

● ● ● ● ● **Shared Governance Model and**
● ● ● ● ● **Watershed Management Planning Framework**

WORKSHOP DISCUSSION GUIDE





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Engagement process

The Alberta Water Council has appointed a Project Team to develop a shared governance model and watershed management planning framework to assist *Water for Life* partners in the execution of their duties. This *Workshop Discussion Guide* will frame the engagement process at four invited workshops conducted by the Project Team.

- Edmonton, Tuesday, November 20.
- Slave Lake, Thursday, November 22.
- Lethbridge, Monday, November 26.
- Calgary, Tuesday, November 27.

The *Discussion Guide* was prepared following consultations with key Watershed Planning and Advisory Council *members* in July and August in which they were asked to help identify the key issues facing WPACs and their partners with respect to shared governance and watershed management planning.

The *Discussion Guide* provides background information to enhance understanding among partners about the concepts that underlie the project and will help the Project Team to gather ideas and suggestions on key content to support the development of the shared governance model and the watershed management planning framework.

Water for Life partners and other interested Albertans will also be able to respond to the questions contained in the Discussion Guide by making a written submission to the Project Team. The Discussion Guide may be accessed online at www.albertawatercouncil.ca. Submissions must be received by November 30, 2007.

The Project Team will prepare a summary report based on information collected through the workshop engagement sessions and independent submissions. The Project Team is also gathering information on various shared governance models and watershed management planning methods from other jurisdictions through an international literature review to see what can be learned and applied in Alberta.

Using your input and assessing examples from other jurisdictions, the Project Team will prepare two draft documents – a shared governance model and a watershed management planning framework – by early 2008. The drafts will then be made available for further review and discussion.

A Shared Governance-Watershed Management Planning Forum is planned for early 2008 to support final review of the model and framework documents by *Water for Life* partners prior to their adoption by the Alberta Water Council in 2008.

Torque Communications, an Edmonton-based communications and public relations consulting firm, is providing support to the Project Team for this project.



SECTION 1: Developing a shared governance model

MANAGING ALBERTA'S WATER RESOURCES... A SHARED RESPONSIBILITY

Water is a public resource that belongs to all Albertans. Its wise management is critical to the health and well-being of future generations, human and otherwise. The Government of Alberta's *Water for Life* strategy, adopted in 2003, defines three goals as the basis on which all decisions should be made within the province concerning water use.

1. **Safe, secure drinking water supply.**
2. **Healthy aquatic ecosystems.**
3. **Reliable, quality water supplies for a sustainable economy.**

To achieve these goals, the strategy emphasizes action in three key areas:

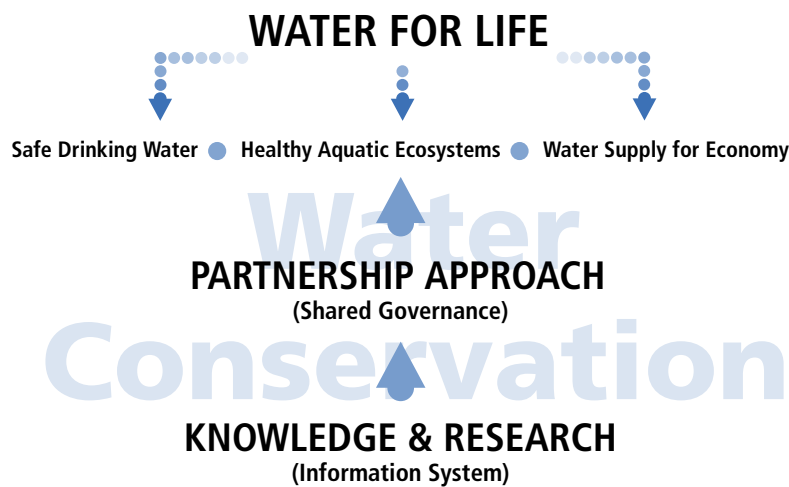
- knowledge and research;
- *partnerships for* watershed management and stewardship (emphasis added); and
- water conservation.

Input received to date from key partners through the *Water for Life* strategy renewal demonstrates Albertans believe the strategy continues to provide a valid structure within which to manage Alberta's water resources.

Figure 1 outlines a conceptual model of the *Water for Life* strategy in action. The aim of the discussion surrounding shared governance is to understand how *Water for Life* partners operate in pursuit of their individual mandates and how they can best work together within this conceptual system to achieve the *Water for Life* goals. Articulating the interactions within this conceptual system will help to develop the shared governance model.



FIGURE 1: WATER FOR LIFE CONCEPTUAL MODEL



Knowledge and research are the foundation for all informed decision-making. Conservation is an overall objective that influences all management decisions. The innovation envisioned by *Water for Life* is that those decisions can and should be made by involving all affected parties so that efforts to achieve the three goals are understood and embraced as widely as possible. The shared governance model will define the “accountability framework” for the three levels of *Water for Life* partnerships, as shown in Figure 2.

Though the *Water for Life* partnerships apply to increasingly discrete elements of Alberta’s total water resource – that is, the Alberta Water Council has a provincial perspective; Watershed Planning and Advisory Councils exist or are proposed for each of the province’s “major river basins” and designated sub-basins; Watershed Stewardship Groups may be created for a local stream, creek or lake. The *Water for Life* partnership relationship among the Alberta Water Council, Watershed Planning and Advisory Councils, and Watershed Stewardship Groups is not intended to be hierarchical. However, what their relationship to one another should be with respect to water management will be explored in the workshops.

¹ The *Water Act* specifies seven “major river basins” in Alberta: Hay, Peace/Slave, Athabasca, Beaver, North Saskatchewan, South Saskatchewan and Milk rivers. Additional WPACs have been designated in response to public demand for Lesser Slave Lake and the Battle, Red Deer, Bow and Oldman sub-basins.

