

Research Article

The Gahcho Kué Diamond Mine: A Case Study in Intergovernmental Environmental Management

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Abstract: The Gahcho Kué Diamond Mine is an operating mine in the Northwest Territories, Canada. Due to requirements defined in law, the mine required several authorizations for construction and operation, including both federal and territorial authorizations. Throughout the construction and operation of the diamond mine, instances occurred when the proponent, De Beers Canada Inc., raised objections about applying conditions in the water licence to areas that were authorized by Fisheries and Oceans Canada. As well, there have been ongoing discussions between various parties, including those with regulatory mandates, regarding requirements and jurisdiction related to site closure planning. This article outlines the discussions that have occurred to date, detailing the areas of ambiguity regarding projects that are authorized under multiple pieces of legislation. Lessons learned, as well as recommendations to address some of these issues, are provided.

1.0 Introduction

In the realm of resource development, various environmental authorizations and approvals are typically required from governments prior to a proponent commencing a project. These may include, but are not limited to, environmental assessments, water-based authorizations issued through provincial/territorial legislation, and federal authorizations. Provincial and territorial governments play an important role related to water legislation and policies in resource development, and most water-related activities in Canada are seen as the responsibility of these jurisdictions. In many cases, however, authorizations are issued under multiple pieces of legislation, involve various levels of government, and can encompass unique multi-jurisdictional approvals and approaches.

The transition from environmental assessment during the project approval stage, to specific operational authorizations at the permitting and licensing stage, can be fairly linear and well understood. However, there may be uncertainties and inconsistencies during various stages of the development (e.g., construction, operations, and closure) with respect to determining when various authorizations apply (e.g., between territorial/provincial water-based authorizations and federal authorizations).

In addition, settled land claims in the three territories of Canada (Yukon, Northwest Territories, and Nunavut) have established environmental assessment regimes that are unique and set them apart from other regions of Canada. As a result, harmonizing these processes with the federal requirements is required.

This article reviews the authorization process of a resource development project in the Northwest Territories, Canada—the Gahcho Kué Diamond Mine—and studies the application of territorial and federal legislation to the mine. The article outlines where there are clear separations between jurisdictions, as well as highlights potential uncertainties, or areas of overlap, that have occurred thus far in the project. An overview of the discussions and decisions that have occurred to date related to the project's authorization process is provided. Finally, the article includes lessons learned, as well as recommendations for achieving resolution of the regulatory issues.

2.0 Background

De Beers Canada Inc. (De Beers) has been operating the Gahcho Kué Diamond Mine in the Northwest Territories, Canada, since 2016. The mine is located approximately 280 km northeast of Yellowknife at Kennady Lake (figure 1). The kimberlite pipes, the ore bodies where the diamonds are found, are located under

the lake, and this required the construction and development of three open pits known as Hearne, 5034, and Tuzo.² To enable safe access to the kimberlite pipes, De Beers had to isolate, fish out, and dewater Kennady Lake.

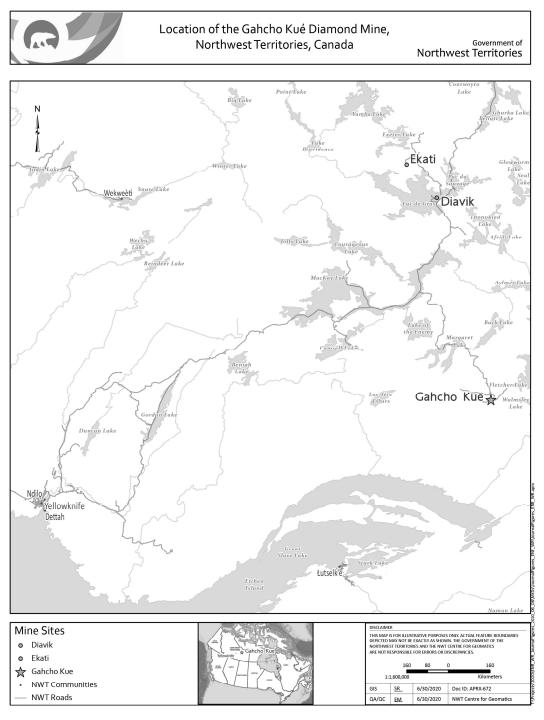


Figure 1. Location of the Gahcho Kué Diamond Mine, Northwest Territories, Canada. (Government of Northwest Territories).

2.1 Authorization under the Federal Fisheries Act

The dewatering of Kennady Lake resulted in the removal of over 18,000 fish³ and the loss of over 670 hectares of fish habitat,⁴ which required approvals from Fisheries and Oceans Canada (DFO) under a *Fisheries Act* authorization issued June 30, 2014. Of note, the fish removed from Kennady Lake were given to local communities and members of impacted Indigenous governments and organizations, such as the Yellowknives Dene First Nation, at their request.

The Fisheries Act authorization was a requirement under section 35 of the Fisheries Act,⁵ which at that time prohibited the "serious harm" of fish unless authorized. Serious harm was defined in the Act as "the death of fish or any permanent alteration to, or destruction of, fish habitat." As such, given the permanent alteration of habitat and death of fish, De Beers needed to obtain an authorization under the Act before they could proceed with draining Kennady Lake.

The process of isolating and fishing out a lake to allow access to diamond ore bodies is a process previously approved in the Northwest Territories (NWT) on a site-specific basis, and is guided by the "General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut." This protocol provides general guidance for proponents that have been authorized to remove all fish from a lake; however similar to most guidance documents, it tends to avoid being prescriptive to allow the proponent to work with affected parties to determine specific details, such as potentially salvaging fish when possible. There are different ways that these fish are destroyed and managed (e.g., relocation), which may have been preferred by the Indigenous stakeholders (see section 2.5), and to ensure fish are provided to communities to avoid wastage—the latter is a requirement of condition 2.2 of De Beers's *Fisheries Act* authorization.

