



**South Saskatchewan River Basin  
CONSULTATION ON  
DRAFT WATER MANAGEMENT PLAN  
October 2005 to January 2006**

**Results**

March 1, 2006

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## Introduction

From late-October 2005 to mid-January 2006, Alberta Environment invited comment from the public and known stakeholders on the South Saskatchewan River Basin Draft Water Management Plan.

Seven public meetings (accompanied by open house opportunities) were held to allow Albertans to ask questions and provide their comments about the draft water management plan. Meetings were held in the following communities:

November 22	Medicine Hat	November 29	Calgary
November 23	Bindloss	November 30	Drumheller
November 24	Brooks	December 1	Red Deer
		December 5	Lethbridge

Alberta Environment made the draft water management plan available by mail and on the Department's web site, and distributed it at meetings. Opportunities to learn more about the draft plan, discuss the recommendations and provide comment were made known to stakeholders directly by mail and also advertised in local area newspapers. Steering Committee members and Alberta Government staff were available at meetings to provide clarification where needed.

Each public meeting was facilitated by an independent facilitator, and recorded by an independent note taker (both employed by Equus Consulting Group Inc.). Equus Consulting Group Inc. was also contracted to collect completed response forms and written submissions, and to compile and analyze the consultation results.

At the meetings, response forms (see Appendix 1) were used as a guide for discussions, and participants were asked to complete a response form as the discussion proceeded. The response form was also available on-line or could be requested from the Department. Doug Ohrn of Alberta Environment provided a brief history of how the draft plan had been developed (see PowerPoint presentation notes, Appendix 2). The facilitator, Bill McMillan, then facilitated group discussion of each principal recommendation in the draft plan. In general, the discussions took the form of an exchange between the meeting participants and Government of Alberta representatives who were present to speak to the draft plan and the information it is based on.

On-line responses were accepted until January 15, 2006; written submissions were accepted until January 20, 2006. This report summarizes and analyzes the consultation results, taking into account the discussions that took place, the completed response forms and the written submissions received.

All input has been forwarded to Alberta Environment.

Note: the following acronyms are used throughout this document:

SSRB	South Saskatchewan River Basin
BAC	Basin Advisory Committee
WPAC	Watershed Planning and Advisory Council
WCO	Water Conservation Objective
IFN(s)	Instream Flow Needs

## Overview of public input

Public response to the draft water management plan indicated that:

- a strong majority support the recommendation to stop accepting applications for water allocations in the Bow, Oldman and South Saskatchewan River sub-basins;
- a majority support the “Matters and Factors” and water management strategies in the draft water management plan;
- a slim majority support the water conservation objective (WCO) proposed for the South Saskatchewan River, but there is concern about the maintenance of natural flow patterns;
- there is mixed response to the proposed WCOs for the Bow and Oldman River sub-basins;
- there is mixed response to the proposed recommendation for managing apportionment; and
- many respondents are either opposed to the proposed Crown reservation and WCO for the Red Deer River, or are unsure of the impact of these proposals.

The above-noted patterns of response reflect the fact that approximately 30% of respondents were unsure whether the water conservation objectives were appropriate. This relatively high level of indecision likely reflects the fact that water conservation objectives are an abstract concept, and a perception that the basis for the proposed water conservation objectives is unclear. Participants commented that they felt the proposed water conservation objectives may not have significant effect on the future health of the aquatic environment.

Since the Red Deer River is the only river with remaining capacity for allocation, it may not be surprising that participants were in least agreement about the limits to allocation on that river. Residents and municipalities in the Red Deer River sub-basin expressed concerns that there are higher use levels in other sub-basins, while the draft plan recommends a lesser degree of future allocation on the Red Deer River. Participants from other sub-basins wondered why the level of protection for the Red Deer River would not be increased, given the reports of impacts to aquatic environments in other sub-basins.

## Overview of public meetings

### Proposal to stop accepting new water allocations in the Bow, Oldman and South Saskatchewan River Sub-Basins

Participants supported this proposal but had questions about how it could be implemented fairly.

There were questions about how a Crown reservation would affect future water allocation. Participants were concerned the designated allocations could be equivalent to a resumption of licences on the river, with certain specific uses being favoured. There was also concern about whether or not licence applications that have been received and dated will be affected.

Comments included the following:

- What will happen to those applications that are awaiting approval?
- With the closing of the basins, is there no long-term plan being developed?
- Is there really a moratorium or is this just a different way to allocate water?
- Will there be public input into how the Crown Reservation would work?
- Assume the Bow River is allocated at 70% with pending applications on another 5%. If they are pending, this regulation will not affect them?
- Definitely stop allocations and take action on some existing allocations.
- Makes sense not to accept, or approve, any more applications.

### Proposal to reserve all water in the Red Deer River Sub-Basin in excess of 600,000 cubic decametres for the aquatic environment

This was the most contentious proposal in the draft water management plan. People had difficulty understanding the significance (and scale) of the 600,000 cubic decametres. Some participants (living in the Red Deer River sub-basin) were concerned they were being subjected to an arbitrary limitation of available water supplies. Some felt the limit was not sufficient to protect aquatic environments, and was not described in a way that reflected the dynamic nature of the river. There was concern among those who live in this sub-basin that this limit is intended to save water in the Red Deer River so it can make up for apportionment short-falls.

Comments included the following:

- What does the 600,000 cubic decametres mean? How did you come up with it?
- The wording and figures seem backward. It would be more appropriate...to have the amounts needed to sustain the river.
- This recommendation has no flexibility.
- Will the 62% left in the river maintain the environment or is it an attempt to make up for over-allocation in the other rivers?
- This would not be used as a guideline. This would be a firm cap and endorsed by Cabinet....we want the tools to protect the river, but this recommendation serves the southern rivers.
- If the Red Deer is capped at 38% then the others should be also.
- 600,000 cubic decametres is too low...if we establish that as the number now, you won't be able to change it.

- Why is the Red Deer being treated differently...it will economically squeeze this area? This is lower than the Basin Advisory Committee recommended.
- Where does this limit put the Red Deer in the future? How affected is it in relation to other basins?

### **Is the proposed WCO for the Red Deer River acceptable?**

The proposed WCO for the Red Deer River was also contentious. Participants found it difficult to understand why the proposed WCO for the Red Deer River was different than for the Bow and Oldman Rivers. They also felt the rationale for defining the WCO was not clear (i.e. it did not align with the IFN science, so how was it selected?).

