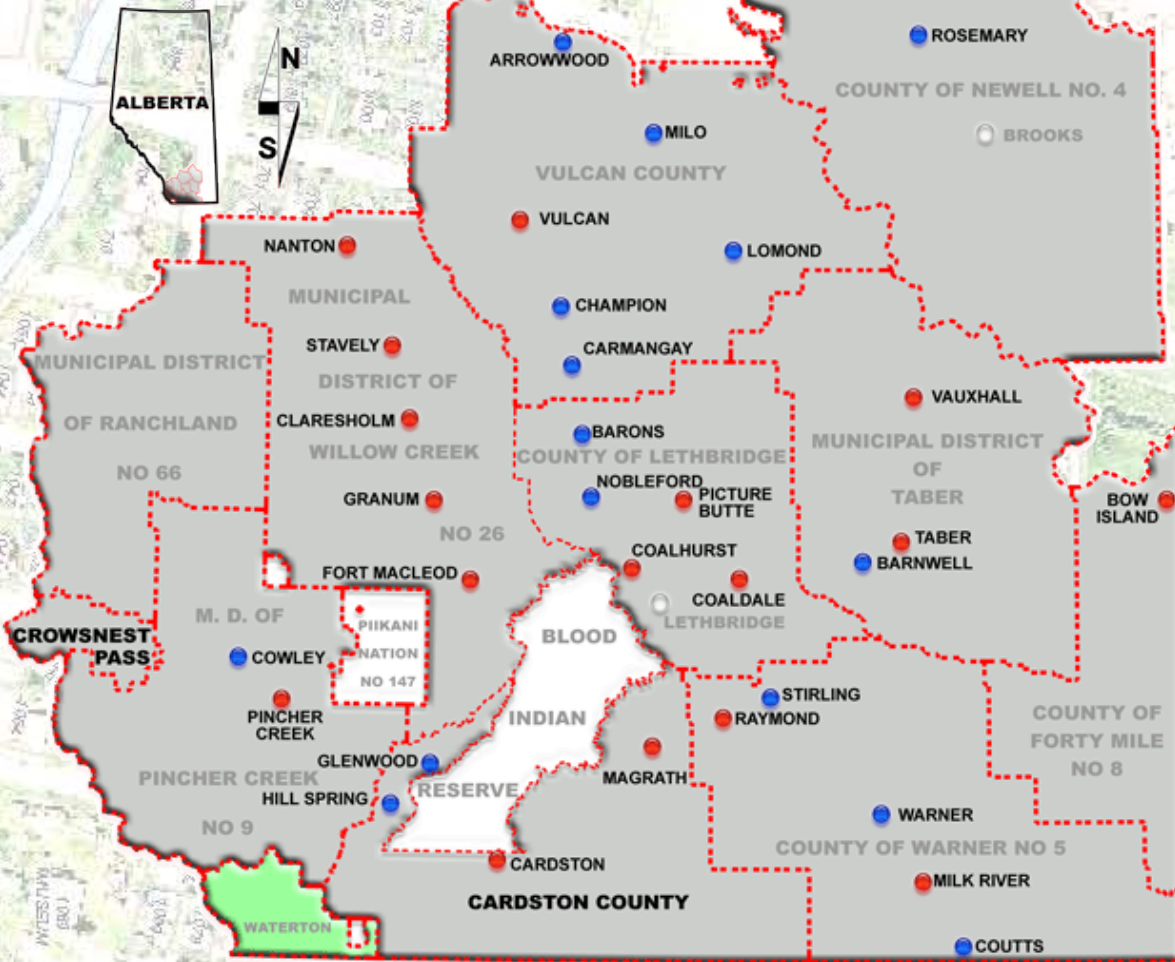


# Oldman River Region Urban GIS Project

## OLDMAN RIVER REGION URBAN GIS PARTICIPANTS

- TOWN
- VILLAGE



## Intermunicipal Cooperation in Southern Alberta: The Oldman River Region Urban GIS Project

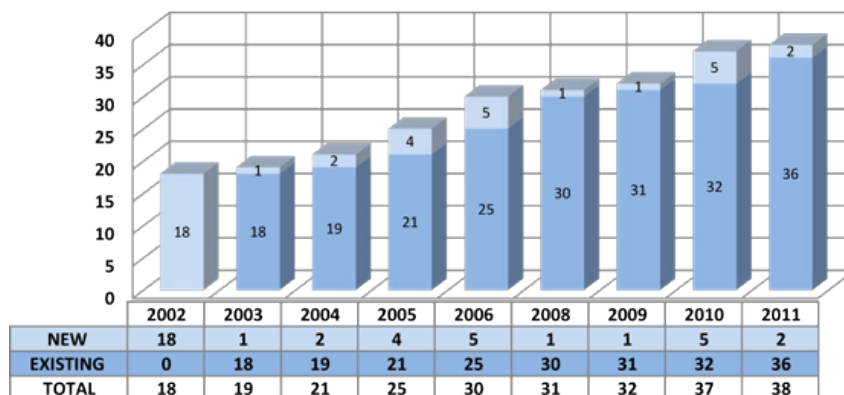
Oldman River Regional Services Commission plays a key role in helping small communities in Southern Alberta benefit from a cooperative Geographic Information System (GIS) that allows the municipalities to make better and quicker decisions.

A GIS is the integration of geographical, or spatial, data that allows for easy understanding and access. A GIS can greatly simplify and streamline geographical information at say, a town office, where otherwise required information can be scattered in a variety of digital files, index cards, rolled up paper or maps on the wall. Specialized software, such as Autodesk MapGuide, allows end users to view on their desktop via the internet spatial data such as cadastral, title and infrastructure mapping as well as multitude of database information such as infrastructure attributes, parcel ownership, tax roll data and land use districts. GIS allows users to synthesize the data and note trends or relationships.

The Oldman River Region Urban GIS Project is an outstanding example of intermunicipal cooperation which has produced a valuable information resource for all those involved. The project is a partnership between the Oldman River Regional Services Commission (ORRSC), a municipal cooperative planning organization, and 38 participating municipalities:

- Village of Arrowwood
- Village of Barnwell
- Village of Barons
- Town of Bow Island
- Cardston County
- Town of Cardston
- Village of Carmangay
- Village of Champion
- Town of Claresholm
- Town of Coaldale
- Town of Coalhurst
- Village of Coutts
- Village of Cowley
- Municipality of Crowsnest Pass
- Village of Glenwood
- Town of Fort Macleod
- Town of Granum
- Village of Hill Spring
- Town of Innisfail
- Village of Lomond
- Town of Magrath
- Town of Milk River
- Village of Milo
- Town of Nanton
- Village of Nobleford
- Town of Olds
- Town of Penhold
- Town of Picture Butte
- Town of Pincher Creek
- Town of Raymond
- Town of Rocky Mtn House
- Village of Rosemary
- Town of Stavely
- Village of Stirling
- Town of Taber
- Town of Vauxhall
- Town of Vulcan
- Village of Warner