2.2 Environmental Assessment and Environmental Impact Review under the Federal *Mackenzie Valley Resource Management Act* (MVRMA)

In addition to the requirements outlined under the federal *Fisheries Act* authorization, projects in the Mackenzie Valley, Northwest Territories, fall within the environmental assessment regime of the federal *Mackenzie Valley Resource Management Act* (MVRMA)⁸ (figure 2). The MVRMA⁹ came into force in 1998 and was enacted as a result of the negotiation of comprehensive land claim agreements in the Northwest Territories, differentiating it from other provincial and federal resource management legislation. The *Mackenzie Valley Resource Management Act* provides for the creation of quasi-judicial co-management boards, which are established to carry out various activities such as land use planning (land use planning boards) and land and water regulation (land and water

boards). Specifically, Part 3 of the MVRMA allows a land and water board to issue land use permits and water licences required under any territorial law within its jurisdiction, including the territorial *Waters Act*. ¹⁰ Of note, subsection 27(5) of the *Waters Act* allows for land and water boards to set standards and conditions that are more protective than other requirements. As well, Part 5 of the MVRMA outlines the requirements for a preliminary screening of proposed projects and a process whereby projects can be referred to an environmental assessment (EA) conducted by the Mackenzie Valley Environmental Impact Review Board (the review board) or a more comprehensive environmental impact review (EIR) conducted by a review panel. ¹¹ The MVRMA also outlines the role of the various federal and territorial departments related to Part 5. Various stakeholders, including the review board and all federal and territorial departments, have referral authority under the MVRMA, which allows them to refer a development to environmental assessment or environmental impact review.

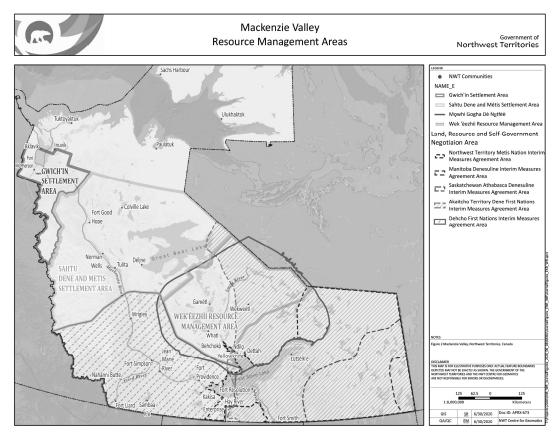


Figure 2. Mackenzie Valley, Northwest Territories, Canada. (Government of Northwest Territories).

In the case of the Gahcho Kué Diamond Mine, De Beers applied to the Mackenzie Valley Land and Water Board (MVLWB) for a Type A water licence on November 24, 2005, which was referred to environmental assessment by Environment Canada¹² on December 22, 2005. Pursuant to MVRMA section 128(1)(c), the review board subsequently ordered an environmental impact review of the proposed development on June 12, 2006. The Report of EIR¹³ was released by the review board's Gahcho Kué Panel on July 19, 2013,¹⁴ and the project was subsequently approved by the Minister of Aboriginal Affairs and Northern Development Canada.¹⁵

2.3 Water Licensing under the Waters Act

Following the environmental impact review decision, the water licensing process proceeded under the territorial *Waters Act.* ¹⁶ A Type A water licence was issued in September 2014 by the MVLWB following approval by the Minister of Government of Northwest Territories – Department of Environment and Natural Resources (GNWT-ENR). ¹⁷ The water licence included conditions requiring the submission of various management plans prior to and during construction and operations such as a water management plan and dyke construction plans. Further, the requirements for various iterations of closure and reclamation plans (interim versions and then a final version required two years before the end of mine life) are included in the water licence.

2.4 Government of Northwest Territories Role in Territorial Regulatory Processes

The land and water boards (LWBs) established under the federal *Mackenzie Valley Resource Management Act* have requirements to distribute water licence and land use permit applications and associated plans for public comment. Applications are distributed to federal and territorial government departments, Indigenous governments and organizations, and local community governments amongst others. All comments received, as well as responses from the proponent, are published and available through an online public registry maintained by relevant LWBs. Through this process, Northwest Territories government departments, including the Department of Environment and Natural Resources, provide advice on project-related submissions, such as those outlined above from De Beers. As well, monitoring and enforcing the conditions of water licences issued on territorial and private lands in the Mackenzie Valley is conducted by GNWT inspectors. Finally, the territorial government is liable for these lands where licensed and permitted activities occur, and retains securities posted by the proponents to cover such liabilities should the proponent become insolvent.

2.5 Consultation and Engagement

Section 35 of the Canadian *Constitution Act*, 1982, recognizes and affirms the existing Aboriginal and treaty rights of Indigenous Peoples, and these can be affected by freshwater management decisions. Further, as noted above, there are comprehensive requirements under the federal MVRMA related to engagement with potentially impacted Indigenous governments and organizations, and the processes provide opportunities for technical sessions and public hearings for stakeholders to participate.

For example, during the environmental impact review, public hearings were held in the communities of Dettah, Lutsel K'e, and Yellowknife. Of particular note, through the recommendation of several Indigenous stakeholders during the EIR, Ni Hadi Xa¹⁸ was developed, an organization responsible for monitoring the mine site. This organization consisted of six Indigenous Nations (Deninu Kue First Nation, Lutsel K'e Dene First Nation, North Slave Métis Alliance, Northwest Territory Métis Nation, Thcho Government, and Yellowknives Dene First Nation), as well as De Beers. During the water licensing process, participation included Ni Hadi Xa, Thcho Government, North Slave Metis Alliance, and Akaitcho Interim Measures Agreement Implementation Office. As well, within the *Fisheries Act* authorization, there were references to required discussions with the same parties that comprise Ni Hadi Xa, on research projects related to offsetting requirements.

Finally, it should be mentioned that De Beers and the co-management boards conducted quite an abundance of engagement sessions throughout the approval process of the mine, and these continue to be ongoing through operations including discussion about monitoring results, closure planning, and mine plan updates. Given the scope of this article, it is not possible to provide a detailed or in-depth review of Crown consultation and proponent engagement, nor the contributions of various parties to these processes; an outline is provided as part of the general overview of mine approval process in the Northwest Territories.

