

SIPA

TIME TO IRRIGATE

Volume II



The Economic, Social and Environmental Benefits of Expanding Irrigation in Saskatchewan

Prepared for the Saskatchewan Irrigation Projects Association
By Clifton Associates Ltd. of Regina, Saskatchewan
October 2008

This report into the Economic, Social and Environmental Benefits of Expanding Irrigation in Saskatchewan is the second of two volumes.

The First Volume examines the Economic, Social and Environmental Benefits of Expanding Irrigation in the Lake Diefenbaker Region.



Saskatchewan Irrigation Projects Association

Since 1996 the Saskatchewan Irrigation Projects Association (SIPA) has been the voice of the irrigator. SIPA is dedicated to the growth of irrigation in Saskatchewan through both the expansion of private irrigation and the development and expansion of irrigation districts.

SIPA's mandate is to: represent the interests of our irrigation membership in Saskatchewan and to provide a common voice for issues concerning irrigators. SIPA operates on the basis of the following three core values:

1. Development of irrigation policies must occur from the producers up to the decision makers.
2. To protect our environment through good stewardship of irrigation practices.
3. SIPA and its members must partner with government, industry, recreation, wetlands and others who have a stake in our water resources.

SIPA has been established to meet the following four goals:

1. To be the advocate for irrigation projects in Saskatchewan, representing and lobbying irrigation concerns on behalf of the association and its members to government and stakeholders and to make SIPA the point of entry for new projects and to assist in their formation.
2. To develop and implement a strategy to promote the benefits of irrigation.
3. To provide direct input to government and assist in setting policies being made by government departments that have an impact on irrigation and to provide options and recommendations for the implementation of those policies.
4. To develop a process to assist in the expansion of irrigable acres.

SIPA can be reached at the following points of communications:

Roger Pederson, Chairman, SIPA
Larry Lee, Vice Chairman, SIPA

Sandra Bathgate - Secretary/Treasurer, SIPA
Ph. (306) 796-4420
email: sbathgate.sipa@sasktel.net

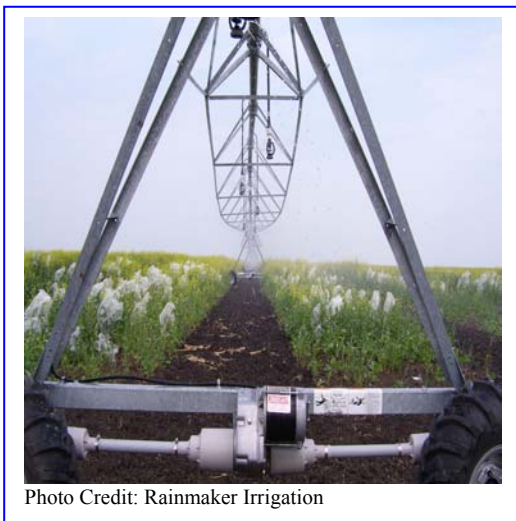


Photo Credit: Rainmaker Irrigation

The Project Team

The study project team consists of several companies and professionals with provincial, national and international experience in irrigation development.

The project has been led by Clifton Associates Ltd., Water Resource Consultants and M R 2 – McDonald & Associates of Regina, KAECI of Saskatoon and Toma, Bouma Management Consultants of Edmonton.

The Project team who has completed the work consisted of:

- Dr. Graham F. Parsons, Vice President, Clifton Associates Ltd. and Project Manager.
- Dr. Surendra Kulshreshtha, President of KAECI and Professor of Agricultural Economics at the University of Saskatchewan.
- Mr. Ray Pentland, President of Water Resource Consultants Inc. and specialist in hydrology and the management of Lake Diefenbaker waters.
- Mr. Darrell Toma, Partner with Toma, Bouma Management Consultants and specialist in Alberta irrigation development and related value chains and rural economic development needs.
- Mr. Roger McDonald, President of MR2 – McDonald & Associates and specialist in municipal and industrial water systems.
- Mr. Greg Vogelsang, Senior Vice President, Clifton Associates Ltd. and specialist in environmental impact assessments.
- Mr. David Kent, Chief Engineer, Clifton Associates Ltd. and specialist in rural agri-processing and environmental licensing.
- Mr. Keith Schneider and Mathew Kreke specialists in municipal financing, regional development and tourism.
- Mr. Toby Thorp, Environmental Scientist, Clifton Associates Ltd.



