

Newsletter

South Saskatchewan River

WATERSHED STEWARDS INC.

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The South Saskatchewan River Watershed

The South Saskatchewan River Watershed incorporates a broad diversity of water users and water-related activities. The River is fed by three major tributaries in Alberta: the Red Deer, Bow, and Oldman Rivers. These rivers originate on the eastern slopes of the Rocky Mountains where the shape of the land consists of steep slopes at high elevations, and converge near the Alberta-Saskatchewan boundary to form the South Saskatchewan

River. The total drainage area for the South Saskatchewan River within the province is approximately 35,000 km², and about 325,000 people reside in the South Saskatchewan River Watershed.

The Watershed is comprised of Mixed Grassland, Moist Mixed Grassland, Aspen Parkland and the Boreal Transition. However, agricultural use in all four areas has altered the landscape. In the Moist Mixed Grasslands and Aspen Parkland, eighty



(80) percent of the landscape has been altered while agriculture use has altered 50 percent of the Mixed Grassland and Boreal Transition eco-regions.

A message from Harold Martens, Interim Chair of the South Saskatchewan River Watershed Stewards Inc.



I would like to thank all of those who have dedicated their valuable time and energy to the Watershed Planning process. Your hard work over the past few years will help to ensure the quality of our source water. The planning process has been a time to become acquainted with many people from across our province. As well, most of us have some personal at-

tachment to this water basin, and we recognize its value to Saskatchewan residents.

As we begin the implementation phase of the Plan, we must continue to build upon a solid foundation of effective teamwork with strong communication and consensus.

Thank you for all of your help.

~ Harold Martens

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South Saskatchewan River Watershed Stewards Inc.

www.southsaskriverstewards.ca
 Email: info@midsask.ca
 Telephone: 1.306.867.9566
 Fax: 1.306.867.9559
 Toll free: 1.888.929.9990
 Mailing Address: 410 Sask Ave. W
 Box 176 Outlook, SK S0L 2N0

More information on the Source Water Protection Plan:

Jeff Olson, Senior Watershed Analyst
 Saskatchewan Watershed Authority
 1.306.786.1364
jeff.olson@swa.ca



South Saskatchewan River Watershed Source Water Protection Plan

Residents of the South Saskatchewan River Watershed, with assistance from the Saskatchewan Watershed Authority and other agencies, have prepared the ***South Saskatchewan River Watershed Source Water Protection Plan***.

To facilitate planning and encourage local participation, the South Saskatchewan River Watershed was divided into the North, Diefenbaker and West watershed planning areas.

The Plan was developed by the Watershed Advisory Committee in each watershed planning area with critical support from the technical Committee. The membership of the Watershed Advisory Committees includes representatives from local municipalities, First Nations, and industry, environmental and agricultural interest organizations. Technical support was provided by a variety of provincial and federal government agencies and from Ducks Unlimited Canada and the City of Saskatoon.



Residents were given the opportunity to learn more about the South Saskatchewan River Source Water Protection Plan and provide feedback during open houses which were conducted in 10 communities in February and March of 2007. In addition to offering information about the plan, each open house dealt with specific issues relevant to the areas including: water quality and apportionment, oil and gas, storm water, reservoir development, the operation of Gardiner Dam, Lake Diefenbaker water levels, stewardship and economic development.

The Plan contains priority issues identified by the Watershed Advisory Committee, which include:

1. Economic Development



The South Saskatchewan River, including Lake Diefenbaker, provides a reliable source of water for drinking, agriculture, industry, recreation and other uses.

To ensure future economic development will maintain a high standard of water quality in the South Saskatchewan River, the Watershed Advisory Committees have recommended the following:

Protect source water by coordinating the economic and environmental needs of the watershed.

Promote responsible development around Lake Diefenbaker by supporting the Land Use Planning initiative of the Mid-Sask Regional Economic Development Authority.

2. Groundwater

Groundwater is a source of drinking water for many people in the watershed. Groundwater resources are extensive in some parts of the South Saskatchewan River Watershed and limited in other parts. It can be difficult and expensive to determine the actual quantity of groundwater that is available for use.

Groundwater quality varies throughout the watershed, and many things that are considered “contaminants,” such as arsenic, selenium, uranium, nitrate, occur naturally. Human activities such as agricultural practices, oil and gas exploration and production, and the use of septic systems, can also contaminate groundwater. And once contaminated, groundwater is not easily restored to its former condition.