Sample comments:

- How does the WCO relate to the IFN set by the study?
- When we move away from the IFN (85% of natural flow), we don't know what we are losing or affecting. We therefore must be conservative.
- [The WCO should be] an objective for in-stream flow needs; for a healthy environment. [It should not] balance social and economic needs.
- If everyone takes all their allocated water, there is marginal to serious effect. Licensing new use makes no sense.
- Why not use the same measurement for all the basins?
- Why did the minimum [flow] drop 40%? BAC recommended a minimum flow of 16 cms, but the draft plan now says 10 cms.

### **Are the proposed WCOs for the Bow and Oldman Rivers acceptable?**

Questions about the proposed WCOs for the Bow River, and for the Oldman River and its southern tributaries, related primarily to concerns about how the WCO would be interpreted and administered. Some participants felt a higher WCO should be established even if this higher level would cause disruption to current licence holders. Others expressed concern that if the WCO was applied to applications-in-process, it would be unfair.

Comments:

- There should be a [mandatory] reduction in all licences.
- How was 10% arrived at?
- Is there a plan to monitor and revisit the WCO in 5-10 years?
- An increase in 10% above current flat line [on southern tributaries] is so far away from what science is telling us ...
- There should be a higher WCO.

### **Is the proposed WCO for the Bow River (below Bassano Dam) acceptable?**

There were few comments about the proposal for the lower portion of the Bow. However, some participants expressed concern that conservation is not being achieved in this portion of the river.

Comments:

- To restore the river may affect upland habitat which gets water from the Bassano Dam. Are we willing to jeopardize the wetlands...if we restore the river?
- Since irrigation consumes a large portion of the water, is anyone scrutinizing irrigation practices?
- ...it's ridiculously low and does that sustain the environment?

### **Is the proposed WCO for the South Saskatchewan River acceptable?**

There were few comments about this proposed WCO. A few participants felt the proposed WCO was too low, did not account for natural variability, or did not provide incentive for conservation.

Comments:

- How does that compare to the scientific IFN? What is the...compromise that we are making...?
- Variation in the flow is important to everything. We not only need a bottom limit, we also need high spring and low spring flows. There are concerns that the WCO is a flat line.
- Can we propose that the WCO have different levels at different times of year?

### **Do you agree with the apportionment recommendation?**

There was considerable discussion about apportionment. Participants agreed with the proposal, but wanted assurance that the contribution to apportionment would be managed fairly. In particular, residents of the Red Deer River sub-basin are concerned the extent of allocation in other basins will leave their river as the primary source for apportionment. Several participants felt improved storage would allow Alberta to use more water.

Comments:

- Water from one basin is sometimes used in another basin. Do these figures take that into account?
- We do not use 50% at times because we do not have storage.
- Apportionment contributions should be split into sub-basins.
- If the Red Deer was split out and used 50% of the flow, it would be better for economic growth here and good for the environmental health of the other rivers in the basin.
- The way to manage is on an integrated basis. The pain should be proportional to allocation on each river.
- More clarity must be placed in the water management plan to ensure each basin is treated fairly and equitably.
- The real question is "which dam does the water come from?"
- I would like to know if the representatives from the sub-basins will have any teeth in providing advice. What power will they have?

## **Do you agree that water management strategies (which were listed) should be recommended in the plan?**

Participants had few comments about this proposal. Most comments were questions about the water allocation transfer process.

### Comments:

- Efficiency and effectiveness not included in factors.
- There is no mention of net use [as a criterion for allocations and transfers].
- If we have a dry year, all of this will be useless. We need more storage...

### **Other Comments**

Participants also commented about a number of other considerations, including:

- How Treaty rights will be addressed.
- Whether the upper Bow River will be addressed in a water management plan.
- The process for amending the water management plan if other sub-basin plans emerge.
- Improved linkage with other policies that affect the SSRB (e.g. wetland policy).
- Approval of irrigation projects (perceived to be at odds with the intention of the water management plan).
- The need for a “value” or “purpose” statement in the water management plan. More clarity about goals.
- The need to acknowledge the Basin Advisory Committees.



# Overview of completed response forms<sup>1</sup>

## About respondents

Of the 181 response forms completed, 155 respondents (85%) indicated they had also attended an open house/discussion meeting. Approximately half (48%) indicated they represented an organization with an interest in public water management (e.g. municipality, environmental group, irrigation district).

Respondents indicated they reside in the following sub-basins:

Sub-basin	n	%
Red Deer River	93	51%
Bow River	32	17%
Oldman River	26	14%
South Saskatchewan River	16	8%
None of the above	14	7%

Participants responded to the following proposals included on the response forms:

## Bow, Oldman and South Saskatchewan River sub-basins

Alberta Environment recognizes the limits for water allocations are being reached in the Bow, Oldman, and South Saskatchewan River sub-basins. The Plan recommends that **Alberta Environment stop accepting applications for new water allocations in these sub-basins until a Crown reservation is in place in order to determine the purposes for unallocated water.** (Water allocation licences could still be obtained through transfers of existing water allocations.)

1. Do you agree with the recommendation to stop accepting applications for new water allocation in the Bow, Oldman and South Saskatchewan River sub-basins?

	n	%
NO	20	11%
<b>YES</b>	<b>147</b>	<b>81%</b>
UNSURE	14	7%

A large majority of respondents supported the recommendation to stop accepting applications for new water allocation in the Bow, Oldman and South Saskatchewan River sub-basins. Of those who agreed, and commented, many expressed their concern for the health of the aquatic ecosystem and also felt pending applications should be denied and currently held allocations should be reviewed.

<sup>1</sup> In all cases, "n" = number of respondents. In some cases, percentages may not equal 100% due to rounding.

Of those who disagreed, and commented, some felt there was still room for new applications if improved efficiency and/or additional storage were considered. One felt the current licence structure needed to be addressed.

Those who were unsure indicated the following were factors requiring more consideration: additional storage, how the Crown reservation would be enacted, the effect on economic development, the needs of First Nations, the need for more detailed information on available water and a review of current allocations.

## Red Deer River sub-basin

### *Supporting future growth while setting a limit on negative impacts on the aquatic environment*

The Plan recommends a limit on allocation of the water in the Red Deer River sub-basin be established in order to limit future impacts on the aquatic environment. The Plan has attempted to establish an allocation limit that will support future growth, and limit risk to existing and future licence holders. The Plan recommends that **the Crown reserve all water in excess of 600,000 cubic decametres (dam<sup>3</sup>), subject to further information about possible effects on the aquatic environment.** *The 600,000 dam<sup>3</sup> includes existing licences and pending allocations, sufficient water for the allowed irrigation area, and sufficient water for non-irrigation purposes to meet projected consumptive demand for the next 50 years (although later licences will provide less reliable water supplies).*

#### 2. Do you agree with the recommendation to reserve all water in the Red Deer River in excess of 600,000 dam<sup>3</sup> for the aquatic environment?

	n	%
NO	80	44%
YES	49	27%
UNSURE	52	28%

A significant number of respondents disagreed with this recommendation. From the comments submitted, it is apparent there are quite different reasons for their disagreement. Many felt the amount available for allocation (600,000 dam<sup>3</sup> or 38% of the median annual flow) should be increased to (approximately) 50% of median annual flow for total allocation, with a limit of 40% on consumptive use (i.e. net use should be considered in the equation). Many others felt the amount available for allocation was too high to protect the aquatic ecosystem, were concerned it was an arbitrary figure not based in science and that any figure should be based on flow (rather than or as well as volume). Some felt allocations should be stopped until the risk to the aquatic ecosystem is better understood.

