

# **Cleaning up Tar Sands Tailings Ponds: Selected Precedents for Optimal Regulation and Indigenous Co-Governance**

An ELC Clinic report prepared for:  
Mikisew Cree First Nation

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## OVERVIEW

The Mikisew Cree First Nation (MCFN) asked us to prepare this report to inform their advocacy for optimal rules for treatment and disposal of “oil sands process affected waters” (OSPW) currently stored in vast tailings ponds in and around their territory. To date there has been no authorized release of treated oil sands process affected waters (OSPW) into the environment. However, Canada is proposing a legal regime by 2025, which would allow the release of treated effluent from Alberta’s oil sands tailings ponds into the Athabasca River.

We hope that the following information is useful to the MCFN and its lawyers in developing and co-authoring optimal regulatory standards for dealing safely with the tailings pond effluent in a way that protects the environment and respects the right of the Mikisew Cree Nation to protect its territory and way of life.

## IMPORTANCE OF THE ATHABASCA RIVER

The Athabasca River is both an ecological wonder, contributing to the well-being of a number of endangered species, and incredibly culturally important to a number of Nations including the MCFN.

The Athabasca River flows into one of the world’s “most ecologically significant wetlands,” the Peace-Athabasca Delta, within Wood Buffalo National Park.<sup>1</sup> The WBNP is not just Canada’s largest national park, but was also designated a World Heritage Site in 1983 – in recognition of its “outstanding universal value.”<sup>2</sup> The Wood Buffalo National Park World Heritage Site’s waters support rich wildlife, as well as countless migratory waterfowl and songbirds that have prompted designation of two Ramsar sites (wetlands of international importance) there.<sup>3</sup> Wood Buffalo National Park protects the largest free-roaming Wood Bison herd in the world, and is the only breeding habitat in the world for

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<sup>1</sup> Athabasca River Basin Research Institute, “About the Athabasca River Basin” at para 3, online: *Athabasca University* <<http://arbri.athabascau.ca/About-the-Athabasca-River-basin/Index.php>>.

<sup>2</sup> UNESCO World Heritage Convention, “Wood Buffalo National Park,” online: *UNESCO* <<https://whc.unesco.org/en/list/256/>>; For more on the incredible downstream environmental values, see the previous ELC project for the Mikisew that led to UN action to protect Wood Buffalo National Park: Environmental Law Centre, “UNESCO Calls on Canada to Protect World Heritage Site” (28 April 2017), online: *ELC* <<https://elc.uvic.ca/woodbuffalopark/?hilite=%27mikisew%27>>.

<sup>3</sup> UNESCO World Heritage Convention, “Report of the joint WHC/IUCN Reactive Monitoring mission to Wood Buffalo National Park, Canada” (4 October 2016) at 1, online: *UNESCO* <<https://whc.unesco.org/en/documents/156893>>.

the highly endangered Whooping Crane, which depends on the health of the Peace-Athabasca delta.<sup>4</sup> Clearly, the preservation of Wood Buffalo National Park's ecological features – including water quality in its waterways – is of superordinate global ecological importance.

Unfortunately, WBNP is also the only World Heritage Site in North America to have deteriorated since 2014,<sup>5</sup> leading the MCFN to file a petition to UNESCO expressing concern.<sup>6</sup> The World Heritage Committee has since urged for the condition of the park to be improved,<sup>7</sup> and Canada has actually announced their intention to invest significant funds to implement commitments under the Wood Buffalo National Park World Heritage Site Action Plan.<sup>8</sup> The Honourable Jonathan Wilkinson stated,

*The Government of Canada will ensure that Wood Buffalo National Park World Heritage Site remains a treasured place for present and future generations in collaboration with our Indigenous, provincial, and territorial partners. That is why we are making a substantial new investment of \$59.9 million in order to continue to deliver on the implementation of the Wood Buffalo Action Plan. Canada is recognized internationally for the effective stewardship of its natural and cultural heritage and we will continue to manage Canada's World Heritage sites to the highest standard while contributing to conservation globally.*<sup>9</sup>

Allowing tailings effluent to contaminate this important waterway would be contrary to the federal government's stated commitment to protect this World Heritage Site.

MCFN are the descendants of the signatories of Treaty 8 and are entitled to benefits of the WBNP and the Athabasca River.<sup>10</sup> The affected areas include sacred sites and ceremonial lands, as well as traditional natural resources that Aboriginal peoples of the region maintain close relationships with.<sup>11</sup>

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<sup>4</sup> Athabasca River Basin Research Institute, "About the Athabasca River Basin" at para 3, online:

<<http://arbri.athabasca.ca/About-the-Athabasca-River-basin/Index.php>>.

<sup>5</sup> CBC, "'No water, no birds': Wood Buffalo National Park among most threatened, warn international scientists Social Sharing" (16 November 2017), online: CBC <<https://www.cbc.ca/news/canada/edmonton/wood-buffalo-national-park-threatened-report-1.4404850>>.

<sup>6</sup> Environmental Law Centre, "UNESCO Calls on Canada to Protect World Heritage Site" (28 April 2017), online: ELC <<https://elc.uvic.ca/woodbuffalopark/?hilite=%27mikisew%27>>.

<sup>7</sup> UNESCO, "Decision: 39 COM 7B. 18, Wood Buffalo National Park (Canada) N 256," (2015) online: UNESCO <<http://whc.unesco.org/en/decisions/6275>>.

<sup>8</sup> "Government of Canada supports continued delivery of Action Plan to ensure the ongoing protection of Wood Buffalo National Park World Heritage Site" (21 December 2020), online: Government of Canada <<https://www.canada.ca/en/parks-canada/news/2020/12/government-of-canada-supports-continued-delivery-of-action-plan-to-ensure-the-ongoing-protection-of-wood-buffalo-national-park-world-heritage-site.html>>; Parks Canada, "Wood Buffalo National Park" (15 February 2022), online: Government of Canada <<https://www.pc.gc.ca/en/pn-np/nt/woodbuffalo/info/action>>.

<sup>9</sup> Parks Canada, "Government of Canada supports continued delivery of Action Plan to ensure the ongoing protection of Wood Buffalo National Park World Heritage Site" (21 December 2020), online: Government of Canada, <<https://www.canada.ca/en/parks-canada/news/2020/12/government-of-canada-supports-continued-delivery-of-action-plan-to-ensure-the-ongoing-protection-of-wood-buffalo-national-park-world-heritage-site.html>>.

<sup>10</sup> "The members of the Mikisew Cree First Nation are descendants of the Crees of Fort Chipewyan who signed Treaty 8 on June 21, 1899. It is common ground that its members are entitled to the benefits of Treaty 8." – see *Mikisew Cree First Nation v Canada (Minister of Canadian Heritage)*, 2005 SCC 69 at para 7.

<sup>11</sup> Amberly Polidor et al, "Athabasca River Delta" (22 August 2014), online: Sacred Land Film Project <<https://sacredland.org/athabasca-river-delta-canada/>>.

The effluent discharge plan proposed by the Government of Canada presents a severe threat to the environment, namely to water quality and the health of fish, other aquatic organisms, and their habitat. Poor water quality and deteriorating aquatic habitat in the Athabasca River has significant adverse health impacts on the Indigenous peoples who rely on it – which may constitute a breach of Aboriginal and treaty rights of the MCFN and other Indigenous communities downstream. All Athabasca Region First Nations, including Athabasca Chipewyan First Nation, Fort McKay First Nation, and Chipewyan Prairie First Nation are concerned about this issue.

## BACKGROUND ON TAR SANDS TAILINGS PONDS

Alberta tar sands development has produced 1.3 trillion litres of liquid tailings currently stored in 220 square kilometres of effluent ponds. These vast tailings ponds are the by-product of over 50 years of bitumen extraction from oil sands ore. Once water used in the process of extraction is too polluted to be re-used, the polluted water has simply been stored untreated in the ponds under the current zero discharge policy.

Tar sands effluent tailings contain a toxic mixture of bitumen, inorganic salts, cyanide, heavy metals such as arsenic, cadmium, nickel and zinc,<sup>12</sup> and toxic organic compounds.<sup>13</sup> Organic compounds include naphthenic acids (NAs), humic and fulvic acids, benzene, toluene, ethylbenzene and xylene (BTEX), phenols and polycyclic aromatic hydrocarbons (PAHs), and more.<sup>14</sup> NAs are organic compounds of particular concern because they are acutely lethal to aquatic organisms in low milligram per litre quantities.<sup>15</sup> PAHs are also of particular concern given their carcinogenic potential and tendency to bioaccumulate.<sup>16</sup> Concentration of NA's in OSPW varies between tailings ponds and is dependent on the age of the pond and the mine that produced it.<sup>17</sup>

The continued existence of over 200 square kilometres of effluent ponds represents a looming risk to the environment – and a multibillion-dollar liability for industry and government. Animals exposed to

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<sup>12</sup> Jodi McNeill and Nina Lothian, "Review of Directive 085 Tailings Management Plans" (13 March 2017) at 2, online: *Pembina Institute* <<https://www.pembina.org/reports/tailings-whitepaper-d85.pdf>>.

It is estimated that as much of 10% of GHG emissions from oilsands mining comes from the tailings ponds.

<sup>13</sup> CEC, "Alberta Tailings Ponds II. Factual Record regarding Submission SEM-17-00" (2020) at 24, online: *North America Environmental Law and Policy* <<http://www.cec.org/files/documents/publications/11861-alberta-tailings-ponds-ii-factual-record-north-american-environmental-law-and-en.pdf>>.

<sup>14</sup> Mohamed Gamal El Din, PowerPoint presentation for the University of Alberta, "NSERC/COSIA/Alberta Innovates Senior Industrial Research Chair in Oil Sands Process Water Treatment: Treatment and Toxicity Perspectives" (23 May 2019) at 11.

<sup>15</sup> Micheal R Van den Heuvel, "In Response: An Academic Perspective on the Release of Oil Sands Process-affected Water" (2015) *Environmental Toxicology and Chemistry*, 34:12 2682 at 2683.

<sup>16</sup> Centers for Disease Control and Prevention, *Polycyclic Aromatic Hydrocarbons (PAHs) Factsheet at:* <[https://www.cdc.gov/biomonitoring/PAHs\\_FactSheet.html#:~:text=Polycyclic%20aromatic%20hydrocarbons%20\(PAHs\)%20are,other%20foods%20will%20form%20PAHs](https://www.cdc.gov/biomonitoring/PAHs_FactSheet.html#:~:text=Polycyclic%20aromatic%20hydrocarbons%20(PAHs)%20are,other%20foods%20will%20form%20PAHs)>. James Meador et al, "Bioaccumulation of Polycyclic Aromatic Hydrocarbons by Marine Organisms" (February 1995) 143:79-165 *Reviews of Environmental Contamination and Toxicology*.

<sup>17</sup> Ashley Mahaffey and Moonique Dubé, "Review and Composition and Toxicity of Oil Sands Process-affected Water" (2016) *Environmental Reviews* 25:1 97-114 at 98, online: <[cdnsiencepub.com/doi/10.1139/er-2015-0060](https://cdnsiencepub.com/doi/10.1139/er-2015-0060)>.

the toxic ponds are at high risk – an estimated 5,000 birds a year are killed on the ponds each year.<sup>18</sup> The massive tailings ponds have the potential to breach dams and catastrophically contaminate watersheds. However, draining the ponds by allowing inadequately treated effluent to enter the Athabasca River would be an egregious violation of treaty rights and a great danger to the environment.

The MCFN asked the ELC to consider the above, and provide legal information to support the Nation's efforts to negotiate:

- the standards that will be applied to tailings ponds effluent; and
- a regulatory co-governance regime to address their interests in the planned release of oil sand effluent into the Athabasca River.

With regards to establishing standards for wastewater to be released from the tailings ponds, the MCFN is aiming for the most stringent standard available in order to ensure that no degradation of the Athabasca River occurs.

With regards to co-governance of the planned effluent release, the MCFN has expressed interest in having authority over:

- setting thresholds and/or standards for water quality and other biological/environmental indicators;
- monitoring and testing for the various thresholds and/or standards they set;
- enforcement actions stemming from contraventions to the standards they set; and
- defining “triggers” in an adaptive management plan that would empower MCFN to compel shutdown orders and/or immediate actions to remedy unacceptable environmental impacts.

Ultimately, the MCFN want to negotiate an arrangement that entitles Nations, like themselves, to be the regulatory decision makers as well as monitors and enforcers of said regulations or rules.<sup>19</sup>

### **IMPORTANT NOTE:**

At the outset, it is important to note governments' legal and moral obligation is not limited to ensuring that release of effluent does not violate the *Fisheries Act* – which is the focus of much of the discussion below. Although this focus on discharged waters has tended to be the central issue for governments to date, there is a broader government obligation – an obligation to fully remediate the tar sand ponds and all tar sands contaminated lands. Aboriginal and treaty rights arguably support

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<sup>18</sup> See Ecojustice, *Tailings ponds are killing migratory birds, and here's how at*: <<https://ecojustice.ca/tailings-ponds-killing-migratory-birds-heres/#:~:text=It%20is%20estimated%20that%20200%2C000,landing%20to%20die%20somewhere%20else>>. Note that significant amounts of greenhouse gases such as methane and carbon dioxide are also emitted from the ponds. Jodi McNeill and Nina Lothian, “Review of Directive 085 Tailings Management Plans” (13 March 2017) at 3, online: *Pembina Institute* <<https://www.pembina.org/reports/tailings-whitepaper-d85.pdf>>.

