improvement cycles/Nujo'tme'k Samuqwan will be externally audited on a 4-year cycle to verify incremental improvements to mitigate risks to public and environmental health. Audits will ensure that incidents and near misses are investigated and result in updates in the Nujo'tme'k Samuqwan risk assessment and mitigation strategies.

## Compliance Inspection/Audit cycle – 2 years

Routine system inspections and regulatory audits will include review of documentation (annual sampling plans, source water protection plans, QA/QC programs, calibration logs, operator training logs, etc.), annual reports, water quality sampling results, and an inspection of treatment systems and distribution/collection systems. Compliance monitoring agency will identify deficiencies and areas of non-compliance. AFNWA will develop corrective action plans.

## Annual Report by AFNWA

Annual reports will summarize water quantity used, verification of treatment efficacy, annual trends for monitored parameters, incidents and corrective actions taken, source water protection plan updates, WSER performance etc., as required per the framework guiding operation. Annual report will also summarize updates made to the Nujo'tme'k Samuqwan due to operational and/or public health concerns, incidents, and near misses. Compliance monitoring agency will identify deficiencies, areas of concern, or areas of non-compliance per the framework applied to the AFNWA.

# Acknowledgements

We would like to thank:



Atlantic Policy Congress of  
First Nations Chief Secretariat



for supporting this work and making this partnership possible.

*Thank you to Melanie Bateman, Dallys Serracin-Pitti, and the ever-growing staff at the AFNWA for helping with all aspects of this work.*

The CWRS was contracted to update the 2012 Regulatory Benchmark report, identify compliance processes, and recommend an interim oversight body for the AFNWA

**Water and Wastewater Regulatory Benchmarks for First Nations Communities in Atlantic Canada: Modernization, Safety Planning Integration, and Compliance and Enforcement Consideration**

- |   |  |
|---|--|
| <b>Task 1:</b> Regulatory review                  | Review provincial and federal regulations, policies, and standards and First Nations documents; Discuss with First Nations water experts |
| <b>Task 2:</b> Regulatory gap analysis            | Identifying key gaps that exist between current practices and ideal benchmark; develop paths forward                                     |
| <b>Task 3:</b> Integration of <b>safety plans</b> | Determine how to integrate <u>risk-based management</u> practices and approaches across all levels of the Authority                      |
| <b>Task 4:</b> Compliance and enforcement         | Identify compliance mechanisms, practices, and standards; identify a regulatory body   |
| <b>Task 5: Engagement</b>                         | This process will engage across Federal agencies, First Nations experts, AFNWA staff, and other jurisdictional leadership                |

# Recommended Compliance and Nujo'tme'k Samuqwan Components



**(Interim) Compliance Components:**

Source water protection plans  
WSER  
Deposits out of normal course (DONCE)

ACWWA guidelines for system designs  
Nova Scotia Treatment Standards (GUDI protocol; 3, 3, 4 log reduction for Crypto., Giardia, and viruses)

Interim Regulator will oversee drinking water compliance  
ECCC will continue to regulate wastewater systems

All compliance monitoring will be conducted by the AFNWA  
\*\* Discussions are still ongoing regarding the role of CBWMS \*\*

Disinfection residuals, microbial, disinfection byproduct, turbidity monitoring etc. will follow Nova Scotia Standards

Metals testing and microbial monitoring will follow Nova Scotia's standards (which follow the Guidelines for Canadian Drinking Water Quality (GCDWQ))

Corrosion control program [minimize lead leaching]

**Nujo'tme'k Samuqwan Components:**

Withdrawal monitoring plans  
Contingency plans  
Environmental Risk Assessments (ERAs) and Effluent Discharge Objectives (EDO)

Sanitation Safety Plan for wastewater systems  
Water Safety Plan for drinking water systems

An external firm will be contracted by AFNWA to perform OWSP auditing to ensure risk management practices are being followed

Optimization monitoring can be done as needed to guide the OWSP

Cross-connection control program to prevent backflow

Inflow & Infiltration reduction program

Water loss control program [leakage reduction]

Corrosion testing  
Other health-related monitoring

# Next Steps for AFNWA

- Wastewater Regulations
  - Strategy to align with WSER with oversight through ECCC
- Drinking Water Regulations
  - Strategy to adopt regulations developed with CWRS until national regulations brought in with SDWFNA
  - Interim monitoring agency until national regulator and regulations brought in with SDWFNA
- Nujo'tme'k Samuqwan Safety Plans
  - Strategy to develop and implement plans with support from CWRS and consultant for external audits

***Final Report:***

# **Water and Wastewater Regulatory Framework for the Atlantic First Nations Water Authority**

**Prepared for:**



**January 18, 2022**

**Prepared by:**

Centre for Water Resources Studies  
Dalhousie University  
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## Executive Summary

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The Atlantic First Nations Water Authority (AFNWA) is pursuing both an interim compliance framework and oversight entity to direct its operation while national legislation regarding water and wastewater in First Nations communities is being developed. The Centre for Water Resources Studies (CWRS) was contracted to provide a report that i) identifies regulatory components and risk management practices to be adopted into an interim compliance framework, ii) provides a gap analysis for participating First Nations communities to meet requirements of the interim compliance standards, and iii) outlines compliance mechanism and monitoring entity to provide compliance validation and oversight of the AFNWA.

### Compliance Framework

The absence of direct precedent for First Nations drinking water regulation provides an opportunity to evaluate compliance and preventive risk-management approaches across jurisdictions to develop a progressive governance framework. The framework presented here incorporates a balance of compliance standards and risk-management practices to ensure constant improvement of drinking water and wastewater services for First Nations communities participating in the AFNWA. The interim compliance framework recommendations in this report are organized into two categories: “compliance standards” and “risk management strategies” (*Nujo’tme’k Samuqwan*). The “compliance standards” represent provincial regulatory practices that can and should be adapted and implemented in First Nations communities. The “risk management strategies” highlight specific areas where risk-mitigation can be achieved through system-specific, proactive, preventive methods. Together, these two management approaches establish standards and practices for the AFNWA. This report makes 24 recommendations in total, which include 14 compliance-based and 10-risk-based recommendations.

**SECTION 3 OF THE REPORT PROVIDES THE RECOMMENDATIONS FOR THE INTERIM COMPLIANCE FRAMEWORK.** The framework presents recommendations organized into three key management areas:

- System Design & Assessment – include standards and guidance for water withdrawal, source water protection, receiving body protection, facility requirements, treatment and distribution/ collection requirements, and facility classification
- Monitoring – includes standards and guidance on operational, compliance, and incident monitoring, as well as community feedback monitoring.
- Management and Operations – includes standards and guidance on operation certification, reporting, community communication, emergency response planning, and occupational health and safety requirements

### Compliance Oversight

Due to constitutional limitations of drinking water and wastewater management at the federal level, there are no national regulations for drinking water standards. National regulations exist however for wastewater system effluent under the Fisheries Act. This creates an incongruous approach for oversight for the AFNWA and the need for a drinking water compliance monitoring entity. Further, because there is no federal precedent for risk-based management of drinking water or wastewater, there is no entity able to oversee the risk management components of the interim compliance framework. To address these complexities, it is recommended that i) an interim compliance monitoring entity be established to oversee the AFNWA’s provision of safe

drinking water and ii) all risk-based management practices be audited by a third-party contracted by the AFNWA.

**SECTION 5 OF THE REPORT PROVIDES THE RECOMMENDATIONS FOR COMPLIANCE OVERSIGHT FOR THE AFNWA.**

The recommendations outline the formation of a compliance unit within the AFNWA and a compliance monitoring unit within ISC to facilitate the harmonization of compliance activities for all participating communities. Recommended compliance activities include, but are not limited to, annual sampling plans, annual reports, source water protection plans, and ad hoc and incident reporting protocols.

AFNWA: The compliance unit, likely to include the Manager of Operations, Manager of Engineering, Superintendent of Operations, Regulatory Compliance Coordinator, and Operations Engineer. This compliance unit will be responsible for engaging with compliance activities and producing necessary compliance documents and instruments.

ISC: The compliance monitoring unit is recommended to include key ISC staff representing both First Nations and Inuit Health Branch and Regional Office Engineering staff, as well as the support of the Community-Based Water Monitors. Inclusion of ISC representation from Headquarters is suggested to facilitate hierarchical communication. As needed, third-party contracts with technical entities are recommended to support the compliance monitoring efforts.

## Interim Framework Recommendations

\* Risk management recommendations shown in orange. Compliance standard recommendations shown in black.

<p>1. Water withdrawal and use</p>	<p><b>REC 1.1*</b> Nujo'tme'k Samuqwan elements for should include withdrawal monitoring plans, contingency plans, and new water source development plans.</p> <p><b>REC 1.2</b> Surface water withdrawals must comply with the Fisheries Act and Species at Risk Act.</p>
<p>2. Source water protection</p>	<p><b>REC 2.0</b> The AFNWA should develop, in collaboration with each community, source water protection plans that incorporate the standard 5-step process and include a source water sampling plan to be reviewed and accepted by the compliance entity.</p>
<p>3. Receiving body protection</p>	<p><b>REC 3.1</b> All wastewater systems must meet the appropriate Fisheries Act regulations and provisions.</p> <p><b>REC 3.2</b> Wastewater EDOs should be set as a function of ERAs as part of the Nujo'tme'k Samuqwan process.</p>
<p>4. Facility requirements</p>	<p><b>REC 4.0</b> All upgrades and new facilities should be designed in keeping with the ACWWA Water Supply Guidelines and Wastewater Guidelines.</p>
<p>5. Facility classifications</p>	<p><b>REC 5.0</b> The AFNWA should follow the <i>Nova Scotia Environment Act and Water and Wastewater facilities and public drinking water supplies regulations</i> to define facility classifications.</p>
<p>6. Treatment, distribution, and collection requirements</p>	<p><b>REC 6.1</b> The AFNWA should follow Nova Scotia's Treatment standards for municipal drinking water systems for:</p> <ul style="list-style-type: none"> <li>• GUDI protocol</li> <li>• Source water protection plan and monitoring plan</li> <li>• Determination of adequate treatment processes</li> <li>• Secondary disinfection in distribution system and storage structure</li> </ul> <p><b>REC 6.2</b> The Nujo'tme'k Samuqwan cycle should include:</p> <ul style="list-style-type: none"> <li>• Assessment and management of corrosion control programs</li> <li>• Assessment and management of cross-connection control program</li> <li>• Identification, assessment, and management of other complex water treatment concerns (water loss control programs, etc.)</li> </ul> <p><b>REC 6.3</b> The AFNWA should follow the ACWWA guidelines as the foundation for Nujo'tme'k Samuqwan management of wastewater collection and treatment practices.</p>
<p>7. Approvals to operate</p>	<p><b>REC 7.0</b> The development of an Operations Guidance document should be designed to serve as a living document to outline the responsibilities of the AFNWA and the compliance entity during the first five years of operations.</p>
<p>8. Monitoring</p>	<p><b>REC 8.1</b> The AFNWA should follow Nova Scotia's <i>Part I Guidelines for monitoring municipal public drinking water supplies</i> for standards on monitoring practices.</p> <p><b>REC 8.2</b> The AFNWA should assume responsibility for developing annual sampling plans, developing SOPs for sampling, and managing the chain of custody from the collection of the sample to delivery to the accredited laboratory.</p>

	<p><b>REC 8.3</b> Nujo'tme'k Samuqwan process should include the following monitoring to ensure the safety of drinking water:</p> <ul style="list-style-type: none"> <li>• Additional corrosion assessment monitoring, as needed, to inform risk assessment</li> <li>• Cross-connection control assessment monitoring, as needed, to inform risk assessment, including annual testing of devices that protect the central system from medium and high-risk threats</li> </ul> <p><b>REC 8.4</b> Process control monitoring plans for wastewater treatment facilities should be developed as part of Nujo'tme'k Samuqwan to ensure treatment efficacy is achieved along the treatment chain.</p> <p><b>REC 8.5</b> Following REC 3.1, all wastewater systems that discharge <math>\geq 100\text{m}^3/\text{d}</math> must meet effluent monitoring and reporting requirements as defined in the WSER.</p>
9. Monitoring of community feedback	<b>REC 9.0</b> The AFNWA should monitor all community feedback, review comments, and enact appropriate responses to address concerns and incorporate this process into the Nujo'tme'k Samuqwan cycle.
10. Operator certification	<b>REC 10.0</b> <i>The Water and Wastewater facilities and public drinking water supplies regulations</i> under the Nova Scotia Environment Act be used as a regulatory standard for operator certification.
11. Reporting	<p><b>REC 11.1</b> The AFNWA should follow Nova Scotia standards and guidelines to develop reporting practices, as detailed in <i>Nova Scotia's treatment standards for municipal drinking water systems</i> and <i>Nova Scotia Part I guidelines for monitoring public drinking water supplies</i>.</p> <p><b>REC 11.2</b> Any incident that requires immediate reporting (for drinking water or wastewater) should be incorporated into the Nujo'tme'k Samuqwan cycle as soon as possible, not to exceed 12 months from the incident date.</p> <p><b>REC 11.3</b> All AFNWA systems must follow the Fisheries Act pollution prevention provisions and Deposit Out of the Normal Course of Events (DONCE) Notification requirements for reporting spills and releases</p>
12. Community engagement and communication	<b>REC 12.0</b> The AFNWA should prepare and share annual water quality reports for the community. Additionally, community communication plans should be included within the Nujo'tme'k Samuqwan cycle as a risk mitigation strategy.
13. Emergency response planning	<b>REC 13.0</b> Emergency training and ERPs should be included in the Nujo'tme'k Samuqwan cycle.
14. Occupational health & safety	<b>REC 14.0</b> The AFNWA must comply with federal OHS regulations.

## 1.0 Introduction

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### 1.1 Statement of work

Significant work has been done in the past by the Centre for Water Resources Studies (CWRS) to address the complexity of water governance for First Nations communities. The CWRS developed a regulatory benchmark report in 2013, built on the findings of the 2006 Independent Expert Panel on Safe Drinking Water for First Nations, which proposed key components of a regulatory system for First Nations communities in Atlantic Canada. The report identified 14 regulatory components, analyzed pan-Atlantic provincial best practices, and drafted a regulatory approach for First Nations communities. This work remains relevant but dated. The 2013 report presented a theoretical construct meant to inform the larger national discussion on water and wastewater regulations for First Nations, however, the need for a regulatory framework has moved beyond the theoretical and is now viewed as an actionable reality to guide the Transfer of Service Agreement (TSA) between

“SINCE THE [SDFWN] ACT PASSED – DURING TWO YEARS OF CONSERVATIVE GOVERNMENT AND SIX YEARS OF LIBERAL GOVERNMENT – NO REGULATIONS HAVE YET BEEN PROMULGATED.” – STEVE E. HRUDEY (SEPTEMBER 1, 2021)

the Atlantic First Nations Water Authority (AFNWA) and the Government of Canada. The AFNWA is the first Indigenous water authority of its kind in Canada, but with no legislated drinking water quality regulations or regulators existent for

First Nations communities, the AFNWA is pursuing both an interim compliance framework and oversight entity to direct its operation. This is viewed as an interim approach, in anticipation of national regulations being developed in the future to conform with the Safe Drinking Water for First Nations Act (SDWFNA) which achieved royal assent in June 2013.

To contribute to the efforts of the Indigenous Services Canada (ISC) - AFNWA joint working group to develop a compliance process for the AFNWA, the CWRS was contracted to provide a report with the following scope of work:

1. modernizing both the regulatory requirements and associated gap analysis for First Nations communities (Tasks 1 & 2)
2. identifying mechanisms to integrate risk assessment, monitoring, and reporting into the compliance framework structure (Task 3)
3. outlining potential entities to be responsible for compliance and enforcement of the AFNWA (Task 4)
4. incorporating collaboration and engagement throughout the process to facilitate a two-eyed seeing approach (Task 5)

### 1.2 Organization of report

This report provides recommendations for an interim compliance framework that relies on a dual oversight approach for the AFNWA including:

- i) an interim externally administered compliance standard framework and
- ii) an internal self-administered preventive risk management framework.

The compliance standard framework establishes key system, operations, monitoring, and reporting requirements that can serve as *de facto* regulations in lieu of legislation.

The internal self-administered preventive risk management framework draws from international risk mitigation strategies and provides a holistic and adaptable approach to incorporate Etuaptmunk (Two-Eyed Seeing) into water management practices.

The report is organized into six sections, as described herein:

- Section 2 provides background information on regulations and risk management practices and describes the documentation used to inform this report.
- Section 3 details the recommendations of the compliance standard framework and risk management framework. System design and assessment standards, monitoring programs, and management and communication attributes will be described, and both compliance standards and risk management recommendations will be outlined.
- Section 4 highlights key findings of the regulatory gap analysis, including a summary of documents and data sets used to inform this analysis.
- Section 5 presents compliance activities recommended to ensure effective oversight of the AFNWA and details recommendations for compliance monitoring roles and responsibilities for both the AFNWA and the compliance monitoring entity.
- Section 6 offers concluding remarks and provides a direction for the AFNWA.

## 2.0 Background and reference documents

### 2.1 Regulations and risk-management

In the Atlantic provinces, which served as the basis for the jurisdictional scan for this study, the predominant governance tool used in the provision of clean drinking water and safe wastewater treatment are regulations pursuant to legislative acts that reinforce the multibarrier approach from source to tap (and back again). Much work has been done globally in the 21<sup>st</sup> century to modernize water treatment and water management practices, largely in response to waterborne illness outbreaks in sophisticated and well-resourced systems (Moreira & Bondelind, 2017). It is well-established that numerical guidelines and traditional ‘end-of-pipe’ regulations do not in themselves assure the provision of safe drinking water and wastewater effluent (Hrudey, 2012). Operational complexities, inherent uncertainties, and ever-shifting source/receiving body water quality and quantity in a changing climate may evade effective regulations and require a more dynamic and system-specific approach than standard regulations can provide. The incorporation of risk-based management strategies to protect drinking water quality was mandated in both Alberta and Ontario following the Walkerton Tragedy in 2000, as it was recognized that a more holistic and proactive approach was necessary to mitigate risk. The dual oversight approach presented here for the AFNWA reflects best practices from these provincial examples and incorporates necessary and effective compliance standards in conjunction with risk-based management practices to provide a progressive approach to ensuring the provision of clean water.

