

APPROVED

Terms of Reference

Phase Two

**Water Management Plan
for the
South Saskatchewan River Basin**

*Finding the Balance Between
Water Consumption and Environmental Protection
in the South Saskatchewan River Basin*

Alberta Environment
June 2003

Statement of Approval

These terms of reference for Phase Two of the Water Management Plan for the South Saskatchewan River Basin (SSRB) are approved by the Alberta Environment *Water Act* Directors responsible for water management in the basin, with the endorsement of the Steering Committee responsible for the SSRB water management plan.

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the Directors, as above, and:

- Ian Dyson, Head, Environmental Management, Southern Region, Alberta Environment; and, Chair, Steering Committee for the SSRB Water Management Plan
- Brent Paterson, Head, Irrigation Branch, Alberta Agriculture, Food and Rural Development
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1. Introduction

The key goal of Phase Two of the water management plan for the South Saskatchewan River Basin (SSRB) is to develop a strategy that best balances water consumption and environmental protection.

The planning process is a cooperative and integrated initiative of Alberta Environment, Alberta Sustainable Resource Development (Fish and Wildlife Division), and Alberta Agriculture, Food and Rural Development (Irrigation Branch). Other provincial government departments and agencies will be consulted.

The SSRB water management plan is being prepared in phases. Phase One, authorizing water allocation transfers, is approved. Phase Two will be carried out in two stages:

a) The first stage will be devoted to enhancing the understanding of the challenges being faced in water management in the SSRB, and to collecting information to assist in the planning process.

b) The second stage will focus on:

- evaluating the information collected
- consulting with the BACs and general public
- generating options and recommendations for updating the existing 1990 SSRB Water Management Policy and the SSRB Water Allocation Regulation
- developing a strategy that best balances water consumption and environmental protection in the SSRB. This will include water conservation objectives (a flexible tool provided by the Water Act - see definition) and other mechanisms. Development of the strategy will involve consideration of ecological requirements, economic values and social values.

Water Conservation Objective (WCO) - From the *Water Act*: “water conservation objective” means the amount and quality of water established by the Director under Part 2, based on information available to the Director, to be necessary for the

- (i) protection of a natural water body or its aquatic environment, or any part of them,
- (ii) protection of tourism, recreational, transportation or waste assimilation uses of water, or
- (iii) management of fish or wildlife,

and may include water necessary for the rate of flow of water or water level requirements.

Due to water allocation commitments there may be limited ability to make adjustments to water management in some river reaches.

When Phase Two is complete it will be melded with the Phase One Approved Water Management Plan and the new expanded plan will become the Approved Water Management Plan.

Phase Two of the SSRB Water Management Plan deals only with surface water. Water drawn from wells that are hydraulically connected to a water body (river, stream, lake, etc.) is considered to be surface water for allocation purposes.

Phase Two will focus on:

- water quantities (flows, volumes and timing) for allocations and for the aquatic environment
- river flows required to result in water quality necessary for the aquatic environment

To assist the reader, definitions of terms used in water management planning in the SSRB will be available on the Alberta Environment website. The address is:

<http://www3.gov.ab.ca/env/water/regions/ssrb/>.

Licences to withdraw water under the *Water Act* that are in good standing will be respected during the planning process. This means:

- a) Water conservation objectives will not be retroactively imposed on existing licences, unless provision to do so is a condition of a licence or the licensee agrees with the change.
- b) Licences will not be summarily cancelled for the sole purpose of accomplishing plan outcomes. (In accordance with normal procedures as described in the *Water Act*, licences may be subject to cancellation under some conditions.)

2. Objectives of Phase 2

The main objectives of Phase Two are to:

- a) Educate the public on the status of water management in the SSRB.
- b) Review and update the existing 1990 Water Management Policy for the SSRB and the 1991 SSRB Water Allocation Regulation. It may be concluded that some of the policies would best be addressed in future phases of the plan.
- c) Develop a strategy that best balances water consumption and environmental protection in the SSRB. The strategy will include:
 - i) An overview of the current status of the aquatic environment (including riparian vegetation) condition in the regulated river reaches.
 - ii) Determination of the instream flow needs for full protection of the aquatic environment, based on the following components: water quality, fish habitat, riparian vegetation and channel structure.
 - iii) Recommendations for water conservation objectives (WCOs).
 - iv) Identification of river reaches that could benefit from a riparian health assessment and restoration of riparian conditions. Approaches to restoration of riparian vegetation will be recommended.

