

SPECIAL AREAS BOARD

SPECIAL AREAS WATER SUPPLY PROJECT

Appendices to Public
Consultation Results
May to July 2005

August 2005

Appendix 1: Public meeting schedule

Community	Date	Location	Time
CONSORT	June 9	Sportex, 4604 – 15 th Avenue	7:00 – 9:30 pm
STETTLER	June 13	Community Hall, 5101 – 46 th Avenue	1:15 – 3:45 pm
CASTOR	June 13	Community Hall, 4801 – 50 th Avenue	7:00 – 9:30 pm
HANNA	June 14	Legion Hall, 224 – 2 nd Avenue West	7:00 – 9:30 pm
SUNDRE	June 16	Royal Canadian Legion, 135 – 6 th Avenue SE*	1:15 – 3:45 pm
CARSTAIRS	June 16	Community Hall, 1100 Lackner Way	7:00 – 9:30 pm
RED DEER	June 22	Black Knight Inn, 2929 – 50 th Avenue.....	7:00 – 9:30 pm
OYEN	June 23	Legion Hall, 207 – 5 th Avenue East.....	7:00 – 9:30 pm
BROOKS	June 24	Heritage Inn & Convention Centre, 1217 – 2 nd St.	1:15 – 3:45 pm
DRUMHELLER	June 27	Drumheller Inn, 100 South Railway Avenue SE	7:00 – 9:30 pm
BINDLOSS	June 28	Community Hall	1:15 – 3:45 pm

*The address in Sundre was advertised in error as “NE” rather than “SE.” A notice was posted at the NE location providing the correct location of the meeting.

**THE WATER ACT
PUBLIC NOTICE**

**PROPOSED DIVERSION AND INTERBASIN TRANSFER OF WATER BETWEEN
THE RED DEER RIVER BASIN AND SOUNDING CREEK BASIN AND THE BATTLE RIVER BASIN.**

Notice is given that the Special Areas Board filed an application under the provisions of the Water Act to divert up to 76,500 cubic decameters of water annually at a maximum rate of 7.08 cubic meters per second from the Red Deer River at SSW 15-38-22-4 for multi-purpose use in the County of Stettler, County of Paintearth and Special Areas 2, 3 and 4. Water users will be located in the Red Deer River Basin, the closed Sounding Creek Basin and the Battle River Basin. Sounding Creek does not contribute to flows in the Battle River or North Saskatchewan River. Transfer to the Battle River Basin would be a supply for a treated domestic water supply line.

The purpose of this diversion is for multi-purpose use, including stockwater, domestic, municipal, industry, irrigation and waterfowl conservation. Section 47 of the Water Act requires that a Special Act of the Legislature be passed to allow for an interbasin transfer of water. The Special Act may only be passed following public consultation.

As part of the public consultation, the Special Areas Board will be holding Open Houses on the following dates and places to provide the public with information respecting the proposed diversion and interbasin transfer and to solicit the public's input on the proposed diversion and interbasin transfer:

Community	Date	Location	Time
CONSORT	June 9	Sportex, 4604 – 15 th Avenue	7:00 – 9:30 p.m.
STETTLER	June 13	Community Hall, 5101 – 46 th Avenue	1:15 – 3:45 p.m.
CASTOR	June 13	Community Hall, 4801 – 50 th Avenue	7:00 – 9:30 p.m.
HANNA	June 14	Legion Hall, 224 – 2 nd Avenue West	7:00 – 9:30 p.m.
SUNDRE	June 16	Royal Canadian Legion, 135 – 6 th Avenue NE	1:15 – 3:45 p.m.
CARSTAIRS	June 16	Community Hall, 1100 Lackner Way	7:00 – 9:30 p.m.
RED DEER	June 22	Black Knight Inn (Banquet Room), 2929 – 50 th Avenue	7:00 – 9:30 p.m.
OYEN	June 23	Legion Hall, 207 – 5 th Avenue East	7:00 – 9:30 p.m.
BROOKS	June 24	Heritage Inn & Convention Centre (Banquet Room), 1217 – 2 nd Street	1:15 – 3:45 p.m.
DRUMHELLER	June 27	Drumheller Inn (Drumheller Room), 100 South Railway Avenue SE	7:00 – 9:30 p.m.
BINDLOSS	June 28	Community Hall	1:15 – 3:45 p.m.

Further information respecting the proposed diversion and interbasin transfer may be obtained from:

**Special Areas Board
Box 820, Hanna, Alberta T0J 1P0
Phone: (403) 854-5600 Web site: www.specialareas.ab.ca**

Your comments respecting the proposed diversion and interbasin transfer are important and may be forwarded to the Special Areas Board at the above address.