Figure 1A diagrams a generic drinking water threat from a preventive risk-management perspective (adapted from Pitbaldo and Nelson, 2013 and personal communications with Dr. K. Lane). The role of regulations along the “threat chain” is crucial for establishing required

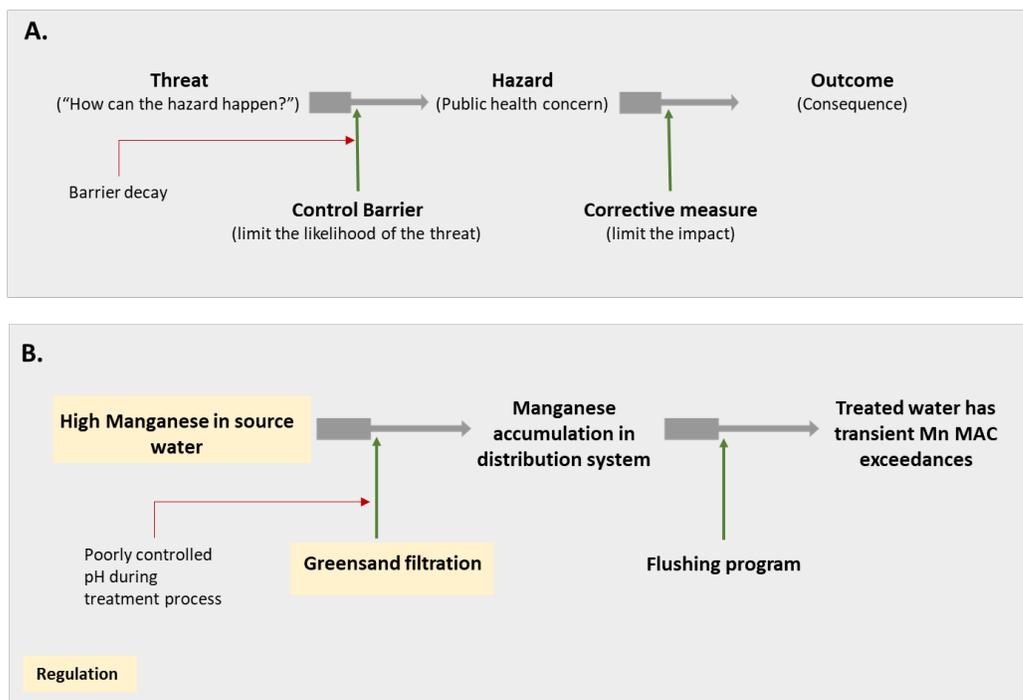


Figure 1. (A) A risk model for a generic water hazard. (B) A risk model for accumulation of Mn in the distribution system.

activities to prevent, detect, and respond to threats to safe water. However, the hazard identification and risk assessment processes in a risk mitigation cycle allow for a holistic consideration of the underlying water quality issue. Figure 1B shows the specific example of Manganese (Mn) accumulation in the distribution system. Regulated source water monitoring ensures the detection of elevated Mn in the raw water and regulated adherence to system design requirements ensures the implementation of oxidative treatment through greensand filtration as a control barrier. However, barrier decay mechanisms (in the form of operational issues, management limitations, communication, etc.) can reduce the effectiveness of the control barrier. In this example, poorly controlled pH during treatment reduces the efficacy of Mn removal and results in the build-up of Mn in the distribution system. Due to the complexity of metal sequestration in the distribution system, a traditional regulatory paradigm is insufficient on its own to mitigate the risk of high Mn levels reaching the customer. An effective preventive risk-management approach considers the hazard, threat, control barrier, methods of barrier decay, corrective measures, and resulting risk level for all relevant hazards specific to each system. The AFNWA is committed to developing and implementing a risk-based management approach in combination with compliance standards to protect water from source to tap and back to the source again.

## **2.2 Reference documents**

The absence of direct precedent for First Nations drinking water regulation provides an opportunity to evaluate compliance and preventive risk-management approaches across jurisdictions to develop a progressive governance framework. This type of framework incorporates a balance of compliance standards and risk-management practices to ensure constant improvement of drinking water and wastewater services. Additionally, federal regulation of wastewater effluent through the Wastewater Systems Effluent Regulations (WSER) establishes a national performance standard as a minimum level of receiving body protection. However, the WSER standards address the legislated protection of surface water under the Fisheries Act and are not aimed at addressing human health concerns related to wastewater effluent quality. This report provides risk-based management recommendations to inform the enhanced protection of receiving bodies for both environmental and human health objectives. This work was informed by a range of federal Acts, regulations, and protocols, as well as provincial Acts, regulations, and guidelines. Provincial and international risk-management approaches were also reviewed to develop the risk-management approaches included in the framework. Specific attention was paid to the Protocol for Centralised Drinking Water in First Nations Communities, the Drinking Water Program Manual, Design Guidelines for First Nations Water Works, and Protocol for Centralised Wastewater in First Nations Communities. It should be noted that the Protocol for Centralised systems both require that treatment systems are subject to the Protocol's requirements or the provincial requirements (standards, regulations, codes, or guidelines), whichever is more stringent, so in many cases the federal documents defer to provincial regulations as a matter of course. Appendix 1 provides a list of all documents reviewed for the regulatory components of this work, presented by province and federal jurisdictions, with a subsection for First Nation-specific documents. Where possible, the document is linked to its URL.

Appendix 2 provides a list of all documents reviewed for the risk-management components of this work. Where possible, the document is linked to its URL.

### 3.0 Recommendations: Interim compliance standards and preventive risk management components

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To facilitate the integration of a compliance standard framework and a preventive risk management approach, the World Health Organization's (WHO's) safety plan framework has been adapted and used as an organizational structure, as shown in Figure 2. The WHO developed water safety planning (WSP) and sanitation safety planning (SSP) as proactive risk-mitigation management tools. These tools serve as the foundation for the risk-management framework recommended here for the AFNWA. Through work with the AFNWA Elders Advisory Lodge (EAL), a risk management cycle is being developed with Wabanaki knowledge and principles guiding the process. Rather than using WHO terminology to refer to the risk management framework, the EAL in collaboration with the AFNWA have named the process *Nujo'tme'k Samuqwan* (meaning *we take care of the water in a good way*). This name will be used throughout this report to reference the WSP/SSP-based risk management tool being designed for risk mitigation in AFNWA water and wastewater systems.

The framework includes both interim compliance standards and risk-management strategies to guide the operation and oversight of the AFNWA. The framework will address each of the critical components shown in Figure 2. The majority of these components were identified in the 2006 Report of the Expert Panel on Safe Drinking Water for First Nations as key elements necessary in any First Nations drinking water regulatory regime (Swain et al., 2006). The items shown in red are components that have been added to the 2006 list to i) reflect the recent advances in wastewater treatment strategies and guidelines (receiving body protection) and ii) ensure clear communication practices between the AFNWA and participating communities (monitoring of community feedback, community engagement/communication, and municipal transfer agreements).

Tables 1 – 3 show the individual framework components for each category (system design and assessment, monitoring, and management and communication), the associated compliance and/or *Nujo'tme'k Samuqwan* recommendations, and a brief discussion on the alignment of the recommendation to the First Nations context.

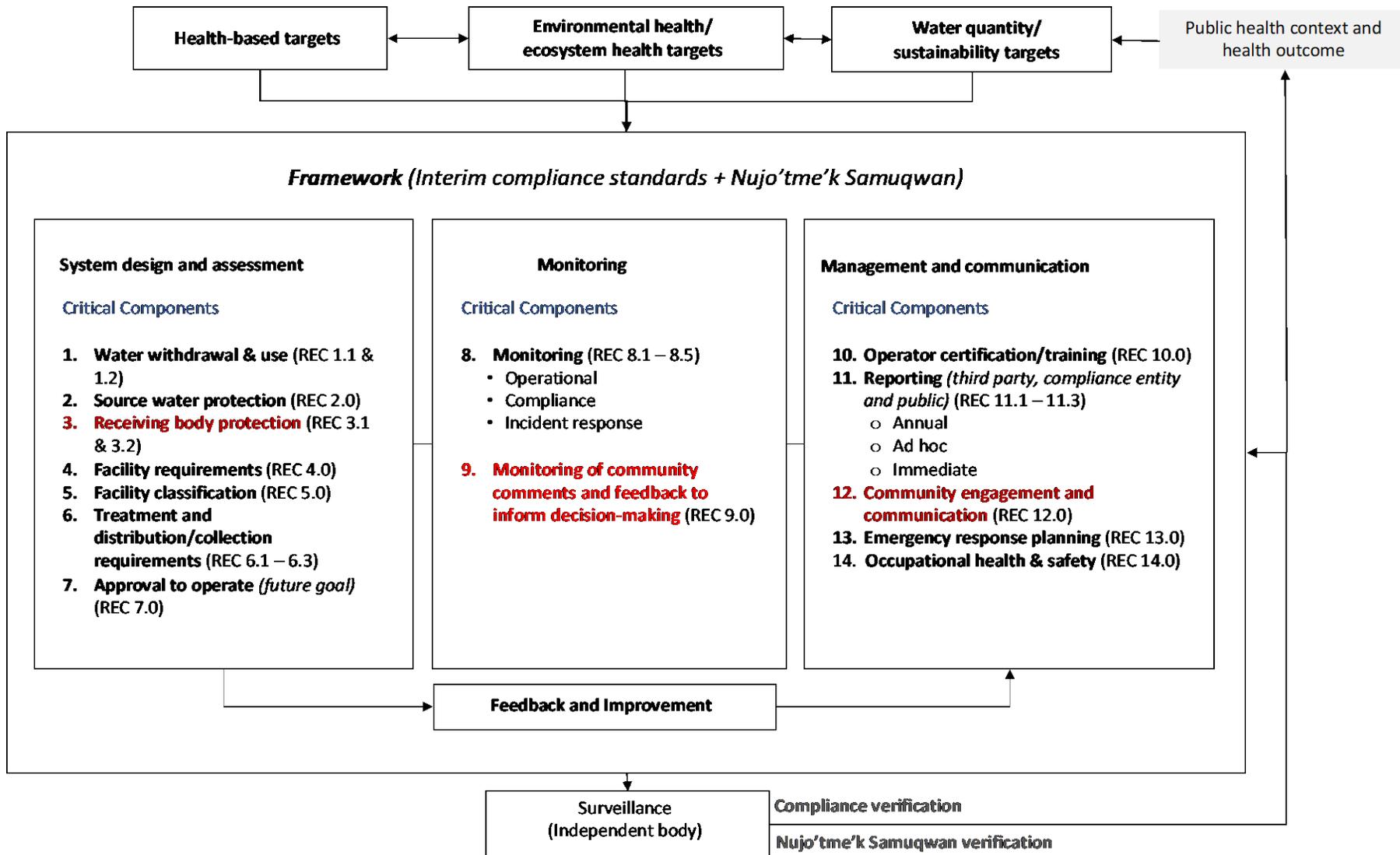


Figure 2. The critical components of the framework are organized into categories of 'System design and assessment', 'Monitoring', and 'Management and communication'. The red text indicates new elements to be incorporated into the framework. Corresponding recommendations, ex. REC 1, are shown and can be found in Section 3 and Appendix 4.

**Table 1. The compliance and Nujo'tme'k Samuqwan (risk-management) framework recommendations for water and wastewater System Design and Assessment.**

<b>System design and assessment: Multibarrier source to tap and back to source approach</b>			
<b>Framework element</b>	<b>Compliance standard</b>	<b>Nujo'tme'k Samuqwan</b>	<b>Adaptation to a First Nations context</b>
Water withdrawal and use	<ul style="list-style-type: none"> <li>Surface water withdrawal: compliance with the Fisheries Act and Species at Risk Act</li> </ul>	<ul style="list-style-type: none"> <li>Withdrawal monitoring plans</li> <li>Contingency plans</li> <li>ACWWA Water Supply Guidelines – current edition <b>(New source water development)</b></li> </ul>	<p>No provincial reference is appropriate for regulating water withdrawal and use. However, Nujo'tme'k Samuqwan practices should be implemented to ensure water usage is measured over time, contingency plans are in place in case compromised or degraded source water occurs, and general sustainability of water sources are maintained for public health, social, cultural, and ecosystem functions.</p> <p>All surface water withdrawals must comply with federal protections of fisheries.</p> <p>New source water development initiatives should follow the protocols detailed in the ACWWA Water Supply Guidelines.</p>
Source water protection	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>Nova Scotia Treatment Standards for Municipal Drinking Water Systems                             <ul style="list-style-type: none"> <li>Source water protection plans</li> </ul> </li> </ul>		<p>Nova Scotia requires a source water protection plan, which includes five distinct steps including hazard identification and risk assessment and a monitoring plan. This approach to source water protection aligns well with the substantial body of work that First Nations communities have done regarding source water protection. It is recommended that the AFNWA develops an appropriate internal process for source water protection planning for each participating community, informed by a template drafted by the Federation of Sovereign Indigenous Nations (FSIN) in partnership with the Saskatchewan First Nations Water Association (SFNWA) available in the Saskatchewan First Nations Drinkable Water Regulations.</p>
Receiving body protection	<p><i>Fisheries Act</i></p> <ul style="list-style-type: none"> <li>WSER (<math>\geq 100\text{m}^3/\text{d}</math> discharge)</li> <li>Fisheries Act, Pollution prevention provisions (<math>&lt;100\text{m}^3/\text{d}</math>)</li> <li>Deposit out of the normal course of events (DONCE) (all systems)</li> </ul>	<ul style="list-style-type: none"> <li>Environmental risk assessments and effluent discharge objects per receiving body vulnerability</li> <li>ACWWA Guidelines for Wastewater systems – current edition</li> </ul>	<p>Federal regulations address wastewater system effluent quality through the application of national minimal standards and pollution prevention provisions. Provincial regulations or practices follow the CCME strategy and require ERAs and site-specific EDOs, as well as the ACWWA Guidelines for Wastewater systems. Without a regulator to oversee ERAs/EDOs for First Nation systems, it is recommended that receiving body vulnerability be considered as a matter of Nujo'tme'k Samuqwan hazard identification and risk assessment and that best practices be developed in accordance with the ACWWA Guidelines.</p>

Facility requirements	<ul style="list-style-type: none"> <li>• ACWWA Water Supply Guidelines</li> <li>• ACWWA Wastewater Guidelines</li> </ul>		Atlantic provinces follow the ACWWA Guidelines (or near equivalent – NL) to determine appropriate system design criteria. These documents should guide all upgrades and new infrastructure development in First Nations communities.
Facility classification	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>• Water and wastewater facilities and public drinking supplies regulations</li> </ul>		Nova Scotia’s classification scheme details Class I-IV for water and wastewater treatment facilities and Class I – III for distribution and collection systems. This classification scheme is recommended for systems participating in the AFNWA.
Treatment, distribution, collection requirements	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>• Drinking water: Nova Scotia treatment standards for municipal drinking water systems (including GUDI protocol, source water protection, adequate treatment and distribution)</li> </ul>	<ul style="list-style-type: none"> <li>• Corrosion control program</li> <li>• Cross connection control program</li> <li>• Water loss control program</li>   <li>• Sanitation safety components of Nujo’tme’k Samuqwan</li> <li>• Inflow and Infiltration control program</li> </ul>	<p>Nova Scotia has robust treatment standard guidelines that set operational, monitoring, and treatment requirements for drinking water. It is recommended that many of these guidelines are set as compliance standards for the AFNWA. However, there are some elements that are best handled through Nujo’tme’k Samuqwan practices and implemented on an individual system basis as needed.</p> <p>For collection and treatment guidelines for wastewater, there are limited provincial regulations. A Nujo’tme’k Samuqwan approach is suggested to address collection and treatment practices on an individual system basis. The ACWWA Wastewater Guidelines should be consulted for best practices. Federal regulations prescribe sampling, effluent quality, and reporting standards but are silent on treatment requirements.</p>
Approval to operate (ATO)	There is no suitable provincial regulatory statute that can be applied to a First Nations context, but terms and conditions for individual water and wastewater facilities must be developed to establish treatment, monitoring, and reporting requirements for each facility operated by the AFNWA	<ul style="list-style-type: none"> <li>• SOPs and related training</li> <li>• Operations manual</li> <li>• Treatment backwash and solids waste management plan</li> </ul>	Provincial jurisdictions have legislative authority and regulatory resources to both require and support the significant effort involved in Approval to Withdrawal and Approval to Operate agreements. Given the interim nature of this framework and the Indigenous context, a provincial-municipal reference is inappropriate here. However, terms and conditions for operation need to be clearly established and agreed upon between the compliance entity and the AFNWA. There are several key elements of a provincial ATO that require SOPs, documentation of training activities, an up-to-date operations manual, etc. It is recommended that these elements be maintained through the Nujo’tme’k Samuqwan cycle.