Of those who agreed, and commented, many added their assumption that research supported the allocation amount and the aquatic ecosystem would be protected. Concerns included consideration of climate change, water conservation, river flow, continued research and monitoring.

Those who were unsure indicated the following were factors requiring more consideration: the flow rate in the river, the science available or required, the health of the aquatic ecosystem, the inflexibility of a fixed amount, proposed uses for the water, water storage and water conservation.

## Water conservation objectives

Water conservation objectives (WCOs) define the minimum flows to remain in rivers. WCOs in this Plan, for rivers other than the Red Deer, recommend gradual flow restoration. In the Red Deer River, the WCO would permit allocation of water for consumption.

### Red Deer River

The Plan recommends **the WCO upstream of the confluence with the Blindman River be either 16 cubic metres per second (cms), or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences and licences with a retrofit provision. The WCO downstream of the confluence with the Blindman River be: a) either 16 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences from November to March; b) either 10 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences from April to October; and c) either 10 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all licences with a retrofit provision. This WCO responds to natural low winter flows (the Dickson Dam is operated to augment low winter flows).**

#### 3. Is the proposed WCO for the Red Deer River acceptable?

	n	%
NO	75	41%
YES	45	24%
UNSURE	61	33%

A significant number of respondents disagreed with this recommendation. Most of those who commented indicated 45% of natural flow is too low (i.e. a higher flow rate is required to protect the aquatic ecosystem).

Of those who agreed, and commented, most did so on the assumption the proposed WCO will protect the aquatic ecosystem.

Those who were unsure indicated the following were factors requiring more consideration: defensible scientific rationale, continued monitoring, climate change, proposed water use (consumptive, non-consumptive), water storage and wetland restoration. Most were concerned about the health of the aquatic ecosystem. Some felt they did not have enough information or were unqualified to respond.

### Bow (Bears paw Dam to Bassano Dam), Oldman, St. Mary, Belly and Waterton Rivers

The Plan recommends **interim WCOs that would permit opportunities for flow restoration to be taken. The WCOs would be a flow rate 10% greater than the existing instream objectives (Bow and Oldman) or existing WCOs (St. Mary, Belly, and Waterton). This objective will apply to any licence issued after May 1, 2005. The intent is to gradually increase the amount of water retained in the rivers, in recognition that the lower reaches of these rivers have unhealthy riparian areas and degraded aquatic environments. The objective will permit some opportunities for improvement. Dam operations would not be changed.**

Question 4 to 8: Is the proposed WCO acceptable for:

4. Bow River (Bears paw to Bassano Dam)	n	%
NO	48	26%
<b>YES</b>	<b>78</b>	<b>43%</b>
UNSURE	55	30%

5. Oldman River	n	%
NO	55	30%
<b>YES</b>	<b>73</b>	<b>40%</b>
UNSURE	53	29%

7. Belly River	n	%
NO	56	30%
<b>YES</b>	<b>71</b>	<b>39%</b>
UNSURE	54	29%

6. St. Mary River	n	%
NO	57	31%
<b>YES</b>	<b>68</b>	<b>37%</b>
UNSURE	56	30%

8. Waterton River	n	%
NO	53	29%
<b>YES</b>	<b>71</b>	<b>39%</b>
UNSURE	57	31%

There was not clear majority support for any of the proposed WCOs. Instead, there was a “mixed” response. The majority of comments (whether related to agreement or disagreement with the proposals) indicate respondents believe that restoring 10% of the flow is insufficient to restore the health of the aquatic ecosystem.

Respondents who supported flow improvements made the following suggestions: voluntary or mandatory clawbacks from existing allocations, review of existing allocations to determine efficiency of use, review of the overall allocation policy, increasing the proposed holdback on allocation transfers and providing more (or enhancing existing) storage.

A number of respondents emphasized the need for improved science and continued monitoring. Some (who marked “unsure”) did not feel sufficiently informed to respond to this question.

**Bow River (below Bassano Dam)**

The Draft plan proposes a **WCO of 17.1 cubic metres per second**. *This would permit opportunities to restore flow to be taken to help improve the (degraded) aquatic environment and the unhealthy riparian areas.*

9. Is the proposed WCO for the Bow River (below Bassano dam) acceptable?

	n	%
NO	45	24%
<b>YES</b>	<b>69</b>	<b>38%</b>
UNSURE	67	37%

The response to this proposal was similar to the response to the proposed WCO in the Bow River upstream, but the level of agreement was lower. Most comments from those who agreed suggested that increasing flow was a positive step. However, some comments questioned whether the increase was sufficient to improve the health of the aquatic ecosystem. Efficient use of water, water storage, water quality, science and monitoring, and holdbacks on transfers were all suggested as additional considerations.

Most comments from those who disagreed indicate the WCO should be set higher to restore the health of the aquatic system. A few thought flows are adequate and should be left as is. One respondent thought limits are meaningless unless mandatory.

Suggestions from those who were unsure included: more scientifically defensible studies, enforcement of more efficient water use, and varying flows to meet other IFNs (channel maintenance, riparian vegetation).

### South Saskatchewan River

The Plan proposes a **WCO of 42.5 cubic metres per second** (the current rate of flow that Alberta Environment attempts to maintain at Medicine Hat). *This WCO would permit opportunities to restore flow to be taken to improve the aquatic environment and unhealthy riparian areas.*

#### 10. Is the proposed WCO for the S. Saskatchewan River acceptable?

	n	%
NO	42	23%
<b>YES</b>	<b>93</b>	<b>51%</b>
UNSURE	46	25%

A slight majority of respondents agreed with this proposal. Some who agreed mentioned cautions: must not be at the expense of communities upstream, do not arbitrarily increase WCO without more study, need to monitor indicators of health and revisit, if necessary.

