



**Consistency and Accountability in Implementing  
Watershed Plans in Alberta: A jurisdictional  
review and recommendations for reform**

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## **Executive Summary**

Collaborative watershed planning has been adopted across much of North America as the method of managing water and land in an integrated fashion. The Government of Alberta joined the collaborative watershed management and planning movement in 2003. Collaborative planning has the potential to significantly alter land and water management in Alberta, so long as it is accompanied by an appropriate policy and statutory framework for implementation.

The Environmental Law Centre (ELC) conducted a jurisdictional review focused on comparing law and policy approaches to implementation of collaboratively produced and approved watershed management plans. The jurisdictions reviewed include Alberta, Ontario, Manitoba, Saskatchewan, British Columbia, Oregon, California, Washington, and the Murray-Darling Basin in Australia. A literature review of published watershed partnership case studies and academic commentary was also conducted to identify characteristics of a law and policy framework to facilitate implementation of watershed plans.

The review identifies central issues that must be dealt with in a policy framework for implementation of plans. These issues include consistent integration of plans in decision-making in government agencies, municipalities and among the broader watershed community, the need for sustained and transparent funding, and the need for a regulatory backstop to deal with implementation failures. Statutory reform is recommended to ensure that watershed plans are consistently applied, that accountability for outcomes is maintained, and to promote a robust and progressive planning system.

### **Recommended reforms**

The ELC recommends amending the *Alberta Land Stewardship Act*, *Water Act*, *Environmental Protection and Enhancement Act*, and *Municipal Government Act* to facilitate implementation of watershed plans.

#### **Recommendation #1**

Upon approval of a watershed plan by the Watershed Planning and Advisory Council (WPAC), the Minister of Environment, Cabinet and all relevant municipalities in the watershed must, independently, consider a plan for approval.

#### **Recommendation #2**

Where the Minister of Environment approves a watershed plan all decisions of the Director under the *Water Act* and *Environmental Protection and Enhancement Act* must comply with the plan.

### Recommendation #3

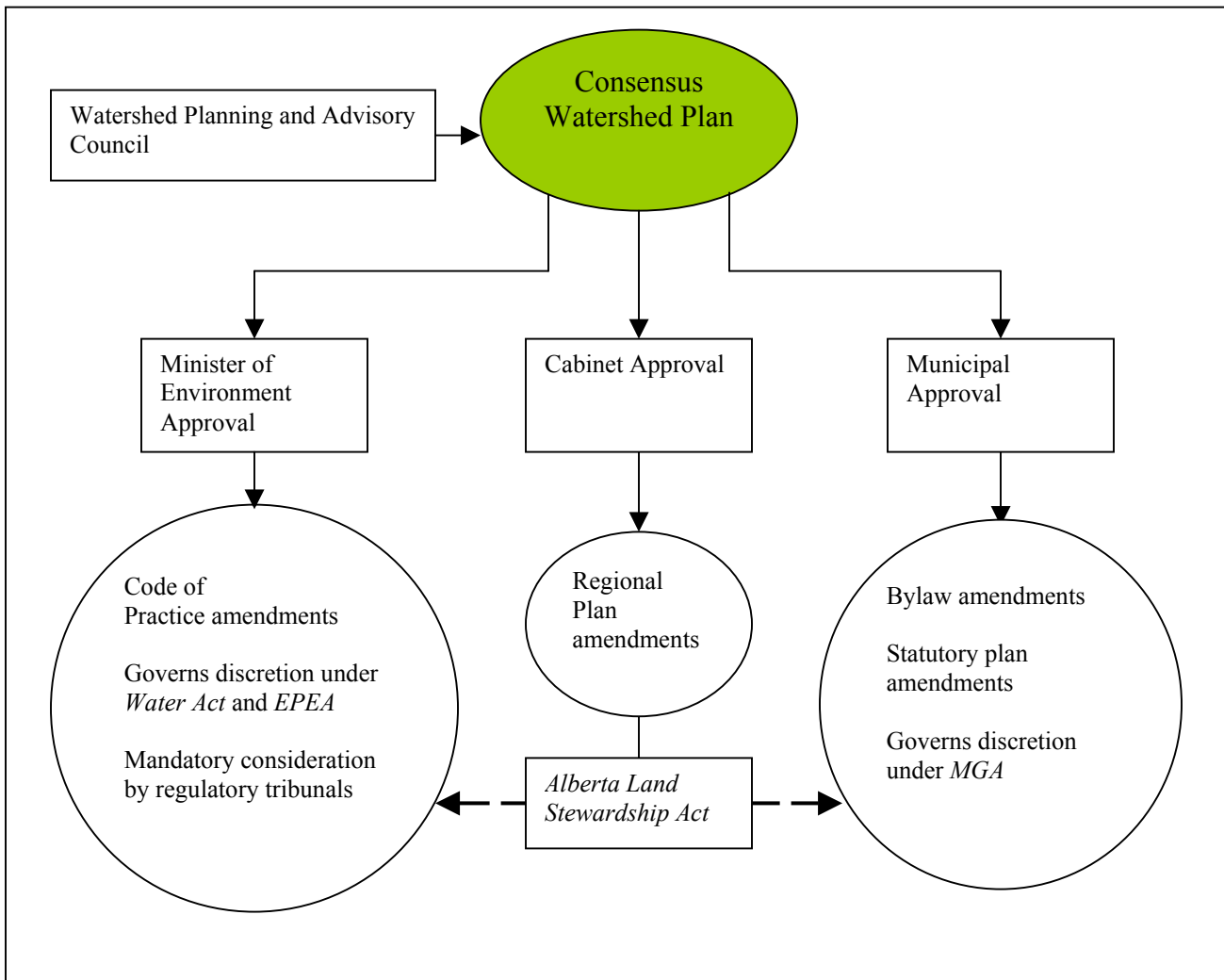
Where Cabinet approves a watershed plan the plan will be incorporated by reference into a regional plan and carry the weight of a regional plan pursuant to the *Alberta Land Stewardship Act*.

### Recommendation #4

Where a municipality approves a watershed plan the municipality must ensure all statutory plans under the *Municipal Government Act* and bylaws (including land use bylaws) comply with the watershed plan.

Figure 1 provides a summary of recommendations #2-4.

**Figure 1: Watershed implementation framework for government decision makers**





### **Recommendation #5**

Approval (or rejection) of a watershed plan by the Minister, Cabinet and the municipality must occur within 6 months of the plan being submitted by the WPAC. Where there is a rejection or partial rejection of the plan, it shall be sent back to the WPAC with reasons for the objection and the WPAC can alter its plan as it sees fit. Where the Minister, Cabinet or municipality fails to formally approve or reject a plan within the prescribed time, the watershed plan is automatically incorporated into decisions (see recommendations #2-4).

### **Recommendation #6**

Where the Minister of Environment approves a plan, compliance with the plan may be appealed to the Environmental Appeals Board. Standing for the appeal is based on whether the party is directly affected by the plan or displays a genuine interest in the subject matter of the plan violation.

### **Recommendation #7**

Create a watershed plan implementation fund (WPIF) and designate a central fund granting agency to administer, track and report on funded projects.

### **Recommendation #8**

Prescribe annual reporting on implementation activities, including budget expenditures.

### **Recommendation #9**

Prescribe monitoring and reporting on changes in watershed conditions at five year intervals.

### **Recommendation #10**

Require, as part of the planning process, a prioritization of threats to watershed health. Within 6 months after the completion of the prioritization process the WPACs must indicate those threats that they will deal with in the planning and implementation process and which threats government must manage.

### **Recommendation #11**

Providing the Lieutenant Governor in Council regulation making powers, pursuant to *Alberta Land Stewardship Act* to encompass all activities related to watershed plans that are not currently regulated under existing legislation.

**Recommendation #12**

Enable binding agreements to be entered into between the Crown and individuals or corporations in the watershed, to ensure accountability for public investments under the WPIF.

**Recommendation #13**

Require a systematic 5-year review and reporting by relevant government agencies of the effectiveness of private stakeholder adoption of watershed based programming for watershed plan implementation.

**Recommendation #14**

Implement a policy of evaluating stakeholder abilities to foster implementation of plan objectives within their watershed constituencies.

# **Consistency and Accountability in Implementing Watershed Plans in Alberta: A jurisdictional review and recommendations for reform**

## **Introduction**

Watershed management planning has become the norm in much of North America in the past two decades as governments and communities attempt to deal with the myriad of issues that impact water resources. Typically, watershed planning has focused on achieving environmental outcomes, but social and economic outcomes are often considered as well. Alberta initiated collaborative watershed planning in 2003 pursuant to its policy, *Water for Life: Alberta's Strategy for Sustainability*.<sup>1</sup> The provincial government reinforced the commitment to the watershed approach in 2008.<sup>2</sup>

This report examines law and policy approaches to implementation of watershed plans and identifies characteristics of an effective policy framework for implementation of watershed plans in Alberta. An effective policy framework must confront the complexity of managing an entire watershed crossing numerous jurisdictional boundaries, and attempting to marry the management of land and water.

The first part of this report reviews some general aspects of the watershed planning lexicon and describes the continuum of law and policy options that may be used to facilitate implementation of watershed plans. Defining “success” in implementing a watershed plan is also discussed. This creates a frame of reference to compare jurisdictional approaches to watershed planning.

The second part provides a review of jurisdictions that have undertaken various approaches to implementation of watershed plans or watershed management. These jurisdictions include Alberta, Ontario, Manitoba, Saskatchewan, British Columbia, Washington, Oregon, California and Australia's Murray-Darling Basin. Literature that evaluates these jurisdictions' approaches to implementation of watershed plans is also considered.

The third part identifies and discusses central issues that must be addressed in developing an implementation policy framework. Finally, recommendations for law and policy reform to facilitate implementation of watershed plans in Alberta are provided.

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<sup>1</sup> Government of Alberta, (Edmonton: Government of Alberta, 2003), online: Water for Life <[http://www.waterforlife.alberta.ca/documents/wfl-strategy\\_Nov2003.pdf](http://www.waterforlife.alberta.ca/documents/wfl-strategy_Nov2003.pdf)> (*Water for Life*).

<sup>2</sup> Government of Alberta, *Water for Life: A Renewal*, (Edmonton: Government of Alberta, 2008) at 14, online: Alberta Environment <<http://environment.gov.ab.ca/info/library/8035.pdf>>.

## Part I: The watershed planning lexicon

Watershed management planning, watershed planning, integrated watershed management planning, integrated resource planning, and integrated catchment management have all been used to describe an integrated approach to natural resource management and planning that considers impacts of activities on both land and water.

Watershed management and planning, as it has evolved in much of the United States and Canada, is focused on “collaborative watershed partnerships” and has been described as having the following institutional characteristics:<sup>3</sup>

- (1) the use of hydrographic watersheds as the principal jurisdictional boundary;
- (2) the involvement of a wide variety of stakeholders (including interest groups, experts, and agency officials from multiple levels of government);
- (3) a reliance on face-to-face negotiations with agreed-on procedural rules (and often a professional facilitator) designed to ensure civility and engender trust;
- (4) a goal of seeking win-win solutions to a variety of interrelated environmental and socioeconomic problems; and
- (5) a fairly extensive fact-finding phase designed to develop a common understanding of the seriousness and causes of relevant problems.

This report uses the phrase “watershed planning”, which has the characteristics of collaborative watershed partnerships with a planning intent, as it is the terminology used interchangeably with watershed management planning in Alberta.

When discussing watershed planning law and policy it is important to acknowledge that the policy around implementation is only one piece of the successful watershed management puzzle. Other factors that will determine watershed planning success include decision-making rules and institutional characteristics (see Figure 2). Decision-making rules include those governing the planning process and cover the type of decision-making (consensus vs. majority) and the inclusiveness of the planning table. Institutional characteristics encompass the existing government and legislative structure at play in a specific watershed, i.e., the arena in which the watershed plan must be implemented.

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<sup>3</sup> Paul A. Sabatier, *et al.*, eds. *Swimming Upstream: Collaborative Approaches to Watershed Management*, (Cambridge: MIT Press, 2005) at 49.

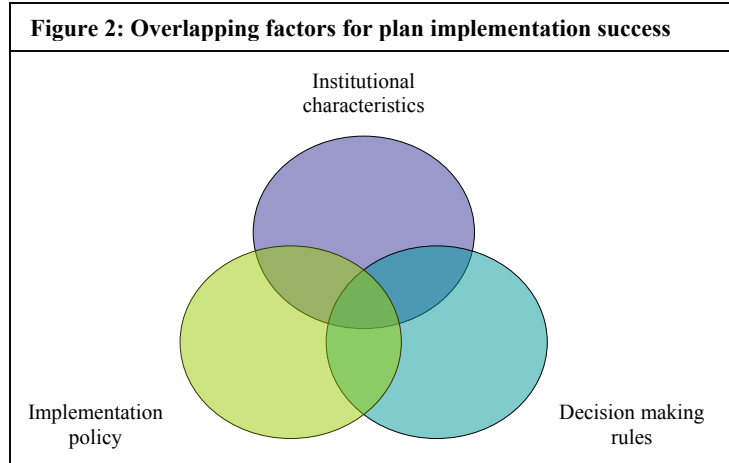
Each of these aspects of watershed planning is likely to impact the other: implementation policy will be directly impacted by the institutional characteristics of a given jurisdiction and the decision-making rules may vary according to existing law and policy structures and whether collaborative planning is deemed appropriate under the circumstances.

For each jurisdiction, these factors and their interplay will be different.

This interplay complicates direct jurisdictional comparisons of policy approaches to implementation and makes conclusive assessment of the causes of implementation success difficult. While there have been efforts to broadly characterize criteria for successful implementation of collaborative resource management approaches, this report seeks to provide a more detailed focus and review of law and policy related directly to implementation of approved watershed plans.<sup>4</sup>

### ***Defining success***

The collaborative watershed planning movement is based, at least in part, on the assumption that environmental outcomes are not readily achievable through the traditional, government led rule-making and “command and control” planning approach.<sup>5</sup> The centralized planning and “command” model has been assessed by many as ineffective and inefficient in dealing with specific environmental outcomes, particularly those that result from non-point source pollution.<sup>6</sup> Insofar as collaborative institutions are meant to replace a more centralized approach to achieving environmental outcomes, it is reasonable that the state of the environment be a primary measure of the efficacy of any collaborative planning effort.



<sup>4</sup> For a discussion of general institutional and procedural factors that are relevant to implementation success see C. Joseph *et al.*, “Implementation of Resource Management Plans: Identifying Keys to Success” (2008) 88 *Journal of Environmental Management* 594. Insofar as these factors are relevant to implementation policy they are used to inform and support the recommendations in this report.

<sup>5</sup> See Douglas S. Kenney, *et al.*, *The New Watershed Source Book: A Directory and Review of Watershed Initiatives in Western United States* (Boulder: Natural Resources Law Center, 2000) and Stephen M. Born and Kenneth D. Genskow, *The Watershed Approach: An Empirical Assessment of Innovation in Environmental Management* (Washington: National Academy of Public Administration, 2000) at 46.

<sup>6</sup> *Ibid.* The assumption that some environmental outcomes are unable to be effectively regulated pursuant to a traditional top down approach remains untested. Arguably the traditional regulatory approach has been abandoned not for lack of effectiveness but due to the fact that it is not politically palatable to pursue a regulatory approach to broader environmental issues.

However, using the state of the environment as the prime indicator of success has its drawbacks, as linking environmental change to specific collaborative planning and management efforts requires intensive monitoring and research.<sup>7</sup>

This has resulted in little research being conducted that evaluates the success of collaborative approaches in attaining environmental outcomes. Research to date has focused on the sustainability of collaborative organizations and the perceptions of success among participants in the planning process, not on ecological conditions.<sup>8</sup> This approach views collaborative planning efforts as having sufficient value unto themselves or otherwise assumes that there will be some causal connection between the process and the making of environmental gains, i.e., that successful and sustained collaborative organizations are “precursors to environmental change”.<sup>9</sup>

While the final determination of whether these institutions are precursors to environmental changes remains unanswered (and will likely remain so for some time to come), case studies that examine institutional and procedural successes provide significant value for the identification of common barriers to implementation of watershed plans. In this way, research related to the perceptions of planners informs the ELC’s recommended policy framework.

The meeting of environmental outcomes should still be the final measure of success for collaborative planning and this end goal guides the ELC’s analysis. The use of environmental outcomes as the indicator of success allows for long-term evaluation of the

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<sup>7</sup> Thomas M. Koontz, “Collaboration for sustainability? A framework for analyzing government impacts in collaborative-environmental management” (2006) 2:1 *Sustainability: Science, Practice, & Policy* at 17 observes that “[e]nvironmental sustainability, by its very nature, suggests conditions that endure. But it is extremely difficult to link CEM processes to ecological conditions due to long time horizons and multiple interacting variables”. See also Douglas S. Kenney, “Are Community Watershed Groups Effective? Confronting the Thorny Issue of Measuring Success” in *Across the Great Divide: Explorations in Conservation and the American West*, pages 188-193, eds Philip Brick, et al. (2000), online: National Civic League <[http://www.ncl.org/cs/conversations/documents/chrislip\\_watershed.doc](http://www.ncl.org/cs/conversations/documents/chrislip_watershed.doc)>. See also Alan R. Collins, et al., *Evaluating the Effectiveness of Local Watershed Organizations* (March 1998) (Tennessee Valley Authority Rural Studies Program/ (Contractor Paper 98-10) at 7-8. The process of measuring the success of collaborative resource planning efforts includes measuring the baseline in environmental condition, establishing some level of certainty in the causal connection between management actions and changes in environmental indicators, and the time for these changes in environmental condition.

<sup>8</sup> See Michael Hibbard & Aaron Dority, *Evaluating Environmental, Social and Economic Impacts of Watershed Enhancement Activities: Year 1 Final Report* (Institute for Policy Research and Innovation, University of Oregon, 2005). See Alan R. Collins, et al., *ibid.*; Elizabeth A. Moore & Thomas M. Koontz “A Typology of Collaborative Watershed Groups: Citizen-Based, Agency-Based, and Mixed Partnerships” (2003) 16 *Society and Natural Resources* 451; and Tanis M. Frame, et al. “The Role of Collaboration in Environmental Management: An Evaluation of Land and Resource Planning in British Columbia” (2004) 41:1 *Journal of Environmental Planning and Management* 59. Also see Scott D. Hardy & Thomas M. Koontz “Reducing Nonpoint Source Pollution Through Collaboration: Policies and Programs Across the U.S. States” (2008) 41 *Environmental Management* 301-310. Other methods of attempting to measure the success of plan implementation include monitoring the percentage of uptake and application of plans, projects and best-management practices, such as the percentage of nutrient management plans in place in a watershed. The management outputs are used as a proxy for specific environmental outcomes.

<sup>9</sup> J.E. Bonnell & T.M. Koontz “Stumbling Forward: The Organizational Challenges of Building and Sustaining Collaborative Watershed Management” (2007) 20:2 *Society & Natural Resources* at 164.

efficacy of collaborative management relative to more traditional forms of planning and environmental management.<sup>10</sup>

### ***Assumptions regarding the watershed plan***

For the purpose of this report it is assumed that those sitting around the planning table have approved a watershed plan. This creates a clear dividing line between the collaborative negotiation of the watershed plan contents and the implementation of that plan by various individuals, governments and organizations in the watershed.

It is also assumed that specific, clear and measurable environmental outcomes or objectives are stated in the plan. This is viewed as a reasonable assumption as environmental problems are often the impetus behind watershed planning initiatives and vague, unmeasurable plans are of limited value in the first instance.<sup>11</sup> This is also reflected in the Government of Alberta's description of a successful planning body, where objectives are "measureable, lead to actions and improve watershed management over time."<sup>12</sup>

### ***Approaches to implementation of collaborative planning***

Rarely are collaborative watershed partnerships, councils, or the plans they produce assigned authority unto themselves. As groups of largely unelected individuals, collaborative partnerships may be left to implement their planning and management objectives through purely voluntary means or through a hybrid of voluntary and regulatory approaches. Taken as a whole, implementation of collaborative management and planning processes from different jurisdictions occur along a continuum of policy approaches, as is illustrated in Figure 3.

As will be seen, many Canadian jurisdictions pursue implementation of watershed plans by taking a voluntary or advisory approach. In contrast, there is an increased reliance on regulatory implementation found in some jurisdictions in the United States.