<sup>19</sup> Perhaps with the support of an Indigenous Guardians-type program in collaboration with other affected Nations.

such a government obligation. In addition, Alberta’s *Conservation and Reclamation Regulation* under the *Environmental Protection and Enhancement Act* itself explicitly states:

*The objective of conservation and reclamation of specified land is to return the specified land to an equivalent land capability.*<sup>20</sup>

Thus, the current effort to deal with *Fisheries Act* regulation of effluent discharged from the ponds should be set within the broader context of an overarching remediation strategy to ensure that all the lands and waters affected by tar sands are fully remediated. Any plan for managing the effluent must be embedded in a broader context of reclaiming all the lands impacted by the tar sands.

Arguably, there must be a plan to ensure that all lands and waters are able to support once again the “equivalent” uses that Indigenous peoples enjoyed before the tar sands development.

## PART I: USING THE STRICTEST STANDARDS TO TREAT EFFLUENT

The water quality standards that are to be used to treat the tailings ponds must prioritize the **chemical, physical and biological integrity** of the Athabasca River. It is vital that the focus remains on maintaining the total health of the waterway, which requires a holistic view of water integrity.

### TOOLS TO ESTABLISH A REGULATORY REGIME

There are a number of tools available for the federal government to establish a regulatory regime that adequately protects the Athabasca River from effluent release.

Section 36 of the *Fisheries Act* makes it an offence to deposit, or permit the deposit of a deleterious substance of any type of water frequented by Fish.”<sup>21</sup> The scope of federal authority allows Canada “to make regulations prescribing substances and classes of substances, quantities or concentrations of substances and classes of substances in water, and treatments, processes and changes of water as deleterious substances for the purposes of the Act.”<sup>22</sup>

The *Fisheries Act* can also be used to designate and regulate environmentally sensitive areas. Under Section 35.2 of the *Fisheries Act*, an area can be designated as an “Ecologically Significant Area.” This

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<sup>20</sup> Conservation and Reclamation Regulation, Alta Reg 115/1993 at s. 2

Also see s.1(e): “equivalent land capability” is defined in the regulation as “... the ability of the land to support various land uses after conservation and reclamation is similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical;”

<sup>21</sup> *Fisheries Act*, R.S.C. 1985, c. F-14 s36(3)

<sup>22</sup> *Fisheries Act*, R.S.C. 1985, c. F-14 s34(2)

provides a mechanism to “manage fish and fish habitat that is sensitive, highly productive, rare or unique in accordance with management objectives established for their conservation and protection.”<sup>23</sup> It also enables the Minister to enter into agreements with other groups to enhance fish protection in the designated areas.<sup>24</sup> Therefore, under this designation, there could be stronger management approaches developed through a collaborative management plan with First Nations, and a precautionary approach may be taken for any effluent released into the river.<sup>25</sup> Considering the cultural and ecological importance of the Athabasca River, and the exceptional pressures it is facing from oil sands pollution, this designation could be an important way to protect it.

Another way to enhance protection of the Athabasca River and establish a collaborative regulatory regime is through government-to-government negotiations. These agreements provide significant flexibility for new frameworks and governance regimes to be established. Part II of this report includes examples of how Nations have collaborated with Canada in order to allow for mutual decision-making processes, as well as enforcement of regulations.

Canada has made several statements affirming their commitment to the enhancement of Indigenous governance. In 2017, Canada issued the “Principles respecting the Government of Canada’s relationship with Indigenous peoples,” where the government stated that “The ten principles are based on the recognition of Indigenous peoples, governments, laws, and rights, including the right to self-determination and the inherent right of self-government.”<sup>26</sup> The Canadian Principles also recognize the importance of free, prior, and informed consent as the goal of meaningful engagement in government-to-government, nation-to-nation, and Inuit-Crown relationships. These relationships include “ensuring . . . space for the operation of Indigenous jurisdictions and laws,” “involving Indigenous peoples in the effective decision-making and governance[,]” and “putting in place effective mechanisms to support the transition away from colonial systems of administration and governance[.]”<sup>27</sup>

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<sup>23</sup> Fisheries and Oceans Canada, “Fish and fish habitat protection policy statement” (August 2019) at section 9.3, online: *Government of Canada* <<https://www.dfo-mpo.gc.ca/pnw-ppe/policy-politique-eng.html>>.

<sup>24</sup> Fisheries and Oceans Canada, “Introducing Canada’s modernized *Fisheries Act*,” online: *Government of Canada* <<https://www.dfo-mpo.gc.ca/campaign-campagne/fisheries-act-loi-sur-les-peches/introduction-eng.html>>.

<sup>25</sup> Environmental Law Centre, Letter to The Honourable Katrine Conroy, M.L.A., “Re: Request that you establish a new Heart of the Fraser Wildlife Management Area” (15 October 2021), online: *ELC* <<https://elc.uvic.ca/wordpress/wp-content/uploads/2021/10/2020-02-01-ELC-Letter-to-Minister-Conroy-2021OCT15.pdf>>.

<sup>26</sup> Canada, Department of Justice, News Release, “Government of Canada Sets a Principled Foundation for Advancing Renewed Relationships with Indigenous Peoples based on the Recognition of Rights” (14 July 2017), online: *Government of Canada* <[https://www.canada.ca/en/department-justice/news/2017/07/government\\_of\\_canadasetsaprincipledfoundationforadvancingrenewed.html](https://www.canada.ca/en/department-justice/news/2017/07/government_of_canadasetsaprincipledfoundationforadvancingrenewed.html)> [<https://perma.cc/B84G-5CNW>].

<sup>27</sup> Canada (Department of Justice), “Principles respecting the Government of Canada’s relationship with Indigenous peoples” (14 February 2018), principle 4, online: *Department of Justice* <<https://www.justice.gc.ca/eng/csi-sjc/principles-principes.html>> [<https://perma.cc/KFY6-6CW6>].



## A KEY PRINCIPLE – A STRICT NON-DEGRADATION STANDARD

In order to maintain the water quality of the Athabasca River, the water quality standard used to treat and release effluent should be a strict *non-degradation standard*. This means that the discharge quality must be the same or better than quality found in the receiving body of water.

Too often Canadian jurisdictions set lax pollution standards that permit the discharge of a defined amount of pollution. Contamination is exacerbated when governments allow even higher amounts of pollution in a “mixing zone” or “dilution zone” surrounding the discharge pipe – taking the irresponsible approach that, “The solution to pollution is dilution.”<sup>28</sup>

In contrast to this lax approach, there are a number of examples in the United States and in Canada of governments and Nations applying a stringent *non-degradation* approach to wastewater. This report will describe the United States federal *Clean Water Act*, as well as how Montana has implemented it in a stringent and effective way. Furthermore, non-degradation strategies in Canada such as the Yukon water quality standards, the Gitanyow Lax’yip Water Policy, and the Yinka Dene ‘Uza’hne Surface Water Management Policy will be shown as strong examples of how to regulate wastewater effluent to the most stringent standard.

### US Federal Clean Water Act and Strict Protection of “Outstanding National Resource Waters”

The US *Clean Water Act* (CWA) is used to regulate surface water quality standards and pollutant discharge within United States waters.<sup>29</sup> Under the CWA, the Environmental Protection Agency (EPA) implements pollution control programs and sets standards. While all surface waters are subject to the CWA’s “Antidegradation Policy,” the strictest standard applies to “Tier 3” waters, also known as “Outstanding National Resources Waters” (ONRWs). This most stringent standard prohibits the water quality of an ONRW to be lowered at all.<sup>30</sup> This strict form of the Antidegradation Policy applies to very high-quality waters, or to waters that may not be of particularly high quality, but are still of “exceptional ecological significance.”<sup>31</sup> Examples of waters that fit into this designation include waters within National and State parks and wildlife refuges, as well as waters that are exceptionally

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<sup>28</sup> The allowance of higher pollution in “dilution zones” in Alberta is particularly problematic, and the Alberta approach can be contrasted with more progressive jurisdictions such as British Columbia, which is more restrictive on dilution zones, and more rigorous in applying Best Available Technology principles, according to one expert we interviewed.

<sup>29</sup> EPA, “Summary of the Clean Water Act,” online: *United States Environmental Protection Agency* <[https://www.epa.gov/laws-regulations/summary-clean-water-act#:~:text=The%20Clean%20Water%20Act%20\(CWA,quality%20standards%20for%20surface%20waters](https://www.epa.gov/laws-regulations/summary-clean-water-act#:~:text=The%20Clean%20Water%20Act%20(CWA,quality%20standards%20for%20surface%20waters)>.

<sup>30</sup> “... except to accommodate limited activities that result in temporary and short-term water quality change, only.”

<sup>31</sup> EPA, “Water Quality Standards Handbook Chapter 4: Antidegradation” online at 12: *United States Environmental Protection Agency* <<https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter4.pdf>>.

ecologically significant.<sup>32</sup> Clearly, if the Athabasca River and Wood Buffalo World Heritage Site were in the US, the watershed would qualify for this “outstanding waters” designation.

According to the EPA Water Quality Standards Handbook (“the Handbook”), “**changes in water quality should not impact existing uses or alter the essential character or special use that makes the water an ONRW.**”<sup>33</sup> The EPA Handbook also includes other helpful language that could be used to draft a similar type of non-degradation standard for Athabaskan watershed. For example, the EPA Handbook explicitly states that the maintenance and protection of ONRWs means that there may be “**no new or increased discharges to ONRWs and no new or increased discharge to tributaries to ONRWs that would result in lower water quality in the ONRWs.**”<sup>34</sup>

Given the global and national importance of the Athabasca River and the downstream World Heritage and Ramsar Sites, the MCFN could propose discharge regulations equal to the US “Outstanding National Resource Waters” standard. In the US such outstanding waters *would not receive any wastewater discharges in any manner that would cause or contribute to a diminution or degradation of natural waterway health and existing water quality.*<sup>35</sup>

The water that runs through the Athabasca River deserves the same high-level protection that it would receive if it were flowing through the United States and subject to the *Clean Water Act*. Like the US, the government of Canada should act to prohibit pollution discharge that would lower water quality at all in these “outstanding waters.” In other words, the quality of the discharged water should be as clean – or cleaner – than current river water. A strict and objectively verifiable non-degradation rule should apply. Among other possibilities, the Athabaskan waters could be designated under Canada’s *Fisheries Act* as an “Ecologically Significant Area” – and made subject to such stringent non-degradation rules.

## Montana Constitution

The US *Clean Water Act* requires that all States and Tribes develop and adopt their own anti-degradation policies, though they have discretion as to how to designate the bodies of water within their boundaries. The EPA provides a tool that compiles all of the anti-degradation standards in all US states, territories and authorized tribes.<sup>36</sup> It should be noted that some states have developed anti-

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<sup>32</sup>California State Water Resources Control Board, “Outstanding National Resource Water Smith River Designation Fact Sheet,” at 1 online: *Water Boards* <[https://www.waterboards.ca.gov/northcoast/water\\_issues/programs/basin\\_plan/160321/20160321\\_ONRW\\_Fact\\_Sheet\\_for\\_distribution.pdf](https://www.waterboards.ca.gov/northcoast/water_issues/programs/basin_plan/160321/20160321_ONRW_Fact_Sheet_for_distribution.pdf)>.

<sup>33</sup> EPA, “Water Quality Standards Handbook Chapter 4: Antidegradation” online at 1: *United States Environmental Protection Agency* <<https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter4.pdf>>.

<sup>34</sup> EPA, “Water Quality Standards Handbook Chapter 4: Antidegradation” online at 12: *United States Environmental Protection Agency* <<https://www.epa.gov/sites/default/files/2014-10/documents/handbook-chapter4.pdf>>.

<sup>35</sup> Guy Alsentzer, Executive Director & Founder of Upper Missouri Waterkeeper, Personal Communication to Calvin Sandborn, April 7, 2022.

<sup>36</sup> EPA, “State-Specific Water Quality Standards Effective under the Clean Water Act (CWA),” online: *United States Environmental Protection Agency* <<https://www.epa.gov/wqs-tech/state-specific-water-quality-standards-effective-under-clean-water-act-cwa>>.

degradation policies even more protective than the Federal CWA requirements. For example, several US States (including Oregon,<sup>37</sup> Alaska,<sup>38</sup> and Washington State<sup>39</sup>) enforce strong non-degradation or anti-degradation standards for waste water discharge in particular circumstances. However, the Montana Statutory Code allows for the enforcement of arguably the strongest non-degradation standards in the United States.<sup>40</sup>

Subsection (4) of Montana Statute §75-5-316 provides the criteria that is used in order to determine that a water body is an Outstanding Resource Water (ORW). The criteria used for this determination includes:

- a) whether the waters have been designated as wild and scenic;
- b) the presence of endangered or threatened species in the waters;
- c) the presence of an outstanding recreational fishery in the waters;
- d) whether the waters provide the only source of suitable water for a municipality or industry;
- e) whether the waters provide the only source of suitable water for domestic water supply; and
- f) other factors that indicate outstanding environmental or economic values not specifically mentioned in this subsection (4).<sup>41</sup>

It is evident that, if the Athabasca was subject to Montana rules, a number of the factors above would make the Athabasca River “outstanding resource water,” given the River’s outstanding ecological properties and endangered species. Thus, the most stringent Montana water quality standards would apply. Section 17.30.705 of the *Montana Administrative Code* lays it out clearly: “For outstanding resource waters, **no degradation is allowed and no permanent change in the quality of outstanding resource waters resulting from a new or increased point source discharge is allowed.**”<sup>42</sup>

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<sup>37</sup> EPA, “Water Quality Standards Regulations: Oregon,” online: *United States Environmental Protection Agency* <<https://www.epa.gov/wqs-tech/water-quality-standards-regulations-oregon>>.

<sup>38</sup> Department of Environmental Conservation, “Chapter 70. Water Quality Standards” (5 March 2020), online: *United States Environmental Protection Agency* <<https://www.epa.gov/sites/default/files/2020-07/documents/akwqs-chapter70-2020.pdf>>.