The strategy may include operational practices to allow high flow events for long-term health of the aquatic environment

3. Planning Area

The planning area is the rivers and streams in the South Saskatchewan River basin in Alberta, which includes all or parts of the sub-basins of the Red Deer, Bow, Oldman, and South Saskatchewan Rivers (Figure 1). The basins of Pakowki and Many Island Lakes

are not considered to be part of the South Saskatchewan River sub-basin. The water management plan applies to all projects that divert water within the SSRB.

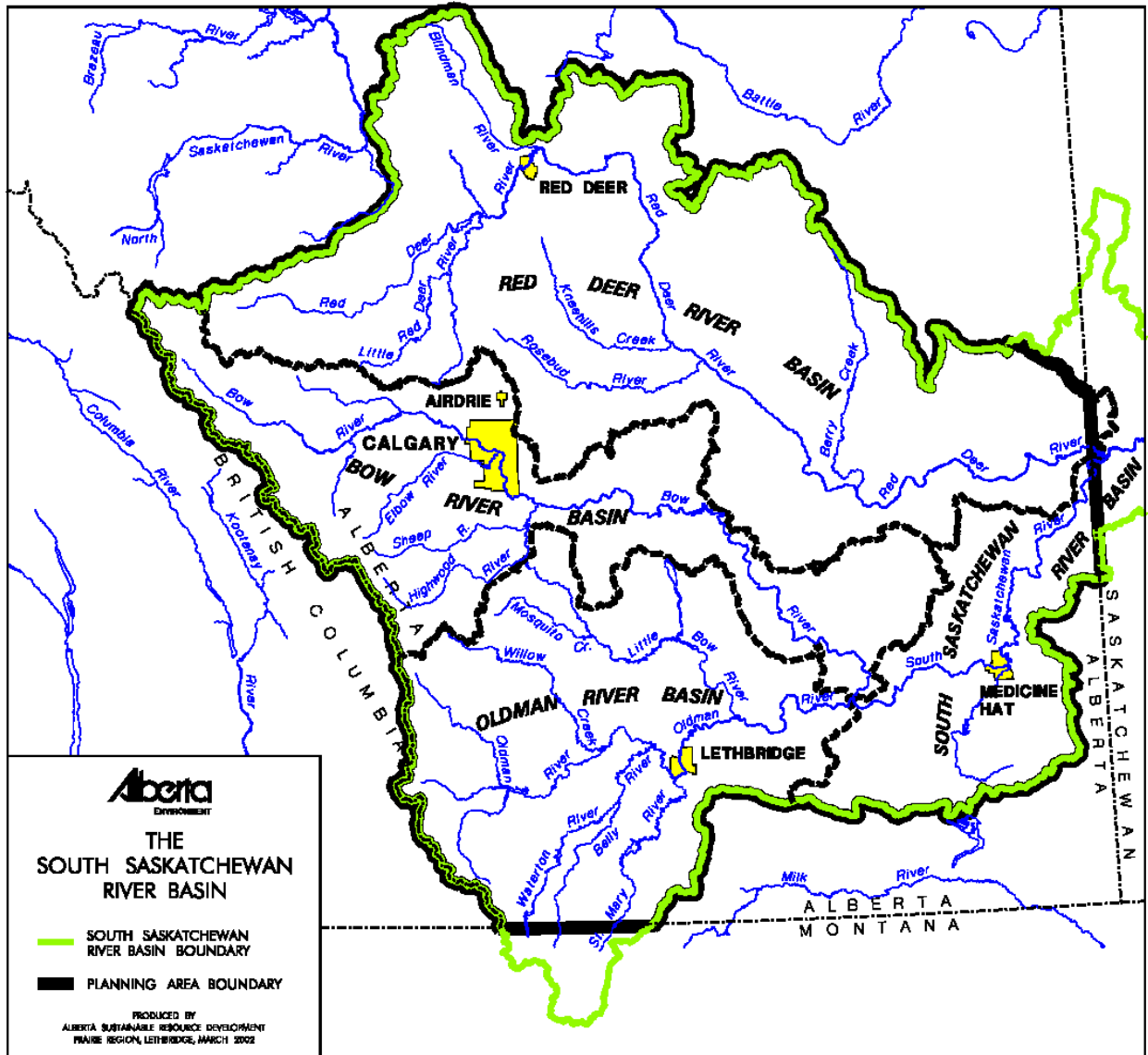


Fig. 1 The South Saskatchewan River Basin

- The parts of the basin that lie in Montana and Saskatchewan are not in the planning area.
- The water management plan applies to all projects that use water diverted within the SSRB.