Photo Credit: Lake Diefenbaker Tourism Committee

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- The Board of Directors of the Saskatchewan Irrigation Projects Association consisting of:
 - Roger Pederson, Chairman, Outlook
 - Kelvin Bagshaw, Vice-Chairman, Birsay
 - Sandra Bathgate, Secretary/Treasurer, Central Butte
 - BJ Boot, Board Member, LDDA, Outlook
 - Jon Könst, Board Member, LDDA, Outlook
 - Larry Lee, Board Member, LDDA, Outlook
 - Howard Steinley, Board Member, SWDA, Rush Lake
 - Ron Tittle, Board Member, SWDA, Consul
 - Don Fox, Board Member, SEDA, Moose Jaw
 - Dave Ollen, Board Member, NDA, Lloydminster
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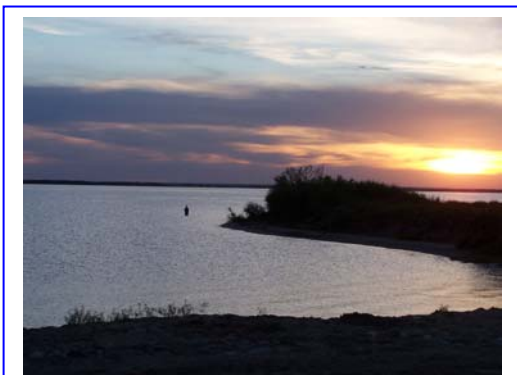


Photo Credit: Lake Diefenbaker Tourism Committee



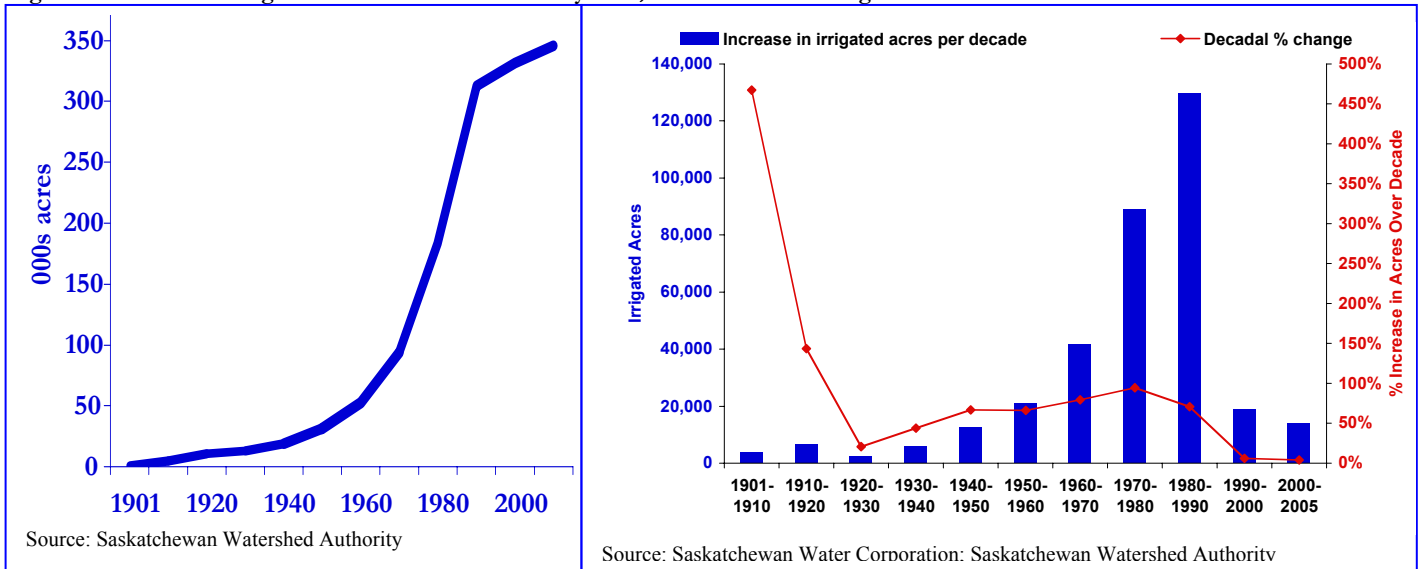
Executive Summary

The time has come!

Saskatchewan has a long history of irrigation.

Starting in the southwest of the Province during the initial settlement, irrigation projects developed by capturing the spring snow melt and run-off. The “Dirty Thirties” created a wider interest in a large number of drought proofing measures from new water storage to the creation of major water storage reservoirs such as Lake Diefenbaker. Irrigation expansion continued slowly, and with intermittent growth, through the 20th Century to approach 350,000 acres. By the 1990s irrigation expansion had almost halted.

Figure A-1 Growth in Irrigated Acres in Saskatchewan by Year, Decade and % Change.

