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Governing Water in Canada: The Legislative Experiments in New Governance

Patricia Hania

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Governing Water in Canada: The Legislative Experiments
in New Governance
& Applying An Eco-Resiliency Framework

Patricia Hania

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
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Abstract

Governing water in Canada is in transition. Since 2000, episodes of drought, unsafe drinking water, and polluted watersheds have affected local and First Nations communities. In reaction to these crises, provincial regulators entered a new governance phase. This regulatory turn profoundly transforms the traditional environmental regulatory approach by introducing a collaborative new governance arrangement. The legal scholarship is generally supportive of this trend, however, a dearth of empirical research exists to understand how decisions are made under this new regulatory approach.

This dissertation presents an “eco-resiliency framework” to examine the responsiveness of this new governance mode to environmental change. The primary research question is: What lessons can be taken from resiliency theory and applied in the sphere of environmental regulation and governance? Three comparative case studies of local watershed-level committees — in Ontario, Alberta, and the Yukon — served as empirical evidence. The research methodology adopted a qualitative approach (i.e., participant observation and interviews with committee members) and a thorough review of the relevant legislation, administrative decisions, policy documents, and media reports. The data was analyzed in terms of the four eco-resiliency elements: flexibility, diversity, a broad perspective, and emergent change.

Contrary to the themes of inclusivity and consensus found in the collaborative governance literature, the research findings exposed an insular and technocratic decision-making process that served the political interests of the province and the administrative needs of the regulatory agency. Even though, in theory, the provincial regimes under study allowed for a diverse number of stakeholders at the policy table, in practice, only a few experts influenced the decision-making. Local communities’ ecological health and environmental concerns including First Nations’ ways of knowing water were overlooked. The devolution of water governance to a local level, rather than empowering local public-interest representatives, concentrates power in the hands of a few participants. Surprisingly, the Yukon Water Board, an administrative tribunal with strict procedural requirements, offered the strongest opportunity for Aboriginal and conservation groups to raise their water concerns. The most important finding is the erosion of the environmental protection function of the state, which is obscured by this policy drift.

Dedication

Lorraine Butterworth, my true mom.

John Hania, my dad, who immigrated to Canada to find his way and learned to love his adopted country while missing his beloved homeland.

Jackie Eiler (nee Hania) whose premature death inspired me to pursue my dream of going to law school.

Chris (Donald Christopher) Holland, my dear high school friend, who always had my back and who I miss dearly.

Acknowledgments

There are so many friends and family members to thank for their kind words of encouragement. Jac, thank you for your support and for giving me the space to complete this research project. Brenda, the Diva's and Renee, your interesting questions always made me think more deeply about my research. Professor Audrey Armour, thank you for your guidance. Professor Peer Zumbansen, I am so thankful that you set a high academic standard. Dayna, my Ph.D. supervisor, who always offered insightful comments, endless edits and today, gives me hope for the future. Finally, thank you, to all the individuals who participated in this research. Each one of you graciously offered your time to share your views on water resource management planning. Your contributions give voice and legitimacy to this research.

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Dissertation Overview

1.0 Introduction

In Canada, an environmental regime change often arises from an ecological crisis that prompts new legislation. This dissertation examines the environmental regulatory change to a governance mode away from the traditional command-and-control approach.¹ In response to the water governance crisis in Walkerton, Ontario (May, 2000) provincial regulators across Canada moved quickly to introduce new water laws, without much debate. The new regulatory approach typically involved local, stakeholder-driven water committees. In fact, this governance mode is now the dominant legal model in Canada. But, is this regulatory approach suitable to protect water sources?

With the introduction of the governance mode, the environmental regulatory paradigm at a provincial level is now firmly repositioned towards the *process* of decision-making. While the legal literature is generally supportive of a governance arrangement that increases transparency and the participation of the public, a dearth of empirical research exists on these regulatory governance experiments. In particular, little is known as to *how* environmental decisions are made and *who* decides in the context of these water committees. This dissertation provides comparative case study research, which casts doubt on the collaborative decision-making nature of this governance mode.

The three case studies presented in this research demonstrate a situation of regulatory change in response to a crisis – specifically, an environmental crisis and a crisis of uncertainty.

¹ C. Abbott, “Environmental Command Regulation” in B.J. Richardson and S. Wood, *Environmental Law for Sustainability: A Reader* (Portland: Hart, 2006) at 61. A command-and-control regulatory style “refers to the prescriptive nature of regulation, the command, supported by imposition of some negative sanction, the control.” Some scholars argue the term “command-and-control” to describe regulation is unnecessary because typically, regulation is based on commands and includes different types of sanctions (controls) to modify behaviour. In this dissertation, the term traditional regulation refers to command-and-control regulation. This command-and-control phrase is also used to align to the meaning as used by Gunningham, *et al.*, *Smart Regulation*, *Infra* note 5. The Smart Regulation model’s responsiveness theme is the primary regulatory model examined in this research.

In Ontario, the Walkerton contaminated drinking water tragedy spurred legislative change and the introduction of 19 localized source protection committees, enacted through a regulation under the *Clean Water Act, 2006 (CWA)*.² In Alberta, water scarcity challenges resulted in the introduction of the *Water Act*³ and the *Water for Life Strategy*⁴ that were relied upon to organize local water governance through watershed planning and advisory councils. In May 2010, when the Yukon Water Board heard the *Western Copper–Carmacks* application and denied the mining proponent’s water license, a crisis of uncertainty emerged within the mining industry operating in the Territories. This denial of the license resulted in the industry proponent appealing the Board’s decision to raise a legal question on the jurisdiction of the Water Board. Together, the Walkerton drinking water tragedy, the water quantity issues in Alberta and the Yukon administrative law proceedings prompt deeper thinking on the rationale of regulators to experiment with the protection of water through a strategy of “regulatory pluralism.”⁵

Generally, at a provincial level, a state-centric form of governance characterized the early phase of environmental protection regulation, as exhibited by the command-and-control implementation style. In other words, the state controlled and directed the behaviour of the regulated entities through prescriptive legislation. The state set out the regulatory standards, instruments or commands, and state-imposed sanctions or controls were incorporated into the

² S.O. 2006, c. 22. See O. Reg. 288/07.

³ R.S.A., 2000, c. W-3.

⁴ Alberta Government, *Water for Life Strategy: Alberta’s Strategy for Sustainability* (November, 2003) and Alberta Government, *Water for Life: A Renewal* (November, 2008), online: Alberta Environment and Parks <<http://www.waterforlife.alberta.ca/02488.html>>.

⁵ P. Grabosky, “Beyond Responsive Regulation: The expanding role of non-state actors in the regulatory process” (2013) 7 *Regulation & Governance* 114 at 115. Grabosky states the concept of regulatory pluralism “derives from that of legal pluralism which recognizes that the law exists alongside a variety of lesser normative orderings.” And, locates regulatory pluralism as an extension of Galanter’s observation that “legal system is often secondary rather than a primary locus of regulation”; including other scholars such as Griffiths view that law is “an unsystemic collage of inconsistent and overlapping parts.”; N. Gunningham, P. Grabosky, D. Sinclair, *Smart Regulation: Designing Environmental Policy* (Oxford: Oxford University Press, 1998) at 89-91. Where regulatory pluralism is described as inclusion of a range of state and non-state actors who, for example, are charged with implementing or overseeing the implementation of a mix of instruments.

regulation. Today's legally constituted governance experiments reorient the state's role towards a shared environmental protection function. However, when governance is a shared function, private actors, in a certain respect, become regulators of the water. With the shift to a governance mode, I question the state's function as the guardian of the public interest, namely as the upholder of environmental protection values.

Prior to this profound regulatory turn away from command-and-control approaches, global regulatory trends – in particular, the 1990s neo-liberal era of privatization and the “responsive regulation theme” – strengthened the “consultative” regulatory relationship provincial governments had established with the private sector.⁶ This advice-giving relationship has defined the participation of industry actors in Canada's environmental regulation since the 1970s command-and-control period and continued through the government's adoption of the cost-cutting measures under the industry-oriented “new public management” platform of the 1990s.⁷ This partnership between environmental regulators and the private sector reverberates through the recent regulatory trend towards a shared governance mode, where a plurality of state and non-state actors govern water at a local watershed level. Perhaps this consultative partnership regularized the participation of private actors in regulatory affairs and facilitated the easy acceptance of the governance mode by regulators.

⁶ S. Wood, G. Tanner & B.J. Richardson, “What Ever Happened to Canadian Environmental Law” (2010) 37 Ecology Law Quarterly 981 at 988.

⁷ *Ibid.* Also see The Honourable Dennis R. O'Connor, *Walkerton Commission of Inquiry – Part One: A Summary Report of the Walkerton Inquiry: The Events of May 2000 and Related Issues* (Toronto: Queen's Printer for Ontario, 2002) at 463. online: Ontario Ministry of the Attorney General <http://www.attorneygeneral.jus.gov.on.ca/english/about/pubs/walkerton/part1/WI_Summary.pdf>. [Herein Known as Walkerton Report One] Justice O'Connor discusses cost cutting measures under the Common Sense Revolution Platform. In the Inquiry Report he states: “The Red Tape Commission was established in November 1995 as a Cabinet-level committee. ... The Commission's primary objectives included, in part, the following objectives: i) Reduce the compliance costs and administrative burden to businesses and institutions, thereby improving the competitiveness and business climate for existing and new businesses. ii) Move toward alternative methods of regulation, such as the establishment of performance standards and allowing business self-regulation; move away from micro-managing the compliance process.....”

The devolution of public responsibilities to private and civil society sectors also occurred during these periods of regulatory change.⁸ For example, in June 1995, Ontario's Ministry of the Environment announced the transfer of the testing of drinking water from the Ministry of Health to private labs. In the Walkerton Reports, Justice O'Connor cited this privatization policy as a contributing factor to the Walkerton incident.⁹ However, in certain ways, explored in more detail in this dissertation, the devolving of responsibilities to private actors continues with the regulatory shift to a shared governance approach.

Taken together, the shift to the governance mode, the embeddedness of the private sector in the regulatory function, the influence of the neo-liberal philosophy on environmental regulation and its devolution effect produce a problematic result from the perspective of public law values (for example, environmental protection, access to public process, transparency) underpinning water source protection. As I embarked on this research, I anticipated that the industry's dominant regulatory role in the environmental function could translate into a domineering voice in the localized water committee setting. I wondered, who would raise environmental protection values and water security issues in this multi-party forum? Moreover, would these decision-makers be responsive to the changing ecological conditions occurring within a watershed?

⁸ Wood, Tanner & Richardson, *Supra* note 6.

⁹ O'Connor, Walkerton Report One, *Supra* note 7. See Chapter 10: Failure to Enact a Notification Regulation – 10.4 The Move to Privatization in 1995–96 beginning at 374 and Chapter 13: Budget Reductions at 31-35. Justice O'Connor, at page 376 explains that: "A new government was elected in Ontario in June 1995. The MOE initiative to privatize drinking water testing that had begun shortly before the election was consistent with the policies of the new government. The decision to privatize became part of the budget reductions implemented through the MOE business plan dated January 22, 1996, and approved by Cabinet on February 28, 1996. The original MOE proposal for privatization, in June 1995, was based on a time line of two to three years. After the newly elected government assumed office, this period was reduced to six months, then to four months, then to two months. Municipalities were informed, in a letter dated May 15, 1996, that the MOE's laboratories would stop providing routine drinking water tests on July 13, 1996. On July 17, 1996, the Ministry of Health informed municipalities that its laboratories would also stop routine testing, as of September 1996. This notification letter was applicable to the testing of water in Walkerton, "because the Walkerton PUC had historically sent its water samples to the Ministry of Health laboratory in Palmerston for testing."

Water security has been an ongoing governance problem for water managers across Canada. By 2000, watersheds in Alberta, Ontario and the Yukon were exhibiting changes associated with climate change (episodes of drought and flooding), oil/gas and mining activities (hydraulic fracturing – i.e., fracking and mineral extraction) and contaminated drinking water events. As I commenced my research, I expected the decision-makers in these water committees would debate these water security issues, especially in my three selected research sites: Alberta’s Bow River Basin Council (BRBC), Ontario’s Lake Erie Source Water Protection Committee and the Yukon’s Water Board. Instead, I found these issues were not raised by the committee members, nor debated in the committee forum, nor fully explored in the committee’s reports or decision documents. For example, in the BRBC’s Bow River Basin State of the Watershed Summary Report (2010), climate change “predict[ions of] increased glacial melting” is briefly commented upon and, then is quickly discounted in the report.¹⁰ As an information tool for “water managers and users .. of the Bow River,”¹¹ I ask: Did this watershed status report prepare water managers, residents and business owners of Calgary for the June 2013 flood, reportedly “Canada’s costliest natural disaster?”¹² This research demonstrates how governing water through a management planning exercise and licensing process remained a reactive and insular administrative function directed at the technocratic and narrow information needs of its administrators. Oddly, a protective, watershed-level perspective was missing in the committees’ decision-making processes.

¹⁰ Bow River Basin Council, Print Copy: Bow River Basin State of the Watershed Report Summary Booklet, 2010 (Calgary, Bow River Basin Council, 2010) at 13. Also see BRBC, State of Watershed Summary Booklet (2010), online: BRBC <http://wsow.brbc.ab.ca/index.php?option=com_content&view=article&id=102&Itemid=182>.

¹¹ *Ibid.* at 2.

¹² Government of Canada, “Canada’s Top Ten Weather Stories for 2013 – 1. Alberta’s Flood of Floods,” online: Environment Canada <<http://www.ec.gc.ca/meteo-weather/default.asp?lang=En&n=5BA5EAFC-1&offset=2&toc=hide>>.

The three research sites also illustrate the change towards regulatory pluralism, where a multiplicity of public, private, civil society and First Nations representatives participate in a regulatory function.¹³ Regulatory scholars and provincial regulators anticipated that a diverse range of stakeholders would participate in these watershed committees. Building on K. Bakker's definition of governance as "how we make decisions and who gets to decide,"¹⁴ I pursued this research to gather empirical data on these questions. I discovered the politicized nature of water governance where an agency captured by provincial authorities prevailed and where decision-making power was concentrated in the hands of a few actors. The civil society sector's participation and the First Nations' ways of knowing water were marginalized. The results call into question the theoretical participatory premise of the governance mode and point to the need for further research on the power and negotiation dynamics in play.

Change is a key feature of environmental regulatory regimes and natural ecological systems. Conceptually, the notion of change connects the theories of "responsive environmental regulation"¹⁵ and "resiliency."¹⁶ In order to examine the responsiveness of the decision-makers to environmental change in watersheds, this dissertation relies on the governance and ecological literature by connecting the ecological theory of "resiliency"¹⁷ with the regulation literature's "responsive environmental regulation"¹⁸ theme. The ecological literature defines resiliency as "a measure of a system's capacity to cope with shocks and

¹³ Grabosky & Gunningham, *Supra* note 5.

¹⁴ K. Bakker, ed, *Eau Canada: The Future of Canada's Water* (Vancouver: UBC Press, 2007) at 16.

¹⁵ N. Gunningham and D. Sinclair, "Integrative Regulation: A Principled-Based Approach to Environmental Policy" (1999) *Law & Society Inquiry - American Bar Foundation* 853.; This article is premised on Gunningham, Grabosky and Sinclair's *Smart Regulation* see footnote Gunningham, Grabosky, & Sinclair, *Supra* 5.

¹⁶ C.S. Holling, "Resilience and Stability of Ecological Systems" (1973) *4 Annual Review of Ecology and Systematics* 1 in R.K. Turner, K. Button and P. Nijkamp, *Ecosystems and Nature: Economics, Science and Policy* (Cheltenham: Edward Elgar, 1999).

¹⁷ *Ibid.*

¹⁸ Gunningham, Grabosky & Sinclair, *Supra* note 15.

undergo change while retaining essentially the same structure and function.”¹⁹ In short, resiliency is a measurement of an ecosystem’s adaptability and stability.

Similar to a natural system often characterized as adaptive, interconnected and responsive, I wondered whether a social-legal system such as a governance regime could be responsive to ecological change.²⁰ This academic curiosity informed the dissertation’s primary research question: What lessons can be taken from resiliency theory and applied to environmental regulation and governance? To address the question I take up Canadian ecologist C.S. Holling’s four features of resiliency: flexibility, diversity, a broad perspective and the capacity to react to emergent change.²¹ These four features make up an “eco-resiliency framework,” which I offer as an evaluative tool to examine if a particular legal governance model exhibits features of an environmentally responsive regime.²² I found the legislation and policy documents exhibited features of eco-resiliency, but the practice of water governance fell short in supporting an eco-resilient governance mode. Perhaps organizational change scholars would have predicted this regulatory implementation problem, but this business management

¹⁹ B.H. Walker, N. Abel, J.M. Anderies & P. Ryan, “Resilience, Adaptability, and Transformability in the Goulburn-Broken Catchment, Australia” (2009) 14(1) *Ecology and Society* 12.

²⁰ S.A. Levin, *The Princeton Guide to Ecology* (Princeton: Princeton University Press, 2009). Conceptually, the social-ecological system recognizes ecological systems as “linked to social systems comprised of resource users and their governance arrangements.”

²¹ Holling, *Supra* note 16 at 21. A description of these four resiliency features is discussed in final section of the 1973 article under the heading: Application. The naming of these four features and characterizing these elements as the Eco-resiliency Framework is exclusive to this dissertation and is inspired by Holling’s thinking in his 1973 article.

²² The term “eco-resiliency” is coined in this research to distinguish resiliency from its use in other disciplines and to limit the term to an ecological context. For example, the term resilience has been used to define “personal” resilience, “community resiliency” and “organizational resilience.” S. Mikail, “Dimensions of Human Resilience: An Overview” 2014 [Unpublished] Mikail relies upon numerous authors including: J.W. Reich, A.J. Zautra (Eds.) *Handbook of Adult Resilience* (New York: Guilford Press, 2010). In this article, Mikail (Ph.D., C.Psych., ABPP.) offers a definition of individual resilience and community resilience: “resilience is the ability to recover from challenges in a manner that leaves an individual or community more flexible and better able to meet future challenges. Resilience involves an ability to react creatively and constructively to change while recognizing that change is ongoing part of life.” Community resilience is “the existence, development, and engagement of community resources by community members to thrive in an environment characterized by change, uncertainty, unpredictability, and surprise.” Mikail further introduces the concept of organizational resilience, which is defined as “the capacity of a system, its function and structure in the face of internal and external changes.” In sum, the term resiliency reflects an ability to adapt to change.

theory was not explored in this research. In the end, I conclude that the regulatory policy drift to a governance mode does not produce better environmental decision-making. I anticipate this particular finding will be of interest to policy-makers, legal scholars, including First Nations and local community groups interested in participating in a localized water committee.

Even though, in this research, the social-ecological context of governing a watershed is acknowledged as complex, the goal of this research is simple: to examine these newly constituted legal models in order to understand how water committee members make environmental decisions. The qualitative research methodology adopted in this dissertation relies upon participant observation and interviews with committee members, a literature review and a thorough analysis of legislation, jurisprudence, administrative law decision-making document of the Yukon Water Board, policy documents and media reports. To examine the ecological responsiveness of these localized decision-making processes and decision-makers, the data was analyzed for the four eco-resiliency elements: flexibility, diversity, a broad perspective and emergent change. The nine key findings from this research are presented next in this dissertation overview.

2.0 Key Research Findings

In this research, resiliency is viewed as a concept that can be used to examine the committee's responsiveness to environmental decision-making. An eco-resiliency framework was developed by mapping the legal governance scholarship with the ecological literature and is used as an analytical tool for evaluating environmental responsiveness. Building on Holling's four elements, the eco-resiliency framework offers four corresponding, interrelated features (flexibility, diversity, a broad perspective, and emergent change) whose meanings are precisely specified in order to provide analytical clarity. Specifically, "flexibility" in a governance context

is present when the regime fosters a two-way communication process that is grounded in consensus and offers the participants flexibility in resolving the problem (for example by relying upon a mix of regulatory responses and tools) and network governance arrangements. “Diversity” is displayed when the decision-making process includes an array of participants, is open to receiving diverse viewpoints and encourages diversity in thinking. “A broad perspective” is depicted when the governance context considers the multi-jurisdictional frame, the polycentric nature of natural resource governance and when it includes a jurisdictional co-ordination mechanism to organize decision-makers, their water problems and solutions. Finally, a capacity for emergent change is present when decision-makers are able to react quickly to accept and respond to emergent environmental change or surprise events.

The application of the four eco-resiliency factors to the three case studies, the interview data, the observation of the water committee members and the media reports resulted in nine primary research findings. These research findings illustrate that governance is complicated. The findings are organized according to the four factors.

2.1 Eco-Resiliency Factor of *Flexibility*

1. Contrary to the collective and consensus-based decision themes the collaborative governance literature predicts these findings expose a restrictive and technocratic decision-making process. Specifically, in the Ontario case study, the source protection committee’s decision-making was limited to the 21 legislatively defined drinking water threats – the enumerated drinking water threat list. In Alberta, the watershed planning and advisory council fulfilled a regulatory information function by reporting on the ecological state of the watershed, with disregard to the oil and gas industry’s fracking activities and climate change events (such as flooding and droughts) occurring within the

basin. In the Yukon, the Water Board was limited to the administrative aspects of reviewing and amending a mining proponent's water license proposal. This administrative process was restricted to considering the environmental mitigation plan of the proponent's project under review and not the watershed as a whole. Overall, as is demonstrated in the following chapters, the legal framework restricted the committees' flows of communication and their ability to be flexible in their decision-making.

2. In the localized water committee where the law structures the governance arrangement, we see the limits of the law with respect to implementing procedural mechanisms to ensure compliance with legal regulations. As observed, in Alberta and Ontario, the practice of governing exposed an application problem; the participants overlooked and failed to implement regulatory directives and policy instruments. For example, the legal requirement to work in a collaborative setting and to adopt consensus as a decision-making principle was often overlooked and left a water plan open to criticism of arbitrariness. In effect, the regulatory architects missed the essence of a collaborative process: that is, the conditions to collaborate resided within the assembled group.

2.2 Eco-Resiliency Factor of *Diversity*

3. Although the theoretical premise of collaborative governance is based upon a diversity of actors, these research findings demonstrate that a stakeholder approach may be in tension with environmental protection goals. In Ontario, local community groups in the cities of Guelph and Paris brought forward their water concerns related to aggregate extraction activities within their watershed, but their concerns were swept aside. As expressed by one of the water committee members, in order for a citizen's concerns to be heard by the committee, the submission must be presented in a conventional, science-based expert

format. Their concerns must fall squarely within one of the 21 prescribed drinking water threats. As I observed, the committee members would respond to the presentation by a citizen's delegation by smiling politely, noting the citizen's concern and then promptly dismissing the issue (as not falling within the enumerated drinking water threat list) as the committee quickly moved forward to draft the water plan.

4. First Nation communities faced systemic barriers to participating in a water committee. In Alberta, local Aboriginal communities did not participate in the process. During the interviews, the lack of First Nations' participation was raised as an outreach challenge for the Bow River Basin Council. In contrast, the Six Nations of the Grand River and Mississaugas of the New Credit First Nation participated regularly in Ontario's Lake Erie Water Source Protection Committee. However, their accepted ways of knowing water were overlooked in the decision-making process. The Ontario case study revealed an administrative planning practice that homogenized, rather than distinguished, the cultural, political and identity differences between these two First Nations. In effect, the new governance arrangement preserved colonial knowledge and the existing administrative knowledge technologies embedded in the provincial government's established planning functions, which together further perpetuated the silencing of Aboriginal voices in the committee. As part of the Yukon Water Board, First Nations communities (for example, the Little Salmon First Nation and Selkirk First Nation) have also actively participated in public hearings. However, a close reading of the decision documents including the observation of a hearing proceeding (Minto Exploration Ltd. Amendment Application QZ11-031) revealed a pragmatic

administrative process that incorporated the concerns of the First Nation communities but lacked any reference to Indigenous law, legal traditions or ways of knowing water.

5. In contrast to the literature's support of empowering watershed users through the devolution of water governance to a local level, this research reveals that power becomes concentrated in this decentralized forum and creates a barrier to a resilient legal regime. In Ontario, the aggregate extraction conflicts (in cities of Guelph and Paris) illustrate agency capture where the provincial regulatory authorities (the provincial Ministry of the Environment and Conservation Authority) tightly held the power to control the administrative process and influence the committee's decision-making process in order to serve provincial interests in economic development. Moreover, powerful industry representatives directly participating in the committee and operating within the shadows of the planning exercise prevailed in the decision-making.

2.3 Eco-Resiliency Factor of *Broad Perspective*

6. Overall, in all three case studies, the challenge of jurisdictional co-ordination was enormous. The jurisdictional fragmentation presented in this research exposes the constraints (for example, constitutional) that are imposed upon these committees and that create a complex administrative burden, wherein the participants acquiesce to these constraints. The ubiquitous legal question of jurisdiction casts a shadow over governing water at a local level, and acts as a barrier to the implementation of inter-agency coordinated decisions and solutions or to a networked governance approach.

2.4 Eco-Resiliency Factor of *Emergent Change*

7. Surprisingly, the Yukon Water Board, an administrative tribunal with strict procedural requirements, offered the strongest opportunity for Aboriginal and conservation groups to

raise their water concerns. The Water Board, through the legal mechanism of presenting and questioning evidence at a public hearing, demonstrated responsiveness to new information, revealing an element of surprise. This responsiveness to new information allowed for the reconsideration and incorporation of additional water concerns into a decision document and a water license.

2.5 Additional Findings

8. Conceptually, the governance model creates a shared governing function where the province no longer acts as the single commander-in-chief over environmental protection regimes. These case studies reveal three state identities with respect to the regulatory function of water governance: the Chameleon State (Ontario), the Enigma State (Alberta) and the Mechanized State (Yukon). Together, these identities demonstrate an organization in a state of flux where these government entities struggle to shed the traditional environmental command-and-control paradigm and move towards a new way of governing.
 - a. Like a chameleon's ability to constantly change colours in order to signal behavioural change, Ontario's provincial government exhibited a constantly shifting oversight function. Charged with the regulatory water source protection oversight function under the *Clean Water Act, 2006*, the provincial agencies exerted strong and weak forms of control directly and indirectly through the use of policy bulletins, directives, discussion papers and a non-appointed Ministry of Environment (MOE) liaison committee representative. Despite this chameleon-like behaviour, the state remained, at its core, strongly aligned to the traditional command-and-control regulatory implementation style.

- b. Alberta's Enigma State manifested as a puzzling and complex water governance regime. In Alberta, there exists a multi-level water governance organizational architecture that is woven through the *Water Act*²³ and the plethora of soft-law policy instruments, with the dominant policy being Alberta's *Water for Life Strategy*.²⁴ In this flexible policy-driven and partnership model (created between the provincial environmental government, its advisory council, the local water committees and the stewardship groups), the province's role in localized-water management planning remains a puzzle – an enigma.
- c. A Mechanized State emerged from observing the Yukon Water Board's (Board) administrative process. The Board's closed-door decision-making process created a limitation to understanding how this heterogeneous group, or even individual decision-makers, moved beyond a traditional administrative law framework. The transparency of the Board's decision-making process was limited in this research to a review of the final decision documents and observation of the Board's process at a public hearing. Thus, insight into how these diverse decision-makers shape the outcome in practice remains undeveloped. However, a mechanized state organism that operates through an efficient administrative function grounded in the legal traditions and doctrines of an administrative tribunal process was observed at the public hearing.
9. Perhaps the most important finding of this research, which is obscured by this policy drift towards a governance mode, is the erosion of the water-source protection function of the

²³ *Supra*. note 3.

²⁴ Alberta Government, *Water for Life Strategy: Alberta's Strategy for Sustainability* (November, 2003) and Alberta Government, *Water for Life: A Renewal* (November, 2008), online: Alberta Environment and Parks <<http://www.waterforlife.alberta.ca/02488.html>>.

state. The state's function as the guardian of the public interest and namely, as the upholder of environmental protection values has been altered. This empirical research reveals how the task of consensus building – in drafting and completing the legislatively imposed end product, the water plan or license – generates a pragmatic view of the agency's policy function, one devoid of environmental values. During my observation of all three processes, the committee members never raised nor debated the environmental values underpinning the public interest in water. Consequently, the essence of the environmental regulatory state's substantive and moral authority, with regard to environmental protection, is being eroded, and the state's function, as guardian of the public interest in water source protection, is now open to question.

3.0 Dissertation Chapters Outlined

This dissertation is structured into five chapters, excluding this overview section and the conclusion segment. In the overview chapter, the premise of the dissertation is provided to direct the reader's attention to how change shapes not only natural systems but also socio-legal systems, such as legally constituted water governance regimes. This summary chapter introduces the reader to the responsiveness concept that underpinned C.S. Holling's resiliency theory and appeared in Gunningham and Sinclair's "Smart Regulation" (Integrative Regulation Approach), which sets out an environmental policy framework. Together, these authorities are featured to introduce the reader to the theoretical basis of dissertation's in-depth analysis of Canada's recent legislative policy drift to a governance mode in Canada's water regulatory sector. The analysis undertaken to understand how these legal governance constructs can be responsive to ecological change.

Chapter One: Introduction: Literature Review & Research Methodology: Given the subject matter of this research, collaborative governance in the water sector (water management planning that results in a water plan or water license), the premise of this dissertation seeks to understand the concept of responsiveness with respect to ecological change across changing local waterscapes. This lengthy chapter begins by setting out the research problem, the central research question and the background of environmental regulatory change, followed by an extensive literature review. The literature review outlines the shift away from the command-and-control implementation style to the responsive regulatory approach. Presented next is Gunningham and Sinclair's Integrative Regulation Approach, the environmental policy framework that informs the theoretical basis of this research. The theme of responsiveness is also explored from an ecological perspective by presenting a summary of C.S. Holling's resiliency theory. The chapter concludes by outlining the research methodology applied in the dissertation.

Chapter Two: Eco-Resiliency Framework – What does Eco-Resiliency look like in a Local Water Governance Model?: In this chapter, I assert that the governance literature demonstrates similar responsiveness features as discussed in the natural science literature's presentation of the concept of resiliency. In Canada, however, the environmental governance literature has yet to explore fully the complementary features of resiliency and the application of this ecological concept to the environmental problem of how to govern a watershed. In response to the gap in the literature, this chapter develops the eco-resiliency framework through a mapping exercise where the resiliency literature is mapped onto governance literature. The eco-resiliency evaluation criteria takes into account the four elements: i) flexibility, ii) a broad perspective iii) diversity, and iv) emergent change. The four-part eco-resiliency framework is

used to evaluate the responsiveness of the legislative water governance experiments and to structure the interview instrument.

Chapter Three: Ontario Case Study – The Chameleon State: The Lake Erie Region Source Protection Committee (SPC) enacted under the *Clean Water Act, 2006* is presented in this chapter. The eco-resiliency features of the committee’s decision-making process are examined by considering the aggregate extraction conflicts that arose in the communities of Guelph and Paris, Ontario. In both cases, local citizens brought forward their drinking water concerns to the SPC but faced numerous barriers in the local planning process. Both groups were concerned their drinking water was at risk of contamination as result of aggregate extraction activities. In the Guelph case, residents were concerned with a breach of an aquitard at a local aquifer. The residents of Paris were concerned with the extraction methods at a gravel pit not yet quarried. Through these conflicts, the chameleon-like behaviour of the state emerged as provincial representatives steered the committee members’ decision-making to ensure community concerns were marginalized in the local planning process.

Chapter Four: Alberta Case Study – The Enigma State: In 2004, the provincial government named the Bow River Basin Council (BRBC) as the first watershed planning and advisory council (WPAC) in the province and it is this water committee that is examined in this chapter. In Alberta, water governance is a complex system of multi-level soft-law policies where the BRBC carries out the local water planning function within a group of over 200 members. In 2012, the Bow River Basin faced numerous water security challenges (for example, climate change events such as floods and drought, First Nation drinking water concerns, hydraulic fracking) but the BRBC had not incorporated these concerns into its localized planning

process. In this research, the role and function of the provincial government at the BRBC meeting remained a riddle – an enigma.

Chapter Five: Yukon Case Study – The Mechanized State: The Yukon Water Board’s May 2010 Western Copper – Carmack’s decision and the Board’s July 4-6, 2012 public hearing process where the Minto Exploration Ltd’s existing Water Use Licence #QZ11-031 was renewed form the backdrop for examining the responsiveness of this co-management Board and its supporting legal framework. In the Carmack’s licensing process, the Board denied the water use license. In the Minto license amendment, the Board found the mining company had breached its existing license and had violated the *Waters Act*. In this chapter, the focus is on whether the legal framework constructs a mode of water governance that is inclusive of the elements of eco-resiliency. Together, these legal decisions, including the integrated legal water governance framework defined by the Umbrella Final Agreement (in particular, The Water Board (Chapter 2) and Water Management (Chapter 14)) and the *Waters Act* legislation, are reviewed to assess the eco-resiliency of the decision-making. In the end, the Water Board’s decision-makers operate in a new governance institutional framework and carry out their decisions through a mechanized state organism. The tribunal supports a form of command- and- control regulatory implementation style with the Board being subject to Ministerial directives and approval.

Chapter Six: The Voices of the Committee Members on Eco-Resiliency: This lengthy analysis chapter organized into the four features of eco-resiliency, presents the findings derived from the interview data gathered from the water committee research participants. In the analysis, consideration is given to the context of the three case studies, the lessons learned of applying

the eco-resiliency framework to these case studies and answering the question: Do the legal water governance models examined exhibit any or all of the four features of eco-resiliency?

Conclusions & Recommendations – The Lessons Learned: The primary question addressed in this conclusion is: How might one strengthen these legislative experiments in water governance in Canada? Several recommendations that support the dissertation's findings are set out.

Chapter One: Literature Review & Research Methodology

1.0 The Research Problem, Question & Rationale

1.1 The Research Problem: Is the Governance Experiment Suitable to Protect Water Sources?

Many of Canada's aquatic systems are degraded. Lake Winnipeg, the St. Clair River, South Saskatchewan River, and the St. Lawrence River illustrate ecological change and the consequences of the loss of resilience.²⁵ In a freshwater system, a loss of resilience can create a more fragile and vulnerable water source. The loss of resilience has been attributed to nutrient overloading (for example, phosphorus and nitrogen) from non-point sources of pollution (for example, fertilized lands, feedlots, storm run-off from urban development, leaky underground septic storage tanks and waste-water sources) into the receiving waters. If an aquatic system is in a vulnerable state, nutrient loading can lead to a degraded ecosystem and eutrophication. Eutrophication is a change to an aquatic system that occurs because of the addition of nutrients to the water. These added nutrients stimulate the growth of phytoplankton and produce a change in the state of the water from a clear to a greenish, turbid condition or an algae bloom. In shallow freshwater lakes, this regime shift can occur very quickly.²⁶ Given this possibility of ecological change, in part, stimulated by continuous anthropocentric activities, the question remains: How can a regulatory regime be designed to be responsive to an aquatic system that functions in an active state of resisting disturbances and perturbations?

²⁵ D. Dempsey, J. Elder & D. Scavia, *Great Lakes Restoration & The Threat of Global Warming* (Great Lakes Organization, May 2008), online: Great Lakes Organization <www.healthylakes.org/wordpress/wp-content/uploads/2008/05/how-global-warming-report-08.pdf>; J.P. Bruce *et al.*, *Report in Focus – The Expert Panel on Groundwater: The Sustainable Management of Groundwater in Canada 2009 Report* (Council of Canadian Academies, May 2009), online: WWF-Canada. <[www.scienceadvice.ca/documents/\(2009-05-11\)%20Report%20in%20Focus%20-%20GW.pdf](http://www.scienceadvice.ca/documents/(2009-05-11)%20Report%20in%20Focus%20-%20GW.pdf)>; WWF – Canada Report entitled: 2009 Canada's Rivers at Risk: Environmental Flows and Canada's Freshwater Future, online: WWF <http://assets.wwf.ca/downloads/canadas_rivers_at_risk.pdf>; Cleaning up Lake Winnipeg and Lake Simcoe see: Online: Env. Canada < <http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=B1128A3D-1>>.

²⁶ Levin, *Supra*. note 20. at 39.

A traditional environmental regulatory response to these environmental problems relied upon command-and-control style regulatory instruments.²⁷ While some scholars argue these prescriptive instruments have been successful in protecting environmental systems,²⁸ others counter that the degraded state of many freshwater systems worldwide demonstrates the limits of this regulatory approach. Taken together, the contested nature of this traditional regulatory approach and the continued degraded environmental state of the aquatic systems across Canada combined with the regulatory turn to a governance mode at a provincial level raises questions for those interested in governance and water-source protection. Does a collaborative decision-making process strengthen water governance regimes? Does the decision-making process allow decision-makers to consider the ecological health or integrity of a watershed? Has the provincial government's adoption of a shared governance paradigm resulted in devolving water-source protection responsibilities to municipalities, industry and civil society sectors and First Nations? Without research on how these water committees are responsive to emerging water security issues, regulators are impeded in understanding how to strengthen and sustain water governance

²⁷ *Abbott, Supra* 1 at 61. Abbot explains that “[c]ommand and control can take numerous forms. It is generally characterized by centrally set environmental standards or targets (for example, limits on the emission of certain pollutant into a watercourse) which are underpinned by the use of sanctions in the event of non-compliance. In many instances, these standards are implemented through an environmental licence or permit.” At page 63, Abbott further describes this form of regulation as a “combination of prohibitions, licences and standards represented the command aspect of pollution regulation. The control aspect usually took the form of the threat of criminal or quasi-criminal liability supported by legal regimes for monitoring, reporting, inspection, prosecution and sanctions.”

²⁸ R. Durant, D.J. Fiorino & R. O’Leary, “Introduction” in R. Durant, D.J. Fiorino & R. O’Leary, eds, *Environmental Governance Reconsidered: Challenges, Choices, and Opportunities* (Cambridge: MIT Press, 2004). These scholars describe this shift away from the traditional model as a “post-modern” perspective. A perspective that emerged as a response to the well-documented critique of the traditional command and control model but also, a response to the evolving state of environmental regulation. These academics argue regulation exhibits distinct phases of development and explains, in part, the current regulatory change towards governance. As an environmental regulatory strategy, this shift from government to governance represents a fundamental change to the traditional regulatory: a model that relied primarily upon a prescriptive, tailored, single-instrument regulatory method of environmental protection.; For a critique and support of the command-and-control approach see: J.V. DeMarco and T. Vigod, “Smarter Regulation: The Case for Enforcement and Transparency” (March 2007) 17(2) J. Env. L. Prac. 85; J. Hanebury, “Smart Regulation – Rhetoric or reality?” (2006) 44(1) Alta. L. Rev. 33; M. Winfield, “Governance and the Environment in Canada From Regulatory Renaissance to ‘Smart Regulation’” (March 2007) 17(2) J. Env. L. Prac.69; M.P. Vandenbergh, “The Social Meaning of Environmental Command and Control” (2001) 20 Va. Envtl. L. J. 191.

regimes with an environmental protective ethos.

1.2 Research Question: Lessons from Resiliency Theory

The central question in this dissertation is: What lessons can be taken from resiliency theory and applied in the sphere of environmental regulation and governance? This question considers the regulatory policy drift to the governance construct as a practice of governing water in Canada. An examination of the legal governance construct devotes attention to the responsiveness theme underpinning Holling's resiliency theory and as featured in the governance literature. While the governance literature is vast, Gunningham, Grabosky and Sinclair's Smart Regulation (Integrative Regulation Approach) is examined because of the dominance of their environmental policy model in the literature and in regulatory practice.²⁹ The responsiveness theme featured in Smart Regulation is directed at industry, is organized by an enforcement-and-compliance pyramid model and is underpinned by a normative frame of effectiveness and efficiency. While important features of a regulatory regime, these values of effectiveness and cost-efficiency are in sharp contrast to environmental protection values advanced by environmental law and policy. In the context of the shift to a shared governance mode, questions are raised on how decisions and decision-makers are influenced by this market-oriented normative frame of reference of effectiveness and efficiency.

1.3 Research Rationale: Is Environmental Policy Responsive to Industry Pressure or Ecological Change?

This doctoral research takes up Professor Benidickson's provocative question: "If one takes conservation, ecological integrity or biodiversity as a frame of reference, what happens [to water law regimes]?"³⁰ What if regulators seriously adopted responsiveness towards ecological change

²⁹ Gunningham, *et. al.*, *Supra* note 5.

³⁰ J. Benidickson, *The Culture of Flushing: A Social and Legal History of Sewage* (Vancouver: UBC Press, 2007) 8.

as a regulatory theme? This dissertation explores whether environmental regulatory responsiveness can be achieved by taking into account the abstract ecological concept of resiliency. To reiterate, resilience is defined as “the capacity of an ecosystem to cope with change and perturbation.”³¹ This research brings together two distinct bodies of theory: the literature on environmental governance and regulation with the literature on ecologically based resiliency. The justification for bridging these two bodies of theory is premised on the hypothesis that water governance in Canada should be responsive to ecological change or “the flux of nature” perspective.³² Unlike the traditional view of an ecosystem in “balance”³³ (or in a state of near equilibrium, implying a “predictable and controllable”³⁴ ecosystem), the flux of nature perspective characterizes an ecosystem as non-linear, “dynamic, inherently uncertain, with potential multiple futures” that respond to external disturbances (for example, a fire or an intense rainfall).³⁵ This contemporary perspective of a responsive or adaptive ecosystem introduces the element of change.

Responsiveness is a dominant theme in regulatory theory. In Gunningham *et.al.*'s Smart Regulation, the responsiveness theme is the key-organizing construct of their environmental policy model. Their idea of responsiveness is ordered through a three-sided enforcement-compliance pyramid directed at the industry actor and advances a regulatory pluralism perspective based on a “flexible and resilient” regulatory model.³⁶ The regulatory pluralism approach considers “not just conventional forms of direct (“command-and-control”) regulation

³¹ F. Moberg & V. Galaz, “Resilience: Going from Conventional to Adaptive Freshwater Management for Human and Ecosystem Compatibility” (2005) at 3, online: Swedish Water Policy Briefs <www.siwi.org/documents/Resources/Policy_Briefs/PB3_Resilience_2005.pdf>.

³² C.F. Hutchinson and S.M. Hermann, *The Future of Arid Lands: Revisited – Chapter 6: Ecosystems* (UNESCO, 2008) at 88.

³³ *Ibid.*

³⁴ *Ibid* at 83.

³⁵ Holling, *Supra* note 16 at 734.

³⁶ *Gunningham, et al., Supra* note 5 at 14.

but also...more flexible, imaginative, and innovative forms of social control that seek to harness not just governments but also business and third parties.”³⁷ Yet, this responsive regulatory pluralism idea has implications for the environmental function of the State, once the primary actor under a traditional environmental regulatory approach. In essence, the Smart Regulation (Integrative Regulation) approach reinforces the logic of enforcement and compliance while also devolving regulatory practice to non-state actors.³⁸ However, it is still unclear: How does the regulatory pluralism approach enable decision-makers to consider environmental protection concerns?³⁹

Gunningham, *et.al.*,’s present their three-side enforcement and compliance pyramid model to bolster the “suboptimal” nature of traditional environmental regulatory approaches.⁴⁰ In their view, environmental regulatory approaches are suboptimal when regimes “are not effective in achieving their purported policy goals, not efficient in doing so at least cost, nor do they perform well in terms of other criteria such as equity or political acceptability.”⁴¹ These scholars characterize an “optimal” regulatory approach as effective (i.e., “achieving their purported policy goals”) and efficient (achieving the goals at the “least cost”).⁴² In their view, effectiveness and efficiency are “the primary concerns of policy makers.”⁴³ On its face, Gunningham and Sinclair’s reliance upon effectiveness and efficiency as an “optimal” evaluation criteria suggests

³⁷ *Ibid* at 4.

³⁸ *Ibid*.

³⁹ N. Gunningham & M.D. Young entitled: “Towards Optimal Environmental Policy: The Case of Biodiversity Conservation” (1997) 24 *Ecology Law Quarterly* 243.; also see: Gunningham and Sinclair, *Supra* note 15. Gunningham and Sinclair caution against adopting an escalating compliance/enforcement response when the potential for an irreversible ecological loss such as, loss of biodiversity exists.

⁴⁰ Gunningham & Sinclair, Integrative Regulation, *Supra* note 15 at 854 and *Gunningham et.al.*, Smart Regulation, at 25-27.

⁴¹ *Ibid*.

⁴² *Ibid*. Integrative Regulation, at 854.

⁴³ *Gunningham & Grabosky, Smart Regulation, Supra* note 5 at 26.

that policy makers are primarily concerned with economic⁴⁴ issues and outcomes while discounting other perspectives (for example, distributive law value of “equity”⁴⁵). This dissertation takes up Gunningham and Sinclair’s contention that policy makers are primarily concerned with a market-oriented criterion and explores the danger of framing the responsiveness theme in an environmental public policy exercise by effectiveness and efficiency. The worry, in this research, is about how this market orientation will shape a decision-making process. The decision-makers might be influenced by the goals of effectiveness and achieving a cost-efficient administrative process with little time or regard for citizen’s environmental protection concerns and key ecological considerations, such as maintaining healthy aquatic system functions.

While Gunningham and Sinclair’s evaluative environmental policy framework of effectiveness and efficiency is important, it is directed at an outcome-based policy analysis (i.e., results oriented), overlooks the process and its participatory aspects. In the case of water governance, Gunningham and Sinclair’s outcome-based framework potentially narrows the focus on the effectiveness and efficiency of the end product – for example, a water plan. Overlooked in their framework is the dynamic nature of environmental policy-making and regulating from the bottom-up. The organizational design of regulatory pluralism re-orientes the regulatory function towards the process and introduces a bottom-up organizational structure where stakeholders participate in the decision-making.⁴⁶

⁴⁴ *Ibid* at 27. Gunningham, *et al.*, discuss the issue of “optimality” from an economic perspective.

⁴⁵ *Ibid.* at 28.; Gunningham & Sinclair, Integrative Regulation, *Supra* note 15 at 854.

⁴⁶ F. Rauschmayer, A. Berghofer, I. Omann and D. Zikos “Examining Processes or/and Outcomes? Evaluation Concepts in European Governance of Natural Resources” (2009) 19 *Environmental Policy and Governance* 159 at 165. My thinking considers the process rather than the outcome of the policy exercise. Evaluation of “good governance” has been approached by considering two approaches – outcome-oriented and process-oriented evaluation. These authors argue that “good processes contribute to good governance” by “improve[ing] the substantial quality of the output through more and better information management and learning effects with the process; legitimate processes stand a better chance of getting their results accepted; reinforce the normative aim of

In the ecological literature, Holling argues efficiency is tied to the concept of engineering resiliency and the equilibrium view in ecology. Engineering resilience focuses on equilibrium “steady states, where resistance to disturbance and speed of return to the equilibrium” are measured.⁴⁷ An engineering approach supports “efficiency, constancy, and predictability — all attributes at the core of the engineer’s desires for a fail-safe design.”⁴⁸ In Holling’s view, these attributes lead resources management activities and policies to be directed towards achieving stability, fixed rules and a maximum sustainable yield. Of course, a danger exists these fixed rules will cause a system to change into another state. Once a system has changed into an alternative state, restoration is often expensive, time consuming and unattainable.⁴⁹ A potential outcome, as Holling pointed out in his 1973 article, may be that “the present concerns for pollution and endangered species are signals that the well-being of the world is not adequately described by concentrating on equilibria and conditions near them.”⁵⁰ In 2015, the problems Holling was concerned about, including pollution, species and biodiversity loss are still pressing.

Holling counters this engineering-oriented efficiency perspective by presenting ecological resiliency, which reflects the “flux of nature” perspective in ecology.⁵¹ Ecological resiliency considers “the amount of disturbance that can be absorbed without undergoing the

certain characteristics of governance processes, such as openness and participation, [features of shift towards participatory, pluralistic and localized water governance]; J. Black “Regulatory Conversations” (March 2002) 29 (1) *Journal of Law and Society* 163 at 164. The process orientation of this dissertation also considers regulatory scholar J. Black’s idea that “regulation is a large part a communicative process;” a communication process that is carried out through decision-making methodologies that are socially constructed, in the case of water governance at a provincial level in Canada, as a participatory, pluralistic and localized participant driven watershed committee. Together, the process orientation and the focus on communication are taken up in this dissertation.

⁴⁷ C.S. Holling “Ecological Resilience versus Ecological Resilience” in L. Gunderson, C.R. Allen & C.S. Holling, *Foundations of Ecological Resilience* (Washington: Island Press, 2010) at 53.

⁴⁸ *Ibid.*

⁴⁹ B. Walker & D. Salt, *Resilience Thinking: Sustaining Ecosystems and People in a Changing World* (Washington: Island Press, 2006). Walker and Salt discuss the problems within The Northern Highlands Lake District, Wisconsin at 96-110.

⁵⁰ Holling, *Supra* note 16 at 2.

⁵¹ Hutchinson & Herrmann, *Supra* note 32.

shift to an alternative stable state.”⁵² The resiliency perspective highlights the elements of “persistence, change and unpredictability.” These three elements are “embraced and celebrated by biologists with an evolutionary perspective and by those who search for safe-fail designs.”⁵³ Unlike engineering resiliency, where the analysis of resiliency is directed toward the time it takes the system to return from a disturbance, ecological resiliency is a measure of the system’s ability to absorb the perturbation.

Holling’s thinking on ecological resiliency is taken up in this dissertation to consider whether decision-making and the decision-makers can be oriented towards flexibility and non-linear thinking. Ecological resiliency requires decisions directed towards “retaining the ability” of the system “to get back”⁵⁴ from a disturbance, to maintain the system’s ability to continue to behave in the same way and to offer an undisrupted flow of “ecosystem services”⁵⁵ from the natural system to the human system. Conceptually, this “flux of nature”⁵⁶ ecological perspective supports a flexible decision-making process responsive to the fluctuations within the system and changing ideas amongst decision-makers.

This dissertation is underpinned by the ecological resiliency and flux of nature perspectives to counter the market-oriented criteria of effectiveness and cost-efficiency featured in Smart Regulation. These values of effectiveness and efficiency are universally accepted in both the literature and in regulatory practice. However, these market-oriented values (for example, cost-efficiency) are in sharp contrast to public policy goals, such as environmental protection, the protective public mandate of environmental law and ecological change. These two

⁵² C.R. Allen, L.H. Gunderson & C.S. Holling, “Commentary on Part One Articles” in L. Gunderson, C.R. Allen & C.S. Holling, *Foundations of Ecological Resilience* (Washington: Island Press, 2010) at 6.

⁵³ C. Folke, J. Colding & F. Berkes, “Synthesis: building resilience and adaptive capacity in social-ecological systems” 352 in F. Berkes, J. Colding and C. Folke, eds., *Navigating Social-Ecological Systems* (Cambridge: Cambridge Press, 2003).

⁵⁴ Walker & Salt, *Supra* note 49 at 64.

⁵⁵ Ranaganthan, *et. al.*, *Infra.* note 149. See discussion of ecosystem services.

⁵⁶ Hutchinson and Herrmann, *Supra* note 32.

values are embedded in regulatory theory and perhaps, carried into regulatory practice without regard to public law values, a contemporary perspective of an ecosystem (flux of nature), a citizen's water security concerns and Aboriginal peoples' ways of knowing a watershed. The worry is the shift to the shared governance mode in a public law area of water governance will continue to perpetuate the values of effectiveness and efficiency without regard to the ecological nature of aquatic systems and an environmental protection ethos.

So, before moving to Gunningham *et.al.*, 's important outcome-oriented environmental law question of whether the regulatory governance regime is effective (i.e., "achieving their purported policy goals"⁵⁷), this dissertation takes a step back and considers the value of first understanding the decision-making carried out in sites of law-making.⁵⁸ Specifically, I am

⁵⁷ Gunningham & Sinclair, *Integrative Regulation*, *Supra* note 15 at 854.; Also see Gunningham *et. al.*, *Smart Regulation*, *Surpa* note 5 at 26-27.

⁵⁸ The focus on environmental decision-making in this dissertation is informed by the following scholars:

1. Lester M. Salamon, "Chapter 1: Introduction – The New Governance and the Tools of Public Action: An Introduction" in Lester M. Salamon (ed) *The Tools of Government: A Guide to the New Governance*. (New York: Oxford University Press, 2002) at 10-11. Salamon contends the enactment of new legislation should consider the implementation stage of the regulatory program and in particular, "the decisions that shape which actors have significant roles in this stage of the process," which points to the political nature of the regulatory design, the governing process and the regulatory tool choice. He states: "What is at stake in these battles is not simply the most efficient way to solve a public problem, but also the relative influence that various affected interests will have in shaping the post enactment evolution." [Emphasis Added];
2. N. Walker and Grainne de Burca "Reconceiving Law & New Governance" (2006-07) 13 Colum. J. Eur. L. 519. These authors argue a "causal analysis" of law and new governance (NG) regulatory approach is insufficient because it fails to reveal how NG shapes law and how law shapes NG. These scholars state: "how each is being shaped and reshaped though the influence of the other, and how this process of mutual influence may affect the balance of values and practical priorities" within modern regulatory regimes.;
3. J. Newig & O. Fritsch, "Environmental Governance: Participatory, Multi-Level – and Effective?" (2009) 19 Environmental Policy and Governance 197 at 198-199 & 210. These scholars contend that "environmental governance has become highly complex system of decision points" and research is needed to explore the relationship between decision-making processes (e.g., collaborative, command and control or market-based mechanisms) and policy outputs on environmental outcomes. Their research question: "what extent the existence of multiple levels of governance affects the ability of participatory decision-making to deliver high quality environmental output and improve implementation and compliance." Their research findings found that face to face, not merely two-way communication, "positively influenced the ecological standard of decisions." In this dissertation, the focus is on the complexity of the decision-making process, which exposes the relationship between decisions and policy outcomes, the political nature of a governance model and the normative frame underpinning the model. It is this idea of how law or for example, in the case of water management planning – the end-product the water plan is being shaped and reshaped by the decisions and decision-making process in the localized, stakeholder-driven water committees.

interested in examining the environmental decision-making process in water committees.⁵⁹ This inquiry is undertaken in order to understand if a legal water model reveals features of a responsive governance regime – ‘responsiveness’ in this thesis is viewed from a conceptual perspective of ecological resiliency. Moreover, to understand the governance process — in particular, who is the decision-maker? And, who has influence within the decision-making process?⁶⁰

To date, the legal environmental governance literature offers limited recognition of how to conceptualize or evaluate decision-making in a regulatory model to be responsive to ecological change. The challenge remains to structure a water governance regime to be responsive to the complexity of the ever-changing state of freshwater aquatic systems and their connectivity with a social system of water users, governance regimes and ecological systems. This research acknowledges the connectivity of social and ecological systems by adopting a framework that treats ecological systems as “linked to social systems comprised of resource users and their governance arrangements.”⁶¹

Given the subject matter of this dissertation, environmental regulation and specifically, the shift to a governance mode in water policy and law in Canada, a comparative analysis of the Integrative Regulatory approach (Smart Regulation) and Holling’s resiliency theory is completed as a mapping exercise to develop an evaluative tool. This dissertation’s eco-resiliency framework

⁵⁹ For example, Ontario’s localized, multi-stakeholder water committee envisioned by the Honourable Dennis R. O’Connor, *Part Two Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water Ontario*. Ministry of the Attorney General (Toronto: Queen’s Park Printer, 2002), online: Ontario Ministry of the Attorney General <http://www.attorneygeneral.jus.gov.on.ca/english/about/pubs/walkerton/part2/Chapter_4.pdf>. [Herein Known as Walkerton Report Two]. The participatory and pluralistic aspects are outlined in Report Two. Ch 4: Participation of Affected Groups and the Public, at 103-109. In particular, at 103, it was expected that the MOE would consult with the CA authority, “municipalities, environmental groups, and other affected groups to develop a provincial framework for the source protection planning, including guidelines for the form, content, and the development process.”

⁶¹ Levin, *Supra* note 26.

is based on an ecological change concept to understand how legal governance regimes and decision-makers are adaptable to ecological change. Presented in Chapter Six is the analysis of the interviews with the water committee members, which offers a “law in action” interdisciplinary research perspective. In Chapter Seven, the conclusion chapter, Gunningham and Sinclair’s Integrative Regulatory principled-based approach, in particular, the participatory principle (i.e., no. 4: “A participatory approach, which empowers third parties to become quasi-regulators”⁶²) is expanded upon. This participatory principle triggered this research inquiry on the decision-making aspect of governance. This dissertation leaves the outcome question — Is the water plan or water license effective? — open for further study.

Presented next is a discussion of the development of the responsive regulation theme, which facilitated the policy drift to a governance mode in Canada’s regulatory affairs. In the next sub-sections (Part 5.0), the responsive theme underpinning Gunningham and Sinclair’s Integrated Regulation Theory and Holling’s Resiliency Theory (Part 6.0) are explained, as both theories form the theoretical foundation of this research. The final section, (Part 7.0) of this chapter, sets out the research methodology of this dissertation.

2.0 Literature Review: Understanding the Responsive Regulation Theme

2.1 Environmental Regulatory Practice in Canada: The Policy Drift to the Governance Mode

2.1.1 Introduction

The last fifteen years have been a period of transition in water governance in Canada. The shift in the regulatory practice to a governance mode can be traced to water governance crises in Alberta, Ontario and Saskatchewan. During the period of 1999-2004, Albertans experienced extreme drought conditions. In May 2000, seven residents of Walkerton, Ontario died as result of

⁶² Gunningham et. al., *Smart Regulation*, *Surpa* note 5 at 141; Gunningham & Sinclair, *Integrative Regulation*, *Supra* 15 at 874.

drinking *E. coli* contaminated tap water. In Battleford, Saskatchewan the cryptosporidium parasite contaminated drinking water in 2001 and caused severe illness for several thousand residents. Like so many Aboriginal communities across Canada, the Kashechewan First Nation in Northern Ontario had been on a boil-water alert for two years when *E. coli* was discovered in the reserve's drinking water in the spring of 2005.

In the literature, the Walkerton incident is cited as the impetus of regulatory change across Canada. Provincial legislators in Ontario responded to public outcry over the incident by introducing several pieces of legislation, including the *Clean Water Act, 2006*. This piece of legislation is known as the gold standard for water source protection planning. In consideration of Justice O'Connor's recommendations, as set out in the Walkerton Commission Inquiry Reports, the new legislative approach was envisioned as a "local planning process" and introduced the governance mode.⁶³ In this new shared-governance model, a plurality of state and non-state actors would form a water committee and come together to develop a water plan for a local watershed. Shortly after, provincial regulators across Canada began to adopt this legal model of water governance. As a politically palatable response, the introduction of the governance mode demonstrates a government's responsiveness to public outcry. But, does this model lead to better environmental decision-making than offered by the traditional command-and-control era of environmental regulation?

In this chapter, the governance literature is reviewed in order to place the policy drift to the governance mode in context and to understand the responsiveness theme in regulatory theory. However, the governance literature is extensive. This review of the scholarship is selective and is

⁶³ O'Connor, Walkerton Report Two *Supra* note 59. Report Two, Ch. 1: An Overview at 9. Justice O'Connor sets out the recommendation regarding a localized process. The recommendation reads: A local planning process: To ensure that local considerations are fully taken into account, and to develop goodwill within and acceptance by local communities, source protection planning should be done as much as possible at a local (watershed) level, by those who will be most directly affected (municipalities and other affected local groups). open to public scrutiny.

narrowly focused on the political science and legal literatures. Particular attention is given to the responsiveness theme in these literatures in order to understand its meaning in Gunningham *et.al.*'s, environmental policy-making model. The collaborative or new governance scholarship is also featured, as both literatures explain the normative framework and offer insight into the implications of the shared governance in the natural resources sector.

Together, scholars from different yet complementary disciplines were calling for regulatory change in the governance of the natural resources sector. This dissertation explores the link between these literatures through the responsiveness theme and the push for change in regulatory practice. The bridging of the scholarship is explored by examining Holling's theory, which informs the analytical eco-resiliency framework, presented in the next Chapter Two – Eco-Resiliency Indicators: The Eco-Resiliency Framework. The framework allows us to seriously examine the responsiveness theme in the context of ecological change, as challenged, by Professor Benidickson's provocative question: "If one takes conservation, ecological integrity or biodiversity as a frame of reference, what happens [to water law regimes]?"⁶⁴

Presented next is a discussion of the responsive regulatory theme as adopted in regulatory theory and as developed in regulatory practice at a global level and then, taken up in Canada. This responsiveness regulatory theme is industry-oriented, is underpinned by values of effectiveness and cost-efficiency and isolates the decision-makers from the social-ecological context of the environmental law-making exercise.

2.1.2 Traditional Environmental Regulatory Practice in Canada

During the 1970s to 1980s, Canada's "compliance system" period of environmental regulation, a traditional regulatory strategy sought to alter business behaviour. Howlett describes this compliance period as one of closed negotiations between government and business interests

⁶⁴ Benidickson, *Supra* note 30.

directed at the implementation of, and compliance with, environmental standards.⁶⁵ In Howlett's view, this strategy of bi-lateral negotiation was, in part, a response to the "significance of industry to the Canadian economy, the historical dominance of single industry production in many areas of the country, and the legacy of a staples economy and economic forces that provided a significant constraint on regulation."⁶⁶ In this negotiation dyad industry acted as an information conduit for the regulatory state where the regulated industry provided the regulator with "base-line data, ...up-to -date technical information...cost-benefit analysis of production and abatement costs."⁶⁷ However, Howlett questioned, as did others, whether this approach to environmental policy could result in "environmental protection."⁶⁸

Wood, Tanner and Richardson also described Canada's regulatory approach as "characterized by a consultative style."⁶⁹ This permissive orientation reflected the close consultative relationship between government and industry in developing and enforcing environmental regulatory rules "via closed door, bilateral negotiations."⁷⁰ Critiques of this approach cite the political nature of regulatory negotiations and the effective blurring of the public-private divide. The notion of "regulatory capture" became commonplace, describing "the effective control or domination of regulatory mechanisms by the interests who are the object of regulation."⁷¹ In the United States, more so than in Canada, the concern with regulatory capture emerged as public interest group in the 1960s and 1970s demanded participation in the law-making regimes of the state. In Canada, the dominance of the consultative implementation style

⁶⁵ M. Howlett, "Chapter Two: Policy Instruments and Implementation Styles: The Evolution of Instrument Choice in Canadian Environmental Policy" in D.L. VanNijnatten and R. Boardman in *Canadian Environmental Policy: Context and Cases*, 2nd ed. (Don Mills: Oxford University Press, 2002).

⁶⁶ *Ibid.* at 35.

⁶⁷ *Ibid.*

⁶⁸ *Ibid.* at 34.

⁶⁹ Wood, Tanner & Richardson, *Supra* note 6 at 988.

⁷⁰ *Ibid.*

⁷¹ M. Minogue, "Governance-Based Analysis of Regulation" (2002) 73 *Annals of Public and Cooperative Economics* 649 at 655.

allowed regulatory capture by industry to prevail, as this permissive bi-lateral negotiation style shaped regulatory affairs.

In the late 1980s, the foundation of the 1970s environmental public law era was beginning to show signs of fatigue – structural cracks were emerging in the traditional approach to environmental regulation as globalization, privatization and the neo-liberal ideology trends influenced methods of regulation.⁷² It was hoped that a “Third Way”⁷³ would re-align the State’s role as a “steering”⁷⁴ function. In an oversight role, the administrative state began to govern from a distance while the “rowing” activities of carrying out the State’s administrative mandate were left to a hybrid form of governance where state and non-state actors participated in regulatory activities.⁷⁵ Scholars cautioned this hybrid form of governing could obscure the bright-line distinction between public and private functions. Yet, in Canada, the dominance of the consultative style of environmental governance points to the acceptance of industry actors in regulatory affairs. Perhaps, this acceptance of private actors also opened the door to a mission

⁷² I thank Professor D. Priel (Osgoode) for this thinking on the influence of “ideas” and how ideas can be used to shape of regulation. For example, the idea of privatization and its impact as an organizing principle is explored in the following articles: Baldwin, M. Cave, M. Lodge, *Understanding Regulation: Theory, Strategy, and Practice 2nd ed*, (Oxford: Oxford University Press, 2012) at 49.; M. Derthick and P.J. Quirk, *The Politics of Deregulation* (Washington: The Brookings Institute, 1985).; P. Hall, “Policy Paradigms, Social Learning, and the State: The Case of Economic Policy-Making in Britain” (April, 1993) 25(3) *Comparative Politics* 275 at 279-280 and 284.; R. Howse, J.R.S. Prichard, & M.J. Trebilcock, “Smaller or Smarter Government” (1990) 40 *U. Toronto L.J.* 498 at 509-13 and 517 to 521.; B. Mansfield, “Rules of Privatization: Contradictions in the Neo-liberal Regulation of North Pacific Fisheries” (2004) 94(3) *Annals of the Ass. American Geographers* 565; D.J. Savoie, *Thatcher, Regan, Mulroney* (Toronto: University of Toronto Press, 1994).; Also see, “G.B. Doern, “Chapter 6: Environment Canada as a Networked Institution” in D.L. VanNijnatten and R. Boardman in *Canadian Environmental Policy: Context and Cases, 2nd ed* (Don Mills: Oxford University Press, 2002) at 108. Public administration scholar Bruce Doern at Carleton University, Ottawa argues that the privatization ideology in addition to the institutionalization of the idea of sustainable development including an innovation policy paradigm has shaped regulatory regimes in Canada. Doern contends that regulatory regimes created a space for “fluid and flexible forms of networked activity” at the Federal government level. Thus, ideas of innovation, networked agencies, sustainable development in addition to privatization, globalization created a change in the orientation of Environment Canada’s regulatory form to more of a networked institution.

⁷³ S. Clarkson & S. Wood, *A Perilous Imbalance: The Globalization of Canadian Law and Governance* (Vancouver: UBC Press, 2010) at 193.

⁷⁴ D. Osborne & T. Gaelber, *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector* (Boston: Addison-Wesley, 1992).

⁷⁵ *Ibid.* and, Clarkson & Wood, *Supra* note 73 at 193.

creep where neo-liberal values expand into a public law area, such as environmental protection regulatory regimes.

2.1.3 The Influence of Global Regulatory Trends

Suddenly, in the 1990s, a window opened and the winds of change swept over the global environmental regulatory space. This global wave of regulatory change brought about the responsive regulation movement.⁷⁶ The responsive regulation trend entered the regulatory arena to temper the environmental regulatory regimes of the 1980s. Scholars and industry actors claimed these traditional environmental regulatory instruments were “[t]oo rigid, complex, burdensome, costly, inefficient, adversarial, and ineffective; [that stifled] entrepreneurial innovation, eliminate[d] jobs and hinder[ed] competitiveness, in return for diminishing environmental benefits; and they are prone to industry capture.”⁷⁷ The idea that effective control is maintained by the nation-state (a centralized, bureaucratic chain of command⁷⁸) through prescriptive regulation was viewed as a barrier to achieving an effective and efficient environmental regulatory regime.

On the global regulatory stage, Braithwaite and Ayres introduced the responsive regulatory theme during the 1990’s period of privatization to mitigate traditional regulatory approaches.⁷⁹ Braithwaite and Ayres’ state-centric enforcement and compliance pyramid engaged two actors – the regulator and the regulated. The State acts as the regulatory enforcer and is charged with escalating the enforcement mechanisms up the compliance pyramid in response to the behaviour of the regulated entity – the firm. The key idea is the State’s responsiveness to the regulatee’s actions. The enforcement pyramid is based on a risk assessment

⁷⁶ Wood, Tanner & Richardson, *Supra* note 6 at 989.

⁷⁷ *Ibid.* at 988.

⁷⁸ Gareth Morgan, *Chapter 22: Max Weber’s – Concept of Bureaucracy*, in G. Morgan, *Creative Organizational Theory: A Resource book* 49 (1989) [hereinafter *Max Weber’s Bureaucracy*].

⁷⁹ I. Ayres & J. Braithwaite *Responsive Regulation: Transcending the Deregulation* (Oxford: Oxford Press, 1992).

perspective where the risk of non-compliance (i.e., some regulated actors will comply but others will need to be coerced to comply) is acknowledged. Regulatory responsiveness is narrowly directed at a firm's behaviour and the state's role of regulatory enforcer.

Freeman challenged the notion that public law is restricted to state actors. In her view, both private and public actors participate in regulatory affairs. Together these actors negotiate, reform, implement and monitor regulatory regimes and establish "institutional relationships."⁸⁰ In this regulatory space of negotiation and problem-solving, the State's role shifts away from commander-in-chief of the regulatory regime to "convener and facilitator of multi-stakeholder negotiations."⁸¹ In Freeman's view, the theme of responsiveness in the administrative state is characterized by public and private actors who are carrying out the administrative practice of regulatory negotiation and problem solving.⁸²

Majone argues the State's regulatory capacity is strengthened through a strategy inclusive of private sector actors, who act as service providers. In his view, a regulatory-based privatization strategy transforms the role of state from a provider of "goods and services" to "umpire whose function is to ensure that economic actors play by the agreed upon rules of the game."⁸³ Effectively, governance is privatized and the responsiveness of the state to the social welfare needs of society is clawed back. The service provider role of the state is privatized through private actors and the focus is inward on managing the procedural aspects of being a service provider.

Baldwin and Black countered Braithwaite and Ayres' enforcement theory with a broader perspective of responsiveness that considers a firm's organizational culture, regulatory logics,

⁸⁰ J. Freeman, "Collaborative Governance in the Administrative State" (1997-98) Vol 45 UCLA Law Review 17.

⁸¹ *Ibid* at 22.

⁸² J. Freeman, "The Private Role in Public Governance" (June 2000) 75 (3) New York University Law Review 543.

⁸³ G. Majone, "The Rise of the Regulatory State in Europe" in R. Baldwin, C. Scott and C. Hood, *A Reader on Regulation* (Oxford: Oxford University Press, 1998).

tools and strategies.⁸⁴ Baldwin and Black's work engages in a more complicated scenario by considering whether "really responsive regulation can be developed in polycentric regulatory regimes, including those where the rules of policy making, information gathering and enforcement are distributed between a number of different organizations, particularly where they cross different jurisdictional boundaries."⁸⁵ These scholars expose the multi-jurisdictional nature of regulatory affairs where organizational behaviour and strategic management are seen as factors that shape the responsiveness of a firm to regulation.

2.1.4 Canada's Responsive Regulatory Period

In Canada, the responsive regulatory period was one of delayering, downsizing and devolution of bureaucratic organizational systems. At both a provincial and federal level, the environmental government sector experienced budgetary cuts, contracting out of services, devolving of government authority and diminishing of regulatory enforcement and compliance capacity in line with the public management approach and a privatization agenda.⁸⁶ Clarkson and Wood contend this retooling of the regulatory bureaucratic organizational systems resulted in an overburdening of the public administration and ineffective oversight:

⁸⁴ R. Baldwin & J. Black, "Really Responsive Regulation" (2008) 71(1) *The Modern Law Review* Ltd. 59.

⁸⁵ *Ibid* at 93.

⁸⁶ Clarkson & Wood, *Supra* note 73 at 195. also see Progressive Conservative Party of Ontario, *Common Sense Revolution Platform Document*, (May 1994), online: Scribd. S. Robinson, *Common Sense Revolution* <<http://www.scribd.com/doc/57099326/Common-Sense-Revolution>>. Also see O'Connor, *Walkerton Report*, *Supra* note 7. In the Report, Justice O'Connor describes the Common Sense Revolution Platform as: "The Red Tape Commission was established in November 1995 as a Cabinet-level committee.... The Commission's primary objectives included the following objectives: i) Reduce the compliance costs and administrative burden to businesses and institutions, thereby improving the competitiveness and business climate for existing and new businesses. ii) Move toward alternative methods of regulation, such as the establishment of performance standards and allowing business self-regulation; move away from micro-managing the compliance process. iii) Establish an ongoing regulatory review process that would critically evaluate all aspects of new regulations, including the cost to government, the cost to the private sector to comply, and the overall benefit. iv) Change the regulatory culture of the government and the public. v) Ensure that the health and safety of Ontarians are not adversely affected by the regulatory reform process; Also See Scott Prudham, "Poisoning the Well: Neoliberalism and the Contamination of the Municipal Water in Walkerton Ontario" (May 2004) 35(3) *Geoforum* 343. online: <<http://www.sciencedirect.com/science/article/pii/S0016718503001076>>; also see J. McKenzie, "Walkerton: Requiem for the New Public Management in Ontario?" *Int'l J of Environment and Pollution* (2004) 21(4) 309. Also see V. Gibbons, "The Managing the Environment Report: A Review of Best Practices (2001), online: <<http://www.ontla.on.ca/library/repository/mon/1000/10292716.pdf>>.