4. Overview of Current Conditions and Initial Description of Issues

The following items form the existing technical, legal and policy context for this planning process. Each will be carefully considered throughout Phase Two.

Current Conditions

- a) The *Water Act*
- b) The *Framework for Water Management Planning*
- c) The Master Agreement on Apportionment
 - will be respected
- d) There are approximately 20,000 existing licences in the SSRB for withdrawal of water for a variety of purposes. These licences will be respected.
- e) Operating licences for dams and headworks (may contain specific instream objectives)
- f) Instream objectives are in use in several river reaches. These are described in the *Water Management Modeling Information Package* (Alberta Environment, 2001a)
- g) The limit of the water resource is being approached in the SSRB as shown by computer modeling (Alberta Environment, 2001a).
 - some licences to withdraw water are not utilized fully, so at this time actual river flows can be greater than that predicted by computer modeling
 - licences for new allocations have a risk of water not being available in drier years
- h) The existing 1990 Water Management Policy for the SSRB
 - adopted in 1990
 - a set of six general policies for water management in the SSRB
- i) The existing South Saskatchewan Basin Water Allocation Regulation
 - has the effect of limiting the amount of water (by stating maximum areas that can be irrigated) for the irrigation districts, private irrigation, and for a number of possible irrigation projects, if applications are made
 - does not allocate water or establish a priority date for the projects
 - irrigation area expansion limits for irrigation districts are now incorporated into the *Irrigation Districts Act*.
- j) Phase One of the Water Management Plan for the SSRB
 - authorizes water allocation transfers and water conservation holdbacks
 - water allocation transfers add flexibility in the allocation of water by enabling new or existing water users to obtain reliable water allocations, even in basins in which applications for new allocations are not being accepted.
 - recommends to the Director that, as an interim measure until the completion of Phase Two, applications for new water allocations from the southern tributaries of the Oldman River (the St. Mary, Belly and Waterton Rivers) not be accepted. This is due to evidence there is insufficient water in these rivers to permit new water allocations.
- k) Recent water shortages have raised public awareness of the water supply and demand situation.
- l) The educational information to be prepared during Phase Two will describe the current conditions in the SSRB main stems in more detail (see section 7).

- m) A provincial water strategy (*Water for Life*) is being prepared and a draft has been released for public comment. The draft strategy and these terms of reference are congruent.

Initial Description of Issues

- a) Some rivers in the SSRB are highly allocated. There may be little water left to support licences for new allocations. (Licences can be issued for transferred allocations.)
- b) There are no current criteria in use by AENV for determining when a basin should have allocations restricted.
- c) Flows in some reaches of the main stems may be inadequate to protect the aquatic environment.
- d) The health of riparian vegetation communities is affected by land-uses and/or water management practices. Riparian vegetation plays a key ecological role in maintaining aquatic environmental health.
- e) Since 1976 the SSRB sub-basins have been operated “in concert.” There are concerns this policy could limit water availability for future growth in the Red Deer River basin.

Issues That Will Not be Addressed in Phase Two

- a) Water pollution – Specific measures for the control of point and non-point sources of pollution. This could be a future phase. Phase Two will address river flows required to result in water quality necessary for the aquatic environment (i.e. for fish, as a surrogate for all aquatic organisms - a good indicator for overall water quality).
- b) The number of households or dugouts per parcel – These topics may be addressed in smaller scale water management plans (i.e. for sub-basins). Ministerial Order 4/99 presently limits the number of households per parcel of land to three.
- c) Climate change – There are insufficient data available at this time to permit defensible and reliable modeling of climate change scenarios. These data are expected to be available in about three years time through research supported by the Climate Change Action Fund of the federal government. It may become necessary to revisit the water management plan in the future once better climate change predictions and data are available.
- d) Groundwater – This could be the subject of a future phase. It is known that surface and groundwater can be linked. However, at this time the groundwater resource in the SSRB is not well understood, and it is believed there are sufficient issues concerning surface water to justify focusing on it alone in Phase Two.
- e) In Phase Two, structural solutions to water supply management will not be addressed. This may be the subject of a future phase of the water management plan, once the overall water availability situation is clarified.

5. Relationship with *Water for Life: Alberta's Strategy for Sustainability*

Alberta is developing a comprehensive water strategy that will identify short-, medium- and long-term plans to effectively manage the quantity and quality of the province's water systems and supply.

Water for Life will address Alberta's current water challenges and enable the province to proactively deal with water-related issues it may face in the future.

Public input on the strategy was sought through responses to a workbook and telephone survey, community workshops that were held across the province and a ministerial forum on water. This input included views on the priority of various water challenges, ideas on potential options for addressing these challenges and suggestions on the roles of government, industry and the public in implementing these options.