Most comments from those who disagreed indicated the WCO is set too low and is insufficient to restore the health of the aquatic ecosystem. A number of respondents emphasized the importance of variability of flow. A few thought flows are acceptable and should be left as is. One respondent thought limits are meaningless unless mandatory.

Comments from respondents who were unsure included the need to know the effect on the ecosystem, the need to vary flow rates during the year, and the need for additional study. One respondent questioned if the WCO was to meet the requirements of the Master Apportionment Agreement as opposed to environmental considerations, and questioned what procedures are in place for extreme drought periods.

## Apportionment

The Plan recommends **all sub-basins of the SSRB continue to be treated as a single unit to meet requirements to provide water to provinces downstream** (*Master Agreement on Apportionment*). A committee of representatives from each sub-basin would provide advice to Alberta Environment regarding apportionment.

### 11. Do you agree with the apportionment recommendation?

	n	%
NO	58	32%
<b>YES</b>	<b>84</b>	<b>46%</b>
UNSURE	39	21%

There was mixed response to this proposal. Comments from those who agreed suggested the minimum flow must be maintained on each river, and the Red Deer River sub-basin must be treated equitably. One respondent noted the system has worked well in the past and should continue; another feels the decision should be reviewed every five years.

Most comments from those who disagreed suggested each river should contribute equally to apportionment (50%). Some were concerned that relying on the Red Deer River to subsidize any shortfall in the southern rivers would unfairly limit growth in the Red Deer region.

Comments from those who were unsure indicate they had similar concerns as those noted above.

## Water management strategies

The Plan recommends **Alberta Environment and water users should pursue water management strategies to help ensure water availability for economic development and for the aquatic environment**. Strategies being considered include improvements in administration, water markets for transfers, water conservation methods, managing high water flows for riparian health, watershed management plans, cooperative flow restoration, and allowing private parties to hold licences for WCOs.

### 12. Do you agree that water management strategies such as those listed above should be recommended in the Plan?

	n	%
NO	19	10%
<b>YES</b>	<b>110</b>	<b>60%</b>
UNSURE	52	28%

A majority of respondents agreed with this proposal. Some comments include:

- Transfer of allocations: placing value on water to increase voluntary conservation vs. fears about making water a marketable commodity.
- Allowing private parties to hold licences for WCOs, some support, some feel it should be a government function.
- Management plan should have “teeth” (i.e. specific targets and deadlines).
- Management plan should focus on water available for a healthy aquatic ecosystem.
- More consultation is required.
- Water use must be considered.
- Resources must be in place to support and enforce the management plan.

Of those who disagreed, and commented, most were concerned or unsure about private parties holding licences for WCOs and about treating water as a commodity.

Those who were unsure, and commented, had the same concerns. In addition, the following were noted:

- Discretionary powers may well be used in ways not intended
- Consultation is needed with First Nations
- Review amount of water storage required
- Consider the purpose for which water will be used (efficiency)
- Live within capacity of watershed

### **Additional comments**

A wide range of additional comments were received that largely reflected or re-emphasized comments made previously under specific sub-sections of the response form. Main areas of concern included (in no particular order):

- The need to respect/protect the health of the aquatic ecosystem (including consideration of riparian habitat, wetlands, variability of river flows, global warming, groundwater, water conservation and effects on water quality from pollution) and the resulting effect the aquatic health of the river systems will ultimately have on economic development.
- The concern that the Red Deer River basin will be used to supplement flow in other (overly allocated) river basins, constraining economic growth and development in the Red Deer region.
- The need for additional and/or continued monitoring to provide a good scientific base upon which decisions may be based that accurately meet the requirements for a healthy river system.
- The need for/investigation of additional water storage options.
- The need for specific wording such as clarification of “significant” and “from time to time,” and specifics regarding the Director’s appointment, duties and term.
- The need to recapture allocations in the southern river systems.
- The efficient use of water (water used for irrigation and oil well injection of particular concern).
- The possible repercussions of private parties holding licences for WCOs.
- The need to review current allocations and conversely, the need to protect current allocations.

Additional concerns included:

- Political aspirations should not enter into any river planning or allocation in this area.
- The material provided was too complex for the general public to understand. Public need to be better informed.

## Other responses

In addition to the completed response forms, a total of 56 other submissions were received during the consultation that provided additional response to the South Saskatchewan River Basin Draft Water Management Plan. All submissions have been forwarded to Alberta Environment. Following is a summary of the comments received.

The submissions have been grouped into three categories: From Citizens, From Municipalities, and From Other Organizations.

### From citizens

A total of 11 submissions were received from individual Alberta citizens who wished to comment on the draft water management plan. The submissions included a number of comments similar to those already documented during the consultation, such as:

- the amount of water available for allocation is based on incomplete science,
- concern about the use of water from the Red Deer River for additional irrigation, particularly for naturally arid areas (although, one respondent felt there would be economic and environmental benefit in the Red Deer area, that loss from seepage or evaporation could be managed, and there is sufficient water available if conservation practices are adopted),
- the amount of allocation currently proposed for the Red Deer River will have a detrimental effect on the aquatic health of the river,
- the need for the Province to explore additional water storage,
- efficient use of water at all levels of consumption must be a consideration,
- there should be no possibility of water diversion to the U.S.,
- clarification is required about how the Crown Reservation will be implemented,
- licences should be reviewed and monitored for compliance,
- only sustainable development will enhance the economic prosperity of the province (consider the overall effects of all development on the province's inter-connected ecosystems), and
- failure to consider the effects of GHG emissions on human health and global warming is a serious omission overall and would ultimately affect water quality.

Some respondents did not feel well enough informed to answer specific questions or felt the information/language used could have been simpler.

A detailed submission with specific recommendations was provided by two respondents:

- the proposed WCOs in the draft plan are not consistent with WCOs as defined in *The Water Act* and should be re-formulated to reflect scientifically based IFNs,
- parties, other than government, should be able to hold WCO licences,
- the Director should consider any relevant WCO when deciding whether or not to close a basin,
- Licences issued should be "subject to the terms of any applicable WCO,"
- transfer of allocation rights will ultimately lead to more intense water use and the Director should ensure "no significant reduction in the quantity or quality of return flow,"
- any investigation of storage to increase instream flow must include determining whether or not licensed entitlements include a right to enhanced flows through release of stored water,
- specific terms and conditions should be developed for the operation of provincial storage, including an appropriate review mechanism, and
- the Department should work with the federal government regarding achieving flow objectives.



