

Municipal Sponsorship Program Annual Progress Report Year 3 2005

Submitted January 2006



Background to the Project

In June of 2002, the Town of Coalhurst on behalf of 18 municipalities, including the Village of Barnwell, Town of Cardston, Town of Coaldale, Village of Coutts, Village of Cowley, Town of Fort Macleod, Village of Lomond, Town of Magrath, Town of Milk River, Town of Nanton, Village of Nobleford, Town of Picture Butte, Town of Pincher Creek, Town of Stavely, Town of Taber, Town of Vulcan, and the Village of Warner in partnership with the Oldman River Intermunicipal Service Agency, submitted a Municipal 2000 Sponsorship Intermunicipal Grant Application to develop a cooperative and centralized regional Geographic Information System. The principal goal of the project was to assist small and medium-sized urban municipalities in southwestern Alberta in gaining the technological tools they needed to implement a GIS by capitalizing on the efficiencies gained by sharing resources and expertise. At this time, the partnering municipalities wished to have the application considered for funding under the Multi-Year Pilot Project Initiative.

Phase I of the application was approved for a partially-enhanced grant in August of 2002 in the amount of \$224,000. Subsequently, the entire plan was approved as a Multi-Year Pilot Project in October of 2002. The Oldman River Region Urban GIS Project commenced September 2002, with Phase I intended to be completed by December of 2003, Phase II by December 2004 and Phase III by December 2005.

As a service agreement between the partnering municipalities already existed for planning services provided by the Oldman River Regional Services Commission, this framework has been utilized in the coordination and management of the regional GIS. Oldman River Regional Services Commission (ORRSC) has assumed the role of service provider and both manages the system and provides system software and GIS expertise to the partnering municipalities. System management includes data storage for all municipalities on a central server located in Lethbridge with the GIS software and information accessing via the Internet from each municipal office. Staff of ORRSC has been allocated to create, coordinate and maintain the system for each community.





Municipal 2000 Sponsorship Grant Dldman River Region Urban GIS Project Progress Report 2004 — Page 2



Progress to Date

Work began on the final phase of the project in January of 2005 and concentrated on obtaining new digital aerial photography of partnering municipalities and a continued focus of infrastructure network collection. Photography was flown in May of 2005 with the final product incorporated into the GIS during the fall of 2005. The substantial task of developing the basic infrastructure networks (roads, water, sanitary sewer, and storm water) continued through the spring, summer and fall of 2005.

Chart 1 depicts the comprehensive breakdown of the implementation steps of Phase III activities on behalf of each of the participating municipalities. In actuality, Chart 1 is a chronology of the actual work initiated and completed by staff on the project between January and December.

The work schedule was divided into categories and was tracked for each municipality. As indicated in Chart 1, the main targets of the third year of the project were met.

The following is a more comprehensive breakdown of work completed by ORRSC GIS staff as well as a report on the communication and partnership aspects of Phase III.

Work Completed

Aerial Photography

New aerial photography was the main focus and expenditure for the final year of the project. Each municipality would be photographed and provided with a 1:10 000 color digital photo of their corporate limits with contours to be integrated into the GIS to be viewed. Municipalities were given a choice of upgraded the photography of their community to a 1:5000 color photo with the municipalities responsible for the cost