“[t]he staff that remained were often stretched beyond their limits, sometimes given explicit or implicit messages to relax their oversight of regulated entities. In Ontario, decisions by government leaders to cut regulatory capacity, privatize certain government functions without adequate oversight, and relax enforcement of existing laws led to injury, illness, or – for the inhabitants of the small town of Walkerton, who became victims of the improperly regulated local water supply – death.”⁸⁷

Similar to the compliance period of environmental regulation, the drinking water contamination events in Walkerton, Ontario and Battleford, Saskatchewan demonstrate a reactive period of political responsiveness. Legislators were prompted by these environmental governance failures to introduce new legislation and a new model of governance.

In response to environmental governance failures and the political backlash to the staid traditional instruments, Canadian environmental regulators, at both a federal and provincial level, also undertook experimentation. Howlett contends first, market-and tax-based incentive forms of governance were introduced including self-regulatory corporate-oriented schemes. Howlett contends that similar to earlier environmental regulatory strategies, this “do more-with-less” idea “on the part of federal and provincial administrative agencies affected by budget cuts in the mid-1990s”⁸⁸ influenced this period of experimentation. In regulatory practice, a slow implementation of these market-based instruments occurred and then, a sudden and unexplained end to their popularity and use followed.⁸⁹

2.1.5 The Policy Drift to a Governance Mode

Nevertheless, Howlett views with optimism the recent shift to the multi-stakeholder or the governance mode that he contends also emerged from the experimentation regulatory period. In his view, the encouragement of diverse range of state and non-state actors in policy processes is,

⁸⁷ Clarkson & Wood, *Ibid.* at 195.

⁸⁸ Howlett, *Supra* note 65 at 35.

⁸⁹ *Ibid.* Howlett contends that “[n]ot one of these experiments were successful. In the case of market-based financial instruments, declines in government fiscal capacity and the political emphasis placed on fighting the deficit led to their quick demise – as evidenced by failure of numerous such proposals contained in the 1990 federal Green Plan.”

in part, an extension of the global new public management movement (NPM).⁹⁰ NPM is an ideology known for prescribing the delayering and downsizing of public administration bureaucracies. The introduction of NPM created a regulatory culture for the inclusion of the new governance framework in the environmental sphere.⁹¹

In response to changing values in the public and private spheres in the United States, Lobel traces the administrative state's subtle shift towards the new governance framework.⁹² In her view, the new governance framework is a reaction to the traditional style of governing and a response to the neo-liberal era's trend of deregulation and privatization that altered the boundaries of the public and the private spheres.⁹³ In effect, the tenets of the new governance framework result in an organizational restructuring. Notionally, the organizational design becomes less hierarchical to take into account how to govern from the ground up. Governing from the ground up is a response to the upward push from interest groups, citizens, and other decision-makers demanding access to policy decisions. In the end, the governance function and the organizational design are reconfigured to account for the upward push.

In response to Lobel's research, Canadian scholars assert the new governance framework re-shaped environmental regulation by introducing a "cluster of [new] values" into the public law regulatory space.⁹⁴ Others highlight the transformation of the nation-state and the idea that

⁹⁰ *Ibid.*

⁹¹ C. Hood, "Public Management: The Word, the Movement, the Science" in E. Ferlie, L.E. Lynn Jr. & C. Pollitt, *The Oxford Handbook of Public Management* (Oxford: Oxford Press, 2007).

⁹² O. Lobel, "The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought" (2004-2005) 89 Minn. L. Rev. 342. Lobel's Renew Deal's New Governance frame is succinctly explained in: O. Lobel, "New Governance as Regulatory Governance" in D. Levi-Faur, *The Oxford Handbook of Governance*. (New York: Oxford University Press, 2012). For a response to Lobel's Renew Deal (2004-05) article, refer to: Bradley C. Karkkainen, "New Governance" in *Legal Thought and in the World: Some Splitting as Antidote to Overzealous Lumping* (Dec, 2004) 89 Minn. L. Rev. 471; and to Lobel's Surreply to Karkkainen see: O. Lobel, "Setting the Agenda for New Governance Research" (2004-2005) 89 Minn. L. R. 498.

⁹³ *Ibid.* Also see: J. Pierre, *Governance and Institutional Flexibility*, in D. Levi-Faur ed., *The Oxford Handbook of Governance*, (Northamptonshire, Oxford University Press, 2012) at 187.

⁹⁴ Chris Tollefson, Anthony R. Zito & Fred Gale, *Symposium Overview: Conceptualizing New Governance Arrangements*, 90(1) Public Admin J 3 (2012).

effective control is maintained by a centralized, bureaucratic chain of command. Conceptually, governance as a legal model is now viewed as a deliberative, information gathering exercise where learning occurs, as the State is responsive to local conditions through the participation of a wider range of stakeholders beyond industry actors. Under the new governance framework, the role and function of the state as commander-in-chief evolved into an orchestrator of a localized governance function.⁹⁵

Overall, the new governance framework supports the participation and creation of partnerships as advanced by the experimentation implementation style highlighted by Howlett. The language of partnerships enters the provincial policy arena, as exhibited in Alberta's Water for Life Strategy. Based on this idea of partnership, governance is viewed as a shared "normative authority" amongst levels of authority and decision-makers with diverse expectations.⁹⁶ Decision-making becomes a collaborative task. Collectively, decision-makers become norm generators, as these "individuals are involved in the process of developing the norms of behaviour and changing them"⁹⁷ This collaborative partnership is responsive to horizontal and hierarchical relationships, with the effect of blurring the organizational lines of authority and introducing competing organizational goals and values.

In light of this shift to the governance mode, the political nature of regulation emerges as a cautionary tale. Minoque characterizes regulation as 'weapon of political control.'⁹⁸ This politicized description of regulation highlights the interplay of "the different political authorities control and sub-central governments so that regulation becomes a weapon of political control, and a locus of political conflict, rather than a politically neutral instrument of efficient economic

⁹⁵ Lobel, *Supra* note 92.

⁹⁶ *Ibid* at 373.

⁹⁷ *Ibid* at 377.

⁹⁸ Minoque, *Supra* note 71.

organization.”⁹⁹ In other words, the significant influence of political factors upon methods and logics of regulation create a form of political capture of the regulatory regime.

2.1.6 Summary of the Regulatory Change to the Governance Mode

The environmental regulatory governance project is one of “institutional change.”¹⁰⁰ Braithwaite and Ayres’ responsive regulatory theme and later advanced by Gunningham, Grabosky and Sinclair expanded regulatory methodologies and initiated the introduction of the governance framework. The re-design of the environmental regulatory space based on the governance mode results in an organizational restructuring. This restructuring takes into account how to govern from the ground up where a flatter, adaptive, self-regulatory organizational structure emerges from the attributes of new governance and the responsive regulation movement. Underpinning the responsiveness theme is the notions of privatization and inclusiveness where non-state actors with competing values now actively participate in the environmental regulatory process. Conceptually, this state and non-state partnership perspective breaks down the rigid organizational culture of the traditional regulatory period and results in the devolution of decision-making. However, in Canada, a consultative style of regulation has existed since the inception of the environmental regulation era and raises questions about how decisions are made in this governance mode. Governance is now viewed as a shared activity that re-orientes the centralized roles and functions of the regulatory state in support of a partnership governance approach to governing water.

3.0 Regulatory Change in the Natural Resource Literature

3.1 A Call For Change

Since the early 1970s natural resources scholars have been calling for regulatory change. In his

⁹⁹ *Ibid.* at 656.

¹⁰⁰ A. J. Cohen, *Negotiation, Meet New Governance: Interests, Skills, and Selves* (Spring 2008) *Journal of Law & Social Inquiry* 33(2) 503 at 503.

seminal 1973 article on resilience theory, Holling presents a conception of resiliency that takes into account the responsiveness of ecological systems: for example, the ability of a system to absorb change without shifting into another ecological state, such as algae bloom in a lake caused by nutrient loading of nitrogen or phosphorous into the water source.¹⁰¹ Holling, in this article, outlined the institutional design elements of a responsive natural resource governance system. Specifically, he put forth four resiliency-based design features: flexibility, a broad perspective, diversity, and emergent change and an element of surprise. Conceptually, his design framework emphasized dynamic change and uncertainty, an attitude that presumes that some events are unexpected.¹⁰² Holling's resilience governance framework calls for natural resource management systems to consider how change is "absorb[ed] and [can] accommodate further" ecological change.¹⁰³ In other words, Holling's framework of change invites an adaptive governance stance that can be responsive to the socio-political and ecological changes associated with contemporary environmental problems.

Concurrently, the connectivity of social and ecological systems (SES) was developing as a dominant theme in the literature. A SES regime recognizes how resource users and their social norms are linked to ecological systems. Ostrom reflected upon the SES concept's intersection with her Institutional Analysis Development (IAD) model. Ostrom's IAD framework challenges the governance function of the State and brings forward the importance of local resource users in organizing a governance regime and protecting the natural resource. In consideration of the SES concept and because of her extensive IAD research, Ostrom understood that "the application of empirical studies to the policy world leads one to stress the importance of fitting institutional

¹⁰¹ Holling, *Supra* note 16 at 7.

¹⁰² *Ibid* at 21.

¹⁰³ *Ibid*. Holling states: "does not require the precise capacity to predict the future, but only the qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they may take."

rules to a specific social-ecological setting. In her view, ‘One size fits all’ policies are not effective.”¹⁰⁴ With her IAD framework rooted in a localized and polycentric concept of governance, Ostrom’s consideration of a SES perspective effectively advanced her research towards an adaptive governance model. A model that also considers both intangible and tactile elements: “innovativeness, learning, adapting, trustworthiness, levels of cooperation of participants of more effective, equitable, and sustainable outcomes at multiple levels.”¹⁰⁵ These attributes are expected to arise in the social context supporting the regime.

4.0 An Interdisciplinary Perspective

4.1 Bridging Legal and Natural Resource Governance Scholarship

Taken together, this brief overview of the governance literature and natural resources scholarship exposes the challenges of the static construct embedded in legal regulatory regimes. The natural resource literature points to a deeper conundrum – how to reorient environmental regulatory regimes around the “idea of the [adaptive] ecosystem, a shared mission to protect and restore its health,” as aptly argued by legal scholar Karkkainen.¹⁰⁶ This dissertation takes up the challenge of regulatory change and considers the responsiveness theme underpinning Gunningham *et.al.*,’s Smart Regulation (also known as the Integrative Regulatory Approach) and Holling’s ecologically based responsiveness theme. So, the question remains: How can regulatory pluralism reform water law in way that continues to protect the environmental integrity of Canada’s ecologically-different waterscapes? This question takes on a renewed significance in light of the introduction of the governance mode. What are the elements that, taken together, can

¹⁰⁴ E. Ostrom, “Beyond Markets and States: Polycentric Governance of Complex Economic Systems” (2010) 100(3) American Economic Review 641 at 643. In this article, Elinor Ostrom relies upon the collaborative research of her husband Vincent Ostrom and his colleagues Tiebout and Warren who together define polycentric as: “connotes many centers of decision making that are formally independent of each other.”

¹⁰⁵ *Ibid* at 665.

¹⁰⁶ B. C. Karkkainen, “Collaborative Ecosystem Governance: Scale, Complexity, and Dynamism” (2001-2002) 21 Va. Env’tl. L.J. 190 at 240, 193.

be seen to constitute a sound framework to evaluate a water governance model in Canada? In this dissertation, the mapping of governance with the natural resources literature offers the opportunity to consider responsiveness to ecological change. Presented next is a summary of the Gunningham *et.al.*,’s environmental policy approach, which is followed of a synopsis of Holling’s resiliency theory. The idea of responsiveness in both theories is examined.

5.0 Re-Centering Environmental Policy–making Towards Eco-Resiliency: Exploring The Gap in Gunningham and Sinclair’s “Integrative Regulatory Approach”

5.1 Introduction

Gunningham, Grabosky and Sinclair’s principle-based Integrative or Smart Regulation model is viewed in the governance literature as part of the global responsive regulation trend that swept regulatory regimes in Australia, New Zealand, North America, Britain, and Europe over the past few decades. The genesis of Gunningham and Sinclair’s Integrative Regulatory Approach¹⁰⁷ appears in the earlier collaborative work of Gunningham and Grabosky, which culminated into *Smart Regulation*, a regulatory governance text that included Sinclair as a key contributor.¹⁰⁸ Smart Regulation builds upon Braithwaite and Ayers’ earlier monograph, *Responsive Regulation*.¹⁰⁹ To re-iterate, Braithwaite and Ayers’ two-dimensional enforcement and compliance model is state-centric. The State acts as the regulatory enforcer and is charged with escalating the enforcement mechanisms up the compliance pyramid in response to the behaviour of the regulated entity. The key idea is state’s responsiveness to the regulatee’s actions.

Gunningham, and his contributors, Grabosky and Sinclair, expanded upon Braithwaite and Ayres’ two-sided enforcement-compliance pyramid by adding an additional face or third side to the model. Their three-dimensional model gives consideration to the role of non-state

¹⁰⁷ Gunningham & Sinclair, *Integrative Regulation*, *Supra* note 15.

¹⁰⁸ Gunningham *et. al.*, *Smart Regulation*, *Supra* note 5.

¹⁰⁹ Ayres & J. Braithwaite, *Supra* note 79.

actors (for example, the public, environmental groups, interest groups, business associations) who act as surrogate regulators; the shift to self-regulatory corporate governance systems; and, the state's ability to influence the behaviour of the regulated entity. Unlike Braithwaite and Ayres's model, Gunningham *et.al.*, 's three-dimensional pyramid model broadens regulatory enforcement theory. Regulatory enforcement and compliance is no longer limited to the state regulator but is a shared activity of a diverse range of actors.

Gunningham *et.al.*'s view of responsive regulation results in a regulatory categorization and mapping exercise.¹¹⁰ This regulatory mapping strategy offers a normative framework that advances regulatory pluralism¹¹¹ and a dynamic, risk-based¹¹² approach to enforcement and compliance. This approach offers a "dynamic" instrument mix and matching process tailored to the context of the environmental problem while consideration is also given to pre-determined policy outcome goals and the level of risk.¹¹³ In effect, this model de-centers the State from its traditional role of commander-in-chief to overseer of outcomes, intervention measures for high-risk regulated entities and surrogate regulators (e.g., ENGOs) and self-regulatory processes.

5.2 A Synopsis of the Integrative Regulatory Approach (Smart Regulation)

In Gunningham and Sinclair's Integrative Regulatory Approach, a successful regulatory approach is premised upon five neo-liberal oriented design elements and principles. The five

¹¹⁰ Gunningham & Grabosky, Smart Regulation, *Supra* note 15 at 22.

¹¹¹ *Ibid.*

¹¹² *Ibid* at 401-2. The risk-based approach is expressed through the two track system: the green and conventional track regulatory system. "[T]he essential idea is not to respond to individual enterprises by being more or less punitive, depending on their path (Braithwaite's model) but rather to offer different standard regulatory paths –green and conventional tracks based upon performance and reputation. The regulatory path offered to best practice performers will be considerably more flexible and attractive than that offered to their more pedestrian rivals and will use a combination of instruments; self-regulation management systems, independent third party audit, community dialogue; oversight and transparency – responsiveness is built in in that a failure to live up to the commitments required of green track performers will result in demotion to the conventional track regulation."

¹¹³ *Ibid* at 403. Is the instrument dynamic and designed to facilitate responsive regulation? These authors consider whether "... the individual instrument ... and its implementation is static rather than dynamic and cannot be tailored to ascend or descend depending on the behaviour of specific firms)." In order to encourage responsiveness, these authors offer two methods: instrument sequencing and circuit breakers.

regulatory institutional design elements are:

1. Directed at industry,
2. Take into account the cost of environmental regulation,
3. Apply a least interventionist role for government actors,
4. Consider the interests of third parties, who are viewed as quasi-regulators; and,
5. Foster win-win opportunities.

The five principles are:

1. “A complementary multi-instrument mix rather than a single-instrument approach;
2. Less interventionist measures;
3. An escalating environmental enforcement pyramid with feedback mechanisms;
4. A participatory approach, which empowers third parties to become quasi-regulators; and,
5. Maximizing win-win outcomes.”¹¹⁴

Gunningham and Sinclair submit these principles will allow policy makers to achieve “efficient and effective environmental policy.”¹¹⁵ As a normative legal theory, it presents their view of *what the law ought to be* and is accordingly based on a set of market-oriented values.¹¹⁶ This normative perspective is reinforced in *Smart Regulation*, when Gunningham and Grabosky ask, “in what circumstances and to what extent can regulation safely be left to industries themselves? When government intervention is necessary, what forms should it take?”¹¹⁷ These questions orient the substance of their compliance and enforcement model towards a self-directed industry orientation, minimal government intervention and a value system of cost-efficiency and minimal regulatory intervention.

¹¹⁴ Gunningham & Sinclair, Integrative Regulation, *Supra* note 15 at 856.; Gunningham et. al., *Smart Regulation*, *Supra*, note 5 Chapter Six: Designing Environmental Policy at 387.

¹¹⁵ *Ibid.*

¹¹⁶ Gunningham & Grabosky, *Smart Regulation*, *Supra* note 15 at 2 and 25-27..

¹¹⁷ *Ibid* at 23.

5.3 The Normative Frame of Effectiveness and Efficiency

Reinforcing these five principles and elements is Smart Regulation's "pre-eminent criteria"¹¹⁸ of effectiveness and efficiency. Gunningham *et al.*'s define the criterion of "effectiveness" from an outcome-oriented perspective as "the degree to which the determined environmental objectives are achieved through the use of certain instruments"¹¹⁹ and "contributing to improving the environment."¹²⁰ This forgoing thinking might reasonably lead one to surmise that Gunningham *et al.*'s effectiveness criterion is aligned closer to a quantifiable policy outcome (i.e., is results-based) rather than an indeterminate environmental variable or a softer, learning characteristic as advanced by a process-oriented environmental collaborative governance model.

Gunningham and Sinclair's Integrative Regulatory Approach also considers the evaluative criteria of "equity and political acceptability." While only briefly mentioned by Gunningham and Sinclair's in their article (*Integrative Regulatory*), in the book *Smart Regulation*, Gunningham and Grabosky further expand upon the meaning of the terms equity and political acceptability. Equity refers to fairness, that is "fairness in the burden-sharing," which these authors expand to include the criteria of "political acceptability (which includes factors such as liberty, transparency, and accountability)."¹²¹ Nevertheless, these authors quickly discount their reliance upon equity as a criterion, as they view it as a concern for environmental justice advocates. These scholars firmly limit environmental policy evaluation to an "effectiveness and efficiency" criteria because to re-iterate, in their view, the target of the improved environmental performance is directed at a "firm"¹²² (and "industry").¹²³

The timing of the introduction of the *Smart Regulation* manuscript in the 1990s, during

¹¹⁸ *Ibid.* at 26.

¹¹⁹ *Ibid.* at 27.

¹²⁰ *Ibid.* at 26.

¹²¹ *Ibid.*

¹²² *Ibid.* at 29.

¹²³ *Ibid.* at 23.

the dawning of the responsive regulation era, raises concerns how the idea of privatization shaped the governance-based legal model. Given the public law nature of environmental policy making and the impact upon local citizens, one might consider whether a smarter environmental regulatory approach should take into account an ecological-based concept, inclusive of equity and fairness issues. Presented in the next sub-sections are the *Integrative Regulatory Approach's* five principles, as described by Gunningham and Sinclair in their article.

5.4 Integrative Regulatory Approach's Five Principles:

5.4.1 Principle 1. A complementary multi-instrument mix: Prefer policy mixes incorporating instrument and institutional combinations

Gunningham and Sinclair acknowledge little empirical research has been completed on the interaction of different instrument mixes. However, they argue a single-instrument regulatory approach is neither a “flexible”¹²⁴ nor a “resilient” response to “all environmental problems in all contexts.”¹²⁵ In their view, the focus of an effective and efficient regulatory strategy should be directed towards the strengths of each instrument and creating a diverse policy instrument mix that is context specific.

5.4.2 Principle 2. Prefer less-interventionist measures

Gunningham and Sinclair contend a least interventionist regulatory approach is needed to change industry behaviour. In their view, a broad-brush implementation strategy applied with prescriptive regulatory instruments unfairly treats all industries within the sector, even the good performers. These scholars recommend the implementation of an instrument continuum. The “continuum” that categorizes policy instruments “from the least to the most interventionist.”¹²⁶ The instrument continuum places the most coercively enforced and highly prescriptive

¹²⁴ *Ibid.* at 388.

¹²⁵ *Ibid.*

¹²⁶ *Ibid.* Gunningham and Sinclair, *Integrative Regulation, Surpa*, note 15 at 863.

instruments – the command-and-control instruments –at one end of the continuum and at the opposite end are the least interventionist instruments, such as voluntarism, education; while in between these two extremes are self-regulation and economic instruments.¹²⁷ Gunningham and Sinclair promote a case-by-case implementation strategy, where the level of instrument intervention needed in the situation is first understood, prior to applying the instrument. In their view, this principle of least intervention is presented as an escalating policy that complements the next principle – the escalating enforcement pyramid principle.

5.4.3 Principle 3. An Escalating Environmental Enforcement Pyramid with Feedback Mechanisms

Gunningham and Sinclair present their “three-dimensional regulatory pyramid model” with “escalating degrees of coercion” as being responsive to “the interaction of different but complementary instruments and parties.”¹²⁸ In this model, when less-coercive regulatory measures fail, a strategic escalation up the three faces of the pyramid should then occur. First, by introducing a more coercive instrument while also connecting the three parties as regulators — the government as regulator (first parties), business as self-regulator (second parties) and commercial and non-commercial (third parties) — and, then sequencing the regulatory response(s).

Conceptually, the integrated escalating pyramid is structured to be responsive to a two-track regulatory system: a “green track” and “conventional track.” Firms with a high environmental performance are placed in the “green track,” which is less interventionist. Firms with a lower environmental performance, for instance, those companies just meeting the regulatory standards will be streamed into the “conventional track” where a higher intervention

¹²⁷ *Ibid.*

¹²⁸ *Ibid* at 867.

strategy is applied through the use of prescriptive, coercive and restrictive measures.¹²⁹

Gunningham and Sinclair also acknowledge the limitations of their model. A key limitation exists in situations where an escalating enforcement response should not be used. In their view, two such situations exist: First, when the environmental problem presents “a serious risk of irreversible loss or catastrophic damage,” such as the “extinction of endangered species or nuclear plant explode[s].”¹³⁰ and, Second, when the regulatory interaction is limited to one-time transaction. This limited relationship limits the regulator’s opportunity to change behavior. Thus, a higher, more interventionist response may be appropriate as a first choice.¹³¹

In sum, this regulatory pyramid is responsive to the regulatory stream (“green” or “conventional”) selected for the firm and results in a regulatory strategy that may include multi-complementary instruments with stated environmental objectives agreed upon between the regulator and regulatee, prior to implementation. Failure of the regulatory strategy’s objectives would result in an agreed-upon escalation process up the enforcement pyramid that could include sanctions. If the environmental problem presents as an irreversible threat then, one would expect the application of a high interventionist instrument. In effect, the state’s role would shift from one of overseer to commander-in-chief of a tightly controlled compliance, monitoring and reporting process.

5.4.4 Principle 4. A participatory approach: the empowerment of third parties to become quasi-regulators

For Gunningham and Sinclair, a key role of government is to foster environmental improvement amongst the various actors (firms, commercial and non-commercial actors). Brought together through the enforcement pyramid, these parties interact and create the conditions to share

¹²⁹ *Ibid* at 869.

¹³⁰ *Ibid* at 871.

¹³¹ *Ibid*.

information, take on a “general educative function”¹³² and “share the regulatory burden.”¹³³ Through this participatory approach, it is hoped public accountability for the environmental performance of the regulated entity will be strengthened.

These authors caution that third party involvement can be counterproductive because the community may remain focused on local concerns (NIMBY – not in my backyard, for example) “to the detriment of broader policy goals.”¹³⁴ To offset this participatory burden, Gunningham and Sinclair stress the reliance of policy goals rooted in the pre-eminent criteria of effectiveness and efficiency. In NIMBY situation, these scholars worry the regulator and regulatee may spend more time on community engagement rather than in regulatory oversight or enforcement. Thus, the State’s role becomes one of establishing procedural mechanisms that offer opportunities for the public participation and to provide for, gather and exchange information.

5.4.5 Principle 5. Maximizing win-win outcomes

In recognition of the criticism that the traditional command-and-control instrument approach lacks incentives to “nudg[e]” firms to improve environmental performance, Gunningham and Sinclair argue a key challenge for regulatory policy makers is creating opportunities for firms to continuously improve their environmental performance.¹³⁵ In their view, the government’s role “is to ensure that regulatory solutions optimize the opportunity for win-win outcomes and facilitate and reward enterprises for going beyond compliance, while maintaining a statutory baseline and a ratcheting up of standards.”¹³⁶ Government intervention is required to foster an environmental performance path geared towards green regulatory track while also taking into account the marginal cost issue facing industry.

¹³² Gunningham & Grabosky, *Smart Regulation*, *Supra* note 5 at 95.

¹³³ Gunningham & Sinclair, *Integrative Regulation*, *Supra* note 15 at 877.

¹³⁴ *Ibid* at 878.

¹³⁵ *Ibid* at 893

¹³⁶ *Ibid* at 880.

5.4.6 Summary of the Integrative Principled Regulatory Approach

To summarize, in response to the perceived failure of the traditional single-instrument regulatory approach, Gunningham and Sinclair's Integrated Regulatory Approach (in their earlier, Smart Regulation) introduces an environmental regulatory method responsive to the industry's regulatory behavior and is structured in a pluralistic and participatory manner. In their view, a regulatory strategy can be adapted to a specific situation by first considering the five principles and adopting a regulatory pluralism perspective. The responsiveness of Smart Regulation appears in the three-dimensional escalating enforcement-compliance pyramid, whereby regulators, regulatees and third parties can respond to the instrument mix's outcomes by increasing or decreasing the levels of intervention, interaction and the type of regulatory instrument. In Gunningham and Sinclair's view, the evaluation of an environmental governance outcome should be limited to the two elements of effectiveness and efficiency. They deem these elements as paramount in assessing the regulatory outcome. Yet, these scholars limit the use of an escalating enforcement pyramid in situations where the environmental problem may lead to the risk of an irreversible loss, such as loss of biodiversity. In this case, the first response by the regulator should be a high coercive interventionist instrument. In this regulatory pluralism model, the State's role is fluid and changes between chief commander-in-controller, overseer, regulatory strategist, negotiator and facilitator of an undefined multi-stakeholder process.

5.5 Does the Smart Regulation Model Lead to Better Environmental Decision-Making?

The degraded state of many of Canada's aquatic systems raises concerns whether the dominance of the responsive regulatory theme as set out in Smart Regulation and Gunningham and Sinclair's Integrated Regulatory Approach is responsive to ecological change and is an appropriate regulatory model given Canada's policy drift to the water governance

experiments.¹³⁷ Gunningham, Grabosky and Sinclair argue the escalating enforcement pyramid approach is an inappropriate regulatory response to a serious environmental problem. Given the fragile state of many of Canada's watersheds, it is timely to examine the *Integrative Regulatory Approach (Smart Regulation)* to determine its relevance for governing aquatic systems and to consider responsiveness from an ecological change perspective. This dissertation argues a shortfall of this integrated regulatory model's evaluation criteria is the lack of an ecologically-based concept. Applying an eco-resiliency framework offers an alternative perspective to evaluate how to govern based on an ecological concept. In view of the goal of this dissertation to examine the decision-making within legal water governance regimes, one wonders if *the Integrative Regulatory Approach (Smart Regulation)* can be expanded to incorporate the lessons that can be learned by applying Holling's resiliency theory, as found in the ecological literature.

6.0 A Synopsis Of C.S. Holling's Resiliency Theory

6.1 Introduction

Resiliency in the ecological literature is describes the capacity of an ecosystem to absorb change.¹³⁸ The concept is used to assess "how to sustain and enhance adaptive capacity" of a complex and constantly changing ecosystem.¹³⁹ An ecosystem is resilient when it exhibits the capacity "to absorb recurrent disturbances."¹⁴⁰ A disturbance may include: a flood, a drought, and a sudden and intense rainfall or pest infestation. A resilient ecosystem maintains structures,

¹³⁷ WWF-Canada, WWF – Canada Report entitled: 2009 Canada's Rivers at Risk: Environmental Flows and Canada's Freshwater Future, online: WWF<http://assets.wwf.ca/downloads/canadas_rivers_at_risk.pdf> Environment Canada, Comprehensive Approach to Clean Water, see: Cleaning up Lake Winnipeg and Lake Simcoe Tabs, online: Environment Canada <<http://www.ec.gc.ca/paae-apcw/default.asp?lang=En&n=61284017-1>>; <<http://www.ec.gc.ca/eau-water/default.asp?lang=En&n=4E8DF48A-1>>and, <<http://www.ec.gc.ca/paae-apcw/default.asp?lang=En&n=63494C3C-1>>, respectively.

¹³⁸ C. Folke, S. Carpeneter, T. Elmqvist, L. Gunderson, C.S. Holling & B. Walker, "Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations" (2002) 31(5) AMBIO 437.

¹³⁹ *Ibid.*

¹⁴⁰ F. Berkes, "Understanding uncertainty and reducing vulnerability: lessons from resilience thinking" (2007) 41 Natural Hazard 283-295 at 283.

processes and feedbacks inherent in the ecosystem without shifting into another state (that is, triggering the system into “a regime shift or flip”¹⁴¹). The resilience concept considers both the vulnerability of an ecosystem and disruptions to an ecosystem and ways the system can “sustain and enhance adaptive capacity in a complex world of rapid transformations.”¹⁴²

With the concept’s consideration of an ecosystem’s adaptive capacity, stability, vulnerability, “surprises and unknowable risks,”¹⁴³ resiliency offers a conceptual framework to organize thinking on how a legal regulatory system should be structured to respond to changing conditions of aquatic systems. Holling defines resilience as both the persistence of the relationships within a system and the system’s ability to absorb change. Resilience is “the ability of the system to absorb change and variation without flipping into a different state where the variables and processes controlling structure and behaviour suddenly change. Resilience, therefore, represents the property that sustains the ecosystem”¹⁴⁴ and can be explained by a loss in resiliency, when an ecosystem loses resilience that loss in resilience could trigger a change in the state of the ecosystem.¹⁴⁵

6.2 Examples of Resiliency & A Loss of Resiliency

In his seminal article on resilience theory, Holling offers the Great Lakes as an example of an evolving ecosystem.¹⁴⁶ The Great Lakes together are considered a self-contained ecosystem, where the properties of the water have been altered by human activities. The human activities of nutrient loading of both domestic and industrial wastes into the lakes as well as commercial fishing have resulted in well-documented ecosystem changes. For example, the presence of algae

¹⁴¹ *Ibid* at 285. Berkes states: “The shift from one stable state to another is a regime shift of a flip.”

¹⁴² *Holling, Supra* note 16.

¹⁴³ C.S. Holling “Surprise For Science, Resilience For Ecosystems, and Incentives For People” (1996) 6(3) *Ecological Applications* 733 at 734-735.

¹⁴⁴ *Ibid.* at 735.

¹⁴⁵ *Ibid.*

¹⁴⁶ *Holling, Supra* note 16.

blooms in the lakes is attributed to the practice of domestic and industrial nutrient loading and sewage diversion. Holling contends that the effect of the nutrient loading “triggers periodic algal blooms,”¹⁴⁷ which reflect a condition of low oxygen coupled with “the sudden disappearance of some plankton species, and the appearance of others,” which in turn, caused “nutrient changes in the lake.”¹⁴⁸ As result, the Great Lakes ecosystem experienced a loss of resiliency.

Holling’s discussion of the nutrient loading event in the Great Lakes illustrates the loss of resiliency and an ecological regime shift. An ecosystem change (also, called a flip) can occur as result of an external event or, what Holling would call “a disturbance.” The external force (a disturbance) exposes vulnerability in the system. For example, an increase in water temperature, as result of climate change, might reduce the population of water temperature sensitive fish species and may leave the remaining fish population(s) vulnerable to a predatory response. The ecosystem’s response to the disturbance might be either to absorb the change or, if the ecosystem is already vulnerable and has reached a threshold, could flip into another state. Holling’s discussion of disruptions within the Great Lakes ecosystem demonstrates that the non-equilibrium model of nature (flux of nature) more closely resembles the behaviour of ecosystem. But also allows exposes the vulnerability and the potential for a regime shift or, surprise, which changes the system as result of resiliency loss caused by human-induced disturbances.

6.3 Applying the Resiliency Concept to a Natural Resource Management Regime

Holling considered how resilience theory could inform the development of a resource governance system. Specifically, Holling outlined four governance principles:

1) *flexibility* - ensures that future options are considered and left open to respond to changing ecological conditions;

¹⁴⁷ *Ibid* at 7.

¹⁴⁸ *Ibid*.

2) a *broad perspective* - requires events to be viewed from both a regional and a local context;

3) *diversity* - supports the heterogeneity of the functions that species provide within an ecosystem and reinforces the perspective of “ecosystem services,”¹⁴⁹ and the redundancy function that species offer an ecosystem; and,

4) *emergent change and an element of surprise* – provides for dynamic change and an attitude that presumes that some events can be unexpected.¹⁵⁰

However, Holling cautions a governance framework “does not require the precise capacity to predict the future, but only the qualitative capacity to devise [governance] systems that can absorb and accommodate future events in whatever unexpected form they may take.”¹⁵¹ Holling invites an adaptive governance stance that can be responsive to the socio-ecological system changes associated with contemporary environmental problems.

6.4 The Pathology of the Command-and-Control Regime – The Engineered Approach

Together, Holling and Meffe contend an ecosystem’s loss of resiliency can be attributed to the application of an engineering-oriented solution to a natural resources problem.¹⁵² Holling and Meffe argue the typical institutional response to a resource management crisis exposes the real

¹⁴⁹ J. Ranaganathan, M. Munasinghe & F. Irwin, *Policies for Sustainable Governance of Global Ecosystem Services World Resources Institute* (Northampton: Edward Elgar, 2008) at 9. These authors use the concept ecosystem services of nature to re-orient thinking on the degraded state of ecosystems globally and “how human alterations to natural systems affect their supply and distribution over time.” These authors characterize ecosystem services into four categories: 1) *provisioning* services (food, fresh water, fiber and fuel); 2) *regulating* services (biophysical processes that control climate, flood, diseases, air and water quality, pollination and erosion); 3) *cultural* services (recreational, aesthetic or spiritual places); and 4) *supporting* services (underlying ecosystem processes such as soil, photosynthesis and nutrient cycling). At page 19, these authors state that “the way forward requires rewiring of governance – making new connections to understand and find solutions to solve the complex interlinked challenges of ecosystem degradation. One thing is abundantly clear: “business as usual” is no longer the option. The time has come to stop operating Planet Earth Ltd solely for the purpose of making a few shareholders rich in the short term, and instead to manage it as a family trust fund, set up for the benefit of today’s and tomorrow’s children.”

¹⁵⁰ Holling, *Supra* note 16 at 21.

¹⁵¹ *Ibid.*

¹⁵² C.S. Holling & G.K. Meffe, “Command and Control and the Pathology of Natural Resource Management” (April 1996) 10(2) *Conservation Biology* 328-337.

problem; that is, the pathology of the resource management system is the command-and-control theme embedded in the institutional culture of resource management.¹⁵³ In their view, the goal of resource management planning is to create predictable, stable and reliable ecosystems for human needs. This orientation reinforced by an engineering-oriented adaptive response can bring about a loss of ecosystem resiliency.¹⁵⁴ Holling and Meffe point out the managed command-and-control institutional response is premised upon a linear management approach of first identifying the problem and then, engineering a solution and, later, implementing the solution.¹⁵⁵ These scholars offer the following management examples as typical institutional responses: “we control agricultural pests through herbicides and pesticides; we convert natural, multi-species, variable-aged forests into monoculture, single-aged plantations[.]”¹⁵⁶ In their view, this technocratic management approach reflects an institutional response that does not reinforce an adaptive response. Rather, this management approach of control “can lead to short-term economic returns, but it also increases the vulnerability of ecosystems to perturbations that otherwise could be absorbed.”¹⁵⁷ In short, this management approach exposes an institutional response failure — in particular, the failure to consider the natural functioning behaviour of natural ecosystems.

In essence, Holling and Meffe call for change in natural resource management institutional systems reflects the golden rule of: “*Natural resource management should strive to retain critical types and ranges of natural variation in ecosystems.* That is, management should *facilitate* existing processes and variables rather than changing or controlling them.”¹⁵⁸ Rather than controlling the ecosystem’s variables, processes and structures, the resource management’s

¹⁵³ *Ibid.*

¹⁵⁴ *Ibid.*

¹⁵⁵ *Ibid* at 329.

¹⁵⁶ *Ibid.*

¹⁵⁷ *Ibid* at 335.

¹⁵⁸ *Ibid* at 334.

purpose should be building resilience so that the ecosystem can continue to function with the goal of “serving not only the natural functions and species diversity of those systems but also the long-term interests of humanity.”¹⁵⁹ These scholars conclude with an appeal for a reflective review of institutions. In their view, the institutionalization of the control ethos embedded in management systems and organizational cultures should be examined.

In sum, as argued in this chapter, a call for regulatory change has been a consistent plea from natural resource and governance scholars. The concept of change is also a key feature of the responsiveness theme in regulatory theory. However, this regulatory responsiveness theme is industry-oriented, directed at effective and cost-efficient outcomes and overlooks the responsiveness to ecological change. To re-orient environmental law and policy towards an ecological perspective, the responsiveness theme as theorized by Holling’s resiliency theory is featured to bring forward ecological change. In light of the current shift toward experimental legislative governance mode and, in a reflective mode, one might ask: Do the new governance experiments in the water sector perpetuate Holling’s pathology critique of an embedded control ethos? What lessons can be taken from resiliency theory and applied in the sphere of environmental regulation and governance to nudge decision makers to consider ecological change? In order to understand how these questions are explored in this dissertation the research methodology is outlined next.

7.0 Research Methodology

7.1 Introduction

This dissertation is grounded in a socio-legal, interdisciplinary stance. Prior to describing the methodological approach below, a brief discussion of the three primary theoretical perspectives

¹⁵⁹ *Ibid.*

is offered to position the underlying organizing principles of this research and to provide support for the research methodology.¹⁶⁰ The methodology presented in this section outlines the various supporting phases of the research. Namely, the completion of a literature review of both primary and secondary sources, which informed the literature mapping exercise; the development of the eco-resiliency framework, the construction as well as the application of an interview instrument that was applied to the three case studies (see Appendix A) and structured the final stage and the performance of a data analysis matrix.

7.2 Theoretical Perspectives

7.2.1 *The Socio-ecological Resiliency Perspective*

A socio-ecological resiliency construct recognizes the diverse, broad, flexible, emergent change and polycentric dimensions of natural and human systems.¹⁶¹ This social-ecological resiliency perspective pushes the boundaries of the dominant governance discourse by including insights from ecology concerning triggers of change. Generally, the term governance is defined across academic boundaries as “the study of politics, economics, and society.”¹⁶² Applying a socio-ecological resiliency perspective to a water governance system illuminates the dynamic, interconnected, human and adaptive nuances of governance and allows us to imagine how a legal regime can be responsive to change.

7.2.2 *The Law-Making Process Perspective*

Given the recent regulatory turn to an experimental governance mode, the methodology’s lens of inquiry focuses upon the decision-making in these legislatively constituted water committees.

¹⁶⁰ G.B. Davis & C.A. Parker, *Writing the Doctoral Dissertation: A Systematic Approach*, 2nd ed (Hauppauge: Barron’s, 1997), J.E. Mauch & J.W. Birch, *Guide to the Successful Thesis and Dissertation: A Handbook for Students and Faculty*, 3rd ed (New York: Marcel Dekker, Inc., 1993).

¹⁶¹ E. Ostrom “A General Framework for Analyzing Sustainability of Sociol-Ecological Systems” (July 2009) 325 *Science* 419.

¹⁶² D. Levi-Faur, “‘Big Government’ to ‘Big Governance’” in D. Levi-Faur, ed, *Oxford Handbook of Governance* (Oxford: Oxford University Press, 2012) at 9.

This attention on law-making through a decision process subtly shifts the inquiry away from a traditional research investigation into the “legal effectiveness” of a regulatory instrument.¹⁶³ In other words, this dissertation examines the water committee’s collective decision-making processes in action.¹⁶⁴ With the movement away from the question of legal effectiveness, the decision-making remains open to discovery: How does a regulatory pluralism model shape social-ecological concepts of change? How does a legal framework construct these legislative experiments in local decision-making? Who is the decision maker and why? Specifically, my task is to imagine how a legal governance regime can be responsive to ecological change and ideas. Consideration can also be given to the hidden aspects of the decision-making process. For example, such elements as the norms underpinning the governance arrangement and selection of policy instruments (for example, market based instruments) or of the substantive issues to be examined (for example, surface and ground water protection) or scale of the issue (local, regional global effects of climate change) or inclusion of a participant (for example, First Nation). Together, these variables can be brought to the forefront to help us understand how these elements might influence the construction of knowledge and law-making at a local committee level. Perhaps, we can ask, how these features can influence learning, knowledge creation, choices, and final decisions that become embedded in the production of the final product?

¹⁶³ D.M. Trubek & J. Esser, “‘Critical Empiricism’ and American Critical Legal Studies: Paradox, Program, or Pandora’s Box?” (2011) 12(1) German Law Review 115 at 128. Relying upon Professor Austin Sarat’s definition of legal effectiveness, Trubek and Esser offer the following definition of legal effectiveness: “Legal effectiveness research begins by identifying the goals of legal policy and moves to assess its success or failure by comparing the goals with the results produced. Where, as is almost inevitably the case, the results do not match the goals, attention is given to the factors which might explain the gap between law on the books and law in action.”

¹⁶⁴ Salamon, *Supra* note 58.

7.2.3 The Critical Legal Studies Perspective

The critical legal studies¹⁶⁵ approach applied in this dissertation places an emphasis upon the deconstruction of the knowledge creation and law-making that occurred within these local water committees in order to gain an understanding of the “law in action”.¹⁶⁶ The critique of local committee’s knowledge construction is targeted at what (i.e., the values, substantive issues and perspectives) and who (i.e., committee participants) is included or excluded in these governance arrangements. In short, the process of decision-making by committee members is critically examined in these administrative law settings in order to understand, for example:

- i. how the governance arrangement affects the decision-making process;
- ii. how decision-makers craft their decisions;
- iii. how the nuances of the decision-making process (for example, the hidden values and perspectives, the resiliency features in decision-making, the power relations, the role of the state, hegemonic forms of decision-making) shape and re-shape decisions; and,
- iv. how a socio-ecological resiliency perspective animates the decision-making process.

7.3 The Methodology Introduction

Consideration of a social-ecological resiliency perspective informs the research methodology by exposing the basis of the responsiveness of the governance regime.¹⁶⁷ Social-ecological

¹⁶⁵ Trubek & J. Esser, *Supra*. note 163.; also see J.L. Kincheloe and P. McLaren, “Rethinking Critical Theory and Qualitative Research” in N.K. Dezin & Y.S. Lincoln, *The Sage Handbook of Qualitative Research 3rd Edition*, (Thousand Oaks: Sage, 2005).

¹⁶⁶ S. Macaulay, “The New versus the Old Legal Realism: Things Ain’t What They Used to Be”, (2005) *Wisconsin Law Review* 366. At page 390, Professor Macaulay stated: “[W]e must study law from the bottom up if we want to understand anything important about it. Yet, we must be clear what we mean by bottom up. It is not enough to find a gap between the law on the books and the law in action, and then assume it should be closed... In sum, finding a gap only opens a series of questions.”

¹⁶⁷ Research on ecological resiliency or social-ecological resiliency is limited. A literature review on ProQuest

resiliency recognizes the interconnection between nature and humans. The proposition that environmental governance regimes should be responsive to industry is a dominant theme in the governance literature; yet, it is unclear how the governance regime (i.e., decision-making) is responsive to ecological change. In particular, how do these legal governance experiments respond to social-ecological change? In order to understand how this shift to a governance model and whether the eco-resiliency features are present in these local water committee experiments, a law in action approach informed the participant observation and the semi-structured interview processes used in this research plan. The research design unfolded in five stages: i) literature review and a literature mapping exercise ii) research question and propositions iii) units of analysis iv) the case studies iv) data collection and v) criterion for analysis. These four stages are presented next.

7.4 Literature Review and Mapping

The first stage of the research methodology relied upon the completion of an extensive literature review. To fully explore the meaning of the term governance, the literature review commenced with a broad range of disciplines: geography, political science, economics and law, including the natural resource and science disciplines. Then the review was narrowed to undercover the responsiveness theme as discussed in legal, political science and ecological literatures. This literature review forms the theoretical foundation of the mapping exercise that brought together the legal governance scholarship and the natural science literature discussing the ecological resiliency ideology.

Dissertations using the terms: resiliency, social, ecological resulted in a few monographs: J.P. Wargo, *Ecosystem Preservation Policy (Regulation, Land Use, Public Land)* (D. Jur. Thesis) Yale University, 1984; A. Dale, *Sustainable development: A Framework for Governance* (D. Jur. Thesis) McGill University, 1999; B.S. Perla, *The Differential Impact of Protection on Social-Ecological Resilience of Mountain and Lowland Communities in the Skagit River Watershed* (D. Jur. Thesis) University of Washington, 2008). B.L. Simons, *Fostering Food System Resiliency: Lessons from Cuban Experience* (Masters, Tufts University) 2011.

The purpose of the mapping exercise was to bring together these two distinct literatures, that is, the legal governance literature and natural science literature, in order to generate the eco-resiliency framework. Currently, the environmental governance literature promotes the implementation of responsive mode of governance based on regulatory pluralism.¹⁶⁸ But, there is need to understand the success and failures of this “new” governance approach in the water sector. This dissertation will contribute to the legal environmental governance literature by considering ways these legal regimes might be resilient to socio-ecological change.

The dominance of the responsiveness theme in both the governance and natural science literatures led to the research question: what lessons can be taken from eco-resiliency theory and applied to environmental and regulatory governance? These lessons are based upon the proposition that, in order to understand the responsiveness orientation of the legally constituted governance mode and its practice, one must not only examine the legal framework for the presence of eco-resiliency features but also understand how decision-makers construct decisions in a water committee. Taking this initial first step in researching these legislative governance experiments allows for an understanding of the decisions undertaken to create the final water plan, that then can be examined in the future to understand the plan’s effectiveness.

However, this research is limited to understanding the practice of the new governance as captured in these legislative new governance experiments. Under Ontario’s Clean Water Act, 2006 the legislative purpose is: “to protect existing and future sources of drinking water.” The question of effectiveness of the water plan, whether the plan was effective in protecting existing and future drinking water sources, is considered a distinct and a future research project.

In the next research stage, and in order to gain an appreciation of the responsiveness of participatory modes of governance, the mapping of the literature led to the development of an

¹⁶⁸ Grabosky and Gunningham et al., *Supra* note 5.

eco-resiliency framework, which is set out in Chapter Two. The eco-resiliency framework is premised upon C.S. Holling's four features of a resilient resource management system (flexibility, broad perspective, diversity and emergent change).¹⁶⁹ This framework is used as an analytical tool to examine the legal governance regimes in the case studies. The four features of the framework also informed the development of the structured interview instrument used in the participant interview process, which is set out in Appendix A.

7.5 Units of Analysis

The localized, watershed-based (or river basin-based) stakeholder-driven committees, which have been assigned the regulatory steering task of governing a water resource either through legislative fiat or policy, were selected as the unit of analysis. This mode of governance is predominant in the literature, and in practice at provincial and territorial levels in Canada. The assertion adopted in this dissertation, the lack of empirical research on these legal experiments, calls for an examination of these committees, and their collective form of governance, in action. This unit of analysis — the localized water committee — was selected to not only understand how decision-makers in these committees form their decisions but also to gain an appreciation of how these participants conceive law-making in this governance arrangement. The research protocol included both the observation of water committee members in action and the consideration of the research dilemma: What elements of the ecological resiliency framework might emerge in these committees?

7.6 The Case Studies

The case study approach is adopted to investigate the shift to, and the practice of, the new

¹⁶⁹ Holling, *Supra* note 16.

governance mode of governance. The comparative “collective”¹⁷⁰ case study approach undertaken, is focused on the qualitative data generated through both participant observation and semi-structured interviews.¹⁷¹ The case selection resulted in three case studies: a Source Protection Committee (SPC) in Ontario, a Watershed Planning and Advisory Committee (WPAC) in Alberta and the Yukon Water Board. In Ontario, 19 SPCs were created under *O.Reg* 288/07,¹⁷² and in Alberta, 11 WPACs were established under Alberta’s Water for Life Strategy.¹⁷³

7.6.1 The Rationale for the Case Study Selection

While all the Canadian provinces and territories were under consideration as potential case studies, after a review of the water-related legislation and policies to determine the extent to which jurisdictions organized water governance on the premise of a participatory mode of governance, two provinces (Alberta and Ontario) and the Yukon Territory were selected. Water committees from these jurisdictions were selected because each case exhibits the features of a localized, participant-driven, pluralistic mode of governance, set out either in legislation¹⁷⁴ or a policy document,¹⁷⁵ and each committee includes First Nation representation.

¹⁷⁰ R.E. Stake, “Chapter 17: Qualitative Case Studies” in N.K. and Y.S. Lincoln (eds) *Handbook of Qualitative Research* (Thousand Oaks: Sage, 1994).

¹⁷¹ *Ibid.* Also refer to S. Jones, “Depth Interviewing” in C. Seale, *Social Research Methods: A Reader* (New York: Routledge, 2004); J. Gerring, *Case Study Research: Principles and Practices* (New York: Cambridge Press, 2007) at 20. Gerring uses the term – “multiple case studies”; J.A. Maxwell, “Designing a Qualitative Study” in L. Bickman and D.J. Rog, *The Sage Handbook of Applied Social Research Methods 2nd ed.* (Thousand Oaks: Sage, 2009).

¹⁷² *Clean Water Act*, 2006, *Supra* note 2.

¹⁷³ *Alberta, Water for Life Strategy*, *Supra*, note 4.

¹⁷⁴ *Clean Water Act*, 2006, *Supra* note 2. Section 7(2) CWA directs that the composition of the committee is to be set out in a regulation. The committee member appointment process is set out in *O.Reg* 288/07. Section 2. (1.) to (2.) states: “1. One-third of the members to be appointed”...“must”...“reflect the interests of municipalities”; 2. “One-third of the members to be appointed”...“must”...“reflect the interests of the agricultural, commercial or industrial sectors”...“including small business interests.” 3. “One-third of the members to be appointed”...“must”...“reflect the interests other than the interests referred to in paragraphs 1 and 2, including, in particular, environmental, health, and other interests of the general public.” Section 6 sets out the appointment of First Nation representatives. The number of representatives correlates to the size of the overall committee.

¹⁷⁵ *Supra*, note 4. Since 2003, Alberta’s *Water for Life: Alberta’s Strategy for Sustainability* is the policy tool that sets out the Watershed Planning and Advisory Council as the mechanism to manage the province’s water resources.

A review of the legislative purpose of the water governance instruments in each jurisdiction also factored into the case study selection criterion, as it was expected the legislative purpose would guide the water committee's decision-making. Under Ontario's *Clean Water Act*, 2006, for example, the legislative purpose is restricted to the protection of existing and future sources of *drinking* water.¹⁷⁶ In contrast to the narrow scope of the Ontario legislation, the legislative purpose in Alberta's case is broad and includes both ecological and "new" governance features such as a participatory mode of governance, responsiveness, and flexibility. In particular, in Section 2 the comprehensive legislative purpose includes such statements of a "healthy environment" including "the need for an integrated approach and comprehensive, flexible administration and management systems based on sound planning, regulatory actions and market forces" as well participatory role of "all residents of Alberta" in "their role in providing advice with respect to water management planning and decision-making" and "important role of comprehensive and responsive action in administering this Act."¹⁷⁷ It was hoped that the comparison between Ontario's narrowly-drafted legislative purpose and Alberta's environmental, market and new governance-oriented legislative purpose might explain how the legal framework shapes a decision-making criteria for a water committee.

Given the infancy of the Alberta¹⁷⁸ and Ontario¹⁷⁹ legislation, this research also relied upon a historically established co-management organizational structure featured in the water boards of the Territories and Nunavut. Presently, nine co-management water boards exist in Northern Canada. After conducting a content analysis of the website of each water board, it was

Alberta's Water For Life Policy is premised upon a partnership model. Principle 5 states in part that the *Water for Life* strategy "is a shared responsibility that involves a network of partnerships, outcome-based approaches, and collaboration in delivery of services" and is includes the establishment of watershed planning and advisory councils.

¹⁷⁶ Ontario, *Clean Water Act*, *Supra* note 2.

¹⁷⁷ Alberta, *Water Act*, *Supra* note 3.

¹⁷⁸ *Ibid.*

¹⁷⁹ *Clean Water Act*, 2006, *Supra* note 2.

determined that the Yukon Water Board was the most accessible and established water board of a resilient resource management system. Even though a participatory mode of governance exists that includes First Nation representation, a key difference between a water board and Alberta and Ontario's water committees is the quasi-judicial nature of the water board. Yet, all the entities under examination in this dissertation operate under the auspices of administrative law. It is hoped that a learning opportunity would emerge by including an established participatory-based water committee. Also the inclusion of an established water board might offer a better understanding of the similarities and differences between these two organizational designs, which are both premised upon a participatory mode of governance.

Once the jurisdictions were chosen, the choice of the specific water committee(s) to study was based upon additional selection factors such as diversity of participants and their interests, a mix of urban and rural land uses, institutional history and organizational attributes, and the inclusion of First Nations. These factors resulted in the selection of Ontario's Lake Erie Region Source Protection Committee (Lake Erie SPC) and Alberta's Bow River Basin Council (Bow River WPAC) and the Yukon Water Board (Yukon Board). These choices were also based on logistical considerations, such as ease of access to the research site from Toronto and the transparency of policy documents and records. The remaining Canadian provinces were eliminated for various reasons. For example, a language barrier existed in Quebec (the principle researcher's inability to conduct the interviews in French). In Manitoba, the legislative model premised upon public consultation not a shared governance mode. At the time of the case study selection, the participatory mode of governance was still under consideration by some provinces (e.g., British Columbia, Nova Scotia, Saskatchewan) or the legislative mandate of the committee was too broad (Prince Edward Island – the environmental advisory council's work is not specific

to water issues).

7.7 Data Collection

The data collection phase was premised upon participant observation and 15 semi-structured key informant interviews. Given the close proximity to Toronto of the Ontario research site in Cambridge, Ontario, the monthly meetings at Lake Erie SPC research site in Cambridge Ontario were attended for 22 months over a 24-month period ending in December 2012. The committee participants were observed and detailed field notes were recorded, which were cross-referenced with the Lake Erie SPC's published meeting minutes. Twelve out of the 25 Lake Erie SPC members were scheduled to be interviewed, however, one member, at the last minute, declined to participate. Due to limited funding, the Alberta and Yukon research sites were visited for a week each. In the Yukon, I observed a public water hearing. I interviewed a senior official of the Yukon Water Board. I was unable to interview more members of the Board because the senior official who agreed to be interviewed instructed me not to approach other Board members, and without that official's support it would have been difficult or impossible to conduct the research. I also reviewed the Board's policy and decision documents, along with related jurisprudence and media reports. So although the results of a single interview should be interpreted with caution, the case study was also based on other information. In Alberta, I observed a watershed protection advisory committee meeting (June 2012 and I conducted interviews with selected participants. The participants interviewed were selected prior to the site visit based upon their involvement on the WPAC and by relying upon the reputational sampling (i.e., snowball) technique. I had arranged six interviews with key WPAC members but three individuals were not interviewed because a family death and another member cancelled because of a last minute professional commitment and another individual failed to attend the WPAC meeting and was not available for

a follow-up interview during my site visit.

An interview instrument was drafted prior to the site visit and is set out in Appendix A. The interview instrument was constructed based on the four features of the eco-resiliency framework derived from the literature review and the governance literature mapping exercise and the analysis goal of completing “pattern-matching”¹⁸⁰ of the four features of eco-resiliency theory to the interview data collected. The interviews were digitally recorded and interview notes were taken and transcribed. The notes are on file in safekeeping according to York University’s ethics approval requirements.

7.7.1 Data Analysis

Finally, the last step was the data analysis. The data was analyzed based upon a close reading and coding of the field notes (that is, the participant observation data, the minute meeting documents, site field notes). The coding process reflected the four features (diverse, broad, flexible, emergent change) set out in the eco-resiliency framework. These findings were set out in a matrix format using the four features of the framework as the matrix variables and recording the interview data under each category.¹⁸¹ This sorting of the text and narratives into the columns of the matrix allowed for a comparative analysis of the narratives and the text, which further allowed for a sorting of the data into a specific group, based upon the identity characteristics of the participants. So for example, responses from similarly-situated participants (First Nations, public interest groups, etc) could be compared.

¹⁸⁰ R.K. Yin, *Case Study Research: Design and Methods* (Newbury Park, Sage Publications: 1989) at 33. Pattern matching is: “whereby several pieces of information from the same case may be related to some theoretical proposition.” The goal is describe a pattern and then demonstrate whether the data matches the pattern. In my research, the pattern is eco-resiliency framework. The interview data will be matched against the pattern to relate the data to the framework.

¹⁸¹ *Ibid.* at 106.

7.8 The Evaluative Criteria

Briefly, eco-resiliency theory orients governance towards an adaptive form. In order to evaluate whether localized modes of water governance demonstrate resiliency features, the evaluation criteria below is organized into the features of the eco-resiliency framework, premised upon a synthesis of the literature. These four features were used to develop the interview protocol for the structured interviews. Described next is the eco-resiliency evaluation criteria that outlines four interrelated but defined factors for analytical purposes:

1. Diversity is directed at understanding the composition and inclusiveness of the committee decision-making process. Who is a participant? Who is a decision-maker? For example, does the decision-making process incorporate local indigenous knowledge? It is expected a heterogeneous water committee will share knowledge and different perspectives, create the conditions for learning and the development of trusting relationships, social capital, knowledge networks. In short, diversity exists when the decision-making process includes an array of participants and the decision-making is shared amongst these decision-makers.
2. Flexibility is premised upon the idea of being responsive to two-way communication flows and decision-making process grounded in consensus that offers the participants flexibility in resolving the problem (for example by relying upon a mix of regulatory responses and legislative tools) and in establishing network governance arrangements. A consensus-based decision-making principle is promoted to allow for open communication, fluid participation and a collaborative deliberative process between the state and non-actors.
3. A broad perspective is directed at the scale of governance (i.e., local, regional, national and transnational) regime with consideration given to the presence of polycentric

governance. Polycentric governance takes into account the center of power of the decision-makers. A broad perspective considers the multiple jurisdictional scales beyond the local watershed and includes a jurisdictional co-ordination mechanism to organize decision-makers, their water problems and solutions.

4. Emergent change as an eco-resiliency feature considers how the governance system takes into account change. The capacity to respond to emergent change is present if decision-makers can be open to uncertainty and surprising events. In short, emergent change is the capacity of the regime and its decision-makers to accept and respond to emergent environmental change.

Together these foregoing four eco-resiliency features form the evaluation criteria and formed the theoretical basis for the interview instrument, which is set out at the end of this chapter in Appendix “A”.

7.9 Research Limitations

The limited sample size may restrict the generalization of these empirical findings to other research. For example, in Ontario, 19 source protection committees (SPC) exist and only one was under examination in this research. A similar problem with generalizing the research results exists with regards to the findings from the WPAC in Alberta and the Water Board in the Yukon. Accordingly, these research findings should be applied with caution. Caution must be applied to the interview instrument and the responses to the survey questions. Given the resilience concept was new to a majority of the study participants and some participants might have needed more

time to reflect upon their answer then was provided in the interview. The responses may also be biased by a participant or the interviewer's interpretation of the concept.¹⁸²

¹⁸² Professor Holling kindly reviewed the eco-resiliency framework chapter in this dissertation to ensure the accuracy of the interpretation of the resiliency concept. I also met with Professor Gunningham over lunch, and he kindly offered comments on the governance and resiliency theories.

Chapter Two: Eco-Resiliency Indicators: The Eco-Resiliency Governance Framework

1.0 Introduction

The concept of change is the thread that ties this dissertation together. In the ecological literature, resiliency¹⁸³ is defined as “the capacity of an ecosystem to cope with change and perturbation.”¹⁸⁴ However, even within the discipline of ecology, the meaning and means for measuring resiliency are contested.¹⁸⁵ Nevertheless, the core idea of the capacity to cope with change or responsiveness is the key organizing principle of resiliency and in this research.

¹⁸³ I thank Professor C.S. Holling for reviewing, recommending changes to, and for taking the time to ensure this chapter embodies the essence of his concept of resiliency. In this chapter and throughout the dissertation, the meaning of the terms “resiliency” and “eco-resiliency” are similar; thus, these terms are used interchangeably.

¹⁸⁴ Holling, *Supra*, note 16. Also see: M. Scheffer, *Critical Transitions in Nature and Science* (Princeton: Princeton University Press, 2009). At page 101 Scheffer explains Holling’s perspective of resiliency as follows: “In a general sense most would agree on definition 1: *the capacity of a system to recover upon disturbance...* Probably the most widely used specific indicator is definition 2: *the speed with which the system recovers upon disturbance.* However, this does not capture the aspect of robustness against being tipped into an alternative basin of attraction. To deal better with this issue definition 3 uses Holling’s view of resilience: *the magnitude of disturbance that a system can tolerate before it shifts into a different state (stability domain) with different control structure and function.* This corresponds to interpreting resilience as the width of the basin of attraction. Holling coined the term “ecological resilience” for definition 3, to distinguish it from the recovery-rate definition 2, which is he calls “engineering resilience.” Numerous scholars have engaged in Holling’s resiliency theory.; Also see C.R. Allen & C.S. Holling, *Discontinuities in Ecosystems and Other Complex Systems* (New York: Columbia University Press, 2008).; F. Berkes, J. Colding & C. Folke, *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change* (Cambridge: Cambridge University Press, 2003).; F. Berkes, “Understanding Uncertainty and Reducing Vulnerability: Lesson From Resilience Thinking” (2007) 41 *Nat. Hazards* 283.; F. Berkes & C.S. Seixas, “Building Resilience in Lagoon Social-Ecosystems: A Local-Level Perspective” (2005) 8 *Ecosystems* 967.; L.H. Gunderson, & C.S. Holling, *Panarchy: Understanding Transformations in Human and Natural Systems* (Washington: Island Press, 2002).; L. H., Gunderson & S.L. Light, “Adaptive management and adaptive governance in everglades ecosystem” (2006) 39 *Policy Sci.* 323.; L. H. Gunderson, C.S. Holling & B. Walker, “Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations” (2002) 31(5) *Journal of Human Environment* 437.; L. Gunderson, C.S. Holling & S. Light, *Barriers and Bridges to the Renewal of Ecosystems and Institutions* (New York: Columbia University Press, 1995).; F. Moberg & V. Galaz, “Resilience: Going from Conventional to Adaptive Freshwater Management for Human and Ecosystem Compatibility” (2005), online: Swedish Water Policy Briefs <www.siwi.org>.; G. Peterson, C.R. Allen & C.S. Holling, “Ecological Resilience, Biodiversity, and Scale” (1998, Spring) 1 *Ecosystems* 6.

¹⁸⁵ W.N. Adger, “Social and Ecological Resilience: Are They Related? (2000) 24(3) *Progress in Human Geography* 347 at 349. Adger highlights the contested nature of the resiliency by highlighting the obscure nature of the concept. He states: Resilience in ecology is “not easily observed, and there seems at present to be no agreed relationship, for example, between the diversity of ecosystems and their resilience.” He continues to state that “[r]esilience can be defined in many ways. It is the buffer capacity or the ability of a system to absorb perturbations or the magnitude of disturbance that can be absorbed before a system changes its structure by changing the variables and processes that control behaviour. Other definitions of resilience emphasize the speed of recovery from a disturbance, highlighting the difference between resilience and resistance.... It is argued by many ecologists that resilience is the key to biodiversity conservation and that diversity itself enhances resilience, stability and ecosystem functioning.”

In a seminal article, Holling introduced the concept of resiliency by describing three elements of an ecosystem's ability to absorb change over time.¹⁸⁶ First, resiliency is a property of the system and persistence is an outcome. Second, the system is characterized by the existence of multiple states rather than a static equilibrium state. Third, unexpected events (for example, collapse of fish stock or a sudden change in the state of a freshwater lake from clear to a turbid state) and disturbances (for example, a climate change disturbance such as floods, droughts or a sudden and intense rainfall) can occur.¹⁸⁷ In other words, surprises should be expected.¹⁸⁸ Together, these three aspects describe the behaviour of an ecosystem over time. This view of the behaviour of a system is centered in the non-equilibrium or "flux of nature" perspective of an ecosystem, a contemporary rather than traditional viewpoint.¹⁸⁹ Thus, a resilient complex system is non-linear, operates at multi-scales and is in constant flux.

Consideration of the social aspects of resiliency led to the broadening of the ecological resiliency concept to recognize the integrated human-nature dimension of natural systems.¹⁹⁰ Social-ecological resiliency is thus defined as "linked systems of people and nature. The term emphasizes that humans must be seen as a part of, not apart from, nature – the delineation

¹⁸⁶ Holling, *Supra* note 16 at 17.

¹⁸⁷ *Ibid.* Also see L. H. Gunderson and C. Allen, "Introduction: Why Resilience? Why Now?" in L. Gunderson, C.R. Allen and C.S. Holling, *Foundations of Ecological Resilience* (Washington: Island Press, 2010) at p. xv.

¹⁸⁸ *Ibid.* Also see C.S. Holling, "Surprise For Science, Resilience For Ecosystems, and Incentives For People" (1996) 6(3) *Ecological Applications* 733.

¹⁸⁹ Hutchinson & Herrmann, *Surpa*, note 32 at 82-88. The traditional "balance of nature" perspective of an ecosystem suggests that a natural system operates near a state of equilibrium. Unlike the traditional view, these authors support the contemporary "flux of nature" perspective (at 88). This point of view presents the non-equilibrium model of an ecosystem where the system's behaviour is seen as being in flux and where ecological change is characterized as discontinuous, uncertain and perhaps, sudden.; C.S. Holling, "Surprise For Science, Resilience For Ecosystems, and Incentives For People" (1996) 6(3) *Ecological Applications* 733-34 at 734. In this article, Holling argues that ecosystems "do not have a single equilibrium with functions controlled to remain near it." Rather, ecological processes operate "at different spatial and temporal scales, and are subject to the influence of outside processes" (at 733). This perspective of an evolving system characterizes an ecosystem as non-linear, "dynamic, inherently uncertain, with potential multiple futures," (at 734) that respond to external disturbances (for example, a fire, an intense rainfall). These foregoing properties present an integrated ecosystem while also recognizing that knowledge is incomplete — that is, knowledge of the system and the effect of human activities upon the system. In other words, "[s]urprise is inevitable." (at 734).

¹⁹⁰ *Adger, Supra*. note 185.

between social and ecological systems is artificial and arbitrary.”¹⁹¹ An important feature of the human dimension of social-ecological resiliency is the governance system. Attributing governance systems, those that deal with “how we make decisions and who gets to decide,” with social-ecological resiliency characteristics means that we can imagine regimes of rule-making and norm creation that are adaptable, multi-level and respond easily to surprises.¹⁹²

The theme of social-ecological change orients this interdisciplinary research toward examining responsive forms of governance and norm creation. The governance literature reveals a trend toward localized, watershed-focused, stakeholder-driven committees with little discussion on how decisions are carried out in these committees.¹⁹³ These localized modes of governance have gained prominence and legitimacy in both the academic literature and in regulatory practice across Canada. In this chapter, I assert that the environmental governance literature demonstrates similar features as discussed in the natural science literature’s presentation of the concept of resiliency. In Canada, however, the environmental governance

¹⁹¹ *Ibid.*

¹⁹² Bakker, *Supra*, note 14.

¹⁹³ S. Burris, M. Kempa & C. Shearing, “Changes in governance: a cross-disciplinary review of current scholarship.” (2008) 41 *Akron. L. Rev.* 1; R. de Loë & G. Simms, (April 2009) An introduction to source water protection: briefing note#1. Polis Project on Ecological Governance. online: Polis <http://poliswaterproject.org/sites/default/files/deloe_brief.pdf>; R.D. Fish, A.A.R. Loris & N.M. Watson, “Integrating water and agricultural management: Collaborative governance for a complex policy problem.” (2010) 480 *Science of the Total Environment*, 5623.; S.M. Graben, *Co-Management: The Legal Impact of Participatory Governance on Administrative Decision-making in the Mackenzie Valley* (2010) Doctoral Dissertation, Osgoode Hall Law School, York University, Toronto, Ontario, Canada.; N. Gunningham, “The New Collaborative Environmental Governance: The Localization of Regulation.” (March 2009) 36(1) *Journal of Law and Society*, 145.; S. Hodgson, *Modern water rights: theory and practice* (2006) FOA Legislative Study 92. Online: Water Development and Management Unit – Food and Agriculture Organization of the United Nations <http://www.fao.org/nr/wman/abst/wman_071101_en.htm>; R. Lee and E. Stokes, “Environmental Governance: Reconnecting the Global and Local” (March 2009) 36(1) *Journal of Law and Society*, 1.; M.C. Lemos and A. Agrawal, “Environmental Governance” (2006) 31 *Annu. Rev. Environ. Resour.* 31., 297; J. Newig and O. Fritsch, “Environmental governance: participatory, multi-level and effective?” (2009) 19 *Environmental Policy and Governance*, 197.; P. Rogers and A.W. Hall, “Effective water governance” (2003) online: *Global Water Partnership: Technical Committee* <http://www.orangesenqurak.org/UserFiles/File/GWP/GWP%20TEC%20Paper%207_English.pdf>; B.H. Walker, N. Abel, J.M. Anderies & P. Ryan, “Resilience, adaptability, and transformability in the Goulburn-Broken Catchment, Australia (2009) 14(1) *Ecology and Society*, 12.; S. Zeller and L. Gunderson, “Why resilience may not always be a good thing: lesson in ecosystem restoration from glen canyon and the everglades.” (2008-09) 87 *Neb. L. Rev.* 893.

literature has yet to explore fully the complementary features of resiliency and the application of this ecological concept to the environmental problem of how to govern a watershed.

Perhaps the concept of resiliency can orient the governance activity of decision-making to consider the context of the problem – that is, how an aquatic system functions and ecological change (for example, ecological change as result of water contamination, water withdrawals and the impact of surrounding land use activities). I consider whether relying upon an ecological concept dis-embeds the decision-making from a battle of competing stakeholder interests. Re-orienting attention to the ecological resiliency concept may allow committee members to consider the uncertain and changing nature of an aquatic system as an alternative frame of reference to the dominant efficiency and effectiveness market oriented perspective.

The purpose of this chapter is to develop a set of criteria in which to judge the governance experiments that form the case studies of this dissertation, namely a Source Protection Committee (SPC) in Ontario, a Water Protection Advisory Committee (WPAC) in Alberta and a Water Board in Yukon. The eco-resiliency framework is based on Holling's resiliency theory. In his 1973 article Holling set out four features of an governance system adaptive to future events: i) flexibility, ii) broad perspective iii) diversity, and iv) emergent change.¹⁹⁴ This four-part framework is applied to a water committee to test for the presence of eco-resiliency features in the legal framework in order to understand the uptake of theory and practice of the new governance mode. Similarly, in the governance literature, several authors speak to the need for flexible, responsive, and adaptive forms.¹⁹⁵ In other words, the aims of adaptability and flexibility animate both the ecological and contemporary governance literatures.