One respondent submitted specific recommendations to accomplish the draft plan's primary objectives:

- new licences should only be issued for domestic or sustainable (without government subsidy) uses, and initial and ongoing fees should be charged for “non-domestic” use,
- the decision on SAWSP should be deferred until a socio-economic study has been completed,
- WCOs for each river should be equal to the IFNs necessary to protect the aquatic environment, with each Watershed Planning and Advisory Council (WPAC) issued new instream licences,
- the guidelines, criteria, and matters and factors regarding water allocation transfers should be clarified,
- current non-subsidized licences should begin paying royalties equal to the economic, social and environmental value of the allocation (or water stored),
- current subsidized licences should be reviewed to determine the amount of subsidy required to sustain efficient water use, and licence holders should enter into agreements with the provincial government and relevant WPACs to share their water allocation as necessary to ensure future water needs are met, aquatic environment is improved and apportionment is met,
- the plan should not be submitted to the Minister until approved by the WPACs, and
- licences not in compliance with the *Water Act* should be cancelled or reduced.

One respondent expressed his concern that constraints of time and money have hindered the participation of volunteer environmental organizations in the process and “grass roots” support is necessary for effective implementation of the plan. He also felt landowners adjacent to riparian areas must play an active role in the plan and be rewarded for maintaining healthy riparian areas.

## From municipalities

Twenty-six municipalities (26), largely located within the Red Deer River sub-basin, chose to submit their comments by correspondence. These municipalities expressed strong support for the following recommendations:

- The total amount of water for allocation in the Red Deer River sub-basin for use in the Red Deer River sub-basin should be 55% (868,460 dam<sup>3</sup>) of the median annual flow, with net consumption limited to 40% (631,600 dam<sup>3</sup>) of median annual flow. *A few municipalities recommended total water for allocation at 50% of the median annual flow, with net consumption limited to 45%.*

Some municipalities added that a mandatory review of the aquatic environment and reliability of licences be triggered when water allocations reach 40% (631,600 dam<sup>3</sup>), and again at 45% (710,500 dam<sup>3</sup>). The review would include representation from both the WPAC for the Red Deer River basin and municipalities.

It was recommended the SSRB draft water management plan be put on hold until there is clear discussion with the communities and MLAs to ensure a complete review of the Red Deer River water allocation. It is felt the concept of 50% for water allocation and 50% for healthy aquatic environment is achievable with strong partnership with the municipalities in the region.

- The Crown Reservation should not exceed 45% (710,500 dam<sup>3</sup>) of the median annual flow (*several municipalities recommended 50% of median annual flow*) of the Red Deer River since the volume of water for the Crown Reservation will be augmented by unused portions of water licences, stored water and return flows.

Several municipalities also recommended the potential uses of Crown Reservation water be the same as those for the Bow and Oldman River sub-basins, with a few noting in particular

consideration of the aquatic environment and innovative initiatives with very low net use of water.

- Clear policies for operation of the Dickson Dam should be implemented with the first priority to provide a minimum flow of 16 cms year-round. One municipality also encouraged the Province to develop a water storage strategy as part of the SSRB draft water management plan.

With regard to the Apportionment Master Agreement, approximately half the municipalities included the following recommendation:

- In each year, Alberta Environment should endeavour to operate the Red Deer, Bow and Oldman River systems on a 50/50/50 basis. When cuts to water licences are required to meet apportionment, they should first be made in water-short basins and when cuts are required in two or more basins, the cuts should be in proportion to the volume of allocations in each basin.

A few municipalities also emphasized the primacy of 50% of the median annual flow of the Red Deer River for use within the Red Deer River basin and that during water short periods in the Bow and/or Oldman River basins, the Red Deer River must not be required to pass more than 50% of its waters to Saskatchewan (i.e. water licences in the Red Deer River have first priority use of Red Deer River water).

One municipality felt that while treating the SSRB as a whole to meet apportionment requirement is currently essential, the plan should include a review process or sunset clause.

The following comments were also noted:

- There is clearly a management imbalance among the three main stems of the SSRB.
- Consider the efficient and effective use of water, as well as net use.
- 10% holdbacks on transfers “must” remain in the river through a WCO licence.
- The plan should receive mandatory review every 5 to 8 years (no longer than 10 years).
- The plan should be reviewed on completion of the integrated watershed management plans for the SSRB sub-basins.
- The plan should clearly state that no changes would be made without community consultation and input from the WPACs.
- Clarify whether or not diversion of water to a basin outside the SSRB is acceptable and the parameters that may make it acceptable.
- The WCO for the Red Deer River *downstream of the confluence with the Blindman River* is insufficient to protect the aquatic environment from April to October.
- Implement stringent WCOs in the Oldman and Bow River sub-basins to restore aquatic health and provide room for future domestic water needs.
- Consider reducing non-domestic water licences in the Oldman and Bow River sub-basins to provide a healthy aquatic environment.
- The plan should include clear limits on the availability of water for irrigation.
- WPACs will require provincial funding to successfully implement their roles.
- Complete a study on groundwater, including an overall water management and allocation plan.
- Alberta Environment must develop and include in the plan stringent requirements for communities that return waste water to the Red Deer River and develop a strategy to address the impacts of extensive livestock operations.
- Consult with the four BACs regarding any proposed changes to the draft plan.

One town noted their existing permit will be insufficient to meet their needs in 3 to 5 years and indicated they would like to drill more water wells.

## From other organizations

Correspondence was received from 18 organizations who wished to comment on the draft water management plan.

- A broader vision and objectives of prudent and progressive environmental health management should be incorporated in any approved water management plan, supported by legislative and policy decisions.
- A national Water Act is required to clarify the role of governments (federal, provincial, municipal) in providing safe drinking water and protecting watersheds.
- A watershed management framework should be developed with its primary goal sustainable water use.
- The draft plan does not adequately address the implications for the fishery, aquatic invertebrates and the habitat that depend on water remaining in river systems; this could be dealt with in a follow up fisheries management plan.
- Groundwater is an integral part of any river system and must be considered in any water management plan.
- It is the Province's role to ensure a reliable water supply by setting WCOs, protecting instream flows, and directing scientific research. WPACs are part of the management strategy but should not direct the effort.
- There should be more emphasis on establishing healthy river ecosystems rather than adhering to an outdated licensing/allocation system.
- The draft plan is a beginning only and should be reviewed and improved over time (based on improved knowledge), but implementation should not be delayed.
- Climate change and drought will have considerable impact on river flows. Strategies and plans must be developed to address these occurrences.
- It is questionable whether there needs to be basin closure, provided new licenses are subject to WCOs which provide for adequate instream flows.
- A more aggressive effort is needed for WCOs and the holdbacks on transfers to provide adequate aquatic protection and meet IFNs.
- Currently proposed WCOs are based on outdated science and there is no evidence they will result in improved river systems. Should be based on current science (IFN study). Additional study is also required.
- Licences for WCOs should remain the exclusive domain of the government.
- Water allocations must be available for stewardship groups to enable restoring of health watersheds (and the wetlands within them).
- Wording should reflect that BACs did not discuss "quality" when recommending WCOs.
- There should be clarification on when holdbacks will or will not be applied and an interim evaluation of the use of this tool.
- Specify how the Crown Reservation will be created and implemented and its relationship to the WCO.
- Only new applications should be subject to a Crown Reservation being in place. Wording should clarify that new WCOs will be applicable to any applications submitted after May 1, 2005.
- Must improve efficient use of water (e.g. metering).