<sup>39</sup> EPA, “Water Quality Standards for Surface Waters of the State of Washington” (4 January 2022), online: *United States Environmental Protection Agency* <<https://www.epa.gov/sites/default/files/2014-12/documents/wawqs.pdf>>.

<sup>40</sup> John Meyer, Founder and Executive Director of Cottonwood Environmental Law Center, Personal Communication to Calvin Sandborn, March 31, 2022.

<sup>41</sup> Brian Bird and Rachel King, “Clean Waters, Wild Forests: A Citizen Manual for Designating Outstanding Waters in the Wild Forests of the Western United States” (September 2011), online: *WildEarth Guardians* <[http://pdf.wildearthguardians.org/site/DocServer/ONRW\\_Handbook\\_Final\\_Sept\\_2011.pdf](http://pdf.wildearthguardians.org/site/DocServer/ONRW_Handbook_Final_Sept_2011.pdf)>.

<sup>42</sup> Mont. Admin. R. 17.30.705 (2)(c) – Nondegradation Policy-Applicability and Level of Protection.

## APPLYING A NON-DEGRADATION STANDARD IN CANADA

While the *Clean Water Act* standards do not have a direct federal parallel in Canada, there are examples of strong non-degradation standards being recognized and applied within the country. The Yukon's non-degradation standards apply to certain bodies of water, affording them with strong protections that maintain their ecological integrity. The Gitanyow Nation and the Nadleh and Stellat'en First Nations have developed strong non-degradation standards within their own water policies, which they are applying to sources of water pollution on their territories. When looking for good legislative models, the language and structure of these policies can be used as a guide for the MCFN to propose their own water policy that prohibits degradation of important waters.

### The Yukon

The Yukon has implemented the "Yukon Guide for Developing Water Quality Objectives and Effluent Quality Standards for Quartz Mining Projects" ("the Guide") for proponents seeking approvals for quartz mining projects. It applies a non-degradation approach to bodies of water that fall into at least one of the following categories:<sup>43</sup>

- A regulated drinking water supply
- A critical or key aquatic habitat
- A World Heritage Site or National or Territorial Park (created for ecological reasons)
- Designated for protection of aquatic ecosystem (Yukon legislation, First Nation Final Agreement, Regional Land Use Plan, Canadian Heritage River)
- Is of exceptional importance to First Nations or local residents

If one or more of the listed categories apply to the designated body of water, *the water quality must remain unchanged from pre-project conditions*, a standard that is measured against baseline water quality conditions.<sup>44</sup>

The Guide states that, for waters subject to this non-degradation approach, "**Baseline water quality must be maintained at all times. Any permitted discharges shall be regulated in a manner that prevents degradation of the quality of receiving waters.**"<sup>45</sup> Where water quality has been previously

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<sup>43</sup> Yukon, "Yukon Guide for Developing Water Quality Objectives and Effluent Quality Standards" online: <<https://yukon.ca/sites/yukon.ca/files/env/env-yukon-guide-developing-water-quality-objectives-effluent-quality-standards-quartz-minig-projects.pdf>>.

<sup>44</sup> Yukon, "Yukon Guide for Developing Water Quality Objectives and Effluent Quality Standards for Quartz Mining Projects" (October 2021) at 10 online: *Government of Yukon* <<https://yukon.ca/sites/yukon.ca/files/env/env-yukon-guide-developing-water-quality-objectives-effluent-quality-standards-quartz-minig-projects.pdf>>.

<sup>45</sup> Yukon, "Yukon Guide for Developing Water Quality Objectives and Effluent Quality Standards for Quartz Mining Projects" (October 2021) at 10 online: *Government of Yukon* <<https://yukon.ca/sites/yukon.ca/files/env/env-yukon-guide-developing-water-quality-objectives-effluent-quality-standards-quartz-minig-projects.pdf>>.

impacted, baseline water quality analyses may be determined using historically collected data, or current conditions in appropriate locations upstream.

The new regulations to protect the Athabasca River could emulate the criteria laid out in this Yukon Guide for requiring a non-degradation rule. Applying the Yukon criteria (*i.e.*, the Athabasca River is a key aquatic habitat, flows into a National Park and World Heritage Site, and is of exceptional importance to surrounding First Nations), the strictest non-degradation standard would apply. Since such a standard would likely apply in the Yukon, there is no reason why a similar strict standard should not apply in the Athabaskan watershed.

### **Gitanyow Lax'yip Water Policy**

The Gitanyow Lax'yip Water Policy (“the Policy”) has been established as part of the vision of the Gitanyow Governance Accord, which provides formal recognition for Gitanyow Hereditary Governance.<sup>46</sup> The Gitanyow Nation have developed this Policy to address industrial development and create standards that proponents of projects must adhere to when they are conducting activities on Gitanyow territory. Within this Policy, surface water is categorized based on various ecological, cultural and hydrological qualities that make it more sensitive to external pressures, and standards are then established depending on this categorization.<sup>47</sup>

Waters are categorized based on their qualities, and some are then subject to *a non-degradation standard requiring that background water quality is not degraded*. An assessment of baseline conditions is undergone to determine the natural background concentrations in water, so that the water quality can remain at or above these baseline conditions. Part of the Gitanyow’s Water Management Technical Process includes mandating that proponents evaluate baseline conditions and set them out in a detailed report, as well as continuously monitor levels so that the report can be routinely updated.<sup>48</sup>

This is an instructive example of a Nation setting the strictest non-degradation standard for key waters.

### **Yinka Dene ‘Uza’hne Surface Water Management Policy**

Similarly, the Yinka Dene ‘Uza’hne Surface Water Management Policy (“the Policy”), was enacted by the Nadleh and Stellat’en First Nations in 2016 as an “expression of their living governance and laws,” and is grounded in their own traditions and worldviews.<sup>49</sup> The objective of their water quality

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<sup>46</sup> BC Gov News, “Accord is historic recognition of Gitanyow hereditary governance” (12 August 2021) online: *Government of British Columbia* <<https://news.gov.bc.ca/releases/2021IRR0042-001596#:~:text=Gitanyow%20is%20represented%20by%20eight,of%20the%20B.C.%20Treaty%20process>>.

<sup>47</sup> Draft Gitanyow Lax'yip Water Policy. Draft 2.1 February 22, 2021

<sup>48</sup> Draft Gitanyow Lax'yip Water Policy. Draft 2.1 February 22, 2021

<sup>49</sup> Nadleh Whut'en and Stellat'en First Nations, “Addressing Mine Water Discharges at the Endako Mine: A Collaboration with Community, ENV, and Centerra” (3 December 2020), at 11 online: *British Columbia MEND ML/ARD Annual Workshop* <<https://bc-mlard.ca/files/presentations/2020-13-BEAR-ETAL-addressing-mine-water-discharges-endako.pdf>>.

standards is for waters within the traditional territories of the Carrier and Sekani First Nations to remain substantially unaltered in terms of water quality and flow.<sup>50</sup> It was formalized in response to unaddressed pollution at the Endako Mine, and both the province and proponents adhere to the Policy in order to show respect to the Nations.<sup>51</sup> Part II of this report includes further detail on how the governance framework itself was created and is applied.

The Policy includes a water classification system that designates the effluent-receiving bodies of water according to their importance and how susceptible they are to disturbance. These classifications then inform the different numerical water quality standards prescribed to those areas and set short and long-term goals.<sup>52</sup> *The Policy includes a strong non-degradation standard for waters classified as “Class I: Waters of High Cultural or Ecological Significance,” intended to maintain the quality of these special waters.* Spiritual sites, unique traditional use areas, and other areas of cultural importance are categorized as Class I waters in the Policy. According to the Policy, conditions “**should not be degraded, substantially altered, or impaired by human activities,**” relative to the assessed ambient water quality.<sup>53</sup> In order for water quality and flows to remain substantially unaltered, there must be extensive measurement of baseline conditions, which are then measured against any proposed impacts on the water.<sup>54</sup>

While the Policy has not been officially recognized in provincial or federal water policies, *it has been formally recognized within regulatory instruments for the Endako mine and Blackwater mine.*<sup>55</sup> It has been applied to effluent released from the Endako Mine, and has been used to assess potential impacts on surrounding waters. One body of water that receives effluent from the mine is Francois Lake, which the Nations have categorized to be a “Class I” body of water. Because of its classification, a non-degradation standard is applied to the effluent. There is to be “**no measurable mine-related effect**” on the lake in the short-term, medium-term, and long-term, including post-closure of the mine.<sup>56</sup> For example, numerical targets for sulphates within Francois Lake are the same as the

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<sup>50</sup> “Yinka Dene ‘uza’hné Guide to Surface Water Quality Regulations” (18 March 2016) at 2, online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](https://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>51</sup> Nadleh Whut’en and Stelat’en First Nations, “Addressing Mine Water Discharges at the Endako Mine: A Collaboration with Community, ENV, and Centerra” (3 December 2020), at 1 online: *British Columbia MEND ML/ARD Annual Workshop* <<https://bc-mlard.ca/files/presentations/2020-13-BEAR-ETAL-addressing-mine-water-discharges-endako.pdf>>.

<sup>52</sup> “Yinka Dene ‘uza’hné Guide to Surface Water Quality Regulations” (18 March 2016), online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](https://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>53</sup> Nadleh Whut’en and Stelat’en First Nations, “Addressing Mine Water Discharges at the Endako Mine: A Collaboration with Community, ENV, and Centerra” (3 December 2020), at 18 online: *British Columbia MEND ML/ARD Annual Workshop* <<https://bc-mlard.ca/files/presentations/2020-13-BEAR-ETAL-addressing-mine-water-discharges-endako.pdf>>.

<sup>54</sup> “Yinka Dene ‘uza’hné Guide to Surface Water Quality Regulations” (18 March 2016), at 12 online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](https://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>55</sup> Today in BC, “‘Dilution not the solution’ says ?Esdilagh, Nadleh Whut’en First Nations” (19 May 2021) at para 13, online: <<https://www.todayinbc.com/news/dilution-not-the-solution-says-esdilagh-nadleh-whuten-first-nations/>>.

<sup>56</sup> Nadleh Whut’en and Stelat’en First Nations, “Addressing Mine Water Discharges at the Endako Mine: A Collaboration with Community, ENV, and Centerra” (3 December 2020), at 19 online: *British Columbia MEND ML/ARD Annual Workshop* <<https://bc-mlard.ca/files/presentations/2020-13-BEAR-ETAL-addressing-mine-water-discharges-endako.pdf>>.



background concentration (to the 95<sup>th</sup> percentile).<sup>57</sup> With regards to levels of alkalinity allowed in the lake, there should be “no measurable change from its natural conditions.”<sup>58</sup>

The standards and language used in both the Gitanyow Lax’yip Water Policy and the Yinka Dene ‘Uza’hne Surface Water Management Policy can be assessed by the MCFN in order to formulate a strong non-degradation policy that will apply to tailings effluent.

## HOW TO IMPLEMENT A NON-DEGRADATION STRATEGY: AVOIDING RELEASE OF EFFLUENT INTO THE ATHABASCA RIVER

A non-degradation strategy could potentially be implemented by avoiding the release of tailings effluent into the Athabasca River. One method of avoiding the release of wastewater into the river is through the injection of the tailings effluence into deep saline aquifers that are unconnected to any freshwater groundwater. MCFN and its experts might consider proposing that the effluent from the tailings ponds be injected below the McMurray Formation.<sup>59</sup>

A US example of legislation requiring this type of zero-discharge method of effluent disposal can be found in the “Effluent Limitation Guidelines” developed by the United States EPA, pursuant to the *Clean Water Act*.<sup>60</sup> The guidelines impose the following requirement:

40 CFR § 435.32 - Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available

"Except as provided in §§ 125.30 through 125.32, any existing point source subject to this subpart shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT): **there shall be no discharge of waste water pollutants into navigable waters from any source associated with production, field exploration, drilling, well completion, or well treatment** (i.e., produced water, drilling muds, drill cuttings, and produced sand)."<sup>61</sup>

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<sup>57</sup> Nadleh Whut’en and Stelat’en First Nations, “Addressing Mine Water Discharges at the Endako Mine: A Collaboration with Community, ENV, and Centerra” (3 December 2020), at 21 online: *British Columbia MEND ML/ARD Annual Workshop* <<https://bc-mlard.ca/files/presentations/2020-13-BEAR-ETAL-addressing-mine-water-discharges-endako.pdf>>.

<sup>58</sup> Lisa Westenhofer, Anne-Marie Roberts and Ian Sharpe, “Francois Lake Management Plan” (May 2000), at 29 online: *Regional District of Bulkley Nechako* <<https://www.rdbn.bc.ca/application/files/3415/4526/1884/Francois-Lake-LMP.pdf>>.

<sup>59</sup> Dr. Mark Cherniak, Staff Scientist at Environmental Law Alliance Worldwide (ELAW), Personal Communication to Calvin Sandborn, March 29, 2022.

<sup>60</sup> And found in Title 40 of the Code of Federal Regulations, Part 435, Effluent Limitation Guidelines for the Oil And Gas Extraction Point Source Category, Subpart C – Onshore Subcategory.