¹⁹⁴ Holling, *Supra* note 16 at 21. Holling's adaptive governance framework "does not require the precise capacity to predict the future, but only the qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they may take."

¹⁹⁵ M.J. Angelo, (2009) "Stumbling towards success: A Story of Adaptive Law and Ecological Resilience [Lake

Several authors, however, argue that the abstract nature of the concept of resiliency,¹⁹⁶ combined with the lack of agreement on its meaning and its underpinning factors,¹⁹⁷ leads to problems in “operationalizing” the concept.¹⁹⁸ While the contested nature of the resiliency concept is acknowledged in this research, conceptually, Holling’s framework invites an adaptive governance stance. This adaptive governance perspective is responsive to the socio-ecological changes associated with contemporary environmental problems.

In the next section, the four elements of Holling’s governance structure are expanded to reflect their meaning in the ecological and governance literature. Holling’s four elements are adopted as the guiding principles of analysis. For the three case studies examined in this research, the eco-resiliency analysis framework is applied in order to understand how decisions are made in these legislative governance experiments. Or as K. Bakker would ask: Who gets to decide and, why?

2.0 Eco-Resiliency Governance Framework

In this section, Holling’s four resource management design features of flexibility, broad perspective, diversity and emergent change are outlined. Holling’s conception of each element is

Apopka, Florida].” (2009) 87 Neb. L. Rev. 950-1007.; D.E. Booher, & J.E. Innes, “Governance for resilience: Calfed as a complex adaptive network for resource management” (2010) 15:3 *Ecology and Society*, 35.; S. Burris, M. Kempa & C. Shearing, (2008) “Changes in governance: a cross-disciplinary review of current scholarship” (2008) 41 Akron. L. Rev. 1-66. B. Cosens, (2010).; “Transboundary river governance in the face of uncertainty: resilience theory and the Columbia River treaty. (2010) 30:2, *J. Land Resources & Envntl. L.*, 229-265.; R.D. Fish & A.A.R. Loris & N.M. Watson, “Integrating water and agricultural management: Collaborative governance for a complex policy problem” (2010) 408, *Science of the Total Environment*, 5623-5630.; J. Freeman & D.A. Farber, “Modular environmental regulation [Bay-Delta water system, California]” (2005) 54:4 *Duke L. J.* 795-912.; N. Gunningham, *The New Collaborative Environmental Governance: The Localization of Regulation* (March 2009) 36:1, *Journal of Law and Society*, 145-66.; D. Huitema, E. Mostert, W. Egas, S. Moellenkamp, C. Pahl-Wostl & R. Yalcin, Adaptive water governance: assessing institutional prescriptions of adaptive (co-)management from a governance perspective and defining the research agenda (2009) 14:1, *Ecology and Society*, 26.

¹⁹⁶ G.S. Cumming, G. Barnes, S. Perz, M. Schmink, K.E. Sieving, J. Southworth, M. Binford, R.D. Holt, C. Stickler & T. Van Holt, “An Exploratory Framework for the Empirical Measurement of Resilience” *Ecosystems* (2005) 8 *Ecosystems* 975.

¹⁹⁷ M.T. Gibbs, “Resilience: What is it and what does it mean for marine policy makers” (2009) 33 *Marine Policy* 322 at 325.

¹⁹⁸ Cumming *et al.*, *Supra* note 196 at 976.; Also see Scheffer, *Supra* note 184 at page 102.

explained and supplemented by additional resiliency theorists. The meaning of each feature is then explored from a governance literature perspective. Presented at the end of the chapter are the definitions of the four features, as derived from the mapping exercise and, to be applied in the eco-resiliency framework.

2.1 Flexibility

In Holling's view, the uncertain and unpredictable nature of ecosystems requires flexible and nimble policies rather than fixed rules targeted at establishing "stable maximum sustained yield of renewable resources."¹⁹⁹ Examples of such fixed rules may be found in constant harvest yields for fish stock, water quality and timber. In his view, policy options should be left open and responsive to changing ecological conditions.

Some resource management scholars attribute the loss of flexibility to the efficiency orientation of resource management policies that are geared toward achieving optimal yields and are underpinned by market-based economic theory. Gibbs argues that economic rationalism seeks to achieve efficient forms of resource allocation based upon linear mathematical calculations. However, an efficient resource allocation scheme fails to consider the non-linear complex nature of natural systems.²⁰⁰ In his view, the outcome of economic rationalism is a loss of resilience and a system more vulnerable to disturbances.

The push toward efficiency in natural resource management has led resiliency scholars Walker and Salt to coin the phrase the "paradox of efficiency and optimization."²⁰¹ Creating an efficient system means redundancies are eliminated and standardized policies are often applied that eliminate the unique features of the natural system. Ecological systems, however, require

¹⁹⁹ Holling, *Supra* note 16 at 21.

²⁰⁰ Gibbs, *Supra* note 197 at 326.

²⁰¹ Walker & Salt, *Supra* note 49 at 7.

redundant structures and functions.²⁰² Optimization results in maximizing efficiency by creating tight controls over a system and eliminating natural redundancies. In Walker and Salt's view, herein lies the paradox: A dynamic, non-linear, complex adaptive system cannot achieve an optimal state. Why? Because a dynamic system is always in a state of change, shifting to maintain resiliency and to absorb disturbances.²⁰³ In contrast, optimization eliminates the flexibility and ecological variability within the system. The outcome is a less resilient system.

Cosens relies upon the concept of resiliency to examine administrative law actions that take into account the uncertain and changing nature of a river system and the ability of the system to sustain a full range of ecosystem services.²⁰⁴ Cosens puts forth flexibility, in the form of adaptive governance, as a perspective for understanding the complexity of the combined social and ecological system within the Columbia River Basin.²⁰⁵ A resilient governance framework is premised upon a flexible decision-making process that allows for responsiveness to local conditions and the necessary authority to respond to the changes.²⁰⁶

Lobel discusses the recent shift away from regulation to a governance model in terms of regulatory flexibility and fluid environmental policies. In her view, a flexible policy approach

²⁰² *Holling & Meffe, Supra* note 152. Functional Redundancy is explained as follows: In an ecosystem numerous interactions occur amongst physical, chemical, biological processes. The system is self-organizing. "[P]rocesses made up of biotic and physical elements are critical in forming the structure and overall behaviour of the ecosystems, and that these establish sets of relationships, each of which dominates over a definable range of scales over space and time. Each set includes several species of plants or animals, each species having similar but overlapping influence to give functional redundancy. It is that set, operating with abiotic processes, that generates and maintains ecosystem resilience."

²⁰³ Walker & Salt, *Supra* note 49 at 6-9.

²⁰⁴ B. Cosens, "Transboundary river governance in the face of uncertainty: resilience theory and the Columbia River treaty." (2010) 30(2) *J. Land Resources & Envtl. L.*, 229.

²⁰⁵ *Cosens, Ibid.* at 238. Cosens defines adaptive governance as "includ[ing] the process of feedback to a managing agency from monitoring the response of the ecosystem, but it also adds the collaboration and cooperation across different levels of government, non-government and individual action, and among agencies within the same level of government with overlapping authority. In her view, this definition recognizes linked nature of ecological and social systems. Also see S. Zelmer & L. H. Gunderson, "Why Resilience May Not Always Be a Good Thing: Lessons in Ecosystem Restoration from Glen Canyon and the Everglades: (2008-2009) 87 *Neb. L. Rev* 893. On page 927, Zellmer and Gunderson define adaptive governance as "a process by which science, policy, and decision making interact in formal (legal and institutional) structures and informal processes to break the gridlock in the management of natural resources."

²⁰⁶ *Ibid* at 256.

can be achieved through forms of soft-law (for example, social labeling, voluntary codes of conduct, private accreditation). Lobel contends these soft forms of law promote “open communication, fluid participation, and consensus-based deliberation”²⁰⁷ between state and non-state actors. Lobel argues this governance model moves law away from a prescriptive, command and control approach.

Freeman and Farber present a “modular” conception of governance premised upon “flexibility and coordination.”²⁰⁸ Modularity requires flexible institutional structures that can adjust in form, to new and changing information as directed by the environmental problem and the institutional information needs of each agency.²⁰⁹ In their governance model, a key feature is flexibility or “adaptation.”²¹⁰ Their view of governance recognizes institutional relationships and the existing network of interconnected agencies where negotiation and traditional formal forms of interaction prevail. The goal of a modular conception of governance is first to identify the problem and second to create solutions that match the institution’s ability to implement the solution.²¹¹ Responsiveness, in their view, requires being open to new information and requires a transparent process that ensures the appropriate use of administrative discretion.²¹²

Flexibility, from the perspective of natural resource managers Garmestani, Allen and Cabezas is presented as a form of adaptive management approach. In their view, flexibility is achieved by aligning management systems to “evolve to changing environmental conditions.”²¹³

²⁰⁷ Lobel, *Renew Deal*, *Surpa* note 92 at 390.

²⁰⁸ Freeman & D.A. Farber, “Modular environmental regulation [Bay-Delta water system, California]” (2005) 54:4 *Duke L. J.* 795-912 at 876. Freeman and Farber’s conception of “modularity” includes the following six features: 1. Overcoming Regulatory Fracture Through Coordination; 2. Form Following Function; 3. Agreement-Based Regulation; 4. Facilitating Social Learning; 5. Adaptation; 6. Public Participation/Accountability.

²⁰⁹ *Ibid.*

²¹⁰ *Ibid.* at 888.

²¹¹ *Ibid.*

²¹² *Ibid.* at 892.

²¹³ A.S. Garmestani, C.R. Allen & H. Cabezas, “Panarchy, adaptive management and governance: policy options for building resilience” (2008-09) 87 *Neb. L. Rev.* 1036 at 1042.

Policy development is oriented toward a “reflective front-end flexible”²¹⁴ process, in which attention is paid to monitoring and the continuous improvement through all stages of policy development. Responsiveness requires an adaptive form of governance that allows adaptation of policies to monitoring findings.

Garmestani, Allen and Caezas view the use of a mix of regulatory tools as supporting an adaptive approach that can be “both flexible and enforceable under the law and associated regulations.”²¹⁵ To preserve the social-ecological system, a mix of both “finance (e.g. taxes, fees, surcharges, bonds) and compliance mechanisms (regulatory and market based incentives, reporting and information requirements, planning requirements, voluntary actions)” can be introduced to achieve flexibility.²¹⁶ Other scholars also view responsiveness through the application of a mix of regulatory tools and flexible decision-making governance regime.²¹⁷ Gunningham and Sinclair also promote flexibility by incorporating a mix of regulatory instruments.²¹⁸ In their view, this mix of regulatory instruments should also take into account a diverse range of regulatory perspectives: the instrument’s purpose, the legislative goal, the environmental orientation of the regulatee, the current and desired condition of the watershed.²¹⁹

Huitema *et al.*, discuss flexibility in the context of experiments.²²⁰ While these scholars support the use of experiments to understand the status of the aquatic system, they caution that experiments should be limited to small-scale experiments that take into account the costs and

²¹⁴ *Ibid.*

²¹⁵ *Ibid* at 1051.

²¹⁶ *Ibid.*

²¹⁷ Gunningham & Grabosky, *Smart Regulation*, *Supra* note 15.

²¹⁸ Gunningham & Sinclair, *Integrative Regulation*, *Supra* note 15 at 854.

²¹⁹ *Ibid.*

²²⁰ D. Huitema, E. Mostert, W. Egas, S. Moellenkamp, C. Pahl-Wostl & R. Yalcin, “Adaptive water governance: assessing institutional prescriptions of adaptive (co-)management from a governance perspective and defining the research agenda” (2009) 14(1) *Ecology and Society* 26.

risks.²²¹ In their view, in light of the participatory and localized nature of water governance models and the use of experiments, the results from the experiments should be reviewed and tested for relevance by local participants.²²² However, these scholars caution the use of experiments may be more appropriate for technical issues.²²³ Consideration of these concerns points to a technocratic governance approach premised upon experiments and is dependent upon a dialogue and negotiation between experts and laypersons. This view of governance is suggestive of an adaptive management regime responsive in form to allow for the time to conduct experiments, monitor results, change policies, negotiate between stakeholders, and to create the knowledge capacity amongst the stakeholders to negotiate and evaluate outcomes.

Collectively, these natural resource and governance scholars promote a flexible and adaptive governance structure. Flexibility, as envisioned by both literatures, recognizes the changing, non-linear unpredictable nature of both natural and human systems. Decision makers are charged with developing a fluid governance system, which provides for a participatory and consensus-based decision-making process. An adaptive management approach inclusive of a mix of regulatory tools and a networked governance arrangement are encouraged.

2.2 A Broad Perspective

In Holling's view, a broad perspective is required to view "events in a regional rather than a local context."²²⁴ An ecosystem is a series of complex adaptive nested cycles that respond to an array of internal and external disturbances occurring at different scales. In this complex adaptive system, Holling explains how a disturbance can trigger a series of physiological, behavioral, ecological and/or genetic changes to a population. The variability in response is dispersed over

²²¹ *Ibid.*

²²² *Ibid.*

²²³ *Ibid.*

²²⁴ Holling, *Supra* note 16 at 21.

space and time in a manner that creates variability in the numbers of the population as some species may remain in low numbers with other species moving into predator mode and taking up the opportunity to increase their population numbers.²²⁵

Canada's constitutional arrangement creates a broad yet fragmented context for water governance. In Canada, the legal jurisdiction for water is shared amongst federal and provincial constitutional powers. As creatures of the provinces, local municipal governments also participate in the governance of water resources. This fragmented legal regime results in multiple "centers of power."²²⁶ Huitema *et al.*, define this "center of power" as a situation of "polycentric" governance in which "political authority is dispersed to separately constituted bodies with overlapping jurisdictions that do not stand in hierarchical relationship to each other."²²⁷ A polycentric form of governance fosters a broad perspective of governance that brings to the forefront issues of co-ordination between the distinct yet interconnected levels of legal and socio-political centers of decision-making power. In a localized form of water governance, a polycentric form of governance requires decision-makers to take into account issues of co-ordination across a range of legal jurisdictions, such as domestic, regional, national, and transnational. In addition, consideration may also be given to crafting the decision-making regime to represent a broad view of the waterscape. A view of the regional and local environmental conditions but also the social, geographic and political scope of the problem.

In a similar vein, some resource managers frame governance as a "multiple, nested,

²²⁵ *Ibid* at 18. Also see: Walker & Salt, *Supra* note 49. Walker and Salt discuss the loss of sawgrass to phosphorous loving cattails in the Florida Everglades. They argue for a regional perspective where the triggers of change are considered (e.g., trigger – phosphorous and change: the invasion of predator species – cattails). In the Everglades, the introduction of phosphorous into the water basin from local housing developments triggered a change in the ecosystem that created conditions conducive for the growth of the cattails. A system perspective considers the impact of change in land use upon the regional water basin and perhaps prompts thinking towards a broader perspective of the impact and governance tools (for example, limits on land development combined with the introduction of a market-based permit system that included a cap on phosphorous inputs into the aquatic system).

²²⁶ Huitema, *Supra* note 220 at 28.; Also see *Ostrom*, *Supra* note 104 for a discussion of polycentric.

²²⁷ *Ibid*.

institutional”²²⁸ “wide basin”²²⁹ approach that adopts a broad viewpoint of institutional arrangements, problems and processes. Garmestani *et al.*, present a broad institutional view premised upon the participation of stakeholders and the “bridging”²³⁰ of organizations to improve communication channels and to create opportunities for joint-problem solving, collaboration and the development of “trust.”²³¹ In their view, a broad polycentric aspect is a key feature of an adaptive governance system.²³²

Similarly, environmental scholars Dovers and Connors promote the reliance upon the subsidiarity principle. In their view, the subsidiarity principle directs that a decision should be taken at the most effective level. A level that considers the political, administrative and substantive aspects of the problem yet, is broadly scoped to take into account the influence of policy directions stemming from complex institutional and policy systems.²³³

In Ostrom’s view, a local level is the appropriate governance scale. In her view, the design of the governance system’s collective choice rules should be supportive of local conditions.²³⁴ Her research supports the use of governance rules that match the local attributes of resource, the resource unit itself and the users.²³⁵

For decision-makers in a local water governance regime, the foregoing scholarship raises questions that define the jurisdictional landscape and consider the power brokers and distribution

²²⁸ Garmestani, Allen & Cabezas, *Supra* note 213 at 1048.

²²⁹ *Ibid* at 1053.

²³⁰ *Ibid* at 1049-1050.

²³¹ L. Lebel, J.M. Anderies, B. Campbell, C. Folke, S. Hatfield-Dodds, T.P. Hughes & J. Wilson, “Governance and the Capacity to Manage Resilience in Regional Social-Ecological Systems” (2006) 11(1) 19.

²³² *Ibid*.

²³³ S. Dovers & R. Connor, “Institutional Policy Change for Sustainability” at 52 in B. Richardson and S. Wood, eds, *Environmental Law for Sustainability* (Portland: Hart, 2007).

²³⁴ Ostrom, Sustainability of Social-Ecological Systems, *Supra* note 161. Also see: E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, Cambridge University Press, 1990). A common pool resource is a resource (natural or man-made) where one person’s use can subtract from another person’s use (subtractability) and it is difficult to exclude another person (excludability) from accessing the resource. Ostrom’s governance system rules are set out in her institutional analysis and development (IAD) framework.

²³⁵ *Ibid* at 421.

of power and coordinating mechanisms to facilitate co-operation. A broad perspective brings forward the scale of governance. This perspective considers a wideview of institutional arrangements, environmental problems and processes and is premised on a polycentric form of governance that includes an institutional coordinating mechanism.

2.3 Diversity

Holling's discussion of the diversity feature recognizes the heterogeneity of the functions that species provide within an ecosystem. The diversity element reinforces the concept of ecosystem services and the redundancy function species offer an ecosystem. This redundancy function contributes to the ecosystem's characteristic of "persistence of relationships."²³⁶ In his examination of the complexity of social-ecological systems, Holling argues the complexity of the system is tied to the interaction of a small number of controlling processes within a self-organizing system. He states that self-organization is key to "the development of complex adaptive systems, in which multiple outcomes typically are possible depending on accidents of history."²³⁷ Ecological characteristics of a self-organizing complex adaptive system include "diversity and individuality of components, localized interactions among components, and an autonomous process that uses the outcomes of those local interactions to select a subset of those components for enhancement."²³⁸

Resiliency scholars Folke *et al.*²³⁹ expanded Holling's diversity element by tying into the human dimension of a social-ecological system. In their view, fostering diversity allows for reorganization and renewal of a social-ecological system. Diversity nurtures ecological memory

²³⁶ Holling, *Supra* note 16 at 1.

²³⁷ C.S. Holling, "Understanding the Complexity of Economic, Ecological, and Social Systems" (2001) 4 *Ecosystems* 390 at 391.

²³⁸ *Ibid.*

²³⁹ C. Folke, S. Carpenter & F. Berkes, "Synthesis: building resilience and adaptive capacity in social-ecological systems" in F. Berkes, J. Colding & C. Folke, eds., *Navigating Social Ecological Systems: Building resilience for complexity and change* (Cambridge: Cambridge University Press, 2003).

and change within institutions and builds trust amongst stakeholders. Consideration of diversity also led these scholars to consider the different types of learning that evolve from a decision-making process as well as the need for organizational mechanisms to share knowledge and inspire creativity.

Berkes extended Holling's theory by considering the link between adaptive capacity and learning. In his view, within a social-ecological system, resilience is exhibited by three properties: 1) "[t]he amount of change the system can undergo and still retain the same controls on function and structure; 2) the degree to which the system is capable of self-organization; 3) the ability to build and increase the capacity for learning and adaption."²⁴⁰ In an interconnected human and natural (social-ecological) system where learning, both institutional and group learning, occurs and the actors and their institutional systems are viewed as responsive to changing information and learning.²⁴¹ Berkes' conception of resilience thinking accepts that organizations can learn through doing.

Janssen and Osnas view diversity through a "shared organizational mind."²⁴² The diversity in participation and organizational redundancy encourages learning, institutional connections, a shared mindset and the continuation of functions so that when a component disappears, the redundant function takes over and the system continues. These scholars consider the lobster-harvesting regime in Maine where the redundancy in function is illustrated by the use of both formal and informal local rules. The community of diverse stakeholders "create[s] different functional groups" that share knowledge, learn and establish institutional memory and

²⁴⁰ *Ibid.*

²⁴¹ *Ibid.* at 286-287.

²⁴² M.A. Janssen & E.E. Osnas, "Adaptive Capacity of Social-Ecological Systems: Lessons from Immune Systems" (2005) 2 *Ecohealth* 93 at 95.

together “stimulate...the adaptive capacity of the community”²⁴³ while fostering redundancy in roles, functions and tasks.

Freeman and Farber’s conception of “modular” governance promotes diversity by establishing connections among and across organizational domains.²⁴⁴ In their view, modularity recognizes and allows for the component parts of the regulatory system to be united by deploying the diverse actors within the system without necessarily replacing existing organizational structures.

Together these foregoing scholars highlight the diversity of the institutional arrangements and actors that are brought together through the problem-solving exercise and the legal, social and political context. Diversity of ideas, stakeholder participation, learning and self-organizing units is brought forward by the diversity factor.

2.4 Emergent Change and the Element of Surprise

Holling viewed the element of change as recognizing a social-ecological system’s ability to accommodate dynamic change and the need to adopt an attitude that recognizes knowledge is incomplete and presumes events can be unexpected.²⁴⁵

Walker and Salt consider change from a systems perspective and how systems function as complex adaptive systems.²⁴⁶ This systems perspective allows for an understanding of how change in one aspect of a system can create a feedback response within the overall complex adaptive social-ecological system.²⁴⁷ The unpredictable nature and emergent behaviour of the system can also suggest that changes to one aspect of the system can lead to the reconfiguration

²⁴³ *Ibid* at 97.

²⁴⁴ *Freeman & Farber, Modular, Supra* note 208.

²⁴⁵ *Holling, Supra* note 16.

²⁴⁶ *Walker & Salt, Resilience Thinking, Supra* note 49 at 27

²⁴⁷ *Ibid.* at 32.

of another stable state.²⁴⁸ Combining resiliency thinking and a systems perspective reinforces the idea of adaptation and raises the question: How is change taken into account in the governance system? Yet, questions remain open as to change *of* what and *to* what?

To assess a system's resiliency and ability to change, Carpenter *et al.*, address the questions: "Resilience of what, and, to what?"²⁴⁹ Even though the system's resiliency can be understood at one time period and at one scale, the concept of change highlights the need to consider the future state of resiliency. A system's resiliency may be different at a later period. This perspective highlights the decision-making process and the importance of first identifying which system state is being considered (for example, a clear or turbid lake), the need to consider the "entire social-ecological system not just the ecological subsystem" and the variables that support the system's "capacity to provide ecosystem services."²⁵⁰ For example, the question: the resilience *of* what? The "what" might be a fresh water lake and this question considers the condition – whether the water state is clear or turbid. The answer defines the scope of the decision-making process. In asking the question, "the resilience *to* what?" the decision-makers are oriented to identify the context of the disturbance(s) of interest. In other words, is the disturbance a result of a biophysical factor, such as the nutrient loading (i.e., phosphorous and nitrogen) into the water source; or is a social-economic factor causing a barrier to establishing flexibility in the governance system. For example, do the committee members hold the power to negotiate and resolve environmental problems with local solutions; or is government approval required to implement the local solution?²⁵¹

Cosens' consideration of resiliency theory within the context of administrative law

²⁴⁸ *Ibid* at 34.

²⁴⁹ S. Carpenter, B. Walker, J.M. Anderies & N. Abel, "From Metaphor to Measurement: Resilience of What to What?" (2001) *Ecosystems* 4 765.

²⁵⁰ *Ibid* at 777.

²⁵¹ *Ibid*.

reveals the competitive tension between the need to establish certainty in the law and the inherent uncertainty of resiliency theory and aquatic systems. To satisfy the tension created by this uncertainty, she discusses the need to change administrative law to be responsive to different circumstances. By way of an example, Cosens describes an existing Native American water rights governance system. Under this administrative law system, a legislated agency or commission is created with the authority to develop decision-making forums that consist of a mix of public and private participants. Such a local decision-making forum is charged with developing an adaptive response and final settlement of the stakeholders' interests. The settlement should take into account changing local conditions, the diversity of positions and two-way flows of communication. The final settlement is then directed to the legislature for approval.²⁵²

Baldwin and Black also rely upon the concept of change to frame the role of a “really responsive regulator” in carrying out regulatory enforcement and compliance duties.²⁵³ In their view, enforcement and compliance are components of a negotiated process amongst different regulatory actors. The normative basis of enforcement will include various goals – punitive, restorative or restitutive — that are complemented by a range of legal tools, such as continuation of business licenses, fines, and voluntary agreements. The role of the really responsive regulator is to consider a range of goals of enforcement while negotiating an appropriate response – for example, a fine. This regulatory approach is responsive to the organizational culture of the regulatee, the institutional context of the regulator, the range of regulatory tools, the performance of the regulatory regime, and the need to change continually each of the foregoing elements.

The resiliency element of emergent change introduces a systems perspective where

²⁵² *Cosens, Supra* note 204 at 263-65.

²⁵³ Baldwin & Black, *Supra* note 84.

dynamic change occurs. A systems perspective exposes expected and unexpected events, which frames the system by uncertainty. Managers are required to accept that knowledge is often incomplete and uncertainty frames the environmental problem as well as overshadows the solution. This consideration of emergent change raises the thorny issue of building resiliency in a system, which can present with alternative states and rates of change. This emergent change raises the questions of: resilience of what, to what? These questions redirect the orientation of a governance framework to be responsive to the unique and different ecological features of each watershed while considering the end goal, which might include maintaining the condition of the aquatic system, restoring a lake to a clear state or accepting the turbid stable state. An emergent change oriented governance system should take into account not only local and regional watershed features but also customary, indigenous and legal features that together foster an “adaptive governance framework.”²⁵⁴ Compliance and enforcement mechanisms must also be considered within the governance system in order to promote accountability for the protection of the environment and to foster “really responsive regulators.”²⁵⁵

Lastly, consideration must also be given to emerging environmental issues such as, climate change. Climate change is a threat to the quality and quantity of local and global water sources and is a transnational global governance issue that affects both international and domestic legal regimes. The effects of climate change upon water sources should direct decision-makers to take into account climatic factors, international obligations and be open to incorporating emerging environmental issues that might present in the future.²⁵⁶

²⁵⁴ Cosens, *Supra* note 204.

²⁵⁵ Baldwin & Black, *Supra* note 84.

²⁵⁶ Great Lakes Water Quality Board, “Climate Change and Water Quality in the Great Lakes Basin (August, 2003), online: IJC <<http://www.ijc.org/php/publications/html/climate/part1/index.htm>>.; Also refer to D. Dempsey, J. Elder & D. Scavia, “Great Lakes Restoration & the Threat of Global Warming” (May 2008), online: Healthy Lakes Org. <<http://www.healthylakes.org/wordpress/wp-content/uploads/2008/05/how-global-warming-report-081.pdf>>.; IPCC, “*Technical Paper VI: Climate Change and Water*,” (June 2008) at 104, online: Intergovernmental Panel on

Emergent change, as considered by the foregoing scholars directs an environmental governance system to consider the likelihood of uncertainty being embedded in the problem. In a social-ecological system based on emergent change, the governance structure must be prepared for unexpected results – that is, the element of surprise.

3.0 Strengthening the Governance Model

These dissertation’s research findings prompt re-thinking of the implementation and implications of the shared governance mode in the water sector. The environmental decision-making capacity of these water committee members and the ability of these decision-makers to be responsive to the water security challenges facing Canada are in doubt. These findings not only offer insight into the potential ways to improve this legal model but also highlight areas for further research for scholars interested in the strengthening the participation of citizens and First Nations in localized forms of governance. The recommendations generated through this research are discussed in detail in Chapter Seven: Conclusion — Lessons Learned.

4.0 Summary: The Literature Mapping Exercise & Establishing the Eco-Resiliency Governance Framework

Taken together, the mapping of the ecological concept of resiliency with the governance literature exposes a complementary pattern of characteristics that in this dissertation is referred to as the “Eco-Resiliency Governance Framework.” This framework is organized by four interrelated attributes that are bounded for analytical purposes. The four elements are: flexibility,

Climate Change/UNEP <<http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf>>. Refer to Section 1.3.2 Projected changes 1.3.2.2 Water resources.; Natural Resources Canada, “Climate Change Impacts and Adaptation: A Canadian Perspective Impacts on Water Supply Report,” online: NRC<http://adaptation.nrcan.gc.ca/perspective/water_3_e.php>; Ontario Ministry of the Environment, Climate Ready : Ontario’s Adaptation Strategy and Action Plan 2011-2014 Report (Ontario Environmental Registry, Information Notice #011-3299, April 29, 2011.), online: EBR Registry <<http://www.ebr.gov.on.ca/ERSWEBExternal/displaynoticecontent.do?noticeId=MTEzMDAx&statusId=MTY5NDQ2&language=en>>; R. de Loë & A. Berg, “Mainstreaming Climate Change in Drinking Water Source Protection Planning in Ontario” Prepared for Pollution Probe and Canadian Water Resources Association (March 2006), online: Pollution Probe <http://www.pollutionprobe.org/Reports/mainstreaming_climate_change_swp.pdf>.

broad perspective, diversity and emergent change, and are defined as follows:

1. **Flexibility** - In a governance context, flexibility is present when the regime fosters a two-way communication process that is grounded in consensus and offers the participants open communication and flexibility in resolving the problem (for example by relying upon a mix of regulatory responses and tools).
2. **A Broad Perspective** - The scale of the governance regime is broad when it represents a multi-jurisdictional framework, which includes a coordinating mechanisms and recognizes polycentric governance.
3. **Diversity** – A diverse governance arrangement exists when the composition of the committee is inclusive of a range of participants and a shared decision-making process exists that facilitates learning.
4. **Emergent Change** – The governance regime exhibits emergent change if the decision-makers operate in an institutional arrangement where the participants are able to be open to uncertainty and responsive to surprises that may emerge in the decision-making process.

These four features emerge from the synthesis of the literature, are used to organize the presentation and analysis of the legal governance regimes in each case study chapter, and to categorize the evaluative criteria and the analysis of the interviews with the water committee members, which is presented in Chapter Six: The Voices of the Committee Members on Eco-Resiliency.

Chapter Three: The Chameleon State: Signaling and Shaping of Water Governance through Ontario's Source Protection Committees

1.0 Overview: A Story of One Water Plan, Two Communities and Their Struggles Over Water

As early as 2009, city officials and citizens from the city of Guelph began to publically express their concerns about aggregate extraction activities at a local Dolime quarry.²⁵⁷ They claimed the protective aquitard layer (a layer of non-porous rock) of the Gasport aquifer had been breached and their drinking water was at risk of becoming contaminated. In their view, the aquitard breach “will allow surface water from the quarry pond, contaminated with bacteria and other pathogens, to leak into the groundwater and thereby contaminate the water supply aquifer” and potentially, harm the “municipal drinking water sources.”²⁵⁸ Together, the Wellington Water Watchers

²⁵⁷ Ground water is a key water resource for the City of Guelph. The city draws approximately 95% of its municipal drinking water from the Gasport aquifer. Grand River SPA – Draft Amended Assessment Report. Dated April 26, 2012 at 8-1. online: Lake Erie Source Protection Region (Herein Known as LESPR) <http://www.sourcewater.ca/swp_watersheds_grand/2012_GR_AmendedAR_Ch8.pdf>. The Assessment Report states: “The City of Guelph has 115,000 residents (GSP Group Inc., 2010), and it is one of the largest cities in Canada to rely almost exclusively on groundwater for its potable water supply.”; For the Dolime quarry ownership/operator structure, refer to the *The City of Guelph, Committee Agenda, Planning & Building and Environment Committee Report (September 19, 2011)* City of Guelph, online: <http://guelph.ca/uploads/Council_and_Committees/PEES/PBEE_agenda_091911.pdf>. Also: The quarry is owned by River Valley Development, a subsidiary of Carson Reid Homes and is operated by James Dick Construction Ltd. Carson Reid Homes is a well-established homebuilder in the Guelph. Also see online: Carson Reid Homes <<http://www.carsonreidhomes.com/aboutus.htm>>.

²⁵⁸ The water conflict in the City of Guelph is being advanced by the citizen's group called “Wellington Water Watchers” The group is concerned with the quarry extraction activities and the proposed increase in extraction activities at the Guelph Dolime Quarry, located in Guelph-Eramosa Township. online: Wellington Water Watchers <<http://www.wellingtonwaterwatchers.ca/wp-content/uploads/2011/09/page0040.jpg>>; and, see City of Guelph, Planning & Building and Environment Committee Report (September 19, 2011) at 40 to 55, City of Guelph, online: <http://guelph.ca/uploads/Council_and_Committees/PEES/PBEE_agenda_091911.pdf>; The proposed expansion of the quarry and water quality concerns were discussed in a September 19, 2011 City of Guelph Committee Report as follows: “Guelph has eight water supply wells within 2 km of the Dolime Quarry and these wells are able to produce up to 25% of [City's] water supply capacity.”...“On June 22, 2011 the City received a letter from James Dick Construction indicating that it is proposing to proceed to amend its aggregate license to expand the annual extraction rate from 500,000 tonnes a year to 1,000,000 tonnes a year.” Earlier in 2007, both River Valley Development and James Dick Construction applied for an expansion of the quarry. The Wellington Water Watchers and the City officials have continuously raised concerns to the Ministry of the Environment and Ministry of Natural Resources and to the Lake Erie Water Source Protection Committee (LEWSPC). They claim: that “the protective layer of aquitard that protects the City's water supply aquifers (especially the Goat Island and Gasport Formations) will not be protected” under the proposed license amendment. In the view of this citizen's group and City officials, a danger exists that the city's water source(s) will or are being contaminated by the breach. As documented in the Committee

citizen group and city officials brought these concerns to the local water water committee (i.e., the Lake Erie Water Source Protection Committee.

In November 2012, the Lake Erie Water Source Protection Committee (LEWSPC or SPC) heard from the Concerned Citizens of Brantford group worried their drinking water was at risk of contamination because of aggregate extraction activities.²⁵⁹ Both groups demand that the SPC add aggregate extraction to the drinking water threat list under the *Clean Water Act, 2006*.²⁶⁰ Nevertheless, after numerous presentations to the committee and an advocacy campaign by a general public representative on the committee, these community groups found themselves unable to influence the SPC's decision-making process. A decision-making process tightly controlled by the province.

Justice O'Connor, author of the Walkerton Commission of Inquiry Reports and considered the chief architect of the new water regulatory regime in Ontario, envisioned a localized watershed-planning process responsive to local citizen concerns.²⁶¹ Under the legislation, a water source protection committee can request permission to add an additional drinking water threat beyond the 21 drinking threats prescribed under the Act's regulation.²⁶² Yet, in the breach of an aquitard situation, the water committee was barred from adding aggregate extraction to the drinking water threat list for the Lake Erie WaterSource Protection Region. The committee, however, was successful in adding underground pipelines to the

report, "this breach [of the aquitard] will allow surface water from the quarry pond, contaminated with bacteria and other pathogens, to leak into the groundwater and thereby contaminated the water supply aquifer" and potentially, harm the municipal drinking water sources.

²⁵⁹ Citizens representing the Paris community group brought forward their concerns to the LEWSPC regarding a proposed gravel pit to be opened in Paris Ontario on Watts Pond Road. Please refer to: online: Concerned Citizens of Brantford website, <<http://ccob.ca/>> and <<http://ccob.ca/source-water-protection-plan-comments-submitted-by-ccob/>>.

²⁶⁰ *Supra* note 2. In particular, Ontario Regulation 287/07 sets out the 21 prescribed threats.

²⁶¹ O'Connor, Report Two, *Supra* note 59 and note 63. Re: Localized planning process.

²⁶² *CWA, Supra*. note 2. s. 2. "drinking water threat" means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat.; also see: (i.e., Technical Rule 119.

region's threat list. Why characterize oil pipelines but not aggregate extraction as a drinking water threat?

In fact, during this aggregate extraction controversy, the Lake Erie Water Source Protection Committee (LEWSPC), with approval from the Director of the Ministry of Environment, added underground oil pipelines as a new drinking water threat for the entire Lake Erie Water Source Protection Region. In response to fears stemming from Michigan's Kalamazoo River oil pipeline spill of 2010, the LEWSPC put forward a request to the Director to add underground oil transmission pipelines as a drinking water threat. Within the committee's geographically vast jurisdiction — only one pipeline location located in the City of Paris was deemed a significant threat to a drinking water source. Despite the limited impact of pipelines within the Lake Erie region, the director's decision to add an oil pipeline to the threat list applied to the entire Region.²⁶³ These two decisions left some residents asking: Why add underground oil pipelines as a local drinking water threat but not aggregate extraction? – an activity currently transforming the landscape in the Lake Erie Water Source Region and according to the citizens of Guelph the local waterscape. How did the SPC arrive at these decisions? Who is the decision-maker?

2.0 Introduction

In a farming community in southwestern Ontario, the *E. coli* drinking water contamination event known as the 'Walkerton tragedy' transformed the state-centric form of environmental regulation with the introduction of the *Clean Water Act, 2006*. The traditional regulatory command-and-

²⁶³ For threats relating to oil pipelines, the Lake Erie Region Source Protection Committee applied to the Director of the Source Protection Programs Branch to consider a request to add this as local threat. The application was made in February 2011 and the Director approved the conveyance of oil by way of underground pipeline on June 13, 2011. A review of the significant drinking water threats identified in the Assessment Reports (Section 1) indicates that the threat of the conveyance of oil by way of an underground pipeline is only significant within the County of Brant (Paris). *Infra.* note 362.

control approaches of environmental regulation gave way to a governance mode where a water-source protection committee (SPC) comprised of state and non-state actors are charged with governing a watershed.

Concurrently with the introduction of the new governance framework, scholars traced a regulatory change away from a government to the governance approach. Specifically, the governance literature points to the introduction of a responsive form of regulation, as advanced by Gunningham et. al.,'s *Smart Regulation*, an environmental policy approach. *Smart Regulation* promotes regulatory pluralism, whereby private, civil society and state actors actively govern together. Together, the emphasis in the theory upon the responsiveness theme combined with the shift in regulatory practice to a water committee arrangement and the past water governance crises raises several questions: Within these water committees, what concerns are the SPC decision-makers responsive to: economic development, legislative requirements, community concerns or ecological change in a watershed? How does the committee balance these competing interests? What legislative barriers exist to consider ecological change at a local watershed level?

As the introductory vignette demonstrates and will be explored more fully in this chapter, the decision makers taking part in the local water committee are faced with competing interests, norms and complex social-ecological relations. Based upon my observation of the SPC, these decision-makers side step these competing interests by relying upon the administrative tasks set out in the *Clean Water Act, 2006* and are captured by the state's chameleon-like control over their governance function.

Similar to a chameleon, the province's ability to change its oversight behaviour is complicated. The province's governance role presents as strong and weak forms of communication. The water committee views its' administrative actions as responsive to

community concerns. Yet, it is also defensive as the province shields the committee's administrative actions by relying upon the legislation, as a defensive back-stop. The province's strong control function was displayed through several mechanisms: the direction provided by MOE liaison representative at committee meetings; the committee's reliance upon the prescribed drinking water threat list; and, the Ministry of Environment's policy directives, technical rules and other similar instruments. Together these instruments, regulations, policies controlled the decision-making process and created a decision-making criteria for the water committee participants.

The province was also instrumental in presenting a weak style of communication. This weak communication presence subtly played out when community pressure exposed the competing interests of economic development and environmental protection underpinning the SPC's decision-making process. The province's response to the water-source protection committee's (SPC) request to add aggregate extraction as a local drinking water threat was one of delay. During four years of the water planning process, two community groups plead for the protection of their local water source. However, it was not until the draft plan was in place and presented at the December of 2012 that the Ministry announced its decision. Aggregate extraction would not be added to the drinking water threat list.

While the provincial government was responsive to the public outcry concerning a drinking water tragedy – Walkerton, Ontario (2000) and introduced the *Clean Water Act, 2006*, it was difficult for the public and First Nation communities to be heard at the water committee. Within the committee setting, citizens raised concerns regarding the protection of their local water source. Yet, their environmental protection concerns were strategically managed by government officials and appear to be marred by political interests playing out beyond the

committee. This latent conflict points to the presence of a power imbalance between industry and community interests at the planning-policy table. This aggregate extraction conflict raises the question: Under this mode of governance, how do water committee participants make decisions amongst competing interests? What actually drives the decision-making process in practice?

3.0 Background

3.1 Community Conflict & Aggregate Extraction

Predictably, the Guelph and Paris community conflicts became entrapped in the classic economic development versus environmental protection debate. These community conflicts play out at the local water committee level and are responsive to the province's interest in economic development and the economics of supply and demand.²⁶⁴ In Ontario, consumption and aggregate demand continues to increase in direct response to the province's growing population pressures and the subsequent building of construction and transportation works.²⁶⁵ Current demand and consumption²⁶⁶ for aggregates is projected to rise beyond historical levels.²⁶⁷ The

²⁶⁴ Mr. Ray Pichette, Director of Natural Heritage, Lands and Protected Spaces, in the Policy Division of the Ministry of Natural Resources submission on Monday, May 7, 2012 to the – Aggregate Resources Act Review” online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2012-05-07&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&DocumentID=26292#P338_94902>. In his submission, Mr. Pichette comments on the supply side: “We all know that aggregates are a major component to the province’s infrastructure. ...For example, the United States produces three billion tonnes of aggregate per year. Ontario, at this point in time, is around 166 million tonnes to 170 million tonnes a year. ...in fact, if you go to southern Ontario, and southern Ontario alone, we’re in the 130-million-tonne to 135-million-tonne range. That is actually 35% of all of Canada...the larger percentage of aggregate is produced in southern Ontario. We have the top 10 there, representing about 50 million tonnes in 2010, predominantly to satisfy the greater Toronto area and the 905 region....”

²⁶⁵ Altus Group Economic Consulting, *State of the Aggregate Resource in Ontario Study (SAROS): Paper 1 – Aggregate Consumption and Demand, Prepared for Ontario Ministry of Natural Resources*, December 18, 2009, online: Ministry of Natural Resources, <http://www.mnr.gov.on.ca/stdprodconsume/groups/lr/@mnr/@aggregates/documents/document/stdprod_067712.pdf>.at 27. Section: 4.2 Which uses are more important in relative terms? ...During the 2000s, an estimated 81% of the total aggregate consumed in Ontario was used in various construction applications.”

²⁶⁶Ms. Moreen Miller, Chief Executive Officer of the Ontario Stone, Sand and Gravel Association – “Committee Transcripts: Standing Committee on General Government – May 9, 2012 – Aggregate Resources Act Review”, online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2012-0509&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&DocumentID=26320>. In her

increased consumption of sand, stone and gravel (i.e., aggregates) is perpetuated by a domino extractive effect that places greater pressure on upstream and downstream aggregate industry providers to extract and deliver aggregates to meet market demands. Today these consumption and demand patterns combined with population and construction pressures are blurring the artificial boundaries of the urban and rural landscape. Intensive housing development projects are now encroaching upon aggregate development locations previously sited in remote rural areas. In the end, these economic driven factors spur community conflicts and leave citizens seeking an outlet to express their concerns. The chief concern for these local communities is water source protection.

3.2 The Aggregate Industry Perspective

The polemics surrounding this type of community conflict typically places industry proponents in direct opposition to community environmental protection interests.²⁶⁸ Within southwestern

statement to the Committee, Ms. Miller explained: “In 2010, 166 million tonnes of aggregate were produced in the province, and 60% of that was consumed by public authorities, the majority of which was used to build public infrastructure. We consume approximately 13.5 tonnes per person in Ontario each year... It is safe to assume that even with conservation practices, consumption will increase as population increases. If, by 2031, the population of Ontario increases by 3.7 million people, as set out in the growth plan, by then we will need 50 million more tonnes each year.”

²⁶⁷ SAROS, *Surpa*.note 265. In the Executive Summary of Report: “...Given expected levels of economic and population growth, Ontario’s consumption of aggregates is projected to average about 186 million tonnes per year on average over the next 20 years, 13% higher than in the past 20 years. Most of the 8 geographic areas within Ontario considered in this study are expected to consume more aggregate over the next 20 years than past 20 years. Also see Section 6.1.1 Ontario’s aggregate consumption patterns.

²⁶⁸ Mr. John Moroz, Vice-President and General Manager of St Marys CBM Aggregates, “Committee Transcripts: Standing Committee on General Government – May 9, 2012 – Aggregate Resources Act Review”, online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2012-05-09&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&DocumentID=26320#P182_40547>; To understand the nature and scope of this type community conflict from an industry perspective refer to Mr. John Moroz, Vice-President and General Manager of St Marys CBM Aggregates, statement to the Standing Committee regarding the company’s proposed quarry in Flamborough, north of the city of Hamilton: “...We recognize that quarrying is not without controversy, and we typically run into some local opposition by special-interest groups, which may include political, environmental or even competitive interests who do not want a quarry in their backyard. Flamborough is no exception.”; and, For another industry perspective also see: *Miller, Supra* note 266. In her statement to the Standing Committee on May 9, 2012, Ms. Moreen Miller, Chief Executive Officer of the Ontario Stone, Sand and Gravel Association, she did not acknowledge the “community” as an affected stakeholder, however, she did reference the competing economic and social interests. Specifically, she stated: “Not

Ontario, industry proponents are drawn to the high quality aggregate deposits located within the central portion of the Grand River watershed, specifically in vicinity of the cities of Guelph, Kitchener, Waterloo, Cambridge and Brantford.²⁶⁹ Both industry and provincial officials view these aggregate deposits as key economic commodities.²⁷⁰ Ms. Moreen Miller, Chief Executive Officer of the Ontario Stone, Sand and Gravel Association stressed in her submission to the Provincial government's Standing Committee on General Government (i.e., the Committee that was charged with reviewing the *Aggregate Resources Act*²⁷¹) the economic importance of aggregate extraction to the province. She stated:

“The aggregate industry is a primary engine for economic growth and prosperity in the province. Nothing gets built without aggregate: safe roads, power stations, municipal water supply systems, homes, schools, churches and hospitals. High-quality aggregate products are the very foundation of the provincial economy. Stone, sand and gravel are non-renewable resources. Once depleted or sterilized, they are lost forever...The provincial interest in aggregate resources is based on long-standing principles that have served Ontario well.”²⁷²

all areas of the province have aggregate deposits. They are only found in certain geologic formations and certain locations. Many of the geological formations that provide our aggregate resources also provide our agricultural resources, our recreation lands, our forests and our tourism destinations. The challenge is to strike the appropriate balance between these competing resource interests.” [Emphasis Added]. ...

²⁶⁹ Ms. Nancy Davy, Director of Resource Management with the Grand River Conservation Authority, “Committee Transcripts: Standing Committee on General Government – Monday, July 09, 2012 – Aggregate Resources Act Review” at 1530 online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?Date=2012-07-09&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&locale=en&DocumentID=26492#P462_125608>. Ms. Davy, in her statement to the Standing Committee, described the Grand River watershed as “located west of Toronto and is similar in size to Prince Edward Island.” ... “The central portion of the watershed has high-quality gravel and sand deposits. That’s generally the area of Guelph, Kitchener, Waterloo, Cambridge and Brantford and the surrounding townships.”

²⁷⁰ Ministry of Natural Resources, News Release, online: MNR <<http://news.ontario.ca/mnr/en/2012/03/all-party-committee-review-of-aggregate-resources-act.html>>. The Government’s position is expressed by the Minister of Natural Resources in a News Release Statement: “Aggregate resources such as sand and gravel are vital to Ontario’s economy – they are used to build roads, subway tunnels, hospitals and schools.”

²⁷¹ RSO 1990, c. A.8.

²⁷² Miller, *Supra* note 266.

For the industry, this aggregate resource rich region offers a unique business opportunity. For the government, the aggregate industry is a key sector advancing the province's economic development and security.

3.3 The Local Communities' Perspective

In contradiction to the industry perspective, is the view of local residents. Citizen group argue the inter-connected hydrological functions and features of a watershed require regulatory protection against potential harm from extractive industry activities. Nancy Davy, Director of Natural Resources with the Grand River Conservation Authority explained, in her submission to Provincial government's Standing Committee on General Government, the interconnected function of particular water features such as moraines that deliver aggregate resources. She stated: "the moraines and outwash deposits that provide aggregate resources also function as important groundwater resource areas and recharge and discharge zones."²⁷³ In fact, in Lake Erie Region watershed, key aggregate deposits exist and provide critical groundwater features such as recharge and discharge zones.

Publically, both the industry²⁷⁴ and provincial government appear to have overlooked the connection between aggregate extraction and watersheds including the legal framework for water

²⁷³ Ms. Davy, *Supra* note 269. Also, see David Suzuki Foundation and Ontario, Biodiversity in Ontario's Greenbelt Report, November, 2011: Section – Growth Plan For The Greater Golden Horseshoe at p. 38, online: David Suzuki Foundation <http://www.davidsuzuki.org/publications/downloads/2011/REPORT-GB_Habitat-Dec2011.pdf>. In the Suzuki Foundation's report, the interconnected waterscape and ecosystem is described as experiencing an impact from aggregate extraction activities: "The Paris and Galt moraines cover more than 560 square kilometers from Caledon to Norfolk – approximately one-third of the moraines are currently in the Greenbelt Plan. Like the Oak ridges Moraine, this area stores and filters a large amount of groundwater, thereby supporting a huge network of coldwater streams and wetlands throughout the Grand River watershed. ... The moraines, already under significant pressure from high levels of aggregate extraction, may not be able to withstand the increased demand that expanding communities will certainly place upon its hydrology. A recent report completed by the Ministry of the Environment failed to examine these potential cumulative environmental effects and their implications for species with nearby populations in the Greenbelt, like the Jefferson salamander and Blanding's turtle that rely on the water flow of the moraines for their habitat."

²⁷⁴ *Miller, Supra* note 266. Ms. Miller, in her statement to the Committee, characterizes the industry's position as "water handlers" [not water users]. The industry offers "innovative water management" initiatives, advances a partnership (industry, MNR and CA) approach to the study of cumulative effects and the development of self-

source protection.²⁷⁵ In their submissions to the provincial Standing Committee, neither the provincial government officials nor industry representatives, referenced the *Clean Water Act, 2006 (CWA)*, its' custodian, the Ministry of the Environment (MOE) and the committee's water source protection planning process. Rather, the presentations to the standing committee expose the economic partnership between the Ministry of Natural Resources and Conservation Authority (but not the Ministry of the Environment) and the aggregate industry. One might wonder whether this oversight points to a lack of awareness or possibly an isolation of the MOE's water source planning activity within the larger government administrative framework and within the broader political power structure? When in fact, the MNR and CA's administrative activities are

regulatory industry certification standards suggesting the industry, as a water handler, holds a mere usufruct right. A right delineated from its ecological impact and is offset by the industry's sustainable water management activities and self-regulation of adaptive management plans. Miller states: "OSSGA also promotes innovative and sustainable water management. Aggregate producers are water handlers, not water consumers. Where appropriate, adaptive management plans are being implemented by OSSGA members..."

²⁷⁵ Pichette, *Supra*, note 264. Mr. Ray Pichette, Director of Natural Heritage, Lands and Protected Spaces, in the Policy Division of the Ministry of Natural Resources submission on Monday, May 7, 2012 to the – Aggregate Resources Act Review" online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2012-05-07&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&DocumentID=26292#P338_94902>. In his submission to the Standing Committee, Mr. Pichette outlines the regulatory process for aggregate extraction and briefly comments on water source protection. Remarkably, while the Policy Director ends his statement by offering his opinion on the well-integrated nature of the aggregate regulatory system, he fails to reference the *Clean Water Act, 2006, c. 22 (CWA)*. He overlooks an important regulatory connection – a final water-source protection plan is binding on all Provincial and Municipal authorities that make decisions that affect the safety of drinking water. Mr. Pichette fails to reference the *CWA* and the legal significance of water source protection plan upon a municipality in his statement to the Standing Committee. He states: "The policy framework for aggregates is fundamentally under two pieces of provincial legislation: firstly, the Planning Act, which is under the municipal affairs ministry; and the Aggregate Resources Act, which is with MNR. These are the overarching legislative frameworks for managing aggregates in the province. There are a host of other pieces of legislation: the Water Resources Act, the Environmental Protection Act, the Niagara Escarpment Planning and Development Act, the Endangered Species Act and, actually, the federal Fisheries Act, at least at this point in time. ..." [Emphasis Added]. In particular, Mr. Pichette fails to reference, s.s. 38-44. And s. 105(1) of the *CWA*. When read together, the wording in s.39(4) and s.105(1) suggests a test for a regulatory conflict: "the provision that provides the greatest protection to the quality and quantity of any water that is or may be used as a source of drinking water prevails." Also see: O'Connor, Walkerton Report Two, *Supra* note 59. At page 106, in Ch. 4: The Protection of Drinking Water Sources, Justice O'Connor strengthen the water source protection plan with a trump card – in that, in his view "the plan would govern municipal land use and zoning activities." Thus, one might ask: does Director Pichette's oversight reflect an organizational culture at the provincial level where the MNR's aggregate extraction sector is the dominant natural resource governance regime over water source protection. Perhaps the answer can be found in the "partnership" between the industry, Ministry of Natural Resources and Conservation Authority where oddly, the Ministry of the Environment (the regulatory custodian of the *CWA, 2006*) is a missing partner. Also See: Miller, *Supra* note 274. Miller comments on the partnership.

potentially implicated by the *CWA*'s overriding provision for water plans. A final plan is considered binding on all Provincial and Municipal authorities making decisions affecting the safety of drinking water.²⁷⁶

3.4 Presenting at the Local Water Committee

As I observed, in both the Guelph and Paris aggregate extraction community conflicts, the issue in dispute is water source protection.²⁷⁷ In reaction to aggregate development activities occurring in their communities, local citizens concerned with the protection of aquifers, below-water-table extraction and the prevention of contaminants entering their drinking water sources, raised these concerns to the Lake Erie Water Source Protection Committee (LEWSPC) — the gatekeeper of “local considerations” pertaining to their “local watershed” – i.e., the Lake Erie Region.²⁷⁸

However, the water-source protection committee's governance function is directed at

²⁷⁶ *O. Reg. 288/07 Ibid*, ss.38-44. And s. 105(1) *CWA*, s. 39. In particular, together the wording in s. 39(4) and s. 105(1) suggests the test for conflict is: “the provision that provides the greatest protection to the quality and quantity of any water that is or may be used as a source of drinking water prevails.”

²⁷⁷ Mr. Ken Seiling, the Regional Chair for the Region of Waterloo and Mr. Rob Horne, the Regional Planning Commissioner for the Waterloo Regional Government, “Committee Transcripts: Standing Committee on General Government – Monday, July 09, 2012 – Aggregate Resources Act Review” online: Ontario Legislature <http://www.ontla.on.ca/web/committee-proceedings/committee_transcripts_details.do?locale=en&Date=2012-07-09&ParlCommID=8958&BillID=&Business=Aggregate+Resources+Act+review&DocumentID=26492#P857_246673>. In their joint submission, these municipal government officials emphasized the importance of water source protection to their groundwater thirsty community, the need to clarify the inter-relationship between *CWA*'s water protection planning process and aggregate extraction regime, which also brings attention to the escalating public conflict over water and aggregate extraction activities within their community. These presenters stated: “Given the groundwater dependence of the Waterloo region and the expansive regulatory framework emerging from the Walkerton tragedy, it is inconsistent that aggregate extraction can so frequently occur very near or below the water table. Even the relationship between aggregate extraction and emerging source protection plans has yet to be established and is currently problematic.” [Emphasis Added].

²⁷⁸ O'Connor – Walkerton Report Two, *Supra* note 59. Also see: Ministry of the Environment, *Clean Water Act* description, online: MOE <http://www.ene.gov.on.ca/environment/en/legislation/clean_water_act/STD01_078394.html>. Ontario's *Clean Water Act*:

- requires that local communities – through local Source Protection Committees – assess existing and potential threats to their water, and that they set out and implement the actions needed to reduce or eliminate these threats
- empowers communities to take action to prevent threats from becoming significant
- requires public participation on every local source protection plan – the planning process for source protection is open to anyone in the community
- requires that all plans and actions are based on sound science. [Emphasis Added].

human health – that is, the safety of the public drinking water system. Justice O’Connor, in the Inquiry, viewed the exercise as a “local planning process” contingent upon adopting a local watershed perspective.²⁷⁹ “[E]cological impacts” or environmental protection of the watershed were considered beyond the mandate of the Walkerton Commission Inquiry.²⁸⁰ This local scale of planning was expected to bring forth the public’s concerns during the process, which would further foster “goodwill” as well as agreement on the source protection plan within the community.²⁸¹ For the citizens of Guelph and Paris presenting to the committee the environmental protection of a water source is closely tied to the safety of their drinking water.

During a site visit to the Lake Erie Water Source Protection Committee, I observed one of the general public representatives bring forward the aggregate extraction issue. The matter was brought forward to the Committee, in the form of correspondence, in which the public interest representative identified the precarious state of the aquitard at the Guelph dolime quarry. At the committee, these types of local water issues can be raised in numerous ways; for example, through a committee member (for example, one of the public interest representatives) or a citizen-based delegation can make a presentation or a send letter to the Committee.

On November 3, 2011, the same public interest representative again brought forward his concern to the committee regarding the breach of the aquitard at the Dolime quarry. In his view, the breach is a serious drinking water threat.²⁸² However, the MOE still had not responded to the

²⁷⁹ O’Connor, *Ibid.* Report Two, Ch. 1: An Overview at 9.

²⁸⁰ *Ibid.* Justice O’Connor interpreted the Inquiry’s mandate as two-fold: 1) to establish a record of the events. (These events are set out in Part One of the Report.) And, 2) to consider other matters that were relevant to the issue of: “ensur[ing] the safety of Ontario’s drinking water.” These matters are set out in Part Two of the Report. Justice O’Connor’s interpretation of his mandate narrowed the issues to be heard and considered by the Inquiry to matters relating to the safety of drinking water. Ecological impacts to the watershed such as climate change or water conservation issues were considered outside the scope of the Inquiry.

²⁸¹ *Ibid.*

²⁸² Lake Erie Source Protection Region SPC Meeting “Source Protection Meeting Minutes – November 3, 2011”, online: LESPR- SPC Meetings <<http://www.sourcewater.ca/index/document.cfm?Sec=5&Sub1=2&Sub2=45>>.

SPC's earlier February 4, 2010 formal motion.²⁸³ In the motion, the committee had requested this local aggregate extraction activity be characterized as a local drinking threat.²⁸⁴ But, at this November meeting the MOE liaison representative attending this meeting was unable to advise on the Ministry's position on the motion. With no direction from the MOE, the committee was unable to respond to the member's request on the drinking water threat. In their view, the committee was still awaiting a formal response from the MOE. So, the public interest representatives' concern was set-aside.

Yet, at the time of this November 2011 SPC meeting, correspondence did exist demonstrating provincial officials were aware of the breach as early as 2009. Correspondence between the Municipal entity (City of Guelph²⁸⁵), the Provincial (MOE, MNR) officials, and an aggregate company employee (River Valley Developments Inc.²⁸⁶) indicates communication took place between these parties on this issue as early as November of 2009. The date of the correspondence suggests the MOE was well aware of the breach and the municipalities' concerns.

²⁸³ See Appendix B for a detailed a four-part motion illustrating the Committee's style of communication and the motion put forward on the aggregate extraction issue.

²⁸⁴ *CWA*. Under the O. Reg 287/07, s.1.1(1), 21 prescribed threats are identified. A policy directive supports each prescribed threat. Although this issue was discussed at the December 3, 2009 SPC meeting it was decided that further information was required from the provincial staff. At the subsequent February 10th meeting, a number of recommendations were accepted that related to gathering more information on the Ministry's position on the quarry. Online: Refer to: Report NO. SPC-10-02-01 – Subject: Background on Quarrying as a Drinking Water Threat <http://www.sourcewater.ca/swp_committee/020410_spc_minutes.pdf> and see the Lake Erie Region Source Protection Committee Meeting Minutes Thursday, February 4, 2010, SPC online: <http://www.sourcewater.ca/swp_committee/SPC021001.pdf>.

²⁸⁵ Letter from the Mayor City of Guelph to the MOE, Guelph District Office (dated July 26, 2011) regarding an upcoming meeting between the City and the MOE to discuss the quarry. online: City of Guelph <http://guelph.ca/uploads/Council_and_Committees/Information/info_items_080411.pdf>. In the letter, Mayor Farbridge outlines the City's objection to the quarry management plan changes, as the increase in the extraction rate, in the City's view is deemed a change in the terms of permit.

²⁸⁶ Letter from R. Baxter, General Manager to both the Ministers of the Environment and Natural Resources Correspondence (dated November 12, 2009). online: <<http://ward2guelph.files.wordpress.com/2009/11/letter-from-river-valley-developments-to-minister-of-natural-resources-and-minister-of-environment-nov-12-2009.pdf>>. In a nutshell, the General Manager's position is that the company is well within its provincial licence requirements. The city is responsible for ensuring adequate water treatment and has limited access to well infrastructure data. The problem lies with the City as the quarry is a legal land use.

At this SPC meeting, the MOE liaison representative was presented an opportunity to de-escalate the community conflict by introducing an August 2, 2011 letter from the local MOE District Guelph Office to Mayor of City of Guelph. In the letter, the MOE Guelph District Manager conceded the aquitard is “exposed.” In the opinion of the Manager, even though the “exposed or nearly exposed areas of the Gasport Formation” exist, the aggregate company’s management plan offers a mitigation plan that addresses the breach of the Gasport Formation.²⁸⁷ However, the MOE liaison representative chose to remain silent on this issue and not introduce the letter. The MOE’s District Manager’s admission of a breach at the Dolime quarry casts a long dark shadow of doubt over the MOE liaison representative’s response of silence on the issue.

At this meeting, the MOE liaison representative further failed to de-escalate the conflict brewing in the City of Guelph by not raising two key provincial documents. These two key documents shed light on the MOE’s position on below-water-table extraction at a quarry. The first document was referenced by Ms. Davy, Director of Natural Resources with the Grand River Conservation Authority, in her submission to the Standing Committee on General Government. Ms. Davy stated that the MOE participated in the development of September 2010 document entitled: *Cumulative Effects Assessment (Water Quality and Quantity) Best Practices Paper for*

²⁸⁷ Letter from Jane Glassco, District Manager, Ministry of the Environment, Guelph District Office to Karen Farbridge, Mayor of Guelph file # SI WE GU C5 100 (dated August 2, 2011). For a copy of the letter, *Supra* note 257 refer to pages 54 to 55 of the online version of the Planning & Building and Environment Committee Report (September 19, 2011). In the letter, the MOE District Manager states: “[t]he detailed technical hydrological reviews indicate the ground water has not been adversely affected however the ministry has taken a cautionary approach to this issue and asked the company to prepare a management plan to remediate the area where the Gasport formation is exposed. Following thorough Ministry technical review of the company’s draft management plan, the Ministry has advised both the Ministry of Natural Resources (MNR) and the company that the plan was acceptable to MOE... Our technical review included assessing the feasibility of the “fines layer” and the Ministry concluded that the management plan is a reasonable approach for mitigating exposed or nearly exposed areas of the Gasport Formation. The City of Guelph was provided with a copy of the finalized management plan on April 1, 2011 by the company. It is our understanding the plan addresses the City’s concerns first raised in 2007.”

*Below-Water Sand and Gravel Extraction Operations in Priority Subwatersheds in the Grand River Watershed Report.*²⁸⁸

The next document, the “Source Protection Planning Bulletin – Aggregate Resources Act Instruments” (MOE, March 2011) could have been raised by either the MOE liaison representative or the Conservation Authority representative acting as the facilitator of the meeting.²⁸⁹ Under the *CWA, 2006*, the CA is considered the Source Protection Authority and coordinates the SPC functions with the MOE. However, both government officials failed to raise the document and left the public representative’s concerns unanswered. This oversight by the government officials leaves the administrative process open to questions concerning transparency. From a participant observation perspective looking in at the SPC meeting process, it appeared the MOE liaison representative’s was stone walling the committee’s process and deliberately disregarding the public interest representative’s concerns.

A year later at the November 1, 2012 SPC meeting, the water committee was confronted with another aggregate extraction issue. A delegation from the group called the Concerned Citizens of Brantford made a presentation to the committee regarding a planned gravel pit located on Watt Pitts Road in Paris, Ontario.²⁹⁰ Dufferin Aggregates, the gravel proponent, has held the aggregate licence since 1974 on land that has been farmed for the last 38 years. The

²⁸⁸ Davy, *Supra* note 269 at 1539-40. In her presentation to the Standing Committee on General Government regarding the Aggregate Resources Act Review, Ms. Davy, Director of Resource Management with the Grand River Conservation Authority referenced the Best Practice Paper and indicates that the cumulative effects paper was developed with the Ministry of Natural Resources, the Ministry of the Environment and Ontario Stone, Sand & Gravel Association.

²⁸⁹ Ontario Ministry of the Environment “Source Protection Planning Bulletin – Aggregate Resources Act Instrument (March, 2011). online: MOE <http://www.sourcewaterprotection.on.ca/downloads/notices_minutes/notices/2011_Apr_8/8a_20110305%20Aggregates%20Bulletin%20FINAL.pdf>.

²⁹⁰ Lake Erie Region Source Protection Committee Meeting Minutes Thursday, November 1, 2012; online: LESPR-SPC <http://www.sourcewater.ca/swp_committee/110112_spc_minutes.pdf>.

company plans to commence extractive activities as soon as the various approvals are received. These citizens were worried their drinking water source could become contaminated.

At the SPC, the Brantford delegation argued the source protection plan (SPP) should take into account the planned aggregate activities. In their view, the SPP should take into account both the above and below water table extraction activities, aggregate washing facilities, washing wastewater pond(s), with water which may also be used to recharge the aquifer, and ponding effects. The close proximity of the extractive activities to the wellhead protection zone is a particular concern for this group. The group argues the wellhead protection areas surrounding the municipal wells (i.e., the Telfer and the Gilbert Well heads) are at risk of being adversely impacted by the activities at proposed gravel pit. Specifically, these residents contend the sandy composition of the soil creates contaminate pathways that easily and quickly transports contaminants to the area's shallow water table. These citizens are also concerned with the presence of legacy agricultural chemicals historically used by the local farmers (i.e., nitrate, phosphate/atrazine) on the site. In effect, these citizens fear the aggregate activities will transform the region's natural waterscape and its hydrological functions; thus, placing the quality and quantity of their drinking water at risk.²⁹¹

After the delegation had completed their presentation and departed the meeting room, the committee members began to deliberate whether the SPC's mandate allowed for the consideration of a local aggregate license. The heated exchange that ensued led the aggregate industry representative to strongly state to the Chair that the role of SPC is not to consider a local aggregate license dispute. In his comments, the representative reminded the Chair the committee had agreed in an earlier SPC meeting where the aggregate issue in Guelph was raised that it was

²⁹¹ Concerned Citizens of Brantford website, online: CCOB<<http://ccob.ca/>>. Refer to the CCOB presentation by Ron Norris that is set out as: "Source Water Protection Committee – Speaker Notes November 1, 2012"; Concerned Citizens of Brant online: <<http://ccob.ca/source-water-protection-committee-speaker-notes-nov1-2012/>>.

“not within the Committee’s jurisdiction to comment on site-specific development activities.”²⁹²

Other committee members also agreed with the representative’s position. In end, the committee members passed a resolution to accept four questions from the citizens group and to request the CA staff to respond to the questions at the next meeting in December.²⁹³

Finally, at the December 6th 2012 SPC meeting, the CA staff reported to the Committee on the aggregate extraction threat request. The CA responded with a resounding no to three of the four questions posed a month earlier by the Concerned Citizens of Brantford delegation.²⁹⁴ In short, aggregate extraction is not a drinking water threat. A CA staff explained, in memo form, to the Committee that the SPC does not have the “authority to examine site specific risks to the Paris drinking water supply.”²⁹⁵ Under the *CWA* technical rules and *Ont. Reg. 287/07*, the mandate of the SPC is limited to addressing prescribed drinking water threats and aggregate extraction is not one of the prescribed threats. The legal authority of the “Source Protection Authority” (SPA- i.e., CA) is limited to these fore mentioned legal instruments, which means the SPA “cannot assess risks to drinking water outside” the Act and its regulations.²⁹⁶ Aggregate extraction activities associated with transport pathways might be considered as an activity set out

²⁹² Lake Erie Source Protection Region SPC Meeting “Source Protection Meeting Minutes - Thursday, November 1, 2012,” online: LESPR-SPC <http://www.sourcewater.ca/swp_committee/110112_spc_minutes.pdf>.R. Haggart felt that the issues being put forward by the CCOB are a County-wide concern and requested that these questions be reviewed and discussed at an upcoming SPC meeting. T. Schmidt felt that it is not the mandate of the SPC to comment or make decisions regarding site-specific development or operations (i.e. the proposed gravel pit in Paris). W. Wright- Cascaden agreed and added that although CCOB is particularly concerned about events in Paris, the questions being brought forth to the SPC by the CCOB could be answered in a general manner. [Emphasis Added].

²⁹³ *Ibid.* The four questions put forward: 1) Does the Source Protection Committee have the authority to examine the risk as a site specific issue for the Paris wells before the permit to take water will be grants? 2) Will the Source Protection Committee have input to the Ministry of the Environment when Dufferin Aggregates applies for their permit to take water, as it relates to the issues outlined in the presentation? 3) Can a study be requested/required, specifying the lab and field methodology to detect levels of chemistry, to determine if CCOB’s [Concerned Citizens of Brant’s] concerns about the wash pond have been made? 4) Will the Source Protection Committee be pursuing the issue any further with the Ministry of the Environment? And is there anything CCOB can do to support the Committee in this pursuit?

²⁹⁴ *Ibid.*

²⁹⁵ *Ibid.* Also see online: Lake Erie Source Protection Region SPC Meeting “Source Protection Meeting Minutes – December 6, 2012 ... “Report 12-12-01: Response to Questions from Concerned Citizens of Brant – Delegation November 1, 2012”, online: LESPR-SPC <http://www.sourcewater.ca/swp_committee/SPC_121201.pdf>.

²⁹⁶ *Ibid.*

in *CWA* policies and the technical rules and could be considered as protective measures.²⁹⁷ The CA staff also reported that the water studies completed in the Paris, Brant County area did not reveal any water stress.²⁹⁸ As a participant observer of the meeting, I watched as the Chair requested a comment on the presentation from the MOE liaison representative, who responded in brief, that the MOE and MNR are continuing to examine the issue. The Chair, responded lightly heartily to the MOE representative, “is that all you have to say on the issue!” She politely, responded – yes!

3.5 Summary: Governance as a Process of Decision-Making – How Are Decision-makers Responsive to Environmental Change?

Together, in this chapter, the Guelph and Paris aggregate community conflicts serve as a backdrop to understand the presence of eco-resiliency features in a legally constituted governance function. This idea of a governance mode emerged from the Walkerton Inquiry Commission’s Reports, is now embedded in *Clean Water Act (CWA)* and its supporting regulations.²⁹⁹ Governance, as a function of decision-making, is focused on what the participants are charged to do – in this dissertation, make decisions regarding water resources. In this case study of a SPC and its role in drafting the water-source protection plan (SPP), decisions are made concerning “drinking water threats”³⁰⁰ within the watershed.³⁰¹ To gain insight into the decision-

²⁹⁷ *Ibid.* Report 12-12-01: In the memo. it is further explained: “A transport pathway is a condition of land resulting from human activity that increases the vulnerability of a raw water supply of drinking water system. Pits and quarries are considered transport pathways, and vulnerability assessment can be adjusted (i.e., increased) for areas where transport pathways exist.

²⁹⁸ *Ibid.* Report 12-02-01: According to the Report and the status of the water quality studies, it was noted that the subwatershed wide based Tier 2 Water Quality Studies that were completed across the Lake Erie Region showed low potential for water quantity stress in the area around Paris in Brant County. As a result, no detailed (Tier 3) water quantity study was recommended for the drinking water supply system in Paris under the Source Protection Program.