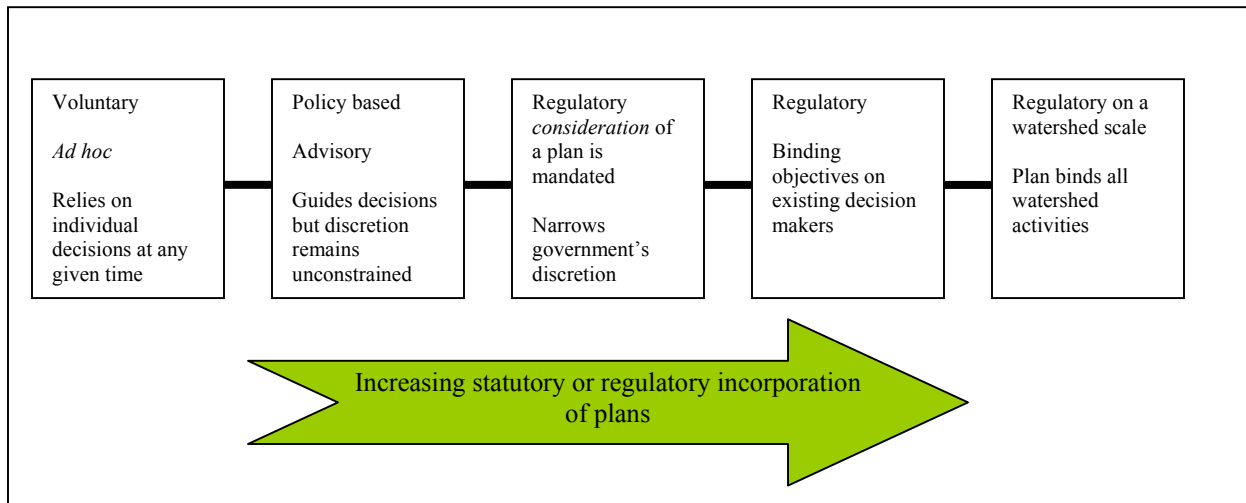
### **Figure 3: The implementation continuum of watershed plans**

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<sup>10</sup> See Cary Coglianese, "Is Satisfaction Success? Evaluating Public Participation in Regulatory Policy Making" (2002) *John F. Kennedy School of Government, Harvard University Faculty Research Working Papers Series* and T.M. Koontz & C.W. Thomas "What Do We Know and Need to Know about the Environmental Outcomes of Collaborative Management?" (2006) 66 (6<sup>th</sup> supplement) *Public Administration Review* 109.

<sup>11</sup> See Sabatier, *et al.*, *supra* note 3.

<sup>12</sup> Government of Alberta, *Enabling Partnerships: A Framework in Support of Water for Life: Alberta's Strategy for Sustainability* (Edmonton: Government of Alberta, undated) at 12, online: Water for Life <[http://www.waterforlife.alberta.ca/documents/wfl-enabling\\_partnerships.pdf](http://www.waterforlife.alberta.ca/documents/wfl-enabling_partnerships.pdf)>.



When discussing the policy approach to implementing collaborative watershed plans it is also important to recognize that many jurisdictions have formal (non-collaborative) planning processes that will directly limit the relevance of collaborative planning processes. Many activities that impact water quality and quantity within a watershed are regulated through existing legal frameworks. Activities that are usually subject to the most regulation include water diversions and allocations (or appropriation in the western United States), point source pollution, works that impede or otherwise impact water bodies, and fisheries and wildlife management. These highly regulated activities are typically the least impacted by collaborative watershed management planning processes.

There are also those activities that have been and continue to be the subject of minimal regulation. This includes activities where direct regulation has proven difficult or politically unpalatable. It is these difficult to regulate areas that formed, at least in part, the impetus for watershed planning.<sup>13</sup> These areas include managing non-point source pollution and habitat restoration aimed at the recovery of species, both of which have been focal points for collaborative watershed work in the United States (largely due to the federal legislation at play, as described *infra*).<sup>14</sup> Managing for these issues often entails managing the cumulative environmental impact in the watershed. The continuum of approaches to watershed planning and management is illustrated by the jurisdictional review below.

<sup>13</sup> See Paul A. Sabatier, *et al.*, “Eras of Water Management in the United States: Implications for Collaborative Watershed Approaches” in *Swimming Upstream: Collaborative Approaches to Watershed Management*, *supra* note 3 at 43-51.

<sup>14</sup> While direct regulations exist for species at risk in many jurisdictions the collaborative watershed approach is often used to attempt to deal with contentious issues of mitigating watershed impacts to facilitate species recovery. This in turn has resulted in the assertion that collaborative planning is, in many cases, merely an abdication of government responsibility to deal with issues where significant contention is likely to arise. See John D. Echeverria, “No Success Like Failure: The Platte River Collaborative Watershed Planning Process” (2001) 25 *William and Mary Environmental Law and Policy Review* 559 at 582-583.



## **Part II: Approaches to implementation of collaborative watershed plans and management: a jurisdictional review.**

Collaborative watershed planning and management has become the norm in most provincial and state jurisdictions in Canada and the United States.<sup>15</sup> This report reviews the policy approaches to implementation of watershed plans in Alberta, Ontario, Saskatchewan, Manitoba, British Columbia, Washington, Oregon, and California. For comparative purposes, implementation of a watershed plan of a more regulatory nature in Australia's Murray-Darling Basin is described.

The jurisdictional review focuses on legislative and policy frameworks dealing with watershed planning as described earlier in this report. Where no specific enabling legislation for watershed planning was identified, other water-related planning policies and laws are reviewed. Where evaluations of these planning systems were available they are discussed.

For a general overview of the approach of each jurisdiction see Appendix A.

A summary of the nature of implementation approaches used by each jurisdiction is included in Table 1 below.

### **A. Canada**

Watershed planning has been promoted by provincial governments across most of Canada but the focus of most structured planning deals with the protection of drinking water. Where watershed planning does exist it is largely policy driven and has not been subjected to serious evaluation and assessment. This is in part due to the fact that collaborative watershed planning in Canada is relatively new.

#### **1. Alberta**

*Water for Life* contemplates the creation of watershed plans through the use of Watershed Planning and Advisory Councils (WPAC). WPACs may also create *water* management plans as a subset of *watershed* plans. Water management plans are enabled by and carry legislative weight under the Alberta *Water Act*.<sup>16</sup> Watershed plans, on the other hand, are not directly referenced in Alberta legislation. Watershed plans reflect the province's effort to integrate water and land management as espoused by the *Water Act*, the *Framework for Water Management Planning*, and the renewed *Water for Life* policy.<sup>17</sup>

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<sup>15</sup> See Sabatier, *et al*, *supra* note 3 at 43-49. The U.S. Environmental Protection Agency (EPA) has also been a strong proponent and supporter of these efforts pursuant to its jurisdiction over water quality. For more information see the U.S. EPA website at <<http://www.epa.gov/owow/watershed/>> and the watershed management process at <<http://www.epa.gov/owow/watershed/watershedcentral/process.html>>.

<sup>16</sup> R.S.A. 2000, c. W-3.

<sup>17</sup> Alberta Environment, *Framework for Water Management Planning* (Edmonton: Alberta Environment, undated) at 7, online: Alberta Environment <[http://environment.alberta.ca/documents/Framework\\_for\\_water\\_management\\_planning.pdf](http://environment.alberta.ca/documents/Framework_for_water_management_planning.pdf)>. Also see

**Table 1: Approaches to implementation of approved watershed plans**

Jurisdiction		Environmental Agency	Other government agencies	Municipalities	Non-government stakeholders
AB	WP	Discretionary	Discretionary	Discretionary	Discretionary
	OP	WMP binding			
ON	WP	Discretionary	Discretionary	Discretionary	Discretionary
	OP	SPP/STP binding	SPP/STP binding	SPP/STP binding	SPP/STP binding
MB	WP	Prescribed decisions bound by regulation	Prescribed decisions bound by regulation	Prescribed decisions bound by regulation	Discretionary
SK	WP	Discretionary	Discretionary	Discretionary	Discretionary
BC	WP	Discretionary	Discretionary	Discretionary	Discretionary
	OP	WMP/DWP prescribed decisions bound by regulations	WMP/DWP prescribed decisions bound by regulations	WMP/DWP prescribed decisions bound by regulations	Discretionary
WA	WP	Binding	Binding	Binding	Binding
OR*	WP	Discretionary	Discretionary	Discretionary	Discretionary
CA	WP	Discretionary	Discretionary	Discretionary	Discretionary
	OP	WQP binding	WQP binding	Discretionary	Discretionary
MDB**	WP	Binding	Binding	Binding	Binding

WP = watershed plan  
 OP = other multi-stakeholder water focused plan  
 SPP/STP = significant threat policies pursuant to source protection planning. Other policies set out in source protection plans are not binding on decision makers, rather the decision makers must “have regard” to the policies.  
 WMP = water management plan  
 DWP = drinking water plan  
 WQP = water quality plan  
 \* Oregon is unique insofar as it has legislation that provides for administration and funding of watershed restoration through a central board.  
 \*\* the Murray-Darling Basin approach is not collaborative in nature.

*Water for Life: A Renewal*, supra note 2 at 7. *Framework for Water Management Planning* indicates that integration of planning efforts across government departments is pursued through “Regional Strategies led by Alberta Environment” (at 11).

Implementation of watershed plans relies on the WPACs, their constituent members (including government), and action of individual organizations and watershed stewardship groups within the watershed.

The government foresees the following WPAC actions related to plan implementation:<sup>18</sup>

- Prepare watershed management plans that identify issues and examine the best course of action to address them. These plans may address a number of areas including water, land use, and information needs. They may also include a water management plan with Water Conservation Objectives as outlined under the *Framework for Water Management Planning*.
- Seek adoption of these plans by jurisdictions (municipal, provincial and federal) and stakeholders with the appropriate legislated authority to implement recommendations.
- In collaboration with its stakeholders, assist in development and implementation of water conservation, water monitoring, source water protection and wetland programs.
- Promote awareness and implementation of best management practices by landowners and other stakeholders in the watershed.
- Conduct education and awareness programs such as riparian health assessments, field demonstration sites, and other stewardship activities.

Implementation of **watershed plans** relies heavily on voluntary application of plan actions by individuals and organizations within the watershed. In this regard, the implementation of watershed plans can be characterized as opportunistic and *ad hoc*, insofar as the extent of plan implementation will depend on the actions and choices of each government agency, organization or individual within the watershed in any given instance.

Government approved **water management plans** limit government discretion in prescribed instances under the *Water Act*. Specifically, an approved water management plan may set out matters and factors that must be considered in various decisions of the Director, the central decision maker under the Act, including the issuance of approvals

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<sup>18</sup> Government of Alberta, *Enabling Partnerships: A Framework in Support of Water for Life: Alberta's Strategy for Sustainability* (Edmonton: Government of Alberta, undated) at 10, online: Water for Life <[http://www.waterforlife.alberta.ca/documents/wfl-enabling\\_partnerships.pdf](http://www.waterforlife.alberta.ca/documents/wfl-enabling_partnerships.pdf)>. The Alberta Water Council, a multi-stakeholder advisory council to government, has also published *Strengthening Partnerships: A Shared Governance Framework for Water for Life Collaborative Partnerships* in 2008 which outlines several recommendations to expand on how implementation of watershed plans should take place. These recommendations have not been formally accepted (or rejected) by the Government of Alberta at the time this report. Online: Alberta Water Council <<http://www.albertawatercouncil.ca/Portals/0/pdfs/SharedGov%20-%20Strengthening%20Partnerships%20FINAL.pdf>>.

and licences and approval of licence transfers.<sup>19</sup> An unapproved water management plan “*may be considered*” (emphasis added) in water licencing decisions.<sup>20</sup>

Where an approved water management plan deals with issues outside the scope of the *Water Act*, implementation is based on voluntary adoption of plan outcomes.

### ***Evaluations of plan implementation***

Implementation of watershed plans is in the early stages in Alberta and a broad assessment of plan implementation has not been conducted.

A water management plan is in place for the South Saskatchewan River Basin and has had significant implications for the basin, including the closing of the basin to further water allocations from surface water.<sup>21</sup> In this regard implementation of the water management plan may result in environmental benefits. However, the closing of the basin has resulted in an increased focus on transfers of water allocations that may actually increase the intensity of water use.<sup>22</sup> Avoiding further environmental impacts will depend on future government policies and decisions in relation to water allocation transfers.

## **2. Ontario**

Watershed planning in Ontario can be characterized as a hybrid of collaborative and formal legal planning processes. Legislative planning does exist for drinking water pursuant to the *Clean Water Act*<sup>23</sup> and for the Lake Simcoe watershed, pursuant to the *Lake Simcoe Protection Act, 2008*,<sup>24</sup> although the latter does not use a collaborative planning approach. Broader watershed planning is pursued through voluntary initiatives led primarily by regional “conservation authorities.”<sup>25</sup>

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<sup>19</sup> *Supra* note 16, at ss. 38, 51 & 81. In addition, approved water management plans may prescribe certain limits of diversions for agricultural purposes and certain rules about household diversions (at ss.19 & 23). The matters and factors that may be outlined in a water management plan include “water conservation objectives” which are focused on managing water flows for recreation, wildlife management or waste assimilation purposes. *Supra* note 16 at s. 1(1)(hhh).

<sup>20</sup> *Ibid.* at s. 51.

<sup>21</sup> This includes groundwater hydraulically connected to surface water but does not include the Red Deer River basin. See the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order*, Alta. Reg. 171/2007.

<sup>22</sup> See Nigel Bankes, “The legal framework for acquiring water entitlements from existing users” (2006) 44:323 *Alberta Law Review* 2.

<sup>23</sup> S.O. 2006, c. 22.

<sup>24</sup> S.O. 2008, c. 23.

<sup>25</sup> Government of Ontario, *Watershed Management on a Watershed Basis: Implementing an Ecosystem Approach* (Ontario: June 1993) online: Ministry of Natural Resources <[http://www.mnr.gov.on.ca/MNR\\_E002319.pdf](http://www.mnr.gov.on.ca/MNR_E002319.pdf)>. Also see the *Conservation Authorities Act*, R.S.O. 1990, c. C27. Conservation authorities are regionally based watershed management bodies established in 1946 with a mandate of ensuring “the conservation, restoration, and responsible management of Ontario’s water, land and natural habitats through programs that balance human, environmental and economic needs”, online: Minister of Natural Resources <[http://www.mnr.gov.on.ca/en/Business/Water/2ColumnSubPage/STEL02\\_163413.html](http://www.mnr.gov.on.ca/en/Business/Water/2ColumnSubPage/STEL02_163413.html)>.

Implementation of **watershed plans**, as foreseen by government, is focused on the voluntary adoption of plan outcomes. These watershed plan outcomes include:<sup>26</sup>

- providing information/input in land use planning and decision making;
- providing recommendations and responsibilities for future studies;
- providing for monitoring programs and responsibilities for information updating and corrective actions;
- setting out a time frame for review/update of plan; and
- promoting agency endorsement.

The bulk of these planning processes and watershed stewardship initiatives are led by Conservation Authorities.<sup>27</sup>

Implementation of **source protection plans** under the *Clean Water Act* relies on a process of identifying significant threats to drinking water and policies to manage these threats. Municipalities, local boards or source protection authorities must comply with these significant threat policies.<sup>28</sup> The significant threat policies prevail over official plans and bylaws.<sup>29</sup>

Municipalities are prohibited from undertaking any work or improvement that conflicts with significant threat policies and from passing a conflicting bylaw.<sup>30</sup> The official plan of the municipality must be amended to reflect the significant threat policy.<sup>31</sup> Non-conforming municipalities can be forced to conform by way of Ministerial Order.<sup>32</sup> Other prescribed instruments must be amended to comply with significant threat policies set out in a source protection plan.<sup>33</sup> Where source protection plans have not been created for an area, a risk management planning framework under the Act applies.<sup>34</sup>

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<sup>26</sup> *Ibid.* at 12.

<sup>27</sup> Conservation Authorities are formed in relation to watersheds, at the initiative of municipalities within watersheds. The legislative objects of a Conservation Authority are “to establish and undertake... a program designed to further the conservation restoration, development, and management of natural resources other than gas, oil, coal and minerals”. The legislative powers of Conservation Authorities includes those of a person at law and, of particular relevance to watershed management, range from controlling surface water flows to planting trees on Crown land and causing research to be done. *Conservation Authorities Act*, *supra* note 25 at ss. 2, 20, & 21.

<sup>28</sup> *Supra* note 23 at ss. 38-39.

<sup>29</sup> *Ibid.* at s. 39(2). Subsections 39 (4) & (5) prescribe certain instances where a municipality’s bylaws prevail over a significant threat policy if greater protection of drinking water quality and quantity is provided.

<sup>30</sup> *Ibid.* at s. 39.

<sup>31</sup> *Ibid.*

<sup>32</sup> *Ibid.* at s. 41.

<sup>33</sup> *Ibid.* at s. 43. If the amendment is not sought the Minister can force the amendments (s. 44(2)).

<sup>34</sup> *Ibid.* at ss. 58-59.

Other policies (potentially related to ecological conditions) may be integrated into source protection plans, but planning and regulatory bodies need only “have regard” to these policies.<sup>35</sup> In this way these planning outcomes and policies inform decision-making but need not govern it.<sup>36</sup>

### *Evaluations of plan implementation*

A general assessment of the perspectives of Conservation Authorities in collaborative planning processes in the province was conducted in 2005.<sup>37</sup> The review of Conservation Authorities involved interviewing those who had taken part in the collaborative planning processes to identify “lessons learned” and to inform source water protection planning in the province.

Specific to plan implementation the review identified the need, in dealing with cross-boundary issues, to have participants that are willing to work together and the need for clarity around roles and responsibilities of participating agencies (through the use of a clearly articulated memorandum of understanding).<sup>38</sup> This includes the need to have a lead agency assigned to minimize confusion and duplication.<sup>39</sup>

It was also identified that participant willingness to be involved in the process was highly relevant to subsequent action.<sup>40</sup> It was observed that a high level of buy-in may be achieved where participation is viewed as a way of avoiding a regulatory approach to resource management issues.<sup>41</sup> This reflects the importance of a regulatory backstop.

Involving “community leaders and representatives authorized to make decisions on behalf of their agency or group to enhance project ownership” is also recommended.<sup>42</sup> The review found that it was beneficial to link “undertaking[s] to locally relevant objectives and initiatives” as it would “enhance stakeholder willingness to get involved in planning and implementation”.<sup>43</sup>

Beyond these “lessons learned” there is a need to monitor and assess the implementation of watershed plans in Ontario. Many watershed plans have been produced and are accompanied by monitoring and reporting requirements; however, assessments of the

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<sup>35</sup> *Ibid.* at s. 39(1)(b).

<sup>36</sup> The requirement for government agencies to “have regard” to policies is broad enough that the decision maker would be largely immunized, except in cases of bad faith, from having its decision successfully challenged in the courts.

<sup>37</sup> Guelph Water Management Group and Partners, *Working Together to Protect our Source Waters*, (Guelph: Guelph Management Group and Partners, 2005).

<sup>38</sup> *Ibid.* at 11.

<sup>39</sup> *Ibid.*

<sup>40</sup> *Ibid.* at s. 19.

<sup>41</sup> *Ibid.* This issue of regulation avoidance as motivator is discussed further in Part III.

<sup>42</sup> *Ibid.*

<sup>43</sup> *Ibid.*

effectiveness of these plans may prove difficult as these plans focus primarily on existing management tools rather than prescribing specific actions and substantive outcomes.<sup>44</sup>

### **Non-collaborative watershed planning - *Lake Simcoe Protection Act***

The *Lake Simcoe Protection Act* establishes the first binding watershed planning regime in Ontario. This legislation outlines the intent and statutory power of the Lake Simcoe Protection Plan (LSPP). The LSPP is binding on municipalities and other decision-makers within the province.<sup>45</sup> Specifically, municipal plans and bylaws must conform to the LSPP and prescribed instruments that are in operation in the watershed must be created or amended in accordance with designated policies.<sup>46</sup> The legislation does not prescribe a collaborative approach to the development of the plan. Rather, the plan is the subject of extensive public consultation.<sup>47</sup>

### **3. Manitoba**

The *Manitoba Water Strategy* outlined the need to develop an integrated water management planning system and consolidate water legislation.<sup>48</sup> Subsequently the *Water Protection Act (WPA)* was proclaimed in 2006.<sup>49</sup>

The *WPA* contemplates the creation of **watershed management plans** through water planning authorities designated under the Act.<sup>50</sup> The plans are to:<sup>51</sup>

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<sup>44</sup> As the lead agency in many watershed planning processes the Conservation Authorities can be expected to implement watershed plans to the degree their jurisdiction allows. The Conservation Authorities have regulation making powers (subject to Ministerial approval) to regulate the use of surface water, regulate for changing or interfering with watercourses and wetlands, and regulate development if, in the opinion of the authority, flooding, erosion, dynamic beaches or pollution or the conservation of land maybe effected. See the Conservation Authorities' website at <[www.conservation-ontario.on.ca](http://www.conservation-ontario.on.ca)>. For example, the Toronto and Region Conservation Authority has several plans, such as the Humber River Watershed Plan. <[http://www.trca.on.ca/Website/TRCA/Website.nsf/WebPage/trca\\_\\_water\\_protection\\_\\_strategies\\_\\_humber\\_\\_humber?OpenDocument&ppos=1&spos=1&tpos=1&rsn=#alliance](http://www.trca.on.ca/Website/TRCA/Website.nsf/WebPage/trca__water_protection__strategies__humber__humber?OpenDocument&ppos=1&spos=1&tpos=1&rsn=#alliance)>. See for example the Humber River Implementation Guide <[https://www.blackcreek.ca/Website/TRCA/Graphics.nsf/Graphics/humber\\_plan\\_implementation\\_guide\\_final\\_intro/\\$file/Humber\\_ImplGuide\\_FINAL\\_TOC\\_ExecSum\\_Intro.pdf](https://www.blackcreek.ca/Website/TRCA/Graphics.nsf/Graphics/humber_plan_implementation_guide_final_intro/$file/Humber_ImplGuide_FINAL_TOC_ExecSum_Intro.pdf)>. Also see the implementation of the Cobourg Creek watershed plan at <<http://www.grca.on.ca/CobourgCrkWP/Watershed%20Plan%20Implementation,%20Water%20Budget%20and%20Conservation%20Plan.pdf>> or the Central Welland River Watershed Plan <[http://www.npca.ca/water-management/water-planning/documents/CentralWellandRiverBackground\\_FINAL.pdf](http://www.npca.ca/water-management/water-planning/documents/CentralWellandRiverBackground_FINAL.pdf)>.