The goal of the water strategy is to identify the actions that will be taken by all Albertans, including government, industry and the public to address the priority water challenges. The draft water strategy is now available for public review.

One of the major recommendations from the Ministerial Forum on Water is: "There should be significant emphasis on watershed planning and management". This recommendation supports the existence of the South Saskatchewan River Water Management Planning Program.

The SSRB Water Management Plan is a regional initiative dealing with specific issues in the SSRB. As such, it will proceed in parallel with the work on the Water for Life strategy. Communication between these two initiatives will continue to manage any issues that may appear. Once the water strategy is complete there may be some implications that will require adjustment to the SSRB program. However, it is hoped that continued communication will catch these implications.

Addressing the important water management issues in the SSRB need not be delayed while the Water for Life strategy is being completed.

6. Relationship with Regional Strategies and Other Planning Activities

Phase I of the Southern Alberta Sustainability Strategy (SASS) has been initiated. The planning area includes all of Southern Alberta, entirely encompassing the SSRB (in Alberta).

The strategy will look at social, economic, land use and environmental information to take stock of the current situation and to assess what population growth and economic growth in multiple sectors of the economy are likely to mean for social, economic and environmental health over the next two generations. Its purpose will be to identify the issues that need to be addressed to ensure a sustainable future—how can we meet our social and economic needs while ensuring reasonable environmental integrity?

The relationship between the SSRB water management plan and the SASS is the same as with the Water Strategy; both the latter exercises are strategic plans, dealing with a suite of issues in a very large system, the SSRB water management plan is tactical—dealing with specific issues in a basin. If it were not already underway, the SSRB water management planning is precisely the kind of ‘issue to be addressed’ that would be an outcome of Phase I of the SASS. Because of the interconnectedness of environmental resource management challenges, it is possible that addressing issues arising from the SASS also may require parts of the SSRB water management plan to be revisited and amended.

7. The First Stage - Groundwork

There is a need to raise awareness and understanding of water issues and water management in the SSRB. This will help the public provide informed input. Also, essential information must be gathered, organized and presented before development of the draft plan commences.

The essential information needs are:

- a) the status of water allocation in the SSRB
- b) the status of the aquatic environment in the SSRB, including:
 - (i) an overview of the ecological condition of the aquatic environment
 - (ii) possible causes of impacts on the aquatic environment
 - (iii) a report on instream needs for full protection of the aquatic environment, including fish habitat, water quality for fish (dissolved oxygen, temperature and ammonia), riparian vegetation and channel structure
- c) historical patterns and trends in sub-basin contributions to apportionment flows
- d) non-irrigation water use forecasts (complete) (Alberta Environment, 2001b)

A summary of computer modeling information on scenarios will be produced in consultation with the basin advisory committees (BACs). Some of the scenarios are “educational” in nature. That is, they will serve to help people understand certain aspects of water management in the SSRB, even though the scenarios may not be practical.

This information will be presented in lay terms suitable for broad distribution to all interested parties and the general public.

The Alberta Irrigation Projects Association recently published a report on options for the future of irrigation in the SSRB (Alberta Irrigation Projects Association, 2002). This will also be important information for the planning process.

8. The Second Stage - Planning

Water Management Policies

During this stage the existing 1990 Water Management Policy for the SSRB will be reviewed and updated, if necessary, with the advice of the BACs and the general public. The Phase Two Plan will supersede and replace the existing 1990 SSRB water management policy. The policy review may also point out possible future phases of the water management plan.

The Strategy to Balance Water Consumption and Aquatic Protection in the SSRB

The strategy is anticipated to have three components (in addition to generating educational information):

- a) Water conservation objectives (WCOs) - Please refer to the definition of a WCO in the Introduction. A WCO can be established to protect all or part of the aquatic environment, and for other reasons, all pertaining to leaving water in rivers. A WCO includes both water quantity and quality components. It is a flexible tool provided by the *Water Act*. A WCO could be established as a compromise between consumption demands and the needs of at least a part of the aquatic environment, or it could simply reflect existing instream objectives. The use of this tool is only starting to be explored. In Phase Two, WCOs will be recommended only for the reaches of the main stems where there is a priority need for WCOs. These reaches are:

Red Deer River – downstream of Dickson Dam to Saskatchewan border
Bow River - downstream of Western Irrigation District weir to confluence with Oldman River
Oldman River - downstream of Oldman River Dam to confluence with Bow River
St. Mary River - downstream of St. Mary Dam to confluence with Oldman River
Belly River - downstream of uppermost diversion to confluence with Oldman River
Waterton River - downstream of Waterton Dam to confluence with Belly River
S. Sask. River - all

The process for arriving at WCO recommendations will comprise an iterative approach involving a number of water management scenarios. The scenarios will be tested and evaluated by computer simulations. The goal will be to develop a scenario that offers an acceptable and realistically achievable long-term compromise between the two extremes of consumptive use of all the water and a natural aquatic environment. It is proposed that this long-term compromise could be the water conservation objective in many reaches. WCOs could be recommended as “interim” or “long-term,” depending on the degree of confidence in the information available.