²⁹⁹ *Supra* note 2. *O.Reg.* 288/07 (Source Protection Committees), *O. Reg.* 287/07(General) and *O. Reg.* 284/07 (Source Protection Areas and Regions).

³⁰⁰ *CWA*, *Supra* note 7, s. 2(1) “drinking water threat” means an activity or condition that adversely affects or has the potential to adversely affect the quality or quantity of any water that is or may be used as a source of drinking water, and includes an activity or condition that is prescribed by the regulations as a drinking water threat.

³⁰¹ O’Connor, Report Two *Supra* note 59. Ch 4. at 94. A watershed is defined as: “A watershed consists of all of the

making of these water committees, first, Justice O'Connor's vision of a local planning process, as practiced within the SPC, including the legislative architecture as set out in the *CWA*, are described in this chapter. The chapter commences with a brief description of the historical account of the Walkerton incident to honour the seven lives lost. Then, the analysis of the eco-resiliency features of the legal framework regime is presented, which is followed by the governance practice, as observed, at the SPC.

4.0 Historical Context: A Water Governance Crisis — Walkerton, Ontario.

4.1 Introduction

While the genesis of Ontario's legal water governance regime is well documented in the Walkerton Reports, media accounts and the academic literature, the events prior to the enactment of the *CWA* point to socio-economic changes that culminated in a water governance crisis. Indeed, the provincial government's push toward privatization, the government's downsizing program, the devolution of powers to municipal levels, the cost cutting efforts including the lack of training of municipal water personnel are known factors that contributed to the now infamous drinking water tragedy in Walkerton, Ontario.³⁰² In reaction to the Walkerton incident, the provincial government authorized a public inquiry led by the Honourable Dennis O'Connor. In response to recommendations set out in the Walkerton Inquiry Commission Reports, legislation

lands that drain into a particular body of water. ... Watersheds may be nested: for example, the Grand River watershed is within the Lake Erie watershed. In fact, nearly every watershed is contained within some other watershed. ... Watersheds are an ecologically practical unit for managing water. This is the level at which impacts to water resources are integrated, and individual impacts that might not be significant in and of themselves combine to create cumulative stresses that may become evident on a watershed level... Managing water on a watershed basis requires decision makers to recognize the impacts that upstream activities have on downstream water sources and helps ensure that decision makers take all impacts into account." Also see: *CWA*, 2006, O.Reg 284/07 Source Protection Areas and Regions. This regulation sets out the source protection areas aligned to a conservation authority. There are 36 source protection areas that have been established under s. 4 of the *CWA*, 2006.

³⁰² O'Connor, Walkerton Report One, *Supra* note 7. Specifically, for a discussion of the impact of privatization refer to Report One: Specifically, for a discussion of the impact of privatization refer to Chapter 10: Failure to Enact a Notification Regulation – 10.4 The Move to Privatization in 1995–96 beginning at 374 and Ch. 13: Budget Reductions at 31-35.

was enacted, namely, the *Safe Drinking Water Act, 2002*³⁰³ and the *Clean Water Act, 2006* (*CWA*). The *CWA* is the primary legislative framework for water source protection planning in Ontario.

Collectively, the Walkerton incident, the Walkerton Reports, the expert panels³⁰⁴ including the legislative debates,³⁰⁵ the enactment of the *CWA* and the Provincial government's administrative organizational structure each influenced the normative framework of Ontario's water-source planning process. Yet, each distinct activity did so in different ways. The Walkerton tragedy narrowed the policy lens towards the safety of drinking water not the ecological health of the watershed.³⁰⁶ Justice O'Connor envisioned a regulatory pluralism approach whereby a plurality of state and non-state actors govern the safety of drinking water.³⁰⁷ As enacted, and interpreted by the Ministry of Environment (MOE), the *CWA* offers "local

³⁰³ S.O. 2002, c. 32.

³⁰⁴ Ontario, Legislative Assembly, Official Report of Debates (Hansard) 38th parliament, SP-25 second session, online: Ontario Legislature <www.ontla.on.ca>. Soon after Justice O'Connor's Walkerton Reports were received by the Provincial government, the Environment Minister (then, Leona Dombrowsky) announced the creation of two formal committees: a technical committee and an implementation committee. These two committees would build upon the earlier work of the *Advisory Committee on Watershed-based Source Protection Planning* that commenced their committee work in April 2003. The inter-ministerial technical committee brought together senior officials from the conservation authority and environment ministry as co-chairs. This technical committee was charged with drafting the framework for threat-based risk management approach to water source protection. In contrast, the heterogeneous implementation committee (comprising of municipal, conservation authority, First Nation, agricultural, environmental and health interest group representatives) were charged the task of setting out an implementation plan to create the institutional architecture and identify the parties, roles and responsibilities to draft the water source protection plans, which would also include funding and incentive mechanisms. Together, the ideas, normative framework and recommendations set out by three committees informed the basis for water source protection and together these issues were further debated by the government's Standing committee on social policy that was conferred the task of examining "Bill 43, An Act to protect existing and future water sources." Advisory Committee, "Final Report: Protecting Ontario's Drinking Water: Toward a Watershed-Based Source Protection Planning Framework", April 2003, online: MOE <http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079703.pdf>. Technical Committee For an example of their work, online: <http://www.sourcewater.ca/SWP_Resources/swp_background_technical.pdf>. <http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079703.pdf>. Technical Committee For an example of their work, online: <http://www.sourcewater.ca/SWP_Resources/swp_background_technical.pdf>.

³⁰⁵ Ontario, Legislative Assembly, Official Report of Debates (Hansard) 38th parliament, SP-25 second session, online: <www.ontla.on.ca>.

³⁰⁶ O'Connor, Walkerton Report One, *Supra* note 7. See footnote 280 for a discussion of the mandate of the Inquiry.

³⁰⁷ O'Connor, Walkerton Report Two. *Supra* note 59. The participatory and pluralistic aspects are outlined in Report Two. Ch 4: Participation of Affected Groups and the Public, at 103-109.

communities” a means through which to examine local drinking water threats³⁰⁸ and to take preventive action through a source water protection planning process.³⁰⁹ The idea of drinking water threats was first raised by Justice O’Connor,³¹⁰ then elaborated upon by the expert panels,³¹¹ then, re-shaped, and prescribed in the legislation,³¹² and then enunciated in the

³⁰⁸ *CWA, Supra* note 2 – s. 2(1). Under ss. 22(2) 1. to 5., the contents of the SPP must incorporate policies that relate to “significant drinking water threats”, “drinking water threats” and a “drinking water issue.”

³⁰⁹ Ministry of Environment “The Clean Water Act – Fact Sheet” PIBS 5971e02 (Toronto, Queens Park: November 2008), online: MOE

<http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/stdprod_081235.pdf>.

³¹⁰ O’Connor, Walkerton Report Two, *Supra* note 59. Report Two – Chapter Four: The Protection of Drinking Water Sources at Section 4.4 at pages 121 to 145. Justice O’Connor identifies the following activities as potential threats that may affect of the safety of drinking water: 1. Human waste and municipal sewage treatment plants, 2. Septic systems 3. In rural agricultural areas, the practice of using biosolids (treated solid waste) and septage (untreated waste from septic systems) as fertilizer. 4. Additional agricultural activities, such as: manure management, chemical fertilizer use, stormwater run-off, pesticide use and fuel management. 5. And, other activities and industries that pose a threat to the safety of drinking water include: the spreading of road salt, forestry, mining, urban development; and industrial plants.

³¹¹ *Expert Panels, Supra*, note 304.

³¹² *CWA, Supra* note 2. And, O.Reg. 287/07 General. The 21 prescribed drinking water threats are set out in s.1.1(1) of the regulations and includes the following threat activities: Section 1.1(1) states: Prescribed drinking water threats 1.1 (1) The following activities are prescribed as drinking water threats for the purpose of the definition of “drinking water threat” in subsection 2 (1) of the Act:

1. The establishment, operation or maintenance of a waste disposal site within the meaning of Part V of the *Environmental Protection Act*.
2. The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage.
3. The application of agricultural source material to land.
4. The storage of agricultural source material.
5. The management of agricultural source material.
6. The application of non-agricultural source material to land.
7. The handling and storage of non-agricultural source material.
8. The application of commercial fertilizer to land.
9. The handling and storage of commercial fertilizer.
10. The application of pesticide to land.
11. The handling and storage of pesticide.
12. The application of road salt.
13. The handling and storage of road salt.
14. The storage of snow.
15. The handling and storage of fuel.
16. The handling and storage of a dense non-aqueous phase liquid.
17. The handling and storage of an organic solvent.
18. The management of runoff that contains chemicals used in the de-icing of aircraft.
19. An activity that takes water from an aquifer or a surface water body without returning the water taken to the same aquifer or surface water body.
20. An activity that reduces the recharge of an aquifer.
21. The use of land as livestock grazing or pasturing land, an outdoor confinement area or a farm-animal yard.

O. Reg.385/08, s. 3.

Ministry of Environment directives.³¹³ Thus, this regulatory change is undeniably in part a reaction to the Walkerton drinking water incident and to Justice O'Connor's recommendations as set out in the Walkerton Reports. Importantly, this regulatory reorientation toward a risk-oriented governance mode points to an ideological turn in the provincial government's environmental regulatory strategy away from a command-and-control regulatory approach, and towards a soft law approach based on Ministry policy directives.

The *CWA, 2006* legislative architecture is also perhaps influenced by the design of governance regimes found in other jurisdictions, as Justice O'Connor acknowledged the legislative practices in comparative jurisdictions.³¹⁴ Reinforcing O'Connor comparative analysis of governance practices is the recognition and acceptance of the governance mode in the scholarship. The literature, as discussed earlier in Chapter One confirms the spread of the paradigm shift to a governance mode across the industrialized world.

However, little empirical evidence exists to support this regulatory turn. To provide insight into the legal foundation of water source protection in Ontario, presented next is a brief historical account of the Walkerton crisis, the Walkerton Inquiry Reports. Presented in the final section of the chapter is a discussion of the relevant sections of the *CWA* that exhibit features of eco-resiliency in order to understand the water committee's responsiveness to ecological change.

4.2 The Walkerton Governance Crisis – The Holiday Weekend – May 24th, 2000

The Walkerton Inquiry Commission Reports tell the story of complacency in governance. Prior

³¹³ Numerous documents have been published with respect to specific drinking water threats. For example, Ministry of Environment, *Drinking Water Threats, Clean Water Act, 2006* – PIBS-751eO2. (Toronto: Queen's Park, November 2009), online: MOE

<http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079851.pdf>;

And, Technical Bulletin: Threats Assessments and Issues, March 2010, online: MOE

<http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079532.pdf>.

³¹⁴ O'Connor, Walkerton Report Two, *Supra* note 59. For example, Justice O'Connor in Report Two – Ch 4 at page 101 provides a brief reference to the review of practices in other jurisdictions (Australia & the EU).

to the spring of 2000, when residents of Ontario turned on their drinking water taps to fill a glass with water, they generally did not think about the quality of their drinking water. A glass of water would automatically be gulped down without any thought as to whether the water from their drinking water tap was contaminated. Sadly, the residents of Walkerton paid the ultimate price for not questioning the quality of their drinking water. After drinking tap water contaminated with the deadly bacteria, *Escherichia coli* O157:H7 (*E Coli*), seven residents died, and an additional 2,300 members of the community members became seriously ill. This was in a town with a population of less than 5000.³¹⁵

It was the Victoria Day holiday weekend, in May of 2000, when the drinking water tragedy struck the close-knit, tranquil farming community of Walkerton, Ontario. After a cold winter and a wet spring, the Victoria Day holiday weekend had finally arrived and was welcomed. Even though the summer solstice was still a month away, the “May Two Four” long weekend, as it is colloquially known, was considered by the locals to be the unofficial celebration of the coming of summer.³¹⁶ In anticipation of that holiday weekend, local residents were preparing to participate in their typically long weekend activities: Opening summer cottages, sharing time with friends and families, taking part in picnics, and attending local town events, like fireworks celebrations, and taking the kids to a soccer game. For most residents, all these activities were being carried out without a thought to the quality and trustworthiness of their drinking water. Many of the town’s residents contentedly prepared refreshments for the weekend activities, including filling their water bottles for the local sporting events.

The Adams’ family, for instance, was unaware of the contamination of the town’s drinking water system that long weekend. None of the family members had heard the boil water

³¹⁵ O’Connor, Walkerton Report One, *Supra* note 7. Summary of the Report at 2.

³¹⁶ In 2000, the statutory Victoria Day holiday, which is officially recognized as Monday, occurred on Monday, May 22nd.

advisory alert that had been announced on the local radio stations that Saturday or Sunday morning. Diana Adams was too busy preparing for the arrival of family members from Toronto, including her 79-year old mother. During her son's soccer practice, Diana's husband, the team's coach, had encouraged all the kids to drink lots of water because the weather was hot. At the soccer practice, their son obediently consumed two big bottles of the town's water. By month's end, all three of the Adamses' children had contracted *E Coli*.³¹⁷

The first warning for public officials that something was terribly wrong in the town of Walkerton was the increase in incidents of illness as exhibited by the sudden rise in telephone calls to public authorities, hospital emergency visits, and fatalities of vulnerable residents – that is, the young and the elderly. By Wednesday, May 24th, four people had died including a 66-year-old woman, who died on May 22nd and a two-year-old child, who died on May 23rd.³¹⁸ These warning signs of a serious problem with the town's drinking water system were discussed in Justice O'Connor's Walkerton Commission Inquiry Reports, where he recounted the socio-economic and health impacts.³¹⁹

Tragically, on this supposedly idyllic May long weekend, the community of Walkerton experienced a drinking water crisis. As expected, the crisis resulted in the establishment of an expert-based public inquiry – Justice Dennis O'Connor's Walkerton Inquiry. This moment in time eventually triggered sweeping regulatory changes, not only in Ontario, but also served as an impetus of change in the governance of water across Canada.³²⁰ This historical perspective and

³¹⁷ O'Connor, Walkerton Report One, *Supra*. note 7. Ch 3 at 81.

³¹⁸ *Ibid* at 98.

³¹⁹ *Ibid* at 102.

³²⁰ Almost a year later, in the spring of 2001, the City of North Battleford, Saskatchewan, experienced a drinking water contamination incident that was attributed to an outbreak of cryptosporidiosis. In reaction to this drinking water crisis, the province of Saskatchewan ordered a public inquiry (via an Order-in-Council dated May 10, 2001) into the safety of the public drinking water system. The Inquiry primarily examined the issues of operations and human resources (operator competency and training). Together, the Walkerton and North Battleford drinking water incidents identified a need for regulatory change.

summary demonstrates how the water sector in Ontario became highly politicized. In reaction and in a crisis mode, the Walkerton incident prompted the Provincial government to commence a Public Inquiry and to then, introduce a legislative change – *Safe Drinking Water Act, 2002*³²¹ and the *Clean Water Act, 2006 (CWA)*, without much debate. Presented next is an explanation of the legal framework of the CWA, which is organized to examine and evaluate the regime on the basis of features of eco-resiliency: flexibility, diversity, a broad perspective, and the ability to accommodate emergent change.

5.0 Applying The Eco-Resiliency Framework To The Legal Framework

5.1 Introduction

Legal governance includes the statutory regime, policies, norms, and actors who interact, interpret, and carry out a decision-making activity. The governance regime set out in the *Clean Water Act, 2006 (CWA)* wherein the single legislative purpose of “to protect existing and future sources of drinking water” is complicated by the MOE’s technocratic planning process and an array of decision-makers charged with governing the watershed.³²² Presented next, is an explanation of how the four features of eco-resiliency (diversity, flexibility, a broad perspective and an ability to accommodate emergent change) are provided for in the legislative regime.

5.2 Diversity

Diversity under the eco-resiliency framework exists when the composition of the committee is inclusive of a range of participants and the decision-making process is shared and includes a diverse range of interests that facilitates forms of learning. The water laws, the *CWA, 2006* and the regulations set out the water-source protection committee. Specifically, *O. Reg. 288/07*

³²¹ *Supra*. note 303.

³²² *CWA, Supra* note 2.

explicitly provides for the participation of municipal, industrial, agricultural, environmental, health, general public representatives and First Nation representatives.³²³ Together with the chair, the Lake Erie SPC is comprised of 25 seats, with seven of whom are municipal representatives, seven have business interests, seven are “general public” representatives and three are First Nation representatives. In essence, a shared governance model exists through which Provincial conservation and environmental authorities share decision-making within non-state actors in a localized watershed committee called: “Source Protection Committees” (SPC).³²⁴

The Source Protection Authority³²⁵ (SPA – that is, Conservation Authority) selects the committee members.³²⁶ The municipalities are included on the committee because of their role as urban water service providers. The agriculture and aggregate industries were selected as key business sectors because of their dominant land use position within the Lake Erie Region. The SPA’s selection of the general public representatives is guided by a background document that directs “individuals rather associations” should be chosen.³²⁷ While participation is diverse, the

³²³ *Ibid.* O. Reg. 288/07. The appointment of members is set out in the following sections: s. 2 and s. 6(2).

³²⁴ *CWA, Ibid.*, s. 7(1)(2). Also see: *Supra.* note 309 MOE Fact Sheet at p 2 states: “Source Protection Committee: There will be strong municipal representation on the committee, as well as a range of stakeholders within the watershed. Municipalities across the watershed will work together through the source water protection committee, identifying, assessing, and addressing risks to drinking water within their municipal wellhead and intake protection areas.” Printed Copy only.

³²⁵ *CWA, Ibid.* s.2(1). The Source Protection Authority “source protection authority” means a conservation authority or other person or body that, under subsection 4 (2) or section 5, is required to exercise and perform the powers and duties of a drinking water source protection authority under this Act.

³²⁶ *CWA, Ibid.* s. 7(2)(3) The composition and membership of the SPC is to be prescribed by in the regulations. Refer to: O/Reg 288/07. s. 2 and s. 3 and s. 6. Also refer to Background Reports: Lake Erie Region Source Protection Committee Final Composition and Rationale online: LESPR <<http://www.sourcewater.ca/index/document.cfm?Sec=5&Sub1=0&sub2=0>>. O.Reg. 288/07 ss. 1(3) sets out 22 members and ss. 2 and 6 expands the number to 25. The Lake Erie Source Protection Region must have a Source Protection Committee of 22 members comprised of: 1 non-voting Chair; 7 municipal representatives; 7 sector representatives (including business, industry and agriculture); and 7 others’ representing interests other than municipal and sector interests (the public interest). In addition to the Chair and the 21 municipal, economic sector, and other members referred to above, 3 seats must be offered to, and held for the two First Nations communities in the Lake Erie Region, the Six Nations of the Grand River and Mississaugas of the New Credit First Nation. There are also 3 non-voting liaison seats for representatives of the Source Protection Region, the Province of Ontario, and Public Health.

³²⁷ *CWA, Ibid.* O. Reg. 288/07 s. 4(10)(b) – “interests of the general public.” Also see: Background Reports: Lake Erie Region Source Protection Committee Final Composition and Rationale, online: LESPR

administrative selection process is controlled by the SPA and results in of a select range of participants. While a diversity of participants can participate on the SPC, the selection process is tightly controlled by the province raising questions of public access and on what interests of the public are being raised in a meeting.

Administratively, each water-source protection committee³²⁸ in the Province is charged with overseeing a diverse array of tasks that result in the production of three documents: i) a terms of reference;³²⁹ ii) a “science-based”³³⁰ risk assessment report;³³¹ and iii) a source protection plan (SPP).³³² Each of these documents is considered an essential component of the planning process. The final product of the planning process is the SPP. Under the *CWA*, the content of the SPP is informed by the risk assessment report, the terms of reference document,

<<http://www.sourcewater.ca/index/document.cfm?Sec=5&Sub1=0&sub2=0>>. The Rationale document states: “Municipal Representatives: The Source Protection Authority consulted with municipalities in the Lake Erie Source Protection Region on the distribution of the 7 municipal representatives on the Source Protection Committee. Sector Representatives: Of the 7 seats for sectors, 3 have been allocated to industry and business; 3 to the agricultural community, and 1 to the aggregate industry. The majority of municipal supplies in the Lake Erie Region are located in urban areas. As such, the Clean Water Act may significantly impact a large number of businesses and industries, particularly in the cities. Of the three business and industry seats, at least one member on the Committee will be representative of commercial interests, and one of small business, while also taking into account geographic distribution within the Lake Erie Region. Additionally, it is recognized that agriculture is a dominant geographic and economic land use activity in all four watersheds, and plays a strong role in the protection of the quality and quantity of water sources. Geography and the diversity in agricultural operations will also be considered in the selection of representatives. The Lake Erie Region is a key source of aggregate resources in Ontario, and the aggregate industry is very active in all four watersheds. As such, one seat on the Source Protection Committee has been allocated to the aggregate industry. Other Representatives (of the Public Interest): Six seats in the “Other” category will be appointed as representatives of the public interest, that is, as individuals rather than associations. . . Geography and, in particular, diversity of public interests in drinking water source protection will be considered in the selection of representatives of the public interest. Additionally, one seat will be allocated to the Elgin Area Primary Water Supply System Joint Board of Management, as it operates a major supply of drinking water serving a significant portion of the Southwestern Lake Erie Region. Being neither a municipality nor an economic interest, the Joint Board of Management will be represented in the “Other” category.”

³²⁸ *CWA, Ibid.* O.Reg 284/07 The total number of source protection areas in Ontario is 36. O. Reg. 288/07 sets out the membership numbers for the 19 water source protection region/committees.

³²⁹ *CWA, Ibid.* s. 8(1). For the content of terms of reference, see General O.Reg 287/07. And, O.Reg 288/07 Preparation, Approval, and Amendment of Terms of Reference – s. 2 to s. 10.

³³⁰ Environmental Registry, Ministry of Environment, “Source Protection Plans Under the Clean Water Act, 2006: A Discussion Paper on Requirements for the Content and Preparation of Source Protection Plans” (June 2009) at 5, EBR Registry #010-6726., online: EBR

<http://www.downloads.ene.gov.on.ca/envision/env_reg/er/documents/2009/010%2D6726.pdf>.

³³¹ *CWA, Supra* note 2. s. 15(1). Also see O.Reg 287/07. Preparation, Approval and Updating of Assessment Reports – s. 11 to s. 18.

³³² *CWA, Ibid.* s. 22(1). Also see General, O. Reg 287/07. Preparation, Approval and Amendment of Source Protection Plans – s. 19 to s. 39.

policy directives and consultation with the committee members. The legislation, thus, promotes a diversity of interrelated tasks and outcomes.

The administration of the planning process is a coordinated and shared activity between the MOE, the CA and the committee members based on a partnership. The *CWA* places an obligatory duty upon the SPA (i.e., CA) to provide the committee with scientific, technical and administrative support.³³³ The CA co-ordinates and facilitates the activities of each committee and manages the development of the final plans (SPP).³³⁴ The MOE sets the strategic policy framework for the planning process, provides legislatively required policy directives,³³⁵ makes

³³³ *CWA, Ibid.* s. 7(5)(b)

³³⁴ *CWA, Ibid.* s. 2(1) Definitions – “source protection authority” means a conservation authority or other person or body, that under subsection 4(2) or section 5, is required to exercise and perform the powers and duties of a drinking water source protection authority under this Act. And, s. 4(2) The conservation authority shall exercise and perform the powers and duties of a drinking water source protection authority under this Act for the source protection area established under subsection (1).

³³⁵ *CWA, Ibid.* Under s. 22(2), the content of a SPP must also include a number of mandatory policies that achieve particular objectives. Specifically, the legislative requirement for these mandatory policies is as follows:

Section 22. (2) A source protection plan shall, in accordance with the regulations, set out the following:

2. Policies intended to achieve the following objectives for every area identified in the assessment report as an area where an activity is or would be a significant drinking water threat:
 - i. Ensuring that the activity never becomes a significant drinking water threat.
 - ii. Ensuring that, if the activity is being engaged in, the activity ceases to be a significant drinking water threat.
3. Policies intended to assist in achieving every target established under section 85 for the source protection area, if the Minister has directed under subsection 85 (6) that a report be prepared that recommends policies that should be set out in the source protection plan to assist in achieving the target.
4. Policies governing,
 - i. the monitoring, in every area that is identified in the assessment report as an area where an activity is or would be a significant drinking water threat, of the activity, and
 - ii. the monitoring, in every area that is identified in the assessment report as an area where a condition is a significant drinking water threat, of the condition.
5. Policies governing,
 - i. the monitoring of an activity in an area, if the area is identified in the assessment report as a vulnerable area, the activity is listed in the assessment report as an activity that is or would be a drinking water threat, subparagraph 4 i does not apply and the monitoring of the activity is advisable to assist in preventing the activity from becoming a significant drinking water threat, and
 - ii. the monitoring of a condition in an area, if the area is identified in the assessment report as a vulnerable area, the condition is listed in the assessment report as a condition that is a drinking water threat, subparagraph 4 ii does not apply and the monitoring of the condition is advisable to assist in preventing the condition from becoming a significant drinking water threat.

available a liaison representative at the committee meetings³³⁶ and the Minister approves the final water plan.³³⁷ The individual SPC members offer information on local watershed conditions to the overall committee with a particular focus on how the prescribed drinking water threats affect their interests.³³⁸ Effectively, this partnership creates a diversity of tasks and may build a capacity to co-ordinate activities. In addition, through the exchange of information a diverse

6. Policies governing monitoring to assist in implementing and in determining the effectiveness of every policy set out in the source protection plan under paragraph 3.

7. Policies governing the monitoring of a drinking water issue identified in the assessment report, if the monitoring of the drinking water issue is advisable.

Also, significant, moderate and low and strategic action policies are discussed O.Reg 287/07. In particular, refer to:

s.31. Significant threat policies. A source protection plan shall identify the area to which a significant threat policy applies. O. Reg. 246/10, s. 12.

s. 32 Moderate or low drinking water threat policies (1) Any policy set out in a source protection plan that addresses moderate drinking water threats shall be identified in the plan as a moderate drinking water threat policy and shall identify the area to which the policy applies. O. Reg. 246/10, s. 12.

(2) Any policy set out in a source protection plan that addresses low drinking water threats shall be identified in the plan as a low drinking water threat policy and shall identify the area to which the policy applies. O. Reg. 246/10, s. 12.

(3) If a policy set out in a source protection plan addresses an activity that is a moderate or low drinking water threat, the policy shall not prohibit or have the effect of preventing a person from engaging in the activity. O. Reg. 246/10, s. 12.

s. 33 Strategic action policies Any policy set out in a source protection plan that is not one of the following policies shall be identified in the plan as a strategic action policy:

1. A significant threat policy.

2. A designated Great Lakes policy.

3. A policy to which section 45 of the Act applies.

4. A policy to which clause 39(1) (b) of the Act applies.

5. A policy to which clause 39(7) (b) of the Act applies. O. Reg. 246/10, s. 12. [Emphasis Added].

³³⁶ CWA, *Ibid.* O.Reg 288/07. s.19.2. MOE Representative s. 19(2) see: Liaison – s. 19 The following persons may attend and participate in discussions at meetings of a source protection committee, including any meeting or part of a meeting that is closed to the public: 1. A person designated by the source protection authority as a representative of the [SPA] authority.; 2. A person designated by the Minister as a representative of the Ministry.; 3. A person designated by the Minister as a representative of the medical officers of health for the health units in which any part of the source protection area or source protection region is located. [Emphasis Added].

³³⁷ CWA, *Ibid.*, s. 29(1)(a)(b). The Minister of the Environment may approve the SPP or request amendments or resubmission of the plan prior to final approval of the SPP is granted.

³³⁸ The selection process for participants combined with the focus on drinking water threats and land use activities suggests that the role of the participants is to provide local knowledge of water use, impacts and activities. For example, refer to O. Reg. 288/07, *Supra* note 174. Under s.4.(9)(a), the appointment of persons who “are engaged in agricultural, commercial or industrial activities that have or will have an impact on existing or future drinking sources of drinking water or that are significantly dependent on existing or future sources of drinking water; and” are selected.

networked knowledge base may develop. Soft skills such as fostering trust and social capital may arise to ensure the completion of the administrative tasks.

In sum, diversity is constructed under the *CWA* through the diverse composition of the source protection committee (SPC); thus, establishing a heterogeneous decision-making body that is inclusive of state and non-state actors and is based upon a partnership orientation. The diversity of tasks and functions assigned to a range of institutional actors fosters the potential for a diverse range of issues to be brought forward in the SPC setting. Given a committee member is handpicked by the SPA (i.e., CA), one might wonder if a selection bias exists concerning the membership. In a local watershed planning exercise with a focus on identifying municipal and dominant business interests and the identity of First Nation communities within the Lake Erie region is well-known, the SPA's selection process leaves open the question: Who is the general public? What issues does the general public representative bring forth?

5.3 Flexibility

5.3.1 *What is the decision-making rule: Consensus, Voting or Consultation?*

A legal regulatory framework is flexible when a collaborative decision-making process relies upon the principle of consensus and is inclusive of a range of regulatory tools.³³⁹ However, the legislative and policy direction on the decision-making principle to be employed in the SPC's collaborative setting is unclear and inconsistent.³⁴⁰

The *CWA*'s regulations direct the committee to rely upon consensus.³⁴¹ This regulatory push to adopt the decision-making principle of consensus is also supported by the committee's

³³⁹ *Supra.* note 2. For example, the *CWA, 2006* provides for incentive programs, education and outreach programs under s. 22(7) and prohibition of activities under s. 22(8); O. Reg. 287/07 outlines a range of regulatory tools: s.27(2) stewardship programs, best management practices, pilot programs, govern research.

³⁴⁰ An Internet search, directed at the Provincial conservation and environmental authorities including the Environmental Registry website, did not uncover a Provincial policy document or bulletin. Rather, the form and content of decision-making appears to reside at the local SPC level, with Provincial approval. See *CWA*. O. Reg. 288/07, ss. 14 and 15.

³⁴¹ O.Reg. 288/07. s.14(1)2. The committee shall attempt to make decisions by consensus among the members.

rules of procedure. While the procedural rules promote consensus, the principle is moderated by a voting mechanism.³⁴² Moreover, the Ministry of the Environment views the planning process as a collaborative undertaking but leaves open the decision-making principle to be relied upon — consensus or not.³⁴³ In end, the SPC’s decision-making process is informed by the principles of consensus and voting through procedural rules that privilege the voting mechanism.

Contrary to consensus, consultation is presented as the key decision-making principle. Justice O’Connor, in the Walkerton Commission Inquiry Reports, stressed how the “consultation should err on the side of inclusion.”³⁴⁴ These Reports are viewed by the MOE as a seminal

³⁴² Lake Erie Source Protection Committee Rules of Procedure, Code of Conduct and Conflict of Interest Policy – Amended – January 10, 2011, Background Reports, The Source Protection Committee, online: LESPR Rules of Debate – Speakers: <<http://www.sourcewater.ca/index/document.cfm?Sec=5&Sub1=0&sub2=0>>. Every member wishing to speak to a question or motion shall, upon recognition by the Chair, address the Chair. And, Decision-making: The Committee shall attempt to make decisions by consensus among the Members. If the Chair determines that reasonable efforts have been made to achieve consensus but the committee has been unable to make a decision by consensus, the decision may be made by a vote of two-thirds of the Members present, excluding the Chair. And, see: Procedure at Meetings – Rule of Procedure: In all matters of procedure not specifically dealt with herein, the current edition of Bourinot’s Rules of Order shall be binding. [Underlining Added]. Meeting Procedures – R. 29. Committee meetings shall conform to the following procedure insofar as the procedures are applicable to the meeting:

- 29.1. Call to order by Chair
- 29.2. Certification by Recording Secretary (or designate) that there is a quorum of members present
- 29.3. Chair’s Remarks
- 29.4. Review of Agenda
- 29.5. Declaration of Pecuniary Interest
- 29.6. Adoption of Minutes of previous meeting
- 29.7. Hearing of delegations
- 29.8. Presentations
- 29.9. Correspondence
- 29.10. Presentation of reports
- 29.11. Other business
- 29.11.1. Question and Answer Period
- 29.12. Closed Meeting
- 29.13. Adjournment

³⁴³ Ontario Ministry of Environment, Source Protection Plans Description, Source Water Protection, online: MOE <http://www.ene.gov.on.ca/environment/en/subject/protection/STDPROD_080598.html>. The description of the plans states: “Collaborative, locally-driven, watershed-based drinking water source protection plans founded on sound science will enable Ontario communities to effectively protect their drinking water sources.”

³⁴⁴ O’Connor, *Walkerton Report Two*, *Supra* note 59. Report Two – Ch 4. 4.3.6. Participation of Affected Groups and the Public at 109. He stated: “Although the form of consultation may vary to accommodate local circumstances, the need for it is clear. As a general rule, consultation should err on the side of inclusion, both regarding which parties are consulted and regarding the level of involvement in the process. Consultation should never be pro forma; it should be meaningful and substantial. Interested parties must be given adequate time and information to ensure that their views are fully canvassed and considered.”; also see the MOE Bulletin on Pre-Consultation with

reference inferring that inclusive consultation is decision-making principle to be upheld by the legislation. Throughout the Act, the language of consultation is used.³⁴⁵ The legislative perspective of consultation takes into account a notice, comment, and publication process that is grounded in administrative law.³⁴⁶ Furthermore, two key provincial documents also discuss the importance of consultation. The first is a provincial Ministry of the Environment discussion paper (2009) on the preparation of a source protection plan;³⁴⁷ the second document is a regulatory decision notice.³⁴⁸ Read together, these documents position the SPC deliberative process with the principle of consultation suggesting the committee members are acting in an information and advisory capacity in servitude to the province.

In short, the legal framing of the source protection committee's (SPC) decision-making criteria is ambiguous. The regulatory framework privileges consensus; yet, the language of consultation is embedded in the legislation and policy documents. At the local governance level, the SPC procedural rules promote both consensus and a voting mechanism. Given the inclusion of a MOE liaison representative at the committee, it is also reasonable to expect that the Ministry's position that the water planning process should be a collaborative endeavour might be

Stakeholders – MOE, “Source Protection Planning Bulletin – Overview of Requirements for Pre-Consultation with Stakeholders” (March 25, 2011); online: MOE

<http://www.sourcewaterprotection.on.ca/downloads/notices_minutes/notices/2011_Apr_8/8a_Pre-Consultation%20Bulletin%202011%20Mar%2025%20FINAL%20_2_.pdf>; Also see: EBR #010-8766.

³⁴⁵ *CWA*, *Supra* note 2. For example, consultation with municipalities is required when drafting the terms of reference and water source protection plan. See Terms of Reference s.8(2) Consultation In preparing the terms of reference, the source protection committee shall consult with all of the municipalities in which any part of the source protection area is located. 2006, c. 22, s. 8 (2); Consultation s. (15) In preparing the source protection plan, the source protection committee shall consult with all of the municipalities in which any part of the source protection area is located. 2006, c. 22, s. 22 (15). Regulations – L.G. in C.s 109. (1) The Lieutenant Governor in Council may make regulations, ... (ii) governing consultation during the preparation of terms of reference, assessment reports and source protection plans, ...

³⁴⁶ C.M. Flood and L. Sossin, *Administrative Law in Context* (Toronto: Edmond, 2008).

³⁴⁷ MOE's SPP Discussion Paper. *Supra*. note 330.

³⁴⁸ Ministry of the Environment Environmental Registry, “Regulatory components to support the development and implementation of source protection plans under the *Clean Water Act*, 2006” (August 11, 2010) EBR Registry No: 010-8766. online: EBR<<http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTA4NjQ1&statusId=MTY0NDk2&language=en>>.

an influencing factor. In the end, it is unclear what decision-making principle will prevail in practice at the local SPC level — consultation or consensus, with voting as a backstop.

Nevertheless, the committee's decision-making power is limited by the Minister's final approval of the source protection plan (SPP). Under the *CWA*, the direct decision-making power remains with the State – the Minister of the Environment.³⁴⁹ For the Lake Erie Source Protection Region, all SPPs must be completed by December 31st, 2012.³⁵⁰ This legislatively imposed deadline further suggests the factor of time might hamper the flexibility of the Committee to investigate issues of concern that arise late in the planning process.

5.3.2 Flexibility – A Mix of Regulatory Tools

The Act does promote flexibility through a mix of regulatory tools. For example, the committee can apply to the Director to add a drinking water threat beyond the 21 prescribed drinking water threats.³⁵¹ The committee can also consider a range of policy tools: prohibition;³⁵² risk management plan;³⁵³ restrict land uses, education, outreach, incentive and stewardship programs;³⁵⁴ and, agreements such as Great Lakes agreements,³⁵⁵ the Environmental Bill of Rights.³⁵⁶

Flexibility is also pushed upon the institutional actors implementing the water plan because the legal test requires consideration of related legislation³⁵⁷ (for example, the Planning

³⁴⁹ *CWA*, Supra note 2. s. 29(1)(a).

³⁵⁰ *CWA*, *Ibid.* s. 94. Also see Lake Erie Region Source Protection Committee Report No. SPC 12-06-01 (June 7, 2012) online: MOE <http://www.sourcewater.ca/swp_committee/SPC_120601.pdf>. As documented in the Report: “On May 10, 2012 the Minister of the Environment granted the Lake Erie Region an extension on the submission date of all four Source Protection Plans to December 31, 2012. As a result of the extension, Source Protection Plan timelines have been revised to accommodate the needs of various municipalities as they continue to develop their Source Protection Plan policies.”

³⁵¹ *Ibid.*, s. (Technical Regulations.)

³⁵² *Ibid.*, s. 22(2)(8); s 57.

³⁵³ *Ibid.*, ss. 56 or 58 or 61.

³⁵⁴ *Ibid.*, ss 22(2)(7) and s. 97(1)(2).

³⁵⁵ *Ibid.*, ss. 14(1) and s.83.

³⁵⁶ *Ibid.*, s. 85(8).

³⁵⁷ *Ibid.*, s. 39(5).

Act, the Green Belt Act, 2005, Oak Ridges Moraine Conservation Act, 2001). This legislatively constituted duty places an obligation on a municipality to cooperate with the source protection authority and the source protection committee.³⁵⁸ Under Part III of the Act entitled: the “Effect of [the] Source Protection Plans,” the hierarchy conflict test created ensures the water protection plan will prevail over a zoning by-law, official plan or provincial policy statement.³⁵⁹

In sum, the *CWA* constructs a flexible space of engagement where decision-makers come together to govern a watershed in an open, fluid and deliberative decision-making process. These decision-makers have access to range of legislative instruments. However, the flexibility in the committee’s decision-making is countered by the legislative requirement for Ministerial approval of the final water plan.

Furthermore, a conflict exists between the regulatory principle of consensus and procedural rule of voting and the legislative language of consultation. The Act is silent with respect to whether the decision-making should be premised upon either a collaborative, consensus or consultative basis. The regulations emphasize the principle of consensus. The Ministry of Environment’s documentation supports collaboration. The committee’s procedural rules privilege voting rather than achieving consensus. In the end, the ambiguous nature of the decision-making principle to be relied upon by the committee and the difficulty in determining if the committee members reached a consensus-based decision hints at a process that produces arbitrary decisions. In effect, a limited form of flexibility exists under the legal regime.

5.4 Broad Perspective

A governance regime is broad when it takes into account a multi-jurisdictional framework (e.g., local, regional, national or transnational) and is polycentric and includes coordinating

³⁵⁸ *Ibid*, s. 86(1). & 105.

³⁵⁹ *Ibid*, s. 39(2).

mechanisms. The Lake Erie SPC offers a broad perspective aligned with the existing jurisdictional watershed boundaries established for the Provincial conservation authorities (CA).³⁶⁰

Under the legislation, the broad watershed perspective is countered by the consideration of only 21 prescribed drinking water threats within the watershed.³⁶¹ These threats address a range of activities and can be broken down into pathogen and chemical sources. The water planning process relies upon a desktop-engineered approach to determining expected risk of these prescribed drinking water threats. Risk is assigned to known land uses that may potentially produce chemicals or pathogens and could contaminate a municipal drinking water source. In short, the prescribed threat list is underpinned by a risk orientation that is classified by known land uses and activity.

The Ministry's risk-management information process includes the identification of the water sources, prescribed threats and the establishment of a vulnerability analysis. Within a watershed, the 21 prescribed risks (or in the a case of Lake Erie Lake Source Protection Region the 22 threats³⁶²) are first identified as being present in the watershed. The threats are assigned a hazard rating based upon the movement of water and transport pathways within the vicinity of the municipal well-head intake. The threats are mapped onto four vulnerable areas³⁶³ of both surface and groundwater: i) highly vulnerable aquifers, ii) significant groundwater recharge areas, iii) wellhead protection areas (WHPA) and iv) intake protection zones (IPZ).³⁶⁴ These

³⁶⁰ *Ibid*, s. 4(1) and s. 108(1)(c) and O. Reg. 284/07 Source Protection Areas and Regions.

³⁶¹ *Ibid*, The 21 threats ---- note aggregate is not on the list.

³⁶² The SPC received Ministerial approval to add pipelines on July 13, 2011. See: Lake Erie Region Source Protection Committee (LERSPC) "LERSPC Discussion Paper – Final Draft (August 2011), online: LESPR<http://www.sourcewater.ca/plandevlopment/Oil_Pipelines_DiscussionPaper_Final.pdf>.

³⁶³ *CWA, Supra note 2*. s. 1 Definition Section: "vulnerable area" means, (a) a significant groundwater recharge area, (b) a highly vulnerable aquifer, (c) a surface water intake protection zone, or (d) a wellhead protection area;

³⁶⁴ Ministry of Environment, *The Clean Water Act: Promoting Municipal Awareness and Understanding* (Toronto: Queens Park Printer, Date not recorded). online: MOE

identified vulnerable areas are established municipal intake drinking water sources and are not ecologically defined water sources. The vulnerable areas and the land uses are translated into significant, moderate and low threats as determined by a desktop calculation and are set out in the risk assessment report. Specifically, the characterization of the drinking water threat is equated to a risk score calculated by multiplying a hazard rating to the vulnerability score based upon the location and potential contaminate pathway (measured by time of travel) of either a municipal wellhead or intake protection site.³⁶⁵ In short, within the committee's jurisdiction of the watershed, these threats are mapped out and assigned a hazard rating based upon the movement of water and transport pathways within the vicinity of the municipal well-head intake.

A narrow, technocratic engineering planning approach to risk management informs the planning process rather than a precautionary approach. Risk is presented as a calculated formula, which is set out as follows: Risk = vulnerability analysis + prescribed threat + water source (wellhead - groundwater or intake - surface) + travel time pathway zone (red zone – 100 metre from the water source or yellow zone – two year time travel from the water source or blue zone –

<http://www.sourcewater.ca/Assessment/Assessment_tables.cfm?printer=true>

At page 46 of the Report, a plain language groundwater and surface water vulnerability analysis explanation is offered: "Groundwater Vulnerability Analysis would identify and map vulnerable areas for each existing and planned drinking water system that is required to be considered in the assessment report and that obtains its water from a raw water supply that is groundwater. Vulnerability scores would be assigned for each vulnerable area according to its susceptibility to becoming contaminated. A level of uncertainty would also be assigned." "Surface Water Vulnerability Analysis would identify and map the surface water intake protection zones (IPZs) around each existing and planned drinking water system that is required to be considered in an assessment report and that obtains its water from a raw water supply that is surface water. A vulnerability score and level of uncertainty would be assigned." The vulnerable area and the time of travel zones are explained in the table: The areas where the activity is taking place i.e., Wellhead Protection Areas (WHPA) or Intake Protection Zones (IPZ) shown in Column 3.

- *WHPA-A* is a 100-metre circle around the well [Red circle on map]
- *WHPA-B* is the 2-year Time of Travel Zone [Yellow circle on map]
- *WHPA-C* is the 5-year Time of Travel Zone (10 years in some communities) [Blue circle on map]
- *WHPA-D* is the 25-year Time of Travel Zone [The area beyond the blue circle]
- *IPZ-1* is a 200 meter semi-circle around a river intake or a 1 kilometer circle around a lake intake
- *IPZ-2* is the water and land areas where hazardous materials could reach the intake in a specified time, usually two to six hours
- *IPZ-3* are areas where activities further away from the intake could have an impact on water quality.

³⁶⁵ MOE, Technical Bulletin: Threats Assessment and Issues Evaluation, March 2010 at 5. online: MOE

<http://www.ene.gov.on.ca/stdprodconsume/groups/lr/@ene/@resources/documents/resource/std01_079532.pdf>.

five year time travel from the water source). This formula then guides the source protection committee’s deliberative process to allow the decision makers to assess the potential risk to existing and future sources of drinking water and to identify those drinking water sources in the red zone – WHPA-A: 100 meters from the drinking water source.

The Ministry’s reliance upon a risk management approach was first presented in the MOE’s discussion paper supporting the statutory amendments.³⁶⁶ In the discussion paper, the Ministry’s risk management direction is presented as falling along “a continuum – moving from non-binding and/or informal approaches that are least invasive to approaches that are both formal and legally binding.”³⁶⁷ The document’s supporting explanation indicates the Ministry intends to “reduce risks and manage threats”³⁶⁸ to drinking water sources by implementing a range of policies and a shared model of governance. In the Ministry’s view this course of action, requires integration and adaption to other institutional systems, implementation of the plan by municipalities and relies upon voluntary participation of the public and negotiated agreements between risk management officers and the affected property owners.

In sum, the committee’s broad jurisdictional boundary of the Lake Erie Region’s watershed contrasts with the consideration of only the 22 drinking water threats with the watershed. Compounding this narrow view of the presence of drinking water threats is the technocratic engineering planning approach to risk management. Effectively, the SPC’s decision-making process is limited to a discussion of the prescribed drinking water threats, the Ministry discussion papers and the technical language of WHPAs.

5.5 Emergent Change

The governance regime exhibits emergent change if the decision-makers operate in an open

³⁶⁶ *Supra*. note 330. Policy Proposal: SPP Discussion Paper at 8-9.

³⁶⁷ *Ibid.* at 8.

³⁶⁸ *Ibid.*

information system where the participants are able to be open to uncertainty and surprise that may emerge in the diverse decision-making process. While it is expected the SPC members will bring forward local knowledge of activities within the watershed and watershed conditions, the ability of the source protection committee to respond to ecological change within the watershed is limited. Under the legal framework, a managed form of change exists; as any proposed amendment to the source protection plan must be submitted to the Minister for approval.

The legal framework, however, does provide for the situation where an immediate health concern might arise. In this urgent situation, the Ministry must be informed immediately of “an imminent drinking water health hazard.”³⁶⁹ In effect, the local source protection committee is directed to respond to pressing drinking water threats, such as experienced in the Walkerton drinking water incident. The ability of the SPC to respond to a change in the quality and quantity of watershed is limited to an emergency or accident situation where human health may be at risk.

In short, the legal framework reflects a state-centric information management approach. Under the legislation, the ability of the committee to be responsive to emergent change is limited to human health and is framed by a risk management approach that is directed at the end product — that is, the provision of safe drinking water.

6.0 The Eco-Resiliency Framework *In Practice*: The Water Source Protection Committees & Localized Watershed Management Planning Process & Aggregate Extraction

6.1 Flexibility – Consensus Building

In practice, the local source protection committee’s (SPC) decision-making is structured by voting. The legislative framework envisions a regulatory space where decision-makers come together to govern a watershed in an open, fluid and deliberative decision-making process.

³⁶⁹ *CWA, Supra.* note 2. s. 89(1).

However, as I observed, a polite form of conversation is the preferred style of dialogue. This manner of exchange is constructed by the Lake Erie Source Protection Committee Rules of Procedure.³⁷⁰ According to the rules, the committee members direct all statements to the Chair. These rules create a meeting decorum where the members' statements and submissions from citizen groups are presented and received in a similar manner as in an administrative tribunal.

For example, at the November 1, 2012 SPC meeting, in reaction to the Concerned Citizens of Brantford presentation, the committee members deliberated whether their mandate included the consideration of a local aggregate license. The aggregate industry representative directed his strong statements of disagreement directly to the Chair. Specifically, he stated that it was “not within the Committee’s jurisdiction to comment on site-specific development activities.”³⁷¹ The Chair calmly listened and then, opened the floor for additional comments to be received. Then, the Chair called for a vote on the matter. A committee member demonstrated agreement with the industry representative by voting in the affirmative. The committee also passed a resolution to accept four questions from the citizens group and to request that CA staff respond to the questions at the next meeting in December. In effect, a flexible open dialogue encouraged by a collaborative governance literature is diminished by the Procedural Rules that require a committee member to direct all questions and responses to the Chair. In the end, the act of voting is privileged over building consensus-based decisions. As observed, this adversarial type of dialogue may lead to barriers to participation as the process discourages robust debate and diminishes dissent.

³⁷⁰ LEWSPC, Rules of Procedure, Supra, note 342.

³⁷¹ Lake Erie Region Source Protection Committee Meeting Minutes Thursday, November 1, 2012, online: LESPR-SPC<http://www.sourcewater.ca/swp_committee/110112_spc_minutes.pdf>. R. Haggart felt that the issues being put forward by the CCOB are a County-wide concern and requested that these questions be reviewed and discussed at an upcoming SPC meeting. T. Schmidt felt that it is not the mandate of the SPC to comment or make decisions regarding site-specific development or operations (i.e., the proposed gravel pit in Paris). W. Wright-Cascaden agreed and added that although CCOB is particularly concern about events in Paris, the questions being brought forth to the SPC can be answered in a general manner. [Emphasis Added].

6.1.1 Flexibility – A Mix of Regulatory Tools

While the Act promotes flexibility through a mix of regulatory tools, such as Ministerial bulletins; the source protection committee decision-makers did not reference these bulletins in their discussions. For example, an MOE information bulletin entitled: “Source Protection Planning Bulletin – Aggregate Resources Act Instrument (March, 2011)” outlines the requirements of the Aggregate Resources Act and Clean Water Act, 2006.³⁷² Even though this bulletin was produced a year earlier than the 2012 SPC meeting, the committee did not consider this directive nor did the MOE liaison representative or CA official raise the bulletin.

Under the bulletin’s subheading of “Prescribed Drinking Water Threats”, a rationale is offered for the exclusion of aggregate extraction from the statutorily imposed drinking water threat list. The rationale states: “[s]ince the activity of aggregate extraction at pits and quarries itself does not contribute chemicals or pathogens, this activity is not listed as a prescribed threat.”³⁷³ As explained in the bulletin, a threat is included in the regulation when an “activity” is “associated with the release of chemicals or pathogens, or have the ability to impact the quantity of water in aquifers or surface water bodies.”³⁷⁴ In short, the bulletin stresses how an activity results in the release of chemicals or pathogens and may affect quantity (but not the quality) of the water source.

The bulletin further restricts the source protection committee’s (SPC) duties and law-making. The bulletin states: a SPC “cannot write policies that treat the activity or aggregate extraction itself as significant (or moderate or low) drinking water threat.” Rather, the drafting of a policy falls within the ambit of the regulator: the Source Protection Authority or the MOE. The bulletin, however, does point the SPC decision-makers to consider a range of prescribed threats

³⁷² MOE Aggregate Bulletin, *Supra.* note 289.

³⁷³ *Ibid.*

³⁷⁴ *Ibid.* at 3.

that could be connected to the operations of a pit or quarry.³⁷⁵ Specifically, the threat of handling and storage of fuel is considered the most common threat associated with an aggregate extraction operation.³⁷⁶

In observing the committee proceeding, I found it odd that during their deliberations, neither the Ministry officials nor MOE liaison representative discussed the 2011 bulletin nor informed the citizens' group of the information bulletin. The Ministry representatives preferred to remain silent suggesting the Ministry's position was decided; thus, no further debate would be entertained. However, this lack of discussion by Ministry official raises questions regarding the role of the MOE liaison officer and whether the SPA failed to fulfill its legislative constituted advice function.

A close reading of the MOE bulletin suggests the committee could consider a pit or quarry operation under a transport pathway policy and draft a transport pathway policy.³⁷⁷ "Transport pathways are shortcuts to drinking water sources that increase the vulnerability"³⁷⁸ the sources and land. "[A]n aggregate operation may be considered a transport pathway, since it can remove protective layers of overburden above an aquifer potentially increasing the vulnerability of the water supply."³⁷⁹ As described in the bulletin, if one of the 21 prescribed drinking water threats is within the locale of a "transport pathway, such as an aggregate operation, the risk level (significant, moderate, low) of those [21 prescribed drinking water]

³⁷⁵ *Ibid.* "Other threat that could occur at ARA operations are [identified as]: application of road salt; handling and storage of road salt; handling and storage of dense non-aqueous phase liquids (DNAPLs); handling and storage of organic solvents; consumptive water taking activities; activities that reduce the recharge of an aquifer; application of commercial fertilizers to land (may be associated with rehabilitation); application of pesticides to land (may be associated with rehabilitation).

³⁷⁶ *Ibid.*

³⁷⁷ *Ibid.* at 4.

³⁷⁸ *Ibid.*

³⁷⁹ *Ibid.* at 4-5. A transport pathway is described as "shortcuts to drinking water source that increase vulnerability of the drinking water supply, and may increase the vulnerability score of the land in and around the transport pathway."

threats may have been influenced by the presence of the transport pathway”.³⁸⁰ In response to a transport pathway situation, the bulletin directs the committee members to consider the implementation of diverse mix of policy tools (for example, education, incentive programs, stewardship programs, research) but excludes the consideration of a prohibition policy.³⁸¹ In effect, the information directive carefully distinguishes an aggregate operation from a drinking water threat and introduces the transport pathway but limits the ability of the SPC to prohibit the extraction operation itself.

Essentially, the rationale set out in the bulletin is a form of technocratic doublespeak that is contrary to the *CWA*'s legislative objective (i.e., “to protect existing and future sources of drinking water”). It is inconsistent to characterize the activity of extracting aggregate that has breached an aquitard as a transport pathway and not a local drinking water threat to an existing and future source of drinking water as directed by the *CWA*'s legislative purpose. In the Guelph situation, the activity of aggregate extraction breached the aquitard. The exposed aquitard (by way of a breach of the protective layer) may act as a pathway to allow chemicals or pathogens to enter the aquifer affecting the quality of the groundwater contained in the aquifer.³⁸² The harm to the aquitard is related to the extraction of aggregate, which may harm an existing drinking water source. The SPC's inability to request a prohibition policy is counter to the protective stance of the legislation.

While the legislation provides a range of policy responses, in the end, the exclusion of

³⁸⁰ *Ibid* at 5.

³⁸¹ *CWA*, *Supra*. note 2. For example, the policy tools include: education, outreach, stewardship, best management, and pilot programs including research and/or specify particular actions to achieve the objectives set out in the source protection plan and the use of instruments set out in the *Aggregate Resources Act* licence, for example, wayside permit, aggregate permit and site permit.

³⁸² *Supra* note 257. City of Guelph, Planning & Building and Environment Committee Report (September 19, 2011) at 40 to 55. As documented in the Committee report, “this breach [of the aquitard] will allow surface water from the quarry pond, contaminated with bacteria and other pathogens, to leak into the groundwater and thereby contaminated the water supply aquifer” and potentially, harm the municipal drinking water sources.

aggregate extraction as a local drinking water threat directed the committee members to ignore the aggregate extraction operation and allowed the Ministry representatives to remain silent on the issue. After observing the committee members adopt a technocratic perspective of aggregate extraction and accede to the province's justification, I was left wondering: how is the existing and future water source protected under this rationale?

As the public comment period for the proposed Grand River source protection plan ended on January 16, 2013, citizens continued to express their concerns. As reported: "the majority of the commenters from the general public expressed concerns relating to aggregate extraction."³⁸³ Thus, as the source protection planning process has come to an end, with the first version of the source protection plan in place, citizens from the cities of Guelph and Paris continue to express their concerns on aggregate extraction through the public comment mechanism. In effect, the public's participation on the SPC is one of a privileged informant and the principle of consultation is confirmed through their continued participation via the public comment process raising questions on the effectiveness of planning process to address the public's concerns.

6.2 Broad Perspective

A broad perspective of the water-source protection planning is promoted through an institutional design that is premised upon the jurisdiction of a watershed. However, as I observed at the meetings, the committee members adopted a particular technical language. Their discourse is characterized by the use of specialized acronyms, such as: WHPA-A's (i.e., municipal wellhead protection areas) or IPZ-1's (i.e. river or lake, intake protection zones). This technocratic discourse narrowed the discussion to the enumerated drinking water threat list and consideration whether a drinking water threat (for example, application of road salt) might affect the municipal

³⁸³ Grand Source Protection Authority Minutes Meeting, "Submission of the Proposed Grand River Source Protection Plan: Report No. SPA-01-13-02, January 25, 2013" at 1; online: GRCA <http://www.grandriver.ca/Governance/012513_grspa_package.pdf>.

well or a lake or river drinking water intake.

The committee's deliberative process also included the consideration of discussion papers produced by the provincial government – MOE. As observed at the meeting, typically, the discussion paper was directed at the committee with the aim of guiding the member's decision-making on how to deal with a drinking threat in the water plan. The content of a discussion paper included a description of the drinking water threat, its vulnerability scoring, related legislation and the policy options under the *CWA*. Often, a Conservation Authority representative acted as the lead actor in explaining the discussion document to the committee and guiding the members through the detailed document. The committee members acted as informants as they were offered an opportunity to comment on the substantive aspects of the discussion paper. Their comments, as expected, reflected their local knowledge of the watershed, professional expertise and associational interests. Through out this presentation and comment process the provincial officials held tight control over the discussion transforming their role into a reporting function.

In the end, a narrow perspective of water source protection was carried out. The committee's decision-making was shaped by a limited legislative purpose and the legislative structure of drinking water threats. Accordingly, the legislative structure and legislatively influenced mechanisms such as Ministry directives crafted a specialized language of acronyms within the decision-making process. The SPC's technical discussion was reinforced by the presentation of Ministry directives and policy papers transformed the Ministry officials into the experts of the local watershed. The focus on drinking water threat list promotes decisions oriented toward the protection of human health rather than toward the ecological health of the watershed.³⁸⁴ All other perspectives (such as, a social-ecological,³⁸⁵ First Nations, a gendered

³⁸⁴ *Ibid.* This human health risk perspective is further reinforced in the Report by the emphasis that is placed upon land-use planning activities and the characterization of risk associated with each type of land use activity. For

view³⁸⁶ or an eco-health) are ignored at the local level. Unfortunately, this narrow anthropocentric focus of water source protection restricts the enactment of a broad planning process, which then plays out at the local SPC level with potentially harmful consequences for the natural ecosystem not being explored further.³⁸⁷

7.0 Conclusion

Pressure from community groups on local source protection committees is expected to continue into the future as citizens seek and demand to participate in decision-making processes that affect their drinking water sources. Urban development projects will continue to expand into rural areas where aggregate deposits are being quarried and will likely prompt similar conflicts as seen in the municipalities of Guelph and Paris. While water source protection planning was envisioned by Justice O'Connor to be responsive to community interests, the SPC process as observed in practice at this research site offered limited access for citizens to participate fully as equals. In practice, the responsiveness of the legal regime's governance mode is inward-oriented and

example, the risk of water contamination from non-point source pollution, such as use of pesticides and herbicides by agricultural users. Risk of water source contamination was assessed in relation to land use and its vicinity to the water source and the pathways of potential pathogens.

³⁸⁵ Ostrom, SES, *Supra.* note 161. M. Falkenmark & C. Folke, "Ecohydrosolidarity: A New Ethics for Stewardship of Value-Adding Rainfall" in P. Brown & J.J. Schmidt, *Water Ethics: Foundational Reading for Students and Professionals* (Washington: Island Press, 2010); G. Cornelis Van Kooten & E.H. Bulte, *The Economics of Nature: Managing Biological Assets* (Oxford: Blackwell Publishers, 2000) at 249; J. Linton, *What is Water? –The History of a Modern Abstraction* (Vancouver: UBC Press, 2010).

³⁸⁶ National Network on Environments and Women's Health, "The Gendered Health Effects of Chronic Low-Dose Exposures to Chemicals in Drinking Water" (Toronto, York University, August 2009).

³⁸⁷ Lake Erie Source Protection Region SPC Meeting "Source Protection Meeting Minutes – Thursday, July 9, 2009. online: LESPR-SPC <http://www.sourcewater.ca/swp_committee/070909_spc_minutes.pdf>. For example, nitrate contamination and private wells has been identified as an issue. The source water protection planning process does not address the adverse environmental impact of private wells. In the Thornton well field, nitrate contamination is a well-known problem. As noted in the July 9, 2012 SPC minutes, the town of Thornton is "primarily [an] agricultural area where extensive nitrate research has been undertaken. The nitrates found in the Thornton Well Field will take a considerable amount of time to be reduced; researchers have investigated the best economic models for approaches to reducing nitrates, taking into consideration efficiency, effectiveness, and cost. To address nitrates in the long term, the County of Oxford has purchased and is leasing or taking land out of production. Well decommissioning will also be part of the process. A tenant farmer on county leased parcels of land has been working collaboratively with universities to assess the various approaches to nitrogen application in relation to groundwater protection." Yet these private wells are outside the jurisdiction of the water source protection committee; and thus, the potential adverse impact(s) upon the natural ecosystem is also considered to be outside the jurisdiction of the SPC.

advances the administrative tasks of the state actors including provincial interests in economic development as carried out by the aggregate industry. In the end, legislatively constituted re-organization of the governance function from the bottom up failed to be inclusive of community interests and First Nations issues. Rather, the governance function continued to exhibit centralized control features of a traditional environmental regulatory regime.

In this case study, the province exhibited chameleon-like features. The province with its changing oversight, strong and weak forms of communication including its partnership relationship with other state and non-state actors controls the committee's decision-making process. The province realizes this control directly and indirectly through policy bulletins, directives, discussion papers and reliance upon the non-appointed MOE liaison committee representative and through the *CWA*'s regulations. In effect, the communication style of province changes with each type of instrument and in order to communicate its position on the various issues. Similar to a chameleon that communicates to signal behavioural responses, the provincial government relies upon a range of instruments to steer the water planning process and direct the decision-making behaviour of the participants.

On the aggregate extraction issue, we see the province through its representatives at the water-source protection committee recoiling from the debate. The Ministry officials allow the aggregate-extraction industry-committee member to dominant the policy discussion on whether aggregate extraction should be added as a local drinking water threat. In the committee meeting, the MOE's liaison representative's silence on the issue demonstrates a thin form of communication and allowed the province to march on with the task of completing the water plan.

The province's oversight, carried out by the Ministry officials, ensured a narrow interpretation of the legislative mandate prevailed throughout the planning process. The

committee decisions were directed by the legislative structure, which further limited its decision-making to the statutorily imposed 21 drinking water threats. During a meeting, if the committee's conversation steered off the legislatively mandated agenda then, the province through its Ministry representatives guided the committee back to the 21 drinking water threats. Thus, the province changed its form in response to committee's progress on the planning process and in reaction to local community concerns.

In this chapter, the eco-resiliency governance framework was applied to the legal framework to gain insight into the responsiveness of the legal regime – the *CWA* revealed the presence of the four features: diversity, flexibility, broad perspective and emergent change. In practice, the province was responsive to the dominance of the state actors and the reliance upon a narrow technocratic engineering risk based approach tied to the enumerated list of 21 drinking water threats. Thus, the planning process was narrowly focused upon human rather than ecosystem health and resulted in a limited flexible decision-making process. The SPC's Rules of Procedure shaped the form and substance of the process and allowed the members to rely upon a procedure of voting rather than consensus. In effect, the governance mode constructed by the *CWA* is limited by the final decision-making power that resides with the Minister. Over all, the state-centric nature of this governance experiment raises doubt that environmental decision-making has improved from the earlier command-and-control era.

Chapter Four: The Enigma State: The Changing Form and Function of Water Governance through Alberta's Soft Law Approach

1.0 Overview: What is consensus?

This simple question sparked a contentious and heated debate amongst the participants attending a Bow River Basin Council (BRBC) meeting in June 2012.³⁸⁸ The BRBC Executive Director later described this debate as the most combative the Council had experienced to date. The debate centered on a proposed change to the definition of 'consensus' as set out in the Council's by-laws.³⁸⁹ The proposed wording change would have allowed a 75% majority vote to constitute consensus. In reaction, a BRBC member loudly disputed limiting consensus to a 75% majority. In his view, a 75% majority vote in favour of an outcome did not reflect consensus and would silence the minority views held in the group. He further argued a properly designed consensus-based decision-making process should include a dispute-resolution mechanism. As other participants joined the debate, some offered their understanding of the term consensus while others searched the Internet and offered definitions of the term consensus discovered online. As I observed the exchange, the tension in the room increased quickly as the debate intensified and then, a burst of laughter from a group of participants broke the tension. Suddenly, the debate ended. The issue of defining consensus through the BRBC's by-laws was deferred to the next annual general meeting without any discussion. With this decision, a cheerful

³⁸⁸ The Bow River Basin Council quarterly forum and annual general meeting held on June 13th, 2012 at the Ralph Klein Park facility, Calgary, Alberta.

³⁸⁹ Bow River Basin Council, "BRBC Administration Manual Consolidated: Article 2: Definitions" at 21, , online: BRBC <<http://brbc.ab.ca/index.php/about-us/about-the-brbc/mission-and-purpose>>. [Here in Known as the BRBC Manual]. See Article 2.0-2.06 "Consensus" means a decision is arrived at with a "high majority support" (between 70% to 80% support) with the following conditions. In the process, (a) everyone was satisfied that a sufficient range of options has been looked at; (b) everyone agreed that the preferred option is capable of achieving the intended outcomes; (c) all concerns about the preferred choice were noted along with the decision (as "subject to" statements); and (d) there is a clear mitigation process if these concerns turn out to be significant factors.

spirit re-entered the room. The decorum of the meeting returned to a calm collegiality described by others as characteristic of the BRBC. The passing of the resolution allowed the members to move forward to the next presentation.

However, as I observed the meeting, listened to the presentations and reflected upon the debate on consensus, I was mystified in how to describe the watershed planning and advisory council (WPAC). The WPAC membership consisted of over a hundred members. The meeting agenda included presentations by groups and individuals on a range of water issues. Except for the passing of the resolution on consensus, no voting or decision-making occurred. Both the size and agenda was reflective of a public consultation process. In contrast to the structure of the Lake Erie water source-protection planning committee and its decision-making process, the nature of the Alberta WPAC defied understanding and description. How do I describe the administrative function or structure of this WPAC? How does Alberta's central policy "Water for Life Strategy" play out in this forum?³⁹⁰ Who is the decision-maker in the WPAC?

At this point in my research, Alberta's water governance regime appeared porous and ambiguous without defined structural boundaries. How does this localized water committee contribute to province's environmental governance function? At the end of the meeting, my impression of the WPAC's function was one of an opaque form of governance obscured by the power relations brewing amongst the participants. At the end of this research, my first impression remained unchanged. I conclude Alberta's soft-law water governance regime is an enigma exhibiting a puzzling, complex and fragmented policy-driven approach to governing water.

³⁹⁰ *Alberta, Water For Life, Supra* note 4.

2.0 Introduction

In Alberta, watershed-management planning is comprised of a multilayered maze of policy documents. At a local level, the watershed planning and advisory council (WPAC) is structured as a collaborative watershed-planning process carried out by a “stakeholder” committee.³⁹¹ First established in 1991 under the name the Basin Council, the Bow River Basin Council (BRBC) is the oldest “multi-stakeholder, registered non-profit charitable society” responsible for water-use management and environmental stewardship.³⁹²

In 2004, the provincial government named the BRBC, the first WPAC in the province. The Council’s mandate is to consider and report on the water issues facing the Bow River.³⁹³ The Council’s State of the Watershed Report describes the Bow River as, “the most highly populated and regulated river in Alberta, and water has become the most significant resource issue for balancing environmental and management practices with regional economic development.”³⁹⁴ The BRBC governs a complex situation requiring a water management planning process responsive to the water challenges facing the water basin and its’ users.

The BRCA’s governance mode reflects a regulatory shift driven, in part, by Alberta’s water crises. In the 1990s, industry and residential demand for water was increasing, the effects of climate change, including glacier melting and extreme drought conditions impacted seasonal river and stream flow regimes leaving regulators in a

³⁹¹ Bow River Basin Council, Print Copy: Bow River Basin State of the Watershed Report Summary Booklet, 2010 (Calgary, Bow River Basin Council, 2010). Also see BRBC, State of Watershed Summary Booklet (2010), online: BRBC <http://wsow.brbc.ab.ca/index.php?option=com_content&view=article&id=102&Itemid=182>.

³⁹² BRBC Administrative Manual, *Supra* at 389. The BRBC is registered under the Societies Act, Chapter S-14.

³⁹³ *Ibid.* at 2.

³⁹⁴ State of the Watershed Summary, *Supra* note 391.

conundrum.³⁹⁵ Together, these water stresses created the impetus for regulatory change. The Alberta government introduced the *Water Act*³⁹⁶ in 1996, which came into force in January 1, 1999, repealing the previous *Water Resources Act*.³⁹⁷ The water licence scheme and the establishment of a senior water-management plan for the province are important aspects of the *Water Act*.³⁹⁸ However, another key regulatory maneuver was the policy turn to a shared governance model that introduced WPACs, as part of a *Water for Life Strategy*.³⁹⁹ Accordingly, in 2003, through the Water for Life Strategy, Alberta's Environment Minister (formerly, the Sustainable Resource Development Ministry⁴⁰⁰ and now Environment and Parks (2015)) established eleven WPACs throughout the

³⁹⁵ D.W. Schindler & W.F. Donahue. 2006. "An impending water crisis in Canada's western prairie provinces." (2006) 103 Proceedings of the National Academy of Sciences USA 7210., online: PNAS <<http://www.pnas.org/content/103/19/7210.full>>.

³⁹⁶ *Water Act*, *Supra* note 3.

³⁹⁷ R.S.A., 1980, c. W-5, was repealed and replaced by the Water Act, S.A. 1996, c. W-3.5 on January 1, 1999. The Water Act, S.A. 1996, c. W-3.5 was replaced by the Water Act, R.S.A. 2000, c. W-3 on January 1, 2002.; Also see Environment and Parks (formerly, Alberta Environment and Sustainable Resource Development Department), "Legislative History of Water Management in Alberta", online: AESRD <<http://esrd.alberta.ca/water/education-guidelines/legislative-history-of-water-management-in-alberta.aspx>>.

³⁹⁸ *Water Act*, *Supra* note 3. s. 1 and ss. 7 to 9. Section 1.(1) "water management plan" means a plan with respect to conservation and management of water developed under Part 2., (Herein known as SSRB Plan); Also see: Alberta, Environment-SSRB., Alberta, Environment "Approved Water Management Plan for South Saskatchewan River Basin (Alberta) August, 2006 (Pub no. 1/011), online: Alberta, Environment <http://environment.alberta.ca/documents/SSRB_Plan_Phase2.pdf>. At page 18: The SSRB plan is the senior plan within the SSRB and all other water management plans in the SSRB are to be consistent with it. It is recognized that improvements to the SSRB plan may be made as research results and other data becomes available. "Future watershed planning will be led by the Watershed Planning and Advisory Councils. The Councils will work together to ensure their individual planning is aligned with the SSRB Plan. Together they will decide when sufficient new information has been obtained or situations have sufficiently changed to warrant review of any aspect of the SSRB plan."

³⁹⁹ *Water for Life* (November, 2003). *Supra* note 4.

⁴⁰⁰ Alberta Environment and Parks – Watershed Planning and Advisory Councils, online: Alberta Environment & Parks <<http://www.waterforlife.alberta.ca/01261.html>>. also see Government of Alberta, News Release, (May 8, 2012) On May 8, 2012 Premier Redford announced a new provincial government structure that is premised upon three principles, with the third principle being: 3) Advancing World-leading Resource Stewardship – Developing our natural resources responsibly to protect our environment and grow our markets. This realigned principled driven structure resulted in the merging of the Ministry of Sustainable Resource Development with the Ministry of Environment resulting in the newly formed Environment and Sustainable Resource Development Ministry, which is now renamed Environment and Parks, under the NDP government. online: Alberta <<http://alberta.ca/acn/201205/322862DD7B1D9-AA32-9F78-02192F6786E99742.html>>.

province.⁴⁰¹ Given the recent emergence of a WPAC as the institutional partner in managing the environment and specifically, the assigned role of river basin management planning in Alberta, several questions regarding governance remain open. Who are these decision makers? And, how do they make their environmental decisions?