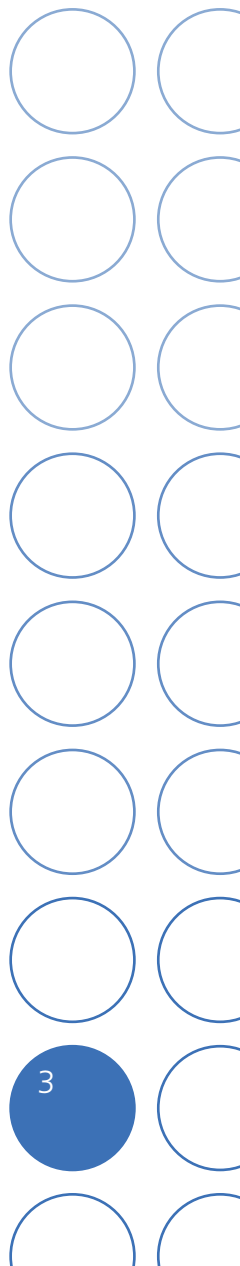
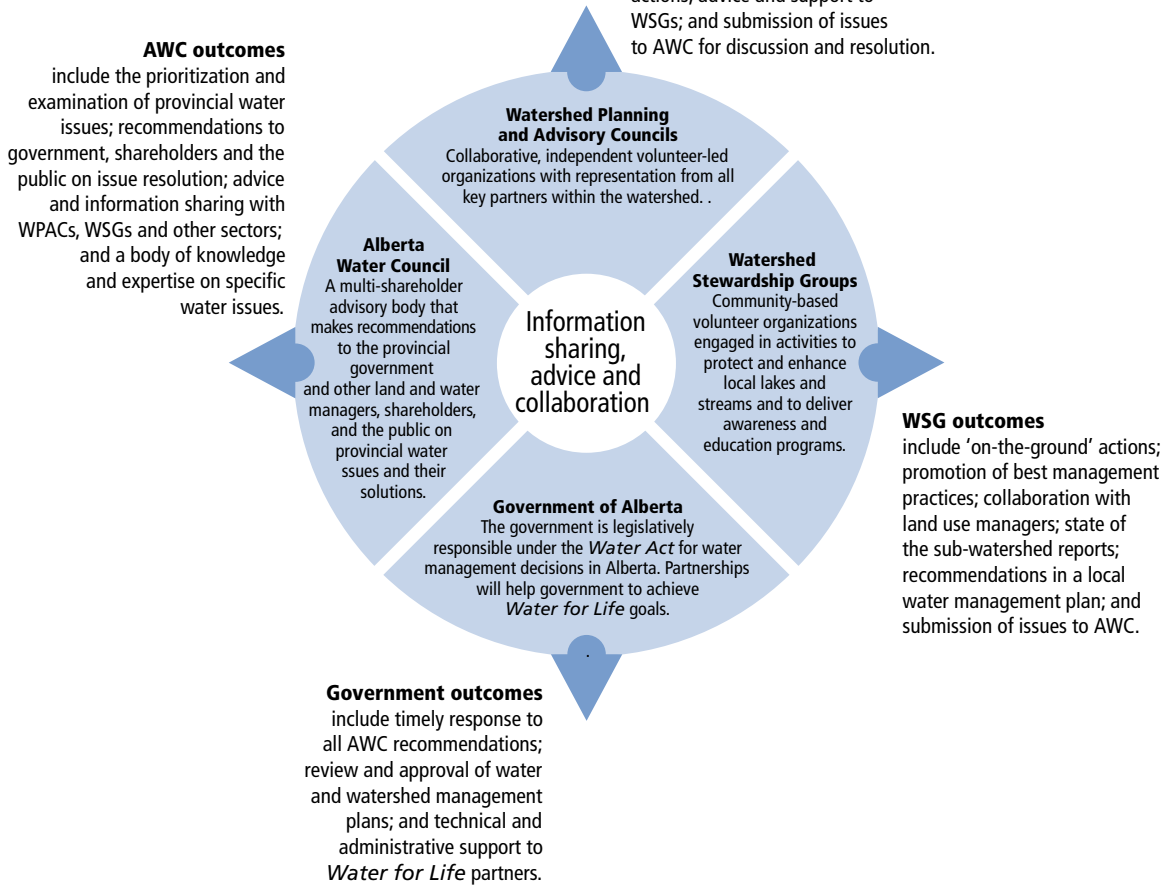


FIGURE 2: WATER FOR LIFE PARTNERSHIPS

Three types of partnerships

work together to make recommendations to the government, shareholders and the public on improving water management throughout Alberta's watersheds



Shared governance refers to a governance structure where the provincial government and external parties – including other orders of government, Aboriginal institutions, industry, and non-government agencies – share responsibility to develop policy and deliver planning, programs or services, but where government retains legislative accountability. Shared governance is a collaborative goal setting and problem-solving process built on trust and communication and requires a clear accountability framework with clear roles, responsibilities and relationships. Government involvement varies with the level of control that is desired and/or the capacity of the external parties to carry out specified functions.

A *Water for Life* partnership is a voluntary organization of the federal, provincial and municipal governments, Aboriginal institutions, industry, non-government agencies, community and/or individual shareholders, that agrees to undertake common or complementary activities, enter into agreements, and work for the orderly, efficient and accountable achievement of results.

The Government of Alberta is connected in different ways to watershed management. Alberta Environment is responsible for managing water quality and quantity and aquatic ecosystems under the *Water Act* and *Environmental Protection and Enhancement Act*. Alberta Sustainable Resource Development manages Crown lands, including the bed and shores of all water bodies, under the *Public Lands Act* and, through its Fish and Wildlife Division, is responsible for fisheries and wildlife management.

Federally, Fisheries and Oceans Canada is responsible for the fish habitat protection provisions of the federal *Fisheries Act* in both coastal and inland waters. And at the local level, municipal governments are responsible for land use planning within their jurisdictions, which may have an impact on watershed both within and outside those jurisdictions. Aboriginal governments continue to evolve their relationships with both the federal and provincial government in traditional territories, which include watersheds.

WATER FOR LIFE PARTNERSHIPS

Alberta Water Council

The AWC is a multi-shareholder advisory body that makes recommendations to the government and other land and water managers, shareholders, and the public on provincial water issues and their solutions.

The AWC consists of representation from 25 major water-use sectors.

Industry: chemical and petrochemical, forestry, irrigation, livestock, mining, oil and gas, power generation.

Non-government organizations: environmental, fishery habitat conservation, lake environment conservation, Watershed Planning and Advisory Councils, wetland conservation.