**Table 2. The compliance and Nujo'tme'k Samuqwan framework recommendations for Monitoring.**

<b>Monitoring</b>			
<b>Framework element</b>	<b>Compliance standard</b>	<b>Nujo'tme'k Samuqwan</b>	<b>Adaptation to a First Nations context</b>
Drinking water: Operational, compliance, and incident response monitoring	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>Nova Scotia Part I guidelines for monitoring municipal public drinking water supplies</li> <li>Nova Scotia's <i>A guide to assist Nova Scotia municipal water works prepare annual sampling plans</i></li> </ul> <p>- It should be noted that source water monitoring of protozoa is recommended in the <i>Guidelines for Canadian Drinking Water Quality (GCDWQ)</i>, because depending on source water quality a greater log removal/inactivation may be required</p>	<ul style="list-style-type: none"> <li>Additional distribution system monitoring to characterize and assess corrosivity</li> <li>Additional and/or First Nations derived monitoring programs (visual inspection, storytelling, etc.)</li> </ul> <p>For GUDI wells and surface water sources use of quantitative microbial risk assessment (QMRA) should be considered as part of the broader risk assessment cycle</p>	<p>The Nova Scotia guidelines for monitoring are robust, clear, and appropriate for application in First Nations systems. Details are provided for source water monitoring and the development of an annual sampling plan. The annual sampling plan captures all operational and compliance monitoring required to meet the NS monitoring standards and comply with the federal GCDWQ, as published by Health Canada. In NB, NS, and PEI compliance monitoring is the responsibility of the water utility. Following these provincial references, the AFNWA should develop and implement a compliance monitoring program.</p> <p>The NS standards are independent documents and procedures for reviewing and revising regulatory statutes will need to be developed by the AFNWA and compliance entities.</p> <p>As First Nations drinking water sources have no substantive protozoa characterization, a robust sampling plan will be needed to characterize all GUDI and surface water sources. Further, because most wells do not have documented GUDI determinations following the NS regulated protocol, all wells should be treated as GUDI until analyses prove otherwise. Dillon Consulting is currently conducting GUDI assessments of all wells in the communities participating in the Asset Management Plan.</p>
Wastewater: Operational monitoring		<ul style="list-style-type: none"> <li>Process control monitoring plan</li> </ul>	<p>There are no provincial regulations that prescribe wastewater treatment operational monitoring practices. Approvals to operate establish sampling, monitoring, and reporting requirements and set discharge effluent quality standards, but no operational guidance is provided. Each treatment process unit may require process control monitoring to ensure effective treatment. This should be managed as a preventive risk management strategy in Nujo'tme'k Samuqwan.</p>
Wastewater: Compliance monitoring	<p><i>Fisheries Act</i></p> <ul style="list-style-type: none"> <li>WSER (<math>\geq 100\text{m}^3/\text{d}</math> discharge)</li> </ul>	<ul style="list-style-type: none"> <li>EDO monitoring</li> <li>Small system effluent quality monitoring (<math>&lt;100\text{m}^3/\text{d}</math>)</li> </ul>	<p>Following the federal regulations for wastewater system effluent discharge, WSER requirements must be met in all wastewater treatment facilities that discharge <math>\geq 100\text{m}^3/\text{d}</math>. These systems may also have additional EDOs identified through the internal ERA process conducted by the AFNWA.</p> <p>Systems that discharge <math>&lt; 100\text{m}^3/\text{d}</math> may be subject to EDOs established through internal ERAs conducted by the AFNWA.</p> <p>A compliance sampling program needs to be developed by the AFNWA to ensure all regulated effluent water quality standards are met.</p>

Wastewater: Incident response monitoring	<i>Fisheries Act</i> <ul style="list-style-type: none"> <li>• Fisheries Act, pollution prevention provisions</li> <li>• Deposit out of the normal course of events (DONCE)</li> </ul>	<ul style="list-style-type: none"> <li>• Incident response monitoring</li> </ul>	<p>Federal provisions under the Fisheries Act requires reporting of spills or releases but does not specify monitoring activities following an incident. However, this may be handled by the ECCC on a case-by-case basis.</p> <p>The AFNWA should implement post-incident response monitoring, as needed, in cases of wastewater spills/releases to identify ecosystem impacts and recovery as a function of the Nujo'tme'k Samuqwan process.</p>
Monitoring of community feedback and comments		<ul style="list-style-type: none"> <li>• Feedback collection, review, and response plan</li> </ul>	<p>Communication and trust between water stakeholders, including end users, operators, and utility management, is a critical element in protecting public health. A transparent community feedback system is recommended as part of the Nujo'tme'k Samuqwan cycle and should be developed by the Manager of Communications and Outreach in collaboration with the Elders Advisory Lodge.</p>

**Table 3. The compliance and Nujo'tme'k Samuqwan framework recommendations for Management and Communication.**

Management and communication			
Framework element	Compliance standard	Nujo'tme'k Samuqwan	Adaptation to a First Nations context
Operator certification	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>Water and wastewater facilities and public drinking water supplies regulations</li> </ul>		Regulations under the Nova Scotia Environment Act detail four types of operator certifications for four classes (Class I – IV, and operator-in-training). It is recommended that these classifications be used to guide operator certification for all AFNWA operators.
Drinking water: Reporting	<p><i>Nova Scotia Environment Act</i></p> <ul style="list-style-type: none"> <li>Nova Scotia treatment standards for municipal drinking water systems</li> <li>Nova Scotia Part I guidelines for monitoring municipal public drinking water supplies</li> <li>In recognition that Atlantic provinces do not have a formal risk-based management approach, there is no provincial reference to guide how incidents should be tracked to inform a risk mitigation cycle, AFNWA incident reporting practices must include updating the Nujo'tme'k Samuqwan hazard identification and risk assessment cycle when an incident occurs (as quickly as feasible, but no longer than 12 months after the incident occurs)</li> </ul>	<ul style="list-style-type: none"> <li>Nujo'tme'k Samuqwan reporting plan</li> </ul>	<p>Nova Scotia has clear and robust reporting requirements outlined in both the Treatment Standards and Monitoring Guidelines. Immediate, ad hoc, and annual reporting requirements are detailed, including the requirement for system assessment reports at least every 10 years. It is recommended that the AFNWA follow these documents and adapt as necessary with each facility having specified reporting requirements per the terms and conditions agreed upon by the regulator.</p> <p>The Nujo'tme'k Samuqwan cycle must be coupled with the regulatory cycle and include incidents and associated corrective action plans. An annual reporting and review cycle for Nujo'tme'k Samuqwan practices should be developed and maintained internally.</p>
Wastewater: Reporting	<p><i>Fisheries Act</i></p> <ul style="list-style-type: none"> <li>WSER (<math>\geq 100\text{m}^3/\text{d}</math> discharge)</li> <li>Fisheries Act, Pollution prevention provisions</li> </ul>	<ul style="list-style-type: none"> <li>Nujo'tme'k Samuqwan reporting plan</li> </ul>	Following the federal regulations on wastewater system effluent discharge, WSER requirements must be met in all wastewater treatment facilities that discharge $\geq 100\text{m}^3/\text{d}$ . These systems may also have additional EDOs identified through the internal ERA process conducted by the AFNWA.

	<ul style="list-style-type: none"> <li>• Deposit out of the normal course of events (DONCE)</li> </ul>		<p>Systems that discharge &lt; 100m<sup>3</sup>/d may be subject to EDOs established through internal ERAs conducted by the AFNWA.</p> <p>In addition to federal reporting requirement for WSER systems, Nujo'tme'k Samuqwan reporting must occur for all systems and should include any summary of EDOs and/or incident occurrence.</p>
Community engagement and communication		<ul style="list-style-type: none"> <li>• Community communication plan(s) <ul style="list-style-type: none"> <li>○ Communication and education plan for drinking water advisories</li> </ul> </li> </ul>	<p>Following PEI's Water Act, an annual report of water and wastewater quality parameters should be provided to each community. It is expected that the AFNWA will make community engagement and communication a central tenet of its operation as a way of building transparent and reciprocal relationships with communities.</p> <p>There is a specific need to communicate and educate participating communities about how the AFNWA will share information regarding drinking water advisories and variants in wastewater discharge. Community participation in developing this communication structure is recommended.</p>
Emergency response planning		<ul style="list-style-type: none"> <li>• Emergency planning and training</li> <li>• Emergency response plan (ERP) for the AFNWA and each individual water and wastewater system</li> </ul>	<p>While provinces ensure the development of ERPs through regulations and as a requirement through Approvals to Operate, it is recommended that ERPs and associated emergency planning and training across the AFNWA be handled as a matter of Nujo'tme'k Samuqwan. This will alleviate the compliance entities from the responsibility of having to review these plans. If external oversight and guidance is deemed appropriate the AFNWA can coordinate with Public Safety Canada through the Regional Resilience Assistance Program (RRAP) for ERP development and review.</p>
Occupational health and safety	<p><i>Canada Labour Code</i></p> <ul style="list-style-type: none"> <li>• Canada Occupational health and safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Training for workplace safety</li> </ul>	<p>While aspects of the federal Labour Code will apply to employees of a First Nations owned water and wastewater utility, it is also recommended that substantive efforts be made in Indigenously led workplace safety training. Indigenous third-party organizations specialize in the development and delivery of educational and training opportunities for Indigenous workers.</p>

### 3.1 Water withdrawal and use

Each province governs the right to water withdrawal and usage through differing approaches. Both PEI and NS have relatively conservative withdrawal limits that trigger a provincial approval process. Approvals to withdraw in these jurisdictions require thorough water quality and quantity validation through hydrogeological and ecosystem studies detailed in regulations under the PEI Water Act and NS Environment Act. The guiding principles of the approval processes are to ensure that water resources are developed in a sustainable manner for indefinite future use without deleterious environmental or social consequences (Water Act, 2021). The concept of sustainability has a particular cultural importance to First Nations people and applying provincial standards here would be inappropriate. Rather, Nujo'tme'k Samuqwan elements are recommended for an Indigenous-led effort to develop community-specific management plans to support sustainable and healthy water withdrawal practices. The **recommended Nujo'tme'k Samuqwan elements are (REC 1.1):**

- **Withdrawal monitoring plans** – these plans should include details pertaining to the measurement of daily pumping rates and the monitoring and reporting of 30-day withdrawal volumes, annual withdrawal volume, groundwater or surface water levels, maximum pumping rate, etc. as needed based on water use history, source supply levels, projected community growth, and other ecosystem and environmental factors.
- **Contingency plans** – the plans should provide contingency measures for any potential effects due to water withdrawal (i.e., saltwater intrusion, well interference, disruption of ecological maintenance flow, drought, etc.) that are likely at individual water extraction sites.
- **New water source development plans** – new source development should incorporate recommendations from the ACWWA Water Supply Guidelines to reduce system design risks and mitigate potential hazards due to poor source selection.

These plans should be developed based on the hydrogeology, land use, and source water quality characteristics of each withdrawal site in the context of the larger watershed. The monitoring data and implementation of contingency plans should be presented within the annual report (as described in Section 3.11) and used to inform the Nujo'tme'k Samuqwan assessment cycle. These plans should be shared with the appropriate provincial agency for a cooperative approach to watershed management.

Regulatory standards for surface water withdrawal and usage are **(REC 1.2):**

- **Surface water withdrawal: compliance with the Fisheries Act and Species at Risk Act** – following Nova Scotia's practice, surface water intake designs should be reviewed by a regulatory body and/or Department of Fisheries and Ocean (DFO) Fisheries Protection Program to approve intake structures are sufficient to protect fish against entrainment or impingement.

### 3.2 Source water protection

As the first barrier in the source-to-tap multibarrier approach to safe drinking water, each province has extensive governance mechanisms in place to protect source water from the effects of land use, contamination, and degradation. PEI, in the recently passed Water Act, has

the most progressive source water protection framework with four water management designation areas: water sustainability plan area, aquatic ecosystem protection area, municipal water supply area, and well-field protection area. All Atlantic provinces have some mechanism for designating protected areas for public drinking supplies with differing approaches to limiting development and restricting land uses adjacent to water sources. The jurisdictional nuances of First Nations communities make a direct reference for protected area designation impossible. However, much work has been done by other First Nation communities and organizations to develop policy and legal instruments to address source water protection. Specifically, the Federation of Sovereign Indigenous Nations (FSIN) in partnership with the Saskatchewan First Nations Water Association (SFNWA) developed the Saskatchewan First Nations Drinkable Water Regulations which details a community-based approach to building source water protection plans (SWPP) (unpublished). SWPPs are used in municipal and First Nation communities alike and establish a risk-based management approach to monitoring and protecting source waters. **It is recommended that the AFNWA develop, in collaboration with each community, source water protection plans that incorporate the standard 5-step process and include a source water sampling plan to be reviewed and accepted by the compliance entity (REC 2.0).** Source water monitoring results should be included in the annual report (as described in Section 3.11) and used to inform the Nujo'tme'k Samuqwan assessment cycle.

If individual communities have by-laws allowing the designation of protected areas for water resources, the AFNWA should pursue designated status for drinking water supplies.

### 3.3 Receiving body protection

Significant harmonization of wastewater effluent discharge monitoring and reporting has occurred with the enactment of WSER under the Fisheries Act. The national standards establish sampling, reporting, and water quality performance requirements for all wastewater treatment facilities that discharge  $\geq 100\text{m}^3/\text{d}$ . Provincial wastewater management practices also include meeting the Canadian Council of Ministers of the Environment (CCME) Canada-wide Strategy for the Management of Municipal Wastewater Effluent (MMWE) which require site-specific EDOs to be met based on an Environmental Risk Assessment (ERA). While First Nations systems are clearly required to meet WSER standards, the jurisdictional relevancy of the MMWE is less clear. The AFNWA has committed to conducting ERAs and identifying EDOs for systems that discharge into a vulnerable environment through ongoing work with Dillon Consulting Limited on the Asset Management Plan project. The framework recognizes that **all wastewater systems must meet the appropriate Fisheries Act regulations and provisions (REC 3.1) and recommends that EDOs are set as a function of the Nujo'tme'k Samuqwan process (REC 3.2)**, based on treatment efficacy, discharge volume, and receiving body vulnerability.

### 3.4 Facility requirements

**It is recommended that all upgrades and new facilities should be designed in keeping with the ACWWA Water Supply Guidelines and Wastewater Guidelines (REC 4.0).** Current facilities that are deficient in treatment processes and/or capacity according to the ACWWA guidelines will be identified through ongoing system assessment activities underway by Dillon Consulting Limited.

### 3.5 Facility classification

Facility classification informs the process for operator certification. Determining a facility's complexity allows for the appropriate training and professional development for operators. PEI is the only Atlantic province that currently provides a facility classification for small and very small water distribution systems (with disinfection by chlorination as the only treatment process) based on the number of service connections. For consistency and a higher level of due diligence, **it is recommended that the AFNWA follows the Nova Scotia Environment Act and Water and Wastewater facilities and public drinking water supplies regulations to define facility classifications (REC 5.0).**

### 3.6 Treatment, distribution, and collection requirements

#### 3.6.1 Drinking water systems

The treatment of drinking water, and the distribution of clean water to consumers, are complex undertakings dependent on source water quality and changes, treatment processes, water consumption patterns of users, age, quality, and material of infrastructure assets (both vertical and linear), and operational and maintenance practices. In a provincial context, all elements of treatment and distribution are regulated, and therefore subject to review by the regulating body. The framework proposed here applies both a compliance and preventative risk-management approach to treatment and distribution requirements to capture the value provided by both practices.

For regulatory performance standards it is **recommended that the AFNWA follow Nova Scotia's Treatment standards for municipal drinking water systems (REC 6.1)** for:

- GUDI protocol
- Source water protection plan and monitoring plan
- Determination of adequate treatment processes
- Secondary disinfection in distribution system and storage structure

For complex and dynamic water quality concerns, a preventive risk-based management approach is recommended following the Nujotme'k Samuqwan cycle. Corrosion control and cross-connection control programs may be necessary in some communities, but currently there are significant uncertainties regarding the linear assets in most systems. When high levels of complexity and uncertainty are present, regulations provide little use in addressing these concerns. System-specific Nujotme'k Samuqwan hazard identification and risk assessment practices provide more system knowledge and allow for the development of appropriate management responses to emerging concerns. **It is recommended that the Nujotme'k Samuqwan cycle include (REC 6.2):**

- Assessment and management of corrosion control programs
- Assessment and management of cross-connection control program
- Identification, assessment, and management of other complex water treatment concerns (water loss control programs, etc.)

#### 3.6.2 Wastewater systems

The collection and treatment of wastewater is subject to far fewer regulatory requirements than drinking water systems. Typically, provincial regulations establish monitoring, reporting, and effluent quality standards for wastewater services through Approvals to Operate but are silent on specific collection and treatment requirements. The ACWWA Wastewater Guidelines provide

system design criteria for effective treatment capacities and establish equipment requirements, controlled hydraulic conditions for optimum treatment efficiencies, etc. **It is recommended that the ACWWA guidelines serve as the foundation for Nujo'tme'k Samuqwan management of wastewater collection and treatment practices for the AFNWA (REC 6.3).**

### **3.7 Approvals to operate**

There is no precedent for approvals, licenses, or permits to operate in First Nations water and wastewater systems. However, the development of terms and conditions of operation is an evidence-based regulatory mechanism that codifies system-specific roles, responsibilities, treatment processes, monitoring and sampling plans, and reporting and incident response expectations. Approvals to operate (ATO) dictate how and when an owner/operator engages with the regulatory body to ensure the efficacy of treatment and evaluate the responsible operation of the treatment facilities. Establishing a procedure for designing and implementing ATOs is a recommended goal for the AFNWA and interim (or future) regulator. However, in the early and dynamic days of the AFNWA, ATOs may be infeasible. As the AFNWA and interim compliance entity mature and/or a revised Safe Drinking Water for First Nations Act is passed with regulations stipulating a legislated regulator, the requirement for ATOs should be implemented. In the near-term, an alternative approach to clarifying and documenting treatment, monitoring, and reporting expectations is recommended and will require collaboration between the AFNWA and interim compliance entity. **The development of an Operations Guidance document should be designed to serve as a living document to outline the responsibilities of the AFNWA and the compliance entity during the first five years of operations (REC 7.0).**

### **3.8 Monitoring**

#### **3.8.1 Drinking water: Operational, compliance, and incident response monitoring**

Monitoring activities are crucial for the production of safe drinking water. Monitoring ensures operational efficacy, validates delivery of clean water to consumers, and provides early detection of water quality threats from source to tap. All Atlantic provinces regulate monitoring activities for public drinking water supplies but differ in the exact approach and parameters monitored. Nova Scotia has the most robust monitoring requirements, both in operational performance verification and compliance standards. It is recommended that the AFNWA follow the Nova Scotia *Part I Guidelines for monitoring municipal public drinking water supplies* and use Nova Scotia's *A guide to assist Nova Scotia municipal water works prepare annual sampling plans*. These two documents outline clear monitoring requirements and operationalize how to develop an effective sampling plan for a drinking water system. For regulatory monitoring standards it is **recommended that the AFNWA follow Nova Scotia's Part I Guidelines for monitoring municipal public drinking water supplies (REC 8.1)** for:

- Routine monitoring for microbiological quality (including total coliform, E. coli, enteric viruses, enteric protozoa, and microbial particulate analysis)
- Microbial quality baselines should be determined for all GUDI and surface water sources. Protozoa monitoring should be collected on all GUDI wells quarterly for at least two years and then on an annual basis in August. \*\* New source water development processes

should include at least this level of monitoring before the pre-design phase to inform the levels of treatment needed in the facility.