<sup>45</sup> *Supra* note 22 at s.6.

<sup>46</sup> *Ibid.* at ss. 6 (3)-(9) and s. 9.

<sup>47</sup> Ministry of the Environment, Ministry of Natural Resources, Lake Simcoe Region Conservation Authority, *Lake Simcoe Protection Plan* (Toronto: Queen's Printer, 2009), online Ministry of the Environment <<http://www.ene.gov.on.ca/publications/6932e01.pdf>>.

<sup>48</sup> Government of Manitoba (Winnipeg: Government of Manitoba, 2003), online: Government of Manitoba <<http://www.gov.mb.ca/waterstewardship/waterstrategy/pdf/water-strategy.pdf>> at 20-21.

<sup>49</sup> S.M. 2005, c. 26.

<sup>50</sup> *Ibid.* at s. 14. Planning authorities may be constituted of boards of conservation districts or planning districts, the municipal council or any other person or entity or combination thereof. Information published

- specify linkages between water management and land use planning so as to facilitate the adoption, in a development plan or other planning instrument, of some or all of the provisions of the watershed management plan; and
- identify ways in which the plan can be implemented, monitored and evaluated, recognizing the need to implement the plan with the assistance of individuals, groups, and organizations.

Implementation of watershed management plans under the *WPA* relies on regulation that may be promulgated by the Lieutenant Governor in Council.<sup>52</sup> The regulations may require that a decision-maker making a prescribed decision consider the approved plan.<sup>53</sup> The *WPA* also alters the *Planning Act* to require consideration of an approved watershed plan by a municipality in preparation of a development plan or the amendment of a development plan bylaw.<sup>54</sup> Zoning bylaws and actions of council and municipal administration must be “generally consistent” with the development plan bylaw.<sup>55</sup> Regulations have yet to be created for the purpose of implementation of watershed plans.<sup>56</sup>

### ***Evaluations of plan implementation***

Implementation of watershed plans is in the early stages in Manitoba and a broad assessment of plan implementation has not been conducted.

## **4. Saskatchewan**

Saskatchewan’s **watershed and aquifer planning** is overseen by the Saskatchewan Watershed Authority, a government agency established in 2002.<sup>57</sup> Watershed Advisory Committees are struck and lead the planning process (in conjunction with a technical committee).<sup>58</sup>

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by the Manitoba government foresees watershed community involvement in the formation of watershed plans although the legislation does not mandate this. Government of Manitoba, *Integrated Watershed Management Planning* (undated), online: Government of Manitoba <[http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp\\_brochure.pdf](http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp_brochure.pdf)>. (*IWMP*)

<sup>51</sup> *Supra* note 49.

<sup>52</sup> *Ibid.* at s. 23.

<sup>53</sup> *Ibid.*

<sup>54</sup> *Ibid.* at s.44(2) which has since been repealed but is now reflected in s. 62.1 of the *Planning Act* (pursuant to s. 94 of the *Statutes Correction and Minor Amendments Act, 2008*). Development plans are implemented through adoption by the passing of by-laws (*Planning Act*, s. 45).

<sup>55</sup> *Planning Act*, C.C.S.M. c. P80, *ibid.* at s. 68. (unofficial version consolidated to January 13, 2009), online: Government of Manitoba <<http://web2.gov.mb.ca/laws/statutes/ccsm/p080e.php>>.

<sup>56</sup> A separate and more focused planning regulation has been made in relation to nutrient management planning in Manitoba. This planning process enables the use of zoning and setbacks to manage nutrient loading within the watershed. See the *Nutrient Management Regulation*, C.C.S.M., c. W65.

<sup>57</sup> See the *Watershed Authority Act 2005*, S.S. 2005, c. S- 35.03 at s. 5. The authority is mandated to develop, manage and protect water resources, deal with water allocations and generally manage and conserve water resources and the land associated with them.

<sup>58</sup> *Ibid.* at s. 20. These advisory committees often evolve into independent nonprofit groups such as the Assiniboine Watershed Stewardship Association.



Completed watershed and aquifer management plans will contain background information, an environmental scan of the watershed, analysis of issues and threats, recommendations for key actions, timelines, responsibilities, accountability measures and evaluation criteria. By identifying and prioritizing threats and solutions, the plans will provide the Authority with direction for programming and resource allocation.<sup>59</sup>

Implementation of watershed and aquifer plans is via voluntary actions and adoption of recommendations by the Saskatchewan Watershed Authority.<sup>60</sup> The focus of plan implementation consists of the development of programs to “effect solutions” and monitoring and assessment of these programs through time.<sup>61</sup>

Several plans have been completed but they have taken a general advisory approach to identification of actions and responsibilities.<sup>62</sup> Notable among plan recommendations is the creation of an authority to effectively administer plans, either through an existing conservation authority or through the creation of a source water protection authority.<sup>63</sup>

### ***Evaluations of plan implementation***

Implementation of watershed plans is in the early stages in Saskatchewan and a broad assessment of plan implementation has not been conducted.

## **5. British Columbia**

Watershed planning in British Columbia focuses on incorporating a “watershed” lens in other planning processes and decisions, including municipal planning, and implementation of existing Land Resource Management Plans and Sustainable Resource Management Plans.<sup>64</sup>

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<sup>59</sup> See the Watershed and Aquifer Planning website at

<<http://www.swa.ca/Stewardship/WatershedPlanning/Default.asp?type=Model>>.

<sup>60</sup> See the Saskatchewan Watershed Authority, *Protecting our water: A Watershed and Aquifer Planning Model for Saskatchewan* (Saskatoon: Saskatchewan Watershed Authority, undated), online: Saskatchewan Watershed Authority <<http://www.swa.ca/Publications/Documents/ProtectingOurWater.pdf>>.

<sup>61</sup> *Ibid.*

<sup>62</sup> For a listing of watersheds and related links to source protection plans see the Saskatchewan Watershed Authority, online: <<http://www.swa.ca/Stewardship/WatershedPlanning/Default.asp?type=Map>> . The plans promote best management practices and generally have a general absence of measurable environmental outcomes.

<sup>63</sup> For example the Assiniboine River Watershed Advisory Committees & Saskatchewan Watershed Authority, *Assiniboine River Watershed Source Water Protection Plan* (August, 2006) at 26, online: <[http://www.assiniboinewatershed.com/index.php?option=com\\_docman&task=cat\\_view&gid=32&Itemid=24](http://www.assiniboinewatershed.com/index.php?option=com_docman&task=cat_view&gid=32&Itemid=24)>.

<sup>64</sup> See the Government of British Columbia’s “Living Water Smart British Columbia’s Water Plan”, online: Living Water Smart <<http://www.livingwatersmart.ca/preparation/waterplans.html>>. A more formal approach to collaborative planning in British Columbia was earlier pursued through the community planning provisions of the *Forests Range Practices Act* and the *Forest Planning and Practices Regulations* that contemplated “community watershed” groups and plans. The relevant provisions have since been repealed.

The government is considering revisions to water legislation to promote watershed planning but no new legislation has been proposed.<sup>65</sup> In addition, collaborative watershed governance is being pursued under the “Living Water Smart” initiative.<sup>66</sup> Notwithstanding the absence of a more formal watershed planning policy framework, a watershed based council, the Fraser Basin Council, has been in operation for more than a decade. The Council evolved from the Fraser River Basin Board in 1997.<sup>67</sup>

Implementation of **watershed plans** in BC is carried out through voluntary adoption of plan actions and recommendations by government and other watershed stakeholders.

**Water management planning** and **drinking water planning** are also enabled by statute in BC. Water management plans are enabled under Part 4 of the BC *Water Act*. These plans are made at the order of the Minister and may consider “concerns related to fish, fish habitat and other environmental matters”.<sup>68</sup> Drinking water planning is also mandated in British Columbia under the *Drinking Water Protection Act*.<sup>69</sup> Neither piece of legislation prescribes a collaborative approach to planning although it may occur.

Implementation of cabinet approved **water management** and **drinking water plans** is by way of regulation.<sup>70</sup> Specifically, regulations may prescribe which decisions must consider the plan, can limit discretion of decision makers under prescribed enactments, and can restrict the issuance of authorizations or amendment of authorizations under prescribed enactments.<sup>71</sup> This regulation making power excludes altering forestry practices in the province.<sup>72</sup>

### ***Evaluations of plan implementation***

Reviews of BC’s approach have focused on the Fraser Basin Council (FBC). It has been observed that several environmental indicators in the watershed have shown improvement including decreases in toxic discharges and fecal coliform concentrations; however, “not all changes or improvements result from FBC programs or activities.”<sup>73</sup>

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<sup>65</sup> See the Government of British Columbia’s “Living Water Smart: British Columbia’s Water Plan” online: Living Water Smart <<http://www.livingwatersmart.ca/preparation/planning.html>>. It should be noted that many of the LRMP & SRMP processes were collaborative in nature.

<sup>66</sup> Government of British Columbia, *Living Water Smart: British Columbia’s Water Plan* (Vancouver: British Columbia Ministry of Environment, 2008) indicates that the “Government will support communities to do watershed management planning in priority areas” at 51, online: Living Water Smart <[http://www.livingwatersmart.ca/docs/livingwatersmart\\_book.pdf](http://www.livingwatersmart.ca/docs/livingwatersmart_book.pdf)>.

<sup>67</sup> See Fraser Basin Council online: <<http://www.fraserbasin.bc.ca/>>.

<sup>68</sup> *Water Act*, R.S.B.C., 1996, c. 483, at s.62 (2).

<sup>69</sup> S.B.C. 2001, c. 9.

<sup>70</sup> *Water Act*, *supra* note 66 at s. 65(1). Also see ss. 65 (3)–(5) which further delineates the nature of how the regulations impact other enactments. Also see s. 65 of the *Drinking Water Protection Act*, *Ibid.*.

<sup>71</sup> *Water Act*, *supra* note 66 at s. 65(1). Also see ss. 65 (3)–(5) which further delineates the nature of how the regulations impact other enactments. Also see s. 65 of the *Drinking Water Protection Act*, *ibid.*

<sup>72</sup> *Water Act*, *supra* note 66 at s. 65 (2). Also see s. 65 of the *Drinking Water Protection Act*, *supra* note 67.

<sup>73</sup> See William Blomquist, *et al.*, “Institutional and Policy Analysis of River Basin Management: The Fraser River Basin, Canada.” (2005) 3525 *World Bank Policy Research Working Paper* at 29, online: World Bank <<[16](http://www-</a></p></div><div data-bbox=)

The FBC approach has been viewed as effective insofar as it has minimized bureaucratic “turf battles” and fits well in the federal system by providing a means of coordinating government action and incorporating First Nations and private stakeholder input.<sup>74</sup>

A weakness identified in the FBC structure was the inability of the independent council to implement plans and programs it agrees upon, having to rely on government agencies for actual performance.<sup>75</sup> It has been observed that government agencies may fail to act pursuant to recommendations or there may be delays in implementation.<sup>76</sup> Funding and budget uncertainty may also make the basin council “continually vulnerable to ‘mission creep’”, i.e., where following the money shifts the focus of the council away from its primary concerns and interests.<sup>77</sup>

## ***B. United States***

Watershed management and planning began in the United States in the early 1980s and continues to be pursued in many states.<sup>78</sup> While there exist hundreds of watershed partnerships, not all participate in formal planning exercises and the planning that does occur is accompanied by a range of legislative and policy approaches to implementation.

### **1. Washington**

Watershed planning in Washington takes place pursuant to the *Watershed Planning Act*.<sup>79</sup> Watershed planning bodies may be formed by local citizens as long as the counties, the largest city or town, and the water supply utility obtaining the largest quantity of water agree to the planning effort.<sup>80</sup>

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wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2005/03/06/000090341\_20050306122559/Rend  
ered/PDF/wps3525.pdf>.

<sup>74</sup> *Ibid.* at 30.

<sup>75</sup> *Ibid.*

<sup>76</sup> *Ibid.*

<sup>77</sup> *Ibid.*

<sup>78</sup> Sabatier *et al.*, *supra* note 3 at 47-48 which indicates that there are over 150 partnerships in California alone. Kenney *et al.*, *supra* note 5 at xii, estimates that there are over 400 “watershed initiatives” in the West.

<sup>79</sup> 90 R.C.W. (1997).

<sup>80</sup> *Ibid.* at § 90.82.060(2). See also Bill 1580 which amends certain provisions of the watershed planning process and provides for local water plans to be created (Second Substitute House Bill 1580, Chapter 183, Laws of 2009, *Pilot Local Water Management Program*). Notably the membership of water management boards are set up at section 4 of the Bill and enables local membership representing water rights holders, environmental interests and citizens at large. It is contemplated that water planning units will become water management boards (at § 90.82.060(9)). The planning unit elects whether they wish to establish instream flows as part of the planning process. Preferential grant priority is given to applications that address fish and fish habitat protection where there is evidence that the supply of water is inadequate for population and economic growth. See *Watershed Planning Act* at § 90.82.040(2)(c) and § 90.82.040(3). This section also indicates that the application must demonstrate a need for state planning funds.

Implementation of watershed plans constitutes the fourth and final phase of the planning process.<sup>81</sup> Implementation plans must contain strategies to provide sufficient water for production agriculture, commercial, industrial and residential use and instream flows.<sup>82</sup> Timelines and interim milestones to measure progress are also required.<sup>83</sup>

Where a planning agency or individual approves a watershed plan in Washington, certain legislative provisions apply. State agencies (with a seat at the planning table) must “adopt by rule the obligations of both state and county government and rules implementing the state obligations” set out in the plan.<sup>84</sup> In lieu of rules these agencies may “adopt policies, procedures or agreements related to the obligations or implementation of the obligations” with the consent of the planning unit.<sup>85</sup> State agencies are also encouraged to review budgetary and staffing requirements annually to facilitate rule implementation.<sup>86</sup>

Counties are obliged, once a plan is approved, to “adopt any necessary implementing ordinances and take other action to fulfill their obligations as soon as possible”.<sup>87</sup> Again, it is recommended that an annual review of the implementation needs and budget and staffing requirements for these plans be conducted.<sup>88</sup>

Other organizations and individuals that approve a watershed plan must “adopt policies, procedures, agreements, rules or ordinances to implement the plan”.<sup>89</sup>

The Department of Ecology itself is also bound by a plan as it constitutes its “framework for making future water resources decisions for the planned watershed or watersheds” and the plan must be relied upon as “a primary consideration in determining the public interest related to such decision[s]”.<sup>90</sup>

Plans are otherwise limited in their retroactive application.<sup>91</sup> Plan provisions must not conflict with existing state statutes, federal laws, or tribal treaty rights.<sup>92</sup> Plans are not able to change existing local ordinances, state rules or permits directly but may

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<sup>81</sup> Once a watershed plan is in place an implementation plan must be created within a year of receiving funding for that purpose. *Ibid.* at § 90.82.040(2)(e).

<sup>82</sup> *Ibid.* at § 90.82.043(2).

<sup>83</sup> *Ibid.*

<sup>84</sup> *Ibid.* at § 90.82.130(3).

<sup>85</sup> *Ibid.*

<sup>86</sup> *Ibid.*

<sup>87</sup> *Ibid.*

<sup>88</sup> *Ibid.*

<sup>89</sup> *Ibid.*

<sup>90</sup> *Ibid.* at § 90.82.130(4).

<sup>91</sup> *Ibid.* at § 90.82.120. A plan can not require a modification in the basic operations of a federal reclamation project with a water right the priority date of which is before June 11, 1998, or alter in any manner whatsoever the quantity of water available under the water right for the reclamation project, whether the project has or has not been completed before June 11, 1998.

<sup>92</sup> *Ibid.* at § 90.82.120.

recommend changes.<sup>93</sup> In addition, the plans do not create additional obligations in relation to forestry practices.<sup>94</sup> Nor can a plan:<sup>95</sup>

- impair or diminish in any manner an existing water right;
- affect or interfere with an ongoing general adjudication of water rights;
- modify or require the modification of any waste discharge permit;
- modify or require the modification of activities or actions taken or intended to be taken under a habitat restoration work schedule; or
- modify or require the modification of activities or actions taken to protect or enhance fish habitat if the activities or actions are part of prescribed plans, legislative instruments or authorizations.

Counties can opt out of the planning and public notice process if their land constitutes less than 5% of the management area or, in the event that they have more than 5% in the management area, all the other initiating counties agree.<sup>96</sup>

### ***Evaluations of plan implementation***

Several watershed planning groups were interviewed regarding their perceptions of the implementation of watershed planning under the *Watershed Planning Act* and concluded that the “Act does not provide adequate funding or technical expertise, and specifies unrealistic, unachievable timelines.”<sup>97</sup> The scale and complexity of watershed plans is also identified as a potential barrier as local governments have insufficient legal, financial and technical capacity to implement watershed plans.<sup>98</sup>

The most recent legislative reports regarding watershed planning also provide some insight into how watershed planning is proceeding:<sup>99</sup>

As the shift to plan implementation continues, planning units have identified specific actions or projects they expect will need more state and local funding support. These actions or projects include:

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<sup>93</sup> *Ibid.* at § 90.82.120(2).

<sup>94</sup> *Ibid.* at § 90.82.120(3).

<sup>95</sup> *Ibid.*

<sup>96</sup> *Ibid.* at § 90.82.130(2)(c).

<sup>97</sup> Clare M. Ryan & Jacqueline S. Klug “Collaborative Watershed Planning in Washington State: Implementing the Watershed Planning Act” (2005) 48:4 *Journal of Environmental Planning and Management* at 502.

<sup>98</sup> *Ibid.* at 504.

<sup>99</sup> Department of Ecology, *2007 Report to the Legislature: Progress on Watershed Planning and Setting Instream Flows* (Washington: Department of Ecology, June 2008), online: Department of Ecology <<http://www.ecy.wa.gov/pubs/0806002.pdf>>.

- Conservation actions
- Data system support
- Enforcement (water rights/law) support
- Ground water and surface water computer modeling
- Instream flow setting, monitoring, tracking and enforcement
- Public education and outreach
- Stream gauging studies and flow data generation
- Water banking systems
- Water rights adjudication and permitting
- Water quality monitoring and water quality enforcement
- Water use and availability assessments
- River and wetland restoration
- Water storage options

The 2007 *Report to the Legislature* notes that planning units “do not have enough local resources to fund full time water planning and plan implementation staff to keep the plans alive and moving ahead without continued and sustained state or other source funding assistance”.<sup>100</sup>

The 2006 *Report to the Legislature* indicated a shift to implementation in watershed planning. Funding request forecasts for 2007-2009 were nearing \$23 million for operating budgets and \$26 million for capital budget requests.<sup>101</sup> Operational budgets were focused on issues of central relevance to plan implementation, such as water quality monitoring, habitat restoration, groundwater and surface water assessments, modeling, monitoring tracking and enforcing, and stream gauging.<sup>102</sup>

In addition, revisions to rules and regulations have been recommended to provide greater flexibility for the reuse of water, to close or adopt instream flow rules for specific areas, and to amend management flows, water reserves and maximum allocations.<sup>103</sup>

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<sup>100</sup> *Ibid.* at 28.

<sup>101</sup> See Washington State Department of Ecology, *2006 Report to the Legislature: Progress on watershed Planning and Setting Instream Flows*, (Washington, Department of Ecology, 2006) at 7, online: Department of Ecology <<http://www.ecy.wa.gov/pubs/0611046.pdf>>.

<sup>102</sup> *Ibid.* at 9. In addition reforms were recommended for mitigation in making allocations decisions and to designate an amount of rainwater capture that is allowable without a permit.

<sup>103</sup> *Ibid.* at 10-11.

## 2. Oregon

Oregon's watershed management process was initiated primarily in response to the imminent listing of two salmonid species under the federal *Endangered Species Act*.<sup>104</sup> The Oregon Plan and the related legislative framework is, in part, focused on being a State mechanism to comply with federal laws.<sup>105</sup> The resulting watershed framework involved the statutory creation of the Oregon Watershed Enhancement Board (OWEB) and watershed based councils.<sup>106</sup> The OWEB's primary task is administering a variety of funds under the legislation, including the Watershed Improvement Grant Fund.<sup>107</sup> This fund is focused on providing grants for watershed and riparian habitat conservation activities, education and implementation of watershed enhancement plans developed by watershed councils.<sup>108</sup> In addition, the OWEB is charged with establishing a "framework for a locally based integrated watershed planning and management process designed to assist the watershed councils".<sup>109</sup>

The legislative focus for watershed plan implementation in Oregon is on central coordination and administration of the Oregon Plan through the Governor's office and the creation of specific funding programs to facilitate watershed restoration.