Government of Alberta and provincial authorities: Alberta Agriculture and Food, Alberta Economic Development Authority, Alberta Energy, Alberta Environment, Alberta Health and Wellness, Alberta Science and Research Authority, Alberta Sustainable Resource Development.

Other government: federal, First Nations, large urban, Métis Settlements, rural, small urban.

The AWC is responsible to provide guidance to government on the implementation of *Water for Life*; identify and prioritize provincial water issues; make recommendations on effective water management and how to resolve water issues; help fill knowledge gaps related to management; and advise government on water policy, best practices and methods to integrate water and land management.

Watershed Planning and Advisory Councils

WPACs are collaborative, independent volunteer-led organizations with representation from all key partners within the watershed. Typically, each WPAC is supported by an Executive Director and a management Board that directs its business. Funding and resources are provided by the Alberta government, municipal governments, industry, non-government agencies and individuals. There are currently eight official WPACs in Alberta.

A **shareholder** is an individual, organization or government with an interest in or engaged in resource and environmental management in Alberta. Involvement can be targeted to specific shareholders or segments of the public or can be more general.

What is their mandate?

WPACs engage governments, shareholders, other partnership organizations and the general public in watershed assessment and planning. They consider existing land and resource management planning processes and decision-making authorities. WPACs are mandated by government to produce two watershed-based deliverables:

1. **state of the watershed reports; and**
2. **watershed management plans.**

What are their roles and responsibilities?

WPACS lead and advocate for the development, implementation and promotion of watershed 'state of' reports and management plans to achieve the three *Water for Life* goals within their designated watersheds. WPACs "build long-term partnerships that examine watershed issues, making recommendations to the appropriate water and land use decision-making authorities, and undertaking actions that benefit Alberta's watersheds" (*Enabling Partnerships*, 10).

Each WPAC could conceivably comprise several hundred members, an elected board, and professional staff that deliver membership services and support active, volunteer-based committees. Volunteer support is critical to the success of any WPAC.

Watershed Stewardship Groups

WSGs are typically community-based volunteer organizations engaged in activities to protect and enhance local lakes and streams and to deliver awareness and education programs. These groups promote knowledge and best management practices to landholders who, in turn, are making changes to the way they operate. These 'on-the-ground' changes improve water quality, fish habitat, riparian zones and wetlands within local watersheds. Some mature WSGs are recognized shareholder groups actively involved in the planning and management of local resources.

Currently there are about 140 WSGs in Alberta and their numbers are increasing. WSGs are eligible to receive federal and provincial grant funding.

What is their mandate?

WSGs are not officially mandated by government to report or deliver specific products. They are recognized as key implementers of various education and awareness activities, and best management practices. Some WSGs are having notable success contributing toward, or developing their own, watershed assessments and management plans. *Enabling Partnerships* suggests that the mandate of WSGs is "to gather the best information available, translating knowledge into actions that improve watershed conditions" (5).

What are their roles and responsibilities?

WSGs are expected to gather and share information, promote and implement various education, awareness and stewardship activities, and encourage best management practices to support the achievement of *Water for Life* goals within the community watershed reach of interest.

Roles and responsibilities

Are the roles and responsibilities assigned to the AWC, WPACs and WSGs appropriate?
What other responsibilities could or should be assigned?

DEFINING RELATIONSHIPS AMONG AWC, WPACS AND WSGS

Water for Life identifies the above groups as partnerships that “work together to make recommendations to the government and the public on improving water management throughout Alberta’s watersheds” (17). Although the relationship between partnerships is not hierarchical, there should be a means for the different partnerships to be accountable to one another since their combined efforts are required to realize the *Water for Life* goals.

Relationships and accountability

What type of relationship between the AWC and WPACs will best support the achievement of *Water for Life* goals?

What should be the relationship between WPACs and WSGs?

What should be the relationship between AWC and WSGs?

How should partnerships be held accountable to one another to achieve outcomes they themselves have defined?

PARTNERSHIPS DEPEND UPON COMMITTED PARTNERS

Both questions above refer to the roles and responsibilities of the partnerships and the relationships among them. However, the fundamental principle of *Water for Life* – and the necessary corollary for all levels of partnership – is that shareholders, *partners*, will actively participate in water management by sharing the responsibility to develop and implement watershed management plans. This participation may be multi-faceted. Obviously, it begins with being present at the table to contribute to decision-making. However, it should also be determined if individuals participate solely to represent the viewpoint of their parent organization or if they have other obligations. Perhaps parent organizations or their appointees might provide expertise, information, and funding contributions to enhance the capacity to exercise planning decisions. It is possible that different partners may have different roles – or it might be better if they adhere to common guidelines.

Partner commitments

What is the nature of your commitment as an AWC, WPAC or WSG partner that will enable these partnerships to fulfill their mandates? What is your role? For what should you be responsible? To whom are you accountable? That is, what does it mean to be a partner...

... as an individual?

... as, or on behalf of, a parent organization?

Although the goal of *Water for Life* is to bring together all shareholders in joint decision-making, the Government of Alberta has a unique role among partners because it has well-defined legislative responsibilities under the *Water Act*. Government has said it will support partnerships by: delineating watershed boundaries; formally recognizing WPACs; providing administrative, financial and technical support; working with federal, provincial and non-governmental agencies to help partnerships define and deliver their objectives; reviewing and responding to AWC, WPAC and WSG recommendations; and developing a provincial Water Information Centre to support data collection, public education and state of watershed reporting.

Government’s role

What should government do to help partnerships and partners to meet their commitments?

SHARED GOVERNANCE BASED ON CONSENSUS DECISION-MAKING

Consensus decision-making seeks not only the agreement of most participants but also to resolve or mitigate the objections of the minority to achieve the most agreeable decision. A healthy consensus decision-making process usually encourages and addresses dissent early, maximizing the chance to accommodate the views of all minorities.

The AWC has chosen consensus decision-making as its model for negotiation. It is a core value of the organization and foundational to its effective functioning. Each partner holds equal decision-making weight. This is particularly important where so many varied sectors gather to analyze and address water issues. Consensus decision-making fosters a collaborative process in which issue resolution is most likely to satisfy the social, economic, and environmental interests of participating partners. Each partner has an equal opportunity – and responsibility – to speak and to influence the shape of the solution.