3.0 Intergovernmental Environmental Management at the Gahcho Kué Diamond Mine

3.1 Construction and Operations

During the construction and operation of the Gahcho Kué Diamond Mine, there have been several instances when De Beers has outlined uncertainty as to whether specific matters pertained to the water licence issued by the MVLWB, or whether they were covered within the scope of the *Fisheries Act* authorization. Specifically, De Beers has challenged comments from GNWT-ENR and the MVLWB in instances where De Beers believes the *Fisheries Act* authorization allows specific activities that are not regulated by, or outside the scope of, the water licence.

As outlined in section 2 above, Fisheries and Oceans Canada issued the *Fisheries Act* authorization to De Beers for dewatering Kennady Lake in order to provide safe access to the diamond ore bodies and construction of the open pits. In addition to the *Fisheries Act* authorization, the water licence issued under the territorial *Waters Act* includes conditions related to the requirement of plans¹⁹ and effluent quality criteria (EQC),²⁰ among others.

3.1.1 Dyke A Construction

An early example of jurisdictional uncertainty occurred during the initial dyke construction in Kennady Lake, which was required in order to isolate the water management pond from the downstream environment. Post-construction, the majority of Kennady Lake was to be used by De Beers as a water management pond to store wastewater until such time that the water could be discharged into the receiving environment. The creation of the water management pond required the construction of several dykes to isolate the areas, the removal of fish from the lake, and dewatering the lake. The water licence, and management plans required under the water licence, included requirements for implementing mitigation measures at the mine site and in the aquatic environment during dyke construction. Mitigation included isolating the open-water environment and downstream-receiving environment during construction (i.e., turbidity barriers), and establishing effluent quality criteria (EQC) for total suspended solids (TSS) in water being discharged from the area.

Of note, Kennady Lake was divided into eight areas, named Areas 1–8, to assist in construction planning and aid in construction sequencing (figure 3).²¹ The eastern portion of Kennady Lake, Area 8, was to remain connected to the downstream environment. Areas 1–7 were within the footprint of the future water management pond and were to be fished out and dewatered at various times throughout the sequencing of project construction. One of the initial construction requirements was the construction of Dyke A, which was to be placed between Area 7 (within the footprint of the future water management pond) and Area 8 (the receiving environment).

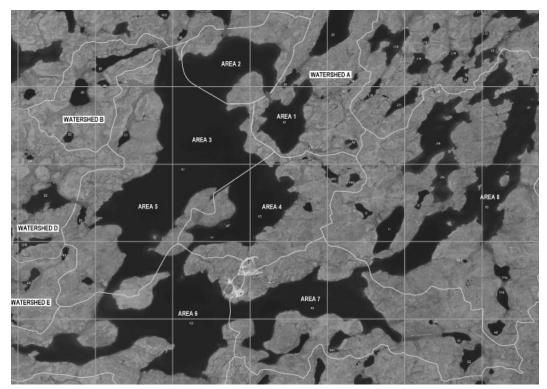


Figure 3. Water Management Area in Kennady Lake. (Source: De Beers, Gahcho Kué Operational Management Water Plan, Version 6.1, Figure 2, June 2021, http://registry.mvlwb.ca/
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In 2014, management plans related to the construction of Dyke A were circulated for review as per the aforementioned process required under the Mackenzie Valley Resource Management Act. De Beers noted, within the "Dyke A Construction and Monitoring Plan Version 2,"22 that turbidity barriers would be placed on both sides of the dyke being constructed, but TSS limits would only apply to water discharged from Area 7 into Area 8. The only EQC criterion related to Area 7 was that if TSS concentrations were above approved limits within the area, discharge into Area 8 would cease. De Beers noted that the rationale for this was that impacts would be reduced in Area 7 at the time of dyke construction as the area would be fished out.²³ Although Dyke A was constructed in 2014, while Phase 1 of the fish out was completed in the summer of 2014, the fish out in its entirety was not completed until later in 2015.²⁴ Given that the fish out had not been completed within Area 7 at the time of Dyke A construction, and since fish still remained within the footprint of the water management pond (Area 7), the Department of Environment and Natural Resources noted that impacts to the open-water aquatic environment should be regulated.²⁵ GNWT-ENR also indicated that the area should not be considered a "Water Management Pond" until the area had been isolated, fished out, and dewatered, and that fish may still be present within the area.²⁶ With respect to the *Fisheries Act* and *Fisheries Act* authorization, it was also unclear at which point the water management pond would be considered authorized, or when the general pollution prevention prohibitions under section 36 of that Act would no longer apply.²⁷ In response, De Beers noted that they had "been issued a Fisheries Act Authorization by Fisheries and Oceans Canada and have consulted with them on the construction activities,"²⁸ with the implication that activities occurring related to Dyke A construction were within the jurisdiction of the *Fisheries Act* authorization and that they were not required to respond to specific concerns from the territorial Department of Environment and Natural Resources.

The outstanding question in this case was at what point does the *Fisheries Act* authorization for the future conversion of Area 7 of Kennady Lake into a section of the water management pond limit the authority of parties under the territorial *Waters Act* and conditions of the water licence (e.g., TSS limits in Area 7/water management pond) for fish still remaining in that area.

Regarding the query from GNWT-ENR and the response from De Beers, the Mackenzie Valley Land and Water Board made the following determination:

Board staff recognizes that this may create a short term impact on water quality in Area 7, however, this area will be completely drawn down and will not constitute aquatic habitat during the operational phase of the project. Board staff is of the understanding that these fish are going to be removed but not be relocated to another area.²⁹

It appears that the board's ruling suggests that while they were aware of short-term impacts to any aquatic species that had not yet been removed from Area 7 of Kennady Lake, this was considered a low risk given that the fish would be eventually removed but not relocated to another area (i.e., destroyed).