3.0 Background

3.1 A Historical Context: Alberta's Soft-Law Approach to Water Governance

The *Water for Life Strategy* is the province's central organizing water policy framework. Alberta's Environment and Parks Ministry (formerly Environment and Sustainable Resource Development Ministry), the policy's institutional home, describes the directive as instrumental in shaping water policy and management decisions while also facilitating public participation and establishing partnerships in water governance.

In March 2003, the Province released the first *Water for Life Strategy* document.⁴⁰² The 2003 *Strategy* report explicitly discusses the WPAC as a partner in water governance and as holding the leadership role in "watershed assessment and planning."⁴⁰³ In 2008, the Provincial government released the *Water for Life: A Renewal Report*, an update to the 2003 Report.⁴⁰⁴ The updated report affirmed the *Water for Life Strategy* as the key water-policy instrument setting the direction for managing water resources in Alberta. The 2008 Report also affirmed a continued commitment to the networked partnership between the Province, the Water Advisory Council, the WPACs, and the local stewardship groups. The four-way partnership established through this soft-law policy approach is contingent upon two-way flows of communication, knowledge

⁴⁰¹ *Ibid.*

⁴⁰² Alberta, *Water for Life, 2003*, *Supra* note 4.

⁴⁰³ *Ibid.* at 14.

⁴⁰⁴ Alberta, *Water for Life, (2008)* *Supra* note 4.

exchanges, consensus-based deliberations between the partners and fosters a responsive form of governance raising questions regarding what information and what actors these partners are responsive to?

In January 2007, the Alberta Water Council (AWC), in its advisory-partnership role and in support of the *Strategy's* principle of partnership, conducted a “review of the shared governance framework,” as carried out by the WPACs.⁴⁰⁵ The goal of this internal review was to strengthen the four-way partnership relationship (the province, the AWC, WPAC and WSG). This review report set out thirteen recommendations and defined the terms “governance” and “shared governance.” The report defines “governance” as a “formal process under which an organization or group of organizations makes decisions, determines who they will involve in the process, and how they render accountability.”⁴⁰⁶

This definition is distinct from “shared governance”:

a governance structure where both government and other stakeholders share responsibility for the development and delivery of policy, planning, and programs or services, but where the government retains legislative accountability.... it is a collaborative goal-setting and problem-solving process built on trust and communication. Shared governance requires clear roles, responsibilities, accountabilities, and relationships.⁴⁰⁷

The AWC's review report presents governance as process oriented. In contrast, shared governance illuminates the heterogeneous nature of the institutional partnership arrangement. The governance function is a shared responsibility with other actors who also participate in the public law-making exercise. Read together, these two definitions reveal the coalescing of the four partners in a decision-making process where the

⁴⁰⁵ Alberta Water Council, *Strengthening Partnerships: A Shared Governance Framework for Water for Life Collaborative Partnerships Report (September 2008)* at 1. online: Alberta Water Council <<http://www.albertawatercouncil.ca/LinkClick.aspx?fileticket=65kwLFVSSjY%3d&tabid=59>>or<<http://www.assembly.ab.ca/lao/library/egovdocs/2008/alawc/171085.pdf>>.

⁴⁰⁶ *Ibid.* at 3.

⁴⁰⁷ *Ibid.*

province retains the final decision making power. These partners problem-solve together in a collaborative setting and are expected to contribute to policy goals, develop programs and deliver services. In effect, the privatization of the water governance function is endorsed.

In sum, Alberta's shift to a shared governance framework illuminates the state's steering function and its changing multi-faceted role – as facilitator of water protection, orchestrator of policy domains and institutional actors, gatherer of information, and educator of both environmental and watershed management functions. On its face, with this major shift to a shared mode of governance, the State's environmental function has devolved to a local community level or is at least now shared with the local community. Yet, the state retains the final decision-making authority. In the four-way partnership, these stakeholders are responsive to numerous issues including but not limited to learning about the water security issues facing the Bow River basin, water users' needs and local community and Aboriginal concerns. Thus, we can conceive this regulation re-tooling to a governance mode as a form of responsive governance.

In this chapter, the examination of the principle of consensus, as applied in the governance mode, is viewed as a factor that shapes the decision-making process. A danger exists, of course, that the WPAC membership, while described as inclusive, is restricted to specific types of communities or alliances, potentially leaving other groups with their interests and water-related issues off the watershed-planning table. The hypothesis in this research is the WPAC's inclusivity, combined with a consensus decision-making principle, results in the province being informed of specific water issues affecting the local watershed but not other issues (for example, the effects of climate

change, fracking, and First Nation perspectives on the Bow River). In this research, particular attention is given to a decision-maker's responsiveness to the ecological resiliency.

To gain an understanding of the responsiveness of Alberta's shared governance mode to ecological resiliency the socio-legal context of the WPAC is examined in this chapter. The WPAC is a non-regulatory body embodied through a complex policy-driven governance framework. The roles, responsibilities, and functions of a WPAC are not set out in legislation but are captured by a form of soft law — provincial policy.⁴⁰⁸ The *Water Act* and other provincial documents, such as the *South Saskatchewan River Basin plan (SSRB)*,⁴⁰⁹ sanctioned by the *Water Act*,⁴¹⁰ offer a glimpse into the WPAC's expected function. The discussion presented next, thus, begins with the WPAC's genesis and growth as envisioned in the Province's key policy document, namely the *Enabling Partnerships – A Framework in Support of Water for Life: Alberta's Strategy for Sustainability Report (2005)* and *The South Saskatchewan River Basin Plan (August 2006)*. Lower level policy documents produced by the Alberta Water Council and the WPAC's organizational administrative manual including the WPAC's Reports will also be outlined with the aim of understanding the responsiveness of the WPAC's decision-makers to eco-resiliency. The province's multifaceted soft-law policy approach blurs the

⁴⁰⁸ Alberta Water Council, "Strengthening Partnerships, Supra note 405 at 17. The Water for Life Strategy is a Provincial Cabinet policy. Under Recommendation 10: Given the Water for Life Strategy is a Cabinet level policy, the AWC concluded that the a "Cabinet policy gives considerable force when considering the structures and processes to achieve *Water for Life* goals."

⁴⁰⁹ SSRB Plan, *Supra*. note 398. The South Saskatchewan River Basin (SSRB) was approved in August 2006. At page 1, the Report states: This is the Approved Water Management Plan for the South Saskatchewan River Basin (SSRB), which comprises the Red Deer, Bow, Oldman, and South Saskatchewan River Sub- basins within Alberta. The plan applies to all of the named rivers, their tributaries and all natural surface water with hydrological connection to the named rivers and tributaries. Groundwater that readily flows naturally under the ground to these surface water bodies is also considered surface water.

⁴¹⁰ *Water Act*, *Supra* note 3.

governance function and contributes to the difficulty in delineating a bright line structure and function for the WPAC. Hence, in this dissertation, Alberta's environmental governance function at a local level is characterized as the Enigma State.

The legal governance framework presented next is organized according to the four eco-resiliency principles: diversity, flexibility, broad perspective, and emergent change. Moreover, given the Water Act's "integrated and comprehensive, flexible administration and management" legislative purpose, each eco-resiliency subsection presents the legislation and the policies, if applicable to the discussion.⁴¹¹

4.0 Applying the Eco-Resiliency Framework to Alberta's Soft-Law Policy Approach

4.1 Diversity

This eco-resiliency element considers the inclusivity of the decision-making process. For example, what is the composition of the local watershed committee? Does the decision-making process consider a diverse array of perspectives?

4.1.1 Under the Water Act

In the Bow River Basin, the senior water plan — the South Saskatchewan River Basin, (2006)⁴¹² — is distinct from the water planning process carried out at the local WPAC level. Under s. 9 of the *Water Act*, at the discretion of the Director, the composition of the senior water-management planning body provides for a heterogeneous group.⁴¹³ The Director holds wide discretion to engage with a range of individuals and governments to

⁴¹¹ *Ibid.* Legislative purpose s. 2 (c).

⁴¹² *SSRB*, *Supra* note 398.

⁴¹³ *Water Act*, *Supra* note 3. s. 9: Water management plans 9(1) The Minister may require a water management plan to be developed by the Director or another person. (2) The Director or other person developing a water management plan (a) may adopt an integrated approach to planning with respect to water, land and other resources; (b) may co-operate with (i) any persons, (ii) local authorities, (iii) Government agencies and other Government departments, and (iv) the governments and government agencies of other jurisdictions.

develop a senior water plan. With Ministerial approval, the Director oversees the senior water plan committee. However, a designate can be assigned the task of developing the water-management plan with the assistance of “any person” and government officials (at a local, regional or federal level) and includes mandatory public consultation.⁴¹⁴ The broad legislative language of “any person” also suggests the inclusion of such individuals such as interest groups, business associations, local citizen groups, and so forth. This idea of inclusivity of a diverse range of participants has also been adopted at the local WPAC level.

Instead of being explicitly referenced in the Act, the watershed planning and advisory council (WPAC) is established through provincial policy documents such as the *Enabling Partnerships Report*.⁴¹⁵ This *Report* identifies a WPAC as the primary actor responsible for watershed planning at a local scale. The composition of this local watershed committee is described in the *Report*, as comprising of a range of stakeholders: citizens, municipalities, government agencies, and First Nations.⁴¹⁶ Interestingly, the policy document advances a similar notion of a diverse institutional arrangement as provided for a senior water plan under the *Water Act*.

The Alberta Water Council (AWC) internal review report also reinforces the WPAC’s diverse stakeholder arrangement.⁴¹⁷ In that document, the key stakeholders are identified as representatives from the three levels of government (federal, provincial and

⁴¹⁴ *Ibid.* Water management plans at s.9(2)(f) states: The Director or other person developing a water management plan (f) **must** engage in public consultation that the Minister considers appropriate during the development of the water management plan. [Emphasis Added]

⁴¹⁵ Alberta Government, *Enabling Partnerships – A Framework in Support of Water for Life: Alberta’s Strategy for Sustainability Report* (2005) (ISBN No. 0-7785-4242-4 Pub. No. 1/1005) at 2. online: Alberta, Environment <http://www.waterforlife.alberta.ca/documents/wfl-enabling_partnerships.pdf>. In support of the partnership concept set out in the *Water for Life Strategy*, the Alberta government published the *Enabling Partnership* document to provide guidance on “how these partners may operate.”

⁴¹⁶ *Ibid* at 8.

⁴¹⁷ *Alberta Water Council, Strengthening Partnerships, Supra* note 405.

municipal), First Nations and Metis parties, as well as industry and non-governmental organizations.⁴¹⁸ The Report states: together these participants “shar[e] the responsibility for recommending water policy” and carry out “watershed assessment and planning, developing education and outreach, monitoring, stewardship and other programs, and delivering services” in support of the *Water for Life Strategy* provincial policy.⁴¹⁹ As an inclusive decision-making model, the document explicitly identifies four sectors (“provincial government,⁴²⁰ industry⁴²¹ other governments,⁴²² and non-government organizations”⁴²³) as the key participants in a WPAC’s planning, policy, and community outreach activities. Even though these diverse group of individuals share responsibility for recommending water policy, the provincial government holds the legal authority and legislative responsibility for the province’s water policy, planning, and “land-use management decisions.”⁴²⁴

In sum, while the WPAC is not legally constituted, it is established and reinforced, by several soft-law policy documents. Both policy documents — the *Enabling Partnerships Report* and the Alberta Water Council’s (an internal review report of the shared governance model) — provide for an inclusive and heterogeneous institutional arrangement.

However, the water committee’s arrangement is complicated by a plethora of

⁴¹⁸ *Ibid.* at 3.

⁴¹⁹ *Ibid.*

⁴²⁰ *Ibid.* at 7-8. Alberta Agriculture & Rural Development, Alberta Economic Development Authority, Alberta Energy, Alberta Environment, Alberta Health & Wellness, Alberta Sustainable Resource Development, Alberta Water Research Institute.

⁴²¹ *Ibid.* at 8. Industry – Chemical and petrochemical, forestry, agriculture (including livestock, irrigated crops, and other crops), mining, oil and gas, power generation.

⁴²² *Ibid.* Federal government, First Nations, Métis Settlements, large urban municipalities, rural municipalities, small urban municipalities.

⁴²³ *Ibid.* Environmental, fishery habitat conservation, lake environment conservation, wetland conservation.

⁴²⁴ *Ibid.* at 9.

policy documents. Together, the large number of provincial policies creates a puzzling water committee structure and contributes to the organic as well as opaque nature of governance at the WPAC scale. The size of the WPAC can balloon to over 200 participants making it difficult to identify the decision-makers and define the composition of committee at any one time and who holds power and influences the planning process. This elastic design feature exposes the need for further research to understand the nuances and limits of the diversity in this collaborative governance arrangement.

4.2 Flexibility

The eco-resiliency factor of flexibility is oriented towards understanding the flexibility of the decision-maker's thinking and regulatory mechanisms. For example, are the decision-makers open to considering new information? Do these decision-makers have access to range of regulatory instruments?

4.2.1 Under the Water Act

The *Water Act* advances a flexible approach to decision-making. The multi-pronged legislative purpose characterizes water management as an “integrated and comprehensive, flexible administration and management.”⁴²⁵ This flexible management and integrated ideology, along with the obligation to incorporate a range of values, encourages a non-linear decision-making approach that requires balancing competing values of: “wise allocation,” water conservation, intra- and intergenerational sustainability, a “healthy environment,” as well as “economic growth.”⁴²⁶ Further, the legislative purpose directs the decision-maker to follow the “provincial planning

⁴²⁵ *Water Act, Supra.* 3. Legislative purpose s. 2 (c).

⁴²⁶ *Ibid.* s. 2(a) “the need to manage and conserve water resources to sustain our environment and to ensure a healthy environment and high quality of life in the present and the future.”

framework,”⁴²⁷ including a “strategy for the protection of the aquatic environment”⁴²⁸ and “biological diversity.”⁴²⁹ Effectively, the decision-makers are encouraged to be flexible by relying on the multi-purpose legislative goal that encourages an understanding of the key issues affecting the river basin and integrating these socio-ecological concerns into the planning process. However, this multi-legislative approach applies to the decision-makers drafting the senior management planning process not the local watershed planning advisory council’s (WPAC) process.

Flexibility is further encouraged through a mix of statutorily imposed regulatory tools. Under the Act, water governance is carried out through a diverse array of practice tools (e.g., strategies, guidelines, framework, and a Ministerial agreement⁴³⁰). However, access to these legislative tools is limited at a local level. The Act provides for water management planning at the senior plan level. In contrast, the watershed planning advisory council (WPAC) is non-regulatory body assigned a reporting function. Together these legislative objectives, establish a multi-faceted decision-making criterion, and reinforce the legal doctrine of prior allocation,⁴³¹ expressed through the legal instrument

⁴²⁷ *Ibid.* Part 2 – Planning and Environmental Assessment Division 1 Planning.

⁴²⁸ *Ibid.* Provincial Planning Framework s. 7(2).

⁴²⁹ *Ibid.* s. 8.

⁴³⁰ *Ibid.* s. 6(1)&(2)(f) “any other matter related to the administration of this Act.”; also see: Specifically, the legislative provisions outline the use of: “a strategy for the protection of aquatic environment” that may include “water management principles” (s. 7(2)(a)), “guidelines for establishing water conservation objectives” (s.8(2)(f) and 8(3)(b)), “matters relating to the protection of biological diversity”(s. 8.(3)(c)) and the direction from the Director as set out in “the framework for water management planning” (s9(2)(e)) and in the Director’s “water conservation objectives” (s. 15(1)) and in the Minister’s water guidelines (s. 14(1) & (2)). The water plan may also include “any information, documents, or water and land management plans” (s.9(2)(d)) and the approved water plan must include relevant information concerning preliminary certificate, licence, registration and water allocations (s. 11(3)(a)(iv)(A)(B)).

⁴³¹ For a discussion of the prior allocation doctrine generally see: David R. Percy, “Water Rights Law and Water Shortages in Western Canada” (1986) 11(2) Canadian Water Resources Journal 14.; David R. Percy “Seventy-five Years of Alberta Water Law: Maturity, Demise & Rebirth” (1996) XXXV(1) Alberta Law Review 221.; David R. Percy “The Limits of Western Canadian Water Allocation Law” (2004) 14 J. Env. L. Prac. 315.

of a water licence and ‘the first in right and first in time’ water law doctrine.⁴³²

In effect, the Act and the soft-law documents together encourage a regulatory mapping exercise. An exercise where information gathering, from state and non-state actors as well as a vast range of policy documents, encourages flexible decision-making and integration of a range of issues and consideration of the senior water plan under s. 9 of *Water Act*. The *Water Act* also provides a backstop by assigning the final decision-making power for approving a water plan to the Minister.⁴³³ However, what remains a puzzle is: how the senior water-management planning process, as enunciated by the Act, shapes the water-management activities carried out by a WPAC, a non-regulatory entity?

4.2.2 The Government of Alberta (GOA) Level - Water Act's South Saskatchewan River Basin Plan Report (SSRB)

Under the Act, the SSRB is considered the “senior”⁴³⁴ water-management plan; all other plans in the South Saskatchewan River Basin, such as Bow River Watershed Plan, must conform to the SSRB plan.⁴³⁵ The approved *South Saskatchewan River Basin Plan*

⁴³² *Ibid.*

⁴³³ *Water Act, Supra.* note 3. s. 11. Either the Lieutenant Governor in Council or Minister approves the water plan.

⁴³⁴ *SSRB Plan, Supra.* note 398. at 18. Under Subsection 3.3 Review of the Plan. Also see: *Water Act, Supra.* note 3.

⁴³⁵ *Water Act, Supra* note 3. s.s. 7(1), 9(1).; Also see: *Ibid.* SSRB plan at vi; Also see Alberta, Environment, Framework For Water Management Planning (1999) (ISBN No. 0-7785-1738-1 Online), online: Environment. <<http://environment.gov.ab.ca/info/library/6367.pdf>>. A careful reading of Framework document indicates there is no reference to a WPAC. Thus, the Framework is not explicitly discussed in this section of the dissertation. The social impetus of the Framework is outlined at page. Under the Background Section, the report states: During the 1990s, guided by extensive public consultation, Alberta Environment reviewed water management policies and legislation. The goal was to establish a blueprint for the sustainable management of water in Alberta. By listening to Albertans, a vision and principles for sustainable water management were developed. New policies to guide water management were adopted by government. A comprehensive new statute, the *Water Act*, was created and is now in effect, providing legislative authority for the implementation of these policies. Throughout the review process, Albertans made it clear that government needed to ensure sustainable water management and a healthy aquatic environment. The government agreed that effective and efficient water management planning is essential and made a commitment through Part 2, Division 1 of the *Water Act* to develop a document to guide such planning called *The Framework for Water Management Planning (Framework)* document. A water management plan can be developed by anyone. It can be a single issue such as a lake cleanup or involve multiple issues in a major river basin. However, any person developing a water management plan must

Report: The South Saskatchewan River Basin Plan (SSRB plan) affirms the flexibility of the watershed planning and advisory council's (WPAC) organizational form, administrative tasks, and water-management responsibilities set out in the *Strategy*.⁴³⁶ However, the SSBR plan does not address either the applicable decision-making principle or process that should occur at the WPAC scale. This gap suggests operationalizing the WPAC's administrative procedures might be viewed as a lower-level activity to be assigned to the WPAC. In effect, the WPAC is afforded the flexibility to design an individual administrative response that can be responsive to local water issues and stakeholder interests.

4.2.3 The GOA's — Water for Life Strategy

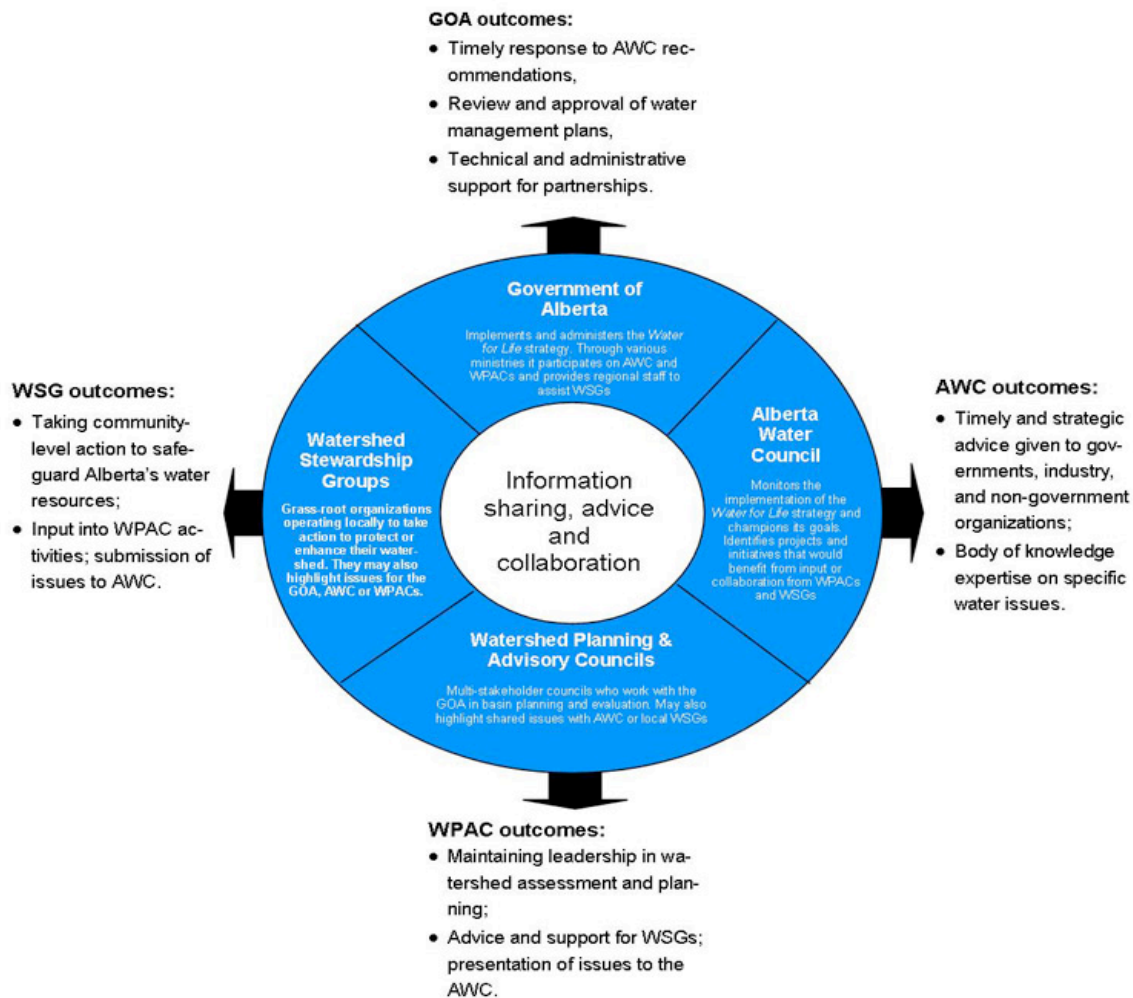
The *Water for Life Strategy* features flexibility as a coordinating mechanism bringing together multi-level institutional partnership arrangement. The *Strategy* is silent on the procedural aspects (for example, such as relying upon consensus as a decision-making principle). In the *Strategy*, flexibility is enabled through the interrelationship of the four institutional partners: the provincial government, the Alberta Water Council (AWC), WPACs, and Watershed Stewardship Group (WSG). Through then Environment and Sustainable Resource Development Ministry and now Alberta's Ministry of the

follow the *Framework for Water Management Planning*. The *Framework for Water Management Planning* will be reviewed every five years to make sure it remains current and continues to support sustainable water management.

⁴³⁶ *SSRB*. *Supra*. note 398. Under the Executive Summary Section of the Plan report, the plan is described as a guidance document for the WPAC and WPAC is referenced as the lead planning unit for future updates. Specifically, the report states: The plan will provide guidance to decision makers and act as a foundation for future watershed management planning of sub-basins in the SSRB by Watershed Planning and Advisory Councils, as well as stewardship groups. In the plan, at page v: "The plan provides guidance to decision makers and acts as a foundation for future watershed management planning of sub-basins in the SSRB by Watershed Planning and Advisory Councils, as well as stewardship groups. Strong linkages between water quality, land use and water quantity may now be further pursued. Improved cooperation between all stakeholders is expected and encouraged to occur." At page vi: "The Watershed Planning and Advisory Councils (WPACS) are encouraged to consider the priorities in their watersheds and undertake future watershed management planning with this water management plan serving as a foundation. These Councils will work together to ensure their individual planning is aligned with the SSRB plan."

Environment and Parks, the provincial government assumes oversight and accountability for water governance. The remaining three partners (AWC, WPAC and WSG) assume responsibility for the operationalization of the *Strategy* and serve in support to the province.

Alberta’s Multi-level Policy Model & Its Actors (source needed)



Under the *Strategy*, the WPAC is viewed as one of the four institutional partners dedicated to achieving these goals. The *Strategy* reinforces flexibility through a mix of

regulatory mechanisms where the WPAC serves as the primary vehicle for “watershed planning,” charged to develop “best management practices, foster stewardship activities within the watershed, report on the state of the watershed, and educate” water users.⁴³⁷ While the Strategy identifies the provincial government as the primary party accountable for oversight of provincial water policy and “watershed management activities,”⁴³⁸ it treats the remaining three partners as important actors. While the WPACs do not report directly to the Provincial Water Advisory Council, the *Water for Life 2003 Report* envisions that the WPAC will seek guidance from the Advisory Water Council on water issues leaving open the question: what provincial authority or entity does the WPAC report to?

The Alberta Water Council (*AWC*) holds the advisory function. The AWC is the primary actor assigned the task of implementing the *Water for Life Strategies*. This multi-stakeholder council of twenty-five members⁴³⁹ is charged with providing policy advice to the Provincial government, investigating existing and emerging water issues, as well as setting research priorities, consulting with citizens, and offering a broad view of water issues and outcomes at a provincial level.⁴⁴⁰

⁴³⁷ *Water for Life, 2003, Supra* note 4 at 16.

⁴³⁸ *Ibid.* at 15.

⁴³⁹ Alberta Water Council, Alberta Water Council Members, Alberta Water Council, online: Alberta Water Council <<http://www.albertawatercouncil.ca/AboutUs/Members/tabid/56/Default.aspx>>. The Council is comprised of 24 members from the following sectors: Industry: Canadian Fuels Association; Chemistry Industry Association of Canada; Alberta Irrigation Projects Association; Crop Sector Working Group, Alberta Chamber of Resources, Canadian Association of Petroleum Producers, Alberta Forest Products Association, Intensive Livestock Working Group, TransAlta; ATCO Power; Non-Government Organizations: Alberta Wilderness Association, Environmental Law Centre, Ducks Unlimited Canada, Fish Habitat Conservation Collective, Alberta Lake Management Society, Alberta WPACs; Government: Cities of Edmonton and Calgary; Alberta Urban Municipalities Association, Alberta Association of Municipal Districts and Counties, Métis Settlements General Council. Government of Alberta & Provincial Authorities: Alberta Agriculture and Rural Development, Alberta Energy, Alberta Environment and Sustainable Resources Development, Alberta Health, Alberta Innovates Energy and Environment Solutions – Water Resources.

⁴⁴⁰ *Water for Life, 2003, Supra.* note 4 at 15.

The community-based Watershed Stewardship Group (WSG) is comprised primarily of local citizens, who voluntarily provide stewardship on-the-ground activities to protect local water resources. To encourage the sharing of local knowledge, these stewardship groups are encouraged to participate in the activities of their WPAC.⁴⁴¹

In sum, the *Strategy's* partnership model is contingent upon a coordinating feedback mechanism where information flows horizontally and vertically amongst the institutional partners. Horizontally, information sharing crosses policy domains, driven by a range of government and non-governmental agencies and industry actors who participate as partners in the AWC, WPAC, and the WSG, and through community, organizational, and professional networks. Vertically, information flows down from the provincial government to AWC. The AWC then translates the information and directs the activities of the WPAC. The WPAC further translates the information and guides the WSG. In reverse, local water stewardship information flows up from the WSG to the WPAC, the AWC, and Province. As more parties participate in the information loops, a danger might arise where the provincial government's accountability is diminished and the government's role and environmental governance function becomes blurred and difficult to characterize. Moreover, this flexible policy-driven approach might also foster a closed-loop governance regime responsive to internal stakeholder interests while creating an institutional barrier to receiving new information from external and less influential stakeholders.

4.2.4 The GOA's – Enabling Partnership Report: A Policy to Operationalize the Water for Life Partnership Concept

The Provincial government's *Enabling Partnerships Report* is a guidance document to

⁴⁴¹ *Ibid.* at 16

implement the Water for Life's four-way partnership.⁴⁴² In this report, consensus is viewed as a key principle to be used in the watershed planning exercise. Consensus is defined as "when all individuals in a decision-making process reach agreement."⁴⁴³ In the report, consensus is presented as an indicator of success for the WPAC and its capacity to be "inclusive and strive for consensus."⁴⁴⁴ The policy document does not define "inclusivity" leaving open to question the parameters of inclusivity. However, this ambiguity may be intentional. The meaning of this term might be left open to interpretation by each individual WPAC, thus, granting flexibility to each WPAC to "define its own relationships"⁴⁴⁵ with its partners.

Nevertheless, a closer reading of the Report reveals the provincial government's strategic use of consensus and control over the WPAC. The provincial government's support of the local governance function is contingent upon the WPAC committing upon entering the partnership with the province "to a watershed approach and the principles of inclusiveness and consensus-based decision-making." The water committee must commit to use an "adaptive management cycle" to update the water management plans as

⁴⁴² Alberta Government, *Enabling Partnerships*, *Supra.* note 415. In support of the partnership concept set out in the *Water for Life Strategy*, the Alberta government published the *Enabling Partnership* document to provide guidance on "how these partners may operate."

⁴⁴³ *Ibid.* at 4.

⁴⁴⁴ *Ibid.* at 12. Councils Will Be Successful If They

- » Are inclusive and strive for consensus.
- » Provide a constructive platform for meaningful dialogue, information exchange, and making recommendations to governments, stakeholders and the public that result in improved watershed management.
- » Prepare, implement, review, and adjust watershed management plans in an ongoing adaptive management cycle required for long-term sustainable management of Alberta's watersheds.
- » Gain support from municipal, Aboriginal, provincial and federal governments, industry, non-government organizations and the public to address specific issues and to prepare and implement watershed management plans.
- » Have objectives that are measurable, lead to actions, and improve watershed management over time.
- » Operate under the requirements for success identified for the overall partnership framework (see page 4).

⁴⁴⁵ *Ibid.* at 11.

described in the “*Framework for Water Management Planning*” document.⁴⁴⁶

In essence, consensus is presented as decision-making principle, which the WPAC is required to employ, in return for establishing a partnership with the Province. If another decision-making process is adopted, the partnership arrangement could be considered breached and the province could withdraw administrative and financial support to the WPAC. The WPAC’s flexibility in designing individual processes is, thus, limited to consensus.

4.2.5 The AWC Level – Alberta Water Council’s Shared Governance Model and Watershed Management Planning Framework Report

As a guidance document for the WPAC, this *Alberta Water Council’s Report* defines “consensus” as “a decision-making process that not only seeks the agreement of participants but also works to resolve or mitigate the objections of the minority to achieve the most agreeable decision.”⁴⁴⁷ Consensus is further defined by the following three questions: i) What does consensus means to the WPAC? 2) How do WPAC members know they have a consensus? 3) How will they resolve a dispute?⁴⁴⁸ The Report and these questions encourage a robust form of consensus and recommends WPACs “have a thorough understanding of consensus before undertaking a watershed assessment or planning initiative.”⁴⁴⁹ In effect, flexibility is afforded to the WPAC to define their procedural process independently and without a direct oversight mechanism and perhaps, leading to arbitrary decisions. Moreover, the WPAC’s partnership with the province is

⁴⁴⁶ Framework, *Supra.* note 435.

⁴⁴⁷ Alberta Water Council, Recommendations for a Watershed Management Planning Framework for Alberta (December, 2008) at 35. Alberta Water Council, online: <<http://www.albertawatercouncil.ca/Portals/0/pdfs/SharedGov%20-%20Watershed%20Management%20Plan%20FINAL.pdf>>. [Here in Known as the AWC’s Framework Document]

⁴⁴⁸ *Ibid.*

⁴⁴⁹ *Ibid.* at 11.

premised upon consensus-based decisions, which reinforces the AWC’s guidance on consensus and places the WPAC in a position to adopt consensus as a procedural mechanism. However, the definition of consensus at the WPAC level still remains open.

4.2.6 The AWC’s – Alberta Water Council (AWC): Strengthening Partnership: A Shared Governance Framework for Life Collaborative Partnerships Report

The AWC’s Strengthening Partnership Report reinforces the Water for Life Strategy’s four-way partnership concept and consensus but adds a dispute resolution mechanism.⁴⁵⁰ Specifically, the Report recommends that “Water for Life partnerships should use a consensus-based process and a clear approach for dispute resolution.”⁴⁵¹ Thus, if the group has reached a stalemate and cannot reach an agreement, the Provincial government “or other appropriate authority” can intervene and act as the final arbitrator.⁴⁵²

The Council (AWC), however, cautions against seeking consensus on all decisions. The report presents “administrative or operational procedure” decisions as routine not requiring consensus. This rationale recognizes some WPACs may have a membership of over “100” people and achieving consensus on routine administrative decisions is inefficient.⁴⁵³ In effect, everyday and repetitive decisions should be bounded by time. At the “partnership table,”⁴⁵⁴ non-repetitive administrative decisions are expected to be decided through a robust democratic decision-making process

Overall, the AWC’s shared governance framework advances a form of “collective” power through the achievement of consensus.⁴⁵⁵ While three members of the four-way form of the partnership – the AWC, the WPAC, and, the WSG – do not hold

⁴⁵⁰ AWC, *Strengthening Partnership*, *Supra*. note 405. See Section 3.2 Consensus Decision-Making at 11-13. [Here in Known as the AWC’s Patnership Document]

⁴⁵¹ *Ibid.* at 12.

⁴⁵³ *Ibid* at 12.

⁴⁵⁴ *Ibid* at 13. Refer to the *Sub-Section* – Sticking With the Process.

⁴⁵⁵ *Ibid* at 16.

legislative power, these parties and the other stakeholders at the table are empowered by the process of achieving consensus-based decisions and hold power within their sectors to implement the WPACs' decisions. If the participants agree to a shared decision then they essentially hold a reciprocal duty to implement the decision. In effect, this governance model is premised upon the group's social norms and expectations that develop in the consensus building process. Together, the social capital developed within the Committee can further lead to the implementation and, perhaps, the enforcement of a water committee's decisions in the wider community (i.e., through the development of social capital).

4.2.7 At The WPAC Local Level: The Bow River Basin Council's (BRBC) Administrative Manual

Finally, the BRBC's Administrative *Consolidated (2012)* Manual is the primary lower-level document directing the WPAC to establish consensus as the decision-making principle.⁴⁵⁶ The organization's values, as highlighted in the document, point to "an inclusive, cooperative and collaborative organization"⁴⁵⁷ that promotes flexible decision-making. The BRBC's organizational values present a guiding principle articulating a consensus decision-making approach and defining "consensus":

"Consensus" means a decision is arrived at with a "high majority support" (between 70% to 80% support) with the following conditions,
(a) everyone is satisfied that a sufficient range of options has been looked at, and
(b) everyone agrees that the preferred option is capable of achieving the intended outcomes, and
(c) all concerns about the preferred choice have been noted along with the decision (as "subject to" statements), and
(d) there is a clear mitigation response if these concerns turn out to be significant factors.⁴⁵⁸

⁴⁵⁶ *BRBC Manual, Supra*, note 389.

⁴⁵⁷ *Ibid.* at 6. Refer to: A.4 BRBC Values.

⁴⁵⁸ *Ibid.*

This definition suggests that at the BRBC level consensus will be achieved in the group when the 70 to 80% of the members agree with the decision. Consensus is conditioned by four elements: i) alternatives being considered, ii) agreement is reached on the preferred alternative, iii) consultation on dissenting has occurred, and iv) a mitigation strategy response has been developed. If a dispute or stalemate arises within the BRBC proceedings, the WPAC is directed to adopt the dispute procedure set out in its administrative procedural manual.⁴⁵⁹ In effect, the BRBC's administrative manual crafts a prescriptive approach to guide decision makers to adopt a flexible consensus-based decision-making protocol.

Overall, on the issue of consensus, it is difficult to ascertain whether the meaning of consensus set out in the BRBC administrative manual aligns with that of the *Water for Life Strategy*, as the meaning of the term was left open in this higher-level policy document. The BRBC Manual definition supports the AWC's vision of consensus, except for the need to determine if 70 to 80% agreement has been reached. Achieving a high

⁴⁵⁹ *Ibid.* at 37. Refer to: C.5.2 Conflict and Complaint Resolution Procedure states: Concerns with the BRBC, its Board and members should be communicated and acted upon in a timely manner, in accordance with the following guidelines: The concerned party should communicate directly with the person or persons (subject party) whose decisions or actions are the cause of concern to allow them to review the concern, clear up any misunderstandings, and make any appropriate adjustments to resolve the concern. If the circumstances are such that the person with a concern is unable or unwilling to communicate directly with the subject party, then the concern should be communicated, verbally or in writing, to the BRBC Governance Sub-Committee for assessment and follow-up. If the concern is not readily resolved and warrants Board attention, the sub-committee will request appropriate details in writing and present the concern to the Board. The Executive Director or the Board may seek outside or independent assistance in resolving concerns that reach the Board. Persons involved in helping resolve the concern can play a facilitation or mediation role to help the parties restore a positive working relationship, or pursue necessary information to allow the Board to assess the concern and undertake any necessary follow-up. Complaints and conflicts shall be dealt with in a confidential manner. In order to limit unreasonable damage to the reputation of the BRBC, all parties will refrain from drawing others into the process as a way of garnering support or gaining attention. Meetings to resolve a complaint shall be open only to the parties and those attempting to resolve the complaint. The parties may have an advocate or supporter present. Meetings may be with the parties individually or together. In the interest of openness, no minutes or written record of what is said in these meetings shall be recorded. The outcome of the meetings or a resulting agreement will be documented.

majority support of 70 to 80% on an issue heard at WPAC more than likely would be achieved through a vote.

In sum, the *Water Act* legislative purpose sets the stage for a flexible water-management planning process at the senior management planning level. This perspective of flexibility permeates to the lower-level policy documents. These documents articulate a flexible shared governance model. Effectively, the flexible multi-level institutional architecture allows for channeling of information, creating informational flows that are multi-directional and support the higher-level legally constituted senior water-management planning approval processes.

The reliance upon consensus as the dominant decision-making principle promotes flexibility in decision-making process. In the view of the AWC, consensus means a decision all parties can live with after having debated dissenting opinions. If a dispute arises, WPAC process is expected to provide for a dispute-resolution procedure. While the WPAC does not hold legislative power, a collective form of power that can be carried into societal sectors ensures implementation of a WPAC's decisions set out in Committee's reports.

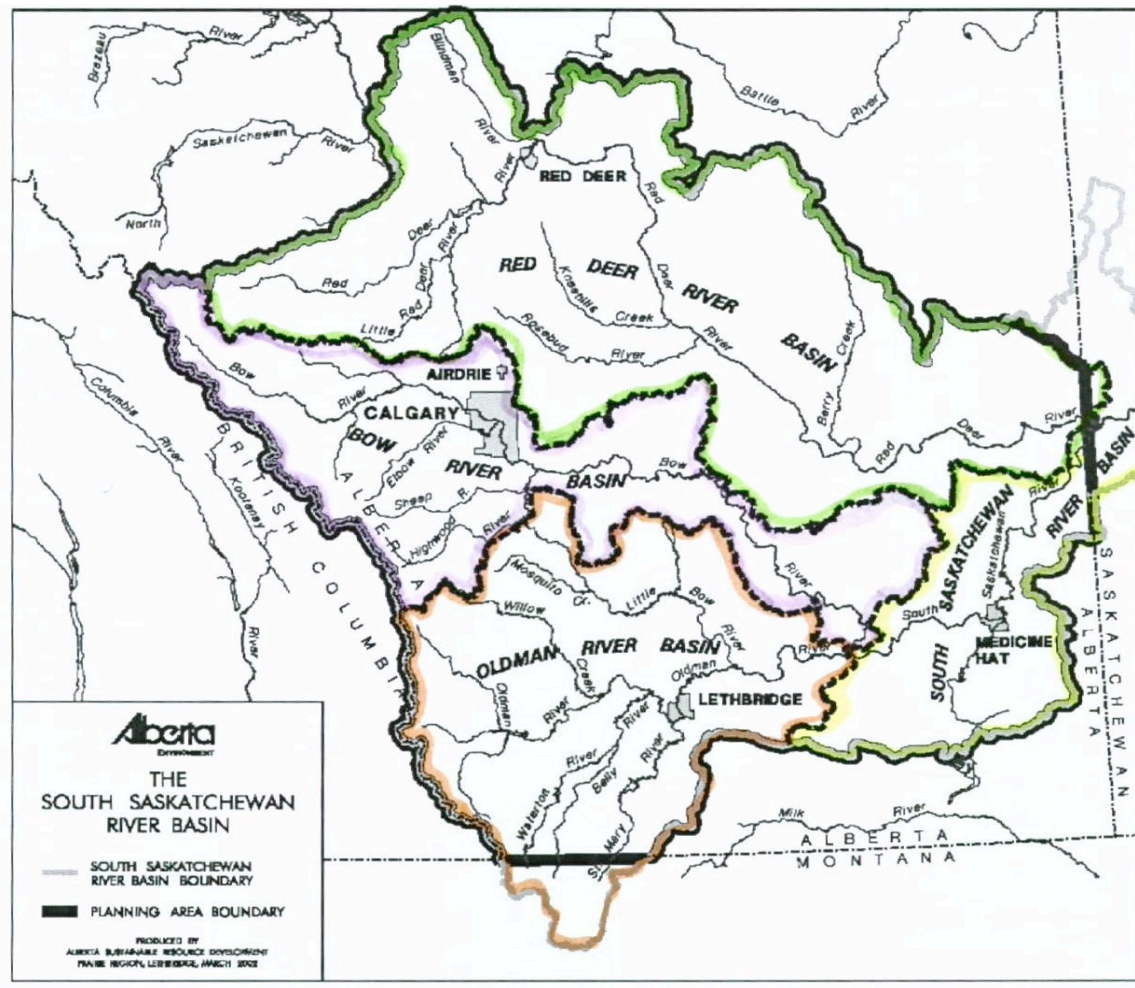
However, the reliance on voting mechanism is beyond the AWC's *Strengthening Partnership* document and raises questions whether the WPAC is in breach of its partnership relationship with the province. Moreover, the use of voting illustrates the WPAC's ability to design a localized decision-making element. This practice of voting, however, introduces the danger of diminishing the spirit of a shared governance model advanced by the *Strategy* and envisioned by the AWC. Moreover, in an inclusive and consensus-based process minority views might be ignored as argued by the WPAC

member at the June 2012 meeting, which further raises the question: What stakeholder group is the WPAC responsive to?

4.3 Broad Perspective

A broad perspective considers the scale and polycentric nature of the governance regime. Consideration is given to the centers of power and presence of co-ordinating mechanisms that can accommodate multi-level governance scales. This broad perspective is examined through the province's policy documents.

The South Saskatchewan River Basin Planning Area – need to reference



4.3.1 At GOA Level – The Enabling Partnership Report

A broad approach is featured in Alberta’s “Enabling Partnerships – A Framework in Support of the Water for Life: Alberta’s Strategy for Sustainability Report (2008).”⁴⁶⁰

This report advances a form of polycentric governance carried out through multi-level scales that includes the WPAC. The WPAC’s mandate is described in this policy document as engaging “governments, stakeholders, other partnerships, and the public in watershed assessment and watershed management planning, considering existing land and resource management planning processes and decision-making authorities.”⁴⁶¹ In effect, the WPAC’s role in the planning process includes a range of activities that requires interacting with a range of stakeholders in order produce the “State of the Watershed Report.”⁴⁶² This report outlines the health of the watershed and documents the issues facing the watershed including gaps in research and data.⁴⁶³ Collecting data needed to fulfill these tasks requires the WPAC to adopt a broad perspective of the watershed and interact with a broad range of stakeholders, establish relationships and develop knowledge networks concerning the environmental status of the river basin and predicting future research requirements. Together these tasks foster a broad understanding of the the Bow River basin.

4.3.2 The GOA: South Saskatchewan River Basin Plan

The SSRB plan reinforces a broad perspective of the watershed, while also taking into account a local perspective.⁴⁶⁴ The 2006 SSRB Plan, describes the plan as a

⁴⁶⁰ *Partnership Report, Supra.* note 405.

⁴⁶¹ *Ibid.* at 8.

⁴⁶⁴ *SSRB Plan, Supra* note 398.

“foundation[al]”⁴⁶⁵ document, to be used by WPACs and WSGs to guide their planning processes. The SSRB plan directs WPAC decision makers to turn their minds primarily to the water quantity issues and other priorities identified in the watershed.⁴⁶⁶ A reading of the SSRB plan suggests water quantity is the priority issue of concern at a river basin level. In contrast, water quality appears to be an issue of local concern, directed at the WPAC level.⁴⁶⁷ The SSRB plan can be updated, in response to water research data on water quantity and quality.⁴⁶⁸ This updating mechanism further reveals a multi-scale governance regime where the plan can be updated to take into account both features of water (i.e., quantity and quality) and at both scales, a basin level (quantity) and a local river-basin level (quality). Consideration of both features and scales points to the presence of a broad eco-resiliency feature.

4.3.3 At AWC Level: Alberta Water Council’s (AWC) 2007 Report

The AWC’s 2007 internal review report featuring the partnership concept supports a broad standpoint.⁴⁶⁹ While the partnership concept is premised upon an informal reporting structure, communication is envisioned as the glue binding the “functional” relationships established by the four-way partnership relationship.⁴⁷⁰ Effectively, the functional four-way partnership (between the Province, AWC, WPACs and WGS) is socially constructed and contingent upon the exchange of information and “shared outcomes and goals.”⁴⁷¹ For example, a two-way flow of communication should exist between the localized WPAC and on-the-ground WSG. The WPAC is expected to

⁴⁶⁶ *Ibid.* See Executive Summary.

⁴⁶⁷ *Ibid.* at 2.

⁴⁶⁸ *Ibid.* at 18. See Section: 3.3 Review of the Plan.

⁴⁶⁹ *AWC, Strengthening Partnership, Supra*, note 405.

⁴⁷⁰ *Ibid.* at 5. See Section: 2.3 The Relationship Among These Partnership Types.

⁴⁷¹ *Ibid.* at 1.

provide relevant watershed information, data, and outreach information to a WSG.⁴⁷² The expectation is that a WSG will align its sub-watershed activities with the higher-level plans (in particular, the SSRB plan) and participate on the WPAC by providing information to the WPAC on the sub-watershed basin. Through these communication flows, a broad perspective of ecological state of the river basin could develop and multi-level governance is reinforced.

4.3.4 At WPAC Local Level: Bow River Basin Council (BRBC) Administrative Manual

At a local WPAC level, *The BRBC Manual* promotes a broad social-ecological perspective of the river basin. The Manual directs decision-makers to take into account a broadly scoped vision statement: “a future where, The Bow River watershed will be conserved and protected as a fragile and unique resource and recognized as our lifeline. Multiple uses will be balanced, ensuring the needs of all stakeholders are met while recognizing that a healthy ecosystem is paramount.”⁴⁷³ Enactment of this vision will require engagement at a multi-level governance scale. This vision is future-oriented while taking into account intergenerational sustainability by considering a future that supports conservation and protection of the river basin, balanced against the needs of heterogeneous group of water users and leaves the WPAC addressing competing stakeholder interests.

In addition to conservation and preservation, the organization’s mission statement further directs the WPAC decision-makers to consider sustainability features (i.e., “all

⁴⁷² *Ibid.* at 6. The Report states: Effective two-way communication between the WPAC and WSGs is critical. Specifically, WPACs can support WSGs by: i) Providing them with relevant data and information ii) Indicating what resources are available to them and how to find them iii) regularly sharing communications.

⁴⁷³ *BRBC Manual, Supra*, note 389 at 4.

social, cultural, economic and environmental aspects”) including the “quality and quantity of groundwater and surface water” and the impact of land use upon the river basin.⁴⁷⁴ It is expected that the watershed plans will be crafted based upon “a collaborative stakeholder process,” and the BRBC’s recommendations will be directed to the “appropriate water and land-use decision-making authorities.”⁴⁷⁵ As drafted, the mission statement suggests the BRBC should consider the ecological health of the watershed with specific regard to broad range of water features: the quality and quantity of ground and surface waters, including supporting ecological systems (riparian zones, aquatic ecosystems) and anthropocentric impacts.

In sum, while the provincial government is responsible for water management across the province, at a local level, the WPAC communicates both the ecological status of the river basin and the water issues facing the basin to higher-level Water for Life partners (i.e., AWC and the Province) and downward to the watershed groups. In effect, the local WPAC is responsive to its three partners as illustrated by the channeling of information upward and downward with the goal of creating a broad perspective of the ecological state of the South Saskatchewan River Basin. This model is premised upon a polycentric governance structure that implicates decision-makers at multiple scales, encourages two-way flows of communication within the four-way partnership (i.e., Province, AWC, WPACs and WGS) and creates a legal regime responsive to internal stakeholders.

4.4 Emergent Change

Often, uncertain and unpredictable events result in a water governance crisis. The eco-

⁴⁷⁴ *Ibid.* at 5. See A.3 BRBC Mission.

⁴⁷⁵ *Ibid.*

resilient feature of emergent change encourages preemptive thinking where decision-makers are directed to consider how surprises or uncertain and unpredictable events shape decision-making and the end-product – in this case, the water plan.

4.4.1 Integration of the Water Act & The Framework for Water Management Planning Policy Document

Through a combination of policy documents and legislation, the idea of emergent change is exemplified by the concept of adaptive management. This concept is discussed in the policy document entitled *The Framework for Water Management Planning*,⁴⁷⁶ which is statutorily sanctioned under s. 7(1) of the Water Act. In this Framework document, an adaptive perspective is upheld by the “responsive and flexible” principle and is further supported by the integrated resource management approach advanced in this framework.⁴⁷⁷ An “integrated approach” is also referenced in s.2 (c) (Legislative Purpose Section) of the Water Act. Furthermore, under s.7(2)(d) of the Water Act, senior water-management plans can be reviewed and revised based upon the participation of local and regional participants. This adaptive management information cycle mirrors the horizontal and vertical flows of information created by the *Water for Life’s Strategy* partnership principle. The partnership principle establishes unique informational networking activities to facilitate the sharing of local knowledge with the WPAC’s remaining two partners --- the Alberta Water Council and Watershed Stewardship Groups. Conceptually, the WPAC is responsive to conditions of emergent change stemming from the horizontal and vertical two-way information flows and knowledge networks created through the

⁴⁷⁶ *Alberta, Framework for Water Management Planning, Supra.* note 435.

⁴⁷⁷ *Enabling Partnerships, Supra.* note 415 at 9. An adaptive approach to watershed management is described in five fluid steps: i) Trigger – identify and assess watershed issues in a ‘state of’ report ii) Plan – examine alternatives and make recommendations for the best course of action in a plan. iii) Review and Evaluate – Determine if conditions in the watershed are getting better or if the plan needs to be revised. iv) Monitor and Report – Gather and analyze monitoring data in successive ‘state of’ reports. V) Implement – Work with appropriate individuals, organizations and jurisdictions to implement plan.

four-way partnership model.

4.4.2 At GOA: The Water Act's South Saskatchewan River Basin Plan (SSRB)

The SSRB Plan also takes into account emergent change.⁴⁷⁸ This legislatively constituted senior plan establishes a water-monitoring role for the WPACs and directs the WPACs to be responsive the water-management planning priorities set out in the Basin Advisory Committee, the *Water for Life: Alberta's Strategy for Sustainability Reports*, and directives from Alberta Environment.⁴⁷⁹ These water-monitoring activities could include: flow monitoring, confirming water-modeling results; water diversions and consumption rates; and water quality and biological elements (such as, “fish populations and riparian forests.”).⁴⁸⁰ This collect of data could then lead to changing water conservation objectives⁴⁸¹ and the plan itself. In effect, the SSRB plan views the WPAC as operationalizing the Province's water priorities set out in *Water Act* and the *Strategy* document, which further creates both monitoring and reporting activities at the local river

⁴⁷⁸ *SSRB, Supra.* note 398 at 17. See Additional Provisions 3.1 Future Watershed Management Planning Priorities.

⁴⁷⁹ *Ibid.* at 17. See 3. Additional Provisions 3.1 Future Watershed Management Planning Priorities Watershed Planning and Advisory Councils (WPACs) are encouraged to consider the priorities in their watersheds and undertake future watershed management planning with this water management plan serving as a foundation. The Recommendations Report of the Basin Advisory Committees and *Water for Life: Alberta's Strategy for Sustainability* recommend a number of priorities, including holistic watershed management, performance indicators, land uses, economic planning, water conservation, water quality, groundwater, objectives for aquatic environments and evaluation of infrastructure needs (e.g. storage). Alberta Environment will assist the Watershed Planning and Advisory Councils in evaluations of the potential for on-stream and off-stream storage. It is also recommended that adjustments to this plan be made, as research results on the potential water management implications of climate change are better understood. 3.2 Performance Monitoring Requirements: In partnership with the WPACs, it is recommended that performance monitoring of the aquatic environment be conducted, to support any refinements to the WCO and allocation recommendations, including the following: i) Flow monitoring to confirm water modelling results and adherence to designated WCOs. ii) Tracking and reporting of actual water diversions and consumption. iii) Water quality monitoring, particularly for dissolved oxygen and temperature, to confirm modelling results, and to help ensure protection of the aquatic environment. Additional parameters such as nutrients and pesticides could be monitored using the Long-term River Network program and targeted water quality initiatives. iv) Assessment of biological communities, particularly fish populations and riparian forests.

⁴⁸⁰ *Ibid.* at 18. See: 3.2 Performance Monitoring Requirements.

⁴⁸¹ *Ibid.*

basin level for the WPAC. In effect, these activities establish an adaptive management approach for the local water committee.

4.4.3 At a Local WPAC Level: The BRBC's Watershed Reports

However, at a local level, the BRBC's *The State of Watershed Reports – the Bow River Basin (2005 & 2010)* exhibit a limited ability to respond to emergent change.⁴⁸² These Reports are primarily directed at three issues: First, creating an understanding of the quantity and quality water challenges facing the watershed. Second, achieving an “adaptive management framework that enables research, actions and best practices needed to improve the health of the watershed.”⁴⁸³ Third, “ensur[ing] information and knowledge of our water resources is the foundation for sustainable development, enhanced conservation and, effective decision-making.”⁴⁸⁴

Together, these two lower-level informational Reports outline the ecological state and challenges facing the four rivers within the watershed: the Red Deer, Bow, South Saskatchewan, and Oldman rivers. A review of the 2005 and 2010 Report finds no discussion of emerging water issues. Emerging water issues, such as the pharmaceuticals in water sources, nutrient run-off, impact of climate change (e.g., flooding) and fracking are overlooked in the Reports.

The Watershed Reports direct the WPAC members to consider “communication and collaboration.”⁴⁸⁵ However, the report's discussion of collaboration is limited to a closing section and offers one statement. This strategic placement of consensus at the end

⁴⁸² Bow River Basin Council, “BRBC State of Watershed Report: Nurture, Renew, Protect”, (2005), BRBC, online: <http://wsow.brbc.ab.ca/index.php?option=com_content&view=article&id=93&Itemid=179>.

⁴⁸³ State of Watershed 2010 Report, *Supra* note 391 at 43.

⁴⁸⁴ *Ibid.*

⁴⁸⁵ *Ibid* at 187. Refer to Chapter 12: What needs to change? 12.4 Closing Statement: ... Communication and collaboration among those involved in watershed management are essential to ensure the responsible use and conservation of water resources in the basin.

of document reinforces the function of these Reports as environmental reporting documents.

In summary, the SSRP plan and the *Water Act* place a strong emphasis upon water quantity issues, which may narrow the water-planning exercise and limit the WPAC's ability to be responsive to a change in water quality. While the plan envisions a localized management function and duties, the question remains open: Is the WPAC decision-making directed at water quantity, the legislatively dominant water feature, or water quality? The WPAC's water-management activities, such as collecting and reporting of local information such as river flows and biological and chemical aspects of the river basin, foster an emergent-change perspective. However, this ecological perspective of a river is offset by the legislation's strong emphasis on water allocation through licences. In the end, the BRBC's reporting function — *The State of Watershed Reports – the Bow River Basin (2005 & 2010)* can be viewed as a key communication mechanism to inform the other three *Water for Life* partners and the public of the water quantity and quality water challenges facing the local watershed. As these science-based reports link policy changes with scientific information, they can be considered an informational tool for public education and, when read together, perhaps signal an ecological change to state of the watershed. However, these Reports offer a snapshot of static moment in time of a breathing river raising doubt the local water committee's information function is responsive to ecological change as envisioned by an adaptive management approach.

5.0 The Eco-Resiliency Framework *in Practice* – The WPAC & Consensus-Building

On June 13th 2012, I arrived at Calgary's Ralph Klein Park to attend a WPAC meeting

during a heavy rainfall. The torrent of rain outside the meeting facility turned my mind to the wetland feature of the Ralph Klein Park. A key ecological design of the Park is the “man-made wetland that uses natural vegetation to treat storm water before it is discharged into the Bow River,” perhaps reminding some attendees of the subject matter of the WPAC meeting – the breathing river.⁴⁸⁶ The meeting room was filled to capacity. Throughout the daylong meeting, several individuals presented reports and findings relating to the ecological state of river basin. The only contentious issue that arose that day was the meaning of consensus. On what basis should the consensus definition provided in the BRBC Administrative Manual’s be amended?

As mentioned earlier in this chapter, the Province’s Enabling *Partnership Report* and the Alberta Water Council’s *Watershed Management Planning Report* and *Shared Governance Partnership Report* and the WPAC’s administrative manual discuss the importance of a consensus-based decision-making process. In particular, the “consensus” is defined as “a decision-making process that not only seeks the agreement of participants but also works to resolve or mitigate the objections of the minority to achieve the most agreeable decision.”⁴⁸⁷ In this view, consensus is achieved when the majority of the participants “can live with”⁴⁸⁸ with the decision. A robust form of consensus arises through exploring dissenting opinions while also attempting to take account of the participants’ diverse views. The BRBC’s Administrative *Consolidated (2012) Manual* also directs the WPAC to make flexible consensus-based decisions and provides a specific definition of “consensus” that is tied to gaining support of 70% to 80% of the

⁴⁸⁶ Ralph Klein Park, City of Calgary, online: <<http://www.calgary.ca/CSPS/Parks/Pages/Locations/SE-parks/Ralph-Klein-Park.aspx>>.

⁴⁸⁷ *AWC’s Watershed Planning Framework, Supra.* note 415.

⁴⁸⁸ *Ibid.*

participants and is contingent on four pre-conditions.⁴⁸⁹

As an observer of the heated debate amongst the meeting participants over the meaning of consensus, I noticed none of the participants referenced the aforementioned WPAC documents (for example, *BRBC Administrative Manual: C.5.2 Conflict and Complaint Resolution Procedure* and *Alberta Water Council's-Strengthening Partnerships: A Shared Governance Framework for Water for Life Collaborative Partnerships Report (September 2008)*). Rather, in the midst of the debate, these individuals either relied upon their own knowledge of the term or Internet definitions of the term. As the dispute gained strength and the tension rose in the meeting room, it was suggested that the amendment (to the definition of consensus) under debate be deferred to the next meeting. Throughout the heated discussion the facilitator did not guide the group to invoke the procedural consensus-voting mechanism set out in the BRBC's administrative manual. As an observer, I perceived the meeting's goal to be the creation of a collegial environment, while diminishing dissent and conflict, and need to consult with stakeholder groups in order to gather information required to update the state of the watershed reports. Based on my observations and the Executive Director's comment that I witnessed the most contentious debate (over the meaning of consensus) during his tenure at the WPAC, this local governance function is one of process management rather than responsiveness to emergent change in the riverbasin or watershed.

6.0 Conclusion: The Puzzling State of Water Governance

In this chapter, the mapping of the eco-resiliency to the local watershed-planning and advisory council (WPAC) reveals a governance regime carried out by the non-regulatory

⁴⁸⁹ *BRBC Manual, Supra* note 389. Refer to: A.4 BRBC Values.

entity. The WPAC is supported by a flexible legislative and policy structure that hinges upon the decision-making principle of consensus. However, articulating a defined institutional form and function for the WPAC is difficult.

Alberta's multi-level water governance arrangement is created by a plethora of reports, policies and directives. This soft-law approach to governing water through numerous high level provincial policies and the introduction of a four-way partnership model blurs the administrative state's role in governing water. This complex and puzzling arrangement leaves uncertain the province's accountability for water governance and the boundaries of the WPAC's function. This unclear policy hierarchy structure leaves open numerous questions. For example, How has the province's environmental decision-making powers been altered?

This empirical research affirms water governance in Alberta is primarily structured by a policy-driven soft-law approach resulting in a maze of documents with the dominant policy being Alberta's *Water for Life Strategy*. These policies establish a localized mode of water governance bringing together a diverse range of state and non-state actors to make decisions concerning the Bow River. Their decisions act as a filter to ensure certain issues and information are reported upon and prioritized – with the issue of water quantity being the dominant concern. This collaborative decision-making arrangement further implicates the power relations within the group and beyond the planning table. The effect of the power dimension means certain issues are reported on while other important issues are excluded for example, fracking, climate change effects, culture concerns, and Aboriginal peoples' perspectives.

The localized WPAC allows the provincial government to gather information on

the river basin from various stakeholder groups. This information is brought forward to a higher, broader provincial level. But, it is unclear how the provincial government uses this information. The Alberta Water Council (AWC) appears to be the authority that responds to provincial state interests. The AWC is also responsive to the WPACs' need for guidance on particular decision-making issues, as demonstrated by the need for the internal review process and the introduction of the idea of shared governance and consensus building amongst actors.

Consequently, the administrative state's role in water governance remains vague. In this soft-law governance experiment, the province through a partnership model moves into a new role of overseer of water governance and the conditions for an uncertain legal regime arise. At the local WPAC level, the regulator's presence and administrative environmental regulatory role remain open to debate. It is difficult to identify the provincial government's environmental governance function, accountability for environmental protection and its role in the local decision-making process. Alberta's water governance regime is a puzzling, complex, and fragmented policy-driven approach to governing water. Thus, I describe Alberta as an enigma state.

At the end of this research, several questions remain open: What is the provincial government's role in water governance? And, how do the watershed planning and advisory council's decisions shape the water governance in the province of Alberta? In the Chapter Six, the analysis chapter, the interview data is examined to understand if the WPAC decision-makers can shed light on the role of the provincial government and whether or not they view the decision-making process as exhibiting the features of the eco-resiliency framework.

Chapter Five: The Yukon: The Mechanized State: The State's Stable and Routine Form of Water Governance Mediated through the Yukon's Waters Act⁴⁹⁰

1.0 Overview

“*In the Yukon, mining is in the culture.*”⁴⁹¹ This expression captures the mentality of miners in the Yukon -- or at least, this belief was what the miners thought to be true before the Yukon Water Board (Board) heard the *Western Copper–Carmacks (Carmacks)* decision in May 2010.⁴⁹² In that decision, the Board denied Western Copper Ltd. a water license. This unexpected decision created a ripple effect within the extractive industry. In the past, predictability had been a hallmark of the Board's decision-making process, especially true in situations where the mining proponent had already secured the environmental approvals for the project.⁴⁹³ In the Yukon's mining sector, all notions of predictability seem to have disappeared with the *Carmacks* decision.

As I sat observing the July 4-6, 2012 public hearing held in the informal setting of a cross-country ski lodge with majestic mountains and the Yukon River as a backdrop, I was struck by the formality and the air of certainty that hung over the Board's administrative process.⁴⁹⁴ In considering the Capstone Mining Corporation's application, the Board's machine-like operation delivered its administrative function “in a routinized, efficient, reliable, and predictable way.”⁴⁹⁵ During this hearing, the Board's streamlined procedural process ensured an orderly production of evidence and presentation of

⁴⁹⁰ SY 2003, c. 19, amended by SY 2007, c.6. (WA, 2003)

⁴⁹¹ *Fraser Report, Infra.* note 512 at 39.

⁴⁹² *Carmacks, Infra* note 568.

⁴⁹³ Yukon Water Board, “YESAA and the Yukon Water Board: How do they link?”, Yukon Water Board, online: < <http://www.yukonwaterboard.ca/policy/Info%20Sheets/YESAA%20and%20YWB.pdf>>.

⁴⁹⁴ On July 4-6, 2012, the Board held a public meeting to hear the Capstone Mining Corporation's application to amend the company's existing Type A water license for its Minto mine.

⁴⁹⁵ Gareth Morgan *Images of Organization* (Newbury Park: Sage, 1986) at 22.

submissions by an array of participants that exposed the Minto Explorations Ltd.'s (a subsidiary of Capstone Mining Corporation) breach of its existing water use licence (#QZ96-006) and provided for the management of the illegal activities.

In this mechanized adjudicative function, the “Water Board is the sole decision-maker under the Act regarding applications for water use and waste deposit.”⁴⁹⁶ Justice Veale, in *Western Copper and Carmacks Copper Ltd* (2011) decision affirmed “[t]he Water Board’s jurisdiction to regulate the use of water and discharge of waste into water must be respected.”⁴⁹⁷ The Court’s strong affirmation of the Board’s administrative licensing function is distinct from an enforcement and compliance function. In the Board’s view, the Yukon Government “is the sole authority responsible for enforcement of Water Licences issued by the Board.”⁴⁹⁸ But, what happens when the Yukon Government has withdrawn as an intervenor at a public hearing and instead, has chosen to participate as an observer? Does this mean the Board is charged with upholding the public’s interest in the protection of water in addition to the conservation, development and utilization of waters in the Yukon?

2.0 Introduction

In the Yukon, the Board is the regulatory body responsible for administering water permits. Mining proponents seeking regulatory approval from the Board expect predictable administrative processes. For Western Copper, the Board’s denial of its application for a 25-year Type-A water license was an unexpected result. At this regulatory stage with environmental approvals in place, Western Copper expected its

⁴⁹⁶ Yukon Water Board, “Reasons For Decision: Water Use Application QZ11-031 (Amend 8 of QZ96-006), Minto Explorations Ltd”. at 3. Reasons for Decision, online: <<http://www.yukonwaterboard.ca/registers/quartz/QZ11-031/10.4.pdf>>.

⁴⁹⁷ *Western Copper Corporation v. Yukon Water Board 2011* YKSC 16. at para. 140.

⁴⁹⁸ YWB, QZ11-031, *Supra* note 496 at 3.

“open pit” quartz-mining project and “heap leach” technology would pass easily through the Board’s approval process.⁴⁹⁹ The evidence indicated the heap leach facility would impact both the “groundwater wells within the Upper William Creek and make-up water (i.e., sediment ponds) affecting a tributary of the Yukon River.”⁵⁰⁰ Despite the evidence, the project proponent, with the environmental approvals in place, appeared confident in the public hearing that the Board would grant the water permit.⁵⁰¹ For Western Copper in particular and the mining industry in general, the denial of the license marked an unexpected administrative turn in the Board’s water-licensing process.

In the aftermath of the Carmacks (2010) decision, some observers questioned whether the Board’s decision-making process held back the wave of burgeoning economic opportunities washing over the Yukon. In July 2012, the Board held a public meeting to hear the Capstone Mining Corporation’s application to amend the company’s existing Type-A water license for its Minto mine. The public gallery was filled to capacity. “So goes mining so goes the Yukon” and with the Minto project, Premier Pasloski’s public statement points to the socio-economic rewards of the project.⁵⁰² The rewards were expected to be high for the company, for the First Nations communities and the Yukon government. Given the stakes were high, a large number of mining executives (representing future Yukon mining projects - Western Cooper’s proposed Casino mine) and government officials attended the hearing as observers. As a participant-observer of the Board’s hearing process, I attended the hearing, sharing space and conversation with these gallery observers. Like me, these bystanders wondered if the licensing process had

⁴⁹⁹ *Ibid.*

⁵⁰⁰ *Ibid.*

⁵⁰¹ I am thankful to Arthur Pape for his insight on the turning points at the Yukon Water Board’s public hearing for the Carmacks water use license application.

⁵⁰² *Premier’s Darrell Pasloski Budget Speech, Infra note 516.*

changed as result of the 2010 Carmacks decision.

In his opening remarks at the Capstone July 2012 public hearing, Board Chair Mr. Bruce Willis expressed his disappointment in the Yukon government's lack of involvement in the Minto application. The absence of the Yukon Government at the hearing was also recorded by the Board in the Introduction section of the decision document #QZ11-031. While the Yukon government, acted as an intervenor in the earlier Western Copper 2010 hearing, the government declined to participate in this proceeding for the Capstone's Minto mine water use licence amendment #8. Rather, the Yukon government officials attended the hearing as observers, like me. One might view the Yukon government's lack of input into the Board's decision-making process as signaling the alignment of a government line department with Premier's public support of the extractive industry.

After three days of the public hearing, the Board held that Capstone was in violation of the Water Act, 2003. This holding related to six illegal activities at the Minto mine. The Board found Capstone had "initiated prior to the [July 2012 public] hearing and prior to the "issuance of an amended water licence."⁵⁰³ The six activities cited by the Board are as follows:

1. "The Licensee began mining of the Area 2 pit on April 15, 2011 and has produced waste (overburden, rock and ore) as part of the that process. Mining of waste rock and ore has been on-going since the Licensee's operational decision to proceed.
2. The Licensee made an operational decision on or around April 19th, 2012 to mill area 2 ore.
3. Milling of area 2 ore and the subsequent placement of tailings..on the existing dry stack tailings storage facility (DSTSF) have been on-going since the Licensee's operational decision to proceed was made.

⁵⁰³ *Minto, QZ11-031, Supra* note 496 at 5.

4. Water affected by the operational decisions to mine and mill Area 2 has been and continues to be stored in the Mine Pit.
5. Temporary realignment of the South Diversion Ditch was completed by the Licensee at some unknown date in advance of the hearing.
6. Construction of the Mill Valley Fill was initiated by the Licensee in May 2011.⁵⁰⁴

For example, the Board in its decision-making considered on the issue of mining and milling of Area 2 ore that Capstone (Licensee) in its YESAA submission identified these as new activities. However, Capstone's submission to the Water Board differed. Capstone's submission to the Board suggested the activities at Area 2 were not "new activities" but in fact were included in an earlier amendment document (i.e., number 7 not the current amendment number 8). While the Board considered Capstone's perspective that "the initiation of the Water Use Licence amendment review process as sufficient regulatory grounds to begin milling area 2 ore,"⁵⁰⁵ the Board disagreed. Through its questioning procedure, the Board found that "Licensee did in fact know that mining and milling of Area 2 ores were not authorized by Amendment 7."⁵⁰⁶ Thus, on this issue, the mining company was found to have breached the licence.

Given the Yukon government's supportive political climate for the mining sector combined with the self-regulatory nature of a water licence and the mining proponent's infractions of the *Waters Act*, concerns are raised as to who the government is responsive to – the public's interest in environmental protection, the mining industry's need for water and its' regulatory enforcement and compliance function? The change in the government's participation in the Water Board's public hearing process – where it had

⁵⁰⁴ *Ibid.* at 4-5.

⁵⁰⁵ *Ibid.* at 5.

⁵⁰⁶ *Ibid.* at 6.

been a key contributor to the Board's process in past hearings — highlights the need to explore the multiple influences affecting these administrative decision-makers and their decisions.

3.0 Background

3.1 The Federal Level

In Canada's natural resources sector, the tagline "Responsible Resource Development"⁵⁰⁷ brands Canada's Economic Action Plan (Action Plan) and is featured in the 2012 Federal Budget.⁵⁰⁸ The Action Plan's obscure approach to water governance and the details of how water is governed lie buried under the rhetoric of an economic development platform. The Action Plan locates the extractive industry as one of the country's strategic economic pillars. Yet, the Action Plan omits the contribution of water resources to economic activities.