Placement schedule in area newspapers

MEETING LOCATION	MEETING DATE	NEWSPAPER	INSERT #1	INSERT #2
Consort	June 9	Consort Enterprise	May 24	May 31
Stettler	June 13	Stettler Independent	May 25	June 8
		Bashaw Star	May 24	June 7
		Lacombe Globe	May 24	June 7
		Ponoka News	May 25	June 8
		Camrose Canadian	May 29	June 5
Castor	June 13	Castor Advance	May 26	June 9
		Coronation Review	May 24	June 7
Hanna	June 14	Hanna Herald	May 24	June 7
Sundre	June 16	Sundre Round Up	May 25	June 7
		Innisfail Province	May 24	June 7
		Olds Albertan	May 24	June 7
		Olds Gazette	May 25	June 8
Carstairs	June 16	Carstairs Courier	May 24	June 7
		Didsbury Review *	May 24	June 14 *
		Three Hills Capital	May 25	June 8
Red Deer	June 22	Red Deer Express	June 1	June 15
		Sylvan Lake News	June 1	June 15
		Red Deer Advocate (daily)	June 15	June 20
Oyen	June 23	Oyen Echo	May 24	June 14
Brooks	June 24	Brooks & County Chronicle	May 30	June 13
		Brooks Bulletin	May 31	June 14
		Bassano Times	May 31	June 14
		Strathmore Standard	June 2	June 16
Drumheller	June 27	Drumheller Valley Times	June 7	June 14
		Drumheller Mail	June 8	June 22
Bindloss	June 28	Medicine Hat News (daily)	n/a	June 23

* Due to a misprint (a missing page), the advertisement did not appear in the Didsbury Review on June 7, as planned. It was re-run in the next edition, a week later.

Appendix 3: Project brochure and response form

Information About The Special Areas Water Supply Project

June 2005

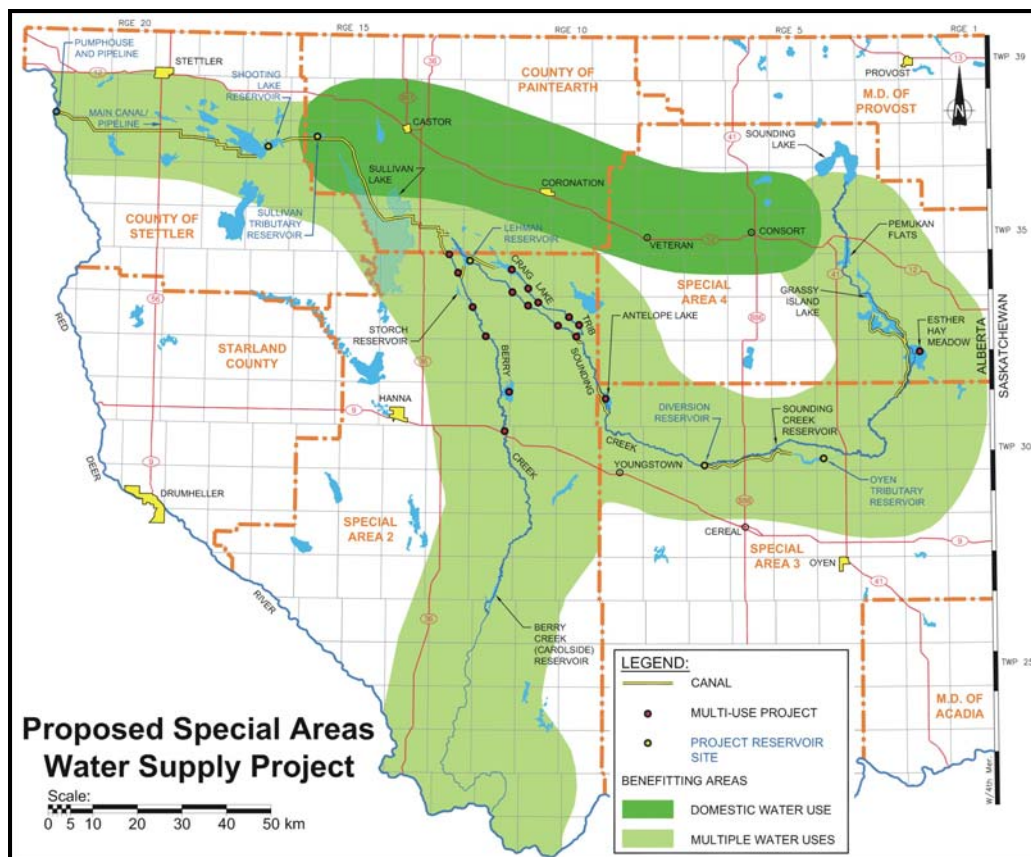
This pamphlet describes an application made by the Special Areas Board under the Water Act to divert water from the Red Deer River. It includes a description of a proposed inter-basin transfer of water (which would require legislative approval under the Water Act).