3.1.2 Additional Dyke Construction

The following year (2015) another plan approval was required under the water licence, for the construction of additional dykes in Kennady Lake. Again, GNWT-ENR outlined concerns that increased levels of total suspended solids were being permitted within the future footprint of the water management pond while fish still remained in those areas.³⁰ GNWT-ENR also noted that throughout the plan it appeared that De Beers was suggesting a higher level of TSS would be permitted within Kennady Lake during construction since "internal" dykes were isolating the downstream environment via the previously constructed Dyke A. As such, the GNWT-ENR requested that De Beers clarify the phase and status of

the fish out of Kennady Lake to understand if any fish species were still within the lake.³¹ In May 2015, De Beers provided information indicating that the fish out was being completed in phases—Phase 1 in the summer of 2014, Phase 2 in July 2015, and Phase 3 potentially to be completed in August 2015.³² De Beers also noted that turbidity barriers would be located on both sides of the dyke, similar to those installed during the construction of Dyke A in 2014. While monitoring was being conducted within the areas during fish out, several monitoring stations were to be sampled "only if discharge from Area 7 to Area 8 is planned to occur," again indicating that areas within the interior of Kennady Lake that still retained fish at that point would be less protected.³⁴

3.2 Closure Planning

There has also been significant discussion between De Beers, GNWT-ENR, and the Mackenzie Valley Land and Water Board related to closure planning of the site. The land and water boards require mining projects to develop closure and reclamation plans guided by the "Guidelines for the Closure and Reclamation of Advanced Mineral Exploration Sites and Mine Sites in the Northwest Territories." Through these processes, the board and other parties, including the GNWT-ENR, have been incorporating fisheries aspects into long-term closure planning of the site. During project approvals (e.g., environmental impact review), it was understood that, post-closure, the majority of Kennady Lake would return to a functioning aquatic ecosystem with fisheries populations similar to baseline conditions. According to the most recent mine plan, the mine is now anticipated to be operational for fourteen years (ending in 2030) with a closure period that includes at least a twenty-year timeline for lake refilling.

De Beers has indicated concern throughout this closure planning process that there may be duplication of closure efforts to accommodate stakeholders' issues related to fisheries components of the project. They have indicated their position that, under the *Fisheries Act* authorization, DFO is the primary regulator for fisheries aspects and monitoring the return of fish to Kennady Lake and that, therefore, fishery-related requirements are outside the scope of the land and water board's authority³⁸ and may not be relevant to the closure and reclamation plan required under the water licence. For example, during the review of the interim closure and reclamation plan (ICRP) version 4 in 2018, there was a discussion on the monitoring requirements for the establishment of fish communities post-closure. GNWT-ENR, as well as Environment and Climate Change Canada, outlined concerns that the two years of fisheries monitoring proposed by De Beers was insufficient to determine the return of a stable, functioning aquatic ecosystem over the long-term in Kennady Lake. De Beers's proposed fisheries monitoring was related to requirements under the *Fisheries Act* authorization, which state:

The use of the fish habitat features within Kennady Lake shall be evaluated by demonstrating fish presence on the features at the appropriate life stages, as defined in the Fish Habitat Validation Plan which will be submitted to DFO for approval prior to final construction of the fish habitat features. *Once this has been confirmed in two successive years this monitoring may be discontinued*.⁴¹ (emphasis added)

GNWT-ENR's concern was that these requirements are related to specific fish habitat features, and not whole lake fish population recovery, as a closure objective. ⁴² GNWT-ENR also referenced a comment from De Beers's environmental impact statement, ⁴³ which summarized the length of time that was required for fisheries populations to return to Kennady Lake. De Beers noted that based on the slower recovery times of Arctic systems as a result of colder temperatures, shorter growing seasons, and low nutrient availability, full recovery of the system would likely take between fifty and sixty years following the complete refilling of Kennady Lake, or between sixty and seventy-six years following the end of operations. Specifically, De Beers noted that a self-sustaining northern pike population would take approximately fifty to sixty years to re-establish in Kennady Lake and that the return time of the previous dominant piscivore, lake trout, would likely take sixty to seventy-six years to establish a self-sustaining population following the complete refilling of the lake. ⁴⁴

As such, GNWT-ENR suggested that the monitoring requirements included in the *Fisheries Act* authorization were likely insufficient during the post-closure period, in order to ensure that the aquatic environment is re-established, and the department suggested several rounds of post-closure monitoring, at three-year intervals, to monitor the recovery of fish populations within the lake.⁴⁵

In their response, De Beers reiterated their disagreement with GNWT-ENR and maintained the position that Fisheries and Oceans Canada (DFO) is the lead regulatory agency of fish and fish habitat and the *Fisheries Act* is sufficient. Furthermore, De Beers noted it is DFO's responsibility to determine success with respect to establishment of fish habitat, not the GNWT-ENR or the Mackenzie Valley Land and Water Board. De Beers concluded that "it is not necessary or appropriate for the MVLWB to also regulate this through redundant or close to redundant monitoring or reporting mechanisms."⁴⁷

In their subsequent decision to not approve De Beers's interim closure and reclamation plan (ICRP) version 4 for the mine, the MVLWB outlined that ecosystem recovery success should include proof of long-term sustainability.⁴⁸ The MVLWB continued that closure objectives related to Kennady Lake and the open pits were broader than the *Fisheries Act* authorization, and that meeting

the requirements of the *Fisheries Act* authorization were only one criterion. The objectives are noted as returning "Kennady Lake to a state that will support a functioning aquatic ecosystem and traditional uses" and "that the backfilled and/ or flooded pits will not adversely impact establishment and maintenance of sustainable aquatic ecosystems in the overlying Kennady Lake and downstream waterbodies."⁴⁹

Furthermore, MVLWB noted that the goal defined for closure of the mine site remained returning the site to a "viable, and wherever practicable, self-sustaining ecosystem that is compatible with a healthy environment, human activities, and the surrounding environment." It was concluded by the MVLWB that the *Fisheries Act* authorization does "not release De Beers from any obligations to obtain permission from or to comply with the requirements of any other regulatory agencies." The MVLWB provided specific examples of instances when this logic was presented (see section 4), to support the position that the MVLWB can address, generally, the issue of fish habitat in discussions on closure and reclamation. Regarding the redundancies noted by De Beers, the MVLWB responded that concerns raised by GNWT-ENR were justified. The MVLWB concluded that monitoring in addition to *Fisheries Act* authorization requirements, and the acceptance of a performance assessment, would be required to ensure closure objectives are met. ⁵²

4.0 Legal Precedents Related to Intergovernmental Environmental Management in NWT

As noted in section 3.2 of this article, when making its decision on the fisheries jurisdiction related to closure at the Gahcho Kué Diamond Mine, the MVLWB referenced previous discussions that occurred through the process of another land and water board in the Mackenzie Valley—the Wek'èezhii Land and Water Board (WLWB) related to the Ekati Diamond Mine and then operator BHP Billiton Diamonds Inc. (BHP).