- Incident monitoring associated with microbial contaminant and issuance and removal of drinking water advisory
- Monitoring for chemical, physical, and radiological quality
  - General chemical and physical water quality parameters
  - Health-related parameters (as determined by the GCDWQ)
- Monitoring of disinfection byproducts
- Monitoring of Cyanobacterial toxins
- Monitoring of Manganese
- Monitoring of corrosion assessment requirements
- Source water protection monitoring
- Operational monitoring
- Incident monitoring associated with a sample exceedance for a health-related chemical parameter

In most provinces in Atlantic Canada the owner/operator of drinking water treatment systems are responsible for the collection of compliance samples. **It is recommended that the AFNWA follow this reference and assume responsibility for developing annual sampling plans, developing SOPs for sampling, and managing the chain of custody from the collection of the sample to delivery to the accredited laboratory (REC 8.2).** Also based on industry best practice, it is recommended that the accredited lab send all water quality results to the compliance entity and AFNWA simultaneously upon completion of analysis for full transparency. Software such as WaterTrax can be utilized by AFNWA and configured for this purpose.

For treatment and distribution control programs that have been recommended for inclusion in the Nujo'tme'k Samuqwan cycle, it is recommended that any necessary monitoring and sampling plans be developed to support the Nujo'tme'k Samuqwan hazard identification and risk assessment processes. **The following monitoring programs are recommended for the Nujo'tme'k Samuqwan cycle (REC 8.3):**

- Additional corrosion assessment monitoring, as needed, to inform risk assessment
- Cross-connection control assessment monitoring, as needed, to inform risk assessment, including annual testing of devices that protect the central system from medium and high-risk threats

Beyond western-based water quality monitoring practices, there is an opportunity to augment how water quality is appraised through traditional knowledge. It is recommended that Elders and community water leaders be involved in developing First Nations led water quality information particularly around source and receiving body health and protection.

It is worth noting that this framework represents a static moment in time and references Nova Scotia guidelines that are likely to change regarding treatment standards and monitoring practices, as the industry continues to evolve. How the AFNWA and compliance entity plan to review and revise these standards after the signing of the TSA will need to be determined. It is recommended that the TSA indicate that where a new regulation is adopted, the AFNWA will

achieve compliance within 12 months of adoption with additional funding from the Government of Canada where additional costs are incurred by the utility. Both provincial regulators and utility representatives interviewed for this work indicated that how GCDWQ updates are implemented should be carefully considered because there are sampling and reporting procedures that may be affected by the changes, as is the case with the recent changes to the lead MAC and sampling procedures. It is recommended that updates to the GCDWQ be implemented within 12 months of approval.

### **3.8.2 Wastewater: Operational monitoring**

There is no federally mandated operational monitoring for the treatment of wastewater. Likewise, provincial regulations do not prescribe any operational monitoring requirements. However, a **process control monitoring plan should be developed to ensure treatment efficacy is achieved along the treatment chain (REC 8.4)**. This should be done as part of the Nujo'tme'k Samuqwan to maintain records of performance and track treatment trends over time.

### **3.8.3 Wastewater: Compliance monitoring**

**All wastewater systems that discharge  $\geq 100\text{m}^3/\text{d}$  must meet effluent monitoring and reporting requirements as defined in the WSER (REC 8.5, following REC 3.1).** Sampling frequency, averaging periods, and reporting frequencies are set by WSER under the Fisheries Act.

For all wastewater systems, including those that discharge less than  $100\text{m}^3/\text{d}$ , the Pollution Prevention Provisions under the Fisheries Act dictate compliance for spills or releases. Any monitoring that may be required as a result of a spill or release is required as a reactionary measure, not a preventative one. There are no compliance monitoring requirements during normal operations of a small wastewater treatment facility, unless there is a spill. However, it is recommended that the AFNWA conduct routine monitoring of effluent quality, as necessary, to ensure the protection of the receiving body as a matter of standard of care.

For all AFNWA systems **it is recommended that EDOs, as determined by an ERA, are monitored as necessary (See REC 3.2)** to inform the Nujo'tme'k Samuqwan assessment cycle.

### **3.8.4 Wastewater: Incident response monitoring**

Unless directed to conduct post-incident monitoring by ECCC, there is no requirement for incident-related monitoring. However, following an incident, for systems that discharge to vulnerable receiving bodies, response and recovery monitoring plans should be developed to evaluate the impact of the spill or release on the surrounding environment, on an as-needed basis.

## **3.9 Monitoring of community comments and feedback**

In Nova Scotia, the Approval to Operate for each treatment system requires the annual report to describe consumer complaints and document how the complaint was responded to and resolved. This regulated approach to the management of consumer comments is untested in a First Nations context, where communication pathways within communities are potentially different than in municipalities. **It is recommended that the AFNWA monitor all community feedback, review comments, and enact appropriate responses to address concerns (REC 9.0).** As necessary, the community feedback and comments should inform the Nujo'tme'k Samuqwan

cycle to ensure community perspectives are incorporated into the incremental improvement of water and wastewater services.

### 3.10 Operator certification

**It is recommended that the Water and wastewater facilities and public drinking water supplies regulations under the Nova Scotia Environment Act be used as a regulatory standard for operator certification (REC 10.0).** This standard allows for the certification of operators for distribution and treatment of drinking water and collection and treatment of wastewater from operator-in-training through to Class IV for all four types of categories certification. It is recommended, following industry best practice, that all operators be certified at a Level 1, with the exception of the Operator on Record who must be certified to the level of the treatment facility.

### 3.11 Reporting

#### 3.11.1 Drinking water

Nova Scotia has well-established reporting requirements for annual, ad hoc, and incident reporting per the *Nova Scotia treatment standards for municipal drinking water systems* and *Nova Scotia Part I guidelines for monitoring*. Nova Scotia also requires system assessment reports be completed at least once every ten years to ensure systems are remaining current with any significant technological or water quality developments. **It is recommended that the AFNWA follow Nova Scotia standards and guidelines to develop reporting practices (REC 11.1).** It is recommended that the terms and conditions of operation set the specific reporting criteria for each individual system, as source water, treatment processes, and monitoring plans will influence reporting requirements.

Circumstances that require **immediate notification**:

- Reportable concentrations of spills/releases
- Spills in the watershed
- Prior to the use of a backup water system
- Treatment by-pass or failure of key treatment process
- Exceedance of a MAC for health-related parameter
- Failure of an integrity test (in facilities with membranes)
- Line breakage that may result in cross-contamination
- Exceedance of turbidity values
- Free chlorine residual < 0.2 mg/L in the distribution system
- Any incident on non-compliance (including failure to meet CT requirements)

Elements that may be required in **annual report**:

- Summary of maximum and daily flows
- MAC exceedances and corrective actions
- Corrosion assessment monitoring
- Verification of turbidity measurements for system-specific requirement
- Trend graphs for continuously monitored parameters
- Summary of emergency upset conditions and corrective actions

- Lists of labs utilized
- Source water protection plan update (including changes in sampling plan)
- Incidents of free chlorine below 0.20 mg/L in distribution system and corrective actions
- Verification of CT/IT if operational conditions went outside of design ranges
- Incidents of noncompliance and corrective actions
- Review of QA/QC program
- List of operators and certification level
- Evidence of annual community reporting

Elements that may be required through **ad hoc reporting**

- Notification of modifications of the facility (i.e., process changes)
- If AFNWA becomes aware of any new or relevant information that relates to any portion of the Operational Guidance document (or Approval to Operate, to be established over time).
- If sampling plan is altered (sampling location is moved)

Elements that may be required through **system assessment reports**

- Source water characterization (description, microbial risks, chemical risks, corrosivity, and updates to the SWPP)
- Treatment processes, facilities and equipment (evaluate treatment processes, primary and secondary disinfection, distribution system water quality, and onsite infrastructure)
- Operations and management (review monitoring, reporting, and management practices)

In addition to these regulatory standards for reporting, it is also **recommended that a reporting plan specific to the Nujo'tme'k Samuqwan be developed** to ensure the communication of relevant information to the appropriate stakeholders. Also, **it is recommended that any incident that requires immediate reporting be incorporated into the Nujo'tme'k Samuqwan cycle as soon as possible, not to exceed 12 months from the incident date (REC 11.2)**. The integration of system incidents into the Nujo'tme'k Samuqwan cycle ensures that the likelihood of hazards in a system are being appropriately represented during the risk assessment process.

### 3.11.2 Wastewater

Wastewater systems in First Nations **communities that fall under WSER requirements must comply with reporting frequency through the Effluent Regulatory Reporting Information System (ERRIS) (See REC 8.5)**. System owners/operators must report average effluent quality parameters either quarterly or annually, depending on system type and treatment volume.

All wastewater systems, regardless of treatment volume, must **follow the Fisheries Act pollution prevention provisions and Deposit Out of the Normal Course of Events (DONCE) Notification requirements for reporting spills and releases (REC 11.3, following REC 3.1)**.

It is also **recommended that a reporting plan specific to the Nujo'tme'k Samuqwan be developed** to ensure the communication of relevant information to the appropriate stakeholders. Also, **it is recommended that any incident of concern be incorporated into the Nujo'tme'k Samuqwan cycle as soon as possible, not to exceed 12 months from the incident date (See REC 11.2)**. The integration of system incidents into the Nujo'tme'k Samuqwan cycle

ensures that the likelihood of hazards in a system are being appropriately represented during the risk assessment process.

### **3.12 Community engagement and communication**

The AFNWA, as a community owned and operated water and wastewater utility, understands that the success of the organization requires community engagement and participation facilitated by transparent, timely, and accessible communication. However, **to ensure that annual water quality data is shared with each participating community it is recommended that annual community reports be prepared by the AFNWA based on industry best practice.**

Additionally, **community communication plans should be included within the Nujo'tme'k Samuqwan cycle as a risk mitigation strategy (REC 12.0).** Specifically, communication and education on drinking water advisories will help prepare the community to respond to any future water quality concerns.

### **3.13 Emergency response planning**

An emergency response plan is required in provincial contexts through the Approval to Operate. However, it is expected that emergency response planning for the AFNWA and participating systems will be strongly informed through the Nujo'tme'k Samuqwan cycle. System hazard identification and risk assessment inherently evaluates high risk scenarios that will shape the emergency response planning process, emergency preparedness and training, and ultimately the emergency response plan (ERP) that will be produced for each system. **It is recommended that emergency training and ERPs be included in the Nujo'tme'k Samuqwan cycle (REC 13.0).** If additional external oversight and guidance is warranted, the AFNWA can coordinate with Public Safety Canada through the Regional Resilience Assistance Program (RRAP) for ERP development and review.

### **3.14 Occupational health and safety**

Because the AFNWA is owned by First Nations, federal legislation and regulations regarding employment and occupational health and safety (OHS) apply through the Canada Labour Code. **The AFNWA must comply with federal OHS regulations (REC 14.0).** It is also recommended that the AFNWA consider engaging in First Nations-led OHS training initiatives such as the Indigenous Centre for Occupational Health & Public Safety and other similar organizations.

## 4.0 Key compliance gaps for water and wastewater systems

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The gap analysis conducted for participating AFNWA communities compares the compliance standards identified in the interim framework to current conditions in water and wastewater systems to determine areas of significant concern. The primary data sets reviewed for understanding current conditions in the systems included the APC – First Nation Asset Condition Assessments Final Report prepared by CBCL Limited in 2018, past Asset Condition Reporting System (ACRS) and Annual Performance Inspection (API) reports made available by ISC and the AFNWA, and publicly available WSER monitoring data. Other guiding documents used to characterize current operational conditions include the Drinking Water Program Manual (1<sup>st</sup> Edition, 2014) and the Community-based Drinking Water Quality Monitors Training Manual (2016). It is recognized that the Asset Management Plan and Ten-Year Capital Budget being prepared by Dillon Consulting Limited will have the most up to date information on asset condition and assessment of water and wastewater treatment requirements and capabilities to meet those requirements.

Table 4 provides a summary of key gaps identified for each of the framework categories (system design and assessment, monitoring, and management and communication). For each gap, any relevant actions needed to address the deficiencies are briefly described. Major engineering studies are underway by the AFNWA with a projected completion date of January 2022. The key gaps presented in Table 4 do not represent an exhaustive list of deficiencies, rather they highlight the most significant areas in need of development for systems to meet the compliance standards recommended in the framework. A gap analysis was not done for Nujo'tme'k Samuqwan recommendations. The level of system-specific knowledge needed to conduct hazard identification and risk assessment processes is significant and beyond the scope of this work. Also, given that no preventive risk-based management practices are likely commonplace in these systems, it can be assumed that all Nujo'tme'k Samuqwan recommendations represent significant gaps. However, the Nujo'tme'k Samuqwan process is meant to result in incremental improvement and risk reduction, so by its nature the iterative safety planning cycles will prioritize and address treatment, maintenance, and operational gaps.

**Table 4. Key gaps identified through the gap analysis with recommended actions.**

Category	Framework element: Compliance standard	Gap	Recommended Actions
System design and assessment	Source water protection plan	Few if any communities have SWPPs in place, land use and potential contamination hazards may pose risks to source quality.	Community-informed source water protection plans should be developed based on adjacent land use and any available information about time-of-travel for groundwater flow.
	Receiving body protection	First Nations systems are, at most, required to meet minimum national performance standards under WSER (although federal guidelines refer to provincial standards if present). The AFNWA, through Dillon Consulting Limited, has recently completed ERAs for centralised wastewater treatment facilities in participating communities. Some treatment facilities are not currently able to meet the EDOs established by the ERA process.	While there is no oversight entity for wastewater effluent quality beyond WSER, the AFNWA is committed to improving wastewater treatment processes to comply with the CCME's MMWE. Systems that fail to meet the EDOs established by the recent ERAs should be upgraded accordingly.
	Facility and treatment requirements	<p>There are significant gaps in source water characterization, and therefore likely crucial gaps in treatment processes. The proposed regulations require a combination of filtration and disinfection to treat protozoa in medium or high-risk GUDI sources. Dillon is in the process of assessing groundwater supplies for GUDI designation. Additional sampling at various times of the year is required at some sites. Until GUDI status is known for all community wells, it is unknown if filtration processes will need to be added to these systems.</p> <p>Elevated manganese and iron levels have been reported in some drinking water systems. Additional treatment processes may be needed to achieve the new federal manganese guidelines.</p> <p>Some systems do not have redundant disinfection and/or filtration units.</p> <p>Many systems do not have dedicated stand-by power in case of power outage.</p> <p>Some systems do not have the required on-line, continuous monitoring equipment with alarm capabilities that are required per the framework recommendations.</p>	<p>GUDI status for all groundwater sources should be determined following Nova Scotia's GUDI protocol.</p> <p>Particular attention should be paid to protozoa monitoring, as there is no available data on Cryptosporidium or Giardia for these systems.</p> <p>Based on source water quality, treatment processes need to be evaluated for the necessary 3.0 log reduction of protozoa and 4.0 log reduction of viruses. Likewise, elevated metal concentrations should be considered in treatment design review.</p> <p>Infrastructure and operations needs, such as stand-by power, duplication of process units, and SCADA systems must be brought into compliance through a corrective action plan.</p>

		It is not clear if treatment facilities have the necessary ventilation, fire protection, foundation drainage, etc. as required by the ACWWA guidelines	
Monitoring	Operational monitoring	The available data sets indicate that some drinking water systems do not have consistent operational monitoring records. There is a knowledge gap around operational monitoring, particularly regarding CT/IT compliance. It is also unknown if QA/QC procedures are in place for instrument verification.	Monitoring and record keeping practices need to be harmonized. QA/QC programs should be developed for on-line monitoring and dosing instrumentation.
	Compliance monitoring	<p>Currently, for drinking water systems compliance monitoring is largely done through the Community-Based Water Monitoring (CBWM) program. For wastewater treatment systems compliance monitoring is done by the operators. When the AFNWA assumes responsibility of the systems, to ensure a responsible management approach, all compliance monitoring will be the duty of the AFNWA. This will be a new paradigm for First Nations drinking water management that will require the development of SOPs, workflows, and laboratory contracts, etc. Most importantly each system will need to develop annual sampling plans detailing all compliance and control monitoring to be done from source to tap. The Annual Sampling Plans must be reviewed and approved by the compliance entity.</p> <p>For WSER monitoring and reporting all AFNWA systems designed to treat an average daily volume &gt; 100m<sup>3</sup>, are required to submit effluent quality data. Presently there are inconsistent reporting histories that have been submitted, accordingly not all systems are in compliances with WSER.</p>	<p>Compliance monitoring programs, through the development of annual sampling plans, need to be in place for each water and wastewater system.</p> <p>In communities where the Operator is also the Community-Based Water Monitor, a new CBWM will need to be hired and trained.</p> <p>For wastewater monitoring, noncompliant systems need to be evaluated and monitoring/reporting support should be provided.</p>
Management and communication	Operator certification	The compliance standard recommendations require operators to be certified at a Level I with the Operator on Record being certified to the level of the system. There are currently operators who are not certified at the appropriate level.	All future AFNWA operators need to obtain certification of at least Level 1.
	Reporting	The compliance standards recommend routine, ad hoc, and incident-based reporting for drinking water systems. This will be a new paradigm for First Nations systems to have required reporting. While this gap is significant and central to the AFNWA–compliance entity and AFNWA–community relationships, it is a gap that can be addressed relatively easily.	Reporting structures across all levels of the AFNWA need to be developed to meet the various compliance requirements in the framework.