**Oldman River Region Urban GIS Project Participants by Year**



Year	New Participants
2002	<ul style="list-style-type: none"> <li>• Town of Cardston</li> <li>• Town of Coaldale</li> <li>• Town of Coalhurst</li> <li>• Town of Fort Macleod</li> <li>• Town of Magrath</li> <li>• Town of Milk River</li> <li>• Town of Nanton</li> <li>• Town of Picture Butte</li> <li>• Town of Pincher Creek</li> </ul>
	<ul style="list-style-type: none"> <li>• Town of Stavely</li> <li>• Town of Taber</li> <li>• Town of Vulcan</li> <li>• Village of Barnwell</li> <li>• Village of Coutts</li> <li>• Village of Cowley</li> <li>• Village of Lomond</li> <li>• Village of Nobleford</li> <li>• Village of Warner</li> </ul>
	<i>Note: Initial 2002 <b>grant</b> had 18 participants - Coalhurst was Managing Partner Municipality.</i>
2003	<ul style="list-style-type: none"> <li>• Town of Claresholm</li> </ul>
	<i>Note: Claresholm joined with <b>no grant</b>.</i>
2004	<ul style="list-style-type: none"> <li>• Town of Raymond</li> </ul>
	<ul style="list-style-type: none"> <li>• Village of Stirling</li> </ul>
	<i>Note: Raymond and Stirling joined with their <b>own grant</b>.</i>
2005	<ul style="list-style-type: none"> <li>• Town of Granum</li> <li>• Town of High River</li> </ul>
	<ul style="list-style-type: none"> <li>• Village of Arrowwood</li> <li>• Village of Milo</li> </ul>
	<i>Note: Arrowwood, Milo, Granum and High River (non ORRSC member) joined through the "<b>Layer Enhancement</b>" grant - Raymond was Managing Partner Municipality. Lomond and Pincher Creek did not participate in the "Layer Enhancement" grant.</i>
2006	<ul style="list-style-type: none"> <li>• Town of Vauxhall</li> <li>• Village of Barons</li> <li>• Village of Carmangay</li> </ul>
	<ul style="list-style-type: none"> <li>• Village of Champion</li> <li>• Village of Hill Spring</li> </ul>
	<i>Note: Vauxhall, Hill Spring, Champion, Carmangay and Barons joined through the "<b>Expansion of Project</b>" grant - Vauxhall was Managing Partner Municipality.</i>
2008	<ul style="list-style-type: none"> <li>• Municipality of Crowsnest Pass</li> </ul>
	<i>Note: There was <b>no initial build fee</b> charged because they provided GIS data from an existing ArcView project.</i>
2009	<ul style="list-style-type: none"> <li>• Village of Rosemary</li> </ul>
	<i>Note: Rosemary (non ORRSC member) joined - <b>no grant</b>.</i>
2010	<ul style="list-style-type: none"> <li>• Town of Innisfail</li> <li>• Town of Olds</li> <li>• Town of Penhold</li> </ul>
	<ul style="list-style-type: none"> <li>• Town of Rocky Mtn House</li> <li>• Village of Glenwood</li> </ul>
	<i>Note: Glenwood (non ORRSC member) joined - <b>no grant</b>. Innisfail, Olds, Penhold and Rocky Mtn House (Parkland Community Planning Services (PCPS) members) joined - <b>no grant</b>. The four PCPS participants are under their own Memorandum of Understanding agreements.</i>
2011	<ul style="list-style-type: none"> <li>• Cardston County</li> </ul>
	<ul style="list-style-type: none"> <li>• Town of Bow Island</li> </ul>
	<i>Note: Cardston County joined under the new <b>ORRSC Rural GIS Initiative</b>. Bow Island (non ORRSC member) joined - <b>no grant</b>. High River chose to withdraw from the Project.</i>

**Oldman River Region Urban GIS Project Participant Growth**

Through intermunicipal cooperation, these partners have worked together over the past eight years to create a centralized regional Geographic Information System (GIS). The project was designed to make it economically feasible for small communities to have access to GIS technology by sharing resources and expertise. GIS infrastructure and staff are centralized at the ORRSC office in Lethbridge and the Internet is used as a tool to deliver the information to individual municipalities in a password protected environment. The municipal partners and planning staff at ORRSC benefit from immediate access to



information for decision-making, land use planning and infrastructure management. The partners of the Oldman River Region Urban GIS Project were proud to receive an *Honorable Mention for Partnership* at the 2004 Minister's Awards for Municipal Excellence!