WCOs may be recommended in the future for the reaches above the water management structures.

It must be recognized that the available methods for restoring water to rivers (water conservation holdbacks, cancelled allocations), can restore water to the rivers only at a very slow rate.

- b) Recognizing the interconnectedness of environmental issues, other options such as operational releases, to optimize the benefits of periodic high flow events for the aquatic environment.
- c) Identification and prioritization of the areas and reaches of rivers in the SSRB that would benefit from a riparian health assessment, and restoration of riparian conditions. This includes reaches upstream from dams and weirs.

Other Planning Tasks

- a) Once a determination is made concerning the flows that are to remain in the rivers it will be possible to deduce the volumes of water that may be available for future allocation, at various degrees of risk.
- b) It may be necessary to update the existing SSRB Water Allocation Regulation, in view of WCOs that are recommended. The provisions of the regulation will become part of the water management plan.
- c) Determination of the matters or factors that the Director must consider in deciding to issue an approval, preliminary certificate or licence.
- d) Consideration of possible amendments to the Phase One component of the Approved Water Management Plan to be made when Phases One and Two are merged to become the new Approved Water Management Plan
- e) Determination of the next priorities for water management planning. This can include:
 - the next and prioritized additional phase(s) of the SSRB plan,
 - priorities for water management planning in sub-basins
- f) Development of an implementation section for the plan. This will identify specific actions to be taken.

9. Public Consultation Process

Objectives of Public Consultation

The specific objectives for public consultation in this process are to obtain advice from the specific sectors of society with an interest in the management of the water of the SSRB and also from unaffiliated members of the public.

Description of Previous Consultation Outcomes

Public consultation was conducted during the preparation of the Phase One Plan and the results are summarized in the appendices to that plan. Listed below are outcomes of the consultations that are relevant for Phase Two:

- a) Provide more time and opportunity for public input into the planning process.
- b) There is strong interest in looking at water availability and water conservation objectives.
- c) There was significant public interest in looking at longer term water issues in the SSRB.
- d) More information should be provided to educate/support newcomers to water planning who do not know the recent history of the new *Water Act*.

Basin Advisory Committees

- a) The BACs will be requested to continue in the advisory role they played in Phase One.
- b) They will continue to consist of people who represent a certain sector of society with an interest in water management. Typical sectors are: irrigation agriculture, non-irrigation agriculture, ecosystem protection/environmental, First Nations, industry, municipal and recreation. The BACs are intended to facilitate understanding and cooperation between the sectors.
- c) There will be regular meetings with the BACs during Phase Two. Key points in the process at which the BACs will provide advice are:
 - i) terms of reference
 - ii) selection of scenarios for evaluation
 - iii) review of existing 1990 Water Management Policy for the SSRB.
 - iv) review of results of scenario runs
 - v) identification of preferred scenario
 - vi) development of the strategy that best balances water consumption and environmental protection in the SSRB
 - vii) the other tasks described in section 8.
- d) Joint meetings of the four BACs will be held at key points during the process. Steering Committee members will attend.
- e) The BACs will operate in accordance with a common set of general operating principles, but may adopt their own operating principles which spell out rules on the conduct of meetings.
- f) The BACs will have access to government and other specialists as required.
- g) Independent facilitation services will be used for some or all BAC meetings.
- h) BAC members will be encouraged to maintain regular two-way communication with the sectors they represent.

Consultations with the General Public

- a) Consultations with the general public in the form of open houses or workshops will be held at one point during Phase Two. The approximate timing is listed in section 11, Work Plan and Schedule.
- b) The locations for the public sessions will be as in Phase One: Red Deer, Drumheller, Bindloss, Calgary, Brooks, Lethbridge, and Medicine Hat.