1. The Purpose of the Water Diversion

The Special Areas Water Supply Project (SAWSP) is proposed to divert up to 76,500 cubic decameters (an average of 53,400 cubic decameters) of water annually at a maximum rate of 7.08 cubic meters per second from the Red Deer River as a long-term solution to recurring droughts in the Special Areas. Application for water diversion from the Red Deer River was made in November 2003 in order to provide an improved water supply to landowners and communities located in Special Areas 2, 3 and 4, and in the Counties of Stettler and Paintearth.

Low precipitation and a lack of secure water supply have caused severe hardships in these Special Areas. These characteristics remain impediments to diversifying economic opportunities, stabilizing farm incomes and improving social conditions. Providing an improved water supply will support economic growth and reduce unemployment and out-migration from the Special Areas. It will also improve habitat and range conditions within the water supply area. The diverted water would support the following improvements:

- Stock watering, municipal and rural domestic or household needs along the conveyance routes.
- Multi-use projects that would create or stabilize 3,350 ha (8,280 ac) of wetlands for waterfowl conservation.
- Sprinkler and backflood irrigation projects that would improve agricultural prospects on 10,430 ha (25,780 ac).
- Maintenance of 423 km of stream (canals and natural channels) for wildlife habitat and stock watering.



SAWSP would include diversion works consisting of a pump station on the Red Deer River south of the Hamlet of Nevis (SSW 15-38-22-W4) and a 4.5 km pipeline. An 84 km main canal or pipeline would convey water to the headwaters of Sounding and Berry Creeks. Storage reservoirs would be developed along the main canal at Shooting Lake and on a tributary to the northwest arm of Sullivan Lake.

A distribution system within Sounding and Berry Creek basins would involve upgrades of existing works or new construction of about 94 km of canals, channel improvements, two water supply reservoirs, and 17 multi-use projects.

2. Protection of the “Natural Flow” of the Red Deer River

Alberta Environment will soon establish water conservation objectives as part of a Water Management Plan for the Red Deer River. These objectives define the amount of water that must be left in the river to protect living species and their habitats. SAWSP will use off-stream storage to meet its needs during low flow periods when pumping is curtailed to protect (future) water conservation objectives for the Red Deer River.

A Water Conservation Objective is the amount and quality of water necessary for the protection of a natural water body, its aquatic environment, or any part of them, or for protection of non-withdrawal uses of water. Water Conservation Objectives are established by the *Water Act* Director.

Based on computer analysis of 68 years of flows in the Red Deer River, the median requirements of SAWSP will be approximately 5% of the median natural flow of the Red Deer River at Nevis, except in October when median SAWSP requirements are approximately 16% of median natural flow. During October, natural flow on the Red Deer River is relatively low and SAWSP demands are high due to filling of the multi-use projects.

3. The Effect on Other Water Users on the Red Deer River

All water licences are granted in order of the date of application. All existing water users will have priority of allocation over SAWSP, and therefore will be protected from a loss of their supply due to diversion to SAWSP. Municipalities drawing water from the Red Deer River hold licences that include sufficient allocation to service population growth (as projected) for at least the next 50 years. All municipal users except the proposed Stettler Regional Pipeline have priority over SAWSP.

Future applicants for water from the Red Deer River would have a lower priority for use than would SAWSP. In times of low water availability, these users would legally have a lower priority for water supply than SAWSP. However, experience in Southern Alberta has shown that in practice, licence holders are able to cooperate and share water during times of low water supply. Off-stream storage within SAWSP provides considerable flexibility in operating the project.

4. The Effect on the Red Deer River’s Contribution to Apportionment

Alberta has agreed to send at least 50% of the natural flow of the entire South Saskatchewan River Basin downriver to other provinces that require the water (apportionment).

During the years 1975 to 1995 (the latest available information), the Red Deer River contributed an average of 98.4% of its natural flow to apportionment. If SAWSP had been built 20 years ago, the Red Deer would have contributed an average of 94.8% of its natural flow to apportionment.