The Oregon Plan is implemented through existing regulatory decisions made by various government agencies and through voluntary implementation of action plans developed by regional watershed councils.<sup>110</sup> The Oregon Plan relies on "watershed council and soil and water conservation districts, which are directed to cooperate in the development of local watershed plans that assess watershed conditions and create watershed action plans and strategies for the implementation of the local watershed action plans".<sup>111</sup>

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<sup>104</sup> Kaush Arha, *et al.*, *The Oregon Plan for Salmon and Watersheds: A Perspective* (Corvallis, OR: Oregon State University, 2003). Also see Ryan Bidwell, *Watershed Councils and the Oregon Plan: An Analysis of Watershed Planning Processes* (M.Sc. Thesis, University of Washington, 2003).

<sup>105</sup> Oregon Revised Statutes, Chapter 541, *Watershed Enhancement and Protection: Water Development Projects; Miscellaneous Provisions on Water Right; Stewardship Agreements*, O.R.S 2007, online: Oregon State Legislature <<http://www.leg.state.or.us/ors/541.html>> at § 541.405(8),

<sup>106</sup> *Ibid.* Also see the Oregon Administrative Rules related to the OWEB, online: State of Oregon <[http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_695/695\\_tofc.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_695/695_tofc.html)>.

<sup>107</sup> *Ibid.* at § 541.397-541.401.

<sup>108</sup> *Ibid.* at § 541.399.

<sup>109</sup> *Ibid.* at § 541.371(1)(a). A watershed council is defined as a "voluntary local organization, designated by a local government group convened by a county governing body, to address the goal of sustaining natural resource and watershed protection, restoration and enhancement within a watershed" at § 541.351(15).

<sup>110</sup> The legislative provisions incorporated into the plan are set out at O.R.S. § 541.405(3). For more information see the Network of Oregon Watershed Councils at <[www.oregonwatersheds.org](http://www.oregonwatersheds.org)>.

<sup>111</sup> O.R.S. § 541.405(6)(b). While action planning is prescribed in the statutes no further criteria or guidelines for action plans have been created under the legislation. Also see the Network of Oregon Watershed Councils *ibid.*

The Oregon Plan has four strategic elements, all of which are relevant to implementation goals. These include coordination among state agencies and with the federal government, local community sponsored action, monitoring, and taking corrective measures.<sup>112</sup>

### ***Evaluations of plan implementation***

The following accomplishments have been attributed to the Oregon Plan approach to watershed management:<sup>113</sup>

- “unprecedented coordination among state agencies” in relation to a species-focused conservation strategy and improved relationships with their constituents;<sup>114</sup>
- stimulation of voluntary conservation activities by private landowners;
- establishment of and technical and funding support for local watershed councils; and
- significant resource investment in science of watershed health and salmon restoration, including data management and dissemination.

As with other planning processes the questions remains whether the actions undertaken pursuant to the Oregon Plan may have been achieved through other processes.<sup>115</sup>

Weaknesses observed in the plan include the lack of mutually accepted goals to guide agency actions, the difficulty of maintaining institutional memory through transitions in the Governor’s Natural Resources Office (including the implementation team), and a need to revise the plan to ensure there is precision in “the need, purpose, and scope of the Plan and explain how it plans to achieve its goals”.<sup>116</sup>

It has also been observed that the Oregon Plan may not provide sufficient detail to be constructive for implementation of regional action plans, that there has been a lack of action planning and that the *ad hoc* prioritization and implementation of restoration projects at the local council level make implementation of broader planning goals difficult to assess.<sup>117</sup>

The issue of “sustained and sufficient” investment in the system is also recognized by the OWEB.<sup>118</sup> The OWEB has recommended a process of prioritization to guide restoration

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<sup>112</sup> See Oregon Coastal Salmon Restoration Initiative, *The Oregon Plan: Restoring an Oregon Legacy through Cooperative Efforts* (Coastal Salmon Restoration Initiative, 1997) at 1, online: Oregon State University <[http://www.oregon.gov/OPSW/archives/ocsri\\_mar1997/ocsri\\_mar1997ex.pdf](http://www.oregon.gov/OPSW/archives/ocsri_mar1997/ocsri_mar1997ex.pdf)>.

<sup>113</sup> Arha *et al.*, *supra* note 104 at 21 –22.

<sup>114</sup> For a graphic illustration of the structure of the Oregon Plan, see Appendix B.

<sup>115</sup> Arha *et al.*, *supra* note 104 at 23.

<sup>116</sup> *Ibid.* at 26.

<sup>117</sup> See Bidwell, *supra* note 104.

<sup>118</sup> *Ibid.* at 58.



efforts and has recognized the need for sufficient resources for monitoring, analysis and reporting.<sup>119</sup>

Of the jurisdictions reviewed the resources devoted to restoration projects in Oregon were of note. Funding of watershed restoration projects in a 13-year period from all sources is reported to exceed \$514 million.<sup>120</sup> Funding between July 1, 1999, and Oct 26, 2007 from the OWEB alone was \$171,723, 283. The most recent reporting on completed restoration for 2006 and 2007 indicates that \$123.8 million was directed at restoration with two thirds of the funding coming from federal and state government (including the OWEB).<sup>121</sup> The Willamette basin, for example, reported \$9.6 million in funding for restoration in 2006 and 2007 and \$21.1 million in the previous reporting period (18.0% of which was funded by the OWEB).<sup>122</sup>

### 3. California

California's approach to water management can be characterized as highly regulated; nonetheless, collaborative watershed management and planning is still pursued. Unlike in many other jurisdictions several activities that result in non-point source impacts on water quality are directly regulated in California, including biosolids, dredging and filling wetlands, irrigated lands, land disposal, recycled water, sanitary sewer overflows, storm water and timber harvest.<sup>123</sup>

Issues garnering regulatory planning include water allocation and quality planning, both of which are overseen by the State Water Resource Control Board.<sup>124</sup> Water quality planning is undertaken by regional basin planning authorities.<sup>125</sup> These nine regional boards are appointed and are multi-stakeholder.<sup>126</sup> Plan adoption is mandatory and plans must comply with state water policies including the California Water Plan.<sup>127</sup> Cities or counties may adopt and enforce additional regulations that are non-conflicting and more

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<sup>119</sup> *Ibid.* at 59.

<sup>120</sup> Oregon Watershed Enhancement Board, *2007-2009 Biannual Report: The Oregon Plan for Salmon and Watersheds* at 2., online: Oregon Watershed Enhancement Board <[http://www.oregon.gov/OWEB/docs/pubs/07-09BR/07-09BR\\_I.pdf](http://www.oregon.gov/OWEB/docs/pubs/07-09BR/07-09BR_I.pdf)>.

<sup>121</sup> *Ibid.*

<sup>122</sup> See Oregon Watershed Enhancement Board, *2007-2009 Biannual Report: The Oregon Plan for Salmon and Watersheds*, Basin Reports – Part II, at 47, online: Oregon Watershed Enhancement Board <[http://www.oregon.gov/OWEB/docs/pubs/07-09BR/07-09BR\\_III.pdf](http://www.oregon.gov/OWEB/docs/pubs/07-09BR/07-09BR_III.pdf)> and the Oregon Watershed Enhancement Board, *The Oregon Plan for Salmon and Watersheds, Biennial Report 2005-2006* at 6, online: Oregon Watershed Enhancement Board <[http://www.oregon.gov/OWEB/docs/pubs/biennialrpt\\_05-07/basin\\_rpts.pdf](http://www.oregon.gov/OWEB/docs/pubs/biennialrpt_05-07/basin_rpts.pdf)>. The Willamette basin contains 2.33 million people and covers 7.337 million acres.

<sup>123</sup> For more information regarding rules and regulations relating to these activities see the State Water Resources Control Board website: <[http://www.swrcb.ca.gov/water\\_issues/programs/index.shtml](http://www.swrcb.ca.gov/water_issues/programs/index.shtml)>.

<sup>124</sup> See the *California Water Code*, particularly Divisions 2 & 7 and the *Porter-Cologne Water Quality Control Act*, online: Official California Legislative Information <<http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=wat&codebody=&hits=20>>.

<sup>125</sup> *Porter-Cologne Water Quality Control Act*, 7 Cal. Wat. Code (2009) at § 13260-13267.

<sup>126</sup> *Ibid.* at § 13201.

<sup>127</sup> *Ibid.* at § 13240.

restrictive “with respect to the disposal of waste or any other activity which might degrade the quality of the waters of the state”.<sup>128</sup>

Regional **water quality plans** have statutory requirements for implementation, namely:<sup>129</sup>

- A description of the nature of actions necessary to achieve the objectives, including recommendations for appropriate action by an entity, public or private;
- A time schedule for actions to be taken; and
- A description of surveillance to be undertaken to determine compliance with objectives.

The legislation also provides that all state departments whose activities impact water quality must comply with the plans unless statutorily exempt.<sup>130</sup> The regional board may limit where and when waste may be discharged or otherwise set conditions for waste discharge.<sup>131</sup> The regional board can only adopt a plan following a public hearing and approval of the State Water Control Board.<sup>132</sup>

Implementation of collaborative **watershed plans** is left to a voluntary approach with funding assistance being derived from watershed grants under federal and state programs. A “watershed approach” is promoted and pursued via voluntary partnering with local stakeholders and seeking stakeholder input to improve water quality under the “Watershed Management Initiative”.<sup>133</sup> Implementation of watershed plans in California can otherwise be characterized as opportunistic and *ad hoc*.

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<sup>128</sup> *Ibid.* at § 13002. The Plan for California’s Nonpoint Source Pollution Control Program outlines 5 main goals: “1) Track, monitor, assess, and report program activities, 2) Target program activities, 3) Coordinate with public and private partners in all aspects of the program, 4) Provide financial and technical assistance and education and, 5) Implement the 61 management measures.”

<sup>129</sup> *Supra* note 124 at § 13242.

<sup>130</sup> *Ibid.* at § 13247 which states “State offices, departments, and boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved or adopted by the state board unless otherwise directed or authorized by statute, in which case they shall indicate to the regional boards in writing their authority for not complying with such plans.”

<sup>131</sup> *Ibid.* at § 132443.

<sup>132</sup> *Ibid.* at § 13244-13245.

<sup>133</sup> *Ibid.* Also see California Resources Agency and State Water Resources Control Board, *Addressing the Need to Protect California’s Watersheds: Working with Local Partnerships: Report to the Legislature* – required by AB 2117 (Wayne), Chapter 735, Statutes of 2000 (April 11, 2002), online: California Resources Agency <[http://resources.ca.gov/watershedtaskforce/AB2117LegReport\\_041102.pdf](http://resources.ca.gov/watershedtaskforce/AB2117LegReport_041102.pdf)> (*Addressing the Need to Protect California’s Watersheds*); the California Environmental Protection Agency & State of California Resources Agency, *Memorandum of understanding between the California Environmental Protection Agency and the California Resources Agency for the Implementation of the Framework for Protecting California’s Watersheds* (Revised November 30, 2004); and the State of California, *The Water Boards’ Watershed Management Initiative: An Overview and updated Charter for the Coming Decade* (2008), online: State Water Control Board <[http://www.swrcb.ca.gov/water\\_issues/programs/watershed/docs/wmi\\_charter0208.pdf](http://www.swrcb.ca.gov/water_issues/programs/watershed/docs/wmi_charter0208.pdf)>.

Supporting legislation focuses on funding and the integration of policy and decision-making across government departments through the creation of an interagency forum. Specifically, the *Watershed, Clean Beaches, and Water Quality Act* established the Integrated Watershed Management Program and set out the process and nature of grants that may be awarded in relation to the program.<sup>134</sup>

Beyond issues of funding and integration the collaborative watershed planning process in California is locally driven and is based on the California Coordinated Resource Management and Planning (CRMP) model. CRMP is “a model voluntary, locally led planning process” that incorporates principles of “open membership, diversity of interests and consensus decision making”.<sup>135</sup>

### ***Evaluations of plan implementation***

A case study of 10 watershed partnerships in the state was conducted prior to 2002 as part of California’s *Report to the Legislature*.<sup>136</sup> The study was based on questionnaires sent to partnership groups and was used to identify where improvements were needed and where partnerships were working well. Issues cited as needing improvement include:<sup>137</sup>

- Short term, non-operational and piecemeal approach to funding of restoration efforts;
- Lack of appropriate monitoring assistance impedes the ability to measure program effectiveness;
- Difficulty in getting agency permits (state and federal) can reduce the number of quality watershed restoration projects implemented each year;
- Funding is difficult to get for organizational support (including watershed coordinators), outreach, watershed assessments, watershed plans, and monitoring. Financial uncertainty and cash flow crises impede groups from strongly sustaining longer-term efforts needed to implement and evaluate a common watershed strategy;
- Absence of useful watershed assessments and plans can lead to restoration projects that don’t address priority problems and their causes. These projects may

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<sup>134</sup> *Watershed, Clean Beaches, and Water Quality Act* (Division 20.4, § 30901, et seq; and Division 21, Chapter 5.5, § 31220 of the *Public Resources Code*). Elements that might attract funding under the program include: stormwater capture and treatment; nonpoint source pollution reduction, management, and monitoring; groundwater recharge and management projects; water banking, exchange, and reclamation, and improvement of water quality; vegetation management to improve watershed efficiency, aquatic and terrestrial habitat; the creation and enhancement of wetlands (among many others).

<sup>135</sup> See California Coordinated Resource Management and Planning, online: <<http://www.crmf.org/>>.

<sup>136</sup> California Resources Agency and State Water Resources Control Board, *Addressing the Need to Protect California’s Watersheds: Working with Local Partnerships: Report to the Legislature* –required by AB 2117 (Wayne), Chapter 735, Statutes of 2000 (April 11, 2002).

<sup>137</sup> *Ibid.* at 23-24.

be scattered and not focused on achieving watershed management objectives, and don't use grant funding efficiently;

- Lack of coordination among state agencies impedes:
  - the effectiveness of multiple grants working together,
  - delivery of appropriate and much needed technical assistance,
  - development of useful watershed assessments and plans, and
  - the implementation and analysis of an effective monitoring program;
- Lack of connection among neighboring watershed groups, those within a common basin, and similar watershed partnerships in the state impedes sharing of common lessons learned and strategies for success; and
- Insufficient numbers of appropriately trained state staff are available to fully participate in the many community-based watershed partnerships active in the state.

The *Report to the Legislature* was optimistic that on the ground watershed improvements were achievable through voluntary collaborative efforts and could be illustrated through changes in environmental conditions after a minimum of 4-5 years.<sup>138</sup> It was also observed that projects and strategies for managing watershed impacts were being completed through joint projects.<sup>139</sup>

### ***C. A contrast to collaboration: Australia's Murray-Darling Basin***

Water resources have been the subject of considerable management and regulation in Australia over the years. In the Murray-Darling Basin this has involved an increasingly centralized and regulated system of managing impacts within the basin. Under the *Water Act, 2007* a "Basin Plan" is to be created and administered by the Murray-Darling Basin Authority.<sup>140</sup> The Authority is the successor to the Murray-Darling Basin Commission (MDBC), a partnership of six Basin governments responsible for administering the integrated catchment management policy and facilitating integrated management between regional catchment authorities and relevant government agencies, community advisory committees and the Murray-Darling Basin Ministerial Council.<sup>141</sup>

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<sup>138</sup> *Ibid.* at 27.

<sup>139</sup> *Ibid.*

<sup>140</sup> Act No. 137.

<sup>141</sup> *Ibid.* See also the Murray-Darling Basin Ministerial Council, *Integrated Management in the Murray-Darling Basin 2001-2010: Delivering a sustainable future* (June 2001), online: Murray-Darling Basin Commission Archive Website, <[http://www.mdbc.gov.au/\\_\\_data/page/299/3624\\_ICMPolStatement.pdf](http://www.mdbc.gov.au/__data/page/299/3624_ICMPolStatement.pdf)>. The Commission was formed as part of the Murray-Darling Basin Agreement first signed by the Commonwealth, New South Wales, Victoria and South Australia in 1987 (later joined by Queensland (1996)). See John Scanlon, "A hundred years of negotiations with no end in sight: Where is the Murray-

The move from the Commission to the Authority reflects an increasingly centralized and regulatory approach to watershed planning. The Authority, in producing the Basin Plan, must set out a variety of outcomes and plans for environmental water and water quality.<sup>142</sup> The purpose of the Basin Plan is “to provide for the integrated management of the Basin water resources”.<sup>143</sup> Included in the Basin Plan are water resource plans (for specific water resource areas),<sup>144</sup> environmental watering plans, and water quality and salinity management plans.<sup>145</sup>

Once the Plan is completed and adopted by the Minister it becomes a legislative instrument that binds the Basin Authority and all other government agencies to perform their functions in a manner that is consistent with and gives effect to the plan.<sup>146</sup> In addition, other operating authorities, infrastructure operators or holders of water access rights must not undertake actions that are inconsistent with the Plan and are obliged to act in instances where a failure to act is inconsistent with the Basin Plan.<sup>147</sup>

Exceptions to the application to act consistently with the Basin Plan can be made through regulations.<sup>148</sup> Water resource plans may also be created for specific areas and are binding in the same manner as the Basin Plan.<sup>149</sup> These resource plans must be consistent with the Basin Plan.<sup>150</sup>

### ***Evaluation of plan implementation***

The Murray-Darling Basin planning system under the *Water Act, 2007* is relatively new and the first Basin Plan is slated to commence in 2011.<sup>151</sup> The history of water management in the Murray-Darling is telling however, with the increased centralization of decision-making and the mandatory nature of the Basin Plan and water resource plans.

Prior to the current legislative framework being in place (during the time of the MDBC), it was observed that the institutional change to support integrated catchment management

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Darling Basin Initiative leading us?” (2006) 23 *Environmental Planning and Law Journal* 386. Also see *About the Murray Darling Basin Initiative*, online: Murray Darling Basin Commission <[http://www.mdbc.gov.au/about/the\\_mdbc\\_agreement](http://www.mdbc.gov.au/about/the_mdbc_agreement)>.

<sup>142</sup> *Supra* note 138 at ss. 22 and 41.

<sup>143</sup> *Ibid.* at s. 20.

<sup>144</sup> *Ibid.* at s. 54. Water resource plans are mandatory and are either accredited or adopted by the Minister.

<sup>145</sup> *Ibid.* at s. 22.

<sup>146</sup> *Ibid.* at ss. 33 & 34.

<sup>147</sup> *Ibid.* at s. 35(1).

<sup>148</sup> *Ibid.* at s. 38. The plan is subject to consultations with the basin states and is open to public consultation for a minimum of 16 weeks (s.43). Amendments to the basin plan may be initiated by the Authority and adopted by the Minister and the plan is to be reviewed every 10 years (ss. 45-50).

<sup>149</sup> *Ibid.* at ss. 57-62.

<sup>150</sup> *Ibid.* at s. 55.

<sup>151</sup> For more information see the Murray-Darling Basin Authority website at <[http://www.mdba.gov.au/basin\\_plan](http://www.mdba.gov.au/basin_plan)>.

had “been in the form of *disjointed incrementalism* that lacks continuity and is characterized by ... *adhocery* and *organisational amnesia*.”<sup>152</sup>

In 1999, a Standing Committee of the Australian Parliament held an inquiry into integrated catchment management in which the Department of the Environment and Heritage submitted:<sup>153</sup>

The issue is that integrated catchment management in Australia has to date largely been driven by voluntary action through the Landcare movement or, more recently, as a result of facilitation processes through the Natural Heritage Trust. This has been extremely important in raising awareness of the catchment approach. However, in order to take the next step, greater degrees of intervention at the catchment level are warranted. Examples of the trend towards this approach are the statutory planning and rating powers recently given to catchment management boards and authorities in Victoria and South Australia.

Catchment management without statutory underpinning has limited impact on agency decision-making or decisions made through the Courts on appeal. Appeal Courts are less likely consider the views of a catchment management authority in the absence of a planning requirement. Without planning coordination either by statute or agreement, catchment management will remain a concept with merit but without the capacity to realise its full potential for on-ground application. There is a need to improve vertical integration, in terms of national sustainability principles cascading through Statewide or regional planning, and given effect in local planning, zoning and rating schemes. Delivery of better horizontal integration is also essential, where management of rivers, catchments, coastlines, vegetation, wildlife and land use is considered as an inextricable whole and planned accordingly. This is both feasible and imperative at the catchment, or regional, scale.

The Standing Committee itself recommended:<sup>154</sup>

that the Government ask and resource the Australian Law Reform Commission to examine the feasibility of, and options for, a national body of law to deal with the ecologically sustainable use of land, and in particular, report on feasibility of, and options for:

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<sup>152</sup> See Jennifer Bellamy, *et al.*, *Integrated Catchment Management: Learning from the Australian Experience from the Murray-Darling Basin* (Canberra: CSIRO Sustainable Ecosystems, 2002) at 33.