## Project Development

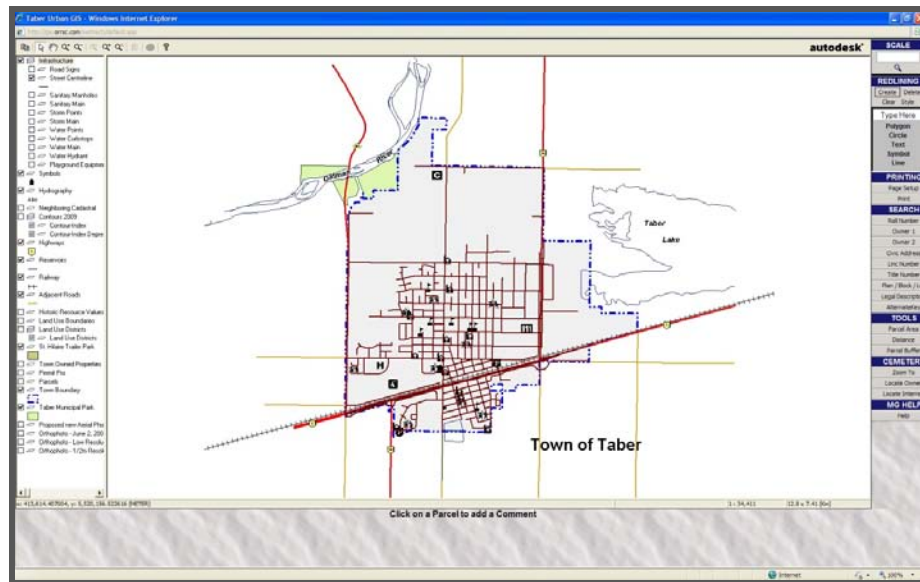
The impetus for the GIS project emerged out of the realization that urban members would benefit from GIS technology, but most communities within the region would not be able to afford a system on their own. ORRSC staff contacted all member and several non-member municipalities in southern Alberta in order to gauge interest and gained enough initial support to go ahead. The project received a Municipal Affairs' 2000 Intermunicipal Sponsorship Grant. The entire program was approved as a multi-year pilot project in October of 2002 and was divided into three one-year phases: land Use, infrastructure and orthophotography (distortion-corrected aerial photography that can be used to accurately measure distance, for example).

The project has grown from serving a population of 36,219 in 18 municipalities to presently serving 88,029 in 38 municipalities. The GIS project is overseen by an advisory committee that meets a minimum of once annually. New initiatives or GIS news in general is conveyed to the membership via a GIS newsletter.

ORRSC technologists work with local land survey company technologists, engineers, survey technologists as well as municipal employees who may not have a technical background.

## Phase I – 2002 to 2003

- Cadastral mapping, title mapping, land use district information and tax role databases were acquired for each municipality
- Web files were created to provide municipal users with access to GIS data stored at the ORRSC office in Lethbridge
- ORRSC staff travelled to municipal offices to load the viewer software and provide training
- These early successes prompted the Town of Claresholm to join the project



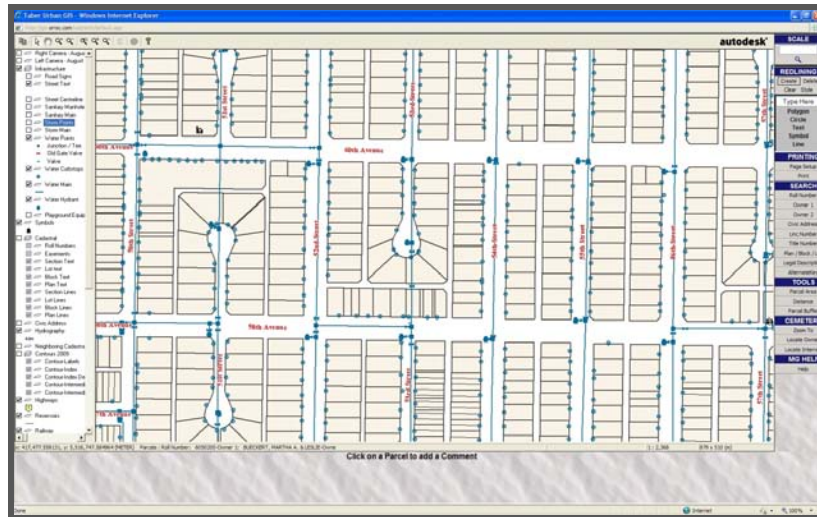
Phase I – Screenshot of Taber Urban GIS Overview