<sup>61</sup> Electronic Code of Federal Regulations, 40 CFR § 435.32 - Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

This requirement is applicable to the following activities:

§ 435.30

**“The provisions of this subpart are applicable to those facilities engaged in the production, field exploration, drilling, well completion and well treatment in the oil and gas extraction industry which are located landward of the inner boundary of the territorial seas..”**

The applicability of this provision is broad enough to encompass the processes by which the effluent tailing ponds in question were generated. The “Alberta Tailings Ponds II. Factual Record regarding Submission SEM-17-001” describes the process for bitumen production in great detail, as well as its effect on the environment. It explains:

*Oil sands tailings are a mixture of water, sand, fine silts, clay, residual bitumen and lighter hydrocarbons, inorganic salts and water-soluble organic compounds, and include other compounds such as naphthenic acids, cyanide, phenols, arsenic, cadmium, chromium, copper, lead and zinc. Freshly produced OSPW is a substance acutely toxic to aquatic organisms.*<sup>62</sup>

With respect to the US “Effluent Limitation Guidelines,” the EPA has stated that the zero-discharge rule in 40 CFR § 435.32 applies to the Oil and Gas Extraction Industry – which includes facilities that “produce crude petroleum from surface shale or tar sands.”<sup>63</sup>

Furthermore, the zero-discharge requirement within the regulation is based on a finding of the US EPA that injections of wastewater via Class II deep disposal wells is the “best practicable control technology currently available.”<sup>64</sup> To avoid coincidental harm to the environment, the design, construction and use of Class II deep disposal wells is strictly regulated to ensure that it protects water sources.<sup>65</sup>

Indeed, injecting the tar sands effluent into saline aquifers has been shown to be a viable option for disposal of wastewater. A recent environmental assessment done by Suncor Energy for the Lewis Project has concluded that disposal of wastewater into the Middle Devonian aquifer system, which is located beneath the McMurray Formation, is in fact a viable option.<sup>66</sup> The hydrological assessment was conducted by Matrix Solutions Inc., which found that not only would the project be technically

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<sup>62</sup> CEC, “Alberta Tailings Ponds II. Factual Record regarding Submission SEM-17-00” (2020) at 24, online: *North America Environmental Law and Policy* <<http://www.cec.org/files/documents/publications/11861-alberta-tailings-ponds-ii-factual-record-north-american-environmental-law-and-en.pdf>>.

<sup>63</sup> 80 FR 18557 at page 18565 (7 April 2015), online: <<https://www.govinfo.gov/content/pkg/FR-2015-04-07/pdf/2015-07819.pdf>>.

<sup>64</sup> Dr. Mark Cherniak, Staff Scientist at Environmental Law Alliance Worldwide (ELAW), Personal Communication to Calvin Sandborn, March 29, 2022.

<sup>65</sup> EPA, “Class II Oil and Gas Related Injection Wells” online *United States Environmental Protection Agency* <<https://www.epa.gov/uic/class-ii-oil-and-gas-related-injection-wells>>; Electronic Code of Federal Regulations, 40 CFR Subpart C - Criteria and Standards Applicable to Class II Wells

<sup>66</sup> See: Environmental Assessment - Suncor Energy Inc. Lewis - Environmental Impact Assessment (EIA) and application for approval at: <<https://open.alberta.ca/publications/environmental-assessment-suncor-energy-lewis-eia>>.



feasible, but it is not expected to negatively affect receptors such as non-saline aquifers and surface water bodies in the regional study areas. The assessment concluded that “impacts to groundwater quality are anticipated to be localized to the selected disposal aquifer and limited in lateral extent.”<sup>67</sup>

*Another way to avoid release into the River:* Another method of ensuring that oil sands effluent is not released into the Athabasca River would be to more effectively treat the OSPW – and continue to reuse it indefinitely in the bitumen extraction process. Instead of continually using and contaminating vast quantities of new fresh water, the same water could be more effectively recycled in a “closed loop system.” Currently, the processed water cannot be reused indefinitely because the build-up of salts causes scaling and corrosion problems. At that point the processed water must be released into the tailings ponds, and new freshwater must be brought in for processing purposes.<sup>68</sup> Desalination has been explored as a way to continuously reuse the water for bitumen extraction, and also reduce the amount of fresh water taken from the Athabasca River. Now studies have been conducted that demonstrate the practicality of desalinating the water with deionization techniques such as electrodialysis (ED).<sup>69</sup>

At C\$10.71 per cubic meter,<sup>70</sup> this desalination process comes with a significant financial cost – but not one that outweighs the benefits of preventing egregious harm to the environment and violating the rights of surrounding Nations. Such perennial closed loop recycling could be key to avoiding any release of effluent waters into the River.

In sum, in order to avoid the release of **any** effluent into the Athabasca River, the MCFN may want to further explore the options of:

- saline aquifer injection; and
- the establishment of absolute “closed loop” perennial recycling of OSPW in the bitumen extraction process.

If the tailings effluence can be diverted from surface water, there may be less likelihood of impacts on treaty rights or sensitive ecosystems.

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<sup>67</sup> See: Suncor Energy, Appendix D – Hydrogeology <[https://open.alberta.ca/dataset/f9e55e85-c164-4227-8be6-b45fb32f812f/resource/db8c8aa3-6b6f-40a8-b4a8-923f915f37e7/download/vol3\\_appendixd\\_hydrogeology.pdf](https://open.alberta.ca/dataset/f9e55e85-c164-4227-8be6-b45fb32f812f/resource/db8c8aa3-6b6f-40a8-b4a8-923f915f37e7/download/vol3_appendixd_hydrogeology.pdf)> at 17

<sup>68</sup> Jonathan W Martin, “Scientific Commentary on Effluent Pond Treatment” (2015) 34:12 Environmental Toxicology and Chemistry at 2683.

<sup>69</sup> Eun-Sik Kim et al, “Desalination of oil sands process-affected water and basal depressurization water in Fort McMurray, Alberta, Canada: application of electrodialysis” (2013) 68:12 Water Science and Technology, online: <<https://pubmed.ncbi.nlm.nih.gov/24355856/>>.

COSIA have been looking at practical desalination methods to remove salt. For more information, see: COSIA, “Wastewater to Clean Water,” online: <<https://cosia.ca/blog/wastewater-clean-water>>; COSIA “Mining” online: <<https://cosia.ca/node/408>>; Saltworks, “EOR Economics Improved with Innovation in Produced Water Desalination” online: <<https://www.saltworkstech.com/news/eor-economics-improved-with-innovation-in-produced-water-desalination/>>. This link shows a practical technology example of desalination.

<sup>70</sup> Eun-Sik Kim et al, “Desalination of oil sands process-affected water and basal depressurization water in Fort McMurray, Alberta, Canada: application of electrodialysis” (2013) 68:12 Water Science and Technology, online: <<https://pubmed.ncbi.nlm.nih.gov/24355856/>>.

## Cleaning the wastewater to match baseline conditions

On the other hand, if effluent from tar sands tailings is actually to be released into the Athabasca River, there must be stringent criteria to determine that the wastewater released will not diminish the water quality of the river. In order to do this, the physical, chemical and biological components of the receiving waters must be thoroughly assessed. In addition, a thorough assessment must be made to determine if it is technologically possible to treat the effluent (through wetlands treatment, other biological treatment, petroleum coke and oxydants, reverse osmosis, etc.) to produce effluent that is as clean as the receiving waters.

As explained in Part I of this report, ensuring that water quality is not diminished may be done by framing the Athabasca River as a body of water analogous to Outstanding National Resource Waters – and mirroring the US *Clean Water Act*'s approach of characterizing the water's existing state and value. As in the CWA, there should be a detailed scientific assessment of natural watershed conditions used to establish a "baseline" condition that any proposed discharge must maintain or exceed. Based on these baseline conditions, the Athabasca River should not receive any discharges in any manner that would cause or contribute to degradation of the existing health and water quality of the river. In the United States, no pollution discharge permit can be issued that would lower the water quality of the Outstanding National Resource Waters.<sup>71</sup> The Mikisew Cree might advocate that the same strict non-degradation rule apply to these Canadian "outstanding waters," at a minimum.

Note that a "catch all" clause that prohibits any proposed discharge that causes or contributes to violations of ONRW standards should be included in the new rules. This could function as a check, and would ensure that any proposed discharge must not degrade the watershed below the baseline ecological conditions (both proximate and downgradient).<sup>72</sup>

## INDIGENOUS-LED NON-DEGRADATION STRATEGY IMPLEMENTATION

The Gitanyow Lax'yip Water Policy and the Yinka Dene 'Uza'hne Surface Water Management Policy both provide extensive descriptions of how to effectively implement a non-degradation strategy that maintains water quality, protects flows, and ensures that aquatic species are not impacted by effluent.

The Gitanyow Water Quality Standards, found within the Water Policy, provide a framework for defining water quality conditions that function as a baseline for any effluent released into surface water. The standards describe the importance of collecting water quality samples from a reference

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<sup>71</sup> Guy Alsentzer, Executive Director & Founder of Upper Missouri Waterkeeper, Personal Communication to Calvin Sandborn, April 7, 2022.

<sup>72</sup> Guy Alsentzer, Executive Director & Founder of Upper Missouri Waterkeeper, Personal Communication to Calvin Sandborn, April 7, 2022.

site that is both relevant and has not yet been impacted by industrial activities.<sup>73</sup> The standards also state the importance of normalizing variables that can influence monitoring results, since results may vary depending on the time of the year and other changing conditions. Given the many variables, there should be at least five years of hydrological data analyzed in a scientifically robust and reproducible way. The Water Quality Standards are then calculated by deriving the maximum baseline value using the 95<sup>th</sup> percentile of the dataset, with an allowable change in 20% to account for the range of natural variability. This allowable limit ensures full protection of the water quality as it is before the effluent is released.

The Yinka Dene ‘Uza’hne Surface Water Management Policy (“Yinka Dene Policy”) uses a similar approach to that within the Gitanyow Lax’yip Water Policy, particularly when assessing waters classified as “High Cultural or Ecological Significant Waters.” The Yinka Dene Policy uses a Background Concentration Procedure (BCP) in order to derive standards that maintain background conditions, or that restore the quality of the water to pre-development conditions. This process prioritizes the use of water quality data that is collected prior to development in order to determine the background conditions to be used. However, when this data cannot be acquired, the background concentrations are derived using data from stations upstream of any polluting activities.<sup>74</sup>

Like Gitanyow’s Water Quality Standards, there is a recognition that water quality variables change rapidly depending on daily, seasonal or annual variability. Background standards should be determined for the relevant time periods and conditions should be normalized. Water Quality Standards are then calculated by determining the 95<sup>th</sup> percentile for background conditions, and also allowing for slight variation above background levels. A strict non-degradation approach is then used to determine the actual numerical standards for effluent allowed in waters.<sup>75</sup>

## CONCLUSION

The examples provided in Part I of this report are intended to help the MCFN negotiate a non-degradation standard that will protect the Athabasca River, the surrounding sensitive ecosystems, and the Nations that depend on its resources. The US *Clean Water Act*, as well as legislation passed in many US states, provide examples of strong “anti-degradation” standards for waters that are of outstanding quality. In Canada, the Yukon, the Gitanyow First Nation, and the Nadleh and Stellat’én First Nations have all incorporated non-degradation strategies in their water quality guidelines. These strategies can be met by either diverting water from the Athabasca River and injecting it into saline aquifers, or stringently assessing baseline water conditions to ensure that they do not get degraded.

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<sup>73</sup> Draft Gitanyow Lax’yip Water Policy. Draft 2.1 February 22, 2021

<sup>74</sup> “Yinka Dene ‘uza’hne Guide to Surface Water Quality Regulations” (18 March 2016), at 2 online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](http://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>75</sup> “Yinka Dene ‘uza’hne Guide to Surface Water Quality Regulations” (18 March 2016), at 3 online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](http://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

## PART II: CO-GOVERNANCE

Co-governance regimes are characterized by having equal decision-making power between governing bodies, ensuring that decisions cannot be made unilaterally. It allows for sharing of power between Indigenous and Crown governments, and should incorporate the laws and traditional knowledge of co-governing Nations. It is also a relationship that truly embodies Free, Prior, Informed Consent, and should be prioritized in any development that will significantly impact First Nations.

### INDIGENOUS NATIONS AND TRIBES SETTING THEIR OWN ENVIRONMENTAL STANDARDS ON THEIR LAND

The MCFN would like to incorporate co-governance by setting environmental standards, and having some authority and control over their members' exposure to environmental contaminants. This is not a novel regulatory authority – other Nations have set precedents that may be followed or built upon by the MCFN. The following case studies will provide an overview of how other Nations and Tribes have created self-governance or co-governance frameworks in order to protect their land.

#### Case Study 1: The powerful role of US Tribes under the US Clean Water Act

Under the US *Clean Water Act*, a Tribe can play the equivalent role as a US state government in:

- setting water quality standards; and
- enforcing the *Clean Water Act*

in their territory.<sup>76</sup>

As one scholar has put it:

*Under the federal Clean Water Act, qualifying tribes can receive treatment-as-a-state status (TAS), which allows them to set water quality standards, certify that certain discharges meet those water quality standards, and, after delegation from the Environmental Protection Agency (EPA), administer the Act's National Pollutant Discharge Elimination System (NPDES) permitting program.<sup>77</sup>*

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<sup>76</sup> Electronic Code of Federal Regulations, 40 CFR § 130.16 - Treatment of Indian tribes in a similar manner as states for purposes of the Clean Water Act; Dave Ross and Anna Wildeman, "EPA Moves to Elevate Tribal Rights in Water Quality: Changes Could Modify CWA Implementation" (4 October 2021) online: *Environmental Law and Policy Monitor* <<https://www.environmentallawandpolicy.com/2021/10/epa-moves-to-elevate-tribal-rights-in-water-quality-changes-could-modify-cwa-implementation/>>.

<sup>77</sup> Robin Kundis Craig, "Borders and Discharges: Regulation of Tribal Activities under the Clean Water Act in States with NPDES Program Authority" (1997) 16:1 *UCLA Journal of Environmental Law and Policy* at 1 <<https://escholarship.org/uc/item/55r94476>>.