							GIS PROGRESSION PH	HAS	<u>E III</u>							
	INFRASTRUCTURE DATA COLLECTION			INFRASTRUCTURE DATA		COLLECTION METHOD	ORTHOPHOTOGRAPHY									
Town / Village	Water Data Collection	Sanitary Data Collection	Storm Data Collected	Road Signs	Data Ready for MIMS	Data Ready For GIS	ORRSC or Engineering		Receive Price Estimate	Decide on Scale & Color 1:5,000 or 1:10,000	Receive Ortho- Corrected Files	Geographically Transform and Create Mosaic	Tile Mosaics	Create .ric File	Prepare Ortho & Contour Files for GIS Via Mapguide Author	Load Into GIS
Barnwell	>	V	~	✓	~	V	EXH Engineering was contracted by Village		V	~	~	~	V	V	V	V
Cardston	>	>	>	V	~	~	GPS Collection by ORRSC		>	~	>	>	>	>	✓	V
Claresholm	>	>	>	V	~	~	Network built from mater plan CAD files		>	~	>	~	>	>	✓	V
Coaldale	>	•	>	~	 Image: A set of the set of the	~	Have own CAD files of infrastructure and will be putting data into MIMS		>	>	>	~	>	>	~	~
Coalhurst	>	>	>	V	~	>	GPS Collection by ORRSC		>	>	>	>	>	>	V	V
Coutts	>	>	>	V	~	V	GPS Collection by ORRSC		>	~	>	>	>	>	✓	V
Cowley	>	>	>	V	~	~	GPS Collection by ORRSC		>	V	>	V		>	V	V
Fort Macleod	>	>	>	V	~	~	CAD files from Arnie/ Need's some work in CAD		>	>	>	>	>	>	V	V
Lomond					~	~	No data		>	>	>	>	>	>	V	~
Magrath	>	>	>	V	~	~	GPS Collection by ORRSC		>	V	>	V	>	>	V	V
Milk River	>	>	>	>	~	~	Collected by Stuart Weir		>	>	>	~	>	>	V	>
Nanton	>	>	>	>	~	~	GPS Collection by ORRSC		>	V	>	~	>	>	V	>
Nobleford	>	>	>	V	~	~	GPS Collection by ORRSC/Topologies need to be built		>	~	>	~	>	>	✓	V
Picture Butte					~	~	Waiting on Associated Engineering		>	~	>	>	>	>	✓	V
Pincher Creek	>	>	>	V	~	~	Waiting on Martin Geomatics		>	~	>	~	>	>	✓	V
Raymond					~	~	Martin Geomatics		>	V	>	V		>	V	V
Stavely	>	>	\checkmark	V	~	~	GPS Collection by ORRSC		>	>	>	>	>	>	V	~
Stirling					~	~	Martin Geomatics		>	>	>	>	>	>	V	V
Taber					~	~	Associated Engineering		\checkmark	V	V	V	~	~	V	V
Vulcan		V	>	V	~	~	GPS Collection by ORRSC		V	~	>	>			V	~
Warner		>	✓	✓	~	V	GPS Collection by ORRSC		~	V	V	V	V	V	V	V

*Those fields that are not filled under Infrastructure Data Collection are due to data not yet received by engineering company.



difference. Four (4) municipal partners choose to do so. ORRSC staff purchased additional software to convert photography into a compatible format for the GIS platform.

Continued work of Infrastructure Network Data Collection

The task of building the infrastructure networks continued throughout the third year of the project. ORRSC staff spent time throughout the summer and fall collecting infrastructure assets with public works staff of several members. Completed portions of layer networks were deployed onto the website as each municipality's infrastructure collection was finished. At the end of December 2005, all available infrastructure assets have been captured but final deployment of all network layers has not occurred. The time required to import infrastructure data into both the MIMS stand alone program and the web GIS was greater than first anticipated.

Collection of field data:

- Appointments with public works superintendents were scheduled.
- GIS staff and superintendents walk scheduled communities collecting visible infrastructure data.

Conversion of field data into MIMS and map layers:

- Differential correction was performed on GPS field data to obtain sub-meter accuracy.
- Field data was cross-referenced against AS-BUILT plans and engineering drawings.
- A cooperation between ORRSC GIS staff and engineering firms was established to convert data to MIMS specifications.
- Data was corrected and implemented into MIMS.

Oldman River Region Urban **GIS** Project

A Cooperative Initiative involving 21 Urban Municipalities and the

Oldman River Regional Services Commission

Web progress:

- Continued development of each municipality's website was undertaken.
- Additional improvements in speed and ease of use of the website were undertaken.