Phase I – Screenshot of Taber Land Use Districts

## Phase II – 2004

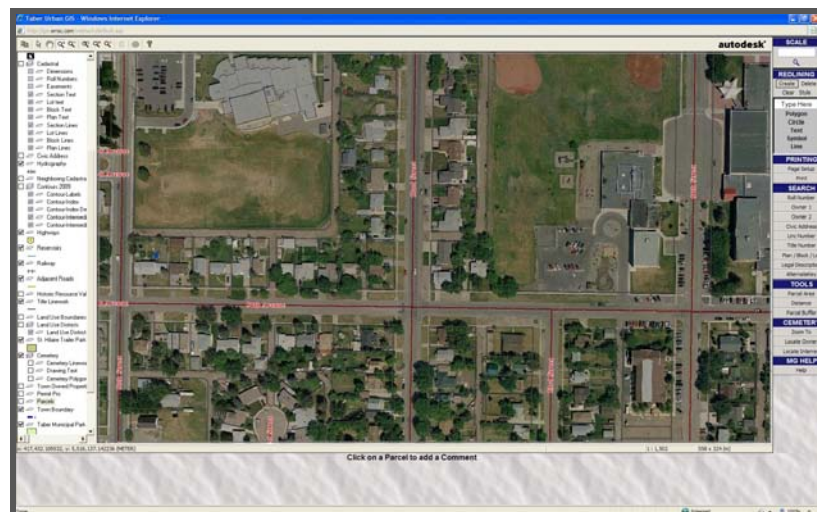
- Information on road, water, sanitary sewer and storm sewer infrastructure networks was collected during 2004
- A GIS Advisory Committee was formed in order to ensure that the direction of the project would continue to meet the needs of the partners involved
- The municipalities received an Honourable Mention for Partnership at the Minister's Awards for Municipal Excellence
- The Town of Raymond and the Village of Stirling joined the Urban GIS Project, bringing the total of number of participating partners to 21



Phase II – Screenshot of Taber Urban GIS Water Infrastructure

## Phase III – 2005

- New aerial photography was flown and a color orthophoto of each municipality was integrated into the GIS
- The total number of municipal partners rose to 25 when the Villages of Arrowwood and Milo and the Towns of Granum and High River joined the project



Phase III – Screenshot of Taber Urban GIS Orthophoto

## **Benefits of the Urban GIS Project**

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The development of quality partnerships has been essential to the successful implementation of the Oldman River Region Urban GIS Project. This project has reduced duplication of data between different organizations and has made access to GIS economically feasible for the partnering municipalities. Data is stored on a central server located in Lethbridge and each community is able to access the GIS software and information via the Internet. ORRSC has assumed the role of service provider by managing the system and providing GIS expertise to the partnering municipalities. ORRSC staff has been actively involved in training municipal staff to use the GIS so that they are able to access information with ease. Partnering municipalities have begun to experience improved local management and operational efficiencies because of Internet access to accurate and up-to-date information. Other benefits of the urban GIS project include:

- **Partnerships**
  - Cost savings through shared infrastructure and expertise in a central location
  - Improved intermunicipal cooperation in the preparation of intermunicipal development plans, water quality studies and joint disaster plans
  - Increased potential for future partnerships between municipalities
  
- **Municipal Management**
  - Organized information that is updated, maintained and available on the Internet
  - Access to an excellent planning tool that is useful in the preparation of reports and presentations for council meetings and public hearings
  - Increased professional development as municipal staff explore the possibilities of the system
  
- **Infrastructure Management**
  - Increased understanding of infrastructure deficiencies
  - Reduced duplication of work
  - Useful for providing notice to residents with regards to street and alley closures
  - Assists in developing maintenance agreements with private sector developers

## Future Directions

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In retrospect, the Oldman River Region Urban GIS Project has met and exceeded the expectations of the project team. Partnering municipalities have continually increased their use of the system and several municipalities have joined the project since its inception. Late in 2005, the partnering municipalities received another grant, the Layer Enhancement Grant, from Municipal Affairs' Sponsorship Program and these funds were used to develop four additional layers for the GIS project in 2006. An assessment layer, cemetery layer and registered plan layer have been added to the system.



**Layer Enhancement Grant - Screenshot of Taber Urban GIS Cemetery**

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For more information on the Oldman River Region Urban GIS Project, visit ORRSC's website at [www.orrsc.com](http://www.orrsc.com) or email [orrsc@telus.net](mailto:orrsc@telus.net).

The Oldman River Regional Services Commission (ORRSC) is a municipal cooperative planning organization that provides professional GIS and planning services to urban and rural municipalities in southwest Alberta.

The GIS project team consists of:

- Steven Ellert, C.E.T. - GIS Technologist
- Cal Kembel - Senior Graphics Technologist
- Jaime Thomas - GIS Analyst
- Mladen Kristic, C.E.T. - CAD/GIS Technologist
- Jordan Thomas - GIS Analyst