- c) The consultations will be advertised well in advance of the sessions. The ads will be in a prominent position in each of the daily and weekly newspapers in the SSRB. Other options for reaching the public will also be explored.
- d) Independent facilitation services will be used for the public meetings.
- e) Following the sessions, the public will have at least thirty days to review materials and submit comments. Thirty-day review periods will take precedence over stated schedule dates.
- f) Methods by which members of the public can review materials and provide input without having to attend meetings will also be used.

Communications Plan

- a) A communications plan will be prepared. This will provide details of delivery of messages and products to the public and government staff.
- b) A website for the water management plan has been set up in connection with the Alberta Environment website. This will include the important documents for the project. The website address is: <http://www3.gov.ab.ca/env/water/regions/ssrb/>

10. Roles, Responsibilities and Accountability of Participants

The roles, responsibilities and accountability of participants will remain essentially the same as in Phase One.

Steering Committee - Consists of senior government managers from the three key provincial departments: Alberta Environment, Alberta Sustainable Resource Development, and Alberta Agriculture, Food and Rural Development. Fisheries and Oceans Canada is also represented. The committee will provide direction to the Working Group on all matters pertaining to the planning process. The Steering Committee reports to the senior executive of the three participating departments.

At key milestones, other provincial government departments will be requested to provide advice to the Steering Committee: These departments are: Municipal Affairs, Energy, Energy and Utilities Board, Economic Development (including Tourism), Transportation, and Innovation and Science.

The Steering Committee will receive the advice of the BACs via the basin teams and project coordinator.

The Steering Committee is responsible for advancing the recommended final draft of the water management plan for approval.

Working Group - Consists of staff from Alberta Environment; Alberta Agriculture, Food and Rural Development; and Alberta Sustainable Resource Development (SRD). It provides recommendations to the Steering Committee through the project coordinator. The Working Group is responsible for conducting public consultation, and for developing a draft water management plan and related products, computer simulations, and

recommending and arranging for necessary research to support the planning process. The Working Group for Phase Two includes:

- i) Three “basin teams” that work with the BAC in each sub-basin. The “basin teams” consist of a Water Resource Planner working with another planner or a Community Relations Officer.
- ii) Alberta Environment Operations and Approvals staff
- iii) The chair of the Technical Instream Needs Group (the scientists who have researched instream needs in the SSRB)
- iv) The computer modelers.
- v) A representative of the Alberta Agriculture, Food and Rural Development Irrigation Branch
- vi) A representative of Alberta Sustainable Resource Development

Project Coordinator – The project coordinator has the following responsibilities:

- i) to ensure the work in all four sub-basins is proceeding in a consistent, unified and coordinated fashion
- ii) to ensure adherence to these terms of reference
- iii) liaison between the Steering Committee and the Working Group
- iv) principal authorship of the draft plan