<sup>153</sup> Department of Environment and Heritage, *House of Representatives Standing Committee on Environment and Heritage, Inquiry into Catchment Management*, (August, 1999) at 5, online: Parliament of Australia, House of Representatives <<http://www.aph.gov.au/house/committee/environ/cminq/sub141-e.pdf>>.

<sup>154</sup> Standing Committee on Environment and Heritage, *Co-ordinating Catchment Management - Inquiry into catchment management, Recommendations*, online: Parliament of Australia, House of Representatives, <<http://www.aph.gov.au/house/committee/environ/cminq/cmirtpt/contents.htm>>.

- consolidating Commonwealth laws;
- consolidating State and Territory laws; and
- integrating laws at all levels

into a consistent body so as to provide for the ecologically sustainable use of Australia's catchment systems.

This law reform apparently took place for the Murray-Darling by way the *Water Act, 2007*.

### **Conclusions of the jurisdictional review**

The approaches taken to implement approved watershed plans are summarized in Table 1. The jurisdictions reviewed take a variety of approaches to implementation, from purely voluntary and *ad hoc* implementation, to regulation making powers that govern prescribed decisions to statutory requirements to make decisions that are consistent with a plan. While reviews and evaluations of these collaborative efforts are often wanting those that exist indicate that where a legislative framework is in place the difficulties faced are primarily monetary in nature. Where legislative frameworks do not require implementation across government sectors difficulties of broad and consistent implementation of plans arise.<sup>155</sup>

The jurisdictional assessments reveal several priority issues that should be addressed by a policy framework. These issues include:

- sustained and sufficient funding for plan implementation,
- consistent integration of plan outcomes in government agency decisions, and
- ensuring systematic plan implementation focused on watershed priorities.

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<sup>155</sup> See California and Australia for example.

### **Part III: Issues impacting implementation: the rationale for change**

This part of the report identifies and discusses central issues of relevance to the development of a policy framework for watershed plan implementation. These issues raise a variety of concerns regarding the consistent and sustained implementation of watershed plans and the need to maintain a level of accountability in plan implementation. Issue identification is informed by the jurisdictional review, other case studies and a literature review related to implementation of collaborative watershed plans.<sup>156</sup> The issues include:

- A. Law and policy as motivating factors in plan implementation;
- B. Sustained and sufficient funding for watershed plan implementation;
- C. Pursuit of systematic and robust vs. opportunistic and *ad hoc* planning; and
- D. Consistent integration of watershed plan objectives into decisions.

#### ***A. Law and policy as motivating factors in plan implementation***

What motivates plan implementation among stakeholders? Is a legislative backdrop or “hammer” necessary to motivate plan implementation? In considering these questions the difference between the legislative frameworks in the United States and Canada must be discussed.

The majority of reviews of collaborative watershed plan implementation to date consider the approaches taken in the United States. Comparing the effectiveness of watershed planning in the United States and that of Canada is compromised by a system in the United States that attracts significant federal involvement and heightened potential for litigation related to watershed management and planning. The law and policy framework in the United States may be characterized as having more prescriptive environmental legislation that allows for civil suits, a more interventionist judicial review system, and a system of budget appropriations that differs significantly from that of Canada.

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<sup>156</sup> For the most part the evaluations to date have been based on the perceptions of planners and have been more theoretical in nature. See Genskow, *supra* note 5 at 48 where it is observed that “much of the prevailing knowledge base is anecdotal and subjective, and any conclusion about key contributing factors should be taken as suggestive rather than definitive.” See also Kenney *et al.*, *supra* note 5; Sari Sommarstrom, “Evaluating the Effectiveness of Watershed Councils in Four Western States” (Proceedings of the Eight Watershed Management Council Conference, Nov. 27-30, 2000), online: Alberta Irrigation <[http://www.aipa.org/Adobe\\_Files/Collaborative\\_Decision\\_Making/Sommarstrom\\_2000\\_Evaluating\\_the\\_Effectiveness\\_of\\_Watershed\\_Councils\\_in\\_Four\\_Western\\_States.pdf](http://www.aipa.org/Adobe_Files/Collaborative_Decision_Making/Sommarstrom_2000_Evaluating_the_Effectiveness_of_Watershed_Councils_in_Four_Western_States.pdf)>; Huntington, C.W. and S. Sommarstrom, (2000) *An Evaluation of Select Watershed Councils in the Pacific Northwest and Northern California*. Parts I, II, III. Prepared for Trout Unlimited and Pacific Rivers Council, Eugene, Or. 140 pp; and Mark Lubell “Collaborative Environmental Institutions: All Talk and No Action?” (2004) 23:3 *Journal of Policy Analysis and Management* at 549.



### ***Prescriptive environmental legislation***

Arguably watershed planning and restoration efforts in the United States would not have been initiated if not for the federal environmental legislative regime. The *Federal Water Pollution Control Act*, commonly referred to *Clean Water Act (CWA)*, has had a significant impact on the evolution of watershed planning in the United States.<sup>157</sup> In particular, the federal regulatory framework around point source and non-point source pollution requires planning and assessment of water bodies across the country.<sup>158</sup> This framework has resulted in many states turning to collaborative watershed planning to facilitate compliance with these regulatory requirements.<sup>159</sup>

Similarly, the species recovery planning requirements of the U.S. *Endangered Species Act (ESA)* provided impetus to collaborative planning and has provided federal funding with direct consequences on watershed planning efforts.<sup>160</sup> It has been observed that “in many western watersheds, the *Endangered Species Act (ESA)* is the preeminent ‘federal hammer’ prompting the formation and activity of watershed initiatives”.<sup>161</sup> The relevance of the *ESA* “hammer” in Oregon and Washington in particular should not be overlooked. The Oregon legislation, for instance, expressly states that its intended purpose is to satisfy federal regulatory requirements in relation to *ESA* matters.<sup>162</sup>

### ***Is plan implementation motivated by a threat of litigation?***

The ability of interested citizens to bring litigation under both the *CWA* and the *ESA* differs significantly from the Canadian legislative system.<sup>163</sup> Citizen suits may be used to ensure that federal administration of the legislation is proceeding as intended and to request court intervention where legislative standards are not being met.<sup>164</sup> The United States has seen significant amounts of litigation in relation to the requirements of the *CWA* resulting in its Environmental Protection Agency being ordered to set “Total

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<sup>157</sup> See Sabatier *et al.*, *supra* note 3 at 43–49.

<sup>158</sup> See *Federal Water Pollution Control Act*, 33 U.S.C. 1251 et seq. The setting of total maximum daily loads (TMDLs) for water bodies and related non-point source planning has provided the impetus for much of the collaborative watershed planning in the United States. See sections 301–304 regarding TMDLs and section 319 regarding non-point source pollution planning. In addition, the *Clean Water Act* also outlines requirements for monitoring and reporting on lake and river water quality and appropriates monies for this purpose.

<sup>159</sup> Interestingly one study has found that those in the planning process view the federal TMDL program as having little relevance to the watershed planning process; see Todd Reeve, “Evaluating the Role of TMDL Plans in Community-Sponsored Watershed Restoration Efforts”, *Getting it Done: The Role of TMDL Implementation in Watershed Restoration, October 29-30, 2003, Severson Washington*.

<sup>160</sup> See *Endangered Species Act*, U.S. Code Title 16, Chapter 35, online:

<<http://frwebgate.access.gpo.gov/cgi-bin/usc.cgi?ACTION=BROWSE&TITLE=16USCC35&PDFS=YES>> at ss. 4 & 6.

<sup>161</sup> Kenney *et al.*, *supra* note 5 at 431.

<sup>162</sup> *Supra* note 105 at §541.405(8)(a). See also 6 U.S.C. § 1533(d), § 1535 (c) and §1539(a) regarding state mechanisms to limit federal involvement.

<sup>163</sup> The *Clean Water Act*, s. 505 and *Endangered Species Act* at s. 11(g) provide for the power to bring citizen suits.

<sup>164</sup> *Ibid.*

Maximum Daily Loads” for water bodies where states have failed to arrive at levels in a timely fashion.<sup>165</sup>

It has been observed that the litigious backdrop to watershed planning processes may impact plan formation and implementation. For example, “the threat of non-local [i.e., federal] regulatory intervention (possible reallocation of irrigators vs. water rights for salmon recovery) appears to have helped catalyze the watershed partnership in the Dungeness watershed.”<sup>166</sup> In the Platte River watershed it was observed that a level of accountability in implementing a non-formal agreement for watershed management was likely derived from previous “project-by-project battle[s] to protect endangered species” and the inefficiencies this litigation entailed.<sup>167</sup> A litigious history within a watershed may prove to be a significant motivator to ensuring plans and agreements are implemented effectively, as the collaborative players are well aware of the downsides of the alternative.<sup>168</sup>

These “litigation lessons” are not readily transferrable north of the 49<sup>th</sup> parallel. The ability to bring civil suits and to force government action through litigation is more limited in Canada (and Alberta). Canadian environmental legislation is for the most part enabling, highly discretionary and has few substantive obligations placed on government. Federal legislation in Canada has limited impact on “watershed” planning and management. The most relevant federal legislation is the *Fisheries Act*.<sup>169</sup> The *Fisheries Act* has significant prohibitions regarding the alteration of fish habitat and the deposition of substances that are harmful to fish.<sup>170</sup> These provisions, while strong, do not protect water bodies where fish are absent and are not readily applicable to non-point sources of deleterious substances. Even where the *Fisheries Act* applies, forcing government action requires bringing an application for judicial review before the court. American style civil suits are not legislatively enabled. The courts have responded to the majority of judicial reviews by being highly deferential to the decisions of government.<sup>171</sup>

The Canadian *Species at Risk Act (SARA)* may also be relevant where aquatic species are listed as endangered or threatened, as specific legislative prohibitions and planning

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<sup>165</sup> For a listing of litigation statistics around the establishment of the Total Maximum Daily Load see the Environmental Protection Agency, online: Environmental Protection Agency <<http://www.epa.gov/owow/tmdl/lawsuit.html>>.

<sup>166</sup> Genskow, *supra* note 5 at 48.

<sup>167</sup> See Edella Schlager & William Blomquist, *Embracing Watershed Politics* (Boulder: University Press of Colorado, 2008) at 86.

<sup>168</sup> Steven L. Yaffee and Julia M. Wondolleck “Collaborative Ecosystem Planning Processes in the United States: Evolution and Challenges” (2003) 31:2 *Environments* at 64, where the development of a collaborative effort for the Clark County Nevada Habitat Conservation Plan is described.

<sup>169</sup> R.S.C. 1985, c. F-14.

<sup>170</sup> *Ibid.* at ss. 35 & 36.

<sup>171</sup> Judicial reviews challenging government decisions related to discretionary provisions in the legislation have had limited success. See for example *Friends of the Earth v. Canada (Governor in Council)*, 2008 FC 1183 (CanLII).

requirements arise.<sup>172</sup> It remains to be seen whether government action in relation to these species will focus watershed planning efforts on ecological goals. The relevance of *SARA* to watershed planning is also limited because the Act has limited application to private and provincial Crown lands in the first instance. Further, the federal government has not exercised its discretion to proactively protect species to date. Many recovery plans have not been published as legislatively required and, when published, little in the way of critical habitat has been identified.<sup>173</sup>

Neither the *Fisheries Act* nor *SARA* provides substantive motivation to implement watershed plans. Provincially there is also a lack of legislation that can be characterized as providing a “hammer” to incent watershed planning and management. Again, provincial legislation is highly discretionary, leaving little room for the public to go to the courts to seek action on non-point source pollution or protection of critical habitat.

Whether such a federal or provincial legislative hammer is required for effective plan implementation remains to be determined, but it begs the question of whether collaborative watershed partnerships in Canada are more symbolic than substantive. This is particularly the case where existing legal institutions, their legislative mandates and their decision-making discretion remain unaltered by a watershed planning process, as is the case in Alberta where there exists no enabling or substantive laws or regulations regarding watershed plan implementation.

In the absence of a legislative hammer, the question arises as to whether collaborative planning process is a politically expedient method of dealing with contentious issues. In the words of Ploger:<sup>174</sup>

A consensus strategy is a way to avoid turning questions of interests, representation, justice or power into political questions and community controversies...Consensus steering can thus be seen as a way of ignoring antagonism or suppressing strife, because this form of governance prevents public disputes from unfolding and becoming important in planning politics.

Federal legislation in the United States has brought people together, but whether watershed health has broadly improved as a result is questionable.<sup>175</sup> In some instances, the backdrop of federal legislation and the possibility of litigation likely play important

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<sup>172</sup> S.C. 2002, c. 29.

<sup>173</sup> The issue of critical habitat designation for species at risk has been the subject of recent litigation in Canada. See *Alberta Wilderness Association v. Minister of Environment*, 2009 FC 710. If *SARA* starts playing an increasing role in watershed management through identification of critical habitat under the Act it will be interesting to see whether provincial collaborative watershed planning processes and legislation will be viewed as “effective” protection for species at risk, as is required under ss. 34(3) & 61(4) of the Act.

<sup>174</sup> J. Ploger, “Strife: Urban Planning and Agonism” (2004) 3:1 *Planning Theory* 3 71-92, cited in Ralf Brand and Frank Gaffikin “Collaborative planning an Uncollaborative World” (2007) 6:3 *Planning Theory* at 293.

<sup>175</sup> See Douglas S. Kenney, *Arguing about Consensus: Examining the Case Against Western Watershed Initiatives and Other Collaborative Groups Active in Natural Resources Management* (Boulder: Natural Resources Law Centre, 2000) at 63.

roles in ensuring that stakeholders negotiate in good faith. In this way the legislative hammer can act as a shield against issue avoidance, delays in plan implementation, or defense of the *status quo*, particularly where the legislation requires specific state action. A legislative hammer may also be important for promotion of clear plan implementation provisions, as would be required to satisfy specific regulatory standards.

The absence of a regulatory hammer may be offset to a degree by enabling regulation making powers to govern specific activities. These regulations would be engaged as plan implementation failures arise.

### ***B. Sustained and sufficient funding for watershed plan implementation***

Watershed planners recognize the importance of sustained funding and leadership to the success of planning efforts.<sup>176</sup> It has been noted in the United States that “federal and, especially, state funding through non-point source pollution abatement programs are key factors” to successful and sustainable collaborative watershed partnerships “in the majority of cases”.<sup>177</sup>

Sustained funding is needed both for restoration projects and financial incentive programs, the latter being relied on heavily for implementation of watershed plans among non-government stakeholders.<sup>178</sup> In the absence of sustained funding for implementation of watershed plans, those in watershed partnerships may simply “follow the money” rather than tackling the important issues in the watershed.<sup>179</sup> Funding uncertainty is also likely to result in *ad hoc*, opportunistic implementation of watershed plans.

Data on government spending on collaborative watershed planning and restoration in Canada is not readily available. In contrast, several jurisdictions in the United States (including the federal government) track and report their spending on watershed restoration and planning efforts. The amount of public money spent on these endeavours, even though it is often cited as being insufficient, provides insight into a minimal level of funding that is required if implementation of plans is to be successful.

The levels of funding for watershed initiatives in Oregon and Washington were cited earlier in this report. Typically these state funds match federal investments to deal with non-point source pollution under the *CWA*.<sup>180</sup> Specifically, s. 319 *CWA* funds have

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<sup>176</sup> William D. Leach and Neil W. Pelkey. “Making Watershed Partnerships Work: A Review of the Empirical Literature” (2001) 127:6 *Journal of Water Resources Planning and Management* at 378. This review included the subjective grouping of themes for success.

<sup>177</sup> See Genskow, *supra* note 5 at 51.

<sup>178</sup> It has been argued that incentive based programs, even with significant investment, will not drive the required behavioural change and that a regulatory approach to watershed management is required. D.R. Williams “When Voluntary Incentive-based Controls Fail: Structuring a Regulatory Response to Agricultural Nonpoint Sources Water Pollution” (2002) 9 *Washington University Journal of Law and Policy* at 4.

<sup>179</sup> This was a possible detriment of managing watersheds through an independent non-profit body where no sustained budget exists. *Supra* note 73.

<sup>180</sup> Hardy & Koontz, *supra* note 8.

increased from the 1990's to over \$200 million per year between 2001 and 2006 with a significant portion of funds being devoted to collaborative partnerships and capacity building.<sup>181</sup> The federal fund history is reproduced in Appendix C. In addition, the Clean Water State Revolving Fund has funded over \$68 billion in low interest loans to states to complete water related activities.<sup>182</sup> Cumulatively this fund has involved grants of \$59.7 billion to wastewater treatment initiatives for the period between 1988 and 2007 and \$2.6 billion to non-point source programming.<sup>183</sup>

In the absence of a federal legislative mandate to support watershed planning processes, federal government contributions to watershed planning and restoration efforts would likely be more *ad hoc* and less sustainable. This is illustrated by the minimal funding provided by the Canadian government to watershed planning efforts.<sup>184</sup> The options to resolve funding sustainability issues are both legislative and practical. While there is no silver bullet to resolve problems of sustainable funding, there are ways to ensure that watershed planning is of sufficient importance to garner long-term financial support. Legislative provisions should provide a transparent and consistent source of funds. This may involve:

- The legislative creation of a centralized administrative body for watershed planning with transparent monitoring and reporting of spending on implementation activities; and
- The earmarking of funds legislatively for watershed planning and restoration through fees (taxes) on relevant watershed services or voluntary programs for support of watershed programs (for example, the salmon licence plate program in Oregon).<sup>185</sup>

### ***C. Ensuring robust planning***

Watershed planning and management initiatives may struggle to implement broad based planning in lieu of opportunistic and *ad hoc* restoration projects.<sup>186</sup> Collaborative partnerships appear to struggle with many of the more contentious management issues or

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<sup>181</sup> See *Clean Water Act* s. 319(h) Grant Funds History, online: Environmental Protection Agency <<http://www.epa.gov/owow/nps/319hhistory.html>> and *Ibid.* at 308-309.

<sup>182</sup> See Environmental Protection Agency, online: <<http://www.epa.gov/owm/cwfinance/cwsrf/index.htm>> and Environmental Protection Agency 2007 Annual Report, *Clean Water State Revolving Fund Programs: Yesterday, Today & Tomorrow, 20 Years of Progress*, online: <<http://www.epa.gov/owm/cwfinance/cwsrf/2007-annual-report.pdf>>.

<sup>183</sup> *Ibid.* at 32.

<sup>184</sup> Some federal funding has been provided for the Atlantic Coastal Action Program. For more information see Environment Canada's website at <<http://atlantic-web1.ns.ec.gc.ca/community/acap/default.asp?lang=En&n=085FF7FC-1>>. For a description of other federal funding related to watershed planning and management see Environment Canada's website at <<http://www.ec.gc.ca/pace-cape/default.asp?lang=En&n=1C1BEFF3-1>>. It must be acknowledged that the federal government has provided funding for water related infrastructure.

<sup>185</sup> An additional \$30 per registration is added for those wanting a salmon plate of which \$15 goes to the OWEB. See <<http://www.oregon.gov/OPSW/salmonplate.shtml>>.

<sup>186</sup> *Supra* note 156.

issues that are chronic and non-crisis.<sup>187</sup> Coglianese refers to this focus on the most tractable issues as one of the “pathologies of consensus”, where important but less tractable issues to watershed health are left unresolved.<sup>188</sup>

Successful implementation must address both symptoms and causes of watershed degradation. This is not likely to occur where implementation is opportunistic and *ad hoc*. Resources must be brought to bear not only on mitigating impacts, but also on changing detrimental behaviours to prevent impacts.

Avoiding this *ad hoc* implementation requires taking a systematic approach to implementation by integrating plan outcomes in decisions and ensuring continuity of decisions across jurisdictions and agencies, and through time. The issue of integration is dealt with further below.

#### ***D. Consistent integration of watershed plan objectives into decisions***

Implementation of plans relies on integration of plan objectives into daily decisions of the entire watershed community (government and non-government stakeholders alike). One of the key benefits of a collaborative approach to planning is that it provides a venue for integration of management objectives into decisions at a watershed scale.<sup>189</sup>

Cardwell *et al.* propose that integration of plan objectives into management decisions must occur along four axes: space, objective, institution and time.<sup>190</sup> Spatial integration requires that there is coordinated management across various landscape scales, from major basins to smaller tributaries. Objective integration reflects the need to manage for multiple objectives: incorporating environmental goals with objectives of other media, such as timber, agriculture or hydrocarbons. Institutional integration requires coordination across government and non-government agencies’ mandates and policies toward unified objectives. Temporal integration requires coordination of activities at different time scales, from individual activities to future operations.

From a law and policy perspective, the integration of watershed plan objectives and outcomes along these axes creates some assurance that there will be consistency and continuity in how plans are applied and wards against *ad hoc* implementation. The approach to integrating plans into management decisions may take many forms, as illustrated in the jurisdictional review. Integration may be legislatively required or may rely on voluntary adoption of the agreed to planning actions.

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<sup>187</sup> *Ibid.* Also see Sommarstrom, *supra* note 156 and Genskow, *supra* note 5.

<sup>188</sup> Cary Coglianese, “Is Consensus an Appropriate Basis for Regulatory Policy?” (2001) *John F. Kennedy School for Government, Harvard University Faculty Research Working Paper Series*, RWP01-012 at 21. See also Mazmanian, D.A., and P.A. Sabatier, *Implementation and Public Policy* (Lanham, Maryland: University Press of America, 1989).