- Conservation methods should be a mandatory condition on licences.
- Current licences should be reviewed.
- Future water allocations should be subject to access via the transfer system and use of unallocated waters by existing licensees.
- Wetlands created with irrigation spill water should be recognized as a valid re-use of water allocations held by the irrigation community.
- Any substantial flow abstraction on the Red Deer River resulting in reduced flows downstream will have serious impacts.
- Using water from the Red Deer River for additional irrigation, particularly for naturally arid areas is a bad idea.
- AENV should update the public regularly on activities of an apportionment committee as well as provide an annual report on the Master Agreement on Apportionment.
- The effects on the economics of primary agricultural production must be considered. Historical users may not hold water licences and will have to apply for a junior licence or purchase the rights to a more senior licence. A flexible and efficient system of licence transfers is required.
- The proposed policies could seriously limit development potential.
- Demand for transfers from senior licence holders will become too expensive for non-profit organizations (e.g. water co-ops). Provincial funding will be required to assist.
- Regulations guiding the transition to the “market trading” of diversion licences are required.
- Alberta Environment should remain integrally involved in review, approval and regulation of water transfers.
- Province should require large diversion holders to develop off-stream storage facilities and to accurately document future water diversion projections. Water diversions should be tied to specific end-use legal land descriptions or defined areas.
- The Province must investigate multi-purpose storage development in the Red Deer River basin.
- Make grants available for developing storage.
- Increased storage could provide viable water management options and should be listed for consideration in the draft plan.
- A mechanism should be developed to allow diversion holders to take more water if it is available in the river.
- A large and well developed irrigation industry relies heavily on the *Water Act* and existing licences and any changes must be agreed to by the Irrigation District licence holders.
- Public participation process and stakeholder involvement is too late in the process and lacks credibility.
- Difficult for environmental organizations to participate meaningfully in the process (due to constraints of funding, volunteer participation).
- The time provided does not allow organizations to build a consensus response.



**South Saskatchewan River Basin  
CONSULTATION ON  
DRAFT WATER MANAGEMENT PLAN  
October 2005 to January 2006**

**Response form**

**Appendix 1**

# South Saskatchewan River Basin DRAFT WATER MANAGEMENT PLAN

## Response Form

October 2005

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*Please use this form to submit your response. Response forms will be received until 4:30 pm, December 9, 2005. If you are attending a meeting, we ask that you submit this form before you leave. Optionally, you may submit your response on-line at [www.environment.gov.ab.ca](http://www.environment.gov.ab.ca) or you can mail your response to: Equus Consulting Group, 250, 9707 – 110 Street, Edmonton, AB T5K 2L9.*

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In order to complete this form, you will need a copy of the DRAFT Water Management Plan for the South Saskatchewan River Basin in Alberta. In addition, you may wish to refer to Background Information for Public Consultation on the South Saskatchewan River Basin DRAFT Water Management Plan. Copies are available from Alberta Environment on-line at [www.environment.gov.ab.ca](http://www.environment.gov.ab.ca) or on request at (call toll-free 310-0000, then 403-297-6250).

Additionally, you are encouraged to attend an open house and public meeting in late November/early December 2005 in locations in the South Saskatchewan River Basin (SSRB). The locations and times will be posted at the above web address and advertised in local newspapers.

## Help us analyze the results by answering the following:

Are you completing this form at a meeting?

If YES, what is the meeting location? \_\_\_\_\_

- NO  
 YES

Do you represent an organization with an interest in public water management?

If YES, please name the organization: \_\_\_\_\_

- NO  
 YES

In which SSRB sub-basin do you reside?

- RED DEER RIVER  
 BOW RIVER  
 OLDMAN RIVER  
 S. SASKATCHEWAN RIVER  
 NONE OF THE ABOVE

## Introduction

Alberta's *Water for Life* strategy describes Alberta's commitment to: (a) a safe, secure water supply; (b) healthy aquatic ecosystems, and (c) reliable, quality water supplies for a sustainable economy. In the SSRB, demand for quality water supplies is high and a plan to support a balance between allocation of water and conservation of healthy aquatic ecosystems is needed. Alberta Environment has prepared a Draft Water Management Plan (Plan) to introduce measures leading toward a sustainable balance. If adopted, this Plan will recommend water conservation objectives and the volume of water that may be available for future allocation. The Plan reflects, in large part, the advice of four Basin Advisory Committees.

The Plan describes recommendations that would advise the Minister of Environment and the Director, who are responsible for making decisions under the *Water Act*. The recommendations are intended to promote sustainable management of water in four SSRB sub-basins: the Red Deer, Bow, Oldman and S. Saskatchewan.

## Principal recommendations

### Bow, Oldman and S. Saskatchewan River sub-basins

Alberta Environment recognizes the limits for water allocations are being reached in the Bow, Oldman, and S. Saskatchewan River sub-basins. The Plan recommends that **Alberta Environment stop accepting applications for new water allocations in these sub-basins until a Crown reservation is in place in order to determine the purposes for unallocated water.** (Water allocation licences could still be obtained through transfers of existing water allocations.)

1. Do you agree with the recommendation to stop accepting applications for new water allocation in the Bow, Oldman and S. Saskatchewan River sub-basins?

- NO  
 YES  
 UNSURE

Comments:

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### Red Deer River sub-basin

*Supporting future growth while setting a limit on negative impacts on the aquatic environment*

The Plan recommends a limit on allocation of the water in the Red Deer River sub-basin be established in order to limit future impacts on the aquatic environment. The Plan has attempted to establish an allocation limit that will support future growth, and limit risk to existing and future licence holders. The Plan recommends that **the Crown reserve all water in excess of 600,000 cubic decametres (dam<sup>3</sup>), subject to further information about possible effects on the aquatic environment.** *The 600,000 dam<sup>3</sup> includes existing licences and pending allocations, sufficient water for the allowed irrigation area, and sufficient*

water for non-irrigation purposes to meet projected consumptive demand for the next 50 years (although later licences will provide less reliable water supplies).