During the development and review period related to an Interim Closure and Reclamation Plan in 2009, BHP submitted a motion to the land and water board requesting a ruling on the board's jurisdiction over fish habitat. Specifically, the cover letter of the ruling requested clarification on:

Whether the Wek'èezhìi Land and Water Board, in the context of BHP Billiton Diamond Inc.'s obligations relating to closure and reclamation of the EKATI Diamond Mine, has the jurisdiction to require that BHP Billiton Diamond Inc. establish and maintain fish or fish habitat in the closed pit lakes or the Long Lake Containment Facility at the EKATI Diamond Mine.⁵³

BHP noted that the issues raised during discussions between interested parties, including Indigenous governments and organizations, which had been occurring throughout the closure planning process, focused on the establishment of fish habitat in the closed-pit lakes and the Long Lake Containment Facility.⁵⁴ BHP's position was that they had entered into a previous agreement with DFO in 1996, which provided "full and final compensation for the permanent loss of fish habitat for the life of the project."55 Specifically, BHP had been authorized under the *Fisheries Act* to destroy fish habitat with the condition to pay monetary compensation of \$1.5 million to DFO, which was to be directed towards fish habitat restoration and enhancement projects off-site.⁵⁶ Subsequently, the board ruled on the request from BHP and concluded "BHP Billiton has not convinced the WLWB that its jurisdiction is limited or even affected in any way by the 1996 agreement. Therefore the WLWB rules that it does have the authority to require BHP Billiton to create fish habitat in the exercise of its reclamation authority."57 The WLWB further stated that the existing agreement between BHP and DFO "does not in any way limit the exercise of its jurisdiction to require the re-establishment of fish habitat as part of the Interim Closure and Reclamation Plan for the EKATI site."58

BHP Billiton then proceeded to appeal the ruling to the Supreme Court of the Northwest Territories.⁵⁹ The application was dismissed as the court ruled that it was premature to determine if the closure plan conflicted with any agreements and requirements stipulated by DFO as the board had yet not made any decisions related to the interim closure and reclamation plan. Specifically,

(t)he Superior Court held that the Board had authority to make decisions with respect to reclamation in the mined area. BHP had an obligation to make a reclamation plan. It was premature to seek review of the Board's decision on BHP's reclamation plan where it was not yet clear whether or not the decision would conflict with BHP's agreement with the Federal government.⁶⁰

As such, given the status of BHP Billiton's closure plan and the uncertainty of how final closure options may overlap with previous agreements between BHP Billiton and DFO, it was premature for the Court to review the board's decision so this case did not lead to a judicial decision that may have set a precedent for jurisdictional matters related to fish habitat at that time.

While the Ekati mine proceeding highlights that some uncertainty still remains regarding closure jurisdiction between DFO and the land and water boards of the Mackenzie Valley, there have been no related discussions about jurisdiction during construction and operations, similar to the issues outlined in

section 3.1, of the Gahcho Kué Diamond Mine. As well, it should be noted that the closure discussions relevant to Ekati were not specifically "that the Board did not have jurisdiction to deal with reclamation of fish habitat generally, but that, in light of the 1996 compensation agreement, its jurisdiction to do so with respect to the EKATI project was displaced." As such, at this point there have been no formal decisions or discussions made in the NWT regarding land and water board jurisdiction that could be relevant to the site-specific discussions and activities that have occurred at the Gahcho Kué Diamond Mine.

5.0 Discussion

There remains some uncertainty in how federal and territorial legislation apply to resource development projects in the Northwest Territories. Regarding the construction and operational considerations during dyke constructions within Kennady Lake, there have been valuable discussions between De Beers, the Mackenzie Valley Land and Water Board, and the Government of Northwest Territories Department of Environment and Natural Resources. De Beers has raised several concerns during this period including questioning why criteria related to a territorial water licence would be required for discharge to an area that was already authorized for destruction under federal legislation. The question from the GNWT-ENR can be summarized by a single point: at which point does an open water environment (i.e., the existing Kennady Lake Areas 1-7) become authorized for destruction under a *Fisheries* Act authorization (i.e., water management pond). Although this area had been authorized, fish still remained in the lake when inlake dyke construction began in 2014. It may have been beneficial for parties to conduct a start-up meeting after De Beers initially received its authorizations, in order to provide those involved with an understanding related to jurisdictions and the sequencing of events.

GNWT-ENR's opinion was that, during the construction phase, and until a fish-out was completed, the requirements under the *Waters Act* and the associated water licence should be adhered to.⁶² Although the MVLWB may have been justified in their response that the water quality issues may be a moot point since fish within Kennady Lake were to be removed, as noted in section 2, there are different ways that these fish could have been managed (e.g., captured by gill nets during a fish out vs incidental death during dyke construction) that may have been preferred by the affected Indigenous organizations and governments noted previously.

There also seems to be more certainty required in understanding intergovernmental environmental management roles related to closure planning. While most northern regulators consider *BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board* to outline the northern regulatory board's jurisdiction

related to fish habitat at closure, that case is different in that it was specific to how previous compensation under the *Fisheries Act* would be considered in relation to additional requirements from regulatory boards, and the case was dismissed given the preliminary nature of the legal challenge in regard to the Board's review and decision process. Of importance, it was discussed throughout that process that BHP had not challenged the board's jurisdiction over fish habitat at closure in general terms, but that they argued compensation had already been paid to DFO.

In the case of the Gahcho Kué Diamond Mine, De Beers's position is more general in that the MVLWB and the GNWT-ENR have no authority regarding the recommendations about the period of closure monitoring related to the successful re-establishment of the aquatic environment within Kennady Lake. ⁶³ In this instance, the board's position was that the monitoring was required to determine that objectives under the water licence's closure planning requirements were met, and as such the MVLWB and the GNWT-ENR were justified in their positions on the matter. ⁶⁴ It may be beneficial for federal and territorial regulators to consider more formal policy or legislative updates outlining how aspects of fisheries protection are covered under relevant federal and territorial legislation.