Consensus decision-making strives for unanimity, seeking to maximize opportunities to resolve differences and reach agreement. Consensus decision-making reaches beyond the *position* of partners to understand their underlying *interests*. Assigning value to these interests enables

partners to create a solution that satisfies all or most of them. Every *consensus* decision is endorsed by all partners, or at least not rejected outright by any partner. It is possible that some partners may not agree with all aspects of an agreement but consensus is achieved when they are willing to support the overall solution. The process can also strengthen relationships within partnerships because it fosters understanding, respect, trust, creativity and innovation. Consensus decision-making “generates solutions that are fairer, more efficient, better informed, and more stable than those arrived at by conventional means.”²

The greatest challenge to consensus decision-making emerges when partners do not engage or when they settle for the lowest common denominator rather than collaborating to achieve the highest common factor in any solution. Just as it is not ‘rule by the majority,’ consensus decision-making should not be reduced to the ability of one or a few to withhold a solution. All partners must be committed to progress.

Implementing consensus decisions

What should be the duty of partnership members and their sponsoring organizations to carry out the consensus decisions of the group – AWC, WPAC or WSG – at the table?

In the absence of consensus

The AWC is committed to consensus decision-making as the basis for shared governance. However, there may be instances in which consensus cannot be achieved in a timely fashion, or perhaps not at all. How should *Water for Life* partners proceed when consensus cannot be reached?

ENSURING PARTICIPATION

As stated above, consensus decision-making is entirely dependent upon the meaningful participation of partners in the decision-making process. Shared governance requires that all shareholders with the authority to make land use decisions that could affect watershed management be represented at the table when watershed management decisions are being made.

For example, forestry operations are subject to the *Forests Act* and the *Public Lands Act*, which are administered by Alberta Sustainable Resource Development, as well as decisions of the Natural Resources Conservation Board.

²The *Consensus Building Handbook* quoted in “Strengthening Consensus.” See Section 5: References.

Oil and gas companies are regulated by Alberta Environment, Alberta Energy and the Energy and Utilities Board. Agriculture is governed through an intersection of agencies that includes Alberta Agriculture and Food, Alberta Environment, Alberta Sustainable Resource Development and the Natural Resources Conservation Board. Municipal land use bylaws are subject to the *Municipal Government Act*, administered by Alberta Municipal Affairs, and water/wastewater operations are licensed by Alberta Environment. First Nations and Métis Settlements have responsibility for the management of reserve and settlement lands, respectively. And, as noted above, Fisheries and Oceans Canada is responsible for the fish habitat protection in both coastal and inland waters.

All these activities pre-date the *Water for Life* strategy and the creation of the AWC. Accordingly, some of these organizations may not yet appreciate the intent of the strategy or the benefits of their participation in shared governance.

At the same time, it must be noted that many of the individuals and organizations alluded to above have embraced the *Water for Life* strategy and are well represented on WPACs and WSGs.

It is also possible that the absence of certain sectors in a WPAC could result in management decisions being unduly influenced by those partners at the table with specific interests.

Ensuring participation

Since shared governance depends on a consensus-based partnership approach to achieve *Water for Life* goals, what should WPACs do if a key shareholder/partner is not represented?

How can WPACs ensure balanced participation from all sectors?



SECTION 2:

Developing a watershed management planning framework

A watershed management plan is a comprehensive document that provides assessment and management information for a geographically defined watershed, including the analysis, actions, participants, and resources related to development and implementation of the plan. It may or may not include a water management plan.

Watershed management plans should address water quality, point and non-point source pollution, source water protection, storm water and wastewater management, subsurface water supplies and a variety of land use activities as they impact water. They will have implications for downstream users and Alberta's legislated trans-boundary requirements. A watershed management plan recognizes and addresses the integration of land use and watershed management outcomes at the watershed scale.

The AWC has directed that *Water for Life* partnerships help to meet strategy goals through the development and implementation of watershed management plans using consensus decision-making, outcome-based planning and adaptive management, and collaborative service delivery. It is through these partnerships that watershed planning – how – and shared governance – who – meet.

Watershed management plans should help WPACs to articulate their efforts to achieve *Water for Life* goals, including efforts to influence land use planning that might affect the achievement of those goals. A watershed management planning framework should help WPACs and WSGs to define the scope of their inquiry in support of a watershed management plan. This will have two aspects: the first is related to content, and the second is related to process.

The evolution of environmental management and ecology has demonstrated the fundamental link between water, watersheds and land use. The Alberta government is currently engaging the public in support of a new Land Use Framework which, it can be anticipated, will overlap with efforts to develop a shared governance model and watershed management planning framework. How that overlap will be addressed and reconciled by government is not yet clear. However, the intersection of water, watersheds and land use suggests that those who are immediately affected by water issues might more effectively identify solutions to those issues.

Water, as distinct from watershed, management systems in Alberta were first designed when human demands for water were less significant and the understanding of ecological processes less sophisticated. Alberta's dramatic economic and population growth are placing greater and greater demands on our water. Concurrently, aquatic eco-systems are degrading and water scarcity has become a concern in some regions,

even as demand for water to support economic development has generally increased. This is the impetus behind the development of the shared governance model that involves all water uses in decisions about how best to manage the resource to balance water management, ecosystem health and economic development with an eye to resource sustainability and future generations.

CURRENT PRACTICE

Alberta's *Water Act* includes provisions for the government (or its designates) to create, coordinate, authorize and approve water management plans³; issue approvals, licences and allocations; create Crown Reservations; and to conduct monitoring and enforcement activities, and numerous other responsibilities.

With respect to water management plans, Section 9 of the Act states as follows.

9(1) The Minister may require a water management plan to be developed by the Director or another person.

(2) The Director or other person developing a water management plan

- (a) may adopt an integrated approach to planning with respect to water, land and other resources;
- (b) may cooperate with
 - (i) any persons,
 - (ii) local authorities,
 - (iii) Government agencies and other Government departments, and
 - (iv) the governments and government agencies of other jurisdictions;
- (c) may, with the consent of the Minister, carry out any studies

that the Director or other person considers appropriate;

- (d) may consider any information, documents or other water and land management plans;
- (e) must follow the framework for water management planning established under this Division [the existing *Framework for Water Management Planning*];
- (f) must engage in public consultation that the Minister considers appropriate during the development of the water management plan.