Prime Minister Harper, in his 2011 Throne Speech, reinforced the importance of the development of the natural resources sector.⁵⁰⁹ In the federal government's view, the Action Plan encourages economic prosperity at local, national, and global levels, engages a flourishing natural resources sector, and strategically harnesses the resource-rich Territories. Select regions in northern Canada, including the Yukon, have been encouraged "to capitalize on the resource development potential" in order "to stimulate

⁵⁰⁷ Government of Canada, "Responsible Resource Development Overview", Canada's Economic Action Plan, online: Gov't of Canada <<http://actionplan.gc.ca/en/page/r2d-dr2/overview>>.

⁵⁰⁸ Government of Canada, "Budget 2012: Background – Responsible Resource Development," online: Gov't Canada, <<http://www.budget.gc.ca/2012/home-accueil-eng.html>> and <<http://www.budget.gc.ca/2012/rd-dc/bdc3-eng.html>>.

⁵⁰⁹ Government of Canada, Speech From the Throne, 3 June 2011, Ottawa, Canada, online: Gov't Canada <<http://www.speech.gc.ca/eng/media.asp?id=1390>>. In the 2011 Throne Speech, the development of the natural resources sector and streamlining regulatory supportive systems was emphasized, as exhibited by the following statements: "Our Government is committed to developing Canada's extraordinary resource wealth in a way that protects the environment... It will engage the provinces, territories and industry on ways to improve the regulatory and environmental assessment process for resource projects, while ensuring meaningful consultation with affected communities, including Aboriginal communities."

jobs and growth in a period of global economic uncertainty.”⁵¹⁰ Natural resource development in the Yukon was viewed as a strategic advantage in the global economic crisis. However, missing from the Federal government’s economic development discourse is water governance. Who gets to decide the fate of the Yukon’s water resources?

Numerous factors have contributed to the success of Canada’s mining industry to extract and to export commodities. As a strategic plan, the Responsible Resource Development program is a response to the post-2008 global economic downturn,⁵¹¹ increasing worldwide demand for commodities, and positive commodity price projections (see, in particular, copper⁵¹²). These events, combined with the vast mineral deposits

⁵¹⁰ Government of Canada, Canada’s Economic Action Plan, “Frequently Asked Questions: Responsible Resource Development, online: Gov’t Canada <<http://actionplan.gc.ca/en/page/r2d-dr2/frequently-asked-questions-responsible-resource-development#q1>>. Q1. What is the purpose of *Responsible Resource Development*? There is a tremendous new global opportunity for Canada to capitalize on its resource development potential to stimulate jobs and growth in a period of global economic uncertainty. In today’s global economy, we simply cannot afford a cumbersome regulatory system full of delays, unnecessary duplication and unpredictable timelines that could jeopardize billions of dollars in investment in our energy and mining sectors. Therefore, building on the commitment in Canada’s Economic Action Plan 2012, the Government intends to introduce new legislation to implement its *Responsible Resource Development* initiative to bring Canada’s regulatory review system into the 21st century. Its goal is simple and straightforward: to make Canada the most attractive country in the world for resource investment and development, while protecting our environment today for future generations of Canadians. That is what *Responsible Resource Development* is all about: greater efficiency, more effective environmental protection and enhancing consultations with Aboriginal Canadians. [Emphasis Added]. Q2. Why is regulatory reform necessary? Our abundant natural resources form the backbone of Canada’s economy... In fact, it has been estimated that there could be more than 500 projects worth some \$500 billion over the next 10 years in our energy and mining sectors. But, our outdated system of rules could put that investment at risk. That is why we need to eliminate duplication and delays in our regulatory system and focus our efforts to ensure efficient and effective reviews for major projects.”

⁵¹¹ Government of Canada, “Budget Plan-Chapter 1: Introduction”, Federal Government of Canada, online: Gov’t Canada <<http://www.budget.gc.ca/2012/plan/chap1-eng.html>>. In Chapter One, it states: “Canada is emerging from the global economic recession. The economy’s strengths provide an opportunity for the Government to take significant actions today that will fuel the next wave of job creation and position Canada for a secure and prosperous future. Economic Action Plan 2012 sets out a comprehensive agenda to bolster Canada’s fundamental strengths and address the important challenges confronting the economy over the long term.”

⁵¹² S. Absolom and T. Goldsmith, “Mine: The Growing Disconnect Report – Review of global trends in the mining industry – 2012”, online: PriceWaterhouseCooper <<http://download.pwc.com/gx/mining/pwc-mine-2012.pdf>>. A theme in the Report is increasing prices of commodities, including copper, which is tied to the profitability of the industry sector. At page 29 of the report, the price of copper was reported increasing as: “Copper: On an annual average basis, copper prices were up over 2010. Also see F. McMahon & M.

located in northern Canada, including Nunavut and the Yukon, have intensified the pressure to develop these resources. The Federal government set the stage, through various federal tax initiatives, for the extractive industry to prosper in the Yukon and across northern Canada.⁵¹³ In the Yukon, with this economic development push, the conditions for the classic economic development versus environment protection debate are present, as international, federal, and local governments work in partnership⁵¹⁴ to

Cervantes, “Fraser Institute Annual: Survey of Mining Companies 2011/2012: What miners are saying” at 39. online: Fraser Institute <<http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2011-2012.pdf>>. At page 5, in Fraser Institute’s Report, the authors indicate that mining executives expect...copper prices to increase by up to 50%” pointing to an industry interest in extracting natural resources in the Yukon. Thus, we should expect robust mining sector over the next decade, if commodity prices continue to rise.

⁵¹³ Government of Canada, “Phasing Out the Corporate Mineral Exploration and Development Tax Credit”, Canada’s Economic Action Plan, Online: Gov’t Canada <<http://actionplan.gc.ca/en/initiative/phasing-out-corporate-mineral-exploration-and-development-tax-credit>>. The Federal Government’s website highlights the tax reductions directed at the mining sector: “Actions taken by the Government since 2006, including corporate income tax rate reductions and the elimination of the federal capital tax, have increased the competitiveness of Canada’s mining sector.” Also see: PricewaterhouseCoopers “2012 Federal Budget Highlights” Newsletter. The online newsletter states: 1) 15% Mineral Exploration Tax Credit for flow-through share investors extended until March 2013. The Federal Government plans to extend the temporary 15% Mineral Exploration Tax Credit for flow-through share investors for an additional year. This credit helps junior exploration companies raise capital by providing an incentive to individuals who invest in flow-through shares issued to finance mineral exploration. 2) Phased out: 10% Mineral Exploration and Development Tax Credit & Atlantic Investment Tax Credit for oil & gas mining assets acquired after 2015, online: PriceWaterhouseCooper <<http://www.pwc.com/ca/en/tax/budgets/2012/index.jhtml>>. Also see B. Carr and S. Jeffery, “KPMG: Cutting Through Complexity – KPMG Canada: A Guide to Canadian Mining Taxation” (September 2011), online: KPMG <http://www.kpmg.com/Ca/en/IssuesAndInsights/ArticlesPublications/Documents/5539_KPMG_A%20Guide%20to%20Canadian%20Mining%20Taxation_web.pdf>. At page 3 of the Report, the authors state: “In many respects, Canada’s tax environment is favourable to business and in particular to mining activities.” Also see R.F. Ralbovsky, *Corporate Income Taxes, Mining Royalties and Other Mining Taxes: A Summary of Rates and Rules in Selected Countries – Global Mining Industry Update* (June 2012), online: PricewaterhouseCoopers <http://www.pwc.com/en_GX/gx/energy-utilities-mining/publications/pdf/pwc-gx-miining-taxes-and-royalties.pdf>. In the Tax Incentive for Mining Industry Section of the Report, the authors describe Canada as: “a flexible and generous tax regime for exploration expenditures, only for base metals, precious metals and diamonds. Provincial tax incentives are also available to mining companies in Canada.” At page 19 of the Report, a detailed summary of the tax structure for Canada is set out. At page 1, the Report states that the validity of the information is considered “correct as at January 2012, unless otherwise specified.” Note: The tax changes set out in 2012 Federal Budget might not be set out in the summary chart.

⁵¹⁴ S. Alfonzo, LL.B., Mining @ Gowlings Newsletter “How the 2012 Federal Budget Impacts the Canadian Mining Industry”. (April 17, 2012 – Volume 1, Number 2), online: Gowlings <http://www.gowlings.com/KnowledgeCentre/enewsletters/mining/HtmFiles/V1N02_20120416.en.html>. In the Newsletter under the heading, *Measures to Expand Trade and Open New Markets*, Alfonzo outlines 2012 Budget implications for encouraging trade and investment opportunities in emerging markets: For example, she states: Alfonzo expects that “These initiatives will likely assist in encouraging and promoting

develop “Canada’s extraordinary resource wealth in a way that protects the environment.”⁵¹⁵ With this strong support from the Federal government for the extractive sector, just how responsive are those decision makers charged with regulating water resources in the Yukon to ecological change and environmental protection concerns.

3.2 The Provincial Level

In 2012, at a Territorial government level, Premier Darrell Pasloski identified the mining sector as a key industry driver of economic development in the Yukon.⁵¹⁶ According to Pasloski, the Yukon’s robust mining sector relies on strong commodity prices, the Federal government’s support, and a streamlined regulatory regime.⁵¹⁷ In a speech, the Premier noted the growth in the sector, “[m]ineral exploration in the territory increased from less than \$10 million to more than \$300 million in 2011. There are 107 active mining companies in the territory today who staked a record 114,587 claims in 2011.”⁵¹⁸ This expansion in mining activity explains, in part, the Yukon’s healthy GDP. In Pasloski’s view, the extractive industry has driven the Yukon’s emerging reputation as an economic leader in Canada and “one the brightest lights on Canada’s economic

foreign investment in Canadian mining companies.”; Also see PricewaterhouseCoopers, “2012 Federal and Provincial Budgets’ Analysis and Commentary”, online: PricewaterhouseCoopers <<http://www.pwc.com/ca/en/tax/budgets/2012/index.jhtm>>. In PWC’s online newsletter, it states “Gov’t looks to foreign trade opportunities with China, EU, India, Asia-Pac, Trans-Pacific Partnership, “Mercosur” and Africa”.

⁵¹⁵ Government of Canada, Speech From the Throne, Supra note 509.

⁵¹⁶ Yukon Government, “Premier Darrell Pasloski, Budget Address 2012-2013 to First session of the Thirty-Third Yukon Legislative Assembly, Whitehorse, Yukon (March 15, 2012)”, Finance Department, online: <http://www.finance.gov.yk.ca/pdf/budget/2012_2013_speech_e.pdf>. At page 4 of the speech, the Premier attributes the positive economic status of the Yukon to the mining sector, “Yukon’s mining sector is primarily responsible for this growth and 90% of exploration in Yukon is conducted by junior exploration companies which contribute significantly to the Yukon’s economic development. Between 2004 and 2006 total exploration expenditures increased from \$22 million in 2004 to just over \$100 million in 2006. Expenditures in 2007 were \$140 million, \$110 million in 2008 and a \$100 million in 2009. Exploration expenditures for 2011 are estimated to be over \$300 million, almost twice the previous record of \$157 million set in 2010.”

⁵¹⁷ *Ibid.*

⁵¹⁸ *Ibid.*

horizon.”⁵¹⁹ In the speech, Premier Pasloski also cited the Capstone’s Minto Mine’s contribution to the region’s economic prosperity, low employment rate, strong demand for housing, and healthy retail sector. The Premier’s strong support of the Minto mining project points to the high economic stakes underpinning Capstone’s upcoming water license amendment hearing.⁵²⁰ Over the next decade, several new mines will come into production.⁵²¹ In Pasloski’s view, a supportive Federal government can encourage the growth of the mining industry and promote partnerships with First Nations through numerous tax and royalty measures and a streamlined regulatory regime.⁵²² All of these political, tax and economic development factors point to a positive investment climate and a continued strong performance of the extractive industry in the Yukon.⁵²³

⁵¹⁹ *Ibid.*

⁵²⁰ *Ibid.*. The Premier highlighted three active mines in his budget speech: at p 7 he mentioned that the Yukon has three operating mines: 1) Capstone’s Minto Mine 2) Alexco’s Keno Hill Mine properties; and 3) Yukon Zinc’s Wolverine Mine.

⁵²¹ *Ibid.* In several pages of his budget speech, the Premier highlighted the importance of the mining industry to the Yukon. For example, at page 5 of the speech, he stated: “There are 107 active mining companies in the territory who staked 83,161 quartz claims in 2010 and a record 114,587 claims in 2011. With three operating mines, the current mineral production value is estimated to be approximately \$420 million...” He continues at page 6, where he further explains: that “Massive sulphide zinc/lead/silver mineralization was first discovered near Vangorda Creek in the Anvil Range in 1953. The huge Faro ore body was discovered in 1965 and mine production commenced in 1970 and continued intermittently until it finally closed in 1997...” And, finally, at page 9 he references, in addition to 12 expected mining proposals, he also points to opening of old mines and potential mining activities: “...Western Copper and Gold’s Casino property due west of Pelly Crossing is another massive deposit containing gold, copper, molybdenum and silver having a twenty three to fifty year mine life. Should it proceed to construction, it would create 17,691 jobs in Canada with 3,340 jobs being in Yukon during the four year construction phase, and 1,610 jobs in Canada with 1,054 being in Yukon for the operations phase.”; also see E. Schiman, “More Mining in the Yukon: What it Means for Yukoners”, (2007-05-01), online: Canadian Mining Journal, <<http://www.canadianminingjournal.com/news/more-mining-in-yukon/1000212937/>>; also see Highlights from The Conference Board of Canada’s, Territorail Outlook Report, online: The Conference Board of Canada <<http://www.conferenceboard.ca/e-library/abstract.aspx?did=4715>>. The online highlights state: “Canada’s North is benefiting greatly from the strength in commodity prices. Real GDP growth in the territories will far outpace the national average over the next two years.”

⁵²² Energy and Mining Ministers Regulatory Performance Improvement Working Group, “Regulatory Improvements Across Canada” (June 2008), see The Yukon Government tab, online: Gov’t of Canada <<http://mpmo.gc.ca/reports-publications/82#i16>>. Gov’t of Canada

⁵²³ K. Bromley, O. Cushing, J. Cook and C. Dusser, “Canada’s Territories: The Emerging North” (November, 2012). Engineering and Mining Journal, online: Global Business Reports <http://www.gbreports.com/admin/reports/Canada-Territories_Mining2012.pdf>.

Notably, neither the Territorial government's economic development policies nor the Federal government's "responsible resource development" rhetoric considers water governance. Premier Pasloski has publicly acknowledged the advocacy efforts of several Yukon environmental and conservation groups that promote the protection the Peel watershed. Specifically, on the issue of the Peel Watershed plan, the Premier argues the Yukon Party's historic third-term win clearly signaled the public's affirmation of a balanced water-governance approach. In his view, the Peel Watershed plan should incorporate both environmental and economic interests.⁵²⁴ The Premier's economic growth narrative, combined with his government's strong economic prosperity sentiment, reinforced by national and global political interests points to an unyielding preference for economic development. In light of the federal government's advance of the natural resource sector and the Territories' economic development orientation, further scrutiny is placed on the Yukon's multi-leveled water regulatory regime to understand whether economic objectives are privileged and the Federal government's economic recovery

⁵²⁴ Premier Darrell Pasloski, Budget Address 2012-2013, *Supra.* note 516. In the Yukon Party's view, it appears the party's third term win demonstrates a social license to support mining in the Yukon. The Premier stated: At p 22...despite the controversy over the Peel Watershed Regional Land Use Plan, Yukon Party governments have done more to protect and preserve Yukon's environment and wildlife than any previous Yukon government...at p 23 The Peel Watershed Regional Land Use Plan was an issue in the 2011 territorial election campaign. The Yukon Conservation Society, the Canadian Parks and Wilderness Society, the Opposition political parties and the four affected First Nations all indicated they were supporting positions of either 100% to 80% protection for the Peel Watershed. During the election campaign, the Yukon Party did not indicate its support for this high level of protection, but called instead for a final Peel plan that protects the environment and respects all sectors of the economy. We were severely criticized for taking this position by those supporting 100% to 80% protection. Mr Speaker, there were cars driving around with the bumper stickers reading "Protect the Peel. Let's vote on it". On October 11, 2011, Yukoners did exercise their vote and elected a majority Yukon Party government for a historic third term. [Emphasis Added].; Also see: In *The First Nation of Nacho Nyak Dun v. Yukon* (Government of), 2014 YKSC 69 at paragraphs [186] to [187], Justice R.S. Veale refers to the Yukon government's desire for a "more balance" [Peel Watershed] plan," a balanced approach allowing for "increased options for access" for commercial interests in the watershed. In this land-use planning decision, the Court relied upon UFA to consider the Yukon Government's refurbishment of the Peel Watershed Plan. In the end, Justice Veale quashed the Yukon government's approved Peel Watershed Plan of January 2014.

strategy is indirectly promoted. The next section outlines the legal framework for water governance in the Yukon.

4.0 The Yukon's Fragmented Legal Structure

4.1 Introduction

In the Yukon, water governance is a multi-level governance arrangement. Governance responsibilities are shared between the Federal and Yukon government and First Nations resulting in a fragmented regime. Three key legal instruments frame the shared legal water-governance arrangement:

1. The Waters Act, SY 2003, c 19., amended by SY 2007, c.6.,
2. The Umbrella Final Agreement, May 29, 1993, between The Government of Canada, The Council For Yukon Indians and The Government of the Yukon;⁵²⁵ and,
3. The Little Salmon/Carmacks First Nation Final Agreement, July 21, 1997 between The Government of Canada and The Little Salmon/Carmacks First Nation and The Government of the Yukon.⁵²⁶

All three legal governance regimes feature the Yukon Water Board.

⁵²⁵ Council for Yukon Indians and The Government of Canada (Minister of Indian Affairs and Northern Development) and Government Leader of the Yukon, "Umbrella Final Agreement Between The Government Of Canada, The Council For Yukon Indians And The Government Of The Yukon Government" signed May 29, 1993, Whitehorse, Yukon. [Herein after known as the UFA]; also see: *Supra* note 516. Premier Darrell Pasloski comments on the economic influence of the UFA. At page 9, the Premier stated: "The Yukon Chamber of Mines attributes the success of the mining industry in Yukon today to three key factors: 1. The devolution of land and resource management to the Government of Yukon by the Government of Canada in 2003. 2. comprehensive Land Claims Agreements being reached with 11 of 14 Yukon First Nations; and 3. the establishment of a single assessment authority on behalf of all responsible authorities (Yukon, Canada and First Nations) that has greatly simplified the assessment process and provides for more certainty and transparency in the permitting process." [Emphasis Added].

⁵²⁶ The Little Salmon/Carmacks First Nation and The Government of Canada (Minister of Indian Affairs and Northern Development) and the Government of the Yukon, "Little Salmon/Carmacks First Nation Final Agreement", signed near Carmacks, Yukon July 21, 1997.; *Supra.* note 524; also see In *The First Nation of Nacho Nyak Dun v. Yukon*, Justice Veale at paragraph 20 interprets these final agreements as "new constitutional arrangements for the Yukon, Canada and Yukon First Nations including provisions" for water management planning.

Under the *Waters Act*, the Yukon Water Board (Board) is the institutional actor responsible for approving, assigning conditions, and amending water licences within the Territory's inland waters.⁵²⁷ The Board's administrative licensing system authorizes the release of contaminants into a water body, indirectly granting permission to pollute. Yet, some Canadian industry sectors balk at the Board's time requirements and approval process. Mining executives have expressed frustration with the regulatory regime and what they view as an institutional barrier to advancing the industry's development activities.⁵²⁸ In effect, a tension exists between achieving efficiency in the regulatory process and fulfilling the Board's environmental protective role.

In order to understand how this efficiency versus environmental protection tension plays out through Yukon's fragmented water-governance framework, this chapter outlines the legal framework to place the two decisions featured as the Yukon case study, the Carmacks (Western Copper)⁵²⁹ and Capstone (Minto Mine)⁵³⁰ decisions, in a social-legal context. The chapter's purpose is threefold. Firstly, this chapter will describe the legal water-governance framework and clarify the role and function of the Board with respect to its water permit function and environmental protection of waters. Secondly, this chapter will determine if and in what ways the eco-resiliency framework and its elements operate within the legal governance arrangement of the Board and the Carmacks Copper May 10, 2010 Decision and its appeal. Finally, this chapter will identify the features of the eco-resiliency framework within the Board's decision-making function as I observed at the Yukon Water Board's July 4-6, 2012 public hearing of the Capstone's

⁵²⁷ *Waters Act*, *Supra* note 490.

⁵²⁸ *McMahon and Cervantes*, *Supra* note 512.

⁵²⁹ Carmacks decision, *Infra* note 568.

⁵³⁰ Minto, YWB, QZ11-031, *Supra*. note 496.

Minto Mine license amendment.

5.0 The Legislative Context

5.1 Introduction – The Big Picture: Environmental Protection in the Yukon

In the Yukon, environmental protection is provided for under the Environment Act.⁵³¹

Under the Act, water is considered an aspect of the environment, and water governance is achieved, in part, through the development of “water management plans” and policies.⁵³²

In effect, the Yukon government is responsible for environmental protection, integrated water-resource management planning process, development approvals, waste management, reduction and recycling, as well as the management of hazardous substances in those geographic areas not under the jurisdiction of First Nations. The public’s interest in water resources is strengthened through the legislation, which sets out the right to “healthful, natural environment,” and declares it to be in the public interest to provide each resident a remedy to protect the environment, including the right to commence an action in Supreme Court, provided for under s. 8.⁵³³ Similar to other jurisdictions in Canada, the safety of drinking water quality is considered a public health issue, falling under the jurisdiction of The Yukon Department of Health and Social Services’ Environmental Health Branch.

⁵³¹ R.S.Y., 2002, c. 76.

⁵³² *Ibid.* The definition section of the Act sets out an exhaustive meaning of the term “environment” that includes water: “environment means (a) air, land and water.” R. Sullivan, *Statutory Interpretation*. (Toronto: Irwin, 1997) at 72. According to Sullivan, an exhaustive definition is the sole meaning of the word and its meaning may not vary throughout the legislation. Section 64 provides for a “water management plan” which is in effect a resource management plan relating specifically to water.

⁵³³ Environmental Rights: Section 6 reads: The people of the Yukon have the right to a healthful natural environment; and, the Declaration is set out in s. 7, which reads: It is hereby declared that it is in the public interest to provide every person resident in the Yukon with a remedy adequate to protect the natural environment and the public trust.; Generally see: David Boyd on environmental rights.

5.2 The Yukon Water Board (Board) & Its Water Governance Role

The Waters Act, 2003 assigns jurisdiction over the allocation of water from, or the deposit of waste into, Yukon waters to the Board.⁵³⁴ The Board's primary responsibility is the granting of licences for either non-domestic water use or the deposit of waste into water. The Board's responsibilities were upheld in the 2003 devolution of federal powers to the Yukon government and First Nations. The Board's governance function and administrative structure is set out in the *Umbrella Final Agreement (UFA)*, specifically in *Chapter 2: General Provisions* and *Chapter 14: Water Management* of the Agreement. The UFA and the negotiation of self-government agreements between First Nations and the federal and Yukon governments has resulted in not only a distinctive multi-level governance arrangement between the parties over the management of water and the enactment of water laws, but also a legally endorsed co-management mode of governance.

5.3 What is the connection between *The Yukon Waters Act* and the *Umbrella Final Agreement* and *Little Salmon/Carmacks First National Final Agreement*?

In 2001, the signing of the *Yukon Northern Affairs Program Devolution Transfer Agreement* ensured the continuous transition and enactment of the provisions of the existing statutory water regime – the *Yukon Waters Act, 1993*, which informed the legislative basis of the *Waters Act, 2003*.⁵³⁵ The enactment of the 2003 legislation

⁵³⁴ *Waters Act, Supra* 490. Also see, *Western Copper, Supra*. note 497 at para 74. Justice R.S. Veale states: “The Waters Act is binding on Yukon which, generally speaking, has the administration and control of all water in Yukon.”

⁵³⁵ Aboriginal Affairs and Northern Development Canada, *Yukon Northern Affairs Program Devolution Transfer Agreement. The Devolution Transfer Agreement*, online: INAC <<http://www.ainc-inac.gc.ca/eng/1297283624739>>. In particular, under Chapter 2: Transfer of Responsibilities of the *Yukon Northern Affairs Program Devolution Transfer Agreement* between The Yukon Government (YTG) and Government of Canada, as represented by the Minister of Indian Affairs and Northern Development, dated October 29, 2001, the YTG was required to enact legislation and supporting regulations that “mirror”

reflects the transfer of powers from the Federal to the Yukon government, as result of the negotiation and completion of the tri-party Umbrella Final Agreement (signed May 29, 1993).⁵³⁶

The *Waters Act, 2003* (Yukon) sets out the role and functions of the Board.

Section 10, the legislative purpose states: “The objects of the Board are to provide for the

existing water legislation. Specifically, under *Section 2.3(a)* the YTG was required to “introduce the Legislation and support, as a government measure, legislation that: (a) mirrors, to extent practicable, the *Yukon Placer Mining Act* (Canada), the *Yukon Quartz Mining Act* (Canada), the *Yukon Waters Act* (Canada)...; and”. Under section 2.4, “The YTG shall make regulation that mirror, to the extent practicable, the regulations made pursuant to... *The Yukon Waters Act* (Canada)..., which are in force and applicable in the Yukon immediately prior to the Effective Date.

Furthermore, under Yukon Act S.C. 2002, c. 7, the YTG has the authority under Section 18(1)(n) to enact legislation in relation to waters in Yukon. Section 18(1)(n) reads as follows: “18(1) The Legislature may make laws in relation to the following classes of subjects in respect of Yukon: (n) waters, other than waters in a federal conservation area, including the deposit of waste in those waters, the definition of what constitutes waste and the disposition of any right in respect of those waters under subsection 48(2);”. The preamble of the Yukon Act states: “An Act to replace the Yukon Act in order to modernize it and to implement certain provisions of the Yukon Northern Affairs Program Devolution Transfer Agreement, and to repeal and make amendments to other Acts”; thus, providing for and implementing the Transfer Agreement.”

An in-depth explanation of the *Yukon Northern Affairs Program Devolution Transfer Agreement* is provided in the Legislative History of Bill C-39, a Parliamentary Bill to enact the Yukon Act, S.C. 2002, c.7. <<http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/LS/371/371c39-e.htm>>. LS-422E; Mary C. Hurley, *Law and Government Division* 3 April 2002, Bill C-39, The Yukon Action Government of Canada, Parliamentary Research Branch See Section *D. Yukon Northern Affairs Program Devolution Transfer Agreement*, which states: “Canada and Yukon have long been discussing the transfer of responsibilities over natural resources in the Territory. Developments related to the present devolution initiative include the following: In 1996, the then Minister issued a consultation paper entitled *Devolution of the Northern Affairs Program to the Yukon Government*; In 1997, Yukon and the CYFN signed an Accord on the Devolution of Federal Programs, which outlined principles for a comprehensive devolution process. The same year, Canada tabled a Formal Proposal for the transfer of authority over lands and resources, including mines and minerals, forestry and inland waters, to the Yukon Government; In 1998, Canada, Yukon, the CYFN Grand Chief, on behalf of 11 of 14 YFN, and representatives of the 3 other YFN, signed the *Yukon Devolution Protocol Accord* (Accord), which provided a framework to both guide devolution negotiations and permit simultaneous negotiation of unresolved land claims; On 29 October 2001, discussions based on principles set out in the Accord culminated in the signing of the *Yukon Northern Affairs Program Devolution Transfer Agreement* (DTA) by Canada and Yukon. In it, Canada undertook to introduce legislation, i.e., Bill C-39, to repeal and replace the *Yukon Act* “to ensure that the [new] Legislature has the power to make laws with respect to Public Land, Waters, and the disposition of any right or interest in Public Land or of any right in Waters.” Canada is also to rescind the *Yukon Placer Mining Act*, the *Yukon Quartz Mining Act* and the *Yukon Waters Act* and related regulations; the *Yukon Surface Rights Board Act* will be repealed effective on a day to be fixed by the Governor in Council (Chapter 2: Transfer of Responsibilities). In return, Yukon has undertaken to introduce legislation prior to the effective transfer date that mirrors federal legislation to be repealed, and to make regulations mirroring related regulations. Should the anticipated Development Assessment legislation not yet be fully in effect, Yukon will also introduce legislation to mirror the *Canadian Environmental Assessment Act*, and to have regulations prepared that mirror related regulations (Chapter 2).

The Yukon Water Board: A Brief History, online: YWB, <<http://www.yukonwaterboard.ca/role.htm>>.

conservation, development, and utilization of waters in a manner that will provide the optimum benefit from them for all Canadians and for the residents of the Yukon in particular.” A similarly worded object was set out in the previously enacted legislation, namely the Federal government’s Yukon Waters Act⁵³⁷ and the earlier Northern Inland Waters Act.⁵³⁸ Thus, no substantive changes were made to the Waters Act, 2003 from its mirror legislation, the Yukon Waters Act, 1993.

In this multi-level legal framework, The Umbrella Final Agreement (UFA - May 29, 1993) and the Little Salmon/Carmacks First Nation Final Agreement (LSCFNA Treaty - July 21, 1997) outline similar water governance regimes and reinforce the Board’s water governance function. The institutional water governance arrangement, including the administration and management of water, is set out in Chapter Two and Chapter 14 of both the UFA and the LSCFNFA.⁵³⁹ Considering the evolution of the UFA and the subsequent LSCFNFA within the legal parlance of “statutory interpretation,” one could describe the LSCFNFA as a re-enactment of the UFA or a mirror agreement.⁵⁴⁰ The substantive construction of the UFA is unchanged in the LSCFNFA, except for the

⁵³⁷ S.C. 1992, c. 40. Under s. 12, the Act stated: The objects of the Board are to provide for the conservation, development and utilization of waters in a manner that will provide the optimum benefit therefrom for all Canadians and for the residents of the Yukon Territory in particular For a description of the evolution of water law in the Yukon see: Water Resources Branch, Department of the Environment, Government of the Yukon “Water for Nature, Water for People: Yukon Water Fact Sheet” (June 2014) online: Government of the Yukon < http://www.env.gov.yk.ca/publications-maps/documents/FS_history_water_mgmt.pdf>.

⁵³⁸ *Northern Inland Waters Act*, to revoke the *Northern Inland Waters Regulations*, C.R.C., c. 1234, online: YWB <<http://www.yukonwaterboard.ca/role.htm>> “The objects of the boards were: to provide for the conservation, development and utilization of the water resources of the Yukon Territory and the Northwest Territories in a manner that will provide the optimum benefit there from all Canadians and for the residents of the Yukon Territory and the Northwest Territories in particular” (NIWAs. 10).

⁵³⁹ The provisions of the UFA are subsumed into the LSCFNFA resulting in a treaty that is premised upon the UFA. In essence, the UFA serves as the overarching standard agreement, which is then revised to include specific provisions applicable to the Little Salmon/Carmacks First Nation. Specifically, under s. 2.1.3 of the *LSCFNFA*, the provisions of the UFA are subsumed into the *LSCFNFA*. Refer to the following: *[LSCFNFA]* – CHAPTER 2 – GENERAL PROVISIONS.

⁵⁴⁰ *Sullivan, Supra.* note 532 at 22.

specific provisions referencing the Little Salmon Carmacks First Nation. In the end, the Umbrella Final Agreement, as set out in its title, serves as an “umbrella” agreement for the LSCFNFA and the role of Yukon Water Board in administering water licences is upheld.

The Umbrella Final Agreement is considered a “comprehensive land claim agreement.”⁵⁴¹ In *Beckman v. Little Salmon/Carmacks First Nation*⁵⁴² [*Beckman*], the *Supreme Court of Canada* (SCC) described the signing of the UFA after “20 years of negotiation,” as “a monumental achievement.”⁵⁴³ Writing for the majority, Justice Binnie describes the form and intent of the “modern comprehensive land claim agreements...[as] intend[ing] to create some precision around property and governance rights and obligations.”⁵⁴⁴ For the Little Salmon Carmacks First Nation (LSCFN), the UFA⁵⁴⁵ together with the subsequent signing of the Little Salmon Carmacks First Nation Final Agreement Treaty⁵⁴⁶ (LSCFNFA, a “modern comprehensive treaty”⁵⁴⁷) resulted in the

⁵⁴¹ M.C. Hurley, “Settling Comprehensive Land Claims,” Parliamentary Brief # PRB 09-16E, Social Affairs Division, September 21, 2009.

⁵⁴² 2010 SCC 53, [2010] 3 S.C.R. 103.

⁵⁴³ *Ibid.* at para. 2.

⁵⁴⁴ *Ibid.* at para. 12.

⁵⁴⁵ *Ibid.* Justice Deschamps, while agreeing with the Justice Binnie’s conclusion, offers different reasons for the conclusion. In several paragraphs, Justice Deschamps provides a detailed description of the UFA. In paragraph he states: “In Yukon, the parties sat down to negotiate. An umbrella agreement and 11 specific agreements were reached between certain First Nations, the Yukon government and the Government of Canada. Through these agreements, the First Nations concerned have taken control of their destiny. The agreements, which deal in particular with land and resources, are of course not exhaustive, but they are binding on the parties with respect to the matters they cover.” He further states at paragraph 130 that “It was after 20 years of negotiations that the Umbrella Final Agreement between the Government of Canada, the Council for Yukon Indians and the Government of the Yukon (“Umbrella Agreement”) was signed on May 29, 1993. At that time, the Little Salmon/Carmacks First Nation was a member of the Council for Yukon Indians, and it still is today, along with nine other First Nations. The Umbrella Agreement provided for the conclusion, in accordance with its terms, of specific agreements with the various Yukon First Nations (s. 2.1.1).” At paragraph 131, Justice Deschamps references “the implementing legislation” namely, “the *Yukon First Nations Land Claims Settlement Act*, S.C. 1994, c. 34,” which should also include the Act entitled “An Act Approving Yukon Land Claim Final Agreements, RSY 2002, c. 240 that references the Little Salmon/Carmacks First Nations explicitly under s. 1 – the Definition provision.

⁵⁴⁶ *Ibid.* at para. 131, Justice Deschamps explains the connection between the UFA and the LSCFN Treaty: “Although the Umbrella Agreement “does not create or affect any legal rights” (s. 2.1.2), it provides that

“the Yukon First Nations surrender[ing] their Aboriginal rights...., in exchange for defined treaty rights.”⁵⁴⁸ In the *SCC*’s majority view, the LSCFNFA Treaty “reflects a balance of interests,” where “the LSCFN surrendered all undefined Aboriginal rights, title, and interests in its traditional territory in return for which it received among other rights the “rights to representation and involvement in land use planning [Chapter 11] and resource management [Chapters 14, 16-18].”⁵⁴⁹ Within this the multi-level governance arrangement, the Board is upheld as the primary actor responsible for administering water use through a licensing process.

6.0 Applying the Eco-Resiliency Framework to the Legal Framework

6.1 Introduction

Together, the Yukon’s multi-level governance framework supports the Yukon Water Board’s co-management approach. In the view of an interview participant, the Board’s practice is expected to be responsive to changing license conditions. The Board’s decision-makers rely upon the expertise and the best available science brought to the Board by the proponent, the interveners, and the government agencies. Yet, as legal scholar Barbara Cosens asks, “does the legal framework reveal the necessarily

“Settlement Agreements shall be land claims agreements within the meaning of section 35 of the *Constitution Act, 1982*” (s. 2.2.1). Moreover, according to the Umbrella Agreement, “[a] Yukon First Nation Final Agreement shall include the provisions of the Umbrella Final Agreement and the specific provisions applicable to that Yukon First Nation” (s. 2.1.3). It can be seen from the final agreements in question that the parties have given effect to this undertaking. Even the numbering of the Umbrella Agreement’s provisions has been reproduced in the 11 final agreements that have been concluded under it so far. These 11 final agreements represent over half of all the “comprehensive” land claims agreements (that is, agreements resulting from claims that Aboriginal rights exist) signed across the country. The Final Agreement in issue here was signed near Carmacks on July 21, 1997 and was subsequently ratified and implemented by enacting legislation; this last step was a condition of validity (ss. 2.2.11 and 2.2.12).”

⁵⁴⁷ *Ibid.* at para 9.

⁵⁴⁸ *Ibid.*

⁵⁴⁹ *Ibid.* at para 36.

preconditions [elements] to be transformed into an adaptive governance framework?”⁵⁵⁰

This section applies the eco-resiliency framework to the UFA Agreement (in particular, The Water Board (Chapter 2) and Water Management (Chapter 14)) and the legislation (Waters Act, 2003) and is organized by the four eco-resiliency features.

6.2 Diversity - The Legal Framework: The UFA Agreement and the *Waters Act*, 2003

Diversity – Who decides? Who are the decision makers? These questions are key governance aspects pointing to an inclusive and diverse decision-making process, where decisionmaking is shared and learning is encouraged.

6.2.1 Umbrella Final Agreement (UFA)

Under the Chapter 2, the Board and its membership composition are explicitly referenced. The membership comprises one-third of the board members nominated from the Yukon First Nations or Council of Yukon Indians, with the remaining members nominated from within the government and all members must be residents of the Yukon. This residency membership requirement creates a diverse co-management board and ensures local Yukon knowledge, including traditional First Nation knowledge, and government expertise can be brought into the decision-making process.⁵⁵¹

Capacity building of the decision makers, with respect to their technical and socio-cultural knowledge, is also endorsed by the mandatory budgetary requirement to

⁵⁵⁰ *Cosens, Supra.* note 204.

⁵⁵¹ *UFA, Supra* note 525. *See Chapter 2 – General Provisions:* In addition to setting out the institutional participatory co-management governance structure. The Yukon Water Board is explicitly referenced under s. 2.12.0 of the UFA. Membership of the Board ensures that the majority of members nominated by Yukon First Nations or Council of Yukon Indians or the Government are residents of Yukon (s. 2.12.2.1). The Minister appoints the Board members (s. 2.12.2.3 & 4). The appointment to the Board shall be for a three-year term (s. 2.12.2.11). The Board members’ role is expressly limited, in that each Board member “shall not” be a “delegate” for their nominating body (s. 2.12.2.12) In other words, in carrying out their duties, a member will act as representative for the Board, only.

direct funding annually to education and training.⁵⁵² Specifically, the Board's annual budget should include funding for "cross cultural orientation and education and other training" to build the members' capacity to carry out their duties and to allow for the inclusion of traditional languages (s.2.12.2.9). The Board is required to enact bylaws and rules that are consistent with the UFA and the Board's enabling legislation (s.2.12.2.10). In effect, the UFA directs the Board to place a priority on the cultural awareness education and training of its board members. This mandatory budget assignment highlights the opportunity for Board members to learn, share knowledge, embed ecological memory, and allow indigenous knowledge to be considered by the Board.

Under Chapter 14, the diverse composition of the Board is set out. This water management chapter explicitly states: "The Council for Yukon Indians shall nominate one-third of the members of the Board." (s.14.4.1). The Board's Chair and vice-chairperson is selected from the Board's membership and through a process of consultation that includes Ministerial appointment (s. 14.4.1 & s.14.4.2).

6.2.2 Waters Act, 2003

As an administrative body, the Board functions in a co-management mode. The Board membership can range from four to nine members.⁵⁵³ The membership must include a government of Canada nominee, whose line department is "directly concerned with the

⁵⁵² *Ibid.* Chapter 2 also prescribes the allocation of budgetary funds. The Board's annual budget will include funding for "cross cultural orientation and education and other training" to build the member's capacity to carrying out their duties and to allow for the inclusion of traditional languages (s. 2.12.2.9). The Board is required to enact bylaws and rules that are consistent with the UFA and the Board's enabling legislation (s. 2.12.2.10). In short, Chapter 2 provides for a participatory co-management governance structure. In particular, the UFA directs the YWB to place a priority on the cultural awareness education and training of its board members and to ensure that their respective roles are carried out in both a culturally sensitive and a well-informed manner.

⁵⁵³ *Waters Act, Supra* note 490. Under s. 8(1), the Yukon Water Board membership comprises of "four to nine members appointed by the Commissioner in Executive Council."

management of waters.” A minimum of three Board members should also hold a “recognized position of Government Leader of the Yukon” (s.8(2) (b)).

6.2.3 Summary of the UFA & the Waters Act, 2003

Both the UFA and the legislation, establish a co-management arrangement inclusive of First Nation representatives and government actors (Federal, Territorial). Similar to the provisions of the UFA, the legislation provides for the Minister to appoint the Board’s Chairperson and vice-chairperson but without consultation with the Board. Contrary to the UFA, the Act does not explicitly reference either the inclusion of First Nation nominees or a residency requirement. However, if the wording of legislative phrase “recognized position of Government Leader of the Yukon” is read broadly, then the phrase could include a recognized Yukon First Nations leader. In the end, membership is inclusive of federal, territorial, and First Nation interests.

Overall, this participatory process is constructed to include a range of perspectives and fosters diversity in ways of knowing water, as expressed by ecological memory and indigenous knowledge. Learning is encouraged by the requirement, under chapter 2 of UFA, to designate funds for cultural and educational purposes. The discourse of rights may also enter the decision-making process via the legal instrument of the UFA, which places a priority on waters flowing on or flowing through First Nations (Settlement) lands.

6.3 Flexibility

Flexibility is present in the governance function when two-way communication is encouraged and where the Board members can rely upon a consensus-based decision-making principle and a mix of regulatory tools.

6.3.1 *The Waters Act, 2003*

Flexibility in the decision-making is featured in the legislation not the UFA. The *Waters Act* authorizes the Board to make rules regarding its hearings, complainant and representation procedures, and internal management protocols. For example, the Yukon Water Board Meeting Rules features consensus. Under rule 23, consensus is defined as “mean[ing] a general meeting of minds.”⁵⁵⁴ “Consensus does not always mean that everyone is in complete agreement, but rather that a solution is found that all members can accept and that no members strongly oppose.”⁵⁵⁵ Under this rule, the Board is directed to adopt the principle of consensus decision-making for meetings not a public hearing.⁵⁵⁶ As constructed by the rule, consensus appears to support flexibility through a dialogic model of open two-way communication between the Board members. Yet, this consensus decision-making rule also recognizes the limitations of consensus and allows the Board to invoke a vote if consensus cannot be reached. (R24).⁵⁵⁷

In sum, the Board’s primary decision-making principle is based upon consensus. A default option of a vote exists in the situation of a meeting but not necessarily applicable in the “in chamber” decisions of a public hearing. However, a danger of the reliance upon a vote as a dispute-resolution mechanism is that the consensus process, in practice, is vulnerable to power disparities and hegemonic majority rule behaviour.

Yet, the legislation limits the flexibility of the Board’s discretionary power to the issuing two types of licenses: either a Type-A or a Type-B water licence. The maximum

⁵⁵⁴ Yukon Water Board, Yukon Water Board Meeting Rules, (Decemeber 10, 2008), online: YWB < http://www.yukonwaterboard.ca/policy/YWB_Meeting_Rules.pdf >.

⁵⁵⁵ *Ibid.*

⁵⁵⁶ *Ibid.*

⁵⁵⁷ *Ibid.* Rule 24 states: “Board members recognize that, in order to meet their obligations under the *Waters Act* (“the Act”), and to comply with the rules of procedural fairness, there will be occasions when consensus cannot be reached. In that case, the Board members will have to vote on the issue. Abstention is not an option.”

period for a licence is 25 years, requiring the payment of fees for the “use of waters or deposit of waste, or both” (s. 12(1)) based upon the criteria set out Regulation O.I.C. 2003/58.⁵⁵⁸ The Act requires the project proponent to satisfy the legislatively defined legal test set out in s. 12, before the Board can grant a licence.

Flexibility in the licensing process is further reinforced through a range of legislative options particularized to the licence. If a licence is granted based upon the legal test, then the licensee or applicant can also be subject to a compensation agreement (s.12(4)(ii)).

The Act further directs the Board to consider Ministerial policy directives (s.11(1)) and the legislative requirements to issue (s.12), renew, amend, and cancel (s.16) as well as assign a licence (s.17) and to recommend to the Minister the expropriation of land (s.29).

A water licence can also be subject to numerous conditions (s.13(1)-(7)).⁵⁵⁹ Effectively, these conditions are primarily engineering or works-oriented requirements that must be balanced against the interests of other users and may require monitoring of “who would be adversely affected by the use of the waters or deposit of the waste.” In short, this narrow focus supports an anthropocentric (“who”) rather than an ecological

⁵⁵⁸ *Waters Act, Supra* note 490. Under s. 7(1), the licensing criteria for “water use and deposit of waste” requiring either a Type A or Type B licence is set out in following Schedules based upon different uses: Schedule 5: Industrial Undertakings; Schedule 6: Placer Mining Undertakings; Schedule 7: Quartz Mining Undertakings; Schedule 8: Municipal Undertakings; Schedule 9: Power Undertakings; and, Schedule 10: Agricultural, Conservation, Recreational and Miscellaneous Undertakings.

⁵⁵⁹ *Ibid.* For example, a Yukon Water Board decision maker can consider setting conditions relating to:

1. the “manner of use of water” (s.13(1)(a)),
2. the “quantity, concentration and type” of waste (s.13(1)(b)),
3. the circumstances of a waste deposit (s.13(1)(c)),
4. the studies to be conducted, plans to be submitted, “works to be constructed” and “monitoring programs” to be completed (s.13(1)(d)) or “future closing or abandonment” a project” (s.13(1)(e)),
5. the decision maker must also take into account other licence holders and domestic, instream and authorized water users, authorized waste depositors, property owners, “occupiers of property,” individuals holding an “outfitting concessions, registered trapline” and other similar rights(s.13(2)(a) - (h)).

orientation.

Finally, as the final arbitrator, the Minister holds the final approval of a specific licence, with or without conditions. Ministerial approval is required for a Type-A and Type-B licences, if a public Board hearing is held. If no public Board hearing is held, then “the chairperson of the Board” can approve a Type-B licence.⁵⁶⁰ Thus, the final decision-making of the Board is limited, reinforcing a limited form of flexibility in decision making for certain license decisions.

In summary, the Board’s function includes a range of actions that fosters adaptive and context-driven decision making but limits the Board’s primary regulatory function to administering the water licence process in a bureaucratic manner that takes into account the type of license (A or B), the legal test, compensation, conditions, and Ministerial policy directives and approval.

6.3.2 Summary of the Waters Act, 2003

Flexibility in the legal framework is exhibited by the decision makers’ reliance on a consensus based decision-making principle and range of legislative tools including compensation, licence conditions and Ministerial directives. The Board’s decision-making arrangement is heavily focused upon process where flexibility is limited to the type of licence and is subject to a legal test and the Minister’s approval, for a Type-A and Type-B, if a public hearing is held.

6.4 Broad Perspective

A broad perspective considers the geographic scale and polycentric nature of the governance regime and considers whether mechanisms of co-ordination exist to allow

⁵⁶⁰ *Ibid.* s.12(6)(a)(b)(i)(ii).

decision-makers to mutually engage in a problem-solving process and to seek solutions.

6.4.1 The Umbrella Final Agreement

In a typical legal drafting style, the UFA Chapter 14 Water Management opens with an objective directing the decision makers to be responsive to both water quality and quantity. Specifically, the Agreement's objective states, "to maintain the Water of the Yukon in a natural condition while providing for its sustainable use."⁵⁶¹ A broad reading of this objective suggests water-management decisions is premised upon a principled approach that directs decision-makers to strike a balance between protection of water quality, as found in its natural state ("natural condition"), and the principle of sustainability through maintaining the "sustainable use" of water. In essence, both water quality and quantity issues could be taken into account by decision-makers, resulting in a balanced approach to the Agreement's vague terms of "natural condition" and "sustainable use."⁵⁶² Arguably, the UFA fosters flexible decision-making and directs decision makers to consider both water quality and quantity issues.

⁵⁶¹ UFA, *Supra*. note 525. Section 14.1.1 reads: "The objective of this chapter is to maintain the Water of the Yukon in a natural condition while providing for its sustainable use." Under the Definition section, "use" includes the deposit of Waste into Water" (s. 14.2.0). Note: Under s.14.2.0, the definition of "water" has the same meaning as "waters" in the Northern Inland Waters Act, R.S.C. 1985, c. N-25." Pat get the NIWA definition.

⁵⁶² *Ibid*. The Definitions Chapter (c.1) of the UFA sets out a definition for "sustainable development" it does not explicitly provide a definition of "sustainable use." In other words, the term "sustainable use" as set out in the objective is vague. Yet, under c.1 (definition section) of the UFA, sustainable development (SD) is defined as: "beneficial socio-economic change that does not undermine the ecological and social systems upon which communities and societies are dependent." Extrapolating from the UFA's SD definition it seems reasonable to characterize a "sustainable use" as a use that is balanced against economic development and results in both social and economic benefits. Applying this line of reasoning to a reading of the UFA it seems reasonable to suggest that UFA directs decision-makers to consider water quality issues, perhaps in terms of water quality standards. A broad interpretation of the term "sustainable use" may also allow decision-makers to adopt a social-ecological systems view of water. Perhaps, for YWB water managers, this social-ecological perspective of economic development might direct their decision-making to consider benefits that support ecosystems and social systems of the local communities. It is essential that local communities dependence upon a sustainable water use remains connected to a communities' need to flourish socially and economically.

6.4.2 *The Waters Act, 2003*

The Board's wide geographic jurisdiction encompasses the six water-management areas noted in the legislation, including the "Yukon River, its tributaries and all river basins of the Yukon River and its tributaries, including the Tanana River."⁵⁶³

Under the Act, the Board is required to take into account the legislative object (s.10): "to provide for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit from them for all Canadians and for the residents of the Yukon in particular."⁵⁶⁴ Water is characterized with competing values of "conservation" and "utilization of water" and an economic orientation, as exhibited by "development" and "optimum benefit." Taken together, these terms imply decision makers strike a balanced water-governance approach, where conservation, economic development and water utilization should be considered together. This construction of the legislative object creates a water narrative where water is an active productive economic resource to be conserved for the benefit of Yukon residents and all Canadians. Moreover, the "optimum benefit" of water for the people of Canada and of the Yukon further implies an economic orientation where a cost/benefit analysis could be premised upon costs and benefits quantified at a national, regional, and/or local scale. In the end, the

⁵⁶³ Water Regulation, YOIC 2003/58 Schedule 1 – Water Management Areas

1. The Liard River, its tributaries and all river basins of the Liard River and its tributaries.
2. The Yukon River, its tributaries and all river basins of the Yukon River and its tributaries, including the Tanana River.
3. The Alsek River, its tributaries and all river basins of the Alsek River and its tributaries.
4. The Peel River, its tributaries and all river basins of the Peel River and its tributaries.
5. The Porcupine River, its tributaries and all river basins of the Porcupine River and its tributaries.
6. All other waters and river basins of the mainland draining into the Beaufort Sea or into the Mackenzie River, and Herschel Island.

⁵⁶⁴ *Waters Act, Supra* note 490. In the Northern Inland Waters Act, the legislative object of both the NWT Water Board and the Yukon Territory Water Board was "to provide for the conservation, development and utilization of the water resources of the Yukon Territory and the Northwest Territories in a manner that will provide the optimum benefit there for all Canadians and the residents of the Yukon territory and the Northwest Territories in particular."

legislative objective appears to direct decision makers to consider the competing issues of water conservation and economic development and use, as balanced against the benefits of the water use as defined for both Canadians and Yukon residents.

In sum, the Act presents decision makers with a broad objective. The legislation directs the Board to take into account both water quantity and public interest issues, suggesting a broad definition of the Board's function. The Board holds the power to renew, amend, and cancel a licence.⁵⁶⁵ A licence can be amended in response either to a water shortage or an issue of public interest.⁵⁶⁶ But, as the Act does not define the meaning of public interest, the definition of this concept remains within the discretionary powers of the Board.

While designed to allow the Board members to consider administrative tasks such as amending, renewing, and cancelling a license, the legal framework also includes a coordinating mechanism, which includes the Yukon Environmental and Socio-economic Assessment Board's (YESAB) decisions. The Water Board's consideration of a YESAB decision document suggests an integrated water governance process structured by a multi-level organizational design.

6.4.3 Summary of the UFA & the Waters Act, 2003

The governance regime's broad perspective is exhibited in the coordinating jurisdictional mechanism with the Yukon Environmental and Socio-economic Assessment Board (YESAB). This mechanism ensures environmental impacts of a project are presented to the Water Board and reinforces a multi-level form of governance where the YESAB's process and decision documents are integrated with the Yukon Water Board's decision-

⁵⁶⁵ *Waters Act*, *Supra* note 490. s.16.

⁵⁶⁶ *Ibid.* s.16(b)(ii)(iii). The consideration of the public interest is bounded by a time limit of three years (in particular, the licensee's failure to exercise their rights "for three successive years" (s.16(c)(ii)(iii)).

making process. However, this multi-level governance framework opens the process to the influence of power brokers and power plays operating in the shadows of the administrative process, as the legislation is directed at “who” is impacted. The social norms that encircle the Board’s function and play out in the shadows of the in chambers decision-making process are difficult to account for in this administrative function.

6.5 The Accommodation of Emergent Change

A governance regime exhibits the feature of emergent change if decision-makers operate in an open information system where the participants are able to be open to uncertainty and surprise.

6.5.1 The Umbrella Final Agreement

Under Section 14.8.1., a Yukon First Nation holds a right to receive “Water which is on or flowing through or adjacent to its Settlement Land remain substantially unaltered as to the quantity, quality and rate of flow, including seasonal rate of flow.” The Yukon Water Board is required to uphold these water rights and the water licence terms of other water users. In the licensing process, the Board is also required to consider the impact of the water use upon fish and wildlife, mitigation measures or compensation, to name a few issues named under this section of the Agreement. In sum, this protection of the quantity, quality, and water flows including seasonal flow requires the Board to be responsive to ecological change. However, it is questionable the Board’s administrative function structured for periodic reviews of a licence could be relied upon to be responsive to sudden ecological events.

6.5.2 The Waters Act, 2003

The legislation directs the Board to amend a license to take into account water quantity,

implying the Board's function could be structured to respond to ecological change. In particular, the Board holds the power to amend a licence "to deal with a water shortage in any water management area,"⁵⁶⁷ suggesting the Board's decision-making regarding amendments is structured to be responsive to water shortages.

The Board is also conferred the power to amend a licence if the amendment is considered in the public interest. However, a definition of "public interest" is not provided for in the Act. Even though, a definition is set out in the legislation it seems plausible a sudden water pollution incident -- for example, an extreme rain event causing tailings to spill over the containment walls -- could initiate the cancellation of licence, if environmental degradation is interpreted as a public interest issue. Thus, on its face, the legal framework appears to provide for the accommodation of specific incidents of emergent change that could result in an amendment to licence in the case of water shortage and cancellation if this administrative act is perceived as in the public interest.

Yet, the Board's final decision-making power in the situation of granting a Type-A licence is limited. This lack of final decision-making power, illustrated by Ministerial approval for Type-A licence, suggests the Board is responsive to internal administrative change and, perhaps, political will, which points to a politicized driver of change and a centralized decision-making orientation. A danger exists this politicized decision-making process could marginalize and silence alternative ways of knowing water in the decision-making process. In the end, the legal framework directs the Board and its decision-making processes to be open to the changes to its primary administrative instrument (the licence) and directives imposed by the Minister.

⁵⁶⁷ *Ibid.* s.16(1)(b)(ii).

6.5.3 Summary of the UFA & the Waters Act, 2003

In sum, the legal framework offers the Board the opportunity to entertain the element of surprise by way of taking account of the new information and impact upon public interest in water. The new information may present during the term of the license or during an amendment process. Under the legislation, the Board appears to hold the power to respond to sudden or unexpected water security events or social developments as they affect water users and are considered in the public interest. Under the UFA, the Board is required to consider the water rights of both Yukon First Nations and other licence holders. The Board is required to give particular attention to the quality, quantity and rate of flow for the affected First Nation.

7.0 The Eco-Resiliency Framework in Practice — The Yukon Water Board

7.1 Introduction: The Board’s Carmacks Decision

In May 2010, after seven days of a public hearing, including “nine volumes of material and the evidence of a number of witnesses, including experts’ testimony,”⁵⁶⁸ the Board denied Carmacks Copper Ltd’s (Carmacks) application for a 25-year Type-A water license for a quartz-mining project. The project proposed in Carmacks’ license application related to “a heap-leach project, which include[d] groundwater wells within the Upper William Creek and make-up water (i.e., sediment ponds) affecting a tributary of the Yukon River.”⁵⁶⁹ The proposed location of the quartz project was a site “northwest of the Village of Carmacks.”⁵⁷⁰ The mining company’s project included, but was not limited to, “an open pit [with the intent] to mine copper oxide ore and to leach the ore with dilute sulphuric acid to extract the metal.”⁵⁷¹ In denying the licence, the Board considered nine issues:

1. use of unproven technology,
2. likelihood of successful leaching,
3. likelihood of successful detoxification,
4. adequacy of the proposed discharge management plan,
5. adequacy of water quality standards for W12,
6. adequacy of proposed effluent discharge standards,
7. adequacy of heap facility preliminary design and liner system,
8. adequacy of water quality model; and,
9. adequacy of sludge management proposal.

The Board, in examining the nine issues, placed the greatest weight on issue three: the “likelihood of successful detoxification.” The Board examined the heap leach technology and took into account the environmental effects of the technology as presented by an

⁵⁶⁸Reasons for the Decision, Water Use Application QZ08-084; Carmacks Copper Ltd – Executive Summary, online: YWB <<http://www.yukonwaterboard.ca/registers/quartz/qz08-084/QZ08-084%20Reasons%20May%2010%20final.pdf>>. [herein known as Carmacks Decision].

⁵⁶⁹ *Ibid.*

⁵⁷⁰ *Ibid.* at page 2: Purpose of the Water Use Application.

⁵⁷¹ *Ibid.* at 2 – Heading: Purpose of the Water Use Application.

expert witness and the Yukon’s Environmental and Socio-Economic Assessment Board’s (YESAB) decision document. As revealed in the record, it was through the questioning and consideration of expert evidence that the Board adopted a different position than YESAB and characterized the proposed rinsing and neutralization technology as “unproven.” A close reading of the Board’s decision reveals the committee’s deliberations concentrated on the new evidence that raised doubt that the heap leach technology could be deemed successful.⁵⁷² In the end, the Board considered the expert evidence and applicant’s arguments concerning the physical and chemical aspects of the commercial scale heap, and found the evidence inconclusive, a finding that differed from the YESAB. The Board concluded the “[a]pplication includes the use of unproven technologies to leach, detoxify, and manage discharges from the site.”⁵⁷³

8.0 Applying the Eco-Resiliency Framework to the Yukon Water Board’s Carmacks Copper Ltd Water Use Licence #QZ08-084 Decision of May 10 2010.

8.1 A Broad Perspective

The Board’s licencing process supports a broad perspective where a coordinating mechanism takes into account a decision document from the Yukon Social Environmental Assessment Board (YSEAB). However, the Yukon Water Board found the findings of the YESAB’s decision-document deficient on several issues including the slope ratio of the heap and the issue of evenly spreading the rinsing fluids from the 70m heap onto a heap that will be sloped not level. The Board was concerned with the slope ratio of the heap where 75% of the heap surface would be sloped at 2:5:1 ratio.⁵⁷⁴ The

⁵⁷² *Ibid.* at 13 – Likelihood of Successful Detoxification.

⁵⁷³ *Ibid.* at 35. – Conclusion

⁵⁷⁴ *Ibid.* 17.

Board interpreted this sloping ratio as indicating the final heap would not be level but in fact would be sloped. In the Board’s view, the sloped heap might result in the rinsing fluids being dispersed primarily on the steep slope of the completed heap resulting in a run-off situation. While the Board’s coordinating mechanism with the YESAB demonstrates a broad perspective, the Board demonstrated independence by further considering additional factors such as the sloping ratio and the environmental impact.

8.2 Emergent Change

In the decision-making process, the Board demonstrated openness and an ability to respond quickly to new environmental concerns, information and experts. The Board found both Mr. James Kuipers’ (expert for Little Salmon Carmacks First Nation) and Dr. Lionel Catalan’s (Primary researcher for Noranda’s Mines Gaspé, Quebec trial in 1996 and 1998 and cited in the YESAB assessment) testimony on the nature of the detoxification process to be persuasive. On the likelihood of the successful detoxification of the heap, the Board adopted a cautious stance and found that the evidence indicated the “proposed rinsing and neutralization of the spent heap”⁵⁷⁵ technology was “uncertain.”⁵⁷⁶

The Board, unlike the YESAB, received and reviewed 2008 testing data that demonstrated differences in the physical and chemical parameters. In particular, the evidence indicated the testing in the one-meter tall columns found insufficient proof of the technology’s certainty. The Board found the testing of the rinsing and neutralization processing at a smaller testing scale to be problematic. The evidence revealed physical differences between the leaching process at an 8-meter thick lift (lab trial) and 70-meter thick heap pile (i.e., the proposed project). The small-scale testing pointed to “potential

⁵⁷⁵ *Ibid.* at 7

⁵⁷⁶ *Ibid.* at 15.

chemical problems” associated with the neutralization of the ore process that resulted in column plugging (in Columns #3 & #6, as per the 2008 data) that included the application of a soda-ash solution.⁵⁷⁷ For the Board, that the plugging occurred in carefully managed trials was a significant concern.⁵⁷⁸

In the end, the Board characterized the technology as unproven and found the YESAB had not received or reviewed the new 2008 data. The Board also found Mr. Kuipers’ testimony reliable. He testified: “in the twelve years since the work of the Catalan was completed there is still no example of a successfully rinsed copper oxide heap.”⁵⁷⁹ The Board found the applicant had not provided sufficient evidence to demonstrate the detoxification process could be deemed a certain technology for commercial use. Through this process of receiving new evidence, the Board’s decision-making process demonstrated an openness to adopt a different opinion from the YESAB, based upon new evidence presented and the experts questioned at the Board hearing.

Overall, this review of the Board’s decision record on the Carmacks Copper Ltd application exposes the workings of an administrative law tribunal-like process. The Board’s mechanized process in which expert decision makers receive witnesses, hear evidence, review documents and apply a “balance of probabilities standard” and where decisions are made privately “in chambers.” The board’s decision-making process illustrates responsiveness to new information, new experts and a new perspective on the technology. The decision document, the access point for discovering the presence of resiliency factors, suggests the Board’s water governance decisions arise from a co-

⁵⁷⁷ *Ibid.* at 15.

⁵⁷⁸ *Ibid.* at 14-17.

⁵⁷⁹ *Ibid.* at 17. With respect to the issue of “Use of Unproven Technology” the “Board heard from Mr. James Kuipers, an expert witness of LSCFN, that there are not existing commercially successful copper oxide heap leach mines in North America.”

management arrangement of governance and reveal that the features of a broad perspective, and emergent change, which all play out at a Board level.

9.0 The Legal Sequel

Following the Water Board's decision, Carmacks Copper Ltd. initiated two separate claims with respect to the denial of the water license. In the first claim, Western Copper Corporation and its subsidiary, Carmacks Copper Ltd., sought an order, under the Yukon Rules of the Court, declaring that the First Nations and the Yukon Conservation Society (Society) be granted intervener status, instead of respondent status, respecting the appeal of the Yukon Water Board's May 10, 2010 decision.⁵⁸⁰ Western Copper sought to limit the parties to an intervener status so they could not proceed with an appeal. The court heard two issues:

1. Are the First Nations and the Society respondents under the *Rules of Court* without application?
2. Should the First Nations and the Society be limited to intervener status?

In the end, Judge Veale held that both the First Nations and the Society should be assigned respondent status.

In the second claim, Western Copper Corporation essentially rebuffed the Water Board's finding concerning the rejection of the Yukon Environmental Social Assessment Board's (YESAB) decision document (i.e., that the heap-leach technology had been proven feasible).⁵⁸¹ The issues heard primarily related to the jurisdiction of the Water Board with respect to:

⁵⁸⁰ *Western Copper Corporation v. Yukon Water Board*, 2010, YKSC 61 CanLii.

⁵⁸¹ *The Western Copper Corporation and Carmacks Copper Ltd v. Yukon Water Board, Yukon Government, Little Salmon/Carmacks First Nation, Selkirk First Nation and Yukon Conservation Society (Respondents) and Yukon Chamber of Mines (Intervener)*, 2011 YKSC 16 CanLii.

1. a) Does the Water Board have the discretion to refuse an application for a water licence pursuant to s. 83(2) of YESAA,
b) or is it obligated to implement the decision document in the Western Copper application for a water licence?
2. Has the Water Board's decision exceeded its powers under the Waters Act by purporting to regulate the mining facilities contrary to the authorization issued by the MEMR in the Quartz Mining Licence which incorporates the terms and conditions of the decision document?

Justice Veale held that:

1. a) Yes: the Water Board does hold the discretion to refuse an application.
b) No: the Water Board is not obligated to implement the YESAA's decision document.
2. No: The Board did not exceed its powers under the Waters Act.

In the end, Justice Veale held that the Water Board had acted within its statutory jurisdiction under the Waters Act.

10.0 The Water Board's July 4-6th 2012 Public Hearing - Minto Explorations Ltd's Water Use Licence #QZ11-031 Amendment #8 for the Minto Mine Yukon Project

10.1 Introduction

Having received affirmation from Justice Veale regarding its jurisdiction over water use, the Water Board entered the next public hearing with a strong sense of its' statutory mandate with respect to the amendment (amendment # 8) of Minto Exploration Ltd's existing Water Use Licence #QZ11-031. The Minto mine site is located "41 km

southwest of the community of Pelling Crossing, Yukon.”⁵⁸² In Board’s deliberations, the oral and written submissions from the Yukon Conservation Society (YCS), the Selkirk First Nation (SFN) and Minto, the Licensee were considered and demonstrated certain features of resiliency.

10.2 Diversity

While confined to an administrative law public hearing setting, the Board’s proceeding does provide an opportunity to hear a diverse range of perspectives, which ultimately shape the final decision.⁵⁸³ For example, both First Nation and Board members were given an opportunity to present their concerns on the issue of the “adequacy of the mining company’s proposed tailings management plans.” At the hearing, the Selkirk First Nation argued a potential groundwater contamination scenario existed as result of “subaqueous deposit of tailings” into the Pits (Main and Area 2 Pits).⁵⁸⁴ The Board requested “[t]he Licensee...provide clarification on what level of responsibility they would take for impacts to groundwater from the Project. In response, the proponent limited their responsibility to the operational period.”⁵⁸⁵ In the end, the Board found the tailings should be subject to restrictions with respect to the volume in the Main Pit and “must include a reserve for the storage of excess water.”⁵⁸⁶

The Selkirk First Nation (SFN) representative also expressed concerns regarding the stability of one of the dumps and the wall of the Main Pit, which would receive the

⁵⁸² Minto, YWB, QZ11-031, *Supra*. note 496. at ii.

⁵⁸³ *Minto, Ibid* at ii. Decision document – Introduction: “In making this decision the Board considered the application of the Licensee, interventions from three parties, the separate decision documents issued by the Yukon Government, Department of Energy, Mines and Resources and by the Selkirk First Nation and oral testimony and arguments from the Licensee and two parties [Yukon Conservation Society] during a public hearing held from July 4 to 6, 2012.”

⁵⁸⁴ Minto, *Ibid* at 8.

⁵⁸⁶ Minto, *Ibid*. at 10.

majority of the waste rock. In the view of the SFN, the “stability of foundations for the waste structures at the site” required further review by the Board. The SFN argued a “criteria for identification of stable foundation conditions should be developed and implemented for [the] site” and should also include the “monitoring and analysis of the stability issue.”⁵⁸⁷ Based upon the evidence, the Board agreed with the SFN that the “conditions of the licence should be included to better monitor” the on-site dumps.⁵⁸⁸

At the hearing, the Board also illustrated its ability to take into account the concerns of its own Board members. For example, Board members raised two water-management plan issues: 1) the water storage capacity in the main pit and 2) the dry stack tailing storage facility. The Board members were concerned about the adequacy of the water storage capacity in the main pit. In the view of the Board members, the “historical water management issues at the site” and in particular, the issue of the “minimum surge capacity on average climatic conditions,”⁵⁸⁹ required a conservative approach. This conservative approach included consideration of the “minimum storage capacity in the Main Pit.”⁵⁹⁰ The storage capacity issue at the Main Pit was resolved by relying upon several storage facilities as disposal sites (in particular, the dry-stack tailings storage facility’s storage capacity, the Main Pit, and the Area 2 pit).

Moreover, through a Board member’s questions the adequacy of the proponent’s geotechnical analysis of the movement of the dry-stack tailings storage facility (DSTSF) was found to be inadequate. The Board held that the “continued loading” “of tailings on the DSTSF should be discontinued as soon as “transition to slurry tailings can be

⁵⁸⁷ Minto, *Ibid.* at 11.

⁵⁸⁸ Minto, *Ibid.* at 12.

⁵⁸⁹ Minto, *Ibid.* at 13.

⁵⁹⁰ Minto, *Ibid.*

completed.”⁵⁹¹ Even though the proponent presented its consultant’s analysis on the last day of the hearing in response to the Board’s request for the proponent’s analysis of DSTSF, the Board did “not find any explicit statement that the analysis assumes that the full capacity of the DSTSF was assumed by the consultants responsible for the analysis.” The evidence suggested to the Board “the proof of the mitigation of documented movements of the DSTSF remain[ed] outstanding.”⁵⁹² At the end of the hearing, the movement of the dry stack remained an outstanding issue requiring further clarification.

In response to the outstanding dry stack issue, the Board advocated for a precautionary approach by requesting further monitoring of the dry-stack facility.

10.3 Flexibility

In the public hearing process, flexibility was exhibited through the Board’s two-way communication and the fluid participation of state and non-state actors (in particular, the three Selkirk First Nation representatives, the Yukon Conservation Society (YCS) representative and the mining company’s contingent of employees and a legal team). In contrast to a court’s stifled questioning procedure, the Board’s active dialogue between the parties resulted in exposing the deficiencies in Capstone’s application during the hearing. For example, the YCS raised the issue of the inadequacy of the “regulatory management, and compliance by the Licensee.”⁵⁹³ The YCS submitted that the mining operator had commenced its mining expansion operating activities without proper regulatory approval. The YCS requested “that the Proponent provide ‘comfort’ to the [YCS] that procedures will be developed by the Proponent to ensure future amendment

⁵⁹¹ Minto, *Ibid* at 10.

⁵⁹² Minto, *Ibid*.

⁵⁹³ Minto, *Ibid* at iii.

applications will be done in a timely manner.”⁵⁹⁴ The Board demonstrated flexibility in its decision-making by taking into account the evidence presented by the YSC and the submissions made by the company. The Board held the “Licensee has violated the existing water licence, [and] the Board agrees with YCS that the Licensee should develop procedures to ensure that such violations do occur in the future.”⁵⁹⁵

Flexibility in the Board’s process is further demonstrated in the exchange of information on three issues either omitted or erroneously described in the water amendment application. First, for the SFN, the channel modifications to water conveyance structures on site were found to be questionable. These modifications appeared to suggest the flood flows from the “south diversion ditch” would be diverted away from the DSTSF and into Area 2 pit. The SFN submitted the application includes an insufficient “conceptual design for the Tailings Diversion ditch” that requires further details and review to ensure the modification would achieve the projected goals.⁵⁹⁶ Second, the Licensee had also modified several water-sampling locations not included in the amendment application. Third, the SFN also identified the Mill Valley Fill Extension structure that the Licensee had reconstructed but had not included in the existing licence amendment application. The structure’s design details were omitted in the application. During the Board’s cross-examination, the Licensee agreed these unauthorized modifications had occurred and agreed to provide the Board with the “as-built plans”⁵⁹⁷ for the structures.

In response to the SFN’s submissions, the Board rebuked the Licensee’s actions

⁵⁹⁴ Minto, *Ibid* at 3.

⁵⁹⁵ Minto, *Ibid* at 13.

⁵⁹⁶ Minto, *Ibid*.