<sup>189</sup> See Schlager & Blomquist, *supra* note 167 at Chapter 2. Also see, by way of example the structure of the Oregon Plan at Appendix A. Paul Sabatier *et al.*, *supra* note 3, observes “the inclusiveness of collaborative institutions reduces transaction costs by providing a forum for coordination” at 184.

<sup>190</sup> Hal E. Cardwell, *et al.*, “Integrated Water Resources Management: Definitions and Conceptual Musings” (2006) 135 *Journal of Contemporary Water Research & Education* 8 at 12.

Those advocating for a more centralized regulatory plan implementation system cite issues of continued disconnects between levels of government and government agencies, resulting in poor integration of planning outcomes.<sup>191</sup> An increasingly centralized approach is seen as worthwhile in the face of a “highly fragmented, piecemeal approach to water management”.<sup>192</sup> A resolution to this can be found in legislative integration and policy application consistent with a plan’s objectives.

Joseph *et al.* propose that a variety of law and policy factors must be in place to allow for sustained success, including:<sup>193</sup>

- Consistent policy environment – Existing policy does not conflict with plan implementation and plan objectives.
- Strategic implementation policy – the implementation process is guided by policy that specifies clear priorities and milestones.
- Supportive decision-making authority – decision makers possess adequate authority and discretion to achieve implementation objectives.
- Adequate regulatory systems – a diversity of implementation instruments, including rules, . . . written guidelines for compliance, enforcement, penalties, and incentives exist to support implementation objectives.
- Sound legislative basis – implementation is based in legislation so as to validate and empower the process.

Others argue that implementation of watershed plans is best achieved through voluntary stakeholder action. Central to the voluntary implementation approach are the concepts of social responsibility and “network power” and their ability to alter behaviours in the watershed.<sup>194</sup> Proposed tools for voluntary implementation of watershed plans include the ratification of planning decisions and the adoption of non-binding compacts by those around the planning table.<sup>195</sup>

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<sup>191</sup> See Ted Grantham, *et al.*, *A Fresh Perspective for Managing Water in California: Insights from Applying the European Water Framework Directive to the Russian River* (University of California, Water Resources Centre Contribution, 2008).

<sup>192</sup> *Ibid.* Some argue that the voluntary approaches have been ineffective in dealing with non-point source pollution, the area of impact which collaborative approaches were intended to resolve. See Neil Gunningham & Darren Sinclair “Non-point pollution, voluntarism and policy failure; lessons for the Swan-Canning” (2004) 21 *Environmental and Planning Law Journal* 93. Also D.R. Williams, *supra* note 176 at 2.

<sup>193</sup> *Supra* note 4 at 597-598.

<sup>194</sup> See Alliance for Regional Stewardship, *Regional Stewardship & Collaborative Governance: Implementation that Produces Results*, Monograph Series 11, March 2006. See also Douglas S. Kenney *supra* note 5 at 35-40.

<sup>195</sup> Alliance for Regional Stewardship, *ibid.* at 36.

The policy choice of whether to pursue implementation of watershed plans through voluntary means or through statute and regulation may vary according to the decision maker and the intended impact on watershed governance.

### **i. Government implementation of watershed plans**

How are watershed management objectives and plans integrated into government decisions? What level of authority does a plan hold relative to each agency's legislative mandate and the administration of their legislative authority? In the absence of legislative provisions dictating adoption of plans, can government agencies be held to account for the success of plan implementation? The answers to these questions are central to implementation success and to ensuring continuity and accountability in the process.

#### ***Voluntary vs. regulatory implementation***

Is it reasonable to expect government decision makers to voluntarily implement watershed plans? While government agencies should only agree to a watershed plan if they are able and willing to implement the plan, the compatibility of plans with existing policy and legal mandates may not be fully understood, and may thereby frustrate the implementation of plans.<sup>196</sup>

It has been observed in the Columbia River Basin that, when it comes to implementing collaborative plans, “[t]he many choices among incommensurate alternatives, diverse agencies with missions that conflict with the overall goal of recovering fish and wildlife, and the complexity of the watershed all work against comprehensive management”.<sup>197</sup>

This reliance on government agencies to implement plans in the absence of legislative guidance was also a drawback identified in the Fraser Basin Council's collaborative process.

Most important [in terms of drawbacks of the approach] is the fact that the council is generally unable to implement the plans and program it agrees upon, and must hand them off to others—usually governmental agencies—for actual performance. This limitation means that matters on which the council has made recommendations do not always get done or get done swiftly or without modification by the implementing agencies.<sup>198</sup>

“Agency hesitance to abdicate decisions” may frustrate implementation of collaborative plans.<sup>199</sup> Similarly, institutional memory, program continuity, staffing, and agency

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<sup>196</sup> This is particularly the case for agencies that have peripheral roles in the watershed planning process.

<sup>197</sup> Schlager & Blomquist, *supra* note 167 at 119.

<sup>198</sup> *Supra* note 71 at 30.

<sup>199</sup> Thomas I. Gunton & J.C. Day, “The Theory and Practice of Collaborative Planning in Resource and Environmental Management” (2003) 31:2 *Environments* at 8.



priorities may all impact implementation where an overriding legislative mandate to comply with watershed plans does not exist.<sup>200</sup>

Australia can be cited as an example of where implementing a watershed plan in the face of long standing legislative mandates and institutional structures has had limited success.<sup>201</sup> Even where policies are in place to facilitate interagency communication and integration of watershed plans, issues of fragmented and isolated decision making are likely to remain.<sup>202</sup> In this way implementation of watershed plans through voluntary actions of government agencies can be characterized as a secondary level of commitment, one that unfolds in the legal and institutional realities of the watershed at any given time.<sup>203</sup>

The absence of legislative direction invoking consideration of watershed plans also limits accountability to plan outcomes. As the primary proponent of collaborative approaches, government should be held accountable for plan outcomes. This includes ensuring that interested parties have the opportunity to judicially review government decisions that fail to comply with plan outcomes.

### **The catch 22 of voluntary plan implementation**

In the absence of legislative direction to consider a plan, a government may find itself in a catch 22. Ignore the collaborative plan and an agency may be accused of failing to uphold its end of the bargain or follow the plan and be open to challenge for fettering government discretion by following the watershed plan at the expense of its legislative mandate.<sup>204</sup>

<sup>200</sup> Schlager & Blomquist, *supra* note 167 at 101-103. Government agencies that promote voluntary implementation of collaborative plans are likely to be easy targets for criticism. “As boundedly rational policy makers struggle to make choices among incommensurate alternatives [i.e., between broad interests represented in the watershed] in a world characterized by complexity [the ecosystem of the watershed as complex and adaptive] and transaction costs [i.e., the various transaction costs of decision making and compliance], the choices they make and the means by which those choices are implemented are likely to appear fragmented, duplicative, and narrow.”

<sup>201</sup> See for example the review of the Murray-Darling Basin, *supra*.

<sup>202</sup> See the evaluation of the Oregon approach to implementing the Oregon Plan, *supra*.

<sup>203</sup> All jurisdictions reviewed (with the exception of Australia) leave the *status quo* of water rights allocations be except where pressured from paramount federal requirements (for species recovery). There is some irony in the fact that proponents of collaborative watershed planning argue that it is more democratic (*vis á vis* the decentralization of decision making) and yet existing legal rights, derived through the purportedly less democratic (centralized) legislative process, are viewed as sacrosanct in most instances.

<sup>204</sup> Jones & de Villars notes that an illegal fettering of discretion may occur where the decision maker adopts “a policy of only acting on the recommendation of a third party” or where they consider a government policy external to their agency that is not relevant to the statutory question in issue. Even where an external policy is relevant to a statutory decision “the delegate cannot simply treat the external policy as a given, and may be required to permit cross-examination and refutation of that policy. The expectation that a delegate will exercise its discretion in a manner so as to accommodate other governmental policies raises difficult legal issues about the relationship between apparently independent administrative bodies and more centralized government agencies, which are only occasionally dealt with specifically by the legislature.” David Phillip Jones, Q.C. & Anne S. De Villars, Q.C. *Principles of Administrative Law* (4<sup>th</sup> Ed.) (Scarborough: Thomson Canada, 2004) at 195-197. If government discretion is exercised in a purely objective state, consistent only with the decision maker’s legislative mandate, there

Consistency and accountability for plan implementation across government departments is best achieved by providing legislative backing. While legislative provisions dealing with government integration of planning outcomes need not apply retroactively, implementation of planning outcomes in future decisions across agencies with disparate mandates is essential. The legislative approach to implementing watershed objectives in government agencies may take various forms, as illustrated in the jurisdictional review.

### **Approaches to legislative integration of plans**

- The creation or designation of a centralized watershed plan administrative and implementation agency.<sup>205</sup>
- Mandatory consideration of watershed plans in decisions.<sup>206</sup>
- Discretionary consideration of watershed plans in decisions.
- Mandatory adoption and consistency with plan outcomes in prescribed decisions.<sup>207</sup>
- The creation of a centralized watershed planning tribunal which hears appeals related to compliance with watershed objectives but otherwise leaves agency authority intact.<sup>208</sup>

Each legislative approach provides decisions makers with varying levels of flexibility.

## **ii. Municipal implementation of watershed plans**

Implementation of watershed plans will rely heavily on decisions of municipal governments and their powers over land use and development. Implementation of watershed plans within the municipal context can be difficult due to the autonomy that elected councils are expected to maintain in exercising planning decisions. In addition, long term implementation of plans is likely to be impacted if there is a lack of continuity

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is a risk that implementation of the plan will be directly undermined. This criticism has also been leveled at the U.S. system where reliance on collaborative efforts raises legal questions about avoidance of statutory requirements of the *Endangered Species Act*. The working assumption of those in the planning processes appears to be that a negotiated agreement will meet the requirements the federal statutes. See John D. Echeverria, *supra* note 14.

<sup>205</sup> For example see Oregon implementation described *supra*.

<sup>206</sup> For example see Alberta's approach to implementing watershed management plans, *supra*. The efficacy of this approach lies in the fact that there is a level of accountability provided. In cases where the watershed plan is not considered the decision of the government body can be challenged or reasons may be necessary to explain why specific planning objectives were not followed in a given instance.

<sup>207</sup> The benefit of this approach is that there is increased certainty in decision making around the plan, as government discretion around plan implementation is limited. A more centralized authority approach has been called for in the Russian River Basin in California to reflect the European Union approach to watershed planning outlined in its Water Framework Directive. See Ted Grantham, *et al.*, *supra* note 188.

<sup>208</sup> See J.B. Ruhl, *et al.*, "Proposal for a Model State Watershed Management Act" (2003) 33 *Environmental Law* 929.

in councils, as incoming councilors may have limited knowledge of plans and have conflicting priorities.<sup>209</sup> Compounding this issue is that watershed plans often encompass more than one municipality.<sup>210</sup>

A paramount concern, as with their provincial government counterparts, is that municipal decisions regarding implementation of watershed plans will lack consistency and thereby undermine the meeting of watershed plan objectives. Consistent application of plan outcomes in decisions and a level of accountability can be achieved at the municipal level through legislative integration of municipally approved watershed plans. Once municipal councils approve a watershed plan, municipal statutory plans and zoning bylaws should be amended to be consistent with the plan.

### iii. Implementation of watershed plans by other watershed constituents

[C]onsensus among stakeholders does not guarantee public and political support. Stakeholders often forget that they are going through a mutual learning process, and the conclusions that they reach are not always shared by their constituencies.<sup>211</sup>

Successful implementation requires broad adoption of plan actions not only within government but also among non-governmental watershed communities. Implementation at this level is particularly difficult as legislative or formal policy that applies to specific sectors within a watershed is usually non-existent or very diverse.<sup>212</sup> For this reason behavioural change related to unregulated activities or activities that have already been authorized (and are not likely to be retroactively amended to reflect watershed plans) is typically pursued through watershed programs based on education, voluntary measures, or financial incentives. Implementation by non-government actors in the watershed will often come down to individual evaluations of transaction costs related to implementation.

Leach found that the majority of those in collaborative processes held “doubts about the ability of other participants to make commitments on behalf of their respective organizations” but, nevertheless were of the view that effective implementation was occurring to some degree.<sup>213</sup> The importance of the planning process being inclusive and

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<sup>209</sup> A stark example of the lack of relevance of vague provincial planning documents to municipal planning is found in Alberta’s Provincial Land Use Policy, a document with which all bylaws and statutory plans must be consistent (s. 622 of the *Municipal Government Act*, R.S.A. 2000, c. M-26). Due to the discretionary and vague nature of the provincial policy it has been of little value to municipal development.

<sup>210</sup> Genskow, *supra* note 5 at p. 61 recommends the linkage of “local land-use planning, growth management regulation to watershed initiatives.”

<sup>211</sup> Richard D. Margerum & Bruce P. Hooper, “Integrated Environmental Management: Improving Implementation Through Leverage Point Mapping (2001) 14 *Society and Natural Resources* 1 at 16.

<sup>212</sup> Implementation of plans is likely to be more achievable where the number of implementers is limited. Unfortunately watershed planning attempts to deal with management of numerous activities and actors at large geographic scale.

<sup>213</sup> William D. Leach “Collaborative Public Management and Democracy: Evidence from Western Watershed Partnerships” (2006) Special issue *Public Administration Review* at 108. Also see C.W. Huntington & S. Sommarstorm, *supra* note 154.

limited in its scope of activities under the plan was also found to be of significant importance.<sup>214</sup>

Lubell's assessment of watershed planning has raised the concern that planners tend to form agreements around issues and resolutions which may not fit squarely with the true interests of stakeholders, and hence behavioural change may not be quick to follow.<sup>215</sup> If the planners are acquiring a level of cognitive dissonance it is likely to be reflected in implementation troubles down the road, as non-planner implementers are forced to deal with plan objectives and actions not of their making or liking.

Ostrom, in her work on managing common pool resources, proposes that sustained systems of managing common resources are characterized in part by the ability of resource users to pursue graduated sanctions against those who violate the agreed rules regarding the common resource.<sup>216</sup> However, in collaborative watershed planning processes the "users" of the resource are typically diverse, with varied objectives for the watershed itself, and with no civil or regulatory remedies available to ensure compliance with watershed "rules", i.e., plan objectives.

In the absence of binding sanctions, what methods are there to ensure accountability among the broader watershed community? Should accountability even be expected?

Implementation of watershed plans among the non-government watershed community in the majority of jurisdictions reviewed relies on volunteer participation and opportunistic and *ad hoc* implementation of plans.<sup>217</sup> Improving ecological health through such an approach remains unproven and seems, on its face, unlikely. Direct regulation may be viewed as necessary in areas where impacts are high and implementation of plans is slow.<sup>218</sup>

However, direct regulation is likely not the best first step as it may undermine the planning process as a whole. A key distinction in plan adoption should be recognized between government and non-government planners. Namely, the representative capacity of government participants to negotiate and adopt a watershed plan is significantly different from the capacity of other planners who may have less formal structures to represent (and bind) their broader constituencies.

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<sup>214</sup> William D. Leach & Neil W. Pelkey, *supra* note 174 at 378. This review included the subjective grouping of themes for success (at 381).

<sup>215</sup> Lubell, *supra* note 154 at 565. Also see Bill Cooke "The Social Psychological Limits of Participation" in *Participation: The New Tyranny*, Bill Cooke & Uma Kothari eds. (London: Zed Books, 2001) at Ch. 7.

<sup>216</sup> Elinor Ostrom, *Governing the Commons: The Evaluation of Institutions for Collective Action* (Cambridge University Press, 1990) at pages 90–92. Ostrom observes that sustained management of common pool resources may be best achieved in situations where the group of resource users is relatively small and homogeneous, the existing framework of rules and behavioral patterns are harmful to all parties, costs and benefits are distributed in a fairly equal manner, enforcement and compliance costs of new rules are relatively low, and when grouped members trust each other.

<sup>217</sup> David E. Booher & Judith E. Innes, "Network Power in Collaborative Planning" (2002) 21 *Journal of Planning Education and Research* 221. This approach relies heavily on relationship building and places significant value in "network power".

<sup>218</sup> See Cary Coglianese, *supra* note 188.

In the absence of regulatory direction, what policies and programs will safeguard against stagnation of plans among non-government actors? Margerum and Hooper propose the use of “leverage point mapping”, a process which involves each stakeholder assessing which constituencies’ actions inhibit or cause barriers to the achievement of the plan objectives, identifying intervention points by way of evaluating their ability to affect behavior and the resources needed to overcome the identified barriers, and recruiting parties to act on these “leverage points”.<sup>219</sup>

This approach may be characterized as an implementation barrier assessment as it allows for a systematic identification and targeting of implementation barriers that should be the focus of specific watershed programs.

For example, the approach could be used to identify the relative impact of industry association ratification of an approved plan on implementation success. Barriers to adoption within the sector would be identified, whether they be technical or financial in nature, followed by an identification of mechanisms (leverage points) to overcome those barriers. The availability of internal sanctioning (as Ostrom proposes), policies and industry standards to implement best management practices, or the need to create specific programs to offset costs of implementation can be assessed and evaluated at the planning table.

Once barriers and gaps to implementation in the non-government watershed community are identified, policies and programs, and if need be, regulations targeting these areas may be pursued.

Further, to facilitate a level of accountability for outcomes, legislation should enable the creation of private agreements between individuals and the Crown. The Washington approach requires those non-governmental entities adopting watershed plans to “adopt policies, procedures, agreements, rules or ordinances to implement the plan”.<sup>220</sup> This will be of particular relevance in watersheds where select stakeholders hold significant resource tenure rights.<sup>221</sup>

#### **Part IV: A watershed plan implementation framework for Alberta**

For successful watershed management to occur laws and policies must facilitate the planning process and ensure consistency in how the plan is implemented across jurisdictions and through time. The policy must also achieve a level of accountability for plan implementation as significant time and public investments are necessary to sustain watershed planning and management.

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<sup>219</sup> See Margerum & Hooper, *supra* note 211.

<sup>220</sup> *Ibid.*

<sup>221</sup> For an Alberta example, it would be important to create agreements with those companies who hold tenure over large tracts of public land. See the Department of Sustainable Resource Development, online: Alberta Sustainable Resource Development <<http://www.srd.gov.ab.ca/forests/managing/forestmanagementagreements.aspx>>.

The Government of Alberta, with its renewed commitment to watershed planning, must ensure that watershed plans do not languish as discretionary documents. Creating legislative obligations for those in the watershed to implement approved plans increases the integrity of the collaborative governance model.

Currently, Alberta implements watershed plans through voluntary adoption of plan actions in the watershed, both by government and non-government actors (with the exception of water management plans, as described *supra*). Among private (non-government) stakeholders, implementation currently relies on voluntary sector-based initiatives or through the work of watershed stewardship groups (WSG). Neither private sector stakeholders nor WSGs should be expected to guarantee implementation success.

It has been proposed that policy based Cabinet approval of watershed plans be used to foster implementation of watershed plans into daily government decisions.<sup>222</sup> However, consistent and effective implementation of watershed plans is better achieved by providing government decision makers with legislative direction. This direction will ensure that conflicts between watershed plans and existing legislative mandates and institutional factors are overcome.

It is opportune timing for legislative reform related to watershed plans in Alberta with the passage of the *Alberta Land Stewardship Act (ALSA)* and future plans to table cumulative effects legislation (in 2010).<sup>223</sup> *ALSA* transforms the planning process that is undertaken in Alberta and sets out legal implementation of regional plans, into which watershed plans can readily be inserted.

Proposed reforms for watershed plan implementation can be enabled through relatively few amendments to the *ALSA*, the *Water Act*, the *Environmental Protection and Enhancement Act*, and the *Municipal Government Act*<sup>224</sup> (*MGA*).

## **Recommended reforms**

Law and policy reforms are set out in a summary form, followed by further information about how the reforms would be applied.

## **Integrating plan outcomes into government decision-making**

Legislative integration of plan outcomes in government decision-making, both at the municipal and provincial level, is essential to a consistent and sustained implementation of watershed plans. In addition, the reforms provide a level of accountability currently lacking in the process for implementation of approved plans.

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<sup>222</sup> See Alberta Water Council, *supra* note 18 at 17.

<sup>223</sup> S.A. 2009, c. A-26.8.

<sup>224</sup> R.S.A. 2000, c. M-26.

**Recommendation #1**

Upon approval of a watershed plan by the Watershed Planning and Advisory Council (WPAC) , the Minister of Environment, Cabinet and all relevant municipalities in the watershed must consider plan approval and adoption.

**Recommendation #2**

Where the Minister of Environment approves a watershed plan, all decisions of the Director under the *Water Act* and the *Environmental Protection and Enhancement Act* must comply with the plan.

**Recommendation #3**

Where Cabinet approves a watershed plan the plan will be incorporated by reference into a regional plan and carry the weight of a regional plan pursuant to the *Alberta Land Stewardship Act*.

**Recommendation #4**

Where a municipality approves a watershed plan the municipality must ensure all statutory plans under the *Municipal Government Act* and bylaws (including land use bylaws) comply with the watershed plan.