With respect to water management plans, "other person" has, in the past, been interpreted as a WPAC. Water management plans, as distinct from watershed management plans, provide broad guidance for water management, set out clear and strategic directions regarding how water should be managed, and can result in specific actions.

A water management plan can either be "authorized" by the Director within Alberta Environment⁴ responsible for water management in the region or "approved," which requires an order issued by Cabinet or the Minister, if authorized by Cabinet to do so. An *approved* water management plan is required:

- to permit the Director to consider applications for transfers of licenced water allocations under Section 82 of the *Water Act*;
- to permit the Director to consider withholding up to 10 percent of a transferred allocation under Section 83 of the *Water Act*; or
- to require the Director to consider matters and factors contained in the plan when deciding on an application for an approval, licence or water allocation transfer.

³Section 2.2, *Framework for Water Management Planning*.

⁴For water management purposes, the province is divided into three regions: southern, central and northern.

The government twice issues consent in the development of an authorized or approved water management plan, and water conservation objectives. First, the responsible Director sanctions the terms of reference to guide the planning process; second, government endorses the outcome of the planning process by *authorizing* – at the Director level – or *approving* – through Cabinet – a plan. The Director may establish water conservation objectives, with public consultation, whether or not a plan is in place.

The Act requires that an *approval* and/or *licence* be obtained before undertaking a construction activity in a water body, or before diverting and using surface water or groundwater. An approval provides authority to construct works or undertake a construction project or 'activity' *within* a waterbody, including riparian areas. The approval includes conditions under which the construction or 'activity' may take place. A licence provides authority to divert and use surface water or groundwater. The licence identifies the source of the water supply, the location of the diversion site, an allocation of water to be diverted and used from that source, the priority of the "water right" established by the licence, and conditions under which the diversion and use must take place.

Section 51 (4)(a) of the Act states that in cases in which an *approved* water management plan exists, the Director *must* "consider, with respect to the applicable area of the Province, the matters and factors that *must* be considered in issuing a licence, as specified in an applicable approved water management plan"; and *may* consider the same for an authorized water management plan. In situations in which discretionary power is granted the Director – "may consider" – he or she would have to have very compelling reasons not to comply with the recommendations of even an authorized water management plan.

Finally, as specified above in Section 9 of the Act, it should be noted that all river basin plans developed to date or being developed are based on the existing *Framework for Water Management Planning* and are not necessarily comprehensive *watershed* management plans in that they do not address land use. As such, water management plans might be considered planning complements to watershed management plans. Though they have a narrower focus on water quality and quantity issues, water management plans will continue to be a useful management tool. Watershed management plans, on the other hand, will be required to address associated land use issues with a wider group of shareholders through the partnership process.

MOVING FROM WATER TO WATERSHEDS

WATERSHED

An area of land that catches precipitation and drains it to a common point such as a marsh, lake, stream or river and recharges groundwater. A watershed can be made up of several sub-watersheds that contribute to the overall drainage of the watershed.

The shared governance model opens the door to other government, non-government organizations or shareholder groups to become involved in the development of *watershed* management plans. For example, a lake management society could initiate a watershed management plan. This plan would be created in collaboration with governments and other shareholders/partners, ensuring through the review and authorization of the terms of reference by the Province that the proposed scope of planning, level of shareholder involvement and objectives are sufficient to achieve the intended results and are consistent with *Water for Life*.

Watershed management planning advocates sustainable water management by addressing the challenges of integrated resource management at the watershed scale in pursuit of *Water for Life* goals. Because land use activities on the uplands of a watershed can affect ground and surface water quality and quantity, a broader, more comprehensive approach to planning is proposed in which watershed management planning complements, and is complemented by, other natural resource management plans and municipal development plans, all of which should ensure healthy environmental and economic management of public and private resources. The complex interconnections between water and almost every other major resource issue of the day – including energy development and conservation,

agriculture, climate change, economic development and environmental health – puts watersheds at the centre of most environmental decision-making. A watershed management plan may look at water quantity, water quality, groundwater, aquatic ecosystems, riparian areas, as well as a variety of land use issues (oil and gas, industrial development, agriculture, forestry, etc.) as they affect water and make recommendations to address those effects. Successful implementation of watershed management plans will require they be endorsed by all partners, and that both water and land use managers work together as they discharge their duties to ensure healthy watersheds.

Goals of a watershed management plan

It is stated above that watershed management plans should help WPACs to articulate their efforts to achieve *Water for Life* goals, including efforts to influence land use planning that might affect the achievement of those goals.

It has also been suggested that these plans should focus on factors that effect water quality, quantity and the maintenance and protection of healthy aquatic ecosystems.

Is this an appropriate scope for watershed management plans?

POSSIBLE COMPONENTS OF A WATERSHED MANAGEMENT PLAN

Many WPACs and WSGs have either completed or are working on state of the watershed (SOW) reports, which, among other things, could provide the foundation for watershed management plans. However, there is no existing template or guide for the completion of a SOW report. Alberta Environment anticipates a handbook will be available in mid-2008. In the meantime, research of existing practices in other jurisdictions has led to a preliminary list of considerations for inclusion in SOW reports. These include the following but are also not necessarily limited to those listed.

PHYSIOGRAPHY

- Watershed delineation.
- Geography and hydrology.
- Ecosystems and biodiversity (plants and animals).
- Climate, meteorological data, climate change.
- Soils.
- Landforms.
- Groundwater.
- Air quality.
- Water allocations and water conservation objectives.

SOCIAL CHARACTERISTICS OF THE WATERSHED/HUMAN GEOGRAPHY

- History and demographics.
- Health hazards.
- Municipalities, water/wastewater treatment, transportation and utilities.
- Economics, land uses, agriculture, forestry, oil and gas, mining, etc.

AGREEMENTS AND LEGISLATION

- All relevant legislation.
- Treaty/First Nations agreements.
- International, inter-provincial and national parks.
- Water allocations and water conservation objectives.

WATERSHED AND WATER PLANNING

- Philosophy and methodology.
- Previous plans.
- Other relevant plans.