As with all jurisdictional matters and overlapping mandates, some debate will likely continue until a case advances to an appeal court. Regarding natural resources exploitation, in an analysis of Canadian watershed management, Hill et al. noted that, to avoid conflict, legislation tends to provide allowances for these activities. Where there has been conflict, it has been observed that courts tend to rely heavily on the expertise of environmental boards and that a considerable amount of deference is given to these boards. The judge specifically noted in BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board that "(g)enerally speaking, courts are extremely reluctant to intervene in ongoing administrative proceedings and subject interlocutory decisions of an administrative tribunal to judicial review." Even if a decision is made, the particulars of the case are often relatively specific and cannot necessarily be applied carte blanche to other situations.

The responsibility for water-related activities tends to be a provincial/territorial matter and this level of management "includes the ability to be responsive to citizen needs and environmental concerns." In general, the law of paramountcy applies whereby federal legislation takes precedence over territorial legislation; but in many regulatory cases, the authorizations are complementary to each other. As well, as discussed previously, the land and water boards that issue water licences under the *Waters Act* are given their authority under the federal *Mackenzie Valley Resource Management Act*. As noted, the MVRMA is linked to the establishment of several comprehensive land claims in the Northwest Territories, which adds a layer of legal complexity. Regarding the specifics of this case study, the existing

territorial regulatory regime should provide additional clarity with respect to jurisdiction as previous recommendations from water policy reviews suggested the establishment of watershed agencies that would make "provision for all aspects of water use" by "federal and provincial delegation of the necessary powers to a jointly established system of agencies."

A clear path forward would be best attained through the cooperation of regulatory bodies in the Northwest Territories to provide direction to industry in this regard. In the context of water policy between provinces and territories, Hill et al. noted that the process of harmonization to achieve "regulatory efficiency, effectiveness and clarity through standardization and centralization" would be desirable to help achieve clarity between federal and provincial/territorial jurisdiction.

During the public inquiry into the E.coli contamination of the municipal water supply in Walkerton, Ontario, 71 it was recommended that a path forward involved additional intergovernmental coordination "in an area where constitutional jurisdiction is not always clear." Other recommendations for jurisdictional clarity that have been noted previously include the federal government engaging in "research and guidance in terms of intersecting jurisdictional authority" and that "intergovernmental coordination is necessary to address local government matters." Discussions on these matters can be difficult but are often valuable. As noted by Gormley, discussion on intergovernmental conflicts should not be worrisome but allows for additional debate and clarity, which should be celebrated. It should be noted that in the context of this case study, the discussion has originated from the proponents rather than the federal or territorial government or the regulatory board. However, a coordinated response from the relevant agencies could pre-emptively avoid additional debate in the future.

6.0 Conclusion

It appears that the fisheries aspects discussed and included within the scope of the water licence related to closure of the Gahcho Kué Diamond Mine fall within the jurisdiction of the Northwest Territories *Waters Act*, and should be discussed further by the Mackenzie Valley Land and Water Board, the Government of the Northwest Territories Department of Environment and Natural Resources, and other interested parties privy to those processes, including Indigenous governments and organizations. There appears to be less clarity related to initial open-water construction, which may require additional discussion between parties. At this point, there is no resolution regarding different authorizations to the same activities of a project. However, there could be resolution provided if progress was made in areas discussed throughout this article and outlined below in the recommendations.

Recommendations to further the resolution of issues related to intergovernmental environmental management include the following:

- 1. The Government of the Northwest Territories, the land and water boards, and Fisheries and Oceans Canada should discuss sequencing of authorizations to provide clear understanding to proponents in instances where a *Fisheries Act* authorization excludes a water body from the protection of water quality protection provisions of other federal and territorial legislation.
- 2. In instances where both a water licence and *Fisheries Act authorization* are required, the land and water boards should clarify if any conditions of the water licence do not apply to any areas that are dually authorized, and whether this applies throughout the duration of the project or only during certain phases.
- 3. Prior to the commencement of major projects subject to intergovernmental environmental management, the proponent and all regulators should discuss the applicability of the various authorizations to ensure that expectations are understood and areas of uncertainty and potential overlap are identified.

Gibson noted that "it is not surprising to find that both federal and provincial governments have difficulty determining their respective fields of responsibility" in the area of environmental management and that "constitutions are necessarily written in general language, and the application of that general language to situations that were not contemplated when the constitution was written is a matter of speculation, at least until ruled upon by the courts." ⁷⁶ As such, uncertainty often remains in these areas until additional decisions are made by the courts.

In closing, the challenge with intergovernmental environmental management is very well articulated by Justice Vertes in the dismissal of *BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board*, and he also offers some clear steps forward:

In my opinion these submissions make a self-evident point. In a complex regulatory environment, where numerous pieces of legislation apply to the same project, it is up to each regulatory body to try to avoid conflict in their decisions with other bodies. Otherwise, the desired objective of having an integrated scheme of resource management becomes unattainable.⁷⁷

At the time of this article's publication, the Gahcho Kué Diamond Mine is in year five of fourteen of its expected mine life, which may be extended based on ongoing evaluations of the resource. As such, there will ongoing discussions between De Beers, federal and territorial departments, and Indigenous governments and organizations, through the remainder of operations and into closure, to determine the expectations of all parties related to the long-term goals for Kennady Lake. On a final note, the Metal and Diamond Mine Effluent Regulations (formerly Metal Mine Effluent Regulations) were updated in June 2018. As diamond mines are now included in these regulations, a tailings impoundment area for a mine (i.e., Kennady Lake) could now be scheduled, and the *Fisheries Act* prohibitions regarding water quality would no longer apply, nor, potentially, would aspects of the *Waters Act*. Alternatively, there is a discussion ongoing between the federal government and Northwest Territories territorial government to reach an "equivalency in effect" agreement whereby section 36 of the *Fisheries Act*—prohibition of deleterious substances into water frequented by fish—would not apply in the Northwest Territories and would cede to equivalent territorial legislation. These ongoing discussions will impact how any diamond or metal mining development in the future is managed.