These gaps between current conditions and compliance standards established by the interim framework will require a range of corrective action plans that consider necessary resources (capital, trained personnel, consultants etc.) and organizational capacity building. The AFNWA was established to provide community-driven solutions to address these long-standing deficiencies. The AFNWA, with the support and collaboration of the compliance entities, can work towards safe water and wastewater using the regulatory and preventive risk-management practices as the guideposts.

## 5.0 Recommendations: Compliance Activities and Oversight

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It is recommended that the oversight activities of the interim drinking water compliance entity be limited to the compliance standards included in the interim framework. The risk based Nujó'tme'k Samuqwan cycle should be developed and administered internally by the AFNWA and audited by a third-party firm contracted by the AFNWA. While there is no legislated authority currently in place to regulate drinking water standards for First Nations, the TSA offers a contractual framework to establish accountability regarding compliance activities and oversight responsibilities for both the AFNWA and the federal government. It is recognized that while ISC aims to devolve water and wastewater service provision to First Nations communities, it retains a key role in ensuring devolution is done responsibly and safely, particularly during this time of negotiation regarding the SDWFNA. Given ISC's technical and historical familiarity with water and wastewater systems in First Nations communities, it is well positioned to transition from its role as a service provider to one of an interim oversight and monitoring entity to verify the provision of services by the AFNWA. It is recognized that this shift in responsibility will create a disruption for current staff and workflows, however through the TSA the nature and extent of these alterations of roles and responsibilities can be articulated and clarified.

### 5.1 Recommended Activities and Instruments

Following provincial practices and industry standards, the following compliance activities and instruments are recommended to establish transparent oversight of the AFNWA:

- Annual sampling plans
- Source water protection plans
- Annual reports
- Inspection/audit processes
- New build/system upgrade processes
- Ad hoc reporting procedures
- Immediate reporting criteria and procedures
- Drinking water advisory issuance/removal procedures
- Corrective action plan procedures

Appendix 3 includes descriptions and rationales for each of these compliance areas. It is expected that the AFNWA will develop, in coordination with the compliance monitoring entity, standard procedures and practices for each of these areas, as needed to support the effective functioning of the AFNWA.

### 5.2 Recommended Compliance Oversight

Significant lessons have been learned from past drinking water incidents and related public health crises. The Walkerton Tragedy transformed the management of drinking water provision and oversight in Ontario and across Canada (Schwartz, 2007). Both scholarly and judicial inquiries have detailed the physical causes of the waterborne disease outbreak, as well as described the many operational and management failures that resulted in the crisis (O'Connor, 2002; Lindgren, 2003). The recommendations from Part Two Report of the Walkerton Inquiry: A Strategy for Safe Drinking

Water are clear - a multibarrier source-to-tap approach with mandatory treatment, monitoring, and reporting processes is required. Further, the Walkerton Inquiry recommended strengthening government (in this case provincial) oversight of utilities, specifically calling for a Drinking Water branch (Recommendation 69), a Watershed Management branch (Recommendation 70), and office of Chief Inspector of Drinking Water Systems (Recommendation 72). The development of these roles and responsibilities ensures government is positioned to protect public health through compliance oversight.

While the SDWFNA is under review and revision, it is imperative that compliance monitoring mechanisms, similar to those recommended by the Walkerton Inquiry, be established in the interim to support the functioning of the AFNWA. The AFNWA represents a paradigm shift in First Nations capacity building and requires an innovative and coordinated response from federal agencies to support this pivotal direction. It is recommended that the AFNWA form a Compliance Unit (CU) to harmonize compliance efforts across all participating communities. Likewise, it is recommended that ISC, through a collaborative effort involving First Nations and Inuit Health Branch (FNIHB) and Regional Office Engineering (RO), form a Compliance Monitoring Unit (CMU) to interface with the AFNWA through a “single window” communication strategy. Figure 3 shows a model for both CU and CMU staffing approaches. Following the Walkerton Inquiry recommendations, and elevation of source water protection, it is suggested that the CMU oversee both drinking water compliance standards and watershed management standards.



Figure 3. Compliance structures for the AFNWA and ISC, including recommended compliance activities and instruments.

### 5.2.1 AFNWA

Through discussions and activities related to the AFNWA-ISC Working Group on Water and Wastewater Regulations, and through the multiyear process of developing its Business Case, the AFNWA has constructed an organizational structure that supports operational, monitoring, and reporting compliance activities. The Manager of Operations, assisted by the Superintendent of Operations will oversee all compliance standards requirements. The Operations Engineer will be

responsible for the development and implementation of the Nujo'tme'k Samuqwan cycle (through close working relationships with operators). Together these roles will be supported by the Manager of Engineering and compliance performance will be documented and communicated by the Regulatory Compliance Coordinator. It is recommended that these positions serve as the core Compliance Unit for all matters included in the interim framework presented herein.

### **5.2.2 ISC**

Given the significant shifts in service delivery, accountability, and liability related to the formation of the AFNWA, there will have to be associated changes in how ISC-FNIHB and ISC-RO interface with AFNWA-participating communities. Because ISC staff will continue to serve non-AFNWA communities simultaneously while managing the new working relationship with the AFNWA, it is recommended that a small team of ISC-FNIHB and ISC-RO staff comprise the CMU. It is likely to be more efficient and effective to train and coordinate new workflows with a limited number of staff rather than all regional staff. This will also work towards ensuring continuity and consistency in compliance activities and responses. It is recommended that CBWMs from AFNWA-participating communities help support the CMU through continued validation monitoring. For communities where the Operator serves as the CBWM, a new CBWM will need to be hired and trained. The staffing model presented in Figure 3 includes representation from ISC-Headquarter (HQ) to engage national content experts and facilitate hierarchical communication from regional staff to national staff. It is also recommended that contracts with technical third-party firms be implemented, as needed, to support the oversight and management of compliance activity monitoring.

### **5.3 Other compliance scenarios pending outcome of co-development of SDWFNA**

These recommendations for both compliance standards and compliance monitoring processes are serviceable solutions as an interim approach while the SDWFNA is co-developed. However, if federal-First Nations progress on the repeal and replacement of the SDWFNA is significantly prolonged, the AFNWA, ISC, and Department of Justice will need to reconsider the need for interim-regulations and the development of a long-term regulator for the AFNWA. Provincial expertise in drinking and wastewater regulations could be leveraged, although inter-provincial coordination would have to be considered. Ultimately, the development of a First Nations-led water regulator could be an ideal solution, however until the future of the SDWFNA is decided, this remains a complex process.

### **5.4 Nujo'tme'k Samuqwan Risk Management Compliance**

It is recommended that the Nujo'tme'k Samuqwan risk-management elements included in the framework be audited through a contracted risk auditor. The auditing process should evaluate all documentation and processes associated with the Nujo'tme'k Samuqwan cycle. The third-party contract, as a matter of necessity, should be held by the AFNWA, following a co-regulatory paradigm. Co-regulation of this nature is commonplace in many industries and often allows efficient auditing processes to be facilitated directly by the organization (McEntaggart et al., 2019). It has been identified as a suitable approach in this case because it allows the incorporation of a Wabanaki worldview approach that addresses risk across watersheds. Due to the siloed nature of drinking water and wastewater management at the federal level, integrated risk-management approaches cannot be audited through partnership between ISC and ECCC. Positioning the Nujo'tme'k

Samuqwan auditing internal to the AFNWA provides a verification procedure for the integrated risk management process.

### 5.5 Compliance and Auditing Cycles

Integration across the compliance and Nujo'tme'k Samuqwan risk-management elements of the interim framework is crucial to ensuring synergy between the two management strategies. Figure 4 shows a nested approach to external compliance oversight activities for the AFNWA which incorporates annual reports, compliance inspections, and Nujo'tme'k Samuqwan auditing cycles into a continuous adaptive management approach aimed at incremental improvement for the protection of water and public health. In addition to the external oversight structure, as an internal standard of care, the AFNWA will also conduct internal reviews and share information with its Board of Directors. Specifically, the Environmental Health and Safety Committee will receive updates from the AFNWA on matters of water quality and system performance.

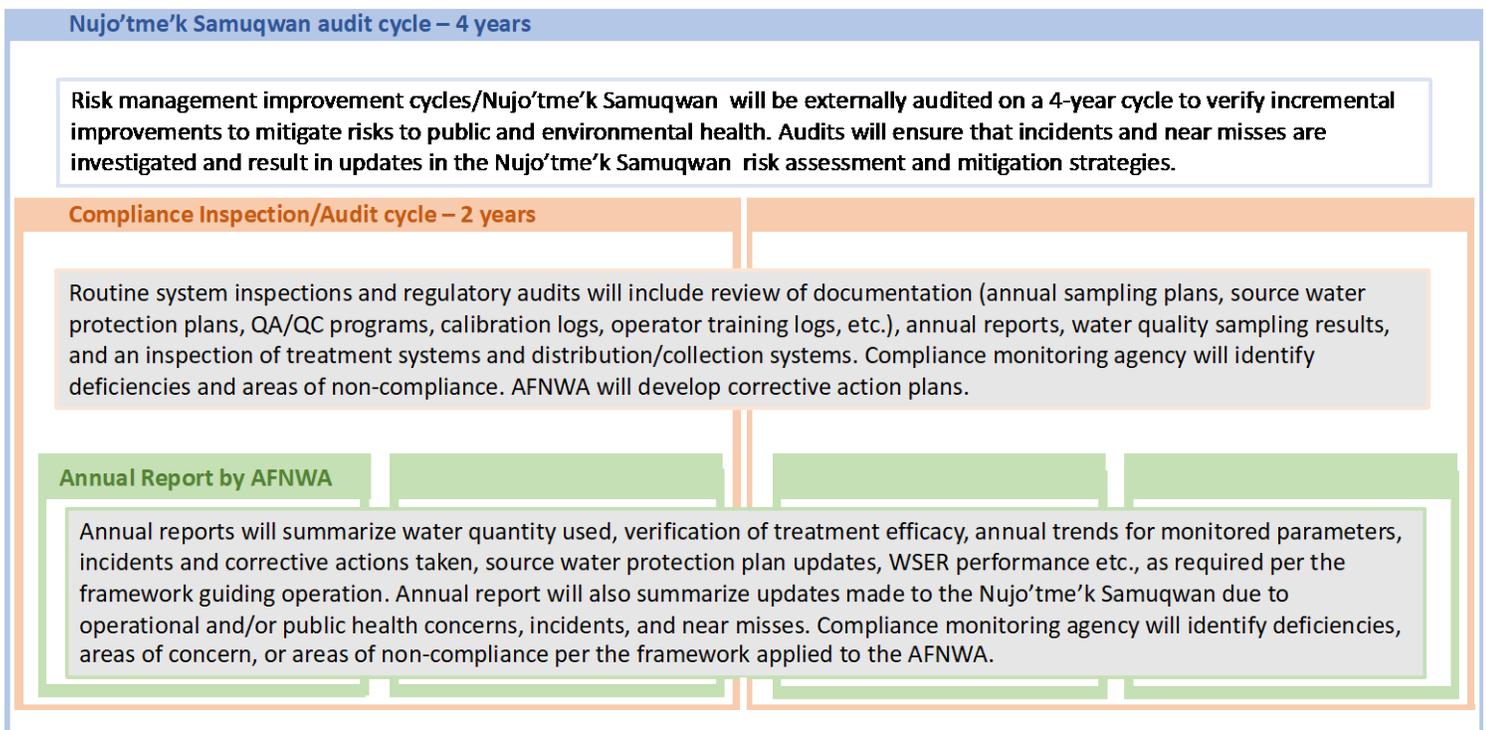


Figure 4. A nested model for external review of both compliance standard and Nujo'tme'k Samuqwan components of the interim framework.

## 6.0 Conclusions

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The AFNWA was established in response to the pursuit of self-determination and improved water and wastewater service for Atlantic First Nations. As an Indigenous owned and operated water utility, it offers an opportunity to transform water management for participating Mi'kmaq and Wolastoqiyik communities. In time, it may provide a model for other Indigenous organized regional water management services. In recognition that the Government of Canada is actively redressing historical colonial practices, the legislation regarding drinking and wastewater services in First Nations is currently being renegotiated. In this unregulated landscape, the AFNWA has no drinking water quality standards and limited wastewater effluent quality standards under WSER. Further there is no entity with authority to regulate the performance of the AFNWA to provide clean and safe drinking water.

It was in this dynamic and complex context that the authors developed a suitable interim framework composed of both compliance standards and preventive risk-management strategies to provide a holistic and progressive process to ensure the protection of public and environmental health. This report includes a prescriptive compliance monitoring plan that requires coordination between the AFNWA and ISC to accomplish the transparent and effective oversight of the first Indigenous owned and operated water authority.

The framework presented here organized a total of 24 recommendations into three key management areas:

- System Design & Assessment – include standards and guidance for water withdrawal, source water protection, receiving body protection, facility requirements, treatment and distribution/ collection requirements, and facility classification (REC 1.1, 1.2, 2, 3.1, 3.2, 4, 5, 6.1-6.3, 7)
- Monitoring – includes standards and guidance on operational, compliance, and incident monitoring, as well as community feedback monitoring (REC 8.1 – 8.5, 9)
- Management and Operations – includes standards and guidance on operation certification, reporting, community communication, emergency response planning, and occupational health and safety requirements (REC 10, 11.1-11.3, 12, 13, 14)

The framework includes both compliance standards (14 recommendations), adapted from provincial references, and preventive risk-management practices (10 recommendations), informed by the WHO and Wabanaki guiding principles. This dual approach, using both “compliance standards” and “risk management strategies” (*Nujo'tme'k Samuqwan*), establishes standards and procedures for the operation and oversight of the AFNWA using industry and governance best practices. Using compliance instruments and mechanisms standard in provincial-municipal water utility governance, such as annual sampling plans, annual reports, treatment and facility standards, monitoring requirements, and incident and communication specifications, it is recommended that ISC develop an interim compliance monitoring unit to oversee drinking water services.

While industry and governance best practices can be evaluated from local and global jurisdictions alike, the application of these practices to First Nations is unprecedented and knowledge sharing and Etuaptmumk principles will be paramount to the success of the process. Justice O'Connor

opened the Report of the Walkerton Inquiry by calling for vigilance and warning against complacency when managing drinking water safety. The details of the interim framework and associated compliance monitoring processes are aimed at ensuring vigilance and preventing complacency, for both the AFNWA and ISC, as this new water management paradigm is realised.

## 7.0 References

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10. Lindgren, R.D., 2003. In the wake of the Walkerton Tragedy: The top 10 questions. National Symposium on Water Law, Publication No. 440. Canadian Bar Association, Vancouver.

## 8.0 Appendix 1: List of documents used for regulatory review

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### **Nova Scotia**

#### Acts

- [Environment Act](#)
- [Occupational Health and Safety Act](#)
- [Water Act](#)
- [Water Resources Protection Act](#)

#### Regulations, Guidelines and Manuals

- [Nova Scotia treatment standards for municipal drinking water systems](#)
- [Part I guidelines for monitoring municipal public drinking water supplies](#)
- [Water and wastewater facilities and public drinking water supplies regulations](#)
- [A guide to assist Nova Scotia municipal water works prepare annual sampling plans](#)
- [Guide to Surface Water Withdrawal Approvals](#)
- [Activities Designation Regulations](#)
- [Designation of protected water area](#)
- [Municipal Source Water Protection Plan](#)
- [Occupational Safety General Regulations](#)

### **Prince Edward Island**

#### Acts

- [Environment Protection Act](#)
- [Emergency Measures Act](#)
- [Occupational Health and Safety Act](#)
- [Water Act](#)

#### Regulations, Guidelines and Manuals

- [Water supply system and wastewater treatment system regulations](#)
- [Water withdrawal regulations](#)
- [Well Construction Regulations](#)
- [Sewage Disposal systems regulations](#)
- [Water Withdrawal regulations Consultation report](#)
- [Prince Edward Island All Hazards Emergency Plan](#)

### **Newfoundland and Labrador**

#### Acts

- [Justice and Public Safety](#)
- [Occupational Health and Safety Act](#)
- [Water Resources Act](#)

#### Regulations, Guidelines and Manuals

- [Environmental control water and sewage regulations](#)
- [Drinking water quality monitoring manual](#)
- [Guidelines for drinking water quality in Newfoundland & Labrador](#)
- [Guidelines for the design, construction and operation of water and sewerage systems](#)
- [Policy for Drinking Water Quality Monitoring and Reporting for Public Water Supplies](#)
- [Well Drilling Regulations](#)
- [Drinking Water Treatment Standards for Newfoundland and Labrador](#)
- [Chlorination equipment selection guidelines](#)

#### **New Brunswick**

##### Acts

- [Clean Water Act](#)
- [Clean Environment Act](#)
- [Emergency Measures Act](#)
- [Occupational Health and Safety Act](#)
- [Apprenticeship and Occupational Certification Act](#)

#### Regulations, Guidelines and Manuals

- [Drinking water guidelines](#)
- [Potable water regulation](#)
- [Water quality regulation](#)
- [Water supply source assessment guidelines](#)
- [Province of New Brunswick Emergency Measures Plan](#)
- [Workplace hazardous materials information system regulation](#)
- [Watercourse and wetland alteration regulation](#)
- [Water well regulation](#)
- [Environmental Impact Assessment Regulations](#) – Water Supply Source Assessment Guidelines (WSSA)
- [Watershed protected area designation order](#)
- [Wellfield protected area designation](#)

- [Watershed Protection Program](#)

## **Federal/Regional documentation**

### Acts/Legislation

- [Fisheries Act](#)
- [Canadian Environmental Protection Act](#)
- [Canada Labour Code](#)
- [Fish and Fish Habitat Protection Program](#)