OTHER GROUPS AND PARTNERSHIPS

- AWC, WPACs, WSGs.
- Other NGOs.
- Community engagement.

ASSESSMENT INDICATORS

- Water quality and quantity.
- In-stream flow needs.
- Aquatic ecosystem health.
- Land habitat health: upland cover, riparian health and wetlands.
- Human health and safety.
- Knowledge appreciation.

KNOWLEDGE GAPS

SPECIFIC PROBLEM AREAS

- Contributing factors, recommendations, indicators, forecast.

Addressing the items above is intended to capture a 'snapshot' of the state of a watershed – in effect, providing baseline data for subsequent management efforts. At the same time, some WPACs or WSGs may wish to move directly to the development of a watershed management plan in order to deal with immediately pressing issues. It is possible that a SOW report might be completed *after* the first version of a watershed management plan. Also, planning might proceed in 'modules,' addressing specific issues of known concern as new data are collected and research is conducted. This information might be assembled through a SOW report in support of a watershed management plan or ongoing WPAC activity.

Components for watershed management planning

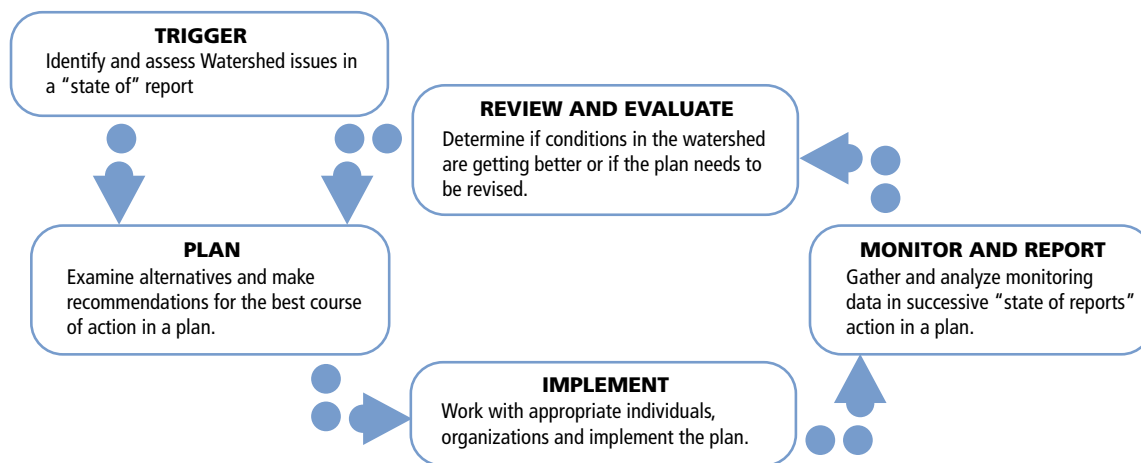
In addition to those elements identified above, what else might be required to develop a watershed management plan?

In its first iteration, a watershed management plan might not include all these elements. Is it appropriate for watershed management plans to be developed incrementally or should they be comprehensive from the start?

USING ADAPTIVE MANAGEMENT IN WATERSHED MANAGEMENT

The AWC and Alberta government currently require WPACs to follow an adaptive management cycle that includes developing, implementing, assessing, and updating watershed management plans as described in the five-step process contained in the *Framework for Water Management Planning* (see Figure 3).

FIGURE 3: AN ADAPTIVE-MANAGEMENT APPROACH TO WATERSHEDS



Adaptive management is best implemented by engaging policy- and decision-makers and other shareholders who have the capacity and authority to commit resources and technical personnel, and who can help identify scientific issues and evaluate monitoring data. Watershed management plans that rely on adaptive management require a long-term commitment of resources to ensure success. Financial, technical, and other human resource requirements need to be defined, along with the specific responsibilities of each party.

Adaptive management is a challenging blend of scientific research, monitoring, and practical management techniques that enables experimentation and provides the opportunity to 'learn by doing.' It is a useful tool because of evolving knowledge about how ecosystems function and how human activity affects ecosystems.

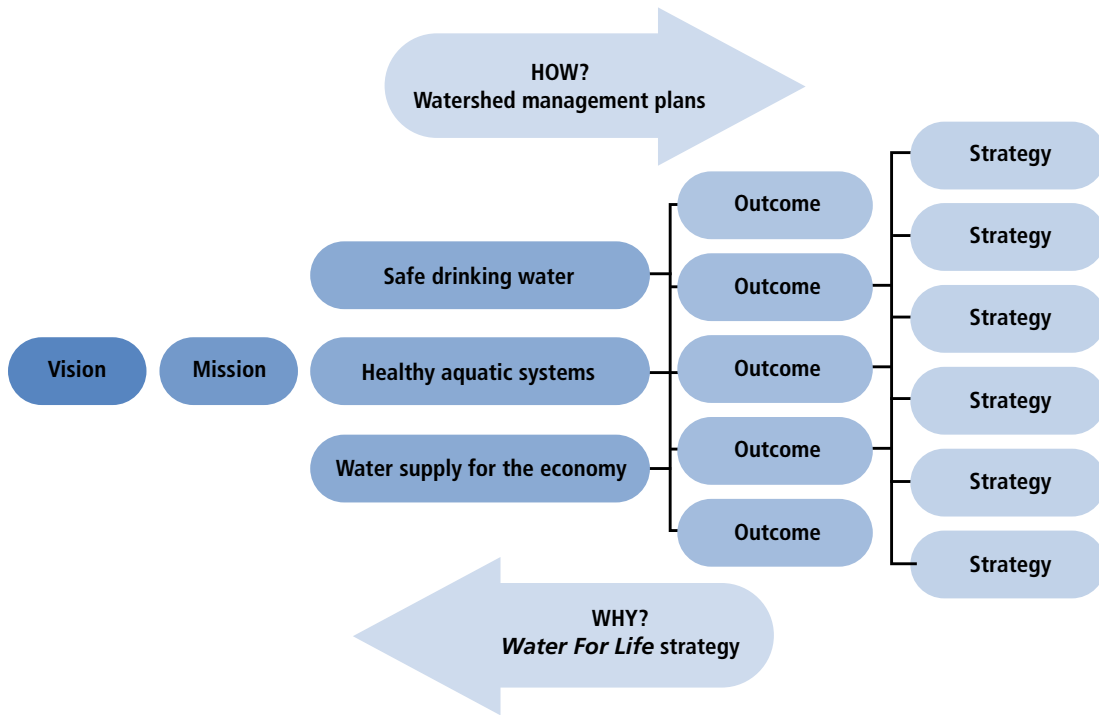
Outcome-based planning

Outcome-based planning is an effective contributor to the effectiveness of adaptive management. Focusing on outcomes means that strategies, actions and even performance measures can be adjusted if they are found not to contribute to the achievement of a particular outcome. This enables evolutionary or incremental change in response to a growing body of knowledge.