To protect groundwater in the South Saskatchewan River Watershed, the Watershed Advisory Committees have recommended the following:

To encourage proper water wellhead protection.

To promote the proper decommissioning of abandoned water wells.
To encourage rural residents to test their well water through the Saskatchewan Watershed Authority's *Rural Water Quality Advisory Program*.

3. Lake Diefenbaker

The Gardiner Dam controls water levels in Lake Diefenbaker, a reliable source of water for many people in Saskatchewan. The Saskatchewan Watershed Authority operates the Gardiner Dam.



Different water users and managers often have different expectations of what water levels should be. Seasonal variations can make meeting all of these expectations particularly difficult.

The Watershed Advisory Committees have recommended the following in order to improve dam operations and communication between watershed residents and the Saskatchewan Watershed Authority on the operation of Gardiner Dam:

Develop an operation plan and communication strategy for Gardiner Dam and Lake Diefenbaker water levels.

Request the Saskatchewan Watershed Authority provide a quarterly report to local residents on the operation of Gardiner Dam.

Develop the Lake Diefenbaker/Gardiner Dam Advisory Committee to give advice on optimum lake levels for stakeholders.

4. Stewardship

Stewardship means caring for land and the land's associated resources and maintaining healthy ecosystems for future generations.

Wetlands are important for source water protection because they perform functions such as groundwater recharge, water storage, flood control, sediment and residue trapping, shoreline protection, and nutrient cycling and storage.

To enhance stewardship practices within the South Saskatchewan River Watershed, the Watershed Advisory Committees have recommended the following:

To improve storm water discharge from communities in the watershed.

To encourage agricultural producers to adopt practices that improve water quality in the watershed, through programs such as Environmental Farm Plans and Agri-Environmental Group Plans.

To maintain existing wetlands, including associated riparian, upland and wetland habitats, to protect their ecological function in protecting source water.



Copies of the *South Saskatchewan River Watershed Steward's Source Water Protection Plan* are available online at www.swa.ca. For more information on the draft Plan please contact Jeff Olson at (306) 786-1364 or Collin McGuire at (306) 953-3243, or e-mail southsaskatchewanplan@swa.ca.

Abandoned Well Decommissioning

All watershed residents have an interest in protecting source water and, as such, all should be responsible for the implementation of this Source Water Protection Plan. Everyone should and can do their part. That includes big parts, such as being a councilor for a city or rural municipality which is responsible for the drinking water of hundreds of people, or small parts, such as urban people being educated about where water comes from and wastewater goes, practicing stewardship and testing and treating the water on your own farm. Get involved and do your part!

For more information on watershed planning and implementation in the South Saskatchewan River Watershed, contact

*Jeff Olson,
(306) 786-1364
Collin McGuire,
(306) 953-3243*

*Jeff Olson, Saskatchewan
Watershed Authority
2nd Floor, 120 Smith Street W.
Yorkton SK S3N 3V3
southsaskatchewanplan@swa.ca*

The majority of communities and most rural residents living in the South Saskatchewan River Watershed are dependant on groundwater wells to meet their water supply needs including drinking water. However, wells no longer in use can become a potential hazard to groundwater resources.

Groundwater is obtained from underground formations known as aquifers - saturated soils which can yield water economically and in sufficient quantity to a well. Normally, the layers of soil overlying the aquifer (called surficial glacial tills) protect groundwater by holding most of the contamination from the surface until it can be naturally broken down. However, any time a well is dug down to an aquifer in order to access groundwater, an avenue for contamination of that groundwater is opened. The chance of contamination is even greater if the well is located in a low-lying area that receives runoff.

Land owners can help remove that pathway for contamination through

proper decommissioning of abandoned wells. Decommissioning wells also ensures the public's safety by preventing people and animals from becoming trapped down a well, and it prevents damage to machinery that may inadvertently run across an abandoned well.



While the decommissioning procedure differs if the well in question is a small-diameter (drilled) well or a large-diameter (bored or hand-dug) well, it generally involves filling and sealing the well

with a suitable uncontaminated material such as bentonite and soil in a manner as to prevent water from moving up or down the old well column.

While there is currently no reliable data on the exact number or location of abandoned wells in the province, the Saskatchewan Watershed Authority is working with landowners to collect data on the number and location of abandoned wells.

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