For example, see the account of how the Jamestown S’Klallam Tribe recently gained the right to administer the *Clean Water Act’s* water quality standards and certification programs on reservation and trust lands.<sup>78</sup>

Furthermore, not only can a Tribe exercise the full powers of a state government on reservation land. There is also likely “tribal authority under the *Clean Water Act* to veto, condition, or deny [upstream] federal permits affecting water quality and tribal treaty rights to hunt, fish, and gather.”<sup>79</sup>

Thus, if the Athabascan tar sands existed in the US, there would be a powerful statutory model for a fully empowered Indigenous role in both setting the rules and enforcing the rules for dealing with the tailings ponds.

## Case Study 2: US Inter-tribal Fish and Wildlife Commissions

An additional powerful model for Indigenous rule-setting and Indigenous rule enforcement is found in the US Pacific Northwest, in the Columbia River Inter-Tribal Fish Commission (CRITFC). The Commission is the vehicle used by the Nez Perce, Umatilla, Warm Springs and Yakama Tribes to assert their treaty rights on and off reservation, and to manage, monitor and protect fisheries and water.<sup>80</sup>

Under the *Northwest Power Act* 1980, tribes were established as equals to federal fish and wildlife agencies with respect to fish management.<sup>81</sup> As co-managers of the Columbia River, the four tribes and the states of Oregon, Washington, and Idaho share responsibilities for making habitat, harvest, and hatchery decisions.<sup>82</sup> The Tribes, through the Commission, set fishing seasons and fishing regulations for tribe members.<sup>83</sup> The inter-tribal commission also plays a critical role in enforcing tribal, state and federal fishing laws for both Indians and non-Indians.

*The Commission’s Enforcement Department, created in 1983 to regulate treaty fisheries, enforce federal and state laws for non-Indian fisheries, secure cultural resources, and protect fishers, is critical to this process. Department officers possess multiple authorities, as they hold commissions from their respective*

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<sup>78</sup> Natasha Brennan, “Jamestown S’Klallam Tribe approved by EPA to administer Clean Water Act programs” (8 April 2022) online: *The News Tribune* <<https://www.thenewstribune.com/news/state/washington/article260139880.html#storylink=cpy>>. **See the relevant law journal article at:** Paula Goodman Maccabee, “Environmental Justice and Tribal Environmental Regulation” (2015) 41:2 William Mitchell Law Review, online: <[https://subdomain.waterlegacy.org/wp-content/uploads/2020/06/Maccabee\\_TribalCWA401\\_WilliamMitchell.L.Rev\\_2015.pdf](https://subdomain.waterlegacy.org/wp-content/uploads/2020/06/Maccabee_TribalCWA401_WilliamMitchell.L.Rev_2015.pdf)>.

<sup>79</sup> Water Legacy, “Tribal Clean Water Act Authority,” at para 4, online: <<https://waterlegacy.org/tribal-clean-water-act-authority/#:~:text=Expanding%20Tribal%20Authority%20under%20the,do%20within%20their%20own%20borders>>.

<sup>80</sup> CCRIFC, “Annual Work Plan,” online: <<http://ccrffc.org/annual-work-plan/>>.

<sup>81</sup> Michael C Blumm, “The Northwest Power Act’s Institutional Innovations and Unfilled Promises” (1987) 2 J Envtl L & Litig 165.

<sup>82</sup> Laura Berg, “Columbia River Inter-Tribal Fish Commission,” online: *Oregon Encyclopedia* <[https://www.oregonencyclopedia.org/articles/columbia\\_river\\_inter\\_tribal\\_fish\\_commission/#.YmR0FtrMKUk](https://www.oregonencyclopedia.org/articles/columbia_river_inter_tribal_fish_commission/#.YmR0FtrMKUk)>.

<sup>83</sup> Columbia River Inter-Tribal Fish Commission, “How Tribal Fisheries are Set,” online: <<https://critfc.org/2015/03/04/how-tribal-fisheries-are-set/>>.

*CRITFC member tribes, the State of Oregon, and the US Fish and Wildlife Service. Further, the states of Oregon, Washington, and Idaho have agreed that the Department and its officers bear primary responsibility for fisheries enforcement on and off reservation lands. Remarkably, this enforcement not only extends the reach of tribal jurisdiction, but has the added, universal benefit of more consistent monitoring and enforcement of fishing regulations – regulations that in the past were mired in turf wars between tribal, state, and federal agencies.<sup>84</sup>*

A similar US inter-tribal initiative, the Great Lakes Indian Fish & Wildlife Commission (GLIFWC), represents eleven Ojibwe tribes in Minnesota, Wisconsin, and Michigan.<sup>85</sup> GLIFWC exercises broad authority, with Commission biologists determining the number of fish that can be safely harvested from each lake within the ceded territory. They then share this information with tribal leaders and spear-fishers (the resource users). The individual tribes of GLIFWC proceed to collaboratively develop a unified harvest limit.<sup>86</sup>

GLIFWC has an active Conservation Enforcement Division, whose conservation officers monitor treaty harvest in ceded territories and Lake Superior, and enforce tribal codes that regulate each treaty season. Wisconsin law now designates GLIFWC officers sworn peace officers of the state.<sup>87</sup> GLIFWC officers enforce a large number of tribal regulations, including those respecting ricing (wild rice harvesting), open-water spearing and netting, open-water hook and line fishing, winter spearing and fishing, big and small game hunting, and aquatic invasive species.<sup>88</sup> The GLIFWC officers also enforce state environmental laws against both tribal and non-tribal members on ceded lands. GLIFWC also has self-regulation agreements with the Fish and Wildlife Service, Forest Service, Coast Guard and National Park Service, that provides them with concurrent jurisdiction with federal agencies, who refrain from enforcement in areas where GLIFWC practices enforcement.<sup>89</sup>

In making the argument that Canada should treat Mikisew Cree First Nation and allied Nations as complete equals in the creation and enforcement of resource laws regarding the tar sands, the examples of the Columbia River Inter-Tribal Fish Commission, the *Northwest Power Act* and the Great Lakes Fish and Wildlife Commission stand as cogent examples.

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<sup>84</sup> ELC, “The Case for a Guardian Network Initiative” (July 2020), at 79 online: *Environmental Law Centre*

<sup>85</sup> Online: *Great Lakes Indian Fish & Wildlife Commission* <[www.glifwc.org/](http://www.glifwc.org/)>.

<sup>86</sup> Tom Busiahn & Jonathan Gilbert, *The Role Of Ojibwe Tribes In The Co-Management Of Natural Resource In The Upper Great Lakes Region: A Success Story* (GLIFWC, 2009) pp 4-5, online (pdf): *GLIFWC* <[www.glifwc.org/minwaaajimo/Papers/Co-management%20Paper%20Busiahn%20%20FINAL.pdf](http://www.glifwc.org/minwaaajimo/Papers/Co-management%20Paper%20Busiahn%20%20FINAL.pdf)>.

<sup>87</sup> “Publications – Brochures – GLIFWC Brochure” at p 12, online (pdf): GLIFWC <[http://glifwc.org/publications/pdf/GLIFWC\\_brochure.pdf](http://glifwc.org/publications/pdf/GLIFWC_brochure.pdf)>.

<sup>88</sup> See “Off-Reservation Harvest Regulations,” online: *GLIFWC* <[data.glifwc.org/regulations/](http://data.glifwc.org/regulations/)>, and Environmental Law Centre, “Community Enforcement of Environmental Laws – Options for BC First Nations” (ELC Associates Teleconference, 15 June 2009) at p 2, online (pdf): *Environmental Law Centre* <[http://www.elc.uvic.ca/wordpress/wp-content/uploads/2015/02/C1\\_CommunityEnforcementBackgrounder-2009Jun15.pdf](http://www.elc.uvic.ca/wordpress/wp-content/uploads/2015/02/C1_CommunityEnforcementBackgrounder-2009Jun15.pdf)>.

<sup>89</sup> See “Off-Reservation Harvest Regulations,” online: GLIFWC, and Environmental Law Centre, “Community Enforcement of Environmental Laws – Options for BC First Nations” (ELC Associates Teleconference, 15 June 2009) at 2, online (pdf): *Environmental Law Centre* <[http://www.elc.uvic.ca/wordpress/wp-content/uploads/2015/02/C1\\_CommunityEnforcementBackgrounder-2009Jun15.pdf](http://www.elc.uvic.ca/wordpress/wp-content/uploads/2015/02/C1_CommunityEnforcementBackgrounder-2009Jun15.pdf)>.

### Case Study 3: Nadleh Whut'en and Stelat'en First Nations' Water Management Regime

When the Nadleh Whut'en and Stelat'en First Nations discovered that British Columbia's Endako mine was releasing chronically toxic effluent into the environment, they enacted a water management regime to regulate surface waters throughout their territories: the *Yinka Dene 'Uza'hné Surface Water Management Policy* and the *Yinka Dene 'Uza'hné Guide to Surface Water Quality Standards*. As discussed in Part I of this report, the Policy is an "expression of [Yinka Dene] living governance and laws,"<sup>90</sup> and both documents constitute a "collaborative water management [plan] for all levels of government."<sup>91</sup> The First Nations collaborated with the province of British Columbia and the owner of the Endako mine to "craft a unique system that preserves, enhances, and protects water impacted by the mine for future generations."<sup>92</sup>

The Policy provides a compelling example of how governments and First Nations can attempt to co-manage waters impacted by resource projects, and has led to a "pathway of collaboration" on provincial and tribal levels.<sup>93</sup> A 2015 joint commitment between British Columbia and the First Nations Leadership Council states that "[c]oncrete action, and new and creative approaches, at all levels is required – in direct government-to-government negotiations, policies and laws, fiscal relations and decision-making."<sup>94</sup> A series of agreements to create relationships between governments have also been entered into between the province and the Carrier Sekani First Nations, including the 2015 Collaboration Agreement that commits the parties to discussing shared decision-making processes to protect natural resources and ecosystems.<sup>95</sup> The Nations have extended an invitation to the province to more formally implement the Policy in a way that is Indigenous-led. The method by which the Nadleh Whut'en and Stelat'en First Nations' set specific standards and management objectives for bodies of water – and negotiate collaborative decision-making – may be of interest to the MCFN as they create their own structure.

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<sup>90</sup> "Yinka Dene 'uza'hné Guide to Surface Water Quality Regulations" (18 March 2016) at 11, online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](http://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>91</sup> "Yinka Dene 'uza'hné Guide to Surface Water Quality Regulations" (18 March 2016) at 9-10, online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](http://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>92</sup> "Yinka Dene 'uza'hné Guide to Surface Water Quality Regulations" (18 March 2016) at 11, online: *Carrier Sekani Tribal Council* <[darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf](http://darac.sg-host.com/wp-content/uploads/Yinka-Dene-Uzahne-Guide-to-Surface-Water-Quality-Standards-March-18-2016-00303157xC6E53.pdf)>.

<sup>93</sup> Carrier Sekani Tribal Council, "Discussion Paper: Opportunities for Collaborative Water Management," online (pdf): <<http://darac.sg-host.com/wp-content/uploads/Discussion-Paper-March-2016-00303629xC6E53.pdf>>.

<sup>94</sup> Carrier Sekani Tribal Council, "Discussion Paper: Opportunities for Collaborative Water Management," at 2 online (pdf): <<http://darac.sg-host.com/wp-content/uploads/Discussion-Paper-March-2016-00303629xC6E53.pdf>>.

<sup>95</sup> Carrier Sekani Tribal Council, "Discussion Paper: Opportunities for Collaborative Water Management," at 3 online (pdf): <<http://darac.sg-host.com/wp-content/uploads/Discussion-Paper-March-2016-00303629xC6E53.pdf>>.



## Case Study 4: Haida Gwaii Management Council

British Columbia has agreed with the Haida Nation that land and resource management should be co-governed across Haida territory.<sup>96</sup> British Columbia and the Haida Nation have equal representation on the Haida Gwaii Management Council,<sup>97</sup> which makes key decisions on resources for the territory.<sup>98</sup> Decision-making powers include setting the region's comprehensive forestry strategy, maximum rate of forest harvest allowed, and standards for conserving heritage sites.<sup>99</sup> This joint Management Council implements and amends the land use plan for the territory previously negotiated between British Columbia and the Haida Nation – a land use plan that sets out land use zones (including protected and special value areas to be maintained according to Haida law),

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<sup>96</sup> *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>]. This protocol was given effect in provincial law through the *Haida Gwaii Reconciliation Act*. *Haida Gwaii Reconciliation Act*, SBC 2010, c 17, online: <[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017_01)> [<https://perma.cc/989J-MDQK>].

<sup>97</sup> The Haida Gwaii Management Council was established under the *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, and the *Haida Gwaii Reconciliation Act*. *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, schedule B, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>]. *Haida Gwaii Reconciliation Act*, SBC 2010, c 17, s 3, online:

<[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017_01)> [<https://perma.cc/989J-MDQK>].

The Protocol was amended by a further agreement signed in 2016, which extended the financial support that British Columbia provides to fund participation in and implementation of the Protocol by the Haida Nation. *Amending Agreement of the Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 22 January 2016, s 4.0, online (pdf):

<[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>].

A more comprehensive description of the history and responsibilities of the Haida Gwaii Management Council can be found in their February 2018 newsletter. Haida Gwaii Management Council, "On Building Consensus: A Short History of the Council" *Forest Views: Making Decisions Together on Haida Gwaii* (February 2018) 4 at 4-5, online (pdf): *Haida Gwaii Management Council* <[http://www.haidagwaiimangementcouncil.ca/wp-content/uploads/2019/03/HGMC\\_FEB18.pdf](http://www.haidagwaiimangementcouncil.ca/wp-content/uploads/2019/03/HGMC_FEB18.pdf)> [<https://perma.cc/BFN7-B7R2>].