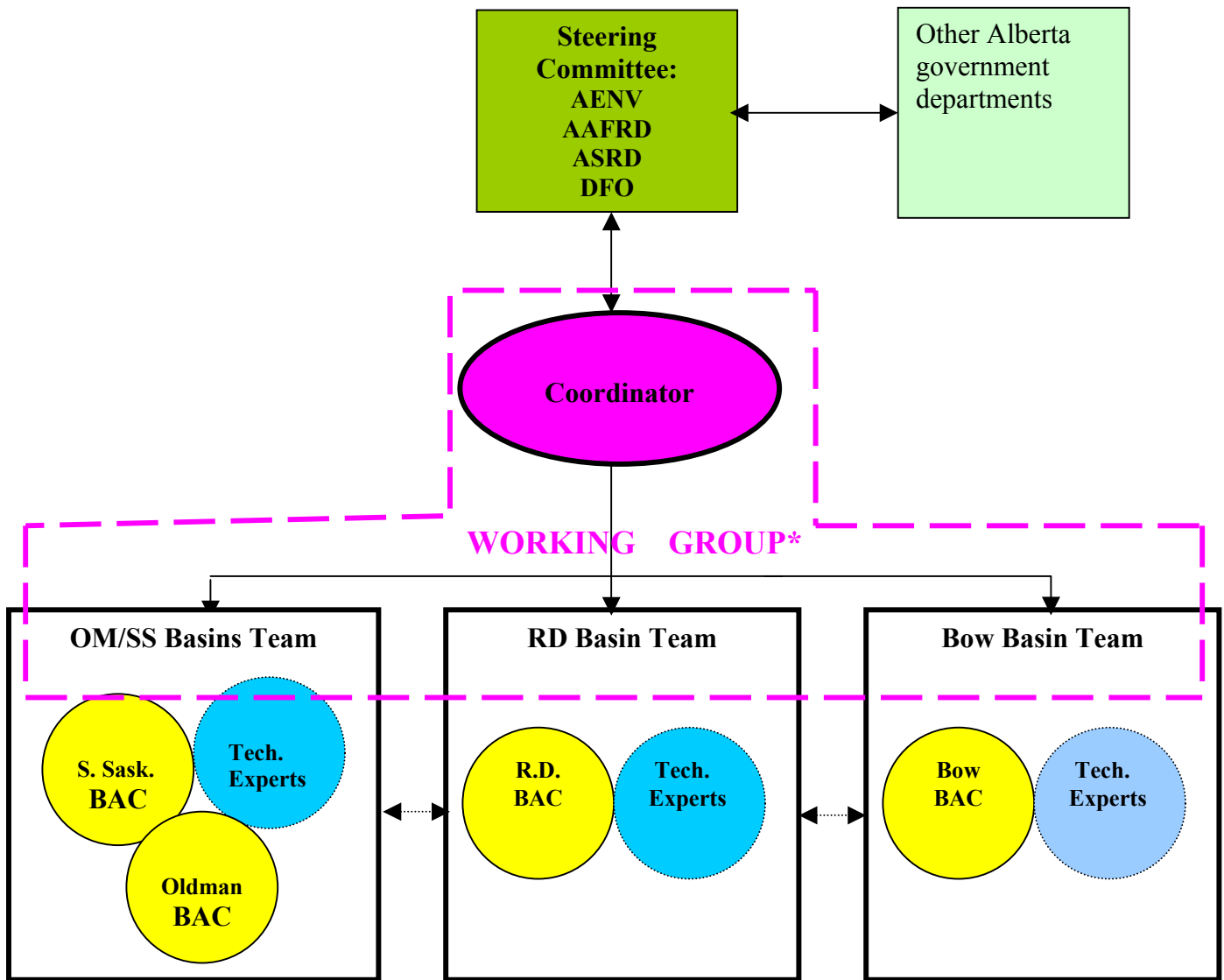
Technical Experts – Government staff who are experts in different aspects of water and resource management will be available for consultations with the Steering and Working Committees and the BACs. Outside experts may also be brought in, when necessary.

Basin Advisory Committees – The BAC members will be responsible for and accountable to the sectors they represent. They should be in active two-way communication with the organizations they represent. The BACs will provide advice to the Working Group and the Steering Committee through their respective basin teams and the project coordinator.

The relationships between the committees are shown in Figure 2.

RELATIONSHIPS

SSRB WATER MANAGEMENT PLANNING COMMITTEES



* The Working Group consists of: AENV basin teams, modelers, water operations staff, approvals staff, communications, AAFRD rep., ASRD rep., technical instream needs group rep.

11. Work Plan and Schedule

Completion

First Stage – Groundwork

Develop general educational material	throughout project
Creation of first iteration of scenarios to be evaluated	April – June 2002
Joint meeting of BACs	June 2002
Joint meeting of BACs	November 2002
Completion of all educational information	April / May 2003
Compile SSRB educational information into educational products	May / June 2003
Release of education information through meetings with BACs and website	June 2003
BACs review SSRB educational information	July / August 2003

Second Stage – Planning

Develop first draft of plan in consultation with BACs	September 2003 – January 2004
Complete first draft of plan	January 2004
General public consultation - review draft Phase Two water management plan	February 2004
Revise draft plan	March / April 2004
Submit final draft of Water Management Plan (Phases One and Two) for approval	May 2004

12. References

Alberta Environment. 2001a. Water management modeling information package. South Saskatchewan River Basin Advisory Committees. Southern Region, Calgary, Alberta. 27 pp.

Alberta Environment. 2001b. South Saskatchewan River Basin Non-irrigation Water Use Forecasts. Hydroconsult and Canadian Resource Economics Ltd. Calgary, Alberta.

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Alberta Irrigation Projects Association. 2002. South Saskatchewan River Basin, Irrigation in the 21st Century, Volume 1: Summary Report. Lethbridge, Alberta

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Government of Alberta. 1991. *South Saskatchewan Basin Water Allocation Regulation* (O.C. 615/91). Edmonton, Alberta. 7 pp.

Appendix A

Relationship of the SSRB Water Management Plan to other Planning Activities

Listed below are existing plans and current planning initiatives in the SSRB that are either directly or indirectly related to water management in the SSRB.

There are numerous other conservation and landscape management initiatives that are not listed that have the general effect of protecting the watershed.