**Recommendation #5**

Approval (or rejection) of a watershed plan by the Minister, Cabinet and the municipality must occur within 6 months of the plan being submitted by the WPAC. Where there is a rejection or partial rejection of the plan, the plan shall be sent back to the WPAC with reasons for the objection, and the WPAC can alter its plan as it sees fit. Where the Minister, Cabinet or municipality fails to formally approve or reject a plan within the prescribed time, the watershed plan is automatically incorporated into decisions (see Recommendations #2-4)

**Recommendation #6**

Where the Minister of Environment approves a plan, compliance with the plan may be appealed to the Environmental Appeals Board. Standing for the appeal is based on whether the party is directly affected by the plan or displays a genuine interest in the subject matter of the plan violation.

## ***A. Provincial government implementation of watershed plans***

Government implementation of watershed plans must occur across all relevant government agencies and must consistently integrate plan outcomes in daily decisions. To achieve integration, a watershed plan, once created and approved by a Watershed Planning and Advisory Council (WPAC), may be independently approved by the Minister of the Environment, by Cabinet or by municipalities within the watershed. Once approved the watershed plan creates obligations for government agencies as follows:

### **1. Ministerial Approval**

Decisions of the Director of Alberta Environment under the *Environmental Protection and Enhancement Act (EPEA)* and the *Water Act* must be consistent with the approved watershed plan:

- a) The Director must comply with plans in respect to water transfers and water allocation decisions;
- b) Approvals issued under *EPEA* must be consistent with an approved watershed plan;
- c) Plans may recommend that the Minister and/or Lieutenant Governor in Council amend regulations or Codes of Practice to give effect to an approved watershed plan. When such a recommendation is made, reasons for rejecting or adopting the recommendation must be provided to Watershed Planning and Advisory Councils (WPAC) within 6 months from the date of submission;
- d) Renewals of *EPEA* approvals, *Water Act* licences and *Water Act* approvals must be amended in accordance with approved watershed plans, to the extent feasible, including the incorporation of the best available technology that is economically achievable;
- e) Decisions of the Director and questions of consistency with approved watershed plans may be appealed to the Environmental Appeals Board;
- f) Approved watershed plans may recommend changes to laws where it is identified that specific laws create barriers to plan implementation; and
- g) Regulatory tribunals must consider an approved watershed plan in making decisions and must provide reasons regarding how their decisions are consistent with an approved watershed plan. In the event that an approved watershed plan is not followed, the tribunal must provide reasons why compliance with the plan is not in the public interest.



## 2. Cabinet Approval

Decisions of other government agencies must be consistent with a watershed plan upon approval by Cabinet. A Cabinet approved watershed plan must be incorporated into regional plans pursuant to the *ALSA*.

- a) Upon incorporation of a watershed plan into a regional plan, all relevant government agencies must, within 6 months, outline how their regulations and policies will bring about the implementation of the plan.
- b) Biannual reporting must be done by all agencies and must include an assessment of whether implementation through existing statutes, regulations, policies and programs is achieving plan outcomes.
- a) Compliance of decisions with watershed plans is appealable to existing appellate bodies.
- c) The process for approval of a regional plan is as follows:
  - i. A WPAC may submit a watershed plan for consideration for incorporation into regional plans to the Minister charged with administration of the *ALSA*.
  - ii. The Minister must recommend to the Lieutenant Governor in Council (LGC) whether or not the plan should be incorporated into a regional plan, in whole or in part, within 6 months of the plan being submitted. In the event a response is not given in the prescribed time, the plan is deemed to be recommended for acceptance.
  - iii. The LGC must reject or accept all or portions of the plan, with those portions being accepted constituting amendments to the regional plan. In the event that the LGC does not adopt or reject the plan within 6 months, the plan is deemed to be incorporated into the regional plan.

### ***B. Municipal implementation of watershed plans***

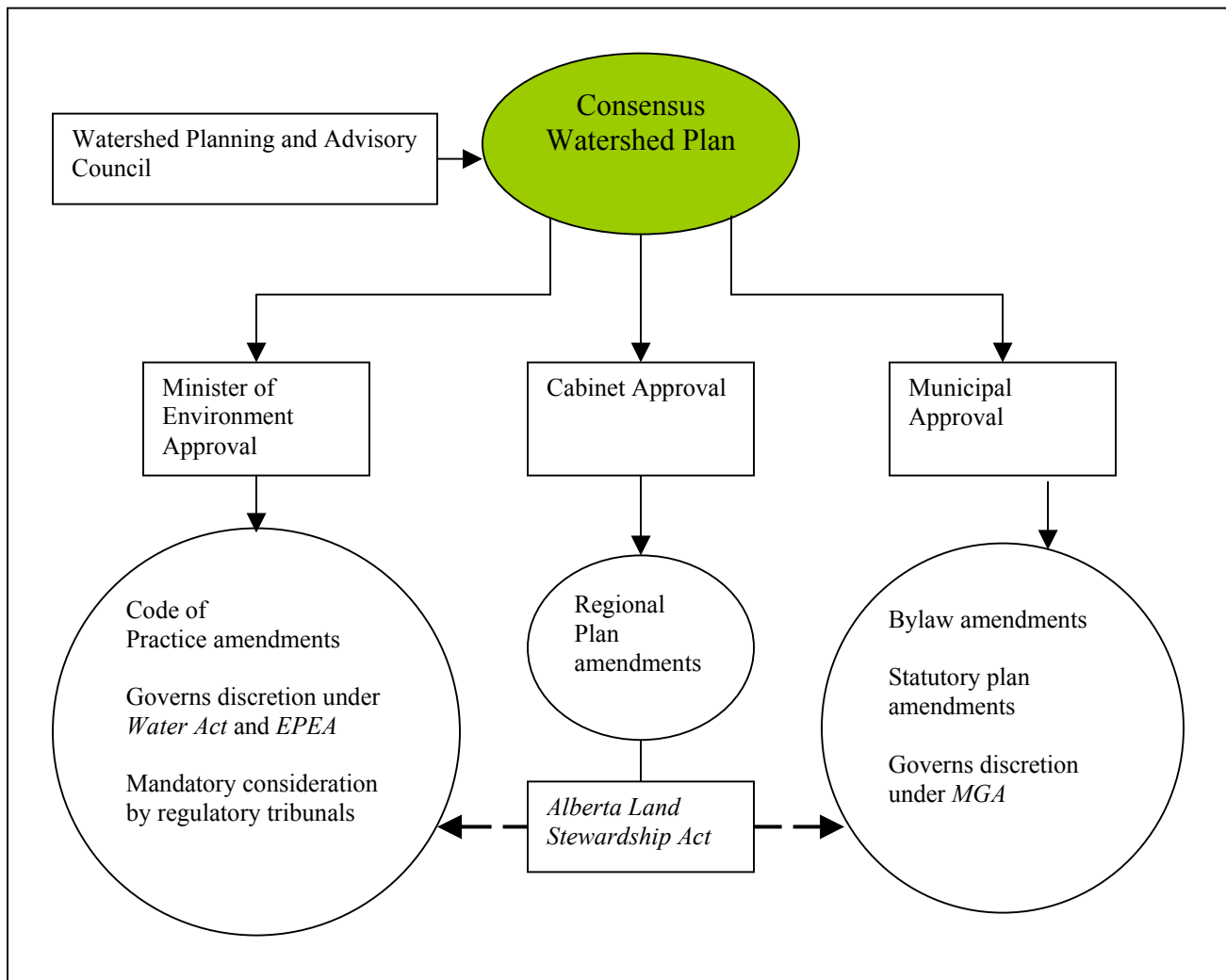
Implementation of watershed plans by a municipality should occur through formal inclusion of watershed plan obligations in statutory plans and bylaws. Once a WPAC has submitted a watershed plan to the municipality, approval by the relevant municipalities should occur through a public hearing process. Legislative reforms must address both the process for municipal approval as well as integration of watershed plans in municipal bylaws and plans.

1. All municipalities within a watershed must formally approve or reject a watershed plan, notwithstanding the LGC's approval or rejection of a watershed plan into a regional plan. Once adopted, the municipality must incorporate the watershed

plan objectives and actions into relevant bylaws and statutory plans within 1 year of approval of the watershed plan.

2. Transitional provisions must prescribe that any decisions within the municipality must be consistent with a council approved watershed plan from the date of approval, including decisions regarding discretionary land uses, development permits, and subdivisions. All permits or authorizations made pursuant to the *Municipal Government Act* must be accompanied by conditions reflecting the municipally approved watershed plan.

**Figure 4: Recommended approach to implementation of approved watershed plans**



## **Sustained and transparent funding**

### **Recommendation #7**

Create a watershed plan implementation fund (WPIF) and designate a central agency for administering and tracking payments from the fund.

Implementation of watershed plans among the broader watershed community will require a variety of law and policy tools, including targeted incentive programs, education and monitoring programs, and the possibility of elevated sanctions and regulation where plan implementation is not progressing on issues of high priority. To further these programs a legislative framework must:

1. Create a Watershed Plan Implementation Fund (WPIF);
2. Designate or create an administrative granting body, preferably centralized, to disburse and monitor funding for implementation actions.

## **Motivating robust plan implementation**

### **Recommendation #8**

Prescribe annual reporting on implementation activities, including budget expenditures.

### **Recommendation #9**

Prescribe monitoring and reporting on changes in watershed conditions at five year intervals.

### **Recommendation #10**

Require, as part of the planning process, a prioritization of threats to watershed health. Within 6 months of the completion of the prioritization process the WPACs must indicate those threats that they will deal with in the planning and implementation process and which threats government must manage.

### **Recommendation #11**

Provide the Lieutenant Governor in Council regulation making powers, pursuant to the *Alberta Land Stewardship Act*, to encompass all activities related to watershed plans that are not currently regulated under existing legislation.

### **Recommendation #12**

Enable binding agreements to be entered into between the Crown and individuals or corporations, to ensure accountability for public investments under the WPIF.

**Recommendation #13**

Require a systematic 5-year review and reporting by the relevant government agency of the effectiveness of private stakeholder adoption of watershed based programming for watershed plan implementation.

**Recommendation #14**

Implement a policy of evaluating stakeholder abilities to facilitate implementation of plan objectives within their constituencies.

Policy mechanisms to foster robust implementation of watershed plans among non-government organizations and individuals includes the placing of timelines on implementation and ensuring monitoring and reporting is consistently and rigorously pursued. There is also the need to ensure planners know an alternative regulatory approach may be pursued when plan implementation falters or to fill gaps in the watershed planning process. For this purpose, regulation making powers should be enabled for watershed activities that are not currently subject to regulation, with the intent of providing a backdrop to implementation should collaborative efforts fail.

Assurances must also be provided that watershed plan implementation is not merely opportunistic and *ad hoc*. Specific implementation recommendations to ensure a robust and systematic approach to plan implementation require a system of identifying and prioritizing areas of focus, tracking changes in the environment and reporting these changes to allow for adaptive management and regulatory amendments.

A statutory framework should specifically:

1. Provide annual reporting on implementation activities, including budget expenditures;
2. Provide monitoring and reporting on changes in watershed conditions at five year intervals;
3. A prioritization of threats to watershed health;
  - a) Within 6 months of prioritization, the WPACs must indicate those threats they will deal with in the planning and implementation process and which threats government must manage.
4. Provide the Lieutenant Governor in Council regulation making powers to encompass all activities related to watershed planning that are not currently regulated under existing legislation;

5. Enable binding agreements to be entered into between the Crown and grantees, to ensure accountability for public investments under the WPIF;
6. Require a systematic 5-year review and reporting by the granting body of the effectiveness of private stakeholder adoption of watershed based programming for watershed plan implementation.

In addition, a policy must be created to ensure barriers to implementation in watershed sectors are assessed through a leverage point mapping process.<sup>225</sup> This policy would be focused on discerning the ability of individual planners to impact broader stakeholder adoption of plans, to identify programming that is needed, and to assess whether a system of watershed based sanctions should be created to promote implementation.

## **Conclusion**

The collaborative watershed planning approach to resource and environmental management represents a significant transition in resource governance. Its success as a system of environmental management and regulation will depend on implementation of approved plans across government jurisdictions and across geographic space and time. This requires a policy framework that provides assurances that decisions within a watershed will consistently reflect the outcomes of the watershed plan.

A legislative and policy framework for implementation of watershed plans must be robust enough to overcome conflicts with existing legislative mandates and institutional structures and biases. The legislative framework must be accompanied by a system of sustainable funding to carry out implementation actions and to fund watershed programs.

A legislative approach to plan implementation is recommended to ensure a level of accountability in the plan implementation process. This approach weds the benefits of a bottom-up collaboratively produced watershed plan with a formal process of plan approval that creates legal obligations in the watershed.

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<sup>225</sup> As proposed by Margerum & Hooper, *supra* note 211.



## **Appendices**





## *Appendix A – Jurisdictional approaches to watershed plan implementation*

### **Alberta**

Alberta joined the watershed planning world as part of Alberta's 2003 strategy document *Water for Life: Alberta's Strategy for Sustainability*<sup>1</sup> (*Water for Life*). The government's commitment to this policy was reinforced by the provincial government in 2008.<sup>2</sup> *Water for Life* contemplates the creation of watershed plans through the use of Watershed Planning and Advisory Councils (WPAC). WPACs may also create *water* management plans as a subset of *watershed* plans.

Water management plans are enabled by and carry legislative weight under the Alberta *Water Act*.<sup>3</sup> Watershed plans, on the other hand, are not directly referenced in Alberta legislation. Watershed plans reflect the province's effort to integrate water and land management as espoused by the *Water Act*, the *Framework for Water Management Planning*, and the renewed *Water for Life* policy.<sup>4</sup>

The approach to watershed and water management planning in Alberta falls within the typical watershed approach taken in the United States, consisting primarily of collaborative partnerships of multiple stakeholders who attempt to arrive at decisions through consensus. The mandate of WPACs is to “engage 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.”<sup>5</sup>

### **Ontario**

Watershed planning in Ontario can be characterized as a hybrid of collaborative and formal legal planning processes. Legislative planning does exist for drinking water pursuant to the *Clean Water Act*<sup>6</sup> and for the Lake Simcoe watershed, pursuant to the *Lake Simcoe Protection Act, 2008*,<sup>7</sup> although the latter is not the subject of a collaborative planning process. Broader watershed planning is pursued through

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<sup>1</sup> Government of Alberta, (Edmonton: Government of Alberta, 2003), online: [Water for Life](http://www.waterforlife.alberta.ca/documents/wfl-strategy_Nov2003.pdf) <[http://www.waterforlife.alberta.ca/documents/wfl-strategy\\_Nov2003.pdf](http://www.waterforlife.alberta.ca/documents/wfl-strategy_Nov2003.pdf)> (*Water for Life*).

<sup>2</sup> Government of Alberta, *Water for Life: A Renewal*, (Edmonton: Government of Alberta, 2008) at 14, online: Alberta Environment <<http://environment.gov.ab.ca/info/library/8035.pdf>> at 14.

<sup>3</sup> R.S.A. 2000, c. W-3.

<sup>4</sup> Alberta Environment, (Edmonton: Alberta Environment, undated) at 7, online: Alberta Environment <[http://environment.alberta.ca/documents/Framework\\_for\\_water\\_management\\_planning.pdf](http://environment.alberta.ca/documents/Framework_for_water_management_planning.pdf)>. Also see *Water for Life: A Renewal*, *supra* note 2 at 7. *Framework for Water Management Planning* indicates that integration of planning efforts across government departments is pursued through “Regional Strategies led by Alberta Environment” (at 11).

<sup>5</sup> Government of Alberta, *Enabling Partnerships: A Framework in Support of Water for Life: Alberta's Strategy for Sustainability* (Edmonton: Government of Alberta, undated) at 12, online: [Water for Life](http://www.waterforlife.alberta.ca/documents/wfl-enabling_partnerships.pdf) <[http://www.waterforlife.alberta.ca/documents/wfl-enabling\\_partnerships.pdf](http://www.waterforlife.alberta.ca/documents/wfl-enabling_partnerships.pdf)> at 8.

<sup>6</sup> S.O. 2006, c. 22.

<sup>7</sup> S.O. 2008, c. 23.

voluntary initiatives lead primarily by regional “conservation authorities” (as described *infra*).<sup>8</sup>

Managing risks to drinking water is pursued through the creation of “source protection plans” prescribed by the *Clean Water Act*.<sup>9</sup> There is discretion to incorporate broader environmental goals in these plans. Assessment of drinking water threats and the development of source protection plans are conducted by multi-stakeholder “source protection committees”.<sup>10</sup> Source protection plans include assessment reports that identify and monitor significant threats to drinking water and policies intended to deal with these threats.<sup>11</sup> “Source protection authorities” review and assess proposed plans and oversee the planning process.

Beyond the planning and regulatory approach to drinking water, regulation of land uses with water impacts is disbursed across several government agencies. Planning specifically aimed at broader watershed issues was initiated in the early 1990’s in Ontario pursuant to *Water Management on a Watershed Basis: Implementing an Ecosystem Approach*.<sup>12</sup> Watershed plans are advisory in nature and can be initiated by anyone but have been generally led by the regional Conservation Authorities.<sup>13</sup>

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<sup>8</sup> Government of Ontario, *Watershed Management on a Watershed Basis: Implementing an Ecosystem Approach* (Ontario: June 1993) online: Ministry of Natural Resources <[http://www.mnr.gov.on.ca/MNR\\_E002319.pdf](http://www.mnr.gov.on.ca/MNR_E002319.pdf)>. Also see the *Conservation Authorities Act*, R.S.O. 1990, c. C27. Conservation authorities are regionally based watershed management bodies established in 1946 with a mandate of ensuring “the conservation, restoration, and responsible management of Ontario’s water, land and natural habitats through programs that balance human, environmental and economic needs”, online: Minister of Natural Resources <[http://www.mnr.gov.on.ca/en/Business/Water/2ColumnSubPage/STEL02\\_163413.html](http://www.mnr.gov.on.ca/en/Business/Water/2ColumnSubPage/STEL02_163413.html)>.

<sup>9</sup> *Ibid.*

<sup>10</sup> See *Source Protection Committees Regulation*, Ont. Reg. 288/07 at s.2 which states. “ Subject to subsection 7 (4) of the Act, the members of a source protection committee shall be appointed by the source protection authority that establishes the committee in accordance with the following rules:

1. One-third of the members to be appointed by the source protection authority, not counting any members appointed pursuant to section 6, must be persons appointed to reflect the interests of the municipalities that are located, in whole or in part, in the source protection area or source protection region.

2. One-third of the members to be appointed by the source protection authority, not counting any members appointed pursuant to section 6, must be persons appointed to reflect the interests of the agricultural, commercial or industrial sectors of the source protection area’s or source protection region’s economy, including small business interests.

3. One-third of the members to be appointed by the source protection authority, not counting any members appointed pursuant to section 6, must be persons appointed to reflect interests other than the interests referred to in paragraphs 1 and 2, including, in particular, environmental, health and other interests of the general public. O. Reg. 288/07, s. 2.”

<sup>11</sup> *Ibid.* at s. 22(2). Monitoring the effectiveness of plan implementation is also required.

<sup>12</sup> Government of Ontario, (Toronto: Government of Ontario, 1993) online: Ministry of Natural Resources <[http://www.mnr.gov.on.ca/MNR\\_E002319.pdf](http://www.mnr.gov.on.ca/MNR_E002319.pdf)>.

<sup>13</sup> *Ibid.*

## Manitoba

Manitoba initiated watershed based management as a major policy direction in the 2003 *Manitoba Water Strategy*.<sup>14</sup> The *Manitoba Water Strategy* outlined the need to develop an integrated water management planning system and consolidate water legislation.<sup>15</sup> Subsequently the *Water Protection Act (WPA)* was proclaimed in 2006.<sup>16</sup>

The *WPA* contemplates the creation of watershed management plans through water planning authorities designated under the Act.<sup>17</sup> The preparation of plans must consider:<sup>18</sup>

- (a) water quality standards, objectives and guidelines that apply to the watershed;
- (b) whether a water quality management zone is included within any part of the watershed, and if so, any regulations made under section 5 respecting the zone;
- (c) studies that the authority considers relevant relating to water, land use, demographics, the capacity of the environment to accommodate development, and any other matter related to present or future physical, social or economic factors;
- (d) comments received through public consultation or public meetings held under section 17;
- (e) prescribed water management principles;
- (f) relevant provincial land use policies, development plans, and zoning by-laws;
- (g) any other information that the authority considers relevant.

The plan's contents include the identification of issues, objectives, policies and recommendations related to aquatic ecosystems, drinking water sources, pollution (point and non-point source), flood control and demand management (among others).<sup>19</sup>

In addition the plans are to:<sup>20</sup>

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<sup>14</sup> Government of Manitoba (Winnipeg: Government of Manitoba, 2003), online: Government of Manitoba <<http://www.gov.mb.ca/waterstewardship/waterstrategy/pdf/water-strategy.pdf>>.

<sup>15</sup> *Ibid.* at 20-21.

<sup>16</sup> S.M. 2005, c. 26.