Outcome-based planning can be distinguished from *output*-based planning methodologies in the sense that output-based planning tends to measure *activity* (that may or may not be effective); outcome-based planning ensures that multiple shareholders are aligned on mutually agreed-upon *results*, such that all actions are measured against their effectiveness to achieve those results.

Goals, outcomes and the strategies employed to achieve those outcomes do not necessarily have a linear relationship: that is, one or more outcomes may correspond to one or more goals and one or more strategies may contribute to one or more outcomes. More important is to have broad agreement on what those outcomes should be and clearly defined performance measures or indicators that can demonstrate progress toward achieving those outcomes.

FIGURE 4: OUTCOME-BASED PLANNING LOGIC MODEL



Outcome-based planning requires involving partners in the expression, at minimum, of outcomes, strategies and appropriate performance measures, all of which become elements in the review and evaluation process of adaptive management. Focusing on outcomes ensures that multiple stakeholders remain aligned on progress toward the overall vision and goals rather than justifying their individual or collective actions. In this, outcome-based planning resembles the effort to reconcile competing interests over the defense of a particular position that is the ideal in consensus decision-making. In some cases – such as the water conservation objectives to restore flow within the Bow and Oldman river basins – outcomes may simply define the direction without being explicit – *i.e.*, how much restoration is required – until such time as targets can be set based on science.

Outcome-based adaptive management in this sphere should enable partners to align in support of outcomes and strategies to achieve the three key *Water for Life* goals. There is little doubt that local solutions, focused in a geographic region and applied by those most immediately affected by water issues, will lead to direct and effective watershed management. These efforts should also be coordinated across Alberta, such that intersecting interests are accommodated as far as is reasonable and best practices shared at the regional and provincial scales.

Outcomes

What kinds of outcomes are appropriate within a watershed management plan? Using the *Water for Life* goals as a starting point, should outcomes relate to water quality and healthy aquatic ecosystems? What else is appropriate?

Monitoring

How should monitoring be conducted in connection with defined outcomes and performance measures?
How is this information best used by WPACs/WSGs to review and evaluate the achievement of planned outcomes?

Knowledge and research

Advances in our knowledge through research and more current information ought to improve watershed management along multiple vectors – pollution control or remediation, ecosystem management, environmental factors, *etc.* How can we continue to build our knowledge base and best disseminate research findings among *Water for Life* partners to improve watershed management and the achievement of planned outcomes?

DEFINING THE ROLE OF THE PARTNERS IN WATERSHED MANAGEMENT PLANNING

According to the *Water Act*, water management plans may be created for lakes, rivers, streams wetlands or smaller bodies using the *Framework for Water Management Planning*. Watersheds, obviously, include the surrounding land areas that drain into a specified waterbody. WPACs have been charged to develop watershed management plans. The shared governance model requires that they work not only with their member partners but with WSGs and, in some cases, other shareholders that may not be represented on the WPAC. WSGs may also develop watershed management plans for tributaries to or smaller sub-basins of a major watershed

As stated in the Act and the *Framework for Water Management Planning*, the provincial government works cooperatively through the office of the appropriate regional Director to develop water management plans by 1) authorizing the terms of reference to be used in the creation of the plan, and 2) authorizing the final “outcomes” or, effectively, the plan itself. Depending on recommendations related to water allocations under Section 82, a plan may be “approved” by Cabinet, which gives it greater legislative weight. If it is the goal for a plan to have “approved” status, that must be identified in the planning stages.

However, a *watershed* management plan applies to lands and land use over which a Director has no jurisdiction. Even the provincial government has limited legislative authority with respect to some land uses within the municipal sphere. Accordingly, it will be necessary for WPACs to somehow engage municipal councils in the early planning stages to ensure that they, too, are prepared to endorse a completed watershed management plan, especially if it is expected to have status similar to an ‘approved’ water management plan.

Defining the role of the Alberta government

Is the current level of involvement of the provincial government in the development of a water management plan appropriate for the transition to watershed management planning?

What is appropriate timing for government to “authorize” or “approve” a watershed management plan that has been endorsed by the partnership?

Defining the role of municipalities

What should be the role of municipal councils in the development and implementation of watershed management plans?

What should a WPAC or WSG do to ensure that the municipalities responsible for regulating land use within the watershed contribute to the recommendations in the plan and then implement them?

***Water for Life* partnerships**

What should be the role of a WSG in the development of a watershed management plan?

What should be the role of AWC in the development of watershed management plans?

The *Water Act* states that anyone creating a water management plan “must engage in public consultation that the Minister considers appropriate.” This authority is effectively conferred upon the Director who approves a terms of reference. When making the transition to *watershed* management plans, the relevant authorities for land use planning will have similar jurisdiction.

Engaging partners and the public-at-large

Given that WPACs could have dozens of member partners all involved in the shared governance model, when and how should partners be engaged?

How can WPACs work with other authorities to determine ‘appropriate public consultation’ to support the development of a watershed management plan?

Timing

What is the appropriate timing for a partnership to endorse a watershed management plan and its associated recommendations?

Resourcing

What is the cost to develop and implement a watershed management plan and how should it be funded?

IMPLEMENTATION OF WATERSHED MANAGEMENT PLANS

Existing *water* management plans and other water management tools are currently administered under the *Water Act* and associated regulations. In each case, plans *may* be considered by the Director(s) responsible for water management in a particular area of the province when making management decisions, except in cases where an approved water management plan must be consulted as described above. It is not clear, however, how an ‘approved’ watershed management plan might be implemented, given the intersecting jurisdiction of the province and municipalities. Municipalities already have legislative authority within a defined sphere and are subject to an existing legislative backstop associated with the execution of their business. Industry, likewise, is often regulated through statutory resource management plans.