⁵⁹⁷ Minto, *Ibid* at 14.

of proceeding with Mill Valley Fill structure before the commencement of July licence amendment hearing. The Board also requested additional information on the South Diversion Ditch modification, which was submitted post hearing, and the parties were provided an opportunity to comment. In their comments, the SFN continued to express concerns regarding the protection of the dry-stack tailings storage facility and overall flow capacity of the ditch. In the end, the Board found the channel modifications were appropriate to ensure the present Phase IV activities. The Board also recommended the inspection process should be directed by the SFN's additional concerns (i.e., "when inspectors review further detailed submissions related to those structures"⁵⁹⁸).

Relying upon a flexible decision-making approach responsive to the legal framework and institutional constraints places the proponent in a self-regulatory mode of compliance with the water use licence. In the end, the Board held on the issue of regulatory management and compliance by Licensee that regulatory administration clauses must be added in the license to ensure Capstone improves its regulatory obligations at the Minto mine site.

In the Minto decision, and after considering the testimony of the proponent, the Board found the company was aware certain activities (for example, "the mining and milling of Area 2 ores"⁵⁹⁹) fell beyond the scope of the licence. The Board chided the proponent and found the mining company officials "either did not understand the Act and the limitations that the Act places on its use of water and deposit of waste or ignored those limitations in its decisions regarding Phase IV activities."⁶⁰⁰

In sum, flexibility in a legislative regime invokes the idea of law as adaptive to

⁵⁹⁸ Minto, *Ibid.*

⁵⁹⁹ Minto, *Ibid* at 6.

⁶⁰⁰ Minto, *Ibid.*

societal, ecological, or economic changes. The challenge facing the Board is the complexity of issues it must address during the licensing process. This complexity creates a need to contain information within a simplified and mechanized procedural system. The structured legal framework is designed to receive the information regarding the water resource in a particular manner. The decision-makers must consider how the water will be utilized and the effects of industrialized mining processes upon the quality and quantity elements of water, while being bounded by the regulatory objective to conserve water for the “optimum benefit” of all Canadians. Yet, the flexibility in the tribunal’s administrative law forum allowed the Board, through new information and questions from intervenors, to amend a license during the hearing process. In the end, while the Board’s function is defined by a rigid legal structure bounded by administrative law principles and creates a mechanized form of water governance; the Board’s decision-making is deemed flexible and responsive to environmental protection values.

10.4 The Accommodation of Emergent Change

Prior to the commencement of the public hearing, the Board member interviewed anticipated two issues would prevail at the hearing: 1) the financial amount of the security bond to cover the decommissioning and reclamation plan (DRP) and 2) the issue of liability. However, at the hearing, the Board discovered a lack of up-to-date information on the DRP because the Department of Energy, Mines and Resources (EMR) approval process was still outstanding (the process was scheduled to be heard later in September 2012 and again, in June 2013). Thus, during the hearing, this preconceived conflict of the security bond dissipated quickly and the Board illustrated its ability to respond to change or changing scenarios. In response, the Board incorporated a condition

into the existing licence requiring the proponent to submit an updated version of the DRP in June 2013, when the information would become available. The Board also considered the SFN's submission that DRP process should be reviewed in a public forum and added that all stakeholders should be provided an opportunity to review and comment on the DRP.⁶⁰¹ Finally, the Board prescribed specific issues to be included in the updated June 2013 DRP.⁶⁰²

In sum, the eco-resiliency element of surprise considers how decision-makers in an administrative process respond to new and changing information. Before the commencement of the Minto license amendment hearing, the Board expected the primary issue would be the amount of the security bond. During the public hearing, the focus of the administrative process quickly shifted away from the security deposit and towards the consideration of technical aspects of the mining operation, non-compliance problems and the need to update the licence. In effect, this element of surprise⁶⁰³ created the space for

⁶⁰¹ Minto, *Ibid.* at 18.

⁶⁰² Minto, *Ibid.* at 18-19. The decision document states: The Board expects the requested future DRP to focus specifically on the following issues: Evidence related to cover designs and performance; Evidence related to passive treatment approaches and performance; Consideration of the effect of potential instabilities affecting the closure of waste management structures; Consideration of the long term effect of runoff and surface drainage from soils cover systems on waste management structures; Greater detail in relation to water management planning and infrastructure designs; Greater attention to contingency planning, particularly in relation to activity water treatment; Greater clarity to reclamation research requirements and plans; and Greater detail in regard to costing of security associated with the proposed DRP." In addition, the Board directed the Licensee to consider the Board's February 2012 newsletter entitled: "Licensee to review the Type A and Type B Quartz Mining Undertaking Information Package" and "The Licensee shall also refer to and comply with the conditions listed in the two decision documents related to the development of the DRP." Finally, "the Licensee agreed to undertake a Failure Modes and Effects Assessment of its proposed DRP." The Board expects the assessment to be incorporated into the DRP and to allow input from all stakeholders and the SFN in the assessment.

⁶⁰³ Numerous newspaper accounts exist discussing the positions of the parties, the uncertain nature of the technology, the Board's jurisdiction and the mining proponents desire to continue with the project. For example, CBC Online News "Water board's Carmacks copper ruling upheld" CBC News Feb. 25, 2011. Online: CBC <<http://www.cbc.ca/news/canada/north/water-board-s-carmacks-copper-ruling-upheld-1.1119258>>. Also see CBC online News "Yukon Water Board to consider Carmacks mine bid" March 3, 2010, online: CBC <<http://www.cbc.ca/news/canada/north/yukon-water-board-to-consider-carmacks-mine-bid-1.893876>>. Also see The online version of Yukon News reported on February 6, 2013 that "Copper North Mining Corp. is preparing to purchase power from the Yukon Energy Corp. for its proposed

the Board to be nimble in its decision-making and offer immediate remedies to new information. However, the Board was limited in responding effectively to the discovery of several non-compliance issues. The Yukon government is deemed responsible for the enforcement and compliance measures such as termination of the licence.

11.0 Conclusion

In this chapter, the application of the eco-resiliency governance to the Board's governance arrangement reveals some of the features of eco-resiliency. The Board's water committee arrangement promotes diversity in decision-making through the inclusion of a range of state and non-state actors. The substance of the decision documents and legal decisions display a rational and technocratic presentation of information privileging engineering science and the operational needs of the mining sector.

Within the Board, a bureaucratized and mechanized administrative state organ controls the decision-makers working within a co-management institutional framework. In this forum, the interpretation of the law is shaped by the social context and the participation of non-state actors, but is also constrained by tenets of administrative law that organizes the processing of information in an orderly format. Understanding how this heterogeneous group informs the final decision is difficult, as decisions are made in a closed-door meeting. The transparency of the decision-making process is limited to a review of the final decision documents. Thus, an insight into how these diverse decision-makers shape the outcome in practice remains unattained.

Carmacks Copper mine. The mining company and Yukon Energy have signed a letter of intent to negotiate a power-purchase agreement." online: Yukon News <<http://yukon-news.com/news/yukon-energy-prepares-to-power-carmacks-copper>>.

Essentially, the Board's governance arrangement and decision-making exhibits the features of eco-resiliency. This co-management model is entrenched within an administrative law framework that creates the space for the decision-makers to receive information, evidence, amend a water licence, and ask questions. The regulatory space exists for the regulatee and the interveners to present evidence and to raise questions, but they must wait patiently for the Board to collectively reach a decision, which is made within the sanctuary of the Board's meeting room. This empirical research of administrative tribunal raises challenges to the governance model. The first challenge is to understand how to develop a flexible environmental governance mode that can respond quickly and test new information, as demonstrated by the Board; and, the second issue, what process design mechanism (e.g., intervenor status) can be introduced to take into account the participants' views.

Chapter Six: The Voices of the Committee Members on Eco-Resiliency

1.0 Introduction

Taking into account the participants' perspectives on governing water, this comparative case-study examination of water committees is focused on questions of who decides and, how decisions are made in these committees. When governance is conceptualized as a decision-making process and the public policy sector under consideration is water, one wonders how decision makers take into account the substantive content of the subject matter — aquatic systems. In these governance experiments, is it reasonable to expect a committee member to incorporate ecological change in her decision-making?

The next four sections present highlights from the interviews with the water committee members, offered as way of exploring the interplay between the theory of environmental governance and its practice. Does theory inform governance practice? If not, can it or should it? The presentation and organization of participants' responses to eco-resiliency framework begins with a discussion of water committee's ability to be responsive to ecological change then moves to the four features of eco-resiliency. These voices represent the dominant patterns that emerged from the eco-resiliency framework analysis. The committee member's responses were analyzed to examine the presence of the four features of eco-resiliency in the governance mode and to consider the role of the state in environmental water protection. Part Six offers a synthesis of the research, discussing the problems plaguing these localized governance models.

2.0 The Committee's Responsiveness to Ecological Change

In the natural resources management literature, an adaptive governance regime exists if decision makers are responsive to changing environmental conditions. This research

demonstrates a limited form of adaptive governance. The findings in Ontario and Alberta reveal how the provincial government and industry interests (including legislatively defined tasks and deadlines) constrained the committee's ability to be responsive to ecological change.

Contrary to Ontario and Alberta, the Yukon Water Board participant responded “Yes! Yes! Yes!” — the decision-making reflects local environmental conditions:

depending on the evidence or traditional knowledge [presented], we have our textbooks, we have our statutes, we have our regulations that are broad and basic but, at the end of day it's going to be specific problems and specific solutions. So, all the reports are bringing us the best new science that's out there but we're evidence based with what's in front of us.⁶⁰⁴

In this Board member's view, the water license is localized by the characteristics of the water use, water problem, solutions, and scientific evidence presented to the tribunal. Together these factors support how the licensee can be responsive to the local watershed conditions.

In Alberta and Ontario, the research findings raise doubt on the ability of a water committee to be responsive to local watershed security issues. In Alberta, an interviewee, well versed in provincial water issues, questioned the model of water-management planning applied by the watershed planning and advisory council (WPAC) and its oversight of several water security issues:

[H]ow do I put this politely? I've always wondered why we don't have a risk management approach in the watershed planning advisory councils. In the water basin, “we have had an oil spill, we have climate change, we have population pressures, we have droughts and floods, and all of these other issues happening around us. As a Bow Basin council, we're not necessarily creating a risk

⁶⁰⁴ Interview of #15 (July 15, 2012) Interview notes at page 7.

management approach with our partners.

These comments raise doubt whether the WPAC is responsive to changing environmental conditions and prompts the question, “What is the purpose of locally based committees if the local watershed security issues are not addressed in the planning process?”

In the Ontario interviews, and without prompting, the majority of the Lake Erie Region water source protection committee (SPC) participants raised the MOE’s lack of responsiveness to local community concerns, with aggregate extraction emerging as the dominant issue. As explained by one of the three agricultural SPC committee members, *“the two sectors that more questions have been raised in the SPC are: one, the agriculture and second, the aggregate sector.”*⁶⁰⁵ The participant, when asked about the responsiveness of the SPC’s decision making to a changing environmental watershed condition, he responded hesitantly and revealed that he felt *“manipulated.”* He felt his decision-making was steered by the province to fulfill the provincial goal of conformity in the water plans rather than being directed to realize Justice O’Connor’s vision of the local planning process that is responsive to local citizen concerns.⁶⁰⁶ The participant stated:

*Good question again. I really don’t know. I don’t know how you’d answer that one no, I don’t know.... I don’t how to answer that one. Things have been ... the decision-making ... how do I put this diplomatically? We’re being manipulated so that decision-making isn’t what Justice O’Connor hoped for. He wanted basically [water planning] “by the people for the people” to sum it up, in simple terms. When we are done, most of the source protection programs across the province will have the same wording for all sectors.*⁶⁰⁷

⁶⁰⁵ Interview of #23 (Dec. 12, 2012) Interview notes at page 15.

⁶⁰⁶ O’Connor, *Supra. note 59*. Walkerton Report Two. Ch. 1: An Overview at 9.

⁶⁰⁷ Interview of #23 (Nov. 13, 2012) Interview notes at page 15.

When one of the three aboriginal SPC committee members was asked the same question on responsiveness, he emphatically responded “No – not the least!” He went on to explain how the committee’s limited mandate was responsive to the local concern over pipelines but not the aggregate extraction conflict:

Our mandate is to study the impact and report via the water plan. [The local committee] pushed the [staff] to come up with a pipeline crossing [as a local drinking water threat] with respect to the “leaks” [spills], which was a positive result [because a pipeline was added to drinking water threat list]; but, the aggregate undertaking was not [added to the list]. I voted with the [public representative] in favour of [adding] aggregate extraction as a drinking water threat but, we got pushed back to narrowing the problem to protecting [municipal] wellheads – the water source.⁶⁰⁸

Taken together, these SPC committee members’ responses point to the rigidity and political nature of the planning exercise. Effectively, the planning exercise narrowed the deliberative process to the issue of protection of the municipal wellhead. The committee’s response to the local citizens’ concerns with aggregate extraction activities (in contrast to its ability to persuade the MOE to include pipelines as the twenty-second drinking water threat for the Lake Erie Region) suggests the theory’s endorsement of an adaptive governance regime is complex and nuanced. The complicated story of aggregate extraction arising in the Ontario case study and presented below, as recounted in the comments of several SPC interviewees, is a broader conflict that appears to be mired in the wider economic development and political background briefly discussed in Chapter Three. The voices of the SPC participants involved in the aggregate extraction conflict appear next, over the next few pages.

Collectively, the participants’ comments reveal how a legally constituted water committee became politicalized, responsive to economic interests, and transformed into a

⁶⁰⁸ Interview of #22 (Nov. 27, 2012) Interview notes at page 1.

strategic instrument of the state. This story of an efficient water planning exercise begins with one of the seven public interest representatives who recounted how a local city official – Dave Belanger, the water supply manager for the City of Guelph – informed the committee of a breach of aquitard at the Dolime quarry in Guelph. His story, and others on the committee, exposes a state-centric approach to water governance. This centralized approach by provincial authorities begins with the controlling of the committee’s decision-making, the downplaying of local citizen’s concerns over the drinking water, and results in the state’s quashing of the SPC’s recommendation to add aggregate extraction to the local drinking water threat list. Belanger’s cautionary tale of the danger of the government’s policy drift to the governance mode is told by one of the public interest representatives who attended the SPC meeting and observed Belanger’s presentation:

“[A] n Ontario geological survey identified the fact that the [extraction activities at the Dolime mine had breached the aquitard.]. Thus, “one of the [drinking water] threats that we identified, as a committee, after hearing [Belanger’s presentation was aggregate extraction – that is,] the quarrying that’s going on at the Dolime Quarry.”

The “Ontario geological survey identified that fact that the [company’s extraction activities] are removing the aquitard. [In the meeting, Belanger opined] that this should not be taking place because the aquitard is protecting our [City of Guelph] aquifer, which is our prime source of drinking water. [The threat is the possibility of contamination of the water in the aquifer] because as soon as the quarry closes, if the aquitard has been removed, then the surface water that has accumulated in the quarry pit [commonly called the quarry pond] will be in contact with the ground water [in the aquifer], which can contaminate the aquifer; so, [its important] to prevent contamination of the aquifer waters.”

“But, the MOE did not see this as a [significant drinking water] threat. So, [even though] the source protection committee identified this a threat and passed a resolution saying it [aggregate extraction] should be included in the list of [local drinking – like the pipeline issue] threats. The committee was responsive to the changing environment but the MOE

wasn't.”

In fact, “the [manager] came back to the source protection committee and presented the information again and I believe it was in December 2010 meeting. It was clear that the quarry [management] had not changed their behaviour at all. They were still mining the aquitard and there was lots talk about it where the MOE had asked them to present a management plan to either the City or the MOE which the MOE would approve and share with the City. The management plan still has not been approved. So, nothing has been done about this situation and it continues to get worse. You can tell they're mining the aquitard because its different part of the rock...you can over there and see that there's some darker rock piling up...that's the aquitard.”⁶⁰⁹

The foregoing commentary, when read with the next interview passage, reveals a perception of the CWA, 2006 as a restrictive legal instrument imposing limitations upon the committee.

One of the SPA staff members, whose role on the committee was to facilitate the planning process and report back to the SPC with policy documents, hinted at not only the political nature of water planning but also how the protective drinking water function combined with limitations of the Act shaped their decisions. He explained in his interview how the committee felt constrained by the CWA:

“[I]t's kinda tricky because a lot of what we do with respect to the Clean Water Act [CWA] is to provide additional protection for municipal drinking water. A lot of the work we do is framed through the Act so there's not a lot of leeway in terms of what we could include or not. There was obviously decisions around in the beginning that we put forward to a committee ... there are mandatory items but there's also optional content. We make recommendations to include some of the options. It's mandatory to address significant drinking water threats. It's optional to address moderate and low drinking water threats. So, at this first round, we look at significant threats and we basically just put those moderate and low threats addressing those to a later round of planning...but, we essentially stayed on track because of timing and resources.”⁶¹⁰

Feeling restricted by the legislation and specifically, the legislatively prescribed twenty-

⁶⁰⁹ Interview of #30 (Dec. 14, 2012) Interview notes at page 6.

⁶¹⁰ Interview of #24 (Nov. 19, 2012) Interview notes at page X.

one drinking water threats, was a theme raised by another public interest representative, who had extensive professional experience with municipal planning issues:

“The committee did ask the Ministry to add aggregate extraction as a significant drinking water threat...We did identify the areas, it was the region of Waterloo, Guelph and the County of Brant where we felt that it could be appropriate... what we have tried to do is to insure that the activities are dealt with as best we can such as fuel storage and other on-site activities. Under the Clean Water Act, they identified, I think it’s 21, specific things that can be considered as significant drinking water threats. Aggregate extraction was not one of those. So, only activities that would fall under those [21] items identified under the Clean Water Act can actually be addressed and those are the more limited activities in terms of the policies that we can develop. I think it is fair to say, we tried to work around it.”⁶¹¹

These limitations of committee were viewed as a governance problem.

One of the SPC public interest members not only commented on the limitations of the committee’s decision-making but also inferred that the committee was impotent, controlled by the MOE, and sadly, had failed to achieve a localized planning process, as envisioned by Justice O’Connor. In his view, the aggregate extraction problem is:

“a governance issue. The committee really can pass whatever it wants to, and the MOE can disregard it. So that it [MOE] is not controlling or managing water at the local watershed level the way Justice O’Connor envisioned it. We identified the threat that was not on the [legislatively prescribed] threat list and tried to get the MOE to recognize it and change their list of twenty-one prescribed threats.”⁶¹²

In his interview, he further explained, the two-fold root problem (i.e., administratively and philosophically). The MOE had designed a process where the 21 drinking water threats had been identified prior to bringing the water-source protection committee (SPC) together. However, the province had raised the expectation in the minds of the committee members that local concerns would be addressed when raised in the committee. In

⁶¹¹ Interview of #20 (Nov. 1, 2012) Interview notes at pages1-2.

⁶¹² Interview of #30 (Dec. 14, 2012) Interview notes at pages 2-3.

practice, the manner in which the planning process was steered by MOE meant local concerns appeared to be arbitrarily decided. In effect, Justice O'Connor's mandate in the Walkerton Inquiry to set out a local planning exercise directed at soliciting local citizens' concerns became an aspirational notion rather than operational result, leaving the committee member feeling frustrated:

So, "I think [the problem] is an administrative issue" – "it's partly the process and partly the administration of the source protection program. The process problem is that MOE held workshops to identify threats long before the SPC started their work. So, they came up with this list of threats and, at the time, they said 'they may not be inclusive... there may be other threats that we haven't identified and there may be other threats down the road, and if so, if a source protection committee identifies some we will include them' ... is what they [MOE] said. However, when our source protection [committee] identified this particular threat, they refused to recognize it ... and,

I see their logic... it is not a threat right now... it's a potential threat. It is only going to be a threat when the quarry unplugs their pumps and stops dewatering.

However, that's not what the source protection committee is about – it about prevention. So, I found the whole process very, very frustrating."

"I think, philosophically, the MOE did not understand the intention of Justice O'Connor's report. The government passed the Clean Water Act, which asked the MOE to set up these source protection committees. It's very clear that water should be managed on a local basis by local expertise with local input, So, here you have Dave Belanger, the City's hydrogeologist saying we have a problem... that's local expertise...you have the local source protection committee saying we've identified a threat... that's local management but at the provincial level, it was overturned and that's how you run into problems when you don't have local control of the watershed... To be clear, we're [SPC] trying to manage the watershed on a watershed basis, the province is managing it on a provincial basis saying aggregate extraction is not on our list of threats province wide."⁶¹³

This commentary reveals a state-centric approach to governing where the MOE's control of the process and, specifically, the Ministry's administrative steering of the drinking

⁶¹³ Interview of #30 (Dec. 14, 2012) Interview notes at pages 3-4.

water threat issue from afar diminished localized participation in the planning exercise. The training workshop held prior to the commencement of the SPC's work was also referenced in both comments. For one of the participants, the workshop offered an opportunity to understand the thinking of others – in effect, an early warning (risk) mechanism:

Prior to starting my work at the SPC, “the first information/learning/training session I went to, a member of another SPC, I think the person was from Halden or Hamilton area asked for clarification with respect to the restriction of quarry activities. The person said: ‘you mean that we can’t prohibit a quarry by sitting on this committee? Well, that’s no good, we have to be able to prohibit them.’ So, in the early going they had gotten on the committee, it appeared to me, just because they had one purpose, which was to prohibit a quarry in a certain area.”⁶¹⁴

This passage and the interview statements below suggest early on the process, during the identification of the twenty-one drinking water threats in the Region and, importantly, prior to the commencement of the SPC's work, the MOE had solidified its' perspective on aggregate extraction. A position seemingly in line with the industry perspective, recognizing the industry's importance to the province's interests of economic development. This committee member responded “Yes,” as an industry representative, he was concerned with adding aggregate extraction as a threat:

“[it] would directly impact our industry and if there’s an understanding what the industry is and understanding of what it does, there may be areas where you don’t want some activity in it. There are some activities that are loosely associated with pits and quarries, like an asphalt plant for example, that should be set aside and looked at completely on its own. But, for a quarry on its own, there has been a lot of studies showing that other than storage of fuel...(we checked obviously to be very careful) that there isn’t anything else going on in the operation that is going to affect the ground water or drinking [water sources] or other waters.

But, it [aggregate extraction] wouldn’t be popular local opinion in some areas so that [in] those cases the MOE would have to take a provincial

⁶¹⁴ Interview of #31 (Dec. 19, 2012) Interview notes at page 4.

line.”...In my view, the provincial line is concerned with pathways. The MOEs characterization of pathways would be different in clay [soil conditions] as opposed gravel conditions and it [comes down to] the time and the movement of a chemical to a water source. The MOE set out the framework and there was little, if any, local involvement in that so they set up the framework so they steered the local involvement if you will, which isn't bad.”⁶¹⁵

“It's good because the committee and conservation authorities are highly influenced or composed of local politicians and sometimes local pressure may cause them to put forward a decision or take a position without even, frankly without knowing the fact. So, the MOE had to set guidelines and sometimes take the hard line to make sure that the provincial interest was maintained and you didn't have a local committee over-riding a local interest.”⁶¹⁶

In the end, these interviews reveal a reluctant provincial government. A government agency, backed by industry support, was reluctant to take into account local citizens' concerns on the issue of aggregate extraction. Taken together, the foregoing comments indicate the committee's hotly debated resolution to add aggregate extraction to the SPC's local drinking water threat list was dead in the water before the committee even rendered its vote on the resolution.⁶¹⁷ This interview data suggests that, as this aggregate conflict was unfolding at the SPC, the provincial government was in conversation with the quarry owners – thus, demonstrating the relational features of the responsive regulation's compliance/enforcement pyramid. These interviews reveal the MOE had solidified its position before the commencement of the SPC's process: it did not view aggregate extraction as a local threat. The MOE failed to formally share this position with the committee until the last SPC meeting (December 2012) several years later, leaving community members with a sense of frustration with the water management planning process.

⁶¹⁵ *Ibid.* Interview notes at page 3.

⁶¹⁶ *Ibid.* at page 4.

⁶¹⁷ See Appendix “B” – The SPC minutes where the final resolution is set out.

As described by one of public interest representatives, the *Clean Water Act* is a rigid document. In his view, the legislation was a good starting point for the first water plan. He also commented on the nature of the legislation, its rolling (update) rule and legislatively imposed timeline that would together allow the plan to be updated and completed:

“The Clean Water Act, in itself, is not a flexible document. But, I think it was probably a good place to start because what it did was, it gave a framework within which you could achieve certain objectives within a specific timeline. The Act also provides for a review of the plans after a maximum of five years and one of the opportunities that I think the committee has and will take advantage of, is to identify things that are still not yet done and other things that need to be addressed in the future.”⁶¹⁸

To conclude, in practice and as managed by government officials, the water governance mode in Ontario and Alberta is not responsive to ecological change. In Ontario, the *CWA* is not an ecologically responsive instrument. In Alberta, a participant expressed a similar sentiment of a lack of responsiveness. The WPAC respondent raised concerns whether the local water committee could be responsive to an oil spill, climate change, droughts, and floods. The participant called for “creating a risk management approach with our partners.” In contrast, in the Yukon, the Water Board member perceived the administrative tribunal proceeding as responsive because the process provided for the presentation and questioning of experts, leading-edge science and results that were localized to the environmental conditions in the watershed.

3.0 Eco-Resiliency Framework – The Flexibility Factor

3.1 Introduction: Flexible Governance Regimes

Governance scholars contend collaboration based upon consensus creates a fluid

⁶¹⁸ Interview of #20 (Nov. 1, 2012) Interview notes at pages 1-2.

procedure and opens the process to new ideas and, possibly, new solutions, as well as exposes the “limits” of the existing regulatory.⁶¹⁹ A governance mode moves the decision-making process away from the rigid, and prescriptive nature of the command-and-control regulatory style towards a “softer” process.⁶²⁰ This softer, supple collaborative process “loosens [rigid regulatory] requirements to allow for communication, fluid participation, and consensus-based deliberation,” which may foster “a more flexible attitude toward reaching decisions.”⁶²¹ Generally, these “collaborative arrangements are...described as consensus processes.”⁶²²

Structurally, in the governance mode, the design of the problem-solving process is premised upon collaboration, and the group’s decisions are developed through, and decided upon, by relying upon the principle of consensus. Procedurally, the meaning of consensus can be open for the group to define before commencing the collaborative process — often, varying from group to group — and can, be set out in both legal regulations and administrative procedures. Thus, when a diverse group of individuals come together to collaborate on a problem and rely upon the decision-making principle of consensus, it should be expected that their understanding of the meaning of consensus could differ.

In arranging regulatory spaces based on collaborative arrangements, legal scholars should take heed of Karkkainen’s contention — lawyers need to pay attention to the procedural justice issues that arise in these processes. In his view, lawyers must understand the nuances of consensus. He holds, as a procedural justice mechanism,

⁶¹⁹ Freeman, *Collaborative Governance*, *Supra* note 80 at 69.

⁶²⁰ Lobel, *Renew Deal*, *Supra* note 92. at 310.

⁶²¹ *Ibid* at 311.

⁶²² B.C. Karkkainen, “Collaborative Ecosystem Governance: Scale, Complexity, and Dynamism” (2001-2002) 21 Va. Env’tl. L.J. 190 at 239.

consensus might offset the effects of regulatory capture. In his view, lawyers should be encouraged to present critical questions on the nature of consensus based decision-making rules and processes.

Karkkainen's caution is timely given the recent policy drift to a regulatory governance model and the potential for particular regulatory interests to prevail in the process and the need to examine the power relations amongst the participants. His call to examine more deeply collaborative decision-making arrangements frames this analysis of the participant's interview data. In all three cases, under examination in this dissertation, even though policy documents, provincial directives and regulatory instruments existed to guide the participants and decision-makers on the meaning of consensus, these research findings revealed the participants' lack of awareness of the regulatory or soft-law instruments setting out the definition of consensus. The participants' lack of awareness of the legally constituted meaning of consensus points to an implementation problem. Karkkainen's argument that the nuances of meaningful consensus in the context of a collaborative mode of governance require further study – and, holds in this research.

In the next few sub-sections, flexibility in the decision-making process is presented as revealed by the patterns that emerged from the interview data. In particular, the participants' notions on the meaning of consensus, a flexible legislative toolbox, and the state's role in water protection. The participants' comments also offer insight into the practice, the problems and possibilities of these legislative governance experiments.

3.1.1 Flexible Legal Frameworks: The Participants' Comments on the Meaning of Consensus

On the issue of an overarching rule to direct the decision-making process, environmental

governance scholar Karkkainen asks, “If local decision-making is no longer hierarchical but collaborative, what decision rule should govern the [collaborative] process?”⁶²³ All three local collaborative water-governance committees examined in this dissertation relied upon consensus as the primary decision rule. However, how does a committee member understand the meaning of consensus?

These research findings demonstrate an implementation problem regarding the execution of the consensus decision-making principle as set out in provincial policy directives and regulatory instruments. As the heated debate at the Alberta WPAC meeting demonstrated, the meaning of consensus is elusive, as the meeting participants’ presented definitions derived from an Internet search rather than the definition set out in the administrative manual. During the interviews in Alberta, the interviewees’ were unable to offer a definition of consensus. This inability to define consensus was surprising because the debate over the meaning of consensus had just occurred at the previous day’s WPAC meeting. One would presume the debate was still fresh in the interviewee’s mind. At the end of these BRBC interviews and similar to the interview results in Ontario and Yukon, the meaning of consensus remained undefined by the participants.

Defining and achieving consensus was also an issue of inquiry for the Alberta Water Council (AWC). The AWC’s Report entitled: “Shared Governance – What We Heard Workshop Summary Report (2008)”, presents survey results of participants, asked about the implementation of consensus under the shared (partnership) governance model at the WPAC level.⁶²⁴ These survey findings revealed support for consensus. However,

⁶²³ Karkkainen, *Supra* note 622 at 240.

⁶²⁴ Alberta Water Council, “What We Heard Report: Summary of Findings of the Shared Governance-Watershed Management Planning Workshops, Shared Governance and Watershed Management Planning Project Team (February 2008), online: AWC

the Report raised a concern with the committee's ability to achieve consensus, considering the size of a WPAC. The AWC survey participants expressed the view that achieving consensus in a WPAC of "300 members" is "unwieldy."⁶²⁵ The workshop results left open the participant's interpretation of consensus. The current membership of the BRBC - WPAC is over 200 members, and it is reasonable to expect that the perception of achieving consensus might continue to be viewed as unwieldy; given the large number of participants who may hold different and, perhaps, competing views with respect to water use in the river basin.

Perhaps, in this research, the interviewees' inability to define consensus exhibits a policy/information overload. One of the Ontario SPC industry participants raised information overload as a concern. He responded to the question regarding information needed to make informed decisions during the planning process: "*I think, if anything, [the SPC] had information overload.*"⁶²⁶ His response points to the possibility committee members have too many documents to review and too little time to read the stacks of paper, leaving them unprepared to discuss the issues in the committee. After all, these committee members are volunteers. A danger of this information overload is committee members may acquiesce to others' opinions and align their views to the dominant perspective without striving to achieve consensus in the committee. Establishing the decision-making criterion and its principles, for example, consensus, is a critical step in a multi-party negotiation process and is considered a hallmark of a principled approach to negotiation theory.⁶²⁷

<<http://www.albertawatercouncil.ca/LinkClick.aspx?fileticket=kQ1a4ehGpII%3D&tabid=133>>.

⁶²⁵ *Ibid* at 11.

⁶²⁶ Interview of #31 (Dec. 19, 2012) Interview notes at page 5.

⁶²⁷ R. Fischer, W. Ury & B. Patton, *Getting to Yes* (New York: Penguin Group, 1991).

The participants' inability to define consensus or describe the decision-making principle is problematic as it signals a form of "policy without law" playing out in these collaborative governance arrangements. Political Science scholars Sousa and McGrory-Klyza contend these "new collaborative approaches present us with this problem of policy without law: ad hoc choices made by administrative agencies in the absence of clear [legislative] guidance."⁶²⁸ For legal scholars, a public policy question is underpinned by a common presumption the policy or in this case, the water plan or licence, is bounded by law set out in the legislation and its regulation. In this research, we see a policy document (water plan) developed without the backing of law. A danger exists these decisions, which are subsequently embedded into a water plan, might be subject to a criticism of arbitrariness.⁶²⁹

To conclude on consensus, in theory, collaborative governance fosters a robust dialogue and a fluid problem-solving process premised upon a consensus decision-making rule. In practice, in all three cases studies, a definition of consensus had been provided for in either a soft-law document or explicitly in the regulations. However, implementation of the consensus principle as crafted by legal instruments eluded the committee members. These findings reveal that decision-making based on consensus, while crafted in a collaborative setting of the water committee in the case of Ontario and Alberta, is not representative of the meaning of consensus as set out in the law. This finding points to a procedural implementation problem in these collaborative arrangements. In the Yukon case study, the committee members conducted their

⁶²⁸ D.J. Sousa & C. McGrory Klyza, "New Directions in Environmental Policy Making: An Emerging Regime or Reinventing Interest Group Liberalism" (2007) 47 Nat. Resources J. 377 at 408.

⁶²⁹ My thinking is informed by: Sousa, *Ibid.* and G. Schubert, "Policy without Law: An Extension of the Certiorari Game" Stanford Law Review (March 1962) Vol. 14 No. 2 284; G.C. Harzard, Jr., "Justice Marshall in the Medium of Civil Procedure: Portrait of a Master" (1991-92) 80 Geo. L.J. 2063.

decision-making “in chambers” -- a closed-door proceeding – making it difficult to discern or describe the practice of consensus.

3.1.2 The Flexible Governance Toolbox

In this research, all three case studies illustrate an implementation problem with the responsive regulatory theory’s premise of applying a range of regulatory instruments. In *Smart Regulation*, Gunningham, Grabosky, and Sinclair’s compliance/enforcement model recommends the use of a mix of regulatory tools to foster a flexible response to noncompliant regulatory behaviour. Regulators pursue compliance by escalating up the three-sided punitive enforcement pyramid, choosing from a toolbox of regulatory strategies and instruments. With the regulatory shift to management-based regulation, firms gain flexibility in achieving regulatory goals by way of developing internal standards and self-regulating management plans.⁶³⁰

Contrary to Gunningham *et al.*,’s promotion of a mix of regulatory tools, the majority of respondents when questioned on the use of a range of regulatory tools, the interviewees referenced the legislation as a whole and could not name any tools prescribed by the legislation. For example, the Yukon Water Board participant responded by quickly naming the Water Act and briefly referenced “*compensation*” as regulatory tool. He tempered his words by adding few individuals “*come to the Board to file the evidence*”⁶³¹ for compensation to be considered. While a Board member may consider a range of available legislative tools, the respondent’s first thought turned to compensation, without further consideration of other tools.

⁶³⁰ N. Gunningham, “Environmental Law, Regulation and Governance: Shifting Architectures” (2009) 21:2 Journal of Environmental Law 179 at 189-92; S. Wood, “Environmental Management Systems and Public Authority in Canada: Rethinking Environmental Governance (2003) 10 Buffalo Environmental Law Journal 129.

⁶³¹ Interview of #15 (July 5, 2012) Interview notes at page 3.

In the practice of developing a water plan in Alberta and Ontario, none of the participants interviewed referenced any specific tools offered in their governing legislation. Rather, the participants named the legislation as a whole. For example, in Alberta, a typical response referenced the name of the legislation but not necessarily an understanding of the range of legislative tools: *“Environmental Protection and Enhancement Act and the Water Act [both] deal a lot with water management activities and the Municipal Government Act.”*⁶³² Similarly, in Ontario, when asked to name any regulatory tools or techniques that could be relied upon to address the dilemma (aggregate extraction) raised by the participant, the SPA interviewee responded, *“Not as it relates to the Clean Water Act, no ... there are other existing planning and approval tools.”*⁶³³

Taken together, the foregoing commentary from all three case studies suggests an implementation problem with the responsive regulatory theory’s premise of using a range of regulatory instruments. This empirical data indicates the participants were aware of the legislation, but their responses suggest they were unaware of the range of regulatory tools available under the legislative framework, which points to both implementation and capacity-building problems. In short, in their view, their regulatory toolbox is empty. Conceivably, this empty toolbox highlights a danger where a committee member may resort to narrow-minded decision-making focused upon the administrative tasks – rowing activities rather than acting as a steering decision-maker, who considers wider environmental impacts.⁶³⁴

⁶³² Interview of #11 (June 14, 2012) Interview notes at pages 6-7.

⁶³³ *Ibid.*

⁶³⁴ Freeman, *Supra* note 80 at 12. Consideration was given to Jody Freeman definition of “meaningful participation” in a collaborative governance arrangement, which is defined as: “enables the contributions of

3.1.3 *The State's Role*

The inflexible practice of participatory governance revealed in this research turns the inquiry to the state's role in fostering "a flexible, engaged agency."⁶³⁵ Governance scholar Freeman identifies a flexible agency as one of five characteristics of collaborative governance. In her view, a flexible agency takes on the role of facilitator of the collaborative process and, through incentives, encourages "participation, information sharing and deliberation."⁶³⁶ The state regulator also contributes by building the capacity of participants through the provision of "technical resources, funding and organizational support."⁶³⁷ In all the case studies, the regulatory body encouraged some form of participation, sharing of information, discussion, and organizational support. This engagement, however, was limited to the information the agency sought to gather, resulting in a closed-loop system of engagement. Thus, flexibility in the decision-making was restricted because the organizational support was directed at collecting input from the committee members on predetermined water management issues the provincial authorities deemed important.

In these governance experiments under examination, the regulators exhibited a weak form of flexibility in responding to changing information. In all three case studies, the state through a legislative framework provided for a legally defined institutional setting, including the procedural means to organize and to gather information, as suggested by Freeman. In Ontario and Alberta, the collaborative water committee was limited by the policies imposed by the government. In contrast, the Yukon Water Board,

the most affected parties to be *institutionalized* and gives them some responsibility for the regulatory regime. By "institutionalized," I mean that participation should be an ongoing feature of the decision-making process."

⁶³⁵ *Ibid.*

⁶³⁶ *Ibid.* at 11.

⁶³⁷ *Ibid.*

an administrative tribunal, demonstrated a stronger form of flexibility, through the presentation and testing of the evidence, and in particular, in responding to the evidence that the heap leach was untested technology. In the end, it is difficult to describe the Alberta and Ontario water committees as flexible and engaged agencies.

Consequently, this research illustrates the organizational behavioural problems underpinning the shift to a governance mode from a command-and-control implementation style. For example, the Ontario case study reveals the difficulty of moving away from a state-centric mentality limits the ability to be transformed into a flexible agency. For legal scholars, the challenge is to understand whether regulatory regimes can be designed to take into account organizational behaviour theory and the challenges of organizational change.

3.2 Eco-Resiliency Framework: The Diversity Factor

3.2.1 Introduction

Diversity concerns the composition and inclusiveness of the water committee. Devolution of water governance to a local watershed and river basin increases the participation of citizens, business and associational groups, and other non-state actors that often represent local community interests. *Regulatory pluralism* describes this increased participation by non-state actors (civil society, business) and the decline of the state in the regulatory process.⁶³⁸ Presented below, the interviews expose the nuanced practice of water governance, presenting a complex picture of water governance, beginning with a discussion the legal composition a water committee then, who is a water committee participant?, Who has influence in a committee? Who's voice is missing? And, finally, how the diversity of thought fosters learning in a committee?

⁶³⁸ Grabosky, *Supra* note 5.

3.2.2 Diversity: What is the composition of a water committee?

All three legal frameworks under study in this dissertation construct a pluralistic regulatory space. As examined in the Ontario case study chapter, *O. Reg. 288/07* identifies a diverse range of stakeholders, setting out the requirement a 1/3 split between four identified stakeholder groups: 1) municipal; 2) agricultural, commercial or industrial including small business; 3) environmental, health, and other interests of the public; and 4) First Nations. Through this legal instrument, the composition of source protection committee (SPC) establishes a heterogeneous decision-making body inclusive of state and non-state actors.

The literature presents a pragmatic perspective of who participates based on leadership and execution. Larson and Lach contend the implementation of the committee's product requires the inclusion of "opinion leaders and other influential parties should be engaged in the planning and related activities,"⁶³⁹ which may or may not hold true in practice.

In practice, at the SPC in Ontario, the decision-makers at the planning table represented key interests in the watershed and professionally, had been or continued to be affiliated with an association that informed their perspective at the policy table. Even the public interest representatives' backgrounds (i.e., Municipal Councilors, Commissioner of Planning, Water Manager) related to municipal, land-use planning and water-management expertise, suggesting expertise and knowledge of municipal water concerns were the criteria for selection rather than a demonstrated personal interest in local watershed issues. The heavy concentration on a municipal background for the public

⁶³⁹ K.L. Larson & D. Lach, "Equity in Urban Water Governance Through Participatory, Place-Based Approaches" (2010) 50 Nat. Resources J. 407 at 410.

representatives further suggests, perhaps, their involvement might create alliances and inroads with the affected municipalities in order to “increase support for outcomes and facilitate implementation”⁶⁴⁰ of the water plan, as suggested by Larson and Lach. This research leaves open whether a local resident without a professional background affiliated with water management or a municipality would have been considered an appropriate candidate for the public interest representative category.

In contrast, as discussed in the Alberta case study chapter, a soft-law approach directs the composition of the watershed-planning advisory council (WPAC). In this case, the *Enabling Partnership Report* does not define the BRBC’s (Bow River Basin Council) composition. The Report’s vague identification of stakeholders (“several individuals, groups, agencies, Aboriginal and municipal governments”⁶⁴¹) creates a conundrum regarding the composition of the water committee and frames the question: “What constitutes a WPAC?”⁶⁴² The WPAC is a fluid, collaborative committee that has grown over the years to the present capacity of over 200 members. The difficulty of bounding and characterizing the WPAC by stakeholder identification and *the Water for Life’s* partnership concept leaves the water committee’s organizational identity and functional boundaries ambiguous.

In the Alberta Water Council’s “*Shared Governance – What We Heard Workshop Summary Report*”, the WPAC’s “operative body” is portrayed as open-ended.⁶⁴³ In this report, the workshop respondents raised a concern regarding the organizational architecture of the WPAC: “What is the operative body of a WPAC? Is it the Board of

⁶⁴⁰ *Ibid.*

⁶⁴¹ Alberta’s *Enabling Partnership Report*, *Supra* note 415 at 8.

⁶⁴² Alberta Water Council, “What we heard Report?”, *Supra* note 624 at 8.

⁶⁴³ *Ibid.* Specifically, the workshop participants asked the question: what is the operative body of the WPAC?

Directors, committee or the entire membership?”⁶⁴⁴ This dissertation continues to ask the question: What constitutes a WPAC? The answer remains undefined and a mystery.

3.2.3 Diversity: Who is a Water Committee Participant?

Notionally, localized governance is premised upon the participation of those individuals who work, live, or spend their leisure time within the community.⁶⁴⁵ These individuals are often referred to as *stakeholders* – they have stake in the issue or problem under consideration. In Ontario, one of the seven public interest representatives described his participation, as an observer:

*“As a public interest representative... I think I watched more I think decision-making varied considerably [on the committee]. Like industry representatives, they were there to present [the industry’s] point of view. The municipal representatives are presenting what their councils want them [to say]. And, public interest representatives, like me... are more broadly based in our perspectives and trying to present and represent what is good for the general public and future generations.”*⁶⁴⁶

This statement reflects a role of observation combined with an expectation each individual will present an expected narrative aligned with his or her interest group.

Research suggests stakeholder groups often show “strikingly similar demographic and attitudinal characteristics” that may create political alliances and power imbalances at the water committee table.⁶⁴⁷ In her California-based urban water-management research, Wessells’ research demonstrates how “being placed” in a water community is a key to

⁶⁴⁴ *Ibid.*

⁶⁴⁵ Larson & Lach, *Supra* note 639. These scholars “examined the ability of a watershed council, in Portland Oregon, to engage a wide variety of residents in environmental protection and decision-making.” Their research findings reveal that the “council overrepresented urban residents” “those who live new water in flood-prone areas” “new comers to Oregon” “residents with relatively high educational levels” “classic pro-environmental (biocentric) worldviews and liberal political interests. Overall, watershed council participants appear to bring a bureaucratic capacity and liberal ideology to the council that does not reflect the full array of residents in the watershed.”

⁶⁴⁶ Interview of #30 (Dec. 14, 2012) Interview notes at page 16.

⁶⁴⁷ A.T. Wessells, “Place-Based Conservation and Urban Waterways: Watershed Activism in the Bottom of the Basin” (2010) 50 *Nat. Resources J.* 539 at 540. Also see Larson & Lach, *Supra* note 738.

achieving equity.⁶⁴⁸ Wessells contends citizen participation and in particular, bottom-up activism can create political capital that coalesces to influence the decision-making process and outcomes of a decentralized water governance regime. In her view, “procedural reforms” — “who gets included in decision-making processes” — requires a consideration of how to foster “political” and “economic equity” to create not only fair access but also “ways of building capacity, solidarity and evaluative force among those with fewer material and organizational resources.”⁶⁴⁹ In this research, while the identity markers (e.g., associational group affiliation or social and economic characteristics) of the water committee participants were not collected, Wessells’ research findings should remind legal scholars that water governance is more than the placement of name cards at the policy table, as has been done in Ontario.

Nevertheless, it is notable that, the Ontario participants displayed absolute acceptance of the identity of their fellow participants. All the participants interviewed appeared to accept the limits of procedural access without question. Who “gets to decide” in the planning exercise was not in question. The participants interviewed did not raise concerns with equitable access, political capital, collective-alliances (coalitions) and did not offer a critical perspective of the selection process.

Similar to Ontario, none of the interviewees in the Alberta BRBC case study commented critically on the participants’ ability or recognized they might suffer from “group think.”⁶⁵⁰ Generally, the participants viewed the committee as being “*inclusive* –

⁶⁴⁸ *Ibid.* at 554. Wessells described being placed as: “To be or to become “placed” entails collective, endeavor-oriented, spiritual dimensions. Being “placed” is key to greater equity.”

⁶⁴⁹ *Ibid.* at 542-43.

⁶⁵⁰ I.L. Janis, “Chapter 15: Groupthink: The Desperate Drive for Consensus at Any Cost” in J. Shafritz, J. Ott and Y. Jang *Classics of Organizational Theory* (Boston: Gale/Cengage Learning, 2015).

to allow people to be heard, to obtain the right information and get people engaged.”⁶⁵¹

Another BRBC participant viewed participation in the planning exercise as a “*voluntary process, nobody is compelled to be members of the BRBC.... There must be a fairly held view that there is value added in participating with us ... and getting into one of those seats at the table.*”⁶⁵² In other words, as volunteers, this study participant viewed participation in WPAC as beneficial.

Perhaps the benefit offered to the participants is gaining an understanding of others’ perspectives. Similar to Hutter and Jones’ research findings where the governance mode was found to create an opportunity for business representatives to be exposed to the viewpoints of others, this research also offers a similar finding of the creation of an early warning system. In identifying the civil society and private sectors as two sources of regulation, regulation scholars Hutter and Jones argue the *government to governance* shift can be understood by commercial entities’ risk-management practices. Their research found firms are influenced by numerous external forces that affect their “risk management practices” and “shape the motives and preferences of internal workings,” thus, directing “what managers acted on.”⁶⁵³

In practice, a long-term administrative BRBC member expressed a similar sentiment of the industry sector’s gathering intelligence to understand its risk tolerance. This risk management approach allowed the business community to be exposed to the views of other stakeholder groups creating an early “warning system”:

“like any other organization there’s voices that I wouldn’t call them dominant voices they’re loud voices and powerful voices and we have very good input from the big players (i.e., big licence holders: City of

⁶⁵¹ Interview of #09 (June 13, 2012) Interview notes at page 8.

⁶⁵² Interview of #11 (June 11, 2012) Interview notes at page 15.

⁶⁵⁴ Interview of #13 (June 14, 2012) Interview notes at page 19.

Calgary, TransAlta, an electrical company and three irrigation districts) because they're interested in what others are thinking. And, we have pretty good turn out of environmental groups and the environmentally interested general public. The big players...the big [water] licence holders like to hear what those people are say because we're almost like an early warning system to what's kinda of going on and what's on people's minds and so forth. So, I think, it's a pretty good spectrum. I would say really strong adversarial environmental groups kinda do their own thing. And, we are fine with that. There's a big role out there for adversarial groups and there's a big role for what we do in collaborative way – sorta, like let's find a solution group.”⁶⁵⁴ And, as we expanded from a group of “49 members in 2000” to the current WPAC membership of “over 200”⁶⁵⁵ “more people come and tell you about things they know.”⁶⁵⁶

In addition to industry's intelligence gathering, this foregoing statement also points to a danger where group norms and similar perspectives bar outside perspectives, perhaps “more adversarial” or radical voices, from entering the planning forum. The prevailing cooperative sentiment of the group may explain the collegial environment (or symptoms of group think) and lack of dissent I observed at this research site (and, in the other two committees.)

Taken together, the participants' perspectives on who is a stakeholder or participant on the Ontario and Alberta committees paint a picture of a volunteer whose place at the table is either prescribed by the regulation (Ontario) or is unrestricted (Alberta). These individuals see their position as voluntary. As volunteers, they come to the table to offer information on the river basin or watershed that aligns with either their personal, professional, or associational views and, through the committee, are governed by the group norms established within the process and by the group. Their ascribed role and identity as committee member represents a particular policy position to the larger

⁶⁵⁴ Interview of #13 (June 14, 2012) Interview notes at page 19.

⁶⁵⁵ Interview of #11 (June 14, 2012) Interview notes at page 15.

⁶⁵⁶ Interview of #13 (June 14, 2012) Interview notes at page 22.

committee that is anticipated and respected within the group and constructs a particular identity (municipal advocate) on the committee. After all, their role as a water committee member is to offer their expertise and provide information. This information giving-and-gathering informs policy development, and the gathered information can be taken back to their constituency or associational alliance acting as an early warning system that a risk to their existing water use may be percolating beyond the water committee.

3.2.4 Diversity – Who is the decision-maker?

Theoretically, participatory governance is premised upon gathering the insights of a diverse range of actors. Often, the engagement of these affected communities is structured upon establishing a partnership relationship.⁶⁵⁷ Gutrich *et al.* view a partnership “as a dynamic relationship among actors, based upon mutually agreed upon objectives, pursued through an understanding of division of labor based on respective comparative advantage of each member.”⁶⁵⁸ The literature now regards developing “partnerships and co-operative” forms of environmental governance as a worldwide trend.⁶⁵⁹ Gutrich *et al.* insist this participatory partnership trend reflects an upward push from interests groups, citizens, and other decision-makers demanding access to policy decisions.⁶⁶⁰ Partnerships are specifically referenced in the Alberta case study and, in particular, as a key organizing principle of the *Water for Life Strategy*. In this empirical research, Alberta’s partnership trend presented as a division of labour where the decentralized water committee is charged with developing the water plan that in effect is

⁶⁵⁷ P. Ryan, “Sustainability partnerships: eco-strategy theory in practice? (2003) 14(2) Management of Environmental Quality 256.

⁶⁵⁸ *Ibid.*

⁶⁵⁹ J. Gutrich, *et al.*, “Science in the public process of ecosystem management: lessons from Hawaii, Southeast Asia, Africa and the US Mainland” (2005) 76 Journal of Environmental Management 197 at 197.

⁶⁶⁰ *Ibid.* at 198.

“a decision support tool” for the province.⁶⁶¹

Another BRBC member described the division of labour or partnership relationship between province and the WPAC in the planning function, as difficult to characterize. This BRBC member viewed the province’s operationalization of the partnership principle as offering a mixed message; yes, the province supports the freedom to draft a water plan but then it also asserts control when a WPAC policy is out of line with provincial interests. This WPAC member acknowledged ordinary individuals at a “grassroots” level as a key feature of the partnership model but also expressed frustration with the state’s lack of direction and engagement:

“The whole purpose for building a water partnership approach to river basin management is to be able to engage the grassroots. [But], it would be helpful to have a little bit more participation from the provincial government or direction from the provincial government in terms of area of focus.”⁶⁶²

The province “should be inviting a process of back and forth” communication; listening, understanding and discussing what are the issues facing each basin and what are the priorities of government. We are not quite there yet.” The province has designed the process backwards. The province “spawned the WPAC community in Alberta, now the province really needs to understand [the tension between] what to do to let loose [at a WPAC scale] and how can it can control the [WPAC] by giving the [committees] the right protocols, planning frameworks and levels of authority. Unfortunately, I think they got it a little bit backwards because we’ve already finished establishing the committees and most of us have planning underway and now they’re coming out with guiding documents to reign us in.”⁶⁶³

Generally, while the state encourages participation in decentralized planning, as set out in the theory, this research demonstrates, in practice, a provincial authority disinterested in

⁶⁶¹ Interview of #11 (June 14, 2012) Interview notes at page 3.

⁶⁶² Interview of #09 (June 13, 2012) Interview notes at page 4-6.

⁶⁶³ *Ibid.*

the details of the local planning process (i.e., committee's rowing activities).⁶⁶⁴ Yet, when the water plan initiative contradicts provincial interests, the provincial authority steps in and curtails the proposed action plan. For this committee member, increased two-way communication between the partners (i.e., the province and WPAC) could rectify this problem. While this policy exercise seems to promote an exchange of information at a local level and to higher-level partners, in essence, the partnership principle facilitates provincial oversight and control, as the decision-maker.

Overall, as discussed in the literature, a democratic process that ensures equitable participation of citizens is a concern in a collaborative process.⁶⁶⁵ In these legislative governance experiments, ensuring procedural justice mechanisms in the process did not present as an issue for the participants. In the interviews, none of the interviewees expressed doubt with respect to the efficacy of their perspective or the lack of representation of the public interest. In addition, as professionals and experts in their fields, these participants happily brought their expertise to the policy exercise and appreciated the opportunity to question the substantive content of the policy documents produced by the environmental ministries. As participants, they viewed their roles as offering assistance and fulfilling a substantive informational role for the state. The democratic deficit critique offered by the literature was irrelevant to these committee members. This research exposes the lack of awareness of procedural justice issues and the need for further research to fashion an appropriate mechanism(s) to measure and achieve procedural justice in these water committee, an inquiry beyond this research.⁶⁶⁶

⁶⁶⁴ R. Eversole, "Community Agency and Community Engagement: Re-theorising Participation in Governance" (2011) 31(1) *Jnl. Publi. Pol* 51.

⁶⁶⁵ *Larson & Lach, Supra.* note 639.

⁶⁶⁶ For example, J. Caddy, "Evaluating Public Participation in Policy Making" (2005) online: OCED

3.2.5 Diversity: The Voices of Influence

This research confirmed the dominance of the provincial government and the industry sectors in the Alberta and Ontario water committees. In contrast, all the parties to the administrative tribunal under study – The Yukon Water Board – their voices were heard and their concerns taken into account in the decision document.

In the Yukon case study, it seemed clear to one Water Board participant all voices were heard:

“We hear them”. In the Keno decision, for instance, “we heard their submission. They had their written submission. We took it into account but at the end of day many of their issues were beyond our jurisdiction. Really, it’s just noise.... Now, having said this, we understand their concerns...and we suggest that they limit operating heavy equipment if it near a suburban area...let’s say 11:00 at night to 7:00 am. So, [w]e understand the problem, your sympathetic, but at the end of the day you have to work within the authority that you’re given under your statute.”⁶⁶⁷

In other words, individuals receive the opportunity to present their arguments and evidence. However, further research is required to understand whose voices are privileged in the process and enabled by the legislation?

In the Ontario case study, the Ministry of Environment (MOE), the Conservation Authority and the Industry representative — aggregate extraction — not the local citizens, were the voices of influence. One of the SPC agricultural representatives suggested that for a citizen to influence the committee, the presenter would have to present a rational, science-based presentation. The interviewee described the committee’s expectation of a presentation to the committee as:

“...a science-based form from an accredited source.” We had one member of the public who has repeatedly made submissions to the committee regarding the aggregate issue. “She’s been on her high horses all along.

<http://www.keepeek.com/Digital-Asset-Management/oecd/governance/evaluating-public-participation-in-policy-making_9789264008960-en#page11>.

⁶⁶⁷ Interview of #15 (July 5, 2012) Interview notes at page 11.

*She has... hmmm... an axe to grind... her own agenda. We receive her [submission] and we file it. So, if somebody wants to put something forward, it has to be from a reputable company." It must be "science-based and put forward in a proper format and it will be looked at. It hasn't happened too many times."*⁶⁶⁸

This commentary suggests a citizen needs to present as an expert, with a science-based presentation.

Even with a expert persona projected onto a layperson, the SPC Chair seemed perplexed by the lack of public participation suggesting the presence of a selection bias or issue myopia occurring:

"Originally, the [water source protection authority (SPA)] thought we probably going to have quite a few delegations but I'd say that we had five delegations and most of them who were coming, were on issues like the quarries that are really not part of our [legislative] mandate. I mean some people think they should be but they're not. The 21 issues are described and so the people who were coming were the wrong people.

They were coming talking about quarries. Quarry issues seem to be the big things that were bothering people. We were polite and accommodating enough to let them speak at the end of the meeting and assured them that we would record their concerns but explained to them that we didn't have the ability to do anything about that because we had letters. It's in the back of the great big book...the letter that Lori and I signed and wrote when the SPC had concerns about breaching the aquitard [in Guelph] and the response from the Ministry was that it was not one of the SPC items. Now the general public has difficulty perceiving that and I can agree... share their concerns but when it's not part of our mandate, there's nothing the SPC can do about it...but, pass on their concerns.

*Most of the issues were quarry related and water taking regarding water bottling but we didn't have more than half a dozen of those. One or two year maximum... we didn't get a lot of public participation coming to the meetings. I mean the public had opportunities to come and we held open houses and we had all kinds of things but at the actual [SPC] meetings themselves we had very few delegations."*⁶⁶⁹

While the dominant issue of concern for local citizens was aggregate extraction, the

⁶⁶⁸ Interview of #23 (Nov. 13, 2012) Interview notes at page 25-26.

⁶⁶⁹ Interview of #26 (Dec. 20, 2012) Interview notes at page 23.

foregoing statements illustrate this issue was legislatively barred from being considered at a SPC. The legally constituted drinking water threat list narrowed the water management planning process into an enumerated classification system of drinking water threats, which further narrowed the thinking of water committee members. This narrowing effect created a frame for the provincial authority and committee members to receive, to process and to deny concerns of local citizens.

Though citizen participation was anticipated in the design of Ontario's SPC water committee, the public stayed away. Freeman contends, unlike industry groups, the public's lack of participation should be expected. In her view, the public may lack the resources or technical, scientific, and legal knowledge to participate. Moreover, a citizen or citizen group's ability for a sustained commitment may be hampered by their ability to continue in the process. Also, a role conflict may present as result of their need to establish "the public-private divide."⁶⁷⁰

Although the theoretical premise of collaborative governance is based upon citizen participation, these research findings demonstrate citizen involvement is complicated by the legislation and the persona of presenter. In Ontario, a citizen's presentation must be presented in science-based expert format and fall squarely within one of the twenty-one prescribed drinking water threats. Otherwise, as I observed, the committee members would respond by smiling politely, noting the citizen's concern, and then, promptly dismissing the issue, as the committee quickly moved forward to draft the water plan.

These research findings point to an apathetic attitude towards citizen or public interest participation. The Conservation Authority (i.e., the source protection authority

⁶⁷⁰ Freeman, *Supra* note 82 at 76.

(SPA) or the MOE) did not step back and investigate why citizens were not engaging in the overall process. Rather, the SPA stayed focused upon its administrative tasks – locate the twenty-one drinking water threats in the watershed, complete the water plan, and meet the legislatively imposed deadline.

Unlike the public, the MOE and the SPA were the dominant voices influencing the public law-making exercise. Some of the SPC members described the MOE liaison representative, not an official member of the committee, as being too influential while other committee members found the MOE representative to be helpful. For example, one of the public interest representatives described “working with our liaison from the Ministry of the Environment [has been good]. She has an understanding of where we are coming from. She’s been a very good resource for us.”⁶⁷¹ In contrast, another committee member emphatically stated that he “didn’t agree that [MOE representative] should be there [at the SPC meetings] at all.” In his opinion, she had “too damn much” influence: *“To be frank, I’ve thought all along that how can you have a decision-making process when your decisions are in Toronto before you are home [from the SPC meeting]?”* This member’s view characterizes the MOE liaison representative’s role as gathering real-time intelligence on the SPC process, delivering the information to the Ministry headquarters in Toronto for it to be processed and re-packaged into a Ministry policy or directive to be delivered to the SPC at the next meeting by the SPA.

Committee members also viewed the SPA staff as a strong influence in the decision-making process. The original aggregate extraction committee member stated, *“I don’t think you can underestimate the effect and influence that the staff had on things that are presented to the committee because on the overwhelming majority of cases, the*

⁶⁷¹ Interview of #20 (Nov. 1, 2012) Interview notes at page 7.

committee went along with the staff's point of view.” This statement exposes the SPA’s steering of SPC process with the MOE’s influence in the background. Perhaps, this insight also explains how a strong MOE presence and SPA direction at the meeting ensured the planning process stayed on course.

In sum, while the diversity of participants, their interests, and knowledge was envisioned as vital aspect of the process, the MOE liaison representative, who effectively operated as an information mechanism at service to the province, was a dominant voice. These findings indicate the acceptance of the MOE’s liaison representative on the committee was mixed. The notion of diversity, as an incentive to encourage the public’s participation, is aspirational. In the end, the SPA, MOE and industry players exhibited the strongest voices in the committee. Together, these state actors controlled and narrowed the administrative planning tasks to align with the enumerated drinking water threat list rather than fostering a local planning process, where the public could participate, as envisioned by Justice O’Connor in the Walkerton Inquiry Report.

3.2.6 Diversity - The Missing Voices

In all three case studies, First Nations voices were missing. Specifically, the Yukon Water Board member indicated indigenous knowledge had not been taken into account “because they don’t come forward. If they did, we would give a strong weight” to their knowledge. He further explained:

“by and large, they don’t come forward, by and large, they got a side with the company and so... they don’t want...there are copyright issues here. They don’t want people to know where those berries are [located]... you know where they’re getting their medicine from... they want that protected. So, they’ll make a deal with the company that we will never know. Once it’s out there, [as result of a public hearing] it’s on our web

page and everyone knows about it. So, as a result we don't get indigenous knowledge.”⁶⁷²

In this participant's view, intellectual and cultural property issues, including concerns with the lack of confidentiality in a public process, limits indigenous knowledge being brought to the committee.

An Alberta BRBC administrative member expressed concern at the lack of Aboriginal peoples' participation on water committee. He explained, First Nation participation:

“has not been very successfully addressed [in our WPAC]. This is an extremely complicated issue. There's all kinds of legal requirements that I'm not very familiar with ... duty to consult sorta of issues. And, it's very difficult for us to comprehend exactly how we fit into that. The provincial government has, at various times, claimed what they believe is their right to consider any discussions that to on between a WPAC and First Nation as being potentially mandated consultation. We indicated that we don't like that idea...we don't think it is fair. It has been an impediment in us having those discussions with First Nations. For good or bad, they're reluctant to come to our table and have even informal discussions around planning and watershed issues in the presence of fear that whatever they say may be considered binding by the provincial government.... We understand their reluctance and we're frankly pretty helpless at being able to do anything.”⁶⁷³

As did another committee member who also viewed First Nation participation as complicated by “legal interventions” and the “duty to consult.”⁶⁷⁴ Together these two responses, point to how a legal rights perspective and the provincial position (i.e., on consultation) are barriers to aboriginal participation on the WPAC.

In contrast, in Ontario, three First Nation representatives held seats on the SPC. Together, the legislatively constituted place cards at the policy table — including their presence at a meeting — was deemed by other SPC members to be active participation.

⁶⁷² Interview of #15 (July 5, 2012) Interview notes at page 12.

⁶⁷³ Interview of #11 (June, 14, 2012) Interview notes at page 10-11.

⁶⁷⁴ Interview of #13 (June 14, 2012) Interview notes at page 25.

One non-aboriginal member succinctly stated: “[M]embers of the First Nations are part of the committee, [they] do participate regularly at the committee meetings and have been supportive of the development of the source protection plan.”⁶⁷⁵ Another non-aboriginal committee member expressed disappointment in the attendance of the First Nations representatives. His statement reflects a lack of understanding how governance issues at an Indian Band level might affect their attendance record. Moreover, his statements also hint at an underlying attitude of assimilation where the interviewee expressed a desire to see aboriginal interests align with dominant societal views. The SPC member stated, “*that he was disappointed in their attendance*” on the SPC. He continued to explain that he understood “*they were included from the very start; with three seats at the table and there has only been one that has, in my view, that has made a consistent attempt to attend. We’ve had two or three different ones and they’re seldom there. And, that’s too bad.*” When asked why he thought they did not attend the meeting on a regular basis he cautiously stated:

*“Boy I better be careful here ... I sense that, as many, many other things, First Nations communities don’t really value and respect, if you like, what mainstream society is trying to do around various matters whether its land claims or whether its protecting water supply.”*⁶⁷⁶

Offering insight into an aboriginal perspective of water source protection, one of the First Nations representatives interviewed presented a holistic perspective of water source protection. His perspective, as he explained, is informed by the teachings from elders often told through stories, stories that are sacred and kept within the community,

⁶⁷⁵ Interview of #20 (Nov. 1, 2012) Interview notes at page 1.

⁶⁷⁶ Interview of #19 (Sept. 27, 2012) Interview notes at page 14.

stories that, I, as the researcher, did not push him to share.⁶⁷⁷ Rather, in the interview, he offered the following explanation of his holistic perspective:

“Like the typical native person... elders, traditional people ... whatever ... on reserve. They never thought of it as ok ... there’s a well here, a zone around [it that] should be protected. They never thought of things like that. They didn’t set up these protection zones or Whoppas or IPZs [like the SPC planning process has created]. When we did our [process] ... it was like we need to protect all water ... surface water, ground water whatever it is because somebody’s gotta use it ... an animal, a bird, a person... they should all be treated the same.... We have some ideas how they were going to do it back then and I say well... we can still keep ours the same way, it’s separate so that’s the we left ours. We “dropped the word ‘source’ off our plan. It’s not source protection it’s just water protection. I think this is a pretty good example of how [we] think differently.”

“When I do a scientific project ... like a water study or putting in a water well ... I would go to the Elder and say this what I am working on, what do you think? Any advice? Are there sources of Indigenous knowledge or ceremonies to be considered? If the Elder provides advice then I incorporate it into the whole strategy. But, I need to be careful how I present the Elder’s advice in public so I don’t go into details. I just say [that] I consulted with an Elder.” Typically, I am asked the name of the Elder. [The Elder’s advice given through stories] “they they’re gifts and that you don’t talk about it publically... We are not supposed to talk about our [stories] publically or to write them down so it’s...the oral part...that is supposed to be respected.”⁶⁷⁸

Over the two-year observation period of the SPC, I did not observe this committee member raise this holistic perspective of water source protection. Rather, he revealed his perspective in the private setting of our one-to-one interview.

Overall, non-aboriginal committee members expressed frustration with the inability to engage with First Nation communities, as was the case in Alberta. In Ontario, the participants revealed an expectation that a legislatively prescribed place card at the

⁶⁷⁷ Leanne Betasamosake Simpson “Theorizing Resurgence from with Nishnaabeg Thought” in J. Doerfler et.al., *Centering Anishinaabeg Stories: Understanding the World Through Stories* (East Lansing: Michigan State U Press: 2013) at 287.

⁶⁷⁸ Interview of #28 (Dec. 20, 2012) Interview notes at page 24-26.

policy table constructed the appropriate space for aboriginal participation. Even though the SPC committee had met for over several years, the participants' comments exposed the collision of different worldviews.

In this planning process, time and space are compressed to ensure the completion of the administrative tasks. Over the lengthy planning period, the committee, as a whole, revealed an inability to nurture the time and space to uncover the epistemologies embedded in the decision-maker's colonial ways of knowing. Instead, a form of "cognitive imperialism" emerged where aboriginal peoples are viewed as lacking knowledge.⁶⁷⁹ The existing knowledge technologies embedded in the provincial government's planning functions were privileged in the watershed-management planning exercise. In effect, First Nations' identities were eroded by an embedded colonial knowledge perpetuated in the technocratic and risk-oriented water-planning process. In practice, the static, institutional watershed-planning structure preserved colonial knowledge. These findings illuminate the need to consider committee participants' cultural competency and their ability to engage in a cross-cultural collaborative regulatory space.

These findings also reveal an adversarial legal rights perspective predominates and can act as a barrier to the participation of Aboriginal communities. As this rights perspective becomes entrenched in the natural resources sector, strained relations will continue to frame the engagement, distance parties and reinforce dominant perspectives in water-source planning. Collaboration purports to promote diversity of thought and the inclusion of range of viewpoints and, perhaps, leads to a disruption of institutionalized frameworks. However, the de-colonizing of regulatory methodologies, and the

⁶⁷⁹ *Simpson, Supra.* note 677. at 280.

introduction of new ways of negotiating a governance problem through indigenous knowledge and law remains an elusive goal in the governance mode.

3.2.7 Diversity – How is Knowledge Production and Learning Experienced by the Participants?

Information exchange is emphasized in the governance arrangements under study. Governance scholars, Van Kersbergen and Van Waarden contend participatory governance arrangements facilitate learning and knowledge production, at both an individual level and beyond the group.⁶⁸⁰ In their view, these “knowledge-based” policy exercises are information exchanges between experts operating within expert “governance networks.”⁶⁸¹ These networks allow for information and knowledge to be expressed, relied upon, and re-considered. Kersbergen and Van Waarden contend expert knowledge “is fed into the policy making arenas, including public media... These new forms of technocracy ... also serve as a mechanism of mutual learning.”⁶⁸² These scholars propose this idea of an information exchange where information is generated through continuous feedback loops of experimentation, monitoring, learning, and adjustments of knowledge.

Technocratic knowledge production prevailed at Ontario’s SPC planning process. Knowledge production and information feedback loops on the aggregate extraction issue was expressed by one of the public interest representatives as occurring: “[when] the issue [Guelph quarry] was identified, it was referred to [SPA – Conservation Authority] staff for further information and recommendations, staff came back with Ministry of the

⁶⁸⁰ K. Van Kersbergen & F. Van Waarden, “‘Governance’ as a bridge between disciplines: Cross-disciplinary inspiration regarding shifts in governance and problems of governability, accountability and legitimacy.” (2004) 43 *European Journal of Political Research* 143 at 162; Wood, *Supra* note 630 at 131. Wood discusses “knowledge production” in the context of the design or value of the voluntary management systems as “generating and disseminating ideas, information and expertise.”

⁶⁸¹ *Ibid.* Van Kersbergen & Van Waarden.

⁶⁸² *Ibid.* at 162.

Environment (MOE) recommendations saying its outside of our jurisdiction and it was the end of the issue.”⁶⁸³ In this statement, the SPA and MOE’s bureaucratic policy-making process provides for the identification of an issue, the exchange of information between staff and the committee, followed by the province’s production of a final decision, which is then directed to the committee.

On the point of individual learning, the aggregate industry representative stated the diversity of interests around the planning table assisted him in understanding different perspectives on the Guelph quarry issue:

“I didn’t understand the specific concerns on the Dolime [Guelph] quarry, they [municipality and the public representative] thought they were digging too deep and getting into the actual supply of the Guelph drinking water supply so ... I didn’t know that was the concern and that was ... ya ... was news to me so I learned because that is a specific [problem]... that came out of a learning thing.” I think what the [MOE] is saying ... if there’s a quarry and it’s not breaching the aquitard that is part of the drinking water [MOE] is not dealing with that one.” So, “understanding [occurred] and increased understanding of the other side.”⁶⁸⁴

Similar to the theory, these findings demonstrate how the exchange of information led to the understanding of different viewpoints and allowed for individual learning of a specific concern at the Guelph quarry.

This research affirmed individual learning and the hope for group learning as benefits of participating in the committee decision-making process. In Ontario, the public interest representative learned first-hand about water problems facing Aboriginal communities when he attended the SPC meeting held at the Six Nations First Nation and listened to the Chief. He also showed individual learning when he said he was reminded of the Aboriginal Seven Generations perspective, and, further expressed hope for a

⁶⁸³ Interview of #30 (Dec. 14, 2012) Interview notes at page 13.