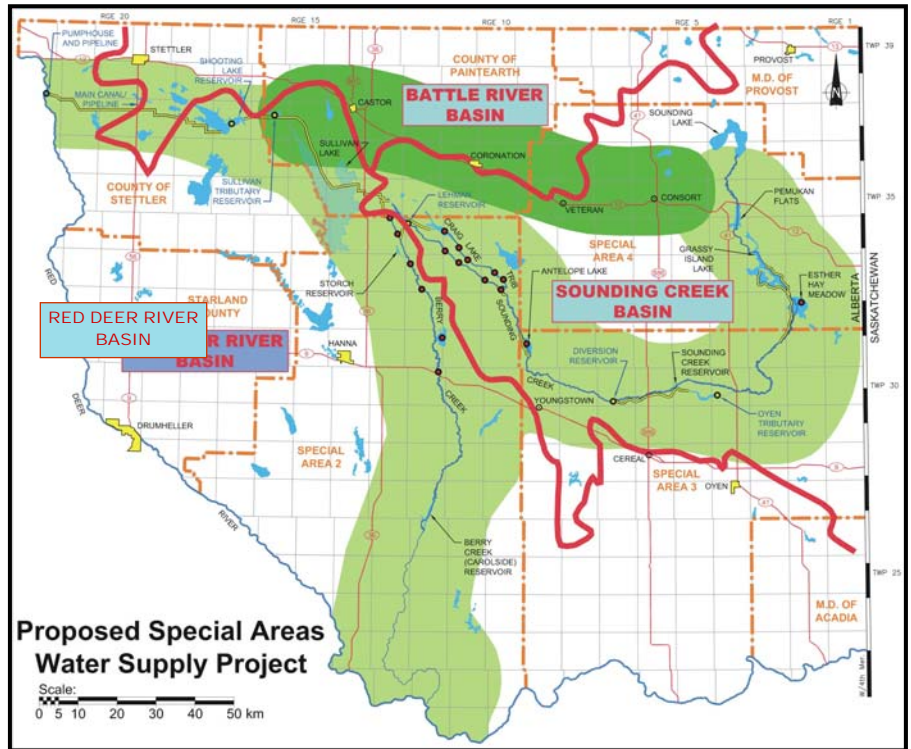
5. Inter-Basin Transfer

The *Water Act* requires a special Act of the legislature to approve inter-basin transfer between major river basins because such transfers could result in (a) introduction of alien species into the receiving basin, or (b) net loss of water available for use by the people living in the basin which is the source of the transfer. The South Saskatchewan River and North Saskatchewan River Basins are considered major basins.

SAWSP has requested approval of an inter-basin transfer of surface water from the Red Deer River Basin into the Sounding Creek Basin (directly adjacent) because this is likely the only opportunity to provide water to meet the needs of residents living there.

As the Sounding Creek Basin is a closed system (does not contribute surface flow to the Battle River), transfer of biota between river basins is not an issue. There would be no flow of surface water from one major river basin to another.

Unfortunately, the Battle River is not a practical source of water.



6. Economic Analysis

Costs

Capital costs of the project (Year 2004 dollars) are described below:

Diversion Works	\$25,270,000
Main Canal and Reservoirs	\$99,090,000
Distribution System	\$67,920,000
Total Cost*	\$192,280,000

*Costs include 20% contingencies and 15% engineering. Land costs are not included. About 50% of the land in the Special Areas is leased Crown land.

Annual operation and maintenance costs are estimated to be approximately \$3.1 million, (including \$1.6 million for energy to power the pumps).

In similar major water supply projects in the South Saskatchewan River Basin, the province has paid for construction and operation. Water users pay a fee for the delivery of the water.

Benefits

A socio-economic assessment (Watrecon 2005) identified direct **quantified** benefits at a provincial level in the range of \$8.5 to \$9.6 million per year; supporting between 60 and 91 person-years of new employment. Over a 50 year period, the economic benefits are estimated to be about 70 cents per dollar invested in capital and operating costs. Regional incomes would increase by \$8.7 to \$9.8 million.

Construction of SAWSP and related facilities would generate considerable short-term benefits. The regional construction benefits include 1,327 person-years of employment and \$59.8 million in labor income.

Other **unquantified** benefits include:

- opportunities for agricultural diversification and intensification and opportunities for regional value-added businesses,
- reduced stress and uncertainty for farm families caused by periodic droughts, and stabilization of regional population,
- reduced drought relief demands on governments (when pumping from the Red Deer is curtailed because of low flows, stock water and irrigation users will be supplied from off-stream storage within the SAWSP),
- improved wetland and upland habitat for the protection of wildlife, including species at risk in Alberta, and
- increased opportunities for water-based recreation.