Ongoing maintenance:

- Tax roll information was continually updated by either downloading title changes or receiving the updates from each municipality.
- Registered plans were updated on the GIS each time a new plan was registered.
- Changes to civic addresses were forwarded to the GIS staff each time the municipality received an update.
- Title boundaries were updated as the new plans were registered and existing titles consolidated.
- Two of the participating municipality's applied for and were granted annexation orders which required additional landowner and parcel information to be added their individual GIS
- Land use district changes were made to the GIS when rezoning bylaws were approved. •



Table 1 is a copy of the proposed implementation schedule submitted with the grant application. ORRSC staff and the municipalities have indicated that they are very satisfied that the actual implementation of Phase III was successful and no significant variations from the proposed implementation schedule occurred.

Table 1





Communication and Partnership

Good communication among all partnering municipalities has continued to be the key to the success of the project. The following steps were undertaken to ensure that contact between all partnering municipalities and ORRSC continued to occur.

Information Meetings: A meeting involving key staff from each municipality was held in March of 2005. The meeting was held to update municipalities on the progress of Phase III and the future of the GIS system. Elections were held for the GIS Advisory Committee and new members were appointed for the upcoming year. The member municipalities directed the GIS Advisory Committee to prepare a Municipal Sponsorship Grant Application for the 2005-2006 year and to develop a project that would be beneficial to all members involved.

GIS Advisory Committee:

The GIS Advisory Committee meet several times throughout 2005 to develop a funding formula that would move the project past the three years of program funding in order to continue the operation of the system. During the discussion, it was agreed by the Committee that the system required several additional basic layers that would be beneficial to all partnering municipalities. Therefore, the project would move forward in a 'building mode' rather than a 'maintenance mode'. The Committee spent much time investigating funding strategies that would finance the project in the future.

After much discussion, the committee agreed that a fee based on per capita would be put forth in a memorandum of understanding to each partner to commit to the Urban GIS. This fee structure was utilized to fund the final two and half months of the project.

Advisory Committee members also investigated the potential of applying for another Municipal Sponsorship Grant to complete several of the basic layers identified by the members. Partnering municipalities were strongly in favour of submitting another grant application for the next phases of the project which included an assessment layer, a registered plan layer, a cemetery layer and a enhanced infrastructure layer.



Training: Ongoing training and open communication continued to play a pivotal role in the continued success of the project. No formal group training was undertaken during the year but additional individual municipal site training was done. ORRSC GIS staff members were asked to make several presentations regarding the GIS program. In October, staff travelled to the Town of Pincher Creek to conduct a session at the Alberta Development Officers Conference.

<u>Newsletters</u>: Again, newsletters were utilized during the final year of the project, with only two issues being published and circulated to the partnering municipalities. They were also posted on the Oldman River Regional Services Commission website (www.orrsc.com) as well as the secure GIS website. Copies are attached in Appendix A.

<u>Agenda Item at Quarterly Board of Directors' Meetings</u>: A progress update on the project has been provided at each of the quarterly Commission Board meetings and copies of current newsletters for that period was available to members.



Project Revenues and Expenses

Surpluses were realized after both Phases I and II and had a limited effect on the implementation or scheduling of the project. At the end of October 2005, all the allocated grant funding has been spent and the additional funds received from newly partnering municipalities funded the final months of the project. The partnering municipalities and ORRSC are pleased that the work proposed for the project has been able to be completed within the original budget forecast. There is a surplus that is contributed to the non-grant allocations and will be used to fund a portion of the project for 2006. A simple summary of expenses and revenues is found in Table 2 and a more detailed set of income statements is attached in Appendix C.