If *watershed* management plans are strictly advisory, then *Water for Life* partners would be accountable to one another for voluntary compliance to achieve mutually endorsed outcomes arising out of the consensus decision-making process. If plans are expected to be mandatory, then some other mechanism must be invoked or created to assign statutory weight to watershed management plans that help to ensure compliance. Whatever these mechanisms might be must be reconciled to existing legislation.

Authority of watershed management plans

What type of authority is needed to implement watershed management plans? Should they be mandatory, *i.e.*, backed with legislative force, or should they be advisory? Some combination of the two? How can WPACs/WSGs be assured that their efforts have value?

Under the *Water Act*, implementation of a water management plan has mostly to do with the issuance of licences or approvals consistent with the recommendations of a water management plan and enforcement activity required to support those recommendations related to dispute resolution, the removal of offending works, appeals, water management orders, inspections, investigation, penalties, civil matters, water conservation objectives, Crown reservations, *etc.* (Sections 93-159). A watershed management plan might make explicit recommendations related to the above, which a Director is expected at the least to consult, but a plan endorsed by a WPAC might also include outcomes and strategies that are not explicitly linked to legislation.

Accountability of *Water for Life* partners for implementation

How should responsibility and accountability for the implementation of watershed management plans – actions and outcomes – be distributed among *Water for Life* partners within a WPAC? Is there a special role for the provincial government?

If a WPAC partner has endorsed a watershed management plan but is not meeting its obligation to achieve the outcomes of the plan, how can the WPAC best work to resolve the discrepancy and help that partner to honour its commitment?

Should WPACs have a role with respect to legislated enforcement activity?

INTEGRATION WITH OTHER RESOURCE PLANNING AND MANAGEMENT ACTIVITIES

A watershed is an appropriate scale for water management; it is a fundamental ecological unit for both the protection and conservation of water quality and quantity, and both water sources and water uses most often originate from within the same watershed. As such, the management of water resources within a watershed is inextricably entwined with land uses. Currently, land and water management occur separately through a multi-jurisdictional system that operates at different levels and involves municipal and provincial authorities and individual landowners.

Related activities with the potential to influence watershed management outside the legislated scope of the *Water Act* could have an impact on efforts to achieve *Water for Life* goals. The *Framework for Water Management Planning*

recognizes the linkages between water management planning and planning that occurs for other resources. It is critical that water management planning and decision-making be integrated with other planning initiatives and decision-making for other resources such as forests, fish, wildlife, petroleum, minerals and public and private lands.

The reverse should also be true.

Areas in which the management of resources is addressed outside the *Water Act* and which may support the development of watershed management plans include the following. This brief list helps to illustrate the challenges related to implementing watershed management plans.

- The environmental assessment process, as set out in the *Environmental Protection and Enhancement Act*, provides a means to review large-scale resource development projects to assess their environmental impacts.
- Some projects are subject to review by agencies such as the Energy and Utilities Board or the Natural Resources Conservation Board to determine if the project is in the public interest. Land use planning done within a municipality is another activity outside the *Water Act* that can affect watershed management.
- Most forestry related activities on public lands are governed by a system of progressively more detailed plans including Forest Management Plans, General Development Plans, and Annual Operating Plans. Many of these plans are developed by industry and all are approved by government.

There are other governmental activities also underway with the potential to influence watershed planning and management. In addition to this project, the Alberta Water Council is consulting with shareholders on a new provincial wetlands policy and Sustainable Resource Development is consulting Albertans on a new provincial Land Use Framework.

Existing processes and mechanisms to integrate land and water management activities are limited. Effective watershed management will require better integration of other mandated air, land and natural resource management planning with watershed planning processes.

Integrating resource management plans

Where and how do you think linkages between watershed planning and other planning processes should be enhanced?

How should the goals and objectives of watershed management plans influence other management plans?
And *vice versa*?



References

The following documents are available online to persons who wish to do additional research into the *Water for Life* strategy, shared governance and watershed management planning.

Several relevant documents are available from the *Water for Life* homepage at www.waterforlife.gov.ab.ca, including the following.

- *Water for Life: Alberta's Strategy for Sustainability.*
- *Enabling Partnerships: A Framework in Support of Water for Life.*
- *Report on Implementation Progress of Water for Life 2004-2005.*
- *Report of the Rosenberg International Forum on Water Policy to the Ministry of Environment, Province of Alberta.*

Other relevant documents published by the Alberta Water Council available online include the following.

- Alberta Water Council *Annual Report 2005-2006*. Available at www.waterforlife.gov.ab.ca/awc
- *Water for Life: Facts and information about water in Alberta 2002*. Available at www.waterforlife.gov.ab.ca/html/information

Online documents relevant to this initiative published by Alberta Environment are available at www3.gov.ab.ca/env/water/management and include the following.

- Alberta Water Management and Erosion Control Program.
- Athabasca River Water Management Framework.
- Battle River Basin Water Management Plan.
- Cold Lake Beaver River Basin Water Management Plan.
- *Framework for Water Management Planning.*
- Lesser Slave Basins Water Management Plan – Phase One.
- South Saskatchewan River Basin Water Management Plan.
- Water Conservation Objectives.

For more information about consensus decision-making, consult the following online documents.

- The Canadian Council of Ministers of the Environment has electronically published excellent information about consensus decision-making, including "Strengthening Consensus" at www.ccme.ca/about/consensus.html
- "Defining Consensus," Alberta Water Council. Is this document available online?

For a modest sample of international approaches water/watershed management, many of which embrace the concept of decentralized decision-making or 'shared governance,' visit the websites listed below.

- National Water Initiative. Australian Government, Department of the Prime Minister and Cabinet. www.pmc.gov.au/water_reform/nwi.cfm
- National Water Resource Strategy. Government of South Africa, Department of Water Affairs and Forestry. www.dwaf.gov.za/Documents/Policies/NWRS/Default.htm
- California Water Plan Update 2005. State of California, Department of Water Resources. www.waterplan.water.ca.gov/strategies
- The EU Water Framework Directive. http://ec.europa.eu/environment/water/water-framework/index_en.html



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