⁶⁸⁴ Interview of #31 (Dec. 19, 2012) Interview notes at page 17.

broader learning experience for the wider group:

“[T]he Chief mentioned that they take a seven generation perspective and it was important not to think about what’s going to happen today but what’s going to happen to our grandchildren’s – grandchildren. It was not new to me but it was refreshing to hear... to be [reminded] and for the committee to hear that [perspective].”⁶⁸⁵

Taken together, these comments affirm the literature’s discussion of knowledge production and forms of learning through information exchange and dialogue occurring at the policy table.

Overall, these research findings on diversity point to the law’s contribution in creating a pluralistic regulatory space through a legally established committee. While learning and knowledge production occurred in these governance arrangements, the participatory aspect of these governance experiments revealed regulatory pluralism as an early warning system. Moreover, the role of the non-state actors as surrogate regulators, as argued by Gunningham *et al.*, is limited in these committees. The participant’s volunteer role became one of a privileged government informant, privileged because the voluntary participants were selected and, as an informant these participants provided needed information to allow the province to understand and manage local watershed conditions and concerns. Within these committees, the government actors emerged as the dominant voices drowning out the voices of Aboriginal communities and the general public representatives. In end, the promise of diversity to enhance a public policy function through inclusion, the diversity of thought and learning was featured in each legal framework. However, the implementation of regulatory pluralism through the participation of non-state actors not only revealed the province’s need for information but also exposed its limitations.

⁶⁸⁵ Interview of #30 (Dec. 14, 2012) Interview notes at page 1.

3.3 Eco-Resiliency Framework: A Broad Perspective Factor

3.3.1 Introduction

A broad eco-resilient factor refers to the scale of governance (i.e., local, regional, national and transnational) regime with consideration given to the presence of polycentric governance and the presence of a coordinating mechanism that can take into account multiple jurisdictional scales. Farber and Freeman offered their “modular” environmental regulation model as a coordinating function addressing regulatory fragmentation.⁶⁸⁶ This modular model advances the “idea” of “provisional and functional rearrangement of units” with the advancement of a “flexible co-ordination” mechanism to overcome regulatory fragmentation.⁶⁸⁷ The aim of modularity is to construct ad hoc “institutional arrangements” aligned with the environmental problem and the potential solutions.⁶⁸⁸ Their research highlights the inherent complexity of addressing regulatory fragmentation that is hampered by “different mandates, [organizational] cultures, management structures and budgetary priorities [that present] significant challenges for co-ordination.”

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The preceding case study chapters examined the legal frameworks’ broad perspective. At the Yukon Water Board, the regulatory management of water licensing showed a broad perspective when the Board’s decision document revealed consideration of a coordinating approval process with the Yukon Environmental and Socio-Economic Board (YESEB) and Yukon Government’s Department of Energy, Mines, and Resources

⁶⁸⁶ Freeman & Farber Supra note 208.

⁶⁸⁷ *Ibid.* at 798.

⁶⁸⁸ *Ibid.* at 799.

⁶⁸⁹ *Ibid.* at 813.

(EMR). However, a coordinating mechanism was not found in either the Alberta or the Ontario case study.

A member of the Alberta BRBC, with a membership of over 200 members, reveals a sophisticated understanding of the barriers to creating an inter-jurisdictional coordinating mechanism in a localized water-management planning exercise. One of the interviewee's responded to the question, Can you tell me about your experience about how the [BRBC] council addresses overlapping jurisdictional issues?":

*"Ya...we've certainly noted it as a challenge. ... I suspect it is in almost every watershed that the topographical, geographical environmental boundaries that make up a watershed are not at all aligned with or poorly aligned to the geo-political boundaries of municipalities and provinces. So, there is without question, overlapping jurisdictions both vertically, if I could say it that way ... referring to federal, provincial and municipal governments and also horizontally with any specific municipal or provincial government layer and the fact that there may be instances where different departments in the provincial government have different ideas on how things should be done. For example, wetland protection; the Alberta Environment department demands the recognition of the natural capital of wetlands and the protection of wetlands. But, the Energy or Agricultural departments promote the notion that siting a gas or oil well in a wetland is an option because the land and oil resource is not taken out of production as could be a possibility under a wetland protection policy. A contradiction exists."*⁶⁹¹

This foregoing commentary shows a tension between the economic development and the environmental protection mandates of the different departments. As discussed by Farber and Freeman, these different mandates are expected to present as a challenge of interagency co-ordination. Furthermore, this respondent commented on the conflict between the natural features and the imposed administrative boundaries of the watershed. Together these challenges, which presented at this local water management planning scale, illustrate how a WPAC is trapped within its jurisdictional silo.

⁶⁹¹ Interview of #11 (June 14, 2012) Interview notes at page 9.

In this research, the study participants from the Yukon Water Board and Ontario's SPC offered responses similar to the Alberta respondents', highlighting the pervasiveness of the jurisdictional co-ordination mechanism challenge and the presence of a regulatory fragmentation barrier. Specifically, the short response from the Yukon Water Board member to the question on over-lapping jurisdiction reveals a hands-off perspective: "We haven't" dealt with it. Upon reflection, he offered an example for clarification: With *"First Nations with over-lapping claims and how we deal with it is we will hear from both First Nations.... It's not our job to get into the politics or under legal interpretations as to who's what. So, we have submissions from both First Nations."*⁶⁹²

In Ontario, several SPC participants also commented on the challenge of jurisdictional co-ordination. One member of the SPC explained his response to the jurisdictional barrier by offering three examples. In particular, the committee member discussed the Port Stanley (Lake Erie) intake pipe's proximity to shipping lanes in the Great Lakes and the concern regarding the potential contamination from shipping activities; First Nation water issues; and, the Melancthon Mega Quarry conflict in the Credit Valley, Toronto and Region and Central Lake Source Protection (CTC) jurisdiction. On the shipping issue, the participant described the committee's response: *"We [SPC] very quickly came to the conclusion, well...shipping lanes and the Great Lakes is a federal jurisdiction issue, we don't need to deal with that period."* On the interconnected ecological boundaries of the broader watershed with the CTC jurisdiction and the mega-quarry conflict, the SPC placed greater emphasis upon the administrative jurisdictional boundary of their Lake Erie SPC and isolated itself from the abutting CTC

⁶⁹² Interview of #15 (July 15, 2012) Interview notes at page p 4-5.

SPC.⁶⁹³ With regard to First Nations, a participant's stated: the "[Lake Erie SPC] "put blinkers on saying [First Nations] that's not our jurisdiction; or in the other case, [the Mega quarry] it's outside of our boundary."⁶⁹⁴ Similar to the other SPC participants' responses to this question of jurisdictional co-ordination, this participant's comments highlight the SPC's efficient response to jurisdictional issues: it's not our jurisdiction so, let's move on to the next administrative planning task.

Overall, in all three case studies, examining the element of a broad perspective exposed the immense challenge of jurisdictional co-ordination. This finding of jurisdictional fragmentation points to a weak version of Freeman and Farber's modularity in these participatory governance arrangements. The administrative jurisdictional barrier exposes the constitutional constraints imposed upon these committees and reinforces the acceptance of the regulatory fragmentation as a constraint. Instead, these committees remain tethered to the traditional legal question of jurisdiction. This traditional approach is expected to impede a broad perspective of water issues and planning recommendations, which will further act as a barrier to the implementation of interagency co-ordination processes and innovative regulatory solutions.

3.4 The Emergent Change Factor

3.4.1 Introduction

Emergent change directs decision-makers to consider the unpredictability embedded in the water governance problem and challenges the committee's ability to respond quickly

⁶⁹³ CTC Source Protection Region, "Amended Source Protection Plan: CTC Source Protection Region" (July-August 2014)," online: CTC <http://www.ctcswp.ca/wp-content/uploads/2014/07/CTCAmendedProposedSPP_20140719.pdf>. The CTC Source Protection Region spans from the Oak Ridges Moraine in the north to Lake Ontario in the south. The region contains portions of the Niagara Escarpment, Oak Ridges Moraine, Greenbelt, Lake Ontario and the most densely populated region of Canada.

⁶⁹⁴ Interview of #30 (Dec. 14, 2012) Interview notes at page 9.

to change. In this research, the strongest form of emergent change presented in the Yukon case study. Through the Water Board's process, the tribunal entertained the element of surprise by way of taking account of new information. In the Carmacks Copper Ltd decision, the Board demonstrated an ability to receive new information and experts regarding the uncertainty and the unproven nature of the heap leaching technology.⁶⁹⁵ In the Minto license-amendment hearing, the Board again demonstrated responsiveness to new information. Before the meeting, a Board member anticipated the primary issue would be financial amount of the security bond. However, during the public hearing, I observed through the presentation of submissions and the questioning process, the Board's administrative focus shift away from the anticipated security deposit and towards the consideration of technical aspects of the mining operation that exposed numerous violations of the water use licence and the Waters Act. The Board's record and public hearing function demonstrated openness to new information – that is, surprise.

In contrast, in the Ontario case study, the water committee's ability to be responsive to emergent environmental change was limited by the legislation and the province's control over the planning process. The committee's law making was narrowed to established categories enumerated in the drinking water threat list, a perspective of public health – drinking water, and a risk-management approach to water governance.

The majority of Ontario SPC participants' comments exhibited a managed view of the watershed-management planning:

"I can't think of an example of when the committee [was being responsive to changing environmental information.] ... hmm.....so, when an issue was raised and the committee needed to determine a course of action...hmm...: I have seen the issue debated...it's often debated whether the issue is too disruptive in the process – should the issue be parked to be dealt with at a

⁶⁹⁵ Carmacks, *Supra.* note 568.

*later date... some instances have arisen when late-breaking information has come to light and question is raised: how can we incorporate this new information into either existing policies or revisions to the source water protection plans? It always comes down to weighing the significance of the change and the need to continue on with the [planning] process in a timely manner. Right!...So, is this a show stopper that we have to halt the process and delay things or is this something that we can put into a parking lot and we can still get this thing [i.e., water plan] through in a timely manner and address this little detail at some future point.*⁶⁹⁶

This comment illustrates a theme of a managed process responsive to internal institutional goals.

In Alberta, one of the BRBC participants offered a similar insight into the bureaucratic mechanics of how the committee responds to new environmental information. When information “*comes to the board as new information*” ... *we need to decide if it is “something that we need to take action on, we’ll then figure out if there is a way we can do something within our priorities and whether it is something we need to look at right away.”*⁶⁹⁷ In other words, an inward organizational focus is adopted where fitting the problem into the existing administrative structure reveals an issue selection bias. The system is static rather than a fluid, changing, or responsive regime. In the end, new or emerging ecological information was not incorporated into the committee’s final regulatory product – the state of watershed report.

Taken together, these decision-makers may debate the issue, but the SPC’s decision-making protocol, like the BRBC’s approach, is to first ask the questions, “Does the problem fit into the existing policy regime? If not, can we park the issue for future consideration?” This efficient processing of information raises concerns whether the committee would respond to climate change research indicating both water quantity and

⁶⁹⁶ Interview of #17 (Sept. 20, 2012) Interview notes at page 13.

⁶⁹⁷ Interview of #13 (June 14, 2012) Interview notes at pages 28-29.

quality are be affected.⁶⁹⁸ Would the response to a climate change incident be the traditional management by crisis approach?

In the Ontario case study, some respondents exhibited issue myopia, a shortsightedness in seeing environmental problems in the watershed. In response to the question, “By way of an environmental example, how did the SPC respond to emerging issues in the watershed – the element of surprise?” one of the SPC participants offered this response:

“There were no surprises. There really were no surprises because the conservation authority had a lot of data or a lot of the information was presented in some of the presentations that we had at the beginning [of the planning process.] There were no surprises in regards to any environmental issues. Now there may be some coming up now that the plan has been submitted that slipped through the cracks.”⁶⁹⁹

Conversely, another SPC participant stated, “the biggest surprise to the committee has been the aggregate” extraction issue. Typically, in the committee,

“problems are raised, we consider the information and then the matter is dealt with.... Personally, I’m supportive of what we are trying to achieve but timing has been difficult on several issues (for example, Port Stanley Harbour intake pipe issue) and the information wasn’t readily available. So, rather than sort of stop the whole plan production process, we proceeded with what we could and we will do the other part in the future.”⁷⁰⁰

Again, these foregoing comments support a managed approach to water-management

⁶⁹⁸ Ontario, “Climate Ready: Ontario’s Adaption and Action Plan – 2011-2014,” Ontario’s Expert Panel on Climate Change, online, : ABCA <http://www.abca.on.ca/downloads/MOE_Climate_Ready_ENG.pdf?phpMyAdmin>. The Report states at page 12: “The Government of Ontario recognizes that the impacts of a changing climate need to be considered in all decision-making.” And, at page 16: “A changing climate will affect both water quantity and quality. Intense rain storms and changes in the annual snow melt may cause flooding to happen more often. A changing climate may lead to reduced winter ice cover on lakes, lower lake levels and more frequent water shortages due to higher temperatures and increased evaporation rates. In the Great Lakes, a changing climate is expected to cause lower water levels, exacerbate other stresses such as habitat loss and pollution, and increase problems with excess algae growth and invasive species infestations. Climate change may cause changes in water temperature in Lake Simcoe, affecting commercial fisheries and further accelerating the growth of aquatic plants caused by high phosphorus loading.”

⁶⁹⁹ Interview of #29 (Dec. 14, 2012) Interview notes at page 16.

⁷⁰⁰ Interview of #20 (Nov. 1, 2012) Interview notes at page 2.

planning by the committee where controversial issues were parked for future consideration reinforcing the MOE's institutional goal of completing the water plan.

The Yukon participant offered a similar view of managed information but stated Board was open to receiving new scientific information by way of the public hearing procedure:

“[W]e will work with the best science available [presented to the Board in a public hearing] and all those expert reports we take a look at the footnotes and the bibliography it's quite extensive. The science keeps on evolving. [As I recall], I think on the Western Copper decision we got into studies from, I think, a university in Washington State, so we will get scientific research from a university thrown at us and...unless someone disagrees with it, then we will work with it. So, in the public hearing, you have this evidence, it stored on our secure website” for future reference.⁷⁰¹

In sum, all three case studies illustrate a closed system focused on the completion of legislatively assigned administrative tasks. While the collaborative governance arrangement is premised upon diverse participation, where it is expected new information will be brought to the table, the Yukon Water Board, an administrative tribunal supports the element of surprise – that is, responsiveness to new information. Interestingly, in this research, the governance experiments – the BRBC and SPC – exhibited features of a closed system focused on an efficient completion of their administrative tasks. These decision-makers came to the planning table fitted with metaphorical blinkers that focused their attention on the administrative tasks, limited the scope of their vision, and directed their sight on the finish line: completing the end product – the water plan or watershed report.

⁷⁰¹ Interview of #15 (July 5, 2012) Interview notes at page 16.

4.0 Synthesis Of Findings: The Limitations Of These Legislative Experiments

4.1 Regulatory Capture

This research supports the dominant theme in the environmental regulatory literature of regulatory capture. Regulatory capture is “the effective control or domination of regulatory mechanisms by the interests who are the object of regulation.”⁷⁰² As argued by Wood, Tanner, and Richardson, the permissive “consultative style” of regulation in Canada allowed regulatory capture by industry to prevail.⁷⁰³

In this research, the aggregate extraction conflict in the Ontario case study exemplifies a danger of regulatory capture. Unknowingly, the SPC small business representative hinted at the presence of regulatory capture when he described how the wording of the SPC’s assessment report policy was reviewed first by the industry and then revised by the MOE to support the industry’s position. For this business SPC member and his industry, it was important that the policy was “*worded properly*” to reflect the difference between “*agricultural source materials*” and “*non-agricultural source materials*.” He discussed the steps he took within and outside the committee to begin the dialogue with the ministry officials:

*“I spoke in the committee and it was decision of the committee” that I first “meet with the staff.” “I met separately outside the committee with some of the staff to have some of the wording reworked and changed to fall more into line where then I got support from the rest of the agricultural sector on the committee and support by the committee for approval” of the wording change.*⁷⁰⁴

The foregoing statement demonstrates a consultative style of regulation as discussed by

⁷⁰² M. Minogue, “Governance-Based Analysis of Regulation” (2002) 73 *Annals of Public and Cooperative Economics* 649 at 655.

⁷⁰³ Wood, Tanner & Richardson, *Supra* note 6.

⁷⁰⁴ Interview of #29 (Dec. 14, 2012) Interview notes at page 2-4.

Wood, Tanner, and Richardson in Chapter One.⁷⁰⁵ This committee member describes his involvement in the development of a key SPC legislative document – an assessment report (s. 15 of *CWA*). The document was developed, revised, and finalized through an information exchange between the government and industry. In short, a business interest successfully pursued a form of regulatory capture through information pushing at the SPC policy-making table.

The earlier comments from the Yukon Water Board participant on the pulling back of the two levels of government and dominance of an industry perspective in a public administrative proceeding points to a danger of regulatory capture – the mining sector’s dominance of the administration of water permits. With regret, the Water Board respondent commented on the recent withdrawal of federal and provincial governments in the administrative proceeding, and he expressed concerns private interests will direct future proceedings and could shape a licensing outcome:

“Unfortunately, the Government of Canada seems to have [been] pulling back on involvement and now we had this [recent] hearing (XXX) where the Government of Yukon is not there, and they’re a major resource, and for them not be available to add to the expert opinion is lamentable. It’s sad. And, if governments continue to pull back and leave it to the private sector, I think we’re not going to get the objective⁷⁰⁶ ... we’re going to have either the hired gun for the company or the higher gun against the company and there’s not objectivity.”⁷⁰⁷

This participant’s concern regarding the stepping back of both levels of government and the opening of the door for the private sector to dominate a public proceeding is disconcerting. He viewed state withdrawal as problematic on two fronts: 1) the Board’s

⁷⁰⁵ Wood, Tanner & Richardson, *Supra* note 6.

⁷⁰⁶ *Yukon, Waters Act, Supra* note 490. To reiterate, Section 10 states: The objects of the Board are to provide for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit from them for all Canadians and for the residents of the Yukon in particular.

⁷⁰⁷ Interview of #15 (July 5, 2012) Interview notes at page 1.

inability to serve the public interest; and, 2) the Board's ability to fulfill its legislative objective: "the conservation, development, and utilization of waters in a manner that will provide the optimum benefit from them for all Canadians and for the residents of the Yukon in particular." (s.10). In short, in his view, the voices of the government are key to protecting the public interest and acting as a shield against the private interests. In effect, representation of the public interest is diminished by the lack of government participation and an insidious shift to the privatization of governance emerged.

4.2 Agency Capture

Complicating regulatory capture is the presence of a form of political or agency capture operating within the murky shadows of the Ontario SPC policy table. To reiterate, governance scholar Minoque characterizes regulation as weapon of political control that exposes the political factors shaping and controlling the regulatory process.⁷⁰⁸ Similarly, in this research, committee members described the planning process as captured by the political interests of the province where provincial economic development interests were placed before local interests – in other words, as a strategic weapon of political control.

Specifically, the aggregate extraction representative told the story of how, in early days of SPC planning process, the committee had passed a resolution to add aggregate extraction to the local drinking water threat list. He, and perhaps one other member, was the only "dissenting vote" with respect to the resolution. Even though he was the only dissenting vote at the local SPC level, the province – operating behind the scenes over many months and without updating the local SPC -- delayed a formal response, overrode the committee's decision, and refused to add aggregate extraction to the local threat list.

⁷⁰⁸ Minoque, *Supra* note 71 at 656.

The province's actions point to back room meetings and the presence of agency capture where the broader political interests of the province captured the MOE and SPA.

Moreover, this aggregate representative's commentary reveals Ministry officials (or agency capture) in pursuit of provincial economic goals. This member, who is no longer part of the SPC, described the memo the MOE finally offered – through the SPA – at the December 2012 meeting (a meeting, which this representative did not attend because he is no longer a SPC member) as factually correct. His statement reveals how the industry's position remained unchanged since his departure from the SPC (18 months earlier) and the MOE's protection of the provincial interest in the aggregate sector and the environmental ministry's role as a backstop to local decisions:

“I don't think there are any factual errors in the summary (December 2012) that I noticed. I guess to a certain extent ...I've been away 18 months from the committee and I was thinking they're still flogging a dead horse in one sense ... let it go but...so, I don't ... I don't think the answer that came out is not bad... I think the MOE protected the provincial position and stopped local interests from doing something that I don't think would've been right.”⁷⁰⁹

The foregoing commentary reveals the practice of Minoque's view of regulation as “a weapon of political control.” The MOE successfully controlled the SPC committee by delaying its formal response. The MOE announced its policy decision at the December 2012 meeting, the concluding meeting, when the ink was drying on the final water plan. In effect, the local conflict in Guelph was contained through tactics of delay and back-room political maneuvering amongst provincial ministries (MOE and Ministry of Natural Resources - MNR). On this aggregate issue, one of the public interest representatives succinctly summarized the situation: “to be clear...the province is managing it on a

⁷⁰⁹ Interview of #31 (Dec. 19, 2012) Interview notes at page 13-14.

provincial basis saying it's not on our list of threats province wide.”⁷¹⁰ In short, agency capture prevailed, confirming a state-centric approach to water governance.

When read together these two statements show aggregate extraction as a provincial interest. In his statement, the aggregate industry SPC representative explicitly characterizes the province as protecting its position. That this industry representative described his position as a dissenting view, as he was the only representative on the SPC to oppose aggregate extraction being added as a significant drinking threat, suggests the industry's interests were being protected by and aligned with the province's interests.

The aggregate representative's statement demonstrates he supports the factually correct MOE document, which he had not read because he was not present at the December 2012 (Brantford SPC meeting) meeting. This statement suggests political interests away from the policy table may have vetted the factually correct document through the association's informational networks exposing the consultative regulatory style between the business sector and the regulatory state.

In sum, the literature details an evolving skepticism of collaborative governance arrangements where “critics, including many national environmental groups, have [now] focused on accountability, authority, expertise, and capture.”⁷¹¹ These research findings reinforced this sentiment of skepticism as illustrated through the aggregate extraction conflict. The SPC committee members' comments expose the industry's regulatory capture. Moreover, the MOE's and the SPA's agency capture of the decision-making process, as the MOE directed what could and could not be discussed and limited the addition of drinking water threats affecting provincial interests and key economic

⁷¹⁰ Interview of #30 (Dec. 14, 2012) Interview notes at page 4.

⁷¹¹ Sousa & McGrory Klyza, *Supra* note 628 at 427.

interests. In short, the implementation of the *CWA, 2006* through the SPC is a complex and nuanced process. The MOE transformed the water governance regime into a weapon of political control, and where these local watershed participants felt like puppets controlled their puppeteer – MOE. The aggregate extraction example affirms the presence of both regulatory and agency capture within a localized water committee and raises further doubt on institutionalizing these collaborative governance arrangements.

4.3 Accountability for Environmental Protection

Overwhelmingly, the Ontario and Yukon respondents attributed accountability for environmental protection of the watershed to the State – their respective provincial environmental authorities. The Yukon interviewee stated, the province “*is responsible under the Yukon Environmental... Act.*” In Ontario, one of the aggregate industry representatives suggested “*the three front runners . . . could be the Ontario government (MOE), the municipalities and the conservation authorities.*”⁷¹² Another Ontario SPC member also viewed accountability as falling within the authority of the conservation authority.⁷¹³ The small business SPC representative succinctly stated, “*The ultimate buck always stops at the MOE but I think the conservation authority and the committee have had some significant input but the ultimate authority will always go back to the MOE.*”⁷¹⁴ The foregoing commentary strongly locates the accountability for environmental protection of the watershed with the state. None of the respondents hesitated in the interview nor offered an alternative perspective on how regulatory pluralism disperses regulatory power and accountability.⁷¹⁵ These limited findings from the Yukon and

⁷¹² Interview of #17 (Sept. 20, 2012) Interview notes at page 14.

⁷¹³ Interview of #26 (Dec. 20, 2012) Interview notes at page 23.

⁷¹⁴ Interview of #29 (Dec. 12, 2012) Interview notes at page 18.

⁷¹⁵ Grabosky, *Supra* note 5.

Ontario suggest these respondents continue to assign accountability for water protection to the state, thus, reinforcing the traditional role of state as guardian of the environment.

In contrast, the Alberta BRBC respondents viewed the accountability for environmental protection of the river basin as based on the shared responsibility stemming from the shared governance model. For example, a participant stated:

“Under the current partnership model, the members that come around the table to write the recommendations in the plan are responsible for implementing them. These are the folks that should be picking up the responsibility for and accountability for those aspects.” This also “includes the provincial government, and also the federal government, given the water quality objectives. Because these are voluntary documents under a voluntary policy framework in Alberta.”⁷¹⁶

This commentary expresses a shared governance model.

Reinforcing this shared governance model, Alberta’s legislative language explicitly references “shared responsibility.” The legislative objective of Alberta’s *Water Act* sets out a “shared responsibility” for not only water “use” but also “water management planning and decision-making.” Section 2.(d) states “the shared responsibility of all residents of Alberta for the conservation and wise use of water and their role in providing advice with respect to water management planning and decision-making.”⁷¹⁷ The origins of this legislative intent can be traced to the province’s water

⁷¹⁶ Interview of #09 (June 13, 2012) Interview notes at page 19.

⁷¹⁷ The history of the *Water for Life Strategy* is set out by the government at: Alberta, Environment and Sustainable Resource Development Ministry, *The Strategy: The History*, online: Alberta Environment <<http://www.waterforlife.alberta.ca/0918.html>>; also see Equus Consulting Group Inc., “Minister’s Forum on Water: Summary Report on the Advice Received” (August, 2002), online: Alberta Government, <<http://environment.gov.ab.ca/info/library/7507.pdf>>. In the summary report, it offers a history of the public outreach that commenced in June 2002, a focused group of 108 invited Albertans and water experts met to review information gathered during the public outreach and consultation process. A clear set of principles 11 emerged [with one of the principles explicitly stating: “Citizens, communities, industry, and government must share responsibility for water management in Alberta, and work together to improve their local watersheds;”]; also see Queens Bench decision: 979899 Alberta Ltd v Alberta 2008 ABQB 57 (CanLii) at paragraph [14] Justice R.E. Nation, in hearing a water licence dispute and considering the sub-issue: What is the appropriate standard of review? where Justice Nation interpreted the legislative purpose and “shared responsibility” as an enumerated factor embedded in the Water Act. At paragraph 14, she

legislation review, which began in the early 1990s and included extensive public consultation, culminating in the 1999 policy document entitled “*The Framework for Water Management Planning*.” This document explicitly states “the government has made it clear that all Albertans share a responsibility for water management” and, informed the legislative framework of the *Water Act, 2003*.⁷¹⁸

Together, these foregoing policy and legislative instruments in Alberta reinforce a shared governance model; however, the scope of this “shared” paradigm is vague. This notion of shared responsibility appears to rest on the public engagement process informing the water-policy framework document as codified in the water legislation. Perhaps in Alberta, acceptance of a shared responsibility extends from both the government’s and the public’s penchant for self-reliance and partnership relationships. However, it remains unclear how this shared governance informs the WPAC participants’ perspective of a shared responsibility for the environment protection of the river basin. The government’s responsibility for environmental protection under the WPAC remains a policy riddle trapped in an enigma.

Within public domain of water or environmental protection, a change in attitude towards environmental protection appears to be occurring. In this research, the Yukon and Ontario respondents demonstrated a clear perspective of the state’s responsibility for environmental protection. The participants exhibited an endorsement of state’s role in environmental protection and, perhaps a state-centric approach. In contrast, in Alberta,

stated: The purpose “[i]t is to support and promote the conservation and management of water, including the wise use and allocation of water, while recognizing six enumerated factors: environmental concerns, the need for economic growth and prosperity, the shared responsibility and role of residents, the need for cooperative work with other jurisdictions and the important role of comprehensive and responsive action in administering the Act.”

⁷¹⁸ *Alberta, Framework, Supra*. note 435 at 9.

the respondents adopted a broader perspective of environmental protection that took into account both state and non-state actors. The Alberta legislation clearly articulates a “shared responsibility” for water management and decision-making.⁷¹⁹ Possibly, a legislative nudge through “social engineering” has re-oriented social attitudes to accept both state and non-state actors as accountable for environmental protection.⁷²⁰ Nevertheless, a dark side of this legislative push is regulatory limbo where neither the public or private actor will accept responsibility for the environmental damage or degradation.⁷²¹

4.4 Volunteer Fatigue

Gunningham and Holley’s identification of volunteer fatigue in collaborative governance is affirmed in this research and points to their concern whether these regulatory spaces can be sustained. The voluntary nature of the participation on these committees combined with lengthy time commitment and the heavy workload demanded of these committee members created work stress for the participants. Offering assistance and their advice came at a price. One Ontario interviewee described the “*volumes*” of documents that had to be reviewed for a meeting.⁷²² Another participant described the committee members as “*weary. It has been a long, hard process of slogging through mountains and mountains and mountains of data and everyone was quite happy to have finish the report and send it*

⁷¹⁹ *Supra.* note 2. Section 2.(d) states: “the shared responsibility of all residents of Alberta for the conservation and wise use of water and their role in providing advice with respect to water management planning and decision-making.”⁷¹⁹

⁷²⁰ A. Podgorecki, J. Alexander & R. Shields, “Social Engineering” (Ottawa: Carleton University Press, 1996).

⁷²¹ N. Olewiler, “Environmental Policy in Canada: Harmonized at the Bottom?” in K. Harrison, *Racing to the Bottom?: Provincial Interdependence in the Canadian Federation* (Vancouver: UBC Press, 2006).

⁷²² Interview of #31 (Dec. 19, 2012) Interview notes at page 5.

off for approval.”⁷²³ Holley and Gunningham’s findings on water committees in New Zealand, under natural resources legislation, identified volunteer fatigue as a threat to “sustaining” these collaborative initiatives into the future.⁷²⁴ The two key representatives involved in the aggregate extraction conflict on the Lake Erie SPC demonstrated “fatigue” and expressed concerns over the workload, and now no longer sit on committee. Sustaining a robust participatory SPC process in the future is in doubt. While not raised by the participants in this research, participants in the Alberta Water Council’s 2008 Shared Governance workshop expressed a similar concern over volunteer fatigue.⁷²⁵

4.5 Coping With Change

Regulatory scholars Baldwin and Black contend the challenge for the responsive regulatory theory, in particular, the enforcement pyramid, is capacity to cope with change.⁷²⁶ These research findings demonstrate the water committees were shortsighted on emerging water security issues and the risk to water resources. In line with Baldwin and Black’s contention, these committees exhibited regulatory methodologies that “tend to focus on existing high level risks rather than smaller, cumulative or newly emergent risks. It will tend to be blind to risk that are not picked up in the existing analysis and has no core method of identifying new regulatory challenges and adjusting to these.”⁷²⁷

During the interviews, at the end of a group of questions on the element of emergent change, the participants were asked explicit questions on emerging water quality and quality issues such as hydraulic fracturing, nitrogen-loading, pharmaceuticals in drinking

⁷²³ Interview of #30 (Dec. 14, 2012) Interview notes at page 13.

⁷²⁴ C. Holley and N. Gunningham, “Natural Resources, New Governance and Legal Regulation: When Does Collaboration Work?”(June 2011) 24 New Zealand Universities Law Review 309 at 333.

⁷²⁵ Alberta Water Council, “What we heard Report?”, *Supra* note 624 at 11.

⁷²⁶ Baldwin & Black, *Supra* note 84 at 74 & 90.

⁷²⁷ *Ibid* at 74.

water, and climate change. While the majority of the participants interviewed had little to say on these issues, one Ontario SPC member commented on climate change as it related to the short-term task of watershed planning, saying climate change

“should be considered for water quantity analysis. Like, ...is something going to change with a rainfall or heat that’s gonna make less water available in the watershed. But, in my mind, with limited understanding of hydrology these [concerns] are for wells that are gonna take decades ... I’m not saying we should ignore it, I’m just saying that it...struck me as a little bit of wasted time to deal with it at this committee. So, for us to look at climate change now, in the initial [water] plan I thought it was not the best use of time. [So, how does the committee then respond to new information?] “[T]his committee has very specific goals under the Clean Water Act and it’s not [protection] of the environment.”⁷²⁸

The foregoing comments illustrate that the Ontario SPC suffers from regulatory blindness – the committee members are blind to the changing state of the environment as well as the inability to cope with change or the element of surprise and implications of climate change on water source protection.⁷²⁹ This research reinforces Karkkainen’s view that natural resource management law continues to uphold the traditional view that natural systems can be controlled — a disconcerting finding given the Walkerton tragedy has been attributed to a heavy rainfall event.

Furthermore, as Baldwin and Black correctly pointed out, in order to move towards a “really responsive regulatory” regime, the regulator must “foste[r] the capacity of regimes to change regulatory direction so as to adapt to changes in circumstances, priorities and objectives, including the cultivation of changes in organizational cultures and intra-organizational dynamics that may be needed to respond to these changes.”⁷³⁰

Governance scholars Gunningham and Sinclair also caution the circumstances in which

⁷²⁸ Interview of #31 (Dec. 19, 2012).

⁷²⁹ *Supra.* note 256.

⁷³⁰ N. Gunningham and D. Sinclair, “Organizational Trust and the Limits of Management-Based Regulation” (2009) 43(4) *Law & Society Review* 865 at 870.

“the capacity to achieve cultural change” occur still remains “a matter of conjecture.”⁷³¹

Retooling organizational culture is difficult, and in their view, success hinges on the support of those who will implement the new regime. Together these researchers point to the importance of cultural organizational attitudes in facilitating a paradigm change. This research exposes the limited institutional capacity of these provincial authorities to respond to change. The regulatory regime remains vested in the traditional “governance by crisis mode.” A command-and-control regulatory legacy characterizes the traditional environmental and natural resource regulatory regimes and in this research, acts as a barrier to its actors’ responsiveness to ecosystem problems or red flags – a breach of an aquitard. These regulatory regimes remain hampered by a traditional organizational culture and its regulatory behaviour of control.

The promise of a responsive regulatory regime seems optimistic at this point because, as suggested by Gunningham and Sinclair, this research points to a cultural organizational change problem, which requires further study. Nevertheless, this organizational behaviour problem rests at the senior levels of the bureaucracy, who may fear releasing the tight reins they traditionally held in the command-and control regulatory system.

Finally, in this research, the normative claim of these governance experiments that a localized stakeholder-driven water committee enhances environmental governance exposes an implementation problem that failed, for example, to bring to life Justice O’Connor’s vision of local planning exercise. For legal scholars, an interdisciplinary environmental policy approach, which incorporates organizational change and leadership theories should be studied further to understand the organizational challenges of giving

⁷³¹ *Ibid.*

life to public law values of public participation and environmental protection framing regulatory regimes.

5.0 Concluding Comments on the Eco-Resiliency Governance Framework

Overall, the application of the eco-resiliency framework to the three case studies reveals a weak form of eco-resiliency. The factor of flexibility is encouraged in the three legal regimes through the support of a collaborative decision-making process. In turn, this collaborative process is supported by the flexible decision-making principle of consensus and the inclusion of a range of legislative tools. However, in practice, in the ungoverned shadows of the water committee strong social norms foster a practice of water governance allowing group norms to dominate and foster a weak form of flexibility. In these committees, the law and its legal instruments become irrelevant to the committee members and point to a regulatory implementation problem.

All three legal frameworks construct a pluralistic regulatory space. While legislation or the partnership policy orientation of the legal framework encourages the diversity factor, in practice, unequal and inequitable participation and the inability to discuss different ways of knowing the watershed result in a weak form of diversity. Even though regulatory pluralism is encouraged and could fulfill a surrogate regulatory role, these participants are effectively privileged informants, offering the state information and perhaps, easing the regulatory burden of information gathering. The information offered is oriented towards the administrative tasks. Committee members expect rent-seeking behaviour from other members. Complementing the rent-seeking behaviour is the strong presence of competing interests operating in the ungoverned political space away from the planning table but within the polycentric regulatory context. The centers of power

lurking in the shadows of the ungoverned space shape the decision-making process. The state's strong arm of control continues to limit the water committee's decision-making by limiting who participates on the committee and, thus, in the decision-making process. The presence of a strong social norm of collaboration in the group either silenced particular views or created a "do not enter sign" for dissenting voices, often representatives of the public. Together, the rent-seeking behaviour combined with the politicization of the water committee and silencing of particular voices further reveals a power imbalance in these committees, which requires further study.

This research found a limited demonstration of a broad perspective of water governance directed at organizing different scales of governance through a coordinating mechanism. All the participants expressed frustration with the lack of a coordinating mechanism. This frustration further shaped their decision-making as they adopted a perspective that the issue was beyond their jurisdiction, enabling them to ignore the water-planning issue. Rather than challenging the legal status quo, the participants exhibited an attitude of administrative fatigue: it is beyond our jurisdiction, so let's move on to the next administrative task.

Finally, the most interesting finding was on the feature of emergent change. Surprisingly, the Yukon Water Board, a mechanized administrative body, exhibited the ability to entertain the element of surprise by taking account of new information (for example, in the Carmacks Copper Ltd decision). The Board's record and public hearing function demonstrated openness to receiving new information – that is, surprise. In contrast, the Ontario water committee's ability to be responsive to emergent change was limited by the enumerated drinking water list and a risk-management approach to water

governance. Overall, the element of surprise was weak in both the Ontario SPC and Alberta BRBC but not the Yukon Water Board.

Chapter Seven: Conclusion – Lessons Learned As a Participant Observer in a Water Committee

1.0 Introduction

The inquiry undertaken in this dissertation began with an academic curiosity to understand and evoke change in legal frameworks governing water; in particular, to direct the regulator's mind to the protection of the subject matter – water or namely, aquatic systems. Seeking a desire to understand the responsive regulatory theme in relation to ecological change or resiliency, this research was guided by the question: If a regulatory water law regime seriously adopted a “conservation, ecological integrity or biodiversity as a frame of reference, what would happen” to legal models of water governance?⁷³² Professor Benidickson's provocative question is not unlike the search for change sought in the governance literature by other scholars.

As illustrated in this research, numerous scholars including legal experts have proposed change to environmental governance and regulatory theory. This dissertation examined the governance shift as set out in the responsive regulatory literature, in particular, Gunningham, Grabosky and Sinclair's three-sided enforcement-compliance pyramid. These scholars expanded upon Braithwaite and Ayres' relational idea of a state-centric enforcement and compliance pyramid that engaged two actors — the regulator and the regulatee. Conceptually, Gunningham *et.al.*'s *Smart Regulation* or regulatory pluralism approach presents a model premised upon multiple instruments and the inclusion of diverse range of state and non-state actors. Collectively these actors are transformed into policy makers focused on the context of the environmental problem.

⁷³² Benidickson, *Supra.* note 30.

This doctoral research takes a step back from Gunningham *et.al.*,’s result-based environmental policy prescription, underpinned by effectiveness and cost-efficiency normative frame, and examined the responsiveness of the decision-making to ecological change, a perspective informed by public law values of environmental protection.

The recent change in the environmental regulatory theory to a governance mode has informed the legal framework of water governance in Canada. This policy drift was examined in this dissertation in order to understand the decision-making process in these water committees. This new legal model combined with the social-ecological perspective and the regulatory theme of responsiveness, turned this research inquiry towards how and in what ways theory can inform the practice of water governance and how the practice can inform theory. The inquiry therefore concerns *how*, and under *what conditions*, can these legislatively constituted water committees take into account *responsiveness from an ecological perspective*.

My academic curiosity in advancing environmental regulatory theory considers how the ideas of adaptive governance and responsiveness can be taken together to re-orient legal environmental governance scholarship to be responsive not only to the business sector (the regulatee: the firm, or corporation) but to the aquatic system — the subject matter of the regulation. This desire to shift awareness to the subject matter of the regulation (for example, Ontario’s Clean Water Act – s.1: “to protect existing and future sources of drinking water.”) further directed my attention to identifying and developing the eco-resiliency governance framework. This framework was used to not only organize my observations of the SPC and WPAC committee members and the Water Board at a

public hearing but also to understand and analyze the water committee participants views on the four features of eco-resiliency.

This research began with Bakker’s definition of governance “to how we make decisions and who gets to decide.”⁷³³ In this research, Bakker’s definition is expanded upon and governance is defined as a process of decision-making, a process influenced by the power dynamics in play and shaped by the political dimensions underpinning the decision-making process. This understanding of governance brings forward the political nature and procedural aspects of what the participants are charged to do under a legally and socially constructed water governance regime: that is, in simple terms, to make decisions. In this sense, water governance can be contrasted with water management, which addresses principally the “operational approaches” and includes “the models, principles and information we use to make those decisions.”⁷³⁴

2.0 Lessons Learned From Applying the Eco-Resiliency Governance Framework

In this research, the eco-resiliency governance framework was designed to explore the adoption of an adaptive water governance legal model and to explore the research question: What lessons can be taken from resiliency theory and applied to environmental regulation and governance theory?

In particular, the lessons learned from the analysis conducted in chapter six and legal analysis set out in the three case study chapters aimed to advance Gunningham *et.al.*,’s *Integrative Regulation: Principle 4. A participatory approach: the empowerment of third parties to become quasi-regulators*. By way of this approach, these scholars

⁷³³ Bakker, *Supra* note 14.

⁷³⁴ *Ibid.* At page 16, Bakker submits that there is “subtle, but important” difference between water governance and water management.

advance a participatory principle contextualized in the responsive enforcement theory. In their view, participation of third parties encourages information exchange, supports an educative function and shares the regulatory burden of compliance and enforcement. The state's role is to construct a procedural regulatory space that offers the public an opportunity to participate, gather information and exchange knowledge.

Presented next are the lessons learned from applying the features of the eco-resiliency governance framework. These lessons take into account the collaborative, SES governance and responsive regulatory themes directed at a protective stance of water rather than the regulatory logics of enforcement and compliance. A law in action inquiry directed at the “bottom-up”⁷³⁵ — the decision-makers and the social norms guiding their decision-making in the water committee, was applied. In this research, the eco-resiliency governance framework is relied upon to identify the presence of Holling's four resiliency factors and to gather lessons on how the theoretical premise of these governance experiments informed the practice of governing water at local level. In the following subsections the lessons learned from observing the eco-resiliency framework in action in the water committees and the legal analysis of the respective case study regulatory regimes; thus, point to the possibilities for change and the recommendations are offered to strengthen these collaborative water governance committees.

2.1 Eco-Resiliency Factor One: Flexibility

Theoretically, the collaborative mode of governance is premised on consensus. In all three cases studies, a definition of consensus had been provided in either a soft-law document or explicitly in the legal regulations. However, in all three case studies, the

⁷³⁵ Macaulay, *Supra*. note 166.

research participants did not refer to these legal instruments. Effectively, the legal instruments defining consensus are insignificant to the participants and point to an implementation problem. Rather, the social norms of the group controlled the decision-making process instead of the legally defined decision-making principle. In the end, a legal instrument offered as a guidance document is irrelevant to a committee member. Moreover, the meaning of consensus remains an ambiguous concept resulting in the characterization of a water plan as a policy without the backing of law.

Flexibility as exhibited through the application of range of instruments and strategies is unimportant to water committee members. All three case studies highlight the irrelevance of the responsive regulatory theory's premise of applying a range of regulatory instruments. Rather, in the water management planning exercise, a committee member's thinking is confined by the state's control or the state's lack of direction, as was highlighted by the Alberta case study. The committee is narrowly focused upon its administrative tasks rather than being responsive to ecological change or to the protection of the watershed/ river basin. Complicating this narrow-minded thinking is the political nature of water governance, as illustrated in the Ontario case study. The politicization of water governance is a barrier to bringing to life the flexibility embedded in the legislation.

In all three case studies, the participants exhibited strong support for the collaborative mode of governance. They displayed an eager acceptance of the collaborative process fostered trust, respect, good working relationships and goodwill within their communities. Within these localized sites of law-making, the relational aspect of governing was brought to the forefront in part through an emphasis on these

soft skills that fostered the development of social capital. As observed at the WPAC and SPC meetings, the emphasis upon creating a fun environment and the sharing of food at lunch provided for an exchange of dialogue and relationship building that was then carried over into the main committee forum. Unlike the water committee's strong relational aspect, the adversarial environment fostered between the parties at the water board's public hearing was pervasive. The mining officials including senior executives missed an opportunity to strengthen relationships and build their social license to operate within these communities by not recognizing the social norms of building relationships in the informal settings (i.e., shared lunch environment) that indirectly supported the public hearing. In the natural resource sector, the challenge remains for lawyers operating in a co-management or collaborative law forum to understand the importance of relationship building and the need to build their social license within the communities they operate in, especially in a cross-cultural community.

2.2 Eco-Resiliency Factor Two: *Diversity*

The literature promotes inclusiveness as a key feature in a participatory mode of governance as it establishes regulatory pluralism. The diverse group of actors is presumed to bring different perspectives and ways of knowing the watershed to the committee. While this research exhibited the features of regulatory pluralism, these volunteers viewed their participatory role as offering advice and collecting information to be taken back to their constituency or associational alliance where the information served as an early warning system. These findings demonstrated the respondents' strong support of the rent-seeking behaviour of their fellow committee members.

However, this research questions the participatory aspects of the new governance mode. The governance mode is promoted as responsive to the upward push from interests groups, citizens, and other decision-makers demanding access to policy decisions. The aggregate extraction conflicts in Ontario countered this participatory aspect and exposed a shortfall of this governance regulatory approach.

Theoretically, and in practice, the state encouraged participation in these decentralized water-planning exercises in the collaborative spirit of the shift from government to governance. In this devolution of the water governance function to a local committee, this research illustrated how the steering function remained strongly vested in the state. The state's steering function diminished the spirit of the local planning exercise and the participation of local community groups (i.e., *O. Reg. 288/07 s. 2.* "in particular, environmental, health and other interests of the general public). The rowing function where the state is actively engaged in the details of the administrative process revealed mixed results: in Ontario, the province demonstrated a strong preference to retain the rowing and steering functions. In contrast, the Alberta case study, the province's role at the lower river basin level was more difficult to define. In Alberta, the reach of the province into the local activities became active when the local committee planning exercise contravened the state's position. Consequently, in both the Alberta and Ontario case studies, the state maintained a strong influence over the committee and local concerns.

In practice, these research findings expose the state-centric function of water management planning where these volunteers are transformed into privileged informants by their place at the table and their role in offering and collecting information. In all three

case studies, the Minister has final approval over the water plans and the water license. For these participants, the Minister's final decision-making authority was unremarkable, as they exhibited support of Minister's approval of the final plan or license.

Yet, voices were missing in these water committees. In the Yukon Water Board's proceeding, both the provincial and federal governments appear to have pulled back from participating in the water licensing process, which pointed to a shift in political interests. The worry, as expressed by a long serving Board member, is in the absence of the state, the private sector's economic development values could dominant the licensing process resulting in the privatization of governance. This re-orientation of a public law function could further result in the diminishment of the public interest in water resources and the state's withdrawal of its' environmental protection function. In effect, a re-alignment of the balanced approach to interpreting the *Waters Act's* legislative object (s.10) is occurring. A modification where the public interest in the "conservation" of water is discounted and greater emphasis is placed on the economic "development" of the Yukon's water resources for private interests rather than "for all Canadians and for the residents of the Yukon in particular" (s.10), as legislatively prescribed. In short, the role of state as guardian of the public interest in water has resulted in a turn towards privileging a neo-liberal economic development perspective and the privatization of a governance function.

In Ontario and Alberta, the active participation of First Nation communities was silenced in the planning exercise. While the participants in Alberta expressed frustration they could not bring First Nation communities to the policy table, it appears that provincial support for First Nation participation was lacking and may have created a

participatory barrier as result of legal doctrines concerning the duty to consult. In Ontario, while First Nation members hold a legally constituted place at the policy table, their participation was silenced. The silencing of First Nation communities is complicated by a lack of recognition of historically embedded mistrust and a misunderstanding of how an aboriginal perspective of knowing water differs from a mainstream view of water source protection.

Notably missing in all three committees is a SES (social-ecological systems) perspective, an eco-health standpoint and an environmental protective stance. Interestingly, this lack of an eco-health or environmental perspective is particularly problematic in Ontario given the composition of the committee as set out in s.2.3 of O.Reg 288/07, which explicitly references the participation from “environmental, health and other interests of the general public.” In the case of Ontario, perhaps the narrow legislative purpose focused on protecting drinking water of the *Clean Water Act, 2006* — *Section 1: to protecting existing and future sources of drinking* — has created a mixed message. While the regulatory constituted committee is diverse, the limited legislative objective directed the SPC, and its supporting Source Protection Authority and the committee’s planning activities were narrowed to a public health perspective directed at a municipal water supply. All other perspectives are overlooked.

In all three case studies, the participants confirmed they experienced learning. In these localized committees, the literature’s discussion of knowledge production and forms of learning through information exchange and dialogue is affirmed. The regulatory space exhibited the formation of networks, community building and perhaps, an opportunity for broader public policy goals (i.e., reconciliation and conflict resolution).

However, what remains outstanding in all three committee is the function of monitoring the aquatic system. None of the committees were structured to monitor the health of the ecosystem by way of physical, chemical or biological or other indicators of ecosystem health. Yet, learning with respect to the environmental state of water system occurred in the committee but this knowledge is contained and overlooked in the water plan and state of watershed report. The committees failed to support an adaptive management approach to watershed protection. In other words, the ability to understand and predict whether a disturbance has or might occur that could shift the aquatic system into a degraded state or create a water emergency disaster remained a missing element in this administrative process. In the Alberta case study, neither the issue of oil and gas fracking nor the risk of a flood, as experienced in Calgary in June 2013, were highlighted in the state of watershed planning documents. These planning documents informed the background of the interviews and the observation of the WPAC, a year earlier in June 2012.

2.3 Eco-Resiliency Factor Three: *Broad Perspective*

Overall, in all three case studies, the challenge of jurisdictional co-ordination is immense. A broad perspective is present where the local scale of governance includes a polycentric perspective where the decision-maker's nodes of power and the presence of a coordinating mechanism can take into account multiple jurisdictional scales and fragmentation. Rather, this research exposed the challenges of jurisdictional fragmentation and institutional co-ordination barriers. The administrative jurisdictional barrier is reinforced by constitutional constraints imposed upon these committees. The constitutional constraints influenced the behaviour of the committee members to accept

the regulatory fragmentation and remain tethered to the traditional legal question of jurisdiction. This traditional approach is expected to impede a broad perspective of water issues and will further act as a barrier to the potential implementation of integrated planning recommendations and interagency co-ordination processes.

2.4 Eco-Resiliency Factor Four: *Emergent Change Perspective*

While the collaborative governance arrangement is premised upon diverse participation where it is expected that new information will be brought to the table, it is the Water Board, through the legal mechanism of presenting evidence at a public hearing, that supported the element of surprise – that is, responsiveness to new information, new experts and new perspectives. In this research, it was the legislative experiments in collaborative governance – in Alberta: the BRBC and in Ontario: the SPC – that exhibited features of a closed system focused on an efficient completion of their administrative tasks, institutional goals and organizational mandates. These decision-makers came to the planning table fitted with blinkers that channeled their vision on the administrative tasks, limited the scope of their sight line and directed their attention on the finish line: completing the end product – the water plan or state of the watershed report, in the case of the BRBC. These committee members demonstrated a narrow perspective that hindered their ability to be responsive to emergent ecological change.

3.0 The Possibilities *for* Improvement

Collectively, the group of study participants including the analysis of their interviews and the legal regimes in the three study areas point to specific actions that can be taken to incorporate an environmental protection perspective into water source planning. Eight recommendations are summarized below. This summary is neither comprehensive nor

presents a hierarchy of recommendations, rather these suggestions are offered to encourage further debate and discussion on how to bolster an eco-resilient governance approach.

In all three case studies, the meeting process is open to the public. A member of the public at large can observe and if requested in an appropriate manner, make a presentation to the committee. The access to the meeting facilitates openness with respect to how decisions are made and the development of a water plan or license. Transparency in the process is encouraged and the committee's decision-making is exposed for public consumption, review and critique. The observation of whether decisions take into account defined public policy principles can be ascertained. The general public can gain a better understanding of how the decision-makers have considered their submissions. The publication of information on the website offers access to minutes of the SPC meetings, reports and submissions made by the various delegations offers the public a better understanding of how decisions are made with respect to the local watershed. A citizen can gain insight into the administrative workings of administrative system that affects watershed and thus, their well-being.

Transparent processes in water governance regimes expose citizens to the diverse decision centers and the networked nature of the institutional system – its polycentric nature. Gaining this understanding of the polycentric nature of a governance system may open not only the public administration but also local communities to think about new ways to structure citizen engagement, regulatory pluralism and decision-making. In this way it has moved away from a conflict to a reconciliation spectrum of legal orderings. In

response, the state's role becomes one of nurturer of local communities and their wellbeing, guided by an ethic of care principle.

However, understanding the nuances affecting an administrative decision is often hidden from the public in all three cases. In the Yukon case study, the final decision is made “in chambers” – the final decision-making process is hidden away from the public. The public learns of the final decision by way of a written decision that is posted on the water board's website. In a similar manner, the WPAC Board or in the case of the SPC, by the government officials – (MOE & SPA's Conservation Authority) the final decision document – the water plans – are drafted and finalized by the administration, hidden away from the public. The public is informed of the plan via a publication that is also reported on a website. In other words, both an administrative tribunal and participatory governance processes function in a similar “in chambers” manner with the decisions hidden from the public followed by an announcement to the public via a final document. Of course, in all three cases, the final decision making authority is assigned to the Minister.

With changes in technology in public forums combined with the governance shift to the inclusion of the civil society sector in public policy the possibility exists these decision-makers' chambers can become visible. The option exists for the format of the decision-making forum to be transformed into an “in camera” proceeding with real time streaming via the Internet. For individuals living in remote communities and busy members of the public at large who cannot attend a mid day meeting these proceedings could be accessed via the Internet, which would support exposure to the decision-making process and the opportunity for greater citizen awareness and perhaps, engagement in

local water security issues.

3.1 Foster Social Capital & Networking & Community Building

Participatory processes are viewed in the literature as encouraging social capital. In the Alberta and Ontario case studies, a strong form of social capital and networking was exhibited. The committee members had established relationships that would allow them to connect beyond the work of the committee. For example, one SPC explained: “*Yes, Wholeheartedly*” I trust the committee members. “*I have been contacted by people and I have contacted people regards to things ... If I need clarification I just pick up the phone.*”⁷³⁶ The possibility exists that with the formation of networks and community social capital perhaps individuals will come together in a supportive manner to pursue additional water challenges that the community will begin to face; as result of changing water conditions created by change climate, urban development challenges and changes in the provincial political landscape.

An opportunity exists for regulatory regimes and its supporting legal system to encourage rather than contain these communities of social capital. Water security issues exist at local, regional, national and global scales. Together these multi-level and interconnected governance scales, combined with the crisis mode of governance that prevails in environmental regulation regimes (as demonstrated by the Walkerton tragedy and the Alberta water security issues) illustrates not only the limits of traditional legal problem solving but also the possibility that transnational environmental challenges will create the momentum to re-conceptualize regulatory regimes and approaches to

⁷³⁶ Interview of 29 (Dec. 14, 2012) Interview notes at p 13.

jurisprudence.⁷³⁷

3.2 Changing to a Social-Ecological Perspective of Water

In Alberta, the shared responsibility perspective of water protection suggests a conceptual change in the public's view of environmental protection: water – is a shared resource to be protected in partnership with the state. Perhaps, this change in perspective also points to a SES (social-ecological systems) perspective of a regulatory regime where individuals will self-organize in pursuit of protection of a natural resource.⁷³⁸ Participating on a WPAC provides for individual and collective learning and gaining knowledge of the environmental issues facing a watershed. This ecological understanding gained from the participatory process combined with a legislative intent explicitly expressing “shared responsibility” points to a re-orientation of the traditional environmental regulatory paradigm of the state as the primary custodian of environmental protection. The possibility exists for a social-ecological perspective to become interpreted by the courts and embedded in legal doctrine.

3.3 Encouraging Surrogate Regulators

In order to be responsive to the ecological conditions in a watershed, a monitoring and enforcement function based upon the participation of non-state actors could be integrated into the regulatory regime. In the literature, non-state actors are viewed as a potential resource -- a “complement to, direct government regulation.”⁷³⁹ Participatory, pluralistic and localized modes of governance allow for the diverse participation of range of non-

⁷³⁷ D. A. Kysar, “What Climate Change can do for Tort Law? (2011) 40 Environmental Law (Yale Law School Working Paper no. 215) 1.

⁷³⁸ Ostrom, *Supra*. note 161.

⁷³⁹ N. Gunningham, M. Phillipson & P. Grabosky, “Harnessing Third Parties as Surrogate Regulators: Achieving Environmental Outcomes by Alternative Means” (1999) 8 Business Strategy and the Environment, 211 at 212.

state actors who gain local knowledge of watershed conditions. Through social mechanisms and norms these actors can act as surrogate regulators to modify behaviour in their community, and beyond. In other words, non-state actors are directly engaged to lend support to the state's monitoring and enforcement roles. In recognition of decentralizing water governance to engage ordinary citizens, these individuals are effectively transformed into environmental police (partners in the compliance and enforcement activities). In support of new role for citizens, the state can provide "1-800" hotlines to report offences and with a follow-up posting detailing the state's response to the individuals charged with an offence. Social media can be used to inform individuals of water security issues and responses by local commercial entities. In effect, the state is encouraging a form of social-environmental responsibility reporting on local watershed conditions.

3.4 Thinking About Innovation & Knowledge Transfer Opportunities

In this research, two modes of water governance were featured: a co-management water board and a participatory, pluralistic and localized water committee. Both of these modes of governance are now the dominant legal models in Canada; yet, operate as two distinct bodies with different purposes: 1) the water board's function - to facilitate the licensing of water permits process primarily for economic development purposes; and, 2) water committees - water management planning to gain an understanding of the environmental state of the local water conditions and the risks to public health – drinking water. In the regulatory literature, both of these modes of governance are considered unique and innovative ways to bring local communities interests into an administratively structured waterscape. Legal governance scholars are challenged by the complexity embedded in

these models and as exposed in this research: how to craft legal models where theory informs the actual on ground practice? The opportunity exists for continued innovation and knowledge transfer between those who practice water governance and those who structure the legal modes of governance. Governance scholars should begin to ask deeper questions about: What lessons can be learned from comparing and contrasting the legal governance models created by environmental regulation? Consideration should be given to whether water security issues (flooding events, water scarcity) will continuously re-structure these modes of governance without leading to protective water policies. This limited research demonstrates the possibilities of law as a flexible instrument to structure and meet the challenges created by decision-making processes and norms of law-making that operate outside a courtroom but within communities.

4.0 Recommendations to Strengthen the Governance Mode

Introduction: Regulatory regimes emerge and are uniquely situated within its sociopolitical and organizational fitness environment.⁷⁴⁰ Similar to the management literature's discussion of the organizational fitness or an administration structure's responsiveness to change, the regulatory regimes under study in this research are responsive to distinct sociopolitical environments resulting in three different images of the state's function in water governance: Alberta – The Enigma state; Ontario - The

⁷⁴⁰ S. C. Voelpel, M. Leibold & K. M. Mahmoud "The organizational Fitness Navigator: Enabling and Measuring Organizational Fitness for Rapid Change" (2004) 4(2) The Journal of Change Management 123 at 128. These business management scholars define organization fitness as an "organization's ability to adapt and survive in the ever-changing business environment. [It] is achieved through natural evolution, purposeful change and continuous learning. Moreover, it is an organizational ability to effect dynamic and spontaneous changes in its extended business network processes and to ensure systemic co-evolution of the socio-cultural system to create new and improved stakeholder value It also encompasses managers' capability to effect meaning that is make sense of socio-cultural trends and provide context to internal and external stakeholders, to enable improved co-evolution and stakeholder success."

Chameleon State and The Yukon: The Mechanized State. Each one of these metaphors is reflective of organizational fitness and the sociopolitical context of the administrative state. The policy-driven, partnership model that reinforces Alberta's WPAC resulted in an ambiguous characterization of the role of the state. The role of province in localized water governance remained a riddle throughout this research endeavor. In contrast, in the Yukon, the mining sector's strong economic development achievements have, in part, been enabled through the state's efficient mechanized machine that ensures water licenses are administered in timely manner. In Ontario, water governance remained a state-centric function where the steering and rowing functions of the state oscillate depending on the degree of oversight the province wishes to extend over the committee's decision-making process.

Nevertheless, in all three water governance case studies the mode of governance is reinforced by a state presence. An orientation that is responsive to the socio-political context, perhaps, reshapes the structure of the state and brings into question the contention of a fundamental shift towards a governance mode and the de-centering of the state. Given the state's strong role in water governance and in order to strengthen water governance in the jurisdictions under study and to expand upon participatory principle set out by Gunningham *et al.*, eight recommendations are offered. The following recommendations are directed at the Province and the Territories' control over water governance and take into account the legal analysis, the participant's interview responses and my observations of the water committees' decision-making:

4.1 Strengthen Transparency

In order to create greater openness in the process and opportunities for citizen

participation in local water governance the format of the decision-making forum should be transformed into an “in camera” proceeding with real time streaming via the Internet.

4.2 Test the Readiness of the Participants to Participate in a Collaborative Governance Arrangement.

Through an on-line forum, potential committee members could be provided access to the core procedural documents necessary to participate in the committee and then, their knowledge could be assessed via on line testing to ensure competency. For example, the decision-making rules outlining the meaning of consensus could be provided to participants. Moreover, to increase the participant’s understanding of the legislative framework, a plain language explanation of the legislation and the legislative tools should be offered as a on-line training document.

4.3 Strengthen Diversity

- a) Recognizing the challenge of fostering inclusiveness and diversity on a committee, as experienced in the Ontario case study, the intercultural competence of the committee members must be developed by introducing education tools that advance an attitude and openness towards cultural inclusion, different ways of knowing water and additional legal orders such as, Indigenous Laws.
- b) To increase the diversity of thought within the water planning process, a targeted comment process that is inclusive of environmental groups, First Nations, the general-public, health and other non-governmental organizations should be designed. In order to offset the lack of participation from these groups, the draft water plans should be circulated for comment beyond the existing interministerial boundaries and public participation process. Additional outreach mechanisms should also be developed and should consider how the Internet and social media

can be used to target a broad range of citizens, non-governmental organizations and First Nation groups.

4.4 Create A Regulatory Administrative Coordinating Mechanism

In recognition of regulatory fragmentation and in the spirit of the Farber and Freeman's modular regulation model including the blurring of private, public and non governmental organizational sectors' role in contemporary water governance, a coordinating mechanism should be legislatively prescribed to allowed for greater cooperation, harmonization of authority and solutions to address the problem.

4.5 Changing to a Social-Ecological Perspective of Water

In Alberta, the shared responsibility perspective of water protection suggests a conceptual change in the public's view of environmental protection: water – is a shared resource to be protected in partnership with the state. This change in perspective also points to a social-ecological perspective (SES) of a regulatory regime where individuals may self-organize in pursuit of protection of a natural resource. In order to nudge a water committee's behaviour to recognize the SES perspective, an explanatory note or a preamble could be added to the regulatory instrument to clarify the intent of the legislation.

4.6 Implement Adaptive Governance Based on Adaptive Management Principles

In order to be responsive to the learning experienced in the committee regarding the ecological conditions in a watershed and to assist in understanding the ecological changes occurring in the watershed, a monitoring and enforcement function based upon the adaptive management model should be integrated into the regulatory regime.

4.7 Encourage the Role of the Civil Society Sector as Surrogate Regulators and Foster Public Awareness of Water Security Issues

The committee members and the public at large should be encouraged to participate as surrogate regulators to modify behaviour in their community, and beyond. In support, the province can provide “1-800” hotlines to report offences and with a follow-up posting of individuals charged with an offence. Social media and forms of communication can be used to inform individuals of water security issues and responses by local commercial entities; in other words, the state can encourage a form of social-environmental responsibility reporting on local watershed conditions.

4.8 Conduct Further Research

- a) In order to support the public law value of environmental protection and to counter the power imbalances within a shared governance model, explicit policies creating procedural mechanisms encouraging environmental protection values must be researched, developed and introduced into water source planning processes.
- b) In light of the new constitutional arrangements created by the Final Agreements with First Nation groups and the explicit naming of First Nations and the general-public on provincial water committees, research must be conducted to understand the barriers facing these groups from participating.
- c) In order to understand the shift in the public’s perspective on water — *is a shared resource to be protected in partnership with the state* — further research by legal scholars on this emerging trend is needed in order to be responsive to the privatization of governance effect upon this common pool resource.

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Appendix “A” – The Interview Instrument

Interviewee: Code # _____

Part One: Interview Protocol

At the beginning of the interview, I will:

1. First, make a brief statement regarding my research – *My research is focused on water governance regimes in Canada and the recent regulatory change towards a participatory mode of governance.*
2. Explain the purpose of the interview and the format and that they can stop the interview at any time;
3. Address the terms of confidentiality;
4. Indicate how long the interview will take – one hour max
5. Tell them how to get in touch with you later if they want to;
6. Explain the interview Terminology – when I use the term – participant – it means the same as stakeholder
7. Ask them if they have any questions
8. Obtain their signature on the consent form before you both get started with the interview.

Part Two: Interview Questions

A. Flexibility:

1. Please tell me how have your experiences as a water law expert/ Bow River Basin Council member influenced or not influenced you in the decisions that you have made with respect to protecting the watershed and its sub- basins?
2. Follow-up questions:
 - a. Could you say more about your decision-making role – using an example, from your experience could you describe how the Council’s decision-making or your decision-making was responsive to changing environmental watershed conditions?
 - b. Was this example/problem outlined in a report – such as BRBC’s watershed report?
 - c. Probing question – with respect to your example, would you describe this decision-making as adaptive to changing environmental information?
 - d. Specifying question – could you describe a range of regulatory tools or techniques that were recommended by the Council to respond to this problem.
 - e. Direct question – did you feel you have enough information to make an informed decision? Or did you need an updated watershed report or additional information to make an informed decision?

B. Broad Perspective:

3. By way of an environmental problem in your watershed, could you Please tell me about your experience with how the Council addresses overlapping jurisdictional problems?
4. Follow-up questions:
 - a. Could you tell me more about how an overlapping jurisdictional or multi-level participant problem was resolved by the Council?
 - b. Probing question: Did the Council's overlook a perspective or an existing or an emerging watershed problem (e.g., pharmaceuticals in the watershed or fracking)
 - c. Probing question – following up [on the example given] would you describe the Council's solution as 1) a local solution or 2) a solution that took into account regional or 3) national water perspective?
 - d. Direct question – by way of example, can you please describe how the Council's decisions are communicated to external parties?
 - e. Direct question – by way of an example, can you please describe the Council's protocol for informing a community of water source protection threat?
 - f. Specifying question – what did the Council do next to deal with the threat?
 - g. Specifying question – do you think the Council or the provincial government is accountable for the environmental state of the watershed?

C. Diversity:

5. By way of an environmental problem in your watershed, could you Please describe whether the Council's or your decision-making considers a range of participant perspectives (e.g., local citizens & quad-state parties: First Nations, municipal, provincial, federal)?
6. Follow-up questions:
 - a. Probing question – could you tell me more, by way of an example, how different perspectives are taken into account into the final product – the plan?
 - b. Specific question – did these different perspectives expand your understanding of the problem?
 - c. Probing question – can you tell me more about whether the group has created a trusting environment to allow for the development of network of local or regional watershed experts?
 - d. Direct question – by way of an example, was indigenous knowledge taken into account?
 - e. Indirect question – from your perspective, how would most Council members describe their decision-making role?
 - f. Probing question – can you tell me more about how conflicts are resolved within the group (i.e., through a formal process or informally)?

D. Emergent Change:

7. By way of an environmental problem in your watershed, could you Please describe how the Council responds to emerging issues (climate change, fracking) with respect to the watershed? – that is, the element of surprise.
8. Follow-up Questions:
 - a. Probing Question – can you tell me about whether the Council’s decision-making process can respond to this new information, create feedback mechanisms and learn from the experience?
 - b. Indirect question – how would most of the council member’s describe the council’s culture – responsive to changing information?
 - c. Specify question – who would you describe as being accountable for the environmental protection of the watershed? (The Council or the Province or the Federal Government or the local community)
 - d. Specify question – what party is responsible for creating policy directives?

Appendix “B” – The Four Part-Motion

The following detailed four-part motion is representative of a typical exchange between the committee members. L. Marshall and P. Eng, Source Protection Program Director, “Background on Quarry as a Drinking Water Threat – Report No. SPC-10-02-01, February 4, 2010”, online: Lake Erie Source Protection Committee <http://www.sourcewater.ca/swp_committee/SPC021001.pdf>.

As result of the issue being brought forward by a public interest representative at the Source Protection Committee’s December 3, 2009 meeting, the following motion was deferred and a staff report was developed, which stated:

“THAT the Lake Erie Region Source Protection Committee recommend to the Ministry of the Environment that quarrying activities that involve mining the aquitard overlying an aquifer which is used as a source of drinking water be added to the list of drinking water threats.”

Subsequent to the meeting, Ms. Minshall drafted Report SPC-10-02-01 and revised the December 3, 2009 motion by setting out the following four part recommendation, which was then sent onto the Ministry and requested the following:

“THAT the Lake Erie Region Source Protection Committee recommend to the Minister of the Environment that Regulation 287/07 section 1.1 subsection (1) be amended to add excavation that breaches the aquitard protecting a municipal drinking water supply aquifer to the list of activities that are prescribed drinking water threats; and

THAT the Lake Erie Source Protection Committee identify excavation below the water table as an activity that may be a drinking water threat and request the Director to establish the hazard rating of the activity based on the release of pathogens to the aquifer that results from the breach of the confining layer protecting the aquifer; and

THAT the Lake Erie Region Source Protection Committee request that the upcoming source protection planning regulation provide for policies intended to deal with transport pathways that increase the vulnerability of a drinking water source such that significant threats are or can be created; and

THAT the Lake Erie Region Source Protection Committee request that pit and quarry licences issued under the Aggregate Resources Act be included in the list of instruments to be prescribed in the upcoming source protection planning regulation; also see Lake Erie Source Protection Committee Meeting Minutes, February 4, 2010, online: Lake Erie Source Protection Region

<http://www.sourcewater.ca/swp_committee/020410_spc_minutes.pdf>.

The Background Report and the foregoing four recommendations were presented to the SPC at the February 4, 2010 Lake Erie Region Source Protection Committee and were commented upon, the amendments made were noted and the four recommendations were voted upon and the following resolutions were passed:

Res. No. 07-10 Moved by: M. Goldberg (i.e., public representative) Seconded by: J. Laird Carried (1 opposed). THAT the Lake Erie Region Source Protection Committee recommend to the Minister of the Environment that Regulation 287/07 section 1.1 subsection (1) be amended to add excavation that breaches the aquitard protecting a municipal drinking water supply aquifer to the list of activities that are prescribed drinking water threats.

M. Wales asked if the wording for the second motion was going to be amended. L. Minshall (Source Protection Director) proposed amending the wording to add “that breaches the confining layer protecting the aquifer”.

M. Goldberg (public interest representative) and J. Laird accepted the friendly amendment. B. Ungar pointed out that there is more than just the risk of pathogens, and suggested changing the wording to acknowledge this. A. Henry suggested changing “pathogens” to “contaminants”.

B. Ungar agreed this would address his concern. M. Goldberg and J. Laird accepted the friendly amendments. *Res. No. 08-10 Moved by: M. Goldberg Seconded by: J. Laird Carried (2 opposed)*

THAT the Lake Erie Source Protection Committee identify excavation below the water table that breaches the confining layer protecting the aquifer as an activity that may be a drinking water threat and request the Director to establish the hazard rating of the activity based on the release of contaminants to the aquifer that results from the breach of the confining layer protecting the aquifer.

Res. No. 09-10 Moved by: M. Goldberg Seconded by: J. Laird Carried (1 opposed) THAT the Lake Erie Region Source Protection Committee request that the upcoming source protection planning regulation provide for policies intended to deal with transport pathways that increase the vulnerability of a drinking water source such that significant threats are or can be created.

Res. No. 10-10 Moved by: M. Goldberg Seconded by: J. Laird Carried (1 opposed) THAT the Lake Erie Region Source Protection Committee request that pit and quarry licences issued under the Aggregate Resources Act be included in the list of instruments to be prescribed in the upcoming source protection planning regulation.