### Regulations, Guidelines and Manuals

#### General drinking water

- [Guidance for Providing Safe Drinking Water in Areas of Federal Jurisdiction](#)
- [From Source to Tap: Guidance on the Multi-Barrier Approach to Safe Drinking Water](#)
- [Guidance for Issuing and Rescinding Boil Water Advisories in Canadian Drinking Water Supplies](#)
- [Emergency Response And Contingency Planning For Small Water Systems](#)

#### General wastewater

- [Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment, and Disposal](#)
- [Guidance on the Site-Specific Application of Water Quality Guidelines in Canada: Procedures for Deriving Numerical Water Quality Objectives](#)
- [Pollution Prevention Provisions](#) (under the Fisheries Act)
- [Deposit Out of the Normal Course of Events Notification Regulations](#) (under Fisheries Act)

#### First Nations specific

- [Commissioning Guide for First Nation Drinking Water Systems](#) (Indian and Northern Affairs Canada)
- [Legal and Policy Tools for Source Water Protection in Indigenous Communities](#)
- [Drinking Water Program Manual](#)
- [Community-Based Drinking Water Quality Monitors Training Manual](#)
- [Procedural Guidelines for Waterborne Disease Events in First Nations Communities South of 60°](#)
- [Procedure Manual for Safe Drinking Water in First Nations Communities South of 60°](#)
- [Design Guidelines for First Nations Water Works](#)
- [Northern Community Water & Wastewater Infrastructure](#)
- [Emergency Response Plan for Wastewater Systems in First Nations Communities](#)
- [Emergency Response Plan for Drinking Water Systems in First Nation Communities](#)
- [Protocol for Safe Drinking Water in First Nations Communities](#)

- [Protocol for Centralized Wastewater Systems in First Nations Communities](#)
- [Protocol for Centralized Drinking Water Systems in First Nations Communities](#)

**First Nation Guidelines**

- [All Our Relations: Emerging Stronger Together Assembly of First Nations Annual Report 2019–2020](#)
- [Shared Perspectives: First Nations Water, Post-2021](#)
- [Aboriginal Water and Wastewater Association Of Ontario](#)

## 9.0 Appendix 2: List of documents used for risk-management review

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[Water safety plan manual: step-by-step risk management for drinking-water suppliers](#)

[Water Safety Plan Manual: Framework for Safe Drinking-water](#)

[Global status report on water safety plans](#)

[Sanitation safety planning: Manual for safe use of disposal of wastewater, greywater and excreta](#)

[Ontario's Drinking Water Quality Management Standard](#)

[Alberta's Drinking Water Safety Plan](#)

[New Zealand drinking-water safety plan framework](#)

## 10.0 Appendix 3: Descriptions of compliance activities

**Table 5. Brief descriptions of recommended compliance activities.**

Activity	Description Summary
Annual Sampling Plan	Annual sampling plans must specify all monitoring activities to be undertaken in a system, as detailed in Nova Scotia's Guidelines for Monitoring Public Drinking Water Supplies. The annual sampling plan must include all parameters to be analysed and the frequency at which they are sampled, sampling locations, and a schematic of the distribution systems with sampling locations marked. Source water characterization and protection monitoring, compliance monitoring, and process control monitoring activities must be described. A Sampling Program SOP should be developed and available upon request. The SOP document should include methods for collecting samples (containers used, preservation methods, hold times, field measurements, and notes, etc.), reference to the methods used for measuring water quality parameters in-house (if applicable), and calibration and maintenance protocols and schedules for all in-plant instrumentation, and quality assurance and quality control (QA/QC) protocols.
Source Water Protection Plan	A source water protection plan must be developed for each community drinking water source (excluding MTA communities) that include the five key steps: form a Source Water Protection Advisory Committee, delineate a source water protection area boundary, identify potential contaminants and assess risk, develop a source water management plan, and develop a monitoring program to evaluate the effectiveness of a Source Water Protection Plan. Depending on the specific source water threats, water quality monitoring activities will differ between communities.
Annual Report	Annual reports will summarize water quantity used, verification of treatment efficacy, annual trends for monitored parameters, incidents and corrective actions taken, source water protection plan updates, as required per the framework guiding operation. The Annual report will also summarize updates made to the OWSP due to operational and/or public health concerns, incidents, and near misses. An explanation of content required in the Annual Report is included in Nova Scotia's Treatment Standards for Municipal Drinking Water Systems (Appendix G.2.1)
Inspections and Audits	On-site inspections and audits are currently performed annually by RO-ISC. It is recommended that an audit and on-site inspection be conducted for AFNWA community systems every 2 years. The scope and procedure for the audit and inspection should be developed collaboratively between the monitoring agency (and necessary third-party support) and AFNWA.
New Designs/Upgrades	Roles and responsibilities regarding design, review, and approval of new facility construction and upgrades need to be developed.
Extensions or modifications proposed	The AFNWA and monitoring agency should identify what activities warrant ad hoc communication. Examples are provided in the Nova Scotia Treatment Standards for Municipal Drinking Water Systems (Appendix G.3).
Ad hoc reporting of new or relevant information that may result in adverse effects	
Communication of changes in sampling plan and/or sampling location	
Immediate reporting	Issues requiring immediate reporting are detailed in Nova Scotia's Treatment Standards for Municipal Drinking Water Systems (Appendix G.1). Immediate reporting is required by owner/operator in cases of presence of total coliform or E. coli, exceedance of MAC, lack of disinfection, use of emergency water supply, etc.
Issuing/removing DWA	In the case of chemical or microbiological exceedances, DWA should be issued following the procedure detailed in Nova Scotia's Guidelines for Monitoring Public Drinking Water Supplies.
Investigate causes of poor water quality	Chemical and microbiological exceedances must be investigated to determine the cause of poor water quality. Investigation procedures for E.coli and total coliforms are included in the Nova Scotia Guidelines for Monitoring Public Drinking Water Supplies. Chemical exceedances are often complex and require unique investigation processes.

\*Zoom to 250% for readability\*

Action	AFNWA				Drinking Water Compliance Activities				IC/IR/MS	Comments			
	Responsible	Accountable	Consulted	Informed	Responsible	Accountable	Consulted	Informed					
<b>Annual Sampling Plan</b>	Identify all sampling locations from source to tap, specify all parameters to be measured, and ensure that sampling SOPs are developed to guide sample collection, analysis, and data recording.	Regulatory Compliance Coordinator	Manager of Operations	Supt. Of Operations; CEO; FNHB [EPHO]	AFNWA Board EHS Committee	Review all sampling plans for completeness - ensure adequate sampling locations, appropriate sample frequency, and complete set of parameters are scheduled to be monitored for the year. Ensure that the sampling plans meet the monitoring requirements detailed in the Nova Scotia's Guidelines for Monitoring Public Drinking Water Supplies. Identify any areas of concern or issues of non-compliance and work with the AFNWA to address these concerns through corrective action.	Interim: NA (gap) Final: FNHB (Verification) Monitoring: IC- FNHB	Final: IC/ Operational Monitoring	Final: IC/ Operational Monitoring	Final: IC/ Operational Monitoring	"If not done, there is a gap to follow, this includes an area where a possible violation is reported, almost possible oversight on individual sampling tasks"		
<b>Source Water Protection Plan</b>	Complete the 5 step process of developing, implementing, and evaluating a Source Water Protection Plan. Ensure the formation of a Source Water Protection Advisory Committee in each community with a non-MTA system and complete the hazard identification and risk assessment process for the source water through land use surveys, time of travel (or other best practice) and necessary source water monitoring. Prioritize and develop management approaches to reduce the risk to source waters through education and collaboration.	Operations Engineer	Manager of Operations	Supt. Of Operations; CEO; Watershed Stakeholders	Board and Council; EHS & Safety; AFNWA EHS Committee	Review the Source Water Protection Plan for completeness and evaluate the hazard identification and risk assessment process. Ensure that the SWPP identifies adequate source water monitoring and confirm that there is alignment between the SWPP monitoring plan and the Annual Sampling Plan. Identify any areas of concern in the SWPP and work with the AFNWA to improve the plan, as necessary.	Interim: NA (gap) Osp relative to surface or GW (e.g. GW and neighboring quarry or other surface adjacent to well)	IC/RO and FNHB could coordinate work with other parties (conservation authorities, neighboring municipalities, provinces)	IC/RO and FNHB could coordinate work with other parties (conservation authorities, neighboring municipalities, provinces)	IC/RO and FNHB could coordinate work with other parties (conservation authorities, neighboring municipalities, provinces)	IC should receive all SWPPs	Far community growth, IC/RO will be involved in the project delivery.	
<b>Annual Report</b>	Produce Annual Reports for each community drinking water system (MTA and non-MTA) that include all necessary components, as detailed in Appendix G.2.1 of Nova Scotia's Treatment Standards for Municipal Drinking Water Systems. Components include, but are not limited to, summary of water quality monitoring results as stated in the Annual Sampling Plan, accounts of incidents/supplies and associated corrective action plans, and verification of operational conditions for necessary CTIT, etc.	Regulatory Compliance Coordinator	Manager of Operations	Supt. Of Operations; Manager of Engineering; CEO	Board and Council	Review the Annual Reports to verify that all necessary sampling was completed and results were appropriately analyzed per the Annual Sampling plan and as required by the Guidelines for Monitoring Public Drinking Water Supplies and in keeping with the Treatment Standards for Municipal Drinking Water Systems. Identify any areas of concern or non-compliance and work with the AFNWA to address these issues through corrective action plans, as necessary.	Interim: Third party firm (contract held by IC)	na (gap)	Interim: IC reviews regulatory reports	Final: IC reviews regulatory reports	Final: IC reviews regulatory reports	"Unpublished material of interest with respect to this"	
<b>Inspections &amp; Audit</b>	Prepare all requested documentation, log books, training logs, etc. as necessary for the audit. Ensure all facilities are accessible and all necessary personnel are available for on-site visits to support the audit and inspection process.	Supt. Of Operations	Manager of Operations	Supervisors; Operators	CEO	Organize an audit and inspection team to review necessary documentation and visit and inspect all water systems, including distribution systems of MTA communities. Assess infrastructure and O&M practices, as necessary, to ensure the systems are in compliance with the regulatory framework. Identify any areas of concern or non-compliance and work with the AFNWA to address these issues through corrective action plans, as necessary.	Interim: Third party firm (contract held by IC)	na (gap)	Interim: IC reviews regulatory reports	IC/RO-AG to review and manage IC internal review	Final: IC reviews regulatory reports	"Unpublished material of interest with respect to this"	
<b>Use or Install Supplies (Includes installation/upgrade/replacement associated with community growth)</b>	Identify necessary facility upgrades or replacements to meet community needs and ensure the provision of safe drinking water and wastewater.	Project Engineer	Manager of Engineering	Manager of Ops; CFO; CEO	AFNWA Board, Band & Council	Review design plans and provide guidance and advice	IC/RO Project Substation (L. Environmental assessment process and 2. IC Lands Branch)	na	na	Similar to MTA Station Agreement, IC would receive infrastructure plan.	na	"Have and include V&M data within plan"	
<b>Site Plan</b> - Proposed extensions or modifications (including process changes) - New or relocated infrastructure that may result in adverse effects in public health or drinking water services and/or quality. - Changes in sampling (also include sampling location)	Report proposed extensions or modifications. The relevant information that impacts source water quality, sampling, treatment, and/or distribution processes to ensure that the monitoring agency is kept aware of changes that may result in adverse effects in public health or drinking water services and/or quality. Report any changes in the sampling plan and/or sampling location (temporary or permanent).	Supt. Of Operations	Manager of Operations	Regulatory Compliance Coordinator; Manager of Engineering; CEO	AFNWA Board EHS Committee; FNHB [EPHO]	Receive and respond to any reports of proposed extensions or modifications and ensure that the changes are compliant with the treatment and monitoring requirements of the regulatory framework. Receive and respond to any reports of new or relevant information affecting source water quality, sampling, treatment, or distribution processes. Review the information per the regulatory framework and identify any areas of concern regarding compliance and public health/safety. Review any requests to change sampling plan and/or location. If the proposed changes result in compliance with the monitoring requirements, work with the AFNWA to address compliance concerns.	na (gap)	na (gap)	IC (FNHB) - Advise and provides recommendations	Long term - proximity or other factors could be out of our body could play a role in the public health advisor	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	"In the event of a violation, we would report to ensure to full control of interest with respect to this"
<b>Site Plan</b> - Spill/leak - Loss of backup water system - Inadvertent bypass or failure (including backflow prevention) - Failure of safety valve (backflow preventer) - Exceedance of lead/silver release - Lead release - Chemical residual < 0.02 mg/L in distribution system - Exceedance of LMR (chemical or microbiological) etc.	Responsible for immediate reporting to the monitoring agency for reasons detailed in Nova Scotia's Treatment Standards for Municipal Drinking Water Supplies (Appendix G.1). Collection of necessary information regarding incidents and timely reporting are required by the system owner/operator. Development of appropriate corrective action plans are required to address the cause of the incident.	Regulatory Compliance Coordinator	Supt. Of Operations	Manager of Operations; Manager of Engineering; CEO; FNHB [EPHO]	AFNWA Board, Band and Council	Receive and respond to immediate reports and consult with the AFNWA on corrective action plans (communication through the Regulatory Compliance Coordinator). Ensure that corrective action plans are appropriate, timely, and sufficient to address any water quality/quantity concerns and protect public health. If a corrective action plan is insufficient in any way, work with the AFNWA to address the concerns and improve the plan.	Interim: IC (FNHB & RO) - Advise and provides recommendations on public health measures; offers feedback on corrective actions	na (gap)	Interim: IC (FNHB & RO) - Advise and provides recommendations on public health measures; offers feedback on corrective actions	Long term - proximity or other factors could be out of our body could play a role in the public health advisor	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	"In the event of a violation, we would report to ensure to full control of interest with respect to this"
<b>Investigate DWA</b>	Responsible for issuing DWA, in consultation with the monitoring agency. Responsible for all related communication to the community. Ultimately responsible for removing DWA, in consultation with the monitoring agency, per the procedures detailed in the Nova Scotia Guidelines for Monitoring Public Drinking Water Supplies.	Supt. Of Operations	Manager of Operations	Manager of Engineering; CEO; FNHB [EPHO]	AFNWA Board, Band and Council	Consult with and support the AFNWA in assessing water quality and public health concerns and provide guidance in issuing and removing DWA. Coordinate with necessary third parties to ensure public health and technical/process concerns are managed safely.	Interim: IC (FNHB & RO) - Advise and provides recommendations on public health measures; offers feedback on corrective actions	na (gap)	Interim: IC (FNHB & RO) - Advise and provides recommendations on public health measures; offers feedback on corrective actions	Long term - proximity or other factors could be out of our body could play a role in the public health advisor	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	"In the event of a violation, we would report to ensure to full control of interest with respect to this"
<b>Investigate the cause of poor water quality</b>	As part of the procedure for removing a DWA, an investigation must be completed to understand the cause of the threat to water quality. The owner/operator is responsible for completing the investigation and identifying the cause of poor water quality. The scope of the investigation will vary as a function of the complexity of the cause.	Supt. Of Operations	Manager of Operations	Operations Engineer; CEO; Manager of Engineering; FNHB [EPHO]	AFNWA Board, Band and Council	Consult with and support the AFNWA in conducting the investigation associated with poor water quality. Review the investigation results and confirm that the cause has been adequately defined and addressed. Review any corrective action plans to verify that necessary action has been taken and water quality has been restored.	na (gap)	na (gap)	Interim: IC (FNHB & RO) - Advise and provides recommendations on public health measures; offers feedback on corrective actions	Long term - proximity or other factors could be out of our body could play a role in the public health advisor	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	"In the event of a violation, we would report to ensure to full control of interest with respect to this"
<b>Document incidents in the operator's management</b>	Per the regulatory framework, the AFNWA must update the Nujot's Sanjourer risk registry with any incidents and complete a hazard and risk assessment annually.	Operations Engineer	Manager of Operations	Manager of Engineering; Supt. Of Operations; CEO	AFNWA Board EHS Committee	Confirm, through assessment of the Annual Report, that all incidents have been documented in the Nujot's Sanjourer risk registry.	na	na	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	IC (FNHB) / IC (RO) informed of the remedial action and results	"In the event of a violation, we would report to ensure to full control of interest with respect to this"	



Item # 1-I  
AFNWA Board  
26 January 2021

**TO:** Chief Wilbert Marshall, Chair, and Members of the AFNWA Board

**SUBMITTED BY:** original signed by  
James MacKinnon, interim Chief Operating Officer

**APPROVED:** original signed by  
Carl Yates, interim Chief Executive Officer

**DATE:** January 20, 2022

**SUBJECT:** Transition Implementation Plan Update

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## **INFORMATION REPORT**

### **ORIGIN**

Transition Implementation Plan [TIP] approved by the Board at the June 24<sup>th</sup>, 2020 meeting

### **BACKGROUND**

The Transition Implementation Plan [TIP] provides a detailed overview of the AFNWA's internal developments as an organization, and external developments on projects and community outreach. The TIP will guide the overall operationalization of the AFNWA through staged phases and lead to full autonomous operations in Spring 2022. It describes the objectives of the phases and the process by which the steps and composite tasks are to be managed.