Table 2 Oldman River Regional Urban GIS Project Program Accounting

Category	Revenue	Expenses
Grant Revenue Year for Year 3	149,098	
Interest/Rebates	15,183	
Municipal Contributions/ORRSC	126,804	
Total EXPENSES		273,187
Surplus of Municipal Contributions	17.898	



Summary of Experiences

In retrospect, the Oldman River Regional Urban GIS Project has meet and exceeded the expectations of the project team. Partnering municipalities have continually increased their use of the system as it has evolved throughout the past three years. The communities have continued to support the initiative through the life of the project and have committed to develop additional layers throughout 2006 and beyond.

The final year of the project did not have unexpected highs or lows but progressed smoothly and on schedule. The acquisition of the new color aerial photography has been a popular addition to the system. If planning the project again, it would have been of some benefit to obtain the photos earlier the system construction as it would have aided in the development of the parcel layer as well as assisted in the visual captures of infrastructure assets.



Appendix A

Newsletters from Year 3

Volume 3, Issue 1

February 2005



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cegional GIS Update

Year Three - Color!

It's time to add some color. We are in the process of arranging a contract for color orthophotography, the major component of year three of the Urban GIS Project. We plan to have the photography flown in April or May, delivered to us during the summer and if all goes as planned, added to the GIS in September. Flying the photography in the spring with 'some leaf on' will allow viewers to see some vegetation at the same time not obscuring too much of the man made features. GIS participants were

offered the opportunity to upgrade higher to resolution photography. The cost of the upgrade would b e the responsibility of the municipality themselves. We have had four municipalities interested in the upgrade to the 1:5,000scale photography. All other participants will receive 1:10,000 photography as provided in the project. The aerial photography insert at the bottom of this page is a sample of what to expect on your GIS. Both the Town of High

GIS Governance

We now have a name for our committee. As of February 10th, ORRSC has officially established the **GIS Advisory Committee**. Paul Goldade of the ORRSC Executive Committee has been appointed to the Advisory Committee for this year along with the four representatives from the partnering municipalities. The committee is presently fine-tuning a funding formula with the goal to establish a reasonable cost of the GIS to municipalities. It may be possible to access additional funding through sponsorship grants. This will be further discussed at the GIS general meeting tentatively scheduled for the end of March.

River and the Municipality of Crowsnest Pass expressed interest in learning more about the GIS Project. The GIS t e a m h a s m a d e presentations to both respective Town Officials in February.

Partnering

Municipalities

Village of Barnwell Village of Coutts Village of Cowley Village of Lomond Village of Nobleford Village of Stirling Village of Warner

Town of Cardston Town of Claresholm Town of Coaldale Town of Coalhurst Town of Fort Macleod Town of Magrath Town of Milk River Town of Nanton Town of Picture Butte Town of Picture Butte Town of Pincher Creek Town of Raymond Town of Stavely Town of Taber Town of Vulcan



How are you using your GIS?

Leah Olsen, the Development Officer for the Town of Coaldale, uses the GIS on a regular basis to prepare presentations for council regarding development issues. Leah has created a template in Microsoft Word with a *pasted-in* bitmap from the GIS. Each time a new development issue arises she accesses the map with the appropriate layers displaying, copies the map to the clipboard and pastes the bitmap into her new document created from the template. We would be happy to help you create something similar if this interests you.

Volume 3, Issue 2

September 2005



GIS Updat ional

Grant Application

After a small hiatus with the newsletter, it's back again. On behalf of ORRSC, we would like to thank each of the 21 participating municipalities for completing, and returning the Memo of Understanding as well as their ongoing support in the Urban GIS Project as the original program draws to a close.

As a result of this continual support, a new grant application; the Oldman River Region **Urban GIS Layer Project** has been submitted to Alberta Municipal Affairs. This new Cooperative **Initiative** involves partners from the original project

along with 4 additional municipalities; the Village of Arrowwood, the Village of Milo, the Town of Granum and the Town of High River.