<sup>98</sup> These decisions include the determination and approval of Annual Allowable Cut (forestry harvests), approval of management plans, developing policies and standards for the identification and conservation of heritage sites, developing a comprehensive forestry strategy, and the implementation or amendment of the 2007 *Haida Gwaii Strategic Land Use Agreement*. Per section 6.2 of the *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, the shared decision-making framework is outlined in schedule B. *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, ss 6.2, schedule B ss 2.2-2.3 online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>].

<sup>99</sup> These decisions include the determination and approval of Annual Allowable Cut (forestry harvests), approval of management plans, developing policies and standards for the identification and conservation of heritage sites, developing a comprehensive forestry strategy, and the implementation or amendment of the 2007 *Haida Gwaii Strategic Land Use Agreement*. Per section 6.2 of the *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, the shared decision-making framework is outlined in schedule B. *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, ss 6.2, schedule B ss 2.2-2.3 online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>].



management objectives, and benchmarks based on Haida cultural values.<sup>100</sup> With its equal representation from British Columbia and the Haida Nation, the Haida Gwaii Management Council operates by consensus<sup>101</sup> and is chaired by a mutually agreed-upon chair.<sup>102</sup>

The agreement between British Columbia and the Haida Nation to co-govern and protect the land provides powerful opportunities for Indigenous decision-making. While this is a unique agreement that has emerged within the particular context of the relationship between the Haida Nation and British Columbia, the MCFN may be interested in leveraging their rights to achieve similar language in co-governance agreements.

### Case Study 5: Tsleil-Waututh Nation's Burrard Inlet Water Quality Objectives

The Tsleil-Waututh Nation have negotiated an agreement with the BC Ministry of Environment and Climate Change Strategy (ENV) to update Water Quality Objectives (WQOs) for the Burrard Inlet. The

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<sup>100</sup> Most notably, this agreement includes the designation of Protected Areas and Special Value Areas to be maintained "in accordance with [Haida] laws, policies, customs, traditions and decision-making processes." *Haida Gwaii Strategic Land Use Agreement*, 13 September 2007, at 4 online (pdf): <<https://www.haidanation.ca/wp-content/uploads/2017/03/Haida-Gwaii-Strategic-Land-Use-Agreement-2.pdf>> [<https://perma.cc/FG9H-5URJ>]. *Haida Gwaii Land Use Objectives Order*, 21 September 2017, at 1-2, online (pdf): <<http://www.haidagwaiimanagementcouncil.ca/wp-content/uploads/2019/03/HGLUOO-Consolidated-Order-2017-Final-Signed.pdf>> [<https://perma.cc/2WPW-MBW3>]

<sup>101</sup> *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, schedule B ss 2.4-2.5, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>]. *Haida Gwaii Reconciliation Act*, SBC 2010, c 17, s 3(3), online:

<[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017_01)> [<https://perma.cc/989J-MDQK>].

Note that the Haida Gwaii Management Council is supported by a Solutions Table, again with equal representation from the Haida Nation and provincial government (specified in the Terms of Reference created under Schedule B section 4.3.3 of the *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*). *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, schedule B s 4.3.3, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>]. "Terms of Reference for the Solutions Table," as cited in email from Council of the Haida Nation to Calvin Sandborn (26 April 2021).

The Solutions Table is responsible for "technical and operational" matters including reviewing applications and land use proposals and providing input to the Haida Gwaii Management Council who make the final decisions. *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, schedule B ss 3.2-3.4, online (pdf):

<[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>]. *Haida Gwaii Reconciliation Act*, SBC 2010, c 17, s 3(3), online:

<[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017_01)> [<https://perma.cc/989J-MDQK>]. Coast Funds, "Haida Nation: Kunst'aa Guu-Kunst'aayah – Moving to a Sustainable Future Together" (15 March 2019), online: *Coast Funds* <<https://coastfunds.ca/stories/kunstaa-guu-kunstaayah-reconciliation-protocol-moving-to-a-sustainable-future-together/>> [<https://perma.cc/MP9U-TGYXr>].

<sup>102</sup> *Kunst'aa guu – Kunst'aayah Reconciliation Protocol*, 11 December 2009, schedule B ss 1.6-1.7, online (pdf):

<[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida\\_rp\\_fully\\_signed\\_and\\_dated\\_-\\_jan\\_22\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/haida_rp_fully_signed_and_dated_-_jan_22_2016.pdf)> [<https://perma.cc/6JX6-W9ZT>].

*Haida Gwaii Reconciliation Act*, SBC 2010, c 17, s 3(2), online:

<[https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017\\_01](https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10017_01)> [<https://perma.cc/989J-MDQK>].

short-term intention of this agreement is to prevent further degradation of the inlet – and in the medium and long-term to provide a goal for improving water quality.<sup>103</sup>

Many of the changes to inputs in the Burrard Inlet come from industry, and the cumulative effects of industrial development are impacting Tsleil-Waututh Nation’s Aboriginal rights and interests.<sup>104</sup> The Nation is now leading the development of technical assessments, coordinating strategic solutions, and exploring environmental impacts.

The WQOs for the Burrard Inlet are framed by the Tsleil-Waututh Nation’s Burrard Inlet Action Plan. This Plan identified issues that are important to the Nation, as well as strategic actions that will lower pollution levels in accordance with Tsleil-Waututh law.<sup>105</sup> The MCFN may be interested in developing a similar plan in order to drive agreements to be in accordance with their traditional law.

### **Case Study 6: Gitanyow Lax’yip Water Policy** <sup>106</sup>

The Gitanyow Lax’yip Water Policy is written in accordance with the laws and interests of the Gitanyow First Nation. The Policy classifies water bodies, assesses water quality, addresses water quantity and flow management standards, characterizes baseline water conditions, and more. The Policy applies within the Gitanyow Lax’yip Land Use Plan and is used to create a Management Direction for Water Resources.<sup>107</sup> As a policy written primarily with the laws and values of the Gitanyow Nation in mind, the MCFN may look to it as an example of a community engaging in self-governance and setting stringent standards for water protection in their territory.

## **INDIGENOUS NATIONS AND TRIBES CONDUCTING ENVIRONMENTAL MONITORING AND TESTING IN THEIR TERRITORY**

Once water quality standards and thresholds are set, Indigenous Nations and Tribes have expressed interest in and are currently conducting environmental monitoring and testing in their territory. Environmental monitoring, data collection, and analysis by Indigenous Nations, Tribes, and Guardians can support enforcement actions and guide future decision-making on their territories. MCFN may be

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<sup>103</sup> Water Quality Objective Series, “Water Quality Objectives for Burrard Inlet” (November 2021) at 4 online: <[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/bc\\_env\\_twn\\_burrardinlet\\_wqo\\_2021\\_wqo-02.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/bc_env_twn_burrardinlet_wqo_2021_wqo-02.pdf)>.

<sup>104</sup> Water Quality Objective Series, “Water Quality Objectives for Burrard Inlet” (November 2021) at 12 online: <[https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/bc\\_env\\_twn\\_burrardinlet\\_wqo\\_2021\\_wqo-02.pdf](https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/water-quality-objectives/bc_env_twn_burrardinlet_wqo_2021_wqo-02.pdf)>.

<sup>105</sup> Patrick Lilley et al, “Burrard Inlet Action Plan,” at 4 online: <[https://msbernabei.weebly.com/uploads/8/7/7/6/8776151/twn-burrard-inlet-action-plan-summary\\_1.pdf](https://msbernabei.weebly.com/uploads/8/7/7/6/8776151/twn-burrard-inlet-action-plan-summary_1.pdf)>.

<sup>106</sup> Draft Gitanyow Lax’yip Water Policy. Draft 2.1 February 22, 2021

<sup>107</sup> Draft Gitanyow Lax’yip Water Policy. Draft 2.1 February 22, 2021

able to use the precedents below when considering how they would like to monitor and collect data related to the planned effluent release.

### Case Study 7: Daylu Dena Council (DDC) Water Quality Monitoring

The Daylu Dena Council (DDC), one of the three nations of the Kaska Dena Council, have been engaging in extensive guardian-type work on their territory, especially with respect to impact assessment and monitoring. The impetus for this work has been increased development of placer mining and oil and gas projects in DDC territory. In response, the DDC initiated water quality testing to obtain baseline data, so that development decisions can be formed based on accurate watershed conditions, and will not compromise environmental integrity.<sup>108</sup>

### Case Study 8: Lummi Seafood Consumption Study

The Lummi Tribe in Washington State engage in a number of water quality monitoring practices.<sup>109</sup> These include establishing baseline conditions of surface and ground waters, evaluating regulatory compliance, and using monitoring to support the implementation of water quality programs.<sup>110</sup> The Lummi Nation also manage fisheries, and lead study efforts related to water quality standards and shellfish consumption.<sup>111</sup> As a result of monitoring and restoration, the Tribe have been able to re-establish both cultural and commercial harvesting along their coast.

The MCFN can look to the work that is done by the Lummi Nation in order to learn more about water quality monitoring, particularly assessing baseline conditions, which must be done in order to ensure that water quality is not degraded.

### Case Study 8: Metlakatla Cumulative Effects Management Program

The Metlakatla First Nation have been deeply involved in monitoring contaminants on their territory. The Metlakatla Cumulative Effects Management (CEM) Program sets out priority values for the community, and engages in monitoring to ensure that any cumulative changes will be responded to effectively.<sup>112</sup> Programs like their Clam Community Monitoring Program “collect data on key stressors

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<sup>108</sup> Lindsay Telfer, “Water knowledge is power - supporting community based monitoring efforts in the Kaska Dene Territory,” online: *Our Living Waters* <[https://www.ourlivingwaters.ca/water\\_knowledge\\_is\\_power](https://www.ourlivingwaters.ca/water_knowledge_is_power)>.

<sup>109</sup> Lummi Nation, “Water Quality Monitoring” online: <<https://www.lummi-nsn.gov/Website.php?PageID=85#:~:text=The%20purpose%20of%20the%20Water,to%20support%20the%20development%20and>>.

<sup>110</sup> Lummi Nation, “Water Quality Monitoring” at para 1 online: <<https://www.lummi-nsn.gov/Website.php?PageID=85#:~:text=The%20purpose%20of%20the%20Water,to%20support%20the%20development%20and>>.

<sup>111</sup> See: Lummi Indian Business Council, “Lummi Seafood Consumption Study,” online: <<https://www.lummi-nsn.gov/Website.php?PageID=180>> and the Lummi Nation also manages their own fisheries, including shellfish, see: Lummi Indian Business Council, “Fisheries Management,” online: <<https://www.lummi-nsn.gov/Website.php?PageID=102>>.

<sup>112</sup> Metlakatla CEM, “Metlakatla CEM Program” online: *Metlakatla Cumulative Effects Management* <<http://metlakatlacem.ca/>>.

including, contaminants, habitat changes, and harvest levels.”<sup>113</sup> The community has partnered with Vancouver Aquarium’s PollutionTracker Program to collect samples and test them for contaminants.<sup>114</sup> The CEM Program also includes a number of “proactive and precautionary” triggers and management actions, which help maintain priority values in the community.<sup>115</sup> The MCFN may be interested in this monitoring program for its focus on cumulative effects, and the Metlakatla Nation’s implementation of management actions that are triggered by toxin levels.

## INDIGENOUS NATIONS AND TRIBES CONDUCTING ENVIRONMENTAL ENFORCEMENT IN THEIR TERRITORY

In addition to the examples of indigenous environmental enforcement cited above, a number of legislative provisions and government-to-government agreements recognize the authority of Indigenous Nations to enforce environmental laws and regulations in their territory. Guardian programs play a critical role in law enforcement by monitoring compliance, notifying colonial government officials of violations, and educating the public about what the law is. A number of Guardian programs have protocol agreements with government agencies overseeing such enforcement actions.<sup>116</sup> For discussion of many ways in which Nations have achieved both formal and informal enforcement authority, see our report, *The Case for a Guardian Network Initiative*.<sup>117</sup>

Even where a Nation does not have recognized enforcement authority, Guardians on patrol routinely and successfully enforce laws. This is done by interacting with land and marine users, and “remind[ing] users of local protocols, agreements or laws with respect to the activity they are engaged in.”<sup>118</sup> Guardians there observe, record, and report violations. They educate, persuade and, if necessary, shame potential lawbreakers. On the other hand, Nations with high capacity should be able to go beyond the “Observe, Record, Report” model. There are successful examples of Nations that are in full charge of enforcement in their territories – issuing tickets, making arrests, carrying guns and laying charges.

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<sup>113</sup> Metlakatla CEM, “Phase 2: Metlakatla Clam Monitoring Program: Environmental Data Collection” online: *Metlakatla Cumulative Effects Management* <<http://metlakatlacem.ca/phase-2-clam-monitoring-program/>>.

<sup>114</sup> Metlakatla CEM, “Phase 2: Metlakatla Clam Monitoring Program: Environmental Data Collection” online: *Metlakatla Cumulative Effects Management* <<http://metlakatlacem.ca/phase-2-clam-monitoring-program/>>.

<sup>115</sup> Metlakatla CEM, “Phase 3: Setting Management Triggers and Actions” online: *Metlakatla Cumulative Effects Management* <<http://metlakatlacem.ca/phase-3-setting-management-triggers-actions/>>.

<sup>116</sup> For example, the Nuxalk River Monitors and others have an enforcement protocol with DFO (Guardian Programs in Canada, *supra* note at p 9).

<sup>117</sup> Online at <<https://elc.uvic.ca/publications/guardian-network-initiative/>>.

<sup>118</sup> 2 Karen Peachey Consulting, On-The-Ground Indigenous Stewardship Programs Across Canada – Inventory Project (Prepared for TNC, Tides Canada, and the Indigenous Leadership Initiative: February 2015) at 9, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Final%20Report%20with%20](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Final%20Report%20with%20)>; as an example, the Taku River Tlingit First Nation Land Guardians inform hunters about BC hunting regulations, and work with the local Conservation Officer to monitor for compliance (“TRTFN Land Guardians,” online: *The T’akhu Â Tlèn Conservancy* <[takhuatlen.org/trtfn-land-guardians/](http://takhuatlen.org/trtfn-land-guardians/)>).