Notes

- 1. C. Hill, K. Furlong, K. Bakker, and A. Cohen, "Harmonization Versus Subsidiarity in Water Governance: A Review of Water Governance and Legislation in the Canadian Provinces and Territories," *Canadian Water Resources Journal* 33, no. 4: 315–332, https://doi.org/10.4296/cwrj3304315.
- 2. De Beers Canada Inc., 2014 Annual Land and Water Licence Report (March 2015).
- 3. De Beers Canada Inc., *Gahcho Kué Mine 2015 Fisheries Act Authorization Annual Report* (December 2015).
- 4. Canada, Fisheries and Oceans Canada, Fisheries Act Authorization 03-HCAA-CA6-00057, issued to De Beers Canada Inc. (June 30, 2014), http://registry.mvlwb.ca/Documents/MV2005L2-0015/MV2005L2-0015%20-%20De%20Beers%20Gahcho%20Kue%20-%20Fisheries%20Act%20Authorization%20-%20Jun30-14.pdf.
- 5. Fisheries Act, RSC 1985, c F-14.
- 6. "Serious harm" was introduced in October 2013 during an amendment to the *Fisheries Act* which replaced the previous habitat protection provisions of Section 35. Additional amendments to the Act in 2019 saw the return of the habitat protection provisions.
- 7. J.D. Tyson, W.M. Tonn, S. Boss, and B.W. Hanna, "General Fish-Out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut," *Canadian Technical Report of Fisheries and Aquatic Sciences* 2935 (2011): 34, https://www.researchgate.net/publication/325697872 General Fish-out Protocol for Lakes and Impoundments in the Northwest Territories and Nunavut.
- 8. The Inuvialuit Settlement Region in northern NWT remains within the jurisdiction of the *Canadian Environmental Assessment Act* while the Mackenzie Valley areas fall within the jurisdiction of the *Mackenzie Valley Resource Management Act* (MVRMA).

- 9. *Mackenzie Valley Resource Management Act*, SC 1998, c. 25, https://laws-lois.justice.gc.ca/PDF/M-0.2.pdf.
- 10. Waters Act, SNWT 2014, c.18, https://www.justice.gov.nt.ca/en/files/legislation/waters/waters.a.pdf.
- 11. An Environmental Impact Review is a more exhaustive review process allowable under the MVRMA and requires the establishment of a panel. To date, only the Gahcho Kué Diamond Mine and the Mackenzie Gas Project have been subject to an Environmental Impact Review.
- 12. Now Environment and Climate Change Canada.
- 13. Mackenzie Valley Environmental Impact Review Board Gahcho Kué Panel, Report of Environmental Impact Review and Reasons for Decision, EIR 0607-001, Gahcho Kué Diamond Mine Project (Yellowknife: July 19, 2013), https://reviewboard.ca/upload/project_document/EIR0607-001_Gahcho_Kue_Diamond_Mine_Project_Report_of_EIR.PDF.
- 14. Regarding the time lag between the commencement of the EIR and the final decision, while the EIR was ordered in 2006, the proponent requested a judicial review that was ongoing from 2006-2007. Additionally, the proponent requested an adjournment in 2008 that was resumed in 2010.
- 15. Now Crown-Indigenous Relations and Northern Affairs Canada
- 16. The *Waters Act* is administered by the Government of the Northwest Territories, Department of Environment and Natural Resources.
- 17. On April 1, 2014, the federal government devolved certain land and water authorities to the GNWT. As such, the GNWT Minister of Environment and Natural Resources approves Type "A" water licences as of that date under the territorial *Waters Act* prior to issuance by the land and water boards. The Gahcho Kué Diamond Mine process was ongoing at this date and the licence issuance date occurred post-devolution by the GNWT.
- 18. More information can be found at https://nihadixa.ca/
- 19. Plans are required for activities such as dyke construction, water management during construction and operation, monitoring plans, etc.
- 20. EQC are limits of parameters in wastewater that must be met prior to discharge from the site into the environment, or limits that must be met in the receiving environment during construction.
- 21. De Beers Canada Inc., Dyke Construction Management Plan, Dykes B, D, E and Perimeter Berms (Version 2) (April 2017), <a href="http://registry.mvlwb.ca/Documents/MV2005L2-0015/MV2005C0032%20-%20De%20Beers%20Gahcho%20Kue%20-%20Dyke%20Construction%20Management%20Plan%20Dykes%20B,%20D,%20E,%20and%20Perimeter%20Berms%20(V.2)%20-%20Apr%2017_17.pdf.
- 22. De Beers Canada Inc., Dyke A Construction and Management Plan, Version 2 (September 15, 2014).
- 23. De Beers Canada Inc., Dyke A Construction and Management Plan, Version 2 (September 15, 2014).

- 24. De Beers Canada Inc., Gahcho Kué Mine Lue T'e Halye, Fish-Out Annual Report 2015 (December 2015).
- 25. Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re Dyke A Construction and Management Plan, October 9, 2014.
- Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re Dyke A Construction and Management Plan, October 9, 2014.
- 27. Section 36 of the *Fisheries Act* contains the pollution prevention provisions of the Act including 36(3), which prohibits the deposit of deleterious substances into waters frequented by fish unless otherwise authorized.
- 28. Mackenzie Valley Land and Water Board, Staff Report related to Dyke A Construction and Management Plan, October 16, 2014.
- 29. Mackenzie Valley Land and Water Board, Staff Report related to Dyke A Construction and Management Plan, October 16, 2014.
- 30. Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re: Dyke Construction and Management Plan, May 7, 2015.
- 31. Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re: Dyke Construction and Management Plan, May 7, 2015.
- 32. Mackenzie Valley Land and Water Board, Staff Report related to Dyke Construction and Management Plan, Dykes A1, F, G, H, I, J, K, and L, May 20, 2015.
- 33. De Beers Canada Inc., Dyke Construction Management Plan (Dykes A1, F, G, H, I, J, K, L), March 2015.
- 34. Shortly following the discussions in 2014 and 2015, the fish-out of Kennady Lake was completed and mine operations began in 2016. As such, there were no further construction activities that required additional discussions on these matters. Additional discussion between parties regarding sequencing of authorizations and whether an area authorized for destruction under the *Fisheries Act* is exempt from other relevant legislation prior to and during construction would have been beneficial to all parties. As well, further discussions could have addressed the applicability of various conditions of the water licence to these areas and whether mitigations were required at different project phases.
- 35. Mackenzie Valley Land and Water Board & Aboriginal Affairs and Northern Development Canada, Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (November 2013), https://www.lands.gov.nt.ca/sites/lands/files/resources/2013 mvlwb-aandc guidelines for closure and reclamation.pdf.
- 36. Mackenzie Valley Environmental Impact Review Board Gahcho Kué Panel, Report of Environmental Impact Review and Reasons for Decision, EIR 0607-001, Gahcho Kué Diamond Mine Project (Yellowknife: July 19, 2013), https://reviewboard.ca/upload/project_document/EIR0607-001_Gahcho_Kue_Diamond_Mine_Project_Report_of_EIR.PDF.