### **DISCUSSION**

The complete Transition Implementation Plan is attached for reference. Some key highlights and developments since our previous meeting are as follows:

- *Step 1: Operational Funding.*
  - Funding has been received. Step 1 can be considered complete.
- *Step 2: Planning and Establishment of Governance.*
  - The Elders Advisory Lodge continues to meet. At their most recent meeting, the EAL worked with Dalhousie to provide more culturally appropriate language to AFNWA and Dalhousie for the development of the water and wastewater quality regulatory and safety plans framework. The EAL has agreed on a basic modification for their terms of reference. The main addition is that the EAL will act in accordance with the 7 Grand Father teachings. The EAL is deliberating on the wording of those teachings before they are added as an appendix.
  - In December 2021, the AFNWA submitted 10-year capital and operating budgets to ISC for inclusion into the 2022-2023 Federal Budget process. With some additional edits, the budget was accepted for inclusion in the budget process.
  - AFNWA internal policy development continues on schedule. Two policies are being submitted for consideration at the January 26, 2022 board meeting are: Occupational Health and Safety Policy, and the AFNWA Procurement Policy.
- *Step 3a; Band Council Resolutions:*
  - ISC proposed a BCR to formally enter into a Transfer Agreement with AFNWA. The BCR is complete in its substantive form. AFNWA will be hosting a Chiefs workshop on all agreements on February 9<sup>th</sup>, 2022 via zoom. The BCR will be presented as part of the Service Delivery Transfer Agreement at that time.
- *Step 3b: Implement Human Resource Strategy*
  - AFNWA is currently advertising for a Technical Services Technologist, which will be hired in late February.
  - In Q1 of the 2022-2023 fiscal year, the AFNWA will be advertising for the following positions:
    - Planning and Development Technologist
    - Procurement Coordinator
- *Step 4: License Agreements*
  - The Land Access Permits are in their final stages of development. Currently, the AFNWA has no further edits that we are requesting of Canada. The AFNWA has received a comprehensive list from ISC regarding which parcels of land will need to be permitted. The next phase will be to confirm this list with each participating community.
- *Step 5: Implement Operations Model.*

- The AFNWA is currently finalizing the 10-year Business Plan which will outline the programs and activities in relation to its Capital and Operations budgets.
  - AFNWA is working with operators and community staff to determine salaries and benefits of operators, as well as levels of education and certification.
- **Step 6: Implement Transition Management.**
  - The AFNWA has begun discussions with ISC with assistance from a change management specialist.
- **Step 7: Regulatory Oversight.**
  - The AFNWA and Dalhousie University's Centre for Water Resources Studies has submitted their report regarding regulatory benchmarks for First Nations Communities in Atlantic Canada. More detail on this issue will be provided in a separate report.
  - AFNWA, FNFMB and ISC have agreed to language regarding an MOU between the three parties to begin development on an Economic Oversight Agency for the AFNWA. More detail on the MOU will be provided in a separate report.
- **Step 8: Operational Planning:**
  - The final deliverable in this step is to complete the AFNWA Operational Plan, which is currently being developed by the AFNWA Manager of Operations.
- **Step 9: Capital Planning**
  - With the completion of the Asset Management Plans and accompanying 10- Year Capital Plan, Step 9 is now complete.
- **Step 10: Risk Assessments**
  - With the completion of the AFNWA Enterprise Risk Management Framework and Risk Register, Step 10 is now complete.
- **Step 11: Financial Model**
  - 10-year Operating and Capital budgets have been accepted by ISC for inclusion in the 2022-2023 Federal Budget Process. In the coming weeks, AFNWA will begin developing corporate financial reporting models (operations and capital)
- **Step 12: Refine Detailed Budgets and Funding Model.**
  - The AFNWA 10-Year Business Plan is currently in development for approval at the February 10<sup>th</sup>, 2022 Board meeting.
- **Step 13: Transfer Agreement**
  - Since the previous Board meeting, ISC has provided the latest version of the Transfer Agreement for review. The major concern regarding Canada's unilateral ability to terminate the transfer agreement has been addressed. Termination is now tied to AFNWA defaulting on the agreement, which can happen if the following goes uncured:

- an auditor gives a disclaimer of opinion or adverse opinion of the financial statements of the AFNWA required under this Transfer Agreement and the AFNWA fails to provide a clean opinion within the Cure Period;
- immediately, if the AFNWA becomes bankrupt or insolvent, goes into receivership, takes the benefit of any statute relating to bankrupt or insolvent debtors, or ceases operations, or ceases to be a corporation in good standing under the applicable laws of Canada or of the province in which it operates;
- the AFNWA passes a member resolution in accordance with the federal Not-for-profit Act to wind up the business of the AFNWA and such resolution remains in effect after the Cure Period.

### **BUDGET and FINANCIAL IMPLICATIONS**

Activities associated with the TIP are funded through Funding Agreements secured with Indigenous Services Canada.

### **ATTACHMENT**

Transition Implementation Plan with progress updates

Report Prepared by: original signed by  
James MacKinnon, interim COO, 902-603-0312

Financial Reviewed by: original signed by  
Chantal Leblanc, Manager of Corporate Services/CFO, 902-877-3813



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

### Background

The AFNWA Business Case recommends a phased milestone-based approach with a two-year transitional period that allows detailed operational and capital budgets to be developed and agreed with ISC based upon an AFNWA operations plan; an Asset Management Plan (AMP); and a 10-year capital program.

The AFNWA has developed a Transition Plan which has been the principle vehicle for agreeing to a Framework Agreement between AFNWA and ISC. This plan which is organized into three key phases includes several steps that need to be delivered sequentially. These phases can be summarized as follows

- **Phase 1: Approval & Funding:** is an enabling phase which includes tasks which must be completed to allow the AFNWA to take on additional operational responsibility in 2020.
- **Phase 2: Operational Initiation:** comprises establishing the AFNWA management team in a staged manner to prepare for the ownership and operation of the participating First Nations water and wastewater assets
- **Phase 3: AFNWA Formation:** comprises the formalization of the AFNWA budget planning and consolidates these into a Funding Model. The funding requirements will be subject to negotiation with ISC with the understanding that the level of funding will be in line with the order of cost identified in the AFNWA business case.

AFNWA and ISC are close to completing a funding agreement which will provide the funds needed to deliver the Transition plan and progress over the next two years.

### Transition Period Implementation Plan

The Transition Period Implementation Plan (Implementation Plan) will guide the overall operationalization of the AFNWA and its phases will lead to fully autonomous operations in Spring 2022. It will describe the objectives of the phases and the process by which the steps and composite tasks are to be managed.



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

The delivery of the Implementation Plan will necessitate a team with diverse knowledge, expertise, and experience. The Implementation Plan contains the information needed to deliver the transition successfully, in terms of integration, communication, quality, cost, schedule, risk, scope, and overall project management. The Implementation Plan defines the governance and organizational structure; the management, administrative, and reporting processes that will be used; and the decision-making responsibilities and authorities for each principal stakeholder.

While Implementation Planning has commenced, finalizing and delivery of the Plan will require the input from the Senior Management Team which has yet to be recruited. The immediate intention of the Plan is to identify the relevant tasks that need to be completed but not to provide the complete details on how they will be delivered. While it is recognized that the CEO will have ultimate accountability for delivery of the Implementation Plan, potential resources required to develop tasks (whether internal or external resources), and reviewer / approver information has been added for considerations.

As each task is formally initiated, it is recommended that the AFNWA initiate further project definitions (i.e. project charter, timing, resources) to guide task implementation. Within the Transition Plan, tasks anticipated to require a formal project charter or workplan are marked with an asterisk (\*). As individual tasks are initiated, additional task implementation planning is anticipated, and this will be reviewed by the CEO and Senior Management Team on a regular basis.



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Legend	
Green	Complete
Yellow	In Progress
Red	Not Started

### Phase 1: Approval and Funding.

#### Step 1a: Operational Funding

Funding Commitment by Government of Canada to provide long term funding to AFNWA in line with the order of cost identified in the Business Case.

Noting that long term funding will come with final negotiation at the end of this two-year transition. Execution of the Transitional Funding Agreement and signature of the Framework Agreement will signify commitment to this objective.

Tasks	AFNWA Owner	Resources <sup>1</sup>	Reviewer /Approver	Recommended Completion Date
1.0 Framework agreement signed demonstrating a co-development process and commitment for long-term AFNWA funding (key milestone)	COO	CY, RB, Colliers	ISC	May 15, 2020
2.0 Complete Transitional Funding Agreement between AFNWA and ISC to cover two-year Transition Period	COO	CY, RB, Colliers	ISC	May 1, 2020
3.0 Cash flow draw system (incl. bank number), schedule (refer to ISC conference call minutes)	COO	RM	ISC	May 15, 2020
4.0 Develop Transition Plan Template	COO	Colliers	CEO	May 15, 2020

<sup>1</sup> A full description of resource abbreviations has been provided following the phase 3 tasks.



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 1: Approval and Funding.					
Step 2: Planning and establish governance					
Funding Commitment by Government of Canada to provide long term funding to AFNWA in line with the order of cost identified in the Business Case.					
Noting that long term funding will come with final negotiation at the end of this two-year transition. Execution of the Funding Agreement and signature of the Framework agreement will close step 1					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	Establish organization				
1.1	CEO	COO, McInnis Cooper	Board	August 1	
1.2	CEO	COO, SMT	CEO	Ongoing	
1.3	COO	RM	CEO	On Going	
2*	Identify corporate policies and procedures needed				As req'd on a priority basis
2.1	Mgr. Comms	COO, RM	Board		
2.2	Mgr, CS	COO, McInnis Cooper, CEO Colliers, HW	Board	March 31, 2022	
2.3	CEO	Mgr. CS, COO	Board		
2.4	CEO	Mgr. CS, COO	Board		



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

2.5	Information Technology	Mgr. CS	COO, JH	CEO	
2.6	Training and Development policy (Parts found within the APC HR Policy)	Mgr. CS	COO, Supervisor CS, RM	CEO	
2.7	Discipline policy (incl. Two Eyed Seeing)	COO	McInnes Cooper, Elders Council, JP, RB	CEO	
2.8	Pension and Benefits policy	CEO/Mgr. CS	McInnes Cooper, Supervisor CS	Board	
2.9	Health and Safety policy	Mgr. Ops	Mgr. CS, COO, Supervisor CS, JH, CEO	Board	
2.10	Environmental policy	CEO	SMT, GG	Board	
2.11	Security policy	CEO	SMT	Board	
2.12	Code of Conduct	CEO	McInnes Cooper, Mgr. CS, COO, RM	Board	
2.13	Debt policy (elements found within the Financial Policy)	Mgr. CS	COO, CEO, Colliers	Board	
2.14	Spending Authority (Financial Policy, will need to be altered)	CEO	Mgr. CS, COO, Colliers	Board	
2.15	Fraud (Elements found within the APC Financial Policy)	Mgr. CS	COO, CEO, Colliers	Board	
2.16	Document Management policy, recommended solution, and tool considerations (utilize APC in interim)	Mgr. CS	SMT, Colliers JH, RM	CEO	
2.17	Violence and Harassment policy	CEO	McInnes Cooper, Mgr. CS, COO	Board	
2.18	Hiring policy	COO	JH, CEO	CEO	
2.19	Conflict of Interest Policy	CEO	COO, Mgr. CS, Colliers	Board	
2.20	Develop AFNWA specific templates - minutes, action list, SOPs	COO	RM, JH, Colliers	CEO	



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

3.0	Establish financial and accounting policies and frameworks				
3.1	Identify Gaps in APC Financial Policies - debt policies, accounting structures being used, align with Treasury Board policies / rates,	Mgr. CS	COO, Colliers	CEO	On going
3.2	Set up basic accounting framework, general ledger, yearly audit standards & audit timelines, income statements, balance sheets – (service may start with APC but transition to AFNWA) - services could be provided on an interim basis by APC; - there are # of other corporate services APC can provide; gradual transition to AFNWA	Mgr. CS	COO, 3 <sup>rd</sup> party advisor, Colliers	CEO	Establish for first fiscal year [2020/2021]
3.3	Tax exemption letters from CRA - anticipated to be received once a lease is signed	COO	Mgr. CS,	CEO	June 1, 2020
3.4	Audited statements 2021 (milestone)	Mgr. CS	COO, CEO,	Board	July 31, 2021
4.0*	Board governance				
4.1	Establish Board Governance Framework - solicit consultant proposal - develop work plan	CEO	COO, RB, Colliers	Board	
4.2	AFNWA Implementation Plan - Board delegated resp. to CEO to manage - CEO owns plan; recommendations to the Board, as req'd - COO & Board Executive work with CEO - Board approves key items	CEO	COO, RB, Colliers	CEO	March 31, 2022
4.3	AFNWA Board Terms of Reference - CEO works with Board executive, legal advice - Incl. governance (i.e. operating water authority, approvals & authorities), roles (i.e. day to day)	CEO	COO, RB	Board	Initiates with hiring of CEO, completes Nov 2020
4.4	Board governance Workshop (Face to Face) - Define roles and resp, Specific Board terms, committee, compensation	COO	RB, Colliers	CEO	Sept/Oct. 2020



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

4.5	AFNWA Board and Committees Terms of Reference [e.g. Executive, Audit and Finance, Environment, Health and Safety]	CEO	COO, RB, Colliers	Board	Draft Nov. 30/20
4.6	AFNWA Board Formally Approves Term of Reference (milestone)	CEO	COO, RB	Board	Feb.1, 2021
4.7	Board Compensation Policy	CEO	COO, RB	Board	April 1, 2021
4.8	Selection of Elders Lodge, develop Terms of Reference - Process for Board to engage with Elders Council	COO	CEO, RB, CBU	Board	March 31, 2021
5.0*	Establish document management system	Mgr. CS	JH, Colliers, RM, COO	CEO	Fall, 2021
6.0	Develop communications strategy	Mgr. Comms	COO, Comms Consultant	CEO	Feb 1, 2021
7.0	Define ISC approvals process				
7.1	Develop engagement plan with ISC - Strategy and framework of approach - Meeting schedule and intent - Identify and clarify requirements	COO	RB, McInnis Cooper,	CEO	Summer, 2021
7.2	Identify milestones and approvals (required by Federal government) - Schedule, process, Cabinet date, timeline, milestones, minutes & action list	COO	RB, Colliers, Central Agency reps,	CEO	As Req'd
7.3	Identify Board approvals and reporting required - Tied to ISC negotiations	COO	RM, Colliers	CEO	As Req'd



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 1: Approval and Funding.					
Step 3a: Band Council Resolutions					
<p>The commitment to GOC funding will allow Band Council Resolutions (BCR) to be completed with participating First Nations Bands. This deliverable will require the AFNWA interim COO to travel to participating and non-participating First Nations alike to request a BCR for further continuation of the project. This will allow license and asset transfer agreements to be developed. This step is dependent on the signature of the proposed framework agreement before the community visits commence.</p>					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	Develop BCRs				
1.1	COO	McInnes Cooper, ISC	CEO, Board, Band Council	Jun 30, 2020	
1.2	COO	RB, Colliers	CEO		
1.3	CEO	COO	Board	Jan 31, 2021	
1.4	Mgr. Eng.	COO, JH	CEO	Nov, 2021	
1.5	COO		CEO	Jun 30, 2020	
1.6	COO	RB,	CEO	Fall 2020 or Winter 2021 depending on Pandemic Restrictions	



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

	plan in detail, and to communicate the AFNWA's timelines for full, autonomous operations				
2.0	BCR approval by communities				
2.1	Organize Community visits - present to Councilors, gain input, make changes / tweaks. This round of BCRs will signify a further commitment to the AFNWA. AFNWA COO and CEO will travel to each community to present to Chief and Council to seek their continued support [22 communities].	COO	RB, RM, Mgr. Comms	CEO	On Going
2.2	Request signature - by community based on meeting with Councils - Presentations to communities	COO	CEO (as req'd), Mgr. Comms	CEO, Band Council	As Req'd
2.3	Final BCR commitments for existing Communities (15 + 7 communities).	COO		CEO	June1, 2022
3.0	Outreach to other communities to extend invitation to join AFNWA	COO,	CEO, Mgr. Comms	CEO	Ongoing up to Dec 1, 2021
4.0	Develop draft BCR process & commitments for communities to join AFNWA after Transfer Agreement - Process to be defined - Resources to be identified in negotiations with GoC	COO	McInnes Cooper, RB	CEO	Summer 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

### Phase 1: Approval and Funding.

#### Step 3b: Implement Human Resources Strategy

The recruitment of a CEO and senior management team is key to delivering phase 2. Obtaining GOC commitment to funding will allow the following activity to commence.

- Contract with a professional search organization
- Hire the CEO and senior managers

These manager positions will have to be selected in order of priority. For 2020-2021, however, it is recommended that the CEO and Manager of Engineering be identified to work alongside the interim COO. At the start of 2021-2022, the remainder of the senior management team will be hired.

Note – Current COO continues to play a strong liaison role with First Nation Chiefs, Board, ISC, and communities; supports CEO as the utility transitions to full operations in 2022.

Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date
1.0 Human Resource planning				
1.1 Develop Human Resource strategies that recognize the experience and knowledge of staff currently employed in water and wastewater system operation and take a consistent approach to salaries, benefits, training, and career development. Confirm skills to operate business	CEO	COO, Mgr. CS, JH	CEO	Sept 1, 2021
1.2 Research pay and compensation (internal and external equity) - Seek outside HR consultant support	CEO	Mgr. CS, COO	CEO	Summer / Fall 2020
1.3 Develop and complete draft CEO job description	CEO	COO	Board	May 15, 2020



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

1.4	Develop and complete SMT job descriptions	CEO	JH, RM, COO	CEO	As Req'd
1.5	Develop and complete staff job descriptions	Mgr. CS	SMT, Supervisor CS	CEO	As Req'd
2.0	Formal staff recruiting				
2.1	Complete RFP for professional recruiting firm	COO	CEO, RM	CEO	April 28/20
2.2	Hire a professional recruiting firm to recruit qualified personnel as candidates for Senior Management positions.	COO	CEO, RM	CEO	May 22/20
3.0	Recruit key staff				
3.1	Recruit (Interim) CEO for 2-year transition	Board	COO	Board	July 2020
3.2	Recruit Manager Engineering (permanent)	CEO	COO, Recruitment Consultant		September 1, 2020
3.3	Recruit Manager Communications & Outreach (permanent)	CEO	COO, Recruitment Consultant		Dec. 1, 2020
3.4	Recruit Manager of Corporate Services (permanent)	CEO	COO, Recruitment Consultant	CEO	January 1, 2021
3.5	Recruit Manager Operations (permanent)	CEO	COO, Recruitment Consultant	CEO	April 1, 2021
3.6	Hire asset management technologist	Mgr. Eng.	COO, JH	CEO	Sept. 1, 2020
3.7	Hire admin assistant	SMT	RM	CEO	Oct. 1, 2020
3.8	Recruit or hire superintendents	Mgr. Op	Mgr. CS, JH	CEO	August 1, 2021
3.9	Recruit permanent CEO	Board	Interim CEO, COO	Board	April 30, 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 1: Approval and Funding.				
Step 4: Permits				
Finalizing BCRs will enable licensing/land access agreements to be drafted and completed with participating First Nations Bands. The AFNWA and its legal team will work directly with First Nations lands departments, ISC, the Department of Justice to create land access/license agreements that will both allow the AFNWA to enter communities, exclusively work on water and wastewater infrastructure, and indemnify Chiefs and Councils for water quality.				
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date
1.0	Permit development			
1.1	Reengage working group with ISC, Dept Justice, community representatives with custom land codes	COO	ISC, Dept Justice, community representatives McInnes Cooper	May 31, 2020
1.2	Develop Term Sheet - Ensure alignment with communities with custom land codes	COO	Band representatives ISC, Operator Working Group McInnes Cooper	Band Council/ Board
1.3	Identify what is required for the permit, and any potential issues on ownership and liability to go with license agreements. • Refer to Indian Act (where applicable), what is required to execute the agreement (i.e. general map, parcels identified)	COO	Band representative ISC, Operator Working Group McInnes Cooper	Band Council/CEO Board /



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

2.0	Community mapping				
2.1	Identify parcels / detailed survey work/assets <ul style="list-style-type: none"> <li>two options to be considered</li> </ul>	COO/Mgr Eng	Dillon, ESA Consultant,		
2.2a	Option 1- Existing community mapping, or minimum required being the list of assets that are required	Mgr. Eng.	COO, Band land manager, ISC, McInnes Cooper	CEO	December 1, 2020
2.2b	Option 2 [Preferred] - Mapping in connection with Asset Management Plan, Identify or confirm assets, survey land in question, geomatics scanning	Mgr. Eng.	COO, Band land manager, ISC, McInnes Cooper	CEO	September 1, 2021
3.0	Permits				
3.1	Permits engagements <ul style="list-style-type: none"> <li>interested community representatives</li> <li>identify elements that will used for AFNWA commitment through BCR</li> </ul>	COO	McInnes Cooper, RB, Mgr. Eng.		Fall 2021
3.2	Complete Environmental Site Assessments	COO	Dillon Consulting, Mgr. Eng		Fall 2021
3.3	Draft Permits <ul style="list-style-type: none"> <li>Generally common, accompanied with a map</li> </ul> Specifics based on band (i.e. municipal transfer agreement)	COO	McInnes Cooper, RB	Band Council/CEO Board /	January 1, 2022
3.4	Group engagements follow up, land workshops <ul style="list-style-type: none"> <li>Land reps from interested communities</li> <li>Presenting final draft</li> </ul>	COO	ISC, McInnis Cooper, RB, Band Council, Community	CEO	
3.5	Recommend permit for final approval to the Board (combine with below)	CEO	COO, RB, McInnis Cooper, Band Council	Board	January 31, 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

3.6	Signature of license agreements - Confirm whether condition of final funding	CEO	COO, RB, McInnes Cooper, Band Council	Band Council/ Board	April 1, 2022
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### Phase 2: Operational Initiation.

#### Step 5: Implement an FSD “Hub and Spoke” operations model.

Hire all senior staff by April 2021 (one year after funding approval) with a clear preference to hire from participating Atlantic First Nations. The tasks of these managers will be to develop and adopt a formal training and development program for all staff. Furthermore, senior managers will develop Human Resource strategies that recognize the experience and knowledge of staff currently employed in water and wastewater system operation and take a consistent approach to salaries, benefits, training, and career development.

The development and implementation of the hub and spoke model is conditional upon the input of the Senior management team. When the SMT is in place a detailed implementation plan for this step will be developed.

Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date
1.0 Ontario Clean Water Agency (OCWA) Peer Review Business Case	COO	CEO, OCWA, JH, Colliers	ISC	Fall 2020
2.0 ISC accepts the Business Case (milestone)	CEO	COO, Colliers, JH	Board / ISC	April 1, 2021
3.0 Develop plan to implement hub and spoke model - i.e. supervisor allocation, technical supervisor set up, connections to HR strategies - consultation with future operators, Board, communities, - financials	Mgr. Ops	SMT, JH,	CEO	Sept. 1, 2021
4.0 Regular updates to Board For information	CEO	SMT, COO	Board	Monthly



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 2: Operational Initiation.					
Step 6: Implement Transition Management.					
AFNWA appoint a dedicated transition management team. Develop an AFNWA transition management strategy and align the communications and transition management strategies to ensure effective engagement and support. This step will be maintained for the 2-year transition period.					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1	AFNWA appoint a dedicated Transition Management Team (TMT) to navigate change with external consultant as support.	SMT	COO, RB, Colliers,	CEO	Starting April 2021
2*	Develop and implement Transition Management Plan - Establish transition management milestones with AFNWA, communities, Government, operators, others	SMT	COO, RB, Colliers,	CEO	From June 1, 2021 to end of 2023

Phase 2: Operational Initiation.					
Step 7: Regulatory Oversight.					
AFNWA confirm regulatory Oversight Agencies with GOC. and develop a plan for implementing their requirements. As an interim step, the AFNWA and Dalhousie University will continue their work in developing a strategy for operating in an unregulated environment.					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1*	Regulatory oversight planning				
1.1	AFNWA and Dalhousie University will continue their work in developing water safety plans for operating in the interim within an unregulated environment. - NSERC application - Proposal consideration	Mgr. Ops	COO, GG, ISC, Mgr. Eng., , JH	CEO	November 1, 2021



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

1.2	Develop (interim step) potential set of processes to facilitate auditing for compliance to benchmark standards (updated from original 2013 regulations prepared by Dalhousie)	Mgr. Ops	SMT, GG, JH,	CEO	Dec 15, 2021
1.3	Adoption of interim regulations	Mgr. Ops	SMT, GG, JH	Board	Jan, 2022
2.0	Determine long term regulations (influenced significantly by the work being conducted by the Assembly of First Nations)	Mgr. Ops.	SMT	Board	As Req'd
3.0	Work with Federal Government to determine Water Quality and Wastewater Effluent regulator (Environment Canada). Develop strategies to gain Public Servant support.	CEO	SMT, GG, ISC	Board	Sept. 1, 2021
4.0	Determine Federal financial regulator	CEO	SMT, ISC	Board	Fall, 2021
5.0	Review current composition / recruitment of additional board members				
5.1	Additional band representation	Board Executive	CEO, COO, RB	Board	As Req'd
5.2	Additional technical, SME experts - Financial, communications, legal, scientific etc....	Board Executive	CEO, COO, JH, Colliers	Board	July, 2021
5.3	Appointment of a Vice Chair	COO	Board Chair	Board	May 15, 2020



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

<b>Phase 2: Operational Initiation.</b>					
<b>Step 8: Operational planning.</b>					
Senior Management team develop an operations plan that identifies AFNWA operational funding requirements including:					
<ul style="list-style-type: none"> <li>board and management costs,</li> <li>operating and maintenance costs</li> <li>administration and accommodation costs,</li> </ul>					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	AFNWA headquarters facility				
1.1	Develop Headquarters accommodation, space, and technical requirements (Search criteria)	COO	RM, Colliers	CEO	June 1/20
1.2	Search for headquarters accommodation on reserve. Enables temporary (medium term; 5-7 years) vs eventual construction (long term), incorporates Board direction	COO	RM, Colliers, Band Land Manager	CEO	August 1/20
1,3	Develop and Secure IT requirements, office equipment. Note: staged IT requirements may be required as full IT Policy will be finalized with the engaged of the Director Corporate Services.	Mgr. Eng., Mgr. CS	RM, JH, COO	CEO	January, 2021
1.4	Lease & financial impact review	COO	COO, McInnes Cooper,	CEO	December1, 2021
1.5	Board lease approval	CEO	COO	Board	January 21, 2020
1.6	Move in to headquarters facility	COO	RM, Contractor	CEO	May 1, 2021
2.0	Develop Operations budget for 2021/22 fiscal year	COO	SMT, CEO	CEO	March 1, 2021
3.0	Develop Operational Plan for commencement of operations	Mgr. Ops	SMT, COO, Consultant	CEO	Jan 31, 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 2: Operational Initiation.					
<b>Step 9: Capital planning.</b>					
The implementation of step 5 will allow Senior Management to develop an asset management plan within 18 months of AFNWA operations and a draft 10-year capital program based on the asset management plan. This further emphasizes the need to retain the AFNWA CEO and Manager of engineering within the first quarter of 2020-2021					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0* Identify what is required specifically for the Asset Management Plan (AMP) plan <ul style="list-style-type: none"> <li>• Develop project charter including schedule, scope etc.</li> <li>• Project requirements</li> <li>• Required consultant requirements</li> </ul>	Mgr. Eng.	COO, JH,	CEO	Sept 1, 2020	
2.0 Develop and issue RFP for consultant to support development of AMP and 10-year capital budget.	Mgr. Eng.	Consultant, JH,	CEO	Sept 30, 2020	
3.0 Organize Asset Management Workshops for operators and technical staff of the AFNWA.	Mgr. Eng.	Consultant, Mgr. Ops, JH,	CEO	On-going	
4.0 Develop a comprehensive AMP for the infrastructure in participating communities.	Mgr. Eng.	Consultant, SMT, JH	CEO	Dec. 1, 2021	
5.0 Develop a draft 10-year capital plan that is based on the asset management plan.	Mgr. Eng.	Consultant, SMT Colliers. JH	CEO	Dec 1, 2021	



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 3: Detailed Business Case and Funding					
<b>Step 10: Risk assessment.</b>					
Prepare a detailed risk assessment to act as an input into the detailed financial model. This will be an ongoing practice within the AFNWA. The asset management plan will identify detailed operational risks; however, it will be the prerogative of the AFNWA senior management to identify additional risks along with the appropriate mitigation strategy. Risks categories may include but are not limited to:					
<ul style="list-style-type: none"> <li>• Economic</li> <li>• Social</li> <li>• Political</li> <li>• Technological</li> <li>• Legal</li> <li>• Environmental</li> </ul>					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	Mgr. CS	CEO, SMT, COO, Colliers	CEO	Jun 1, 2021	
				- Proposal consideration / external consultant	
2.0	CEO	SMT, Consultant, COO, JH, RM	Board	Nov 30, 2021	
				- Workshops with Board, SMT	
				- Risk register	
				- Timelines for review	



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 3: Detailed Business Case and Funding					
<b>Step 11: Financial Model.</b>					
Develop a detailed financial model that incorporated inputs from the AMP, Operational plan, risk assessment and 10-year capital spending plan to identify the operational and capital funding required to operate the AFNWA for the first 25 years of operation. The model should be sufficiently detailed to consider scenarios and risks which might impact operations and service delivery. The model will be a vehicle for agreeing the funding model with GOC.					
Complete Step 11 Mar 2021					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	Mgr. CS	SMT, Colliers	CEO	Jan 31, 2022	
2.0					
2.1	Mgr. CS	COO, Colliers	CEO	Jan 31, 2022	
				<ul style="list-style-type: none"> <li>- Management information required.</li> <li>- External reporting (i.e. GoC) requirements</li> </ul>	



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

<b>Phase 3: Detailed Business Case and Funding</b>					
<b>Step 12: Refine Detailed Budgets and funding model.</b>					
The intention of this step is to review the detailed financial model and risk assessment with ISC and Participating First Nations to develop/agree a detailed funding model.					
Complete Step 12 June 2021					
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date	
1.0	Review the detailed financial model with ISC and Participating First Nations to develop/agree on a detailed funding model - Informed by multiple sources including the enterprise risk management system	Mgr. CS	SMT, Colliers	Board, ISC Band Councils	April 1, 2022
2.0	Develop Business Plans for AFNWA Board Approval	CEO	SMT, COO	Board	
2.2	Determine Business Plans draft Table of Contents	CEO	SMT, ISC	Board	June 1, 2021
2.3	Ten Year Business Plan	CEO	SMT, COO	Board	Jan. 31, 2022
2.4	One Year Business Plan	CEO	SMT, COO	Board	Feb.28, 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

Phase 3: Detailed Business Plan and Funding				
Step 13 Transfer Agreement.				
Transfer Agreement will coincide with the date of AFNWA full autonomous operation. The Transfer agreement will include the agreed funding model and will address how changes such as future upgrades to regulations will be dealt with.				
Tasks	AFNWA Owner	Resources	Reviewer /Approver	Recommended Completion Date
1.0 Determine method of funding - Order and Council; and / or - 10-year grants	CEO	SMT, ISC, COO	Board / ISC	Dec. 1, 2021
2.0 Define Transfer Agreement financial/liability requirements - Constituent parts	CEO	SMT, COO, ISC, McInnes Cooper	Board / ISC	Dec. 1, 2021
3.0 Final Detailed Funding Model Approval By Board	CEO	SMT, Colliers	Board	Jan 31, 2022
4.0 The Transfer Agreement (GoC) will include the agreed funding model, regulatory oversight requirements and address how changes such as future upgrades to regulations will be dealt with - Define requirements - Will reference several documents (BCR's, License Agreement, Business Plans, regulators etc.)	CEO	SMT, ISC, COO, McInnes Cooper	Board / ISC	Spring 2022



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## Atlantic First Nations Water Authority Transition Period Implementation Plan

### Resource Legend

COO – James MacKinnon	Mgr. CS – Corporate Services	Mgr. Ops - Operations	CEO – Carl Yates	Colliers – Representatives based on expertise	JH – Jamie Hannam
RM – Rayleen MacDonald	Mgr. Comms – Communications & Outreach	Mgr. Eng. - Engineering	RB – Rod Burger		GG – Graham Gagnon
JP – John Paul	SMT – Senior Management Team	TMT – members of SMT as assigned			



Item # 2-I  
AFNWA Board  
26 January 2022

**TO:** Chief Wilbert Marshall, Chair, and Members of the AFNWA Board

**SUBMITTED BY:** original signed by  
Methilda Knockwood-Snache, Chair, Elders Advisory Lodge

**DATE:** January 20, 2022

**SUBJECT:** **Elders Advisory Lodge Update**

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## **INFORMATION REPORT**

### **ORIGIN**

Approval of the Governance Manual at Board meeting of November 6, 2020.  
Appointment of members to the Elders Advisory Lodge at Board meeting of March 31, 2021.

### **BACKGROUND**

The concept of an Elders Advisory Committee was born through engagement with Chiefs, Elders and First Nations community representatives during the completion of the Corporate Structure Report by Halifax Water/Accelerator Inc. in 2017. Throughout these engagements, it was evident that significant value is attached to environmental stewardship, the spiritual aspects of water and Two-Eyed Seeing.

Elders play a crucial role in First Nation communities and it is critical the AFNWA incorporate First Nations traditional knowledge and culture. To ensure the AFNWA is and remains aligned with First Nations values, culture and knowledge, Section 3.10 of the AFNWA Corporate Governance Manual sets out the creation of an ex officio advisory committee through which community Elders will provide advice to the Board.

## **DISCUSSION**

The Elders Advisory Lodge has developed a work plan for the 2021-2022 fiscal year and continues to meet regularly. Before work began, the committee agreed to change its name to the Elders Advisory Lodge to reflect that traditionally a lodge is where one seeks wisdom. Work plan activities and updates are as follows:

### **Review and Approve EAL Terms of Reference**

The EAL has reached consensus to its terms of reference. One major change from the version contained in the governance manual is that the EAL would like its mandate to incorporate the 7 Grandfather teachings.

The revised mandate now reads:

- While the Elders of the Elders Advisory Lodge are not corporate Directors of the AFNWA, they play a critical role in ensuring the AFNWA remains aligned with First Nations values, culture, knowledge, and laws. The Elders Advisory Lodge overarching mandate is to help ensure the AFNWA serves the collective interests of First Nation communities and incorporates First Nations traditional knowledge and culture to fulfill its collective stewardship responsibility. The 7 Grandfather teaching will guide all activities of the Elders Advisory Lodge.

The 7 Grandfather teachings will be an appendix to the Terms of Reference and the EAL is currently working to agree on the language of the teachings to be appended. It is anticipated that the Terms of Reference will be complete for approve at the February 10<sup>th</sup> Board meeting.

### **Regular input into Board Activities**

The Secretary to the Board of Directors continues to support the Chair of the EAL to provide regular updates on Board activities. Regular reporting on Board Activities will commence at the next scheduled meeting of the Elders Advisory Lodge.

### **Ensure that the Water and Wastewater Regulations Framework Consider Cultural and Traditional Knowledge within First Nations Communities**

The Elders Advisory Lodge has met with Dalhousie University to discuss the use of traditional language in future water and wastewater regulations and safety plans. While the EAL has not yet agreed to participate in formal research until all

ethics approvals have been obtained, the EAL is supporting the work under the following themes:

- The EAL has worked diligently with Dalhousie University's Centre for Water Resources Studies to add appropriate language to their oversight frameworks. More detail on this work has been provided in a previous report.
- The EAL is also completing deliberations on traditional names for the AFNWA Services Areas, also set to be completed by our February 10<sup>th</sup>, 2022 Board meeting.

### **Culturally Relevant Input into Training**

While training schedules have yet to be finalized for the AFNWA, the EAL is ready to support when the time comes.

### **2022-2023 Workplan**

The EAL will be discussing their 2022-2023 Workplan at an upcoming meeting on February 2<sup>nd</sup>, 2022.

### **BUDGET and FINANCIAL IMPLICATIONS**

Activities associated with the EAL are contained in the 2021/22 Operations budget as funded through Funding Agreements secured with Indigenous Services Canada.

Report Prepared by: original signed by \_\_\_\_\_

James MacKinnon, interim COO, 902-603-0312

Report Approved by: original signed by \_\_\_\_\_

Carl Yates, interim CEO, 902-603-0312