Delegation or appointment of statutory state authority to First Nations is a common way to achieve the goal of Indigenous enforcement. Existing legislation enables Ministers or their delegates at both the federal and provincial levels to designate or appoint enforcement officers and specify the range of powers that the officers hold.

Federal legislation that enables the delegation of enforcement includes:

- *Canada National Parks Act*, S.C. 2000, c.32;
- *Canada Wildlife Act*, R.S.C. 1985, c.W-9;
- *Canadian Environmental Protection Act*, S.C. 1999 c.33;
- *Canadian Environmental Assessment Act*, S.C. 1992 c.37;
- *National Marine Conservation Areas Act*, S.C. 2002, c.18;
- *Fisheries Act*, R.S.C. 1985, c.F-14;
- *Oceans Act*, S.C. 1996, c.31;
- *Species at Risk Act*, S.C. 2002, c.29.

Provincial legislation in Alberta that enables this type of designation includes:

- *Environmental Protection and Enhancement Act*, R.S.A. 2000, c.E-12;
- *Public Lands Act*, R.S.A. 2000, c.P-40;
- *Wildlife Act*, R.S.A. 2000, c.W-10.

There are also examples of enforcement powers that are an expression of Indigenous sovereignty and do not depend on delegated authority from another government, such as the enforcement powers of the Listuguj Mi'gmaq First Nation in Quebec.<sup>119</sup>

### Case Study 9: Fisheries Enforcement - Haida Fisheries Guardians Enforcement Powers<sup>120</sup>

Pursuant to section 5(1) of the *Fisheries Act*,<sup>121</sup> the Minister of Fisheries, Oceans and the Canadian Coastguard may designate people as “fishery guardians.”<sup>122</sup> Although not limited to Indigenous peoples, a number of Indigenous Fishery Guardians have been designated. In some cases, they conduct joint patrols and share training opportunities and equipment with Fisheries and Oceans Canada (DFO).<sup>123</sup>

DFO also administers an Aboriginal Fisheries Guardian program that designates employees of a First Nation as fisheries guardians pursuant to section 5 of the *Fisheries Act*.<sup>124</sup> The Aboriginal Guardian

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<sup>119</sup> Outlined below in Case Study 13.

<sup>120</sup> Environmental Law Centre, “Community Enforcement of Environmental Laws – Options for BC First Nations” (ELC Associates Teleconference, 15 June 2009) at pp 3-5, online (pdf): *Environmental Law Centre*.

<sup>121</sup> RSC 1985 c F-14.

<sup>122</sup> *Fisheries Act*, Section 5(1) of the federal *Fisheries Act* enables the Minister to designate fishery officers and guardians with each designee holding a certificate specifying the powers that the officer or guardian may exercise

<sup>123</sup> Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Ministry of Indigenous Relations and Reconciliation, First Nations Monitoring Evaluation Project – Final Report (Prepared for the BC Oil and Gas Innovation Research Society: 30 July 2018).

<sup>124</sup> Fisheries and Oceans Canada, “Aboriginal Fisheries Guardian program” (2019) online: *Government of Canada* <<https://www.pac.dfo-mpo.gc.ca/abor-autoc/fisheries-guardians-gardes-peche-eng.html>>.

Program has been part of the Aboriginal Fisheries Strategy Agreements since 1992.<sup>125</sup> Feedback from First Nations involved in the Guardian Program has been mixed.<sup>126</sup> Participants report frustration with the lack of training and responsibility, and there remains some tension created in the community when Fisheries Guardians ticket community members, or are recruited by DFO for work outside the community.

An example of a Fisheries Guardian Program is that of the Haida Nation, established in mid-1990.<sup>127</sup> Haida Fisheries Guardians have less authority than Fisheries Officers, given that they can only enforce laws through DFO, and they usually accompany Fisheries Officers on patrol. From a community perspective, DFO has provided little direction for the Program and there is a lack of concurrence on the role of the Haida Nation in fisheries management. However, DFO has provided the Haida with the option of negotiating Enforcement Protocols for certain species, which would provide ticketing authority.<sup>128</sup>

Furthermore, the *Fisheries Act* has specifically authorized Fishery Guardians to enforce the laws of certain First Nations.<sup>129</sup> In particular, Fishery Guardians can enforce Nisga'a,<sup>130</sup> Tla'amin,<sup>131</sup> Tsawwassen,<sup>132</sup> and Maanulth<sup>133</sup> laws. Nisga'a enforcement staff wear uniforms and safety equipment, including bullet-proof vests, and receive training at the Justice Institute in Vancouver.<sup>134</sup> They enforce Nisga'a fish and wildlife laws and federal laws of general application, primarily by means of a ticketing system.<sup>135</sup>

### Case Study 10: Halfway River First Nation Conservation Officer

In British Columbia, the Halfway River First Nation (HRFN) recently entered into a historic partnership with the BC Conservation Officer Service (COS). The agreement creates a dedicated HRFN Conservation Officer position, which is “the first position of its kind in the history of the Conservation

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<sup>125</sup> <<https://www.haidanation.ca/guardians/>>.

<sup>126</sup> Claire Hutton, formerly Outreach Worker, Sierra Club of Canada BC Chapter. Personal Communication to Tim Watson, November 18 2008.

<sup>127</sup> Pat Fairweather, Haida Fisheries Program Manager. Personal Communication to Tim Watson, November 27, 2008.

<sup>128</sup> Community Enforcement of Environmental Laws Options for BC First Nations, Environmental Law Centre University of Victoria (15 June 2009). <<https://elc.uvic.ca/publications/community-enforcement-of-environmental-laws-options-for-bc-first-nations-background/>>.

<sup>129</sup> *Fisheries Act*, 267 RSC 1985 c F-14. s. 5(4).

<sup>130</sup> *Fisheries Act*, 267 RSC 1985 c F-14. s.5(4)(a).

<sup>131</sup> *Fisheries Act*, 267 RSC 1985 c F-14. s. 5(4)(a.1).

<sup>132</sup> *Fisheries Act*, 267 RSC 1985 c F-14. s. 5(4)(b).

<sup>133</sup> *Fisheries Act*, 267 RSC 1985 c F-14. s. 5(4)(c).

<sup>134</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 38, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw%20ork\\_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw%20ork_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf)>.

<sup>135</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012), online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw%20ork\\_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw%20ork_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf)>.



Officer Service.”<sup>136</sup> HRFN identified critical areas that the partners will target collaboratively to promote compliance, protect natural resources and ensure public safety through education and enforcement.”<sup>137</sup>

The new HRFN Conservation Officer will “respond to human-wildlife conflict reports, undertake proactive patrols, liaise with First Nation governments, RCMP and other law enforcement partners as needed, and attend community events, all in consideration of traditional laws and customs.”<sup>138</sup>

In a similar arrangement, the Kitasoo Xais Xais have just completed an agreement that provides for Kitasoo members to be appointed Park Rangers, with the authority to enforce the *Parks Act*, *Wildlife Act*, and other provincial legislation.<sup>139</sup>

### Case Study 11: Lummi Tribe’s Natural Resource Enforcement Patrol

The Lummi Nation in Washington State has enforcement authority “that stems from Lummi tribal laws and the Lummi Nation’s constitution.”<sup>140</sup> An agreement between Washington State Department of Natural Resources and the Lummi Nation establishes joint monitoring for natural resource management on Lummi Nation lands. Lummi Natural Resource Enforcement Patrol officers wear uniforms, have logos on their motor and marine vehicles, and share patrol duties with state departments. Lummi Nation Enforcement Patrol officers “make arrests, issue citations, inspect and confiscate gear and equipment, and ... file complaints in Lummi Tribal Court when legal provisions are violated.”<sup>141</sup>

While Lummi jurisdiction is mostly limited to the reserve, the Natural Resources Division has authority that “extends to traditional territories that include marine waters,”<sup>142</sup> as well as authority

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<sup>136</sup> Alaska Highway News Staff, “New conservation officer partnership in Halfway River” (30 January 2020) at para 2, online: *Alaska Highway News* <<https://www.alaskahighwaynews.ca/bc-news/new-conservation-officer-partnership-in-halfway-river-3506804>>.

<sup>137</sup> BC First Nations Energy and Mining Council and UVic Environmental Law Centre, “The Case for a Guardian Network Initiative” (July 2020), at 84 online: *ELC* <<https://elc.uvic.ca/wordpress/wp-content/uploads/2020/08/2020-01-01-Case-for-a-Guardian-Network-Initiative-compressed-for-email.pdf>>.

<sup>138</sup> BC First Nations Energy and Mining Council and UVic Environmental Law Centre, “The Case for a Guardian Network Initiative” (July 2020), at 84 online: *ELC* <<https://elc.uvic.ca/wordpress/wp-content/uploads/2020/08/2020-01-01-Case-for-a-Guardian-Network-Initiative-compressed-for-email.pdf>>.

<sup>139</sup> Personal communication with Douglas Neasloss of the Kitasoo Xais Xais Nation.

<sup>140</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 45, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw ork\\_Enhancing%20the%20Environmental%20Stewarship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw ork_Enhancing%20the%20Environmental%20Stewarship%20Authority%20of%20Indigenous%20People.pdf)>.

<sup>141</sup> Lummi Nation Code of Laws, Natural Resources Code s 10.01.060, [http://www.narf.org/nill/codes/lummi/10Natural\\_Resources.pdf](http://www.narf.org/nill/codes/lummi/10Natural_Resources.pdf)

<sup>142</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 45, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw ork\\_Enhancing%20the%20Environmental%20Stewarship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw ork_Enhancing%20the%20Environmental%20Stewarship%20Authority%20of%20Indigenous%20People.pdf)>.

“over non-Indigenous persons on tribal lands within the exterior boundaries of the Lummi Reservation.”<sup>143</sup>

### Case Study 13: Listuguj Mi’gmaq First Nation’s Enforcement

Enforcement of Indigenous laws is an important reflection of a Nation’s inherent sovereignty and governance authority, and can also greatly enhance resource management. This has been demonstrated through the work of the Listuguj Mi’gmaq First Nation in Quebec. The Nation, dissatisfied with inadequate fisheries management by the province of Quebec, unilaterally and successfully took over control and management of their fishery. It was due to the traditional knowledge passed down through generations of Listuguj Mi’gmaq fisherman that the community became acutely aware of the damage that had been done to the runs and were able to start managing it.<sup>144</sup>

Through an approximately eighteen month process of community consultation, the *Listuguj Mi’gmaq First Nation Law on Fisheries and Fishing* (the “*Fishing Law*”) was drafted, and then ratified by traditional Listuguj leaders in 1995 pursuant to Mi’gmaq custom.<sup>145</sup> The *Fishing Law*’s authority comes from the inherent jurisdiction of Listuguj Mi’gmaq First Nation, and is not dependent on delegated authority from another government.

The *Fishing Law* provides for a Listuguj Rangers Program, through which the rangers are responsible for enforcement. The result has been:

*...increased regulatory compliance ... [because] Indigenous laws are being enforced and are seen to have an inherent authority that is rooted in the knowledge and traditions of local families and fishers, as opposed to state laws which are viewed as an externally imposed constraint on Listuguj affairs.*<sup>146</sup>

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<sup>143</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 46, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw ork\\_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw ork_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf)>.

<sup>144</sup> Stephen Cornell et al, “Making First Nation Law: The Listuguj Mi’gmaq Fishery” (the Native Nations Institute for Leadership, Management and Policy, the National Centre for First Nations Governance, and Listuguj Mi’gmaq Nation: August 2010) at 9, online: *ResearchGate* <[www.researchgate.net/publication/326028764\\_Making\\_First\\_Nation\\_Law\\_The\\_Listuguj\\_Mi'gmaq\\_Fishery](http://www.researchgate.net/publication/326028764_Making_First_Nation_Law_The_Listuguj_Mi'gmaq_Fishery)>.

<sup>145</sup> Stephen Cornell et al, “Making First Nation Law: The Listuguj Mi’gmaq Fishery” (the Native Nations Institute for Leadership, Management and Policy, the National Centre for First Nations Governance, and Listuguj Mi’gmaq Nation: August 2010) at 116, online: *ResearchGate* <[www.researchgate.net/publication/326028764\\_Making\\_First\\_Nation\\_Law\\_The\\_Listuguj\\_Mi'gmaq\\_Fishery](http://www.researchgate.net/publication/326028764_Making_First_Nation_Law_The_Listuguj_Mi'gmaq_Fishery)>.

<sup>146</sup> Tim Thielmann, “Enhancing the Environmental Stewardship Authority of Indigenous Peoples” (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 41, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Netw ork\\_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Netw ork_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf)>.



Moreover, in 1995 the Atlantic Salmon Federation awarded the Listuguj Mi'gmaq First Nation with having the best-managed river in the province, the Restigouche River.<sup>147</sup> The rangers patrol the Restigouche River using three boats, a canoe, and two fully serviced trucks. From June to October, about forty rangers are employed.<sup>148</sup>

One Listuguj citizen stated, "You wouldn't see what I call a foreign government patrolling our waters and telling our fishers when and how they could fish. It's nice to know that we can employ our own people to patrol our waters and protect our fishers."<sup>149</sup>

As of March 2021, Canada has signed on to the five-year Rights and Reconciliation Agreement on Fisheries, recognizing the Listuguj Mi'gmaq First Nation's fisheries governance and fishing rights. Canada has also "accepted that the recognition of [Listuguj] inherent jurisdiction, legal orders, and laws is the starting point for discussions between the federal government and the LMG."<sup>150</sup>

As described above, there are a number frameworks for enforcement that have been put in place by communities, many of which have been supported by Canada, and have allowed First Nations to adequately protect their territories. These examples may provide a framework for the MCFN to negotiate enforcement mechanisms in their own community.