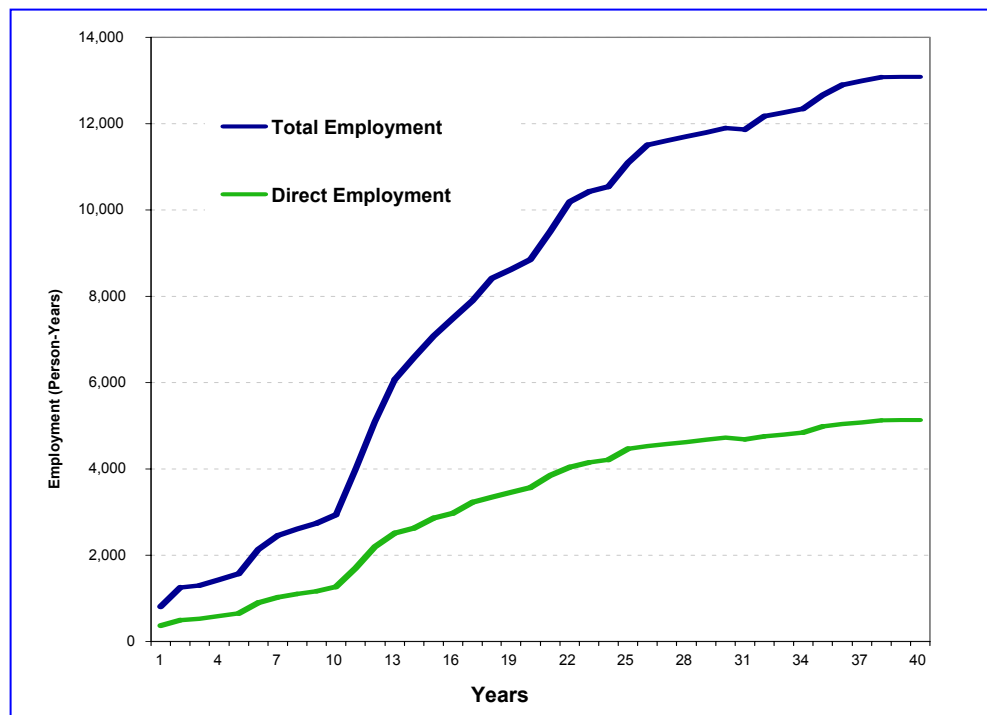


Yet the prospect of rural economic growth and diversification in the dry Prairies has long held promise. To the east and the west agricultural value chains developed around an expanding irrigated acreage. In Saskatchewan, the vision of Diefenbaker, Gardiner and Hamilton remain unfulfilled.

Today there are renewed opportunities for irrigation development. New irrigation infill and development projects have been identified in all regions of Saskatchewan. In total it is estimated that there may be as much as two million acres of irrigable lands in the province. This study has evaluated the social, economic and environmental benefits that would be associated by irrigating over one half a million new acres of in-fill and expansion irrigation and the related agricultural value chain that could develop on the basis of the expanded production from the irrigation area.

The results of the evaluation are transformational. A \$3 billion investment in the regional water supply systems required to realize the irrigation opportunity would lead to a billion dollars of on farm irrigation over a twenty year period. Over the full 40 years of project development gross domestic product would increase by \$35 billion, household incomes by \$13 billion and employment by 326,000 person years.

Figure A-2 – Total and Direct Employment Growth Under a Diversified Saskatchewan Irrigation Development Scenario



Cost benefit evaluations of both the agricultural projects and the fully diversified irrigation value chain demonstrate large returns for investments in regional water supply with a cost benefit ratio of 4.28 for the irrigated agriculture and 15:1 for the irrigated value chain.

Project benefits are not limited to a financial calculus. Irrigation development offers to drought proof in an era of global warming and longer droughts, the revitalization of rural communities, improved water supplies for rural municipalities and new tourism and environmental development opportunities. Significantly, the benefits of irrigation development are shared throughout Saskatchewan's economy and society by farmers and rural and urban people. Governments are also major beneficiaries from the irrigation investments from reductions in the regular payments they make to crop insurance and drought assistance and from the fiscal returns with increased economic development.

While diversified irrigation development has been successful in Alberta and Manitoba, it is clear that in Saskatchewan there are significant constraints to the full development of the sector that include the structure of government financing and uncertainty in the framework for irrigation development. The age of people in the region, cost and availability of power supplies, physical and economic infrastructure, water management and licensing are all limiting the pace of growth of the industry. New institutional and regulatory frameworks will be required to sustain irrigation development over a longer period of time at local, regional and provincial levels.

Saskatchewan leaders and pioneers have over the years had the foresight to dream of a diversified irrigation economy in the dry heartland of the province. Large public investments were made in water storage and some distribution systems with the construction of the Gardiner Dam, the formation of Lake Diefenbaker and the many storage reservoirs across the south. However, the full potential of the sector remains. The Commission of Inquiry into the South Saskatchewan River Project that recommended against the Gardiner Dam in 1952 believed that there would be a time when irrigation could make the project worthwhile.

Today, that time has come. Market conditions, global warming, the continuing need for rural transformation and sustainable agricultural economics provide a clear rationale for investing in the next Saskatchewan mega project for the 21st Century – comprehensive irrigation development. The benefits of the development will be found on farms, rural communities, cities and the natural environment. The costs will be remembered as investments with foresight for the next generation of our Saskatchewan children and grandchildren.

The Time Has Come to Irrigate!