2. Do you agree with the recommendation to reserve all water in the Red Deer River in excess of 600,000 dam<sup>3</sup> for the aquatic environment?

- NO
- YES
- UNSURE

Comments:

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## Water Conservation Objectives

Water conservation objectives (WCOs) define the minimum flows to remain in rivers. WCOs in this Plan, for rivers other than the Red Deer, recommend gradual flow restoration. In the Red Deer River, the WCO would permit allocation of water for consumption.

### Red Deer River

The Plan recommends the **WCO upstream of the confluence with the Blindman River** be either 16 cubic metres per second (cms), or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences and licences with a retrofit provision. The **WCO downstream of the confluence with the Blindman River** be: a) either 16 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences from November to March; b) either 10 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all future licences from April to October; and c) either 10 cms, or 45% of the natural rate of flow, whichever is greater at any point in time for all licences with a retrofit provision. *This WCO responds to natural low winter flows (the Dickson Dam is operated to augment low winter flows).*

3. Is the proposed WCO for the Red Deer River acceptable?

- NO
- YES
- UNSURE

Comments:

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## Bow (Bears paw Dam to Bassano Dam), Oldman, St. Mary, Belly and Waterton Rivers

The Plan recommends interim WCOs that would permit opportunities for flow restoration to be taken. The WCOs would be a flow rate 10% greater than the existing instream objectives (Bow and Oldman) or existing WCOs (St. Mary, Belly, and Waterton). This objective will apply to any licence issued after May 1, 2005. The intent is to gradually increase the amount of water retained in the rivers, in recognition that the lower reaches of these rivers have unhealthy riparian areas and degraded aquatic environments. The objective will permit some opportunities for improvement. Dam operations would not be changed.

4. Is the proposed WCO for the Bow River (Bears paw to Bassano Dam) acceptable?

- NO
- YES
- UNSURE

5. Is the proposed WCO for the Oldman River acceptable?

- NO
- YES
- UNSURE

6. Is the proposed WCO for the St. Mary River acceptable?

- NO
- YES
- UNSURE

7. Is the proposed WCO for the Belly River acceptable?

- NO
- YES
- UNSURE

8. Is the proposed WCO for the Waterton River acceptable?

- NO
- YES
- UNSURE

Comments:

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## Bow River (below Bassano Dam)

The Plan proposes a WCO of 17.1 cubic metres per second. This would permit opportunities to restore flow to be taken to help improve the (degraded) aquatic environment and the unhealthy riparian areas.

9. Is the proposed WCO for the Bow River (below Bassano dam) acceptable?

- NO
- YES
- UNSURE

Comments:

## S. Saskatchewan River

The Plan proposes a **WCO of 42.5 cubic metres per second** (the current rate of flow that Alberta Environment attempts to maintain at Medicine Hat). *This WCO would permit opportunities to restore flow to be taken to improve the aquatic environment and unhealthy riparian areas.*

10. Is the proposed WCO for the S. Saskatchewan River acceptable?

- NO
- YES
- UNSURE

Comments:

## Apportionment

The Plan recommends **all sub-basins of the SSRB continue to be treated as a single unit to meet requirements to provide water to provinces downstream** (*Master Agreement on Apportionment*). A committee of representatives from each sub-basin would provide advice to Alberta Environment regarding apportionment.

11. Do you agree with the apportionment recommendation?

- NO
- YES
- UNSURE

Comments:

# Water Management Strategies

The Plan recommends **Alberta Environment and water users should pursue water management strategies to help ensure water availability for economic development and for the aquatic environment.** Strategies being considered include improvements in administration, water markets for transfers, water conservation methods, managing high water flows for riparian health, watershed management plans, cooperative flow restoration, and allowing private parties to hold licences for WCOs.

12. Do you agree that water management strategies such as those listed above should be recommended in the Plan?

<input type="checkbox"/> NO
<input type="checkbox"/> YES
<input type="checkbox"/> UNSURE

Comments:

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## Other

Do you have comments on any other aspect or part of the Plan?

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Thanks for your response.



**South Saskatchewan River Basin  
CONSULTATION ON  
DRAFT WATER MANAGEMENT PLAN**

**October 2005 to January 2006**

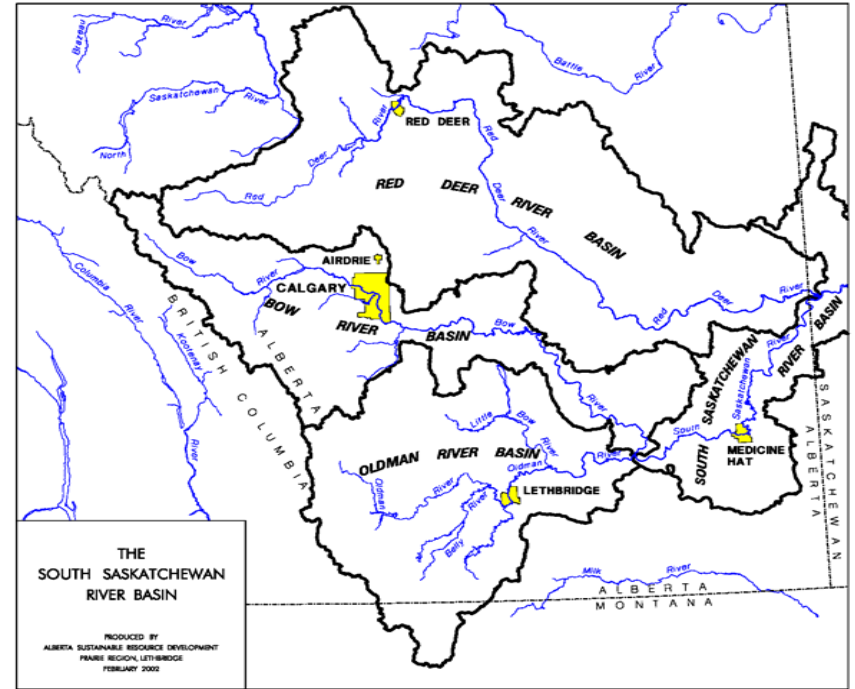
**Public meeting  
presentation notes**

**Appendix 2**



# South Saskatchewan River Basin Draft Water Management Plan

Finding the Balance Between Water Consumption and Environmental Protection in the SSRB



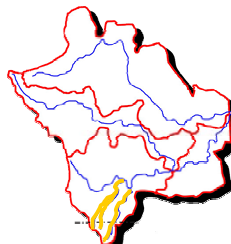
## Phase One Outcomes

### Direction

- transfers authorized
- water conservation holdbacks authorized
- recommend allocation cap on southern tributaries of Oldman River (St. Mary, Belly, Waterton)