7. Environmental Considerations

Habitat

The Special Areas has some of the largest remaining tracts of native mixed-grass prairie and its associated ecosystem in Canada. The SAWSP would minimize loss of native grasslands through the use of natural channels as the conveyance system. Most of the land area that would be irrigated is currently under cultivation. Land uses on environmentally sensitive Crown leased land would be controlled by the Special Areas Board. The project would make possible the implementation of range management systems which would lead to improved range conditions and increased wildlife habitat diversity, foraging opportunities, thermal protection and nesting cover.

SAWSP would provide significant benefits to wetland-related wildlife species. As currently proposed, the project would create or enhance 17 wetland projects that would provide about 3,350 ha (8,280 ac) of high quality wetlands. In addition, the project would provide about 423 km of flowing streams (natural channels with riparian vegetation, and canals). Pumped diversions and releases from balancing reservoirs would ensure valuable wetland habitat would still exist in the Special Areas during periods of drought when it is most needed by wildlife.

Water Quality

Water quality will be improved over the current situation, because the amount of water flowing through the channels will be increased. However, changes in water quality can occur when stream and reservoir areas are expanded. Studies to date project that water quality changes will rarely exceed guidelines. Salt absorption from the beds of reservoirs is the most likely cause of water quality change—occasional exceedences in concentrations of salts, calcium, magnesium and sodium are anticipated to be limited to the lower portions of Sounding Creek, primarily early in the irrigation season. The magnitude and frequency of exceedences will not impact on project benefits or the environment. A monitoring and contingency system will be implemented to detect and address changes in salt concentrations above guidelines.

Water quality will also be affected by adjacent land uses, and therefore exceedences in coliform bacteria levels, phosphorus and turbidity (clarity) may be experienced from time to time, as they are throughout the South Saskatchewan River Basin.

Special Areas Water Supply Project Response Form

June 2005

Please use this form to submit your response. Optionally, you may submit your response on line by visiting the Special Areas Board web site www.specialareas.ab.ca and clicking on SAWSP - RESPONSE FORM.

Please ask for any assistance you require to complete this form: We suggest:

- a) Refer to the document entitled: "Information About The Special Areas Water Supply Project, June 2005"
- b) Attend one of the open house meetings scheduled this month in locations throughout the area to have your questions answered. Optionally, you may phone the Special Areas Board at (403) 854-5600).
- c) Refer to the SAB web site (www.specialareas.ab.ca).

Help us analyze the results by completing the following:

Did you attend a meeting about the SAWSP?

If YES, where? _____.

- NO
 YES

Do you represent an organization with an interest in the SAWSP?

If YES, please name the organization _____.

- NO
 YES

Please provide the first 3 digits of your postal code:

(e.g. T6H)

Introduction

The Special Areas Water Supply Project (SAWSP) is being proposed as a long-term solution to recurring droughts in the Special Areas. Water will be diverted from the Red Deer River to supply much of the Special Areas as well as parts of the Counties of Stettler and Paintearth.

The project will include diversion works on the Red Deer River, south of Nevis; an 84 km main canal (or pipeline) would convey water to the headwaters of Sounding and Berry Creeks, and there would be two storage reservoirs along the conveyance route. Natural channels in the Berry and Sounding Creek Basins would be used to the extent possible to distribute water to users in Special Areas 2, 3 and 4.

The Purpose of the Water Diversion

1. Do you feel adequately informed about the need for the SAWSP, and the scale of the project's conveyance works?

NO
 YES

Comments:

Protection of the "Natural Flow" of the Red Deer River

2. Is the effect of the SAWSP on the flow of the Red Deer River acceptable?

NO
 YES
 UNSURE

Comments:

The Effect on Other Water Users on the Red Deer River

3. Are you satisfied that existing water users on the Red Deer River will not be affected by the SAWSP?

NO
 YES
 UNSURE

Comments:

The Effect on the Red Deer River's Contribution to Apportionment

4. Is the effect of the SAWSP on the contribution of the Red Deer River to apportionment acceptable?

- NO
- YES
- UNSURE

Comments:

Inter-Basin Transfer

5. Do you think it's appropriate to transfer surface water from the Red Deer River Basin into the Sounding Creek Basin (given the conditions described in the information provided)?

- NO
- YES
- UNSURE

Comments:

Economic Analysis

6. Do you think public investment in SAWSP is merited, given the estimated economic, social and environmental benefits?

- NO
- YES
- UNSURE

Comments:

Environmental Considerations

7. Are you satisfied with the efforts to avoid negative environmental effects and to gain environmental benefits?

- NO
- YES
- UNSURE

Comments:

Additional Comments

If you are attending an open house, please deposit this form at door before you leave.

Thanks for your input.

Responses will be received until July 29, 2005.

Return to:
Equus Consulting Group Inc.
250, 9707 – 110 Street
Edmonton, AB T5K 2L9