## INDIGENOUS NATIONS AND TRIBES HAVING AUTHORITY TO SET TRIGGERS WITHIN AN ADAPTIVE-MANAGEMENT PLAN

The Mikisew Cree have expressed an interest in being able to act when certain warning "triggers" (reduced muskrat population, reduced fish population, pollution levels, etc.) occur. A number of Indigenous nations and Tribes have expressed interest in and are setting triggers within adaptive-management plans. Adaptive management is defined by the United States Department of Interior (UDSI) as the following:

*Adaptive management promotes flexible decision-making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific understanding and helps adjust policies or operations as part of an*

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<sup>147</sup> Tim Thielmann, "Enhancing the Environmental Stewardship Authority of Indigenous Peoples" (Prepared for Claire Hutton, Coastal First Nations – Great Bear Initiative, May 2012) at 41, online (pdf): *Indigenous Guardians Toolkit* <[https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource\\_Coastal%20Stewardshp%20Network\\_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf](https://www.indigenousguardianstoolkit.ca/sites/default/files/Community%20Resource_Coastal%20Stewardshp%20Network_Enhancing%20the%20Environmental%20Stewardship%20Authority%20of%20Indigenous%20People.pdf)>..

<sup>148</sup> "Services – Public Security – Welcome," online: *Listuguj Mi'gmaq Government* <[listuguj.ca/directorates/listuguj-public-safety-directorate/#tab-id-1](https://listuguj.ca/directorates/listuguj-public-safety-directorate/#tab-id-1)>.

<sup>149</sup> Stephen Cornell et al, "Making First Nation Law: The Listuguj Mi'gmaq Fishery" (the Native Nations Institute for Leadership, Management and Policy, the National Centre for First Nations Governance, and Listuguj Mi'gmaq Nation: August 2010) at 19, online: *ResearchGate* <[www.researchgate.net/publication/326028764\\_Making\\_First\\_Nation\\_Law\\_The\\_Listuguj\\_Mi'gmaq\\_Fishery](https://www.researchgate.net/publication/326028764_Making_First_Nation_Law_The_Listuguj_Mi'gmaq_Fishery)>.

<sup>150</sup> Listuguj Mi'gmaq Government, "Canada Recognizes Listuguj's Laws and Authority in Fisheries Governance" (18 April 2021) at para 3, online: <<https://listuguj.ca/canada-recognizes-listuguis-laws-and-authority-in-fisheries-governance/#:~:text=The%20five%20year%20Rights%20and,fisheries%20governance%20and%20fishing%20rights>>.

*iterative learning process. Adaptive management also recognizes the importance of natural variability in contributing to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasizes learning while doing.*<sup>151</sup>

Triggers are “prenegotiated commitments in an adaptive-management plan that specify what actions are to be taken and when on the basis of information obtained from monitoring.”<sup>152</sup> For the MCFN, various triggers may then lead to actions like shutting off the discharge of effluent (or other extraordinary regulatory action) if a “trigger” level of contaminants are detected in water, fish, or other aquatic organisms or plants.

The MCFN may want to advocate for the establishment of a defined detailed protocol of action when contaminate levels rise above a certain level. For example, health-based threshold levels of toxins in fish tissue and other traditional foods could be set as triggers for halting effluent release, taking dramatic steps to strengthen standards and cleaning up contaminants in the river. Following precedent set in the US Pacific Northwest, safe levels of contamination in fish could be determined by assessing the amount of fish consumed and ensuring that these consumption rates do not increase incidences of cancer or other disease. In setting those “safe” levels, it is vital to account for the significantly higher rates of fish consumption amongst Indigenous peoples. For example, the US *Clean Water Act* requires states to adopt human health criteria to protect people from effects of pollutants in water. In Oregon, the fish consumption standard is currently 175 grams a day, which protects up to the 95<sup>th</sup> percentile of people who consume the most fish in the State.<sup>153</sup>

In Washington State, a lawsuit filed against the Environmental Protection Agency pushed for tougher water protection regulations, and for the actual amount of fish traditionally consumed by Indigenous people to be reflected in the water quality standards.<sup>154</sup> The EPA subsequently raised the standard to match Oregon’s 175 gram standard, which was significantly more protective. (This standard was lowered in 2020 under the previous US administration, but the EPA is once again proposing to reinstate these strong science-based criteria to protect Indigenous peoples.<sup>155</sup>)

Under this approach, once fish consumption levels are set, the acceptable rates of cancer and non-cancer diseases must be determined. The EPA encourages rigorous standards for protecting human

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<sup>151</sup> Martin A Nie & Courtney A Shultz, “Decision-Making Triggers in Adaptive Management” (2012) 26 *Conservation Biology* 6: 1137-1144 at 1138, citing UDSI (2009).

<sup>152</sup> Martin A Nie & Courtney A Shultz, “Decision-Making Triggers in Adaptive Management” (2012) 26 *Conservation Biology* 6: 1137-1144 at p. 1137, citing UDSI (2009).

<sup>153</sup> Bellamy Pailthorp, “Clean Water Suit Alleges State's Fish Consumption Rate Outdated” (11 October 2013) online: *KNKX* <<https://www.knkx.org/environment/2013-10-11/clean-water-suit-alleges-states-fish-consumption-rate-outdated>>; Wendee Nicole, “Meeting the Needs of the People: Fish Consumption Rates in the Pacific Northwest” (1 December 2013), online: *Environmental and Health Perspectives* <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3855506/#:~:text=The%20state%20came%20to%20an,the%20EPA%2C%20and%20tribal%20biologists>>.

<sup>154</sup> Bellamy Pailthorp, “Clean Water Suit Alleges State's Fish Consumption Rate Outdated” (11 October 2013) online: *KNKX* <<https://www.knkx.org/environment/2013-10-11/clean-water-suit-alleges-states-fish-consumption-rate-outdated>>.

<sup>155</sup> EPA, “Proposed Rule to Restore Protective Human Health Water Quality Criteria in Washington” (March 2022): online: *United States Environmental Protection Agency* <<https://www.epa.gov/system/files/documents/2022-03/proposed-rule-washington-factsheet-3-2022.pdf>>.

health by setting a cancer risk rate of less than one in one million.<sup>156</sup> In order to protect the MCFN and maintain the safety of traditional foods, similar protective standards could be advocated.

The standards could be in the form of a general rule that contaminant levels of any toxin must not exceed the one in a million risk level – or in the form of a trigger that the Mikisew could activate when that level of risk is exceeded. More research needs to be done on the precise implementation of this type of approach.

### Case Study 14: Gitanyow Huwilp Recognition and Reconciliation Agreement

The Gitanyow Huwilp Recognition and Reconciliation Agreement<sup>157</sup> prioritizes decision making between the Nation and the province of British Columbia, and includes provisions that address water management. The Agreement identifies ‘water resources’ as a land use objective that is to be put forward as a legal objective through a Land Use Objective Regulation.<sup>158</sup> The management direction for water is to “[p]rotect and maintain surface and groundwater to:

- a) provide a safe and sufficient drinking water supply that supports healthy communities; and
- b) maintain water quality, quantity, peak and low flows within the range of natural variability in rivers, streams, lakes, and wetlands to protect the hydrological integrity of their watersheds (water quality includes temperature, turbidity and chemistry).<sup>159</sup>

A noteworthy water resource objective is to “Restore the water quality and hydrological integrity of damaged watersheds throughout the plan area.” The management actions and considerations flowing from this objective include creating a ‘Watershed Restoration Plan (WRP), in which there is:

- “A cost benefit analysis to prioritize watershed restoration opportunities with respect to conserving, restoring and improving fisheries values in the plan area;
- Prioritization of WRP projects should be based on vulnerability of fish stocks, social and economic value of fish stocks, level of negative impact, and ecological and economic feasibility; and
- A risk assessment should be undertaken to prioritize road deactivation work with respect to water quality and fisheries impacts;”<sup>160</sup>

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<sup>156</sup> EveryCRSReport.com, “What Does Fish Consumption Have to Do With Water Quality Standards?” (30 September 2016) online: <<https://www.everycrsreport.com/reports/R44646.html>>.

<sup>157</sup> Gitanyow Huwilp Recognition and Reconciliation Agreement, Gitanyow-B.C. (11 July 2016), online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow\\_recognition\\_and\\_reconciliation\\_agreement\\_oct\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf)>.

<sup>158</sup> <sup>158</sup> Gitanyow Huwilp Recognition and Reconciliation Agreement, Gitanyow-B.C. (11 July 2016), at Schedule B-4, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow\\_recognition\\_and\\_reconciliation\\_agreement\\_oct\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf)>.

<sup>159</sup> <sup>159</sup> Gitanyow Huwilp Recognition and Reconciliation Agreement, Gitanyow-B.C. (11 July 2016), at Schedule B-5 online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow\\_recognition\\_and\\_reconciliation\\_agreement\\_oct\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf)>.

<sup>160</sup> Gitanyow Huwilp Recognition and Reconciliation Agreement, Gitanyow-B.C. (11 July 2016), at Schedule B-9 online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow\\_recognition\\_and\\_reconciliation\\_agreement\\_oct\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf)>.

The MCFN may be interested in this case study because of the adaptive management elements found in the Watershed Restoration Plan, such as flexible decision making and prioritizing based on changing environmental data. As damaged or threatened watersheds are identified, and vulnerability of fish stocks are assessed, certain actions are taken such as deactivating road work to maintain or improve water quality and fisheries impacts.<sup>161</sup>

The Gitanyow agreement is another good example of an Indigenous group proactively setting the rules.

### **Case Study 16: Tahltan – Province Government-to-Government Red Chris Mine Co-Management Agreement**

The Tahltan Nation has approved an agreement with the province of British Columbia to share revenues and mutually engage in oversight of the Red Chris gold and copper mine. As part of the agreement, the majority of environmental monitors will be Tahltan.<sup>162</sup>

*The TCG [Tahltan Central Government] Lands Department is responsible for the management of the environment, wildlife, and resources in Tahltan Territory... The TCG Lands Department works with industry and government to ensure sustainable land-based economic development opportunities that benefit all Tahltan's. The technical arm of the Lands Department is the Tahltan Heritage Resource Environmental Assessment Team (THREAT). THREAT's responsibility is to support the protection of Tahltan environmental, social, cultural, heritage and economic interests that may be affected by industrial activity in Tahltan Territory... Their role includes: assessing potential impacts from new and existing industrial development on Tahltan Territory, identifying options for avoiding or mitigating impacts, and ensuring that Tahltan people are meaningfully involved in regulatory processes and project reviews.*<sup>163</sup>

This agreement ensures Tahltan oversight and control of environmental issues surrounding the mine, including training, careers and a revenue sharing agreement.<sup>164</sup> Section 6.0 of the agreement lays out “Compliance, Monitoring and Enforcement,” in which the Parties agree, among other provisions, that Tahltan will have an active role in monitoring implementation of measures regarding the tailing

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<sup>161</sup> Gitanyow Huwilp Recognition and Reconciliation Agreement, Gitanyow-B.C. (11 July 2016), at Schedule B-9 online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow\\_recognition\\_and\\_reconciliation\\_agreement\\_oct\\_2016.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/gitanyow_recognition_and_reconciliation_agreement_oct_2016.pdf)>.

<sup>162</sup> Tahltan Central Council, “Tahltan Nation accepts historic Co-management Agreement with Red Chris Mine,” (19 April 2015) online: *Newsire* <<https://www.newswire.ca/news-releases/tahltan-nation-accepts-historic-co-management-agreement-with-red-chris-mine-517453171.html>>.

<sup>163</sup> Tahltan Central Government, “Doing Business in Tahltan Territory,” at 7 online (pdf): *OnTrack* <[https://ontrack.tahltan.org/wp-content/uploads/2020/05/Tahltan\\_GuidetoBusiness\\_Brochure\\_v5.pdf](https://ontrack.tahltan.org/wp-content/uploads/2020/05/Tahltan_GuidetoBusiness_Brochure_v5.pdf)> [emphasis added].

<sup>164</sup> Tahltan Central Council, “Tahltan Nation accepts historic Co-management Agreement with Red Chris Mine” (19 April 2015), online: *Newsire* <<https://www.newswire.ca/news-releases/tahltan-nation-accepts-historic-co-management-agreement-with-red-chris-mine-517453171.html>>.

impoundments, and informing future monitoring and potential studies.<sup>165</sup> This collaborative framework is one that may be of interest to the MCFN, as it allows the Tahltan Nation to actively participate in decision making, and react to ongoing developments that affect their interests.

## CONCLUSION

The case studies described in Part II of this report provide a number of precedents for agreements that the MCFN can use while negotiating for a co-management structure. The MCFN can look to examples that allow for a co-governance or self-governance framework that empowers Nations to set standards and thresholds for indicators downstream of effluent release. For the implementation of monitoring programs, the MCFN can look to examples where Nations are deeply involved in ensuring compliance through oversight and testing. Furthermore, like other Nations involved in Guardian programs, they should be able to enforce regulations that impact their rights and interests. Finally, the creation of an adaptive-management framework will allow the MCFN to pull the trigger for immediate action when certain identified thresholds are reached. We hope that, with the tools and examples provided, an agreement that is beneficial to the MCFN and other affected Nations can be formed.

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<sup>165</sup> Tahltan-Province Government to Government Red Chris Mine Management Agreement (24 January 2017) at 6-7, online (pdf): <[https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/tahtlan\\_rcma\\_jan\\_24\\_2017.pdf](https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/consulting-with-first-nations/agreements/tahtlan_rcma_jan_24_2017.pdf)>.