### Outcomes

- 6 transfers approved (so far) (~20 applications pending)
- water has been withheld from approved transfers
- allocation cap



## Basin Advisory Committees



## Phase Two Key Objectives

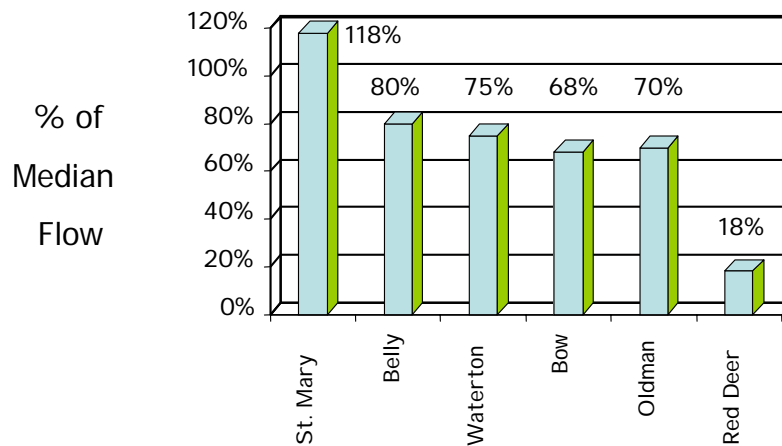
- Determine publicly acceptable balance: water consumption vs. aquatic environment
- Recommend **water conservation objectives** (WCOs) d/s of major dams & diversions
- Determine if, or how much, water is available for additional allocation (with WCOs)



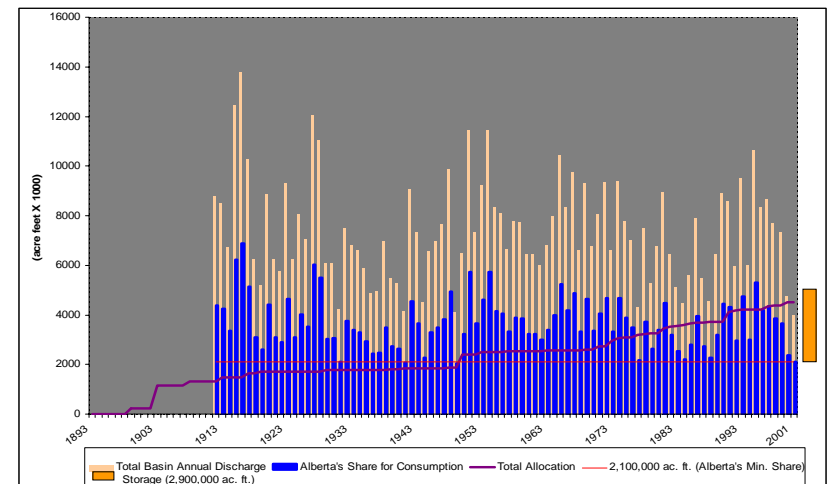
## Water Conservation Objectives

- How much water to leave in rivers for aquatic environment?
- Considering:
  - social development
  - economic development
  - aquatic environment

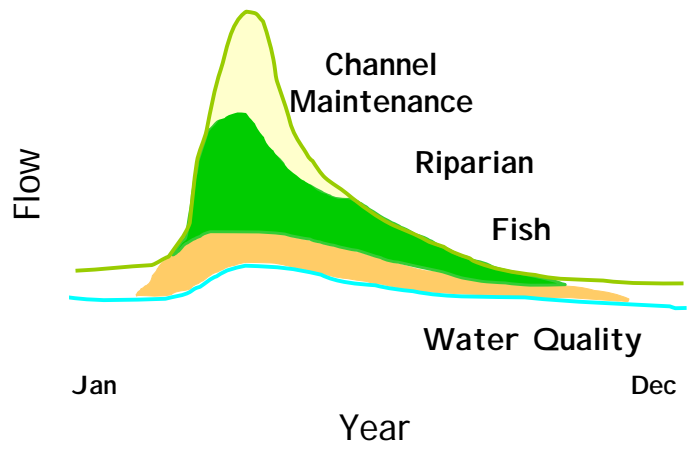
## Allocations by River



## Allocation / Total Discharge Volumes South Saskatchewan River Basin



## Instream Flow Needs



## The Challenge:

- highly allocated rivers
- aquatic environment adversely affected to varying degrees
- increasing demand for water
- commitment to respect existing licences and water-sharing agreements

## The Bottom Line

existing licences & agreements  
+  
protecting the aquatic environment  
+  
future growth

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= more water than is available

## The Core Questions

1. When should we stop allocating from the Bow and Oldman Rivers?
2. If now, should we try to restore some flows?
3. How much should we allocate from the Red Deer River?
4. What environmental / economic / social outcomes do we want?



## Key Recommendations of the Draft Plan

## Bow, Oldman and South Saskatchewan River sub-basins

- The balance between water diversion and protection of the aquatic environment is broadly satisfactory
- There is room for improvement on both sides

## Water Allocation Limits

The limits for water allocations are being reached in the Bow, Oldman, and South Saskatchewan River sub-basins.

AENV will stop accepting applications for new water allocations in these sub-basins until a Crown reservation is in place in order to determine how unallocated water should be used.

AENV will set the amount of water available for allocation in the Red Deer River sub-basin at 600,000 dam<sup>3</sup>.

## “Pros” of no new allocations...

- Transfers & conservation → real options
- Kick start innovation
- Sharing in dry years remains viable
- WFL goal: *within capacity of watersheds*
- Hedge against climate change unknowns
- Controls need for compliance action
- Necessary first step towards better management of aquatic environment



## “Con” of no new allocations...

- Perception that Alberta is “not open for business”

## Water will be available for future economic growth

To improve the efficiency, effectiveness and productivity of water use:

- Continued innovations in water administration,
- Water markets for transfers to re-distribute water already allocated, and
- Improvements in water conservation by water users.

## Water Conservation Objectives (WCOs)

### Bow, Oldman and South Saskatchewan River sub-basins

- Use opportunities to restore some flows through voluntary actions
- For improvement to aquatic environment and riparian health
- Research needed to refine

## Red Deer River WCO

- Permit water diversion for economic development
- There will be impacts on the aquatic environment
- Question for public:

*What balance do you want to see?*

## SSRB Managed as One Basin

AENV will continue to consider the SSRB as a whole in order to meet the *Master Agreement on Apportionment*.

A committee of sub-basin representatives will be formed to provide advice to AENV on how best to meet apportionment on an operational basis.

## A New Era for Water Management

### More.....

- Intensive
- Innovative
- Flexible
- Concern about aquatic environments
- Sustainable