- 37. De Beers Canada Inc., Gahcho Kué Mine, 2020 Updated Project Description, completed February 2020 in support of Type "A" Water Licence amendment application, 20.pdf.
- 38. De Beers Canada Inc., Gahcho Kué Closure Workshop: Interim Closure and Reclamation Plan, Record of Meeting, March 2, 2016; Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.
- 39. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0 November 7, 2018.
- 40. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0 November 7, 2018.
- 41. Canada, Fisheries and Oceans Canada, Fisheries Act Authorization 03-HCAA-CA6-00057, issued to De Beers Canada Inc., June 30, 2014.
- 42. Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT-ENR to MVLWB re: Gahcho Kué Interim Closure and Reclamation Plan, v.4.0, August 7, 2018.
- 43. De Beers Canada Inc., Gahcho Kué Project Environmental Impact Statement, Section 8: Key Line of Inquiry: Water Quality and Fish in Kennady Lake, December 2010.
- 44. De Beers Canada Inc., Gahcho Kué Project Environmental Impact Statement, Section 8: Key Line of Inquiry: Water Quality and Fish in Kennady Lake, December 2010, pp. 8-454 & 8-455.
- Government of the Northwest Territories, Environment and Natural Resources.
 (2018). August 7, 2018 letter from GNWT-ENR to MVLWB re: Gahcho Kué Interim Closure and Reclamation Plan, v.4.0.
- 46. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.
- 47. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018, 7.
- 48. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.
- 49. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018, 7–8.
- 50. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018, 8.
- 51. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018, 8–9.
- 52. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.

- 53. Wek'èezhìi Land and Water Board, Reasons for Decision on BHP Billiton's 2008 Interim Closure and Reclamation Plan, December 10, 2010, 4
- 54. The Long Lake Containment Facility is an area at the Ekati mine site, formerly aquatic habitat, that is used to manage processed kimberlite and wastewater.
- 55. BHP Billiton Diamond Inc.Letter to the Wek'èezhii Land and Water Board re: Originating Notice Regarding Closure and Reclamation of Pit Lakes, September 4, 2009.
- 56. BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23.
- 57. Wek'èezhìi Land and Water Board, Reasons for Decision on BHP Billiton's 2009 Request for Ruling, July 26, 2009, 13.
- 58. Wek'èezhìi Land and Water Board, Reasons for Decision on BHP Billiton's 2009 Request for Ruling, July 26, 2009, 12.
- 59. BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23.
- 60. McCarthy Tetrault, "BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23," Mining in the Courts 2010 Year in Review, April 25, 2011, https://www.mccarthy.ca/en/insights/articles/mining-courts-2010-year-review.
- 61. BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23, 6.
- 62. Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re Dyke A Construction and Management Plan, October 9, 2014; Government of the Northwest Territories, Environment and Natural Resources, Letter from GNWT–ENR to MVLWB re: Dyke Construction and Management Plan, May 7, 2015.
- 63. Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.
- Mackenzie Valley Land and Water Board, Letter to De Beers Canada Inc. regarding Interim Closure and Reclamation Plan v.4.0, November 7, 2018.
- 65. Hill et al., "Harmonization versus Subsidiarity."
- 66. P. Muldoon, A. Lucas, R.B. Gibson, P. Pickfield, and J. Williams, *An Introduction to Environmental Law and Policy in Canada* (Toronto, Canada: Emond Montgomery, 2015).
- 67. BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23, 13.
- 68. Hill et al., "Harmonization versus Subsidiarity," 317.
- 69. D. Gibson, "Constitutional Jurisdiction over Environmental Management in Canada," *University of Toronto Law Journal* 23, no. 1 (1973): 54–87, 76, https://doi.org/10.2307/825276.
- 70. Hill et al., "Harmonization versus Subsidiarity," 317.
- 71. See http://www.archives.gov.on.ca/en/e records/walkerton/index.html. One of the many recommendations related to the Walkterton Inquiry following water contamination of drinking water was that additional communication at different levels of government may have prevented the end result. As such, it was recommended that additional dialogue between the levels of government to clarify roles and communication mechanisms was warranted.

- 72. Hon. Dennis O'Connor, "Chapter 15. First Nations," Report of the Walkerton Commission of Inquiry: A Strategy for Safe Drinking Water, Part 2 (Toronto, ON: Publications Ontario, 2002), https://qspace.library.queensu.ca/bitstream/handle/1974/8481/WalkertonInquiryFinalReport-Part2.pdf?sequence=2&isAllowed=y.
- 73. Hill et al., "Harmonization versus Subsidiarity."
- 74. G. Skogstad, "Intergovernmental Relations and the Politics of Environmental Protection in Canada," in *Federalism and the Environment: Environmental policymaking in Australia, Canada and the United States*, eds. Kenneth M. Holland, F.L. Morton, and Brian Galligan (Westport, Conn: Greenwood Press, 1996), 127.
- 75. W.T. Gormley, "Intergovernmental Conflict on Environmental Policy: the Attitudinal Connection," *Political Research Quarterly* 40, no. 2 (1987): 285–303.
- 76. Gibson, "Constitutional Jurisdiction over Environmental Management."
- 77. BHP Billiton Diamonds Inc. v. Wek'èezhii Land and Water Board, 2010 NWTSC 23, 7.

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