<sup>17</sup> *Ibid.* at s. 14. Planning authorities may be constituted of board of conservation districts or planning districts, the municipal council or any other person or entity or combination thereof. Information published by the Manitoba government foresees watershed community involvement in the formation of watershed plans although the legislation does not mandate this. Government of Manitoba, *Integrated Watershed Management Planning* (undated), online: Government of Manitoba <[http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp\\_brochure.pdf](http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp_brochure.pdf)>. (*IWMP*)

<sup>18</sup> *Ibid.* at s. 15.

<sup>19</sup> *Ibid.* at s. 16.

<sup>20</sup> *Ibid.*

- specify linkages between water management and land use planning so as to facilitate the adoption, in a development plan or other planning instrument, of some or all of the provisions of the watershed management plan; and
- identify ways in which the plan can be implemented, monitored and evaluated, recognizing the need to implement the plan with the assistance of individuals, groups, and organizations.

“Members of the watershed community” create the plans although this is not legislatively prescribed.<sup>21</sup> The plans are submitted for approval of the Minister of Water Stewardship.<sup>22</sup> Amendments to completed plans may be initiated by the Minister or by the planning authority (with subsequent ministerial approval).<sup>23</sup>

## Saskatchewan

Saskatchewan “watershed and aquifer planning” is overseen by the Saskatchewan Watershed Authority, a government agency established in 2002.<sup>24</sup> Watershed Advisory Committees are struck and lead the planning process (in conjunction with a technical committee).<sup>25</sup>

Completed watershed and aquifer management plans will contain background information, an environmental scan of the watershed, analysis of issues and threats, recommendations for key actions, timelines, responsibilities, accountability measures and evaluation criteria. By identifying and prioritizing threats and solutions, the plans will provide the Authority with direction for programming and resource allocation.<sup>26</sup>

The focus of planning is drinking water protection, although ecological considerations are also relevant.<sup>27</sup>

## British Columbia

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<sup>21</sup> Government of Manitoba, *Integrated Watershed Management Planning* (undated), online: Government of Manitoba <[http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp\\_brochure.pdf](http://www.manitoba.ca/waterstewardship/agencies/cd/pdf/iwmp_brochure.pdf)>.

<sup>22</sup> The planning authority is defined by the cabinet regulations and may be the board of a conservation authority, planning authority, a council of a municipality or anyone else. *Supra* note 16 at ss. 18-19.

<sup>23</sup> *Supra* note 16 at s. 20.

<sup>24</sup> See the *Watershed Authority Act 2005*, S.S. 2005, c. S- 35.03 at s. 5. The authority is mandated to develop, manage and protect water resources, deal with water allocations and generally manage and conserve water resources and the land associated with them.

<sup>25</sup> *Ibid.* at s.20. These advisory committees often evolve into independent nonprofit groups such as the Assiniboine Watershed Stewardship Association.

<sup>26</sup> See the Watershed and Aquifer Planning website at <<http://www.swa.ca/Stewardship/WatershedPlanning/Default.asp?type=Model>>.

<sup>27</sup> *Ibid.*

The focus of watershed planning in British Columbia (BC) is by way of incorporating a “watershed” lens in participating in other planning processes and decisions, including municipal planning, and implementation of existing Land Resource Management Plans and Sustainable Resource Management Plans.<sup>28</sup>

The government is considering revisions to water legislation to promote watershed planning but no new legislation has been proposed.<sup>29</sup> In addition, collaborative watershed governance is being pursued under the “Living Water Smart” initiative.<sup>30</sup> Notwithstanding the absence of a more formal watershed planning policy framework, a watershed based council, the Fraser Basin Council, has been in operation for more than a decade. The Council evolved from the Fraser River Basin Board in 1997.<sup>31</sup> Its *Charter for Sustainability* contemplates planning and “collective and cooperative decision making that promotes the use of partnerships to achieve sustainability”.<sup>32</sup> The Fraser Basin Council administer a variety of programs and some regional watershed plans have been developed.<sup>33</sup>

Water management planning and drinking water planning are also enabled by statute in BC. Water management plans are enabled under Part 4 of the BC *Water Act* and these plans are made at the order of the Minister and may consider “concerns related to fish, fish habitat and other environmental matters”.<sup>34</sup> These plans are directed at “addressing or preventing” conflicts between water users or between users and requirements to maintain instream flows, or “risks to water quality”.<sup>35</sup> These plans may or may not be based on a collaborative planning process and consideration “must be given to the result or progress of Provincial government or local government strategic, operational and land use or water use planning processes”.<sup>36</sup>

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<sup>28</sup> See the Government of British Columbia’s “Living Water Smart British Columbia’s Water Plan”, online: Living Water Smart <<http://www.livingwatersmart.ca/preparation/waterplans.html>>. A more formal approach to collaborative planning in British Columbia was earlier pursued through the community planning provisions of the *Forests Range Practices Act* and the *Forest Planning and Practices Regulations* that contemplated “community watershed” groups and plans. The relevant provisions have since been repealed.

<sup>29</sup> See the Government of British Columbia’s “Living Water Smart: British Columbia’s Water Plan” plan online: Living Water Smart <<http://www.livingwatersmart.ca/preparation/planning.html>>. It should be noted that many of the LRMP & SRMP processes were collaborative in nature.

<sup>30</sup> Government of British Columbia, *Living Water Smart: British Columbia’s Water Plan* (Vancouver: British Columbia Ministry of Environment, 2008) indicates that the “Government will support communities to do watershed management planning in priority areas” at 51, online: Living Water Smart <[http://www.livingwatersmart.ca/docs/livingwatersmart\\_book.pdf](http://www.livingwatersmart.ca/docs/livingwatersmart_book.pdf)>.

<sup>31</sup> See Fraser Basin Council online: <<http://www.fraserbasin.bc.ca/>>.

<sup>32</sup> Fraser Basin Council, *Charter for Sustainability*, (Vancouver: Fraser Basin Council, 1997), online, Fraser Basin Council <[http://www.fraserbasin.bc.ca/about\\_us/documents/FBCcharter.pdf](http://www.fraserbasin.bc.ca/about_us/documents/FBCcharter.pdf)>.

<sup>33</sup> See the 2008 draft plan for Shuswap Lake at <[http://www.fraserbasin.bc.ca/publications/documents/SLIPP\\_plan\\_draft\\_may\\_2008.pdf](http://www.fraserbasin.bc.ca/publications/documents/SLIPP_plan_draft_may_2008.pdf)>.

<sup>34</sup> *Water Act*, R.S.B.C., 1996, c. 483, at s.62 (2).

<sup>35</sup> *Ibid.* at s. 62(1).

<sup>36</sup> *Ibid.* at ss. 63(2) and (5). A water management plan of a non-legislative nature has been created in the Cowichan valley. This plan recommended the creation of “a multi-party Cowichan Basin Water Advisory Council (CBWAC) to oversee plan implementation”. The Cowichan water management plan is not an approved “water management plan” under the *Water Act*. See Cowichan Valley Regional District *et al.*,

Drinking water planning is also mandated in British Columbia under the *Drinking Water Protection Act*.<sup>37</sup> As with water management planning, a collaborative approach to drinking water planning is not prescribed, but once approved these plans may impact government decision-making and authorizations.<sup>38</sup>

## Washington

Watershed planning in Washington takes place pursuant to the *Watershed Planning Act*, which was passed in 1998. Watershed planning in Washington is conducted for each water resource inventory area (WRIA) or multiples thereof.<sup>39</sup> A lead agency is designated to head up the planning process and the legislation sets out maximum grant amounts for various stages of the planning process.<sup>40</sup>

Watershed planning bodies may be formed by local citizens of a WRIA as long as the counties, the largest city or town and the water supply utility obtaining the largest quantity of water agree to the planning effort.<sup>41</sup>

Planning is conducted in four phases and implementation plans constitute the final phase. These implementation plans must be created within one year of receiving funding for that purpose.<sup>42</sup> Implementation plans must contain strategies to provide sufficient water for production agriculture, commercial, industrial and residential use and instream flows.<sup>43</sup> Timelines and interim milestones to measure progress are also required.<sup>44</sup>

## Oregon

Oregon's watershed management process was initiated primarily in response to the

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*Cowichan Basin Water Management Plan*, March 2007, online: Cowichan Valley Regional District <[http://www.cvrdb.bc.ca/documents/Engineering%20Services/Environment/Cowichan%20Basin%20Water/CBWMP\\_29Mar07.PDF](http://www.cvrdb.bc.ca/documents/Engineering%20Services/Environment/Cowichan%20Basin%20Water/CBWMP_29Mar07.PDF)>.

<sup>37</sup> S.B.C. 2001, c. 9.

<sup>38</sup> *Ibid.* at ss. 32 & 35.

<sup>39</sup> The WRIA's were designated pursuant to the *Water Resources Act* W.A.C. § 173-500-040 (1971). See *Watershed Planning Act*, Ch. 90.82 R.C.W. at § 90.82.020 (4). Planning units may include multiple WRIs.

<sup>40</sup> *Ibid.* at § 90.82.040.

<sup>41</sup> *Ibid.* at § 90.82.060(2). See also Bill 1580 which amends certain provisions of the watershed planning process and provides for local water plans to be created (Second Substitute House Bill 1580, Chapter 183, Laws of 2009, *Pilot Local Water Management Program*). Notably the membership of water management boards are set up at section 4 of the Bill and includes provisions for having local membership reflecting water rights holders, environmental interests and citizen's at large represented. It is contemplated that Water planning units will become water management boards (at § 90.82.060(9)). The planning unit elects whether they wish to establish instream flows as part of the planning process. Preferential grant priority is given to applications that address fish and fish habitat protection where there is evidence that the supply of water is inadequate for population and economic growth. See *Watershed Planning Act* at § 90.82.040(2)(c) and § 90.82.040(3). This section also indicates that the application must demonstrate a need for state planning funds.

<sup>42</sup> *Ibid.* at § 90.82.040(2)(e).

<sup>43</sup> *Ibid.* at § 90.82.043(2).

<sup>44</sup> *Ibid.*

imminent listing of two salmonid species under the federal *Endangered Species Act*.<sup>45</sup> The resulting watershed framework involved the statutory creation of the Oregon Watershed Enhancement Board (OWEB) and watershed based councils.<sup>46</sup> The OWEB's primary task is administering a variety of funds under the legislation, including the Watershed Improvement Grant Fund.<sup>47</sup> This fund is focused on providing grants for watershed and riparian habitat conservation activities, education and implementation of watershed enhancement plans developed by watershed councils.<sup>48</sup>

In addition, the OWEB is charged with establishing a "framework for a locally based integrated watershed planning and management process designed to assist the watershed councils".<sup>49</sup> A watershed council is defined as a "voluntary local organization, designated by a local government group convened by a county governing body, to address the goal of sustaining natural resource and watershed protection, restoration and enhancement within a watershed".<sup>50</sup>

Funding decisions by the OWEB are guided by its goals and priorities that are in turn based on the Oregon Plan.<sup>51</sup> The mission of the Oregon Plan is incorporated into law "to restore the watershed of Oregon and to recover the fish and wildlife populations of those watersheds to productive and sustainable levels in a manner that provides substantial ecological, cultural and economic benefits."<sup>52</sup>

The Oregon Plan and the related legislative framework is, in part, focused on being a State mechanism to comply with federal laws.<sup>53</sup> The Oregon statute mandates the negotiation with federal agencies to "obtain assurances to the effect that compliance with the Oregon Plan and programs and policies found in the statutes...will satisfy federal requirements imposed by the federal Endangered Species Act".<sup>54</sup> Further, the Governor and other state agencies are to work toward implementing programs and policies with the intent of being able to pursue activities with minimal federal intervention under the federal *Endangered Species Act*.<sup>55</sup>

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<sup>45</sup> Kaush Arha, *et al.*, *The Oregon Plan for Salmon and Watersheds: A Perspective* (Corvallis, OR: Oregon State University, 2003). Also see Ryan Bidwell, *Watershed Councils and the Oregon Plan: An Analysis of Watershed Planning Processes* (M.Sc. Thesis, University of Washington, 2003).

<sup>46</sup> See the Oregon Revised Statutes, Chapter 541, Watershed Enhancement and Protection: Water Development Projects; Miscellaneous Provisions on Water Right; Stewardship Agreements, O.R.S 2007, online: Oregon State Legislature <<http://www.leg.state.or.us/ors/541.html>>. Also see the Oregon Administrative Rules related to the OWEB, online: State of Oregon <[http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_695/695\\_tofc.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_695/695_tofc.html)>.

<sup>47</sup> *Ibid.* at § 541.397-541.401.

<sup>48</sup> *Ibid.* at § 541.399.

<sup>49</sup> *Ibid.* at § 541.371(1)(a).

<sup>50</sup> *Ibid.* § 541.351(15)

<sup>51</sup> *Ibid.* at § 541.371.

<sup>52</sup> *Ibid.* at § 541.405(2)(a)

<sup>53</sup> *Ibid.* at § 541.405(8),

<sup>54</sup> *Ibid.* at § 541.405(8)(a). See also 6 U.S.C. § 1533(d), § 1535 (c) and § 1539(a) regarding state mechanisms to limit federal involvement.

<sup>55</sup> *Ibid.*

## California

California's approach to water management can be characterized as highly regulated; nonetheless, collaborative watershed management and planning is still pursued in the state. Issues garnering regulatory planning include water allocation and quality planning, both of which are overseen by the State Water Resource Control Board.<sup>56</sup> Water quality planning is undertaken by regional basin planning authorities.<sup>57</sup> These nine regional boards are appointed and are multi-stakeholder.<sup>58</sup> Plan adoption is mandatory and plans must comply with state water policies including the California Water Plan.<sup>59</sup> Cities or counties may adopt and enforce additional regulations that are non-conflicting and more restricting "with respect to the disposal of waste or any other activity which might degrade the quality of the waters of the state".<sup>60</sup>

Many activities that create non-point source impacts on water quality are also regulated including biosolids, dredging and filling wetlands, irrigated lands, land disposal, recycled water, sanitary sewer overflows, storm water and timber harvest.<sup>61</sup>

The provisions for collaborative planning and management that exists focus on funding and the integration of policy and decision-making across government departments through the creation of an interagency forum. The *Watershed, Clean Beaches, and Water Quality Act* established the Integrated Watershed Management Program and set out the process and nature of grants that may be awarded in relation to the program.<sup>62</sup> A "watershed approach" is promoted and pursued via voluntary partnering with local stakeholders and seeking stakeholder input to improve water quality under the "Watershed Management Initiative".<sup>63</sup>

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<sup>56</sup> See the *California Water Code*, particularly Divisions 2 & 7 and the *Porter-Cologne Water Quality Control Act*, online: Official California Legislative Information <<http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=wat&codebody=&hits=20>>.

<sup>57</sup> *Porter-Cologne Water Quality Control Act*, 7 Cal. Wat. Code (2009) at § 13260- 13267.

<sup>58</sup> *Ibid.* at § 13201.

<sup>59</sup> *Ibid.* at § 13240.

<sup>60</sup> *Ibid.* at § 13002. The Plan for California's Nonpoint Source Pollution Control Program outlines 5 main goals: "1) Track, monitor, assess, and report program activities, 2) Target program activities, 3) Coordinate with public and private partners in all aspects of the program, 4) Provide financial and technical assistance and education and, 5) Implement the 61 management measures."

<sup>61</sup> For more information see the State Water Resources Control Board website: <[http://www.swrcb.ca.gov/water\\_issues/programs/index.shtml](http://www.swrcb.ca.gov/water_issues/programs/index.shtml)>.

<sup>62</sup> *Watershed, Clean Beaches, and Water Quality Act* (Division 20.4, § 30901, et seq; and Division 21, Chapter 5.5, § 31220 of the *Public Resources Code*. Elements that might attract funding under the program include, stormwater capture and treatment, nonpoint source pollution reduction, management, and monitoring, groundwater recharge and management projects, water banking, exchange, and reclamation, and improvement of water quality, vegetation management to improve watershed efficiency, aquatic and terrestrial habitat, the creation and enhancement of wetlands (among many others).

<sup>63</sup> *Supra* note 121. Also see California Resources Agency and State Water Resources Control Board, *Addressing the Need to Protect California's Watersheds: Working with Local Partnerships: Report to the Legislature*—required by AB 2117 (Wayne), Chapter 735, Statutes of 2000 (April 11, 2002), online: California Resources Agency

<[http://resources.ca.gov/watershedtaskforce/AB2117LegReport\\_041102.pdf](http://resources.ca.gov/watershedtaskforce/AB2117LegReport_041102.pdf)> (*Addressing the Need to Protection California's Watersheds*) and the California Environmental Protection Agency & State of California Resources Agency, *Memorandum of understanding between the California Environmental*



In large part, the collaborative watershed planning process in California is locally driven and is based on the California Coordinated Resource Management and Planning (CRMP) model. CRMP is “a model voluntary, locally led planning process” that incorporates principles of “open membership, diversity of interests and consensus decision making”.<sup>64</sup>

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<sup>64</sup> See California Coordinate Resource Management and Planning, online: <<http://www.crmp.org/>>.

## Appendix B - Oregon Plan Organizational Structure

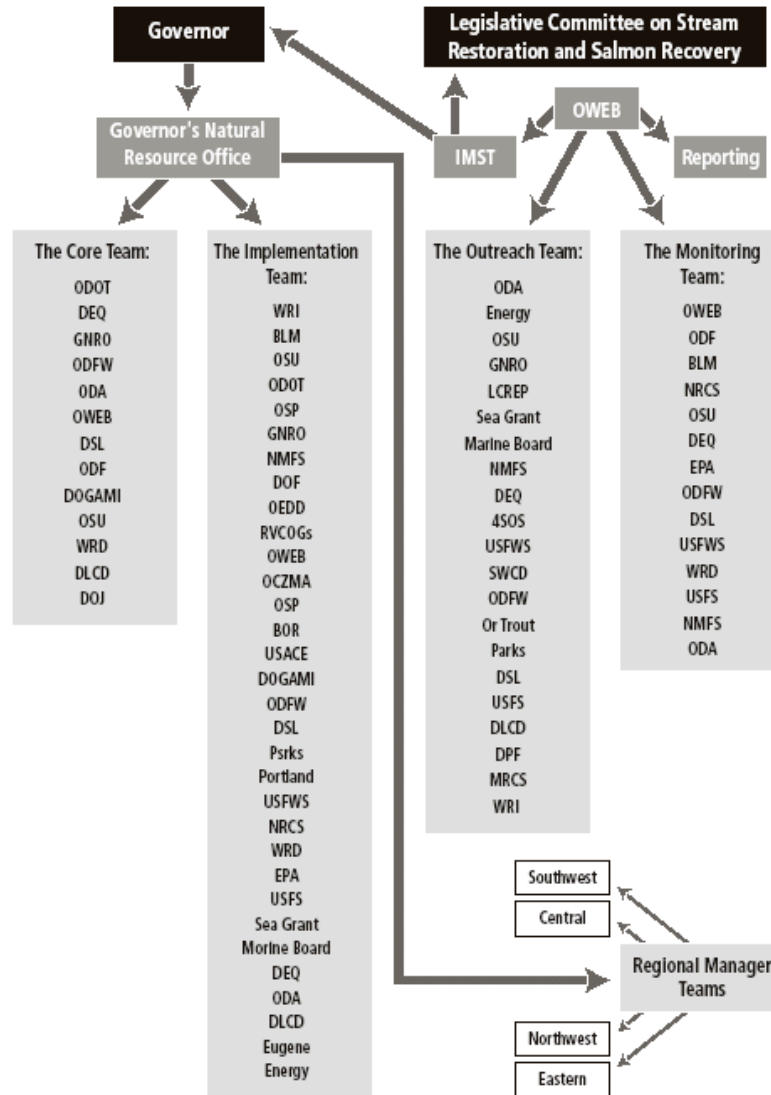


Figure 2. Oregon Plan Functions: Coordination, Monitoring, and Outreach.

Source: Kaush Arha, et al., *The Oregon Plan for Salmon and Watersheds: A Perspective*, (Institute for Natural Resources, INR Policy Paper 2003-03) at 19

### ***Appendix C - Clean Water Act Section 319(h) Grant Funds History***

*All grant totals from 2001 on are after across-the-board government program cuts post-appropriation (i.e. totals are after cuts to the original [sic] Congressional appropriation).*

<b>Federal Fiscal Year</b>	<b>Grant Total (in millions)</b>
1990	\$37
1991	\$51
1992	\$52.5
1993	\$50
1994	\$80
1995	\$100
1996	\$100
1997	\$100
1998	\$105
1999	\$200
2000	\$200
2001	\$237.5 (rounded)
2002	\$237.5 (rounded)
2003	\$238.5 (rounded)
2004	\$237 (rounded)
2005	\$207.3 (rounded)
2006	\$204.3 (rounded)
2007	\$199.3 (rounded)
2008	\$200.9 (rounded)
2009	\$200.9 (rounded)

Source: USEPA, online: USEPA <<http://www.epa.gov/owow/nps/319hhistory.html>>.

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& <<http://www.epa.gov/owow/watershed/watershedcentral/process.html>>.

Watershed Management website of the State Water Resources Control Board, online:  
<[http://www.swrcb.ca.gov/water\\_issues/programs/watershed/](http://www.swrcb.ca.gov/water_issues/programs/watershed/)>.