Provincial Level

- Water for Life: Alberta's Strategy for Sustainability (underway)
 - Alberta Environment
 - see main body of terms of reference for more complete discussion
 - This is a broad initiative with the purpose of developing a provincial strategy for water management.
 - Outcomes of this initiative may have implications for water management planning in the SSRB.

South Saskatchewan River Basin (Overall)

- Southern Alberta Sustainability Strategy
 - See main body of terms of reference for more complete discussion
- Integrated Resource Plans and Regionally Integrated Decisions
 - Alberta Sustainable Resource Development
 - Several are either in place or underway
 - Generally have as one objective the protection of watersheds (e.g. *A Policy for Resource Management of the Eastern Slopes*)
- Municipal development plans
 - Various urban and rural municipalities
 - Many are either in place or underway
 - Generally have the purpose of guiding development to reduce negative impacts on the environment, including the water resource
- Management Plans for parks and protected areas (national and provincial)
 - Parks Canada, Alberta Community Development
 - Many are either in place or to be initiated
 - Particularly in the Rocky Mountain headwaters, but throughout the basin too.
 - Have the inherent effect of watershed protection.
 - Several new parks and protected areas were recently created through the Special Places initiative.

- Local watershed initiatives in smaller basins to improve water quality (underway), e.g. Little Red Deer River Watershed Initiative, Crowfoot Creek, Elbow River Watershed Partnership, Mosquito Creek/Little Bow Watershed Group, Nose Creek Watershed Partnership, Oldman River Basin Water Quality Initiative, Beaver Creek Watershed Group, Frank Lake Water Quality Mitigation Initiative

Bow River Basin

- Bow Basin Plan
 - Alberta Environment
 - Preparation of a plan for the Bow Basin is on-hold pending completion of Phase Two of the SSRB water management plan.
 - Initiatives in the Bow River basin related to the Bow Basin Plan are the implementation of instream objectives for the upper Elbow River, and the work of the Fisheries and Recreation Enhancement Working Group on the Kananaskis River.
- In the Bow River Basin the Bow River Basin Council plays an important role in addressing water management issues. The BAC in the Bow River Basin is a sub-committee of the Council. The mandate of the Council is to: *Conduct activities for the purposes of protecting and improving the waters of the Bow River Basin and with respect to any social, cultural, economic and environmental aspects of:*
 - *the quality and quantity of groundwater and surface water*
 - *riparian zones*
 - *aquatic ecosystems*
 - *the effects of human activity and land use on surface water and groundwater quality and quantity*
- Highwood Water Management Plan (underway)
 - Alberta Environment
 - Relates to the Highwood/Little Bow River diversion project (Alberta Transportation)
 - Mandated by the Joint Review Panel of the Natural Resources Conservation Board and the Canadian Environmental Assessment Agency
 - Goal is to achieve sustainable water management in the Highwood River, Little Bow River, and Mosquito Creek basins.
 - The outcomes of this process will be directly related to SSRB water management
 - This process has served as a prototype for a number of scientific studies that are being applied to the overall SSRB
- A ground water study for the Municipal Districts of Rocky View and Foothills is being considered by AENV.

Red Deer River Basin

- Red Deer River Corridor Integrated Management Plan (in place)
 - Alberta Environment, Alberta Sustainable Resource Development, Alberta Community Development, municipalities
 - contains references to water management, river recreation, fisheries
 - must be consulted during Phase Two of the Water Management Plan
- Glennifer Lake Reservoir Shorelands Areas Structure Plan (in place)
 - Alberta Environment, Alberta Community Development, municipalities
 - contains policies for reservoir levels for recreation and affects water management for the Red Deer River downstream
- Special Areas Water Supply Project
 - Proposed diversion of Red Deer River water in the vicinity of Nevis for use in the Special Areas.
 - Feasibility is currently being studied.
 - Alberta Municipal Affairs (Special Areas)

Oldman River Basin

- Oldman River Basin Water Quality Initiative (underway)
 - multiple partners
 - focuses on four key areas:
 - Public education and awareness regarding water quality in the basin;
 - Assessment of the current land use in the Oldman River Basin;
 - Testing and implementation of beneficial management practices (BMP) to limit negative impacts on water quality;
 - Monitoring of surface water quality in the basin to identify areas of concern and impacts of various activities.
- C5 Forest Management Plan
 - Alberta Sustainable Resource Development
 - may have incidental benefit of reducing impacts on the watershed from forest harvesting
 - Castle River Access Management Plan
 - Alberta Sustainable Resource Development
 - may have incidental benefit of reducing impacts on the watershed from erosion caused by off-road vehicle use

South Saskatchewan River Sub-basin

- No initiatives