Infrastructure data collection has been underway throughout the summer. At the conclusion of this month, the data collection will have been completed for the majority municipalities. of Following this data collection, the next steps will be taken to add this MIMS, data into (Municipal Infrastructure Management System) and also as view only on the web based GIS. ORRSC has also been

GIS Advisory Committee

Finalizations of the GIS Advisory Committee have been completed. The new committee consists of Wendy Bateman from the Village of Barnwell, Mitch Schneider from the Town of Cardston, George Lejbjuk from the Town of Coaldale, and Scott Barton of the Town of Raymond. Paul Goldade will continue to serve as the Executive Committee liaison.





Economic Regional (MMERI) Initiative in order to possibly utilize GIS to support investment attraction capabilities of the MMERI region. The Town of Fort Macleod will be involved in the pilot. Partnering

by

the Mountains

approached

Mounties to

Municipalities

Village of Barnwell Village of Coutts Village of Cowley Village of Lomond Village of Nobleford Village of Stirling Village of Warner

Town of Cardston Town of Claresholm Town of Coaldale Town of Coalhurst Town of Fort Macleod Town of Magrath Town of Milk River Town of Nanton Town of Picture Butte Town of Pincher Creek Town of Raymond Town of Stavely Town of Taber Town of Vulcan

Under the Oldman River Region Urban GIS Layer Project, one of the proposed layers would be that of an Assessment Layer. This layer would incorporate existing tax assessment data in a format compatible with existing property layers in the GIS. Information captured would include along with other attributes: assessed market value, date of construction, building description, building area, building features, accessory building information and property photo.

Jaime Thomas is the newest member of ORRSC's GIS team. Jaime, who is a Warner native has accepted the position of GIS Analyst, and began work on July 4th. He is a graduate of the University of Lethbridge Geography/GIS program, as well as the Certificate Program at Ohio State University in Urban Planning.

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December 2005



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GIS Updat cegional

Grant Approval

The Oldman River Regional Services Commission is pleased to announce the approval of the enhanced grant under the 2005 Municipal Sponsorship Program. The grant, which was approved for the full amount of \$446,447.25, will help lay the foundation for the creation of four new layers under the Oldman River Region Urban GIS Layer Project. The four new layers of assessment, cemeteries, registered plans, and enhanced infrastructure, will add further information to the current GIS, which in turn will provide municipalities with current, digital data

which can be accessed in one location. The first steps for the creation of the assessment and cemetery layers are now in progress, as municipal members have been prompted to supply ORRSC with their tax assessor, and cemetery records contact. With these contacts in place, ORRSC will then be able to acquire the necessary information to initiate the creation of these two layers.

ORRSC has also been busy with other undertakings, as they were approached by Alberta Community Development to carry out a trail

Additional GIS Personnel

With the approval of the municipal grant, ORRSC will be hiring two, one year contract employees. The first position will be a CAD/GIS Technologist, in which the individual will aid in data conversion, as well as preparing new and existing mapping products. The second position consists of a GIS Programmer, who will in turn add to the development of the ORRSC current GIS product.



Land-Use Chang Roll # Ouest

Town of Vulcan The addition of each municipalities new orthophoto is nearly complete. These new photos were flown in May 2005, and as one can see, are in full color, while depending on the choice each municipality made, at a scale of either 1:10,000, or 1:5,000. Accompanying these orthophotos, are two additional sources of information, digital elevation models, (DEM) as well as contour information. Nearly all of the contour information for each municipality has been authored into the GIS, and both DEM and contour information files are available to each municipality upon their request.

The GIS team has been busy in recent months giving presentations to various groups around Southern Alberta. Steven Ellert and Jaime first presented at the Alberta Thomas Development Officer's Conference in Pincher Creek, then gave additional presentations to the M.D. of Pincher Creek, and to the GEO 255 class at LCC. During the presentations, Steven and Jaime explained the features and benefits of a web delivered GIS product.

mapping and inventory project in Cypress Hills Interprovincial Park. All trails. and features (signs, fences, crossings. hazardous tread) were collected with a mapping GPS then packaged into a GIS project, which will be sent to park officials.

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Appendix **B**

Income Statements (Unaudited)