

Municipal 2000 Sponsorship Program

Annual Progress Report Year 1

2002-2003

Submitted March 2004



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 to gain 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 (formerly the Oldman River Intermunicipal Service Agency), 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 19 municipalities on a central server located in Lethbridge with the GIS software and information accessing via the Internet from each municipal office. Staff of DRRSC has been allocated to create, coordinate and maintain the system for each community.





Progress to Date

A detailed work schedule for each year of the project was submitted with the grant application. Phase I work began in September of 2002 and ended December 31 of 2003. The first phase concentrated on building a solid foundation of information on which the additional years of the project would be built upon.

Chart 1 depicts the comprehensive breakdown of the implementation steps of Phase I 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 September and December.

The work schedule was divided into four main categories and was tracked for each municipality. As indicated in Chart 1, there is a minor amount of work to be completed but overall the main targets of the first year of the project were met.

The following is a more comprehensive breakdown of each category of Phase I.

Database progress:

- Tax roll database acquisition from each of the 19 municipalities.
- Tax roll databases were "cleaned" by standardizing input order and checking information against land title and registered plan information.
- Paper maps of each community were linked to the corrected tax roll databases and a unique identifier number was assigned to each parcel of land in each municipality.
- A protocol to update tax roll information was established with each municipality and interoffice forms were created to efficiently handle incoming information.
- Land use district (zoning) information was added to the tax roll databases.



• Discrepancies between tax roll databases and mapping were identified and forwarded to each municipality to correct.

Mapping progress:

- Cadastral base mapping for each municipality was acquired.
- Cadastral mapping was reviewed and necessary corrections were made in order to prepare the maps.
- Title mapping was acquired and a process of assigning unique identifiers to each titled portion of land was completed.
- A process of creating polygons in each base map was undertaken and eventually these were linked back to the tax roll database.

<u>Web progress</u>

- Web files were created. This process included the process of "authoring" the maps and databases to they would be web ready.
- The GIS was deployed.

Ongoing maintenance

• Throughout Phase I, tax roll databases and base maps were continually updated to ensure that the information contained on both was current.

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 I was very successful and no significant variations from the proposed implementation schedule occurred.



Table 1





It was identified early in the grant application process that good communication and coordination was key to the success of a project that included 19 municipalities spread throughout the southwest region. The following steps were undertaken to ensure that contact between all partnering municipalities and ORRSC continued to occur.

Information Meetings: Two meetings involving key staff from each municipality were held in December of 2002 and July of 2003. The agenda of the December meeting included an introduction of the new GIS staff members to the partners and to prepare the municipal staff as to what would be required of each them in terms of information in the coming year. The July meeting was held to update municipalities on the progress of Phase I. As well, a presentation by representatives of the Municipal Infrastructure Management Systems (MIMS) was arranged by DRRSC staff to provide information on anticipated infrastructure information requirements for Phase II of the pilot project.

<u>Newsletters</u>: A newsletter was created to keep the partnering municipalities informed as to the progress of the project. In Year 1 of the project, five issues of the newsletter were created and circulated. They are also posted on the Oldman River Regional Services Commission website (<u>www.orrsc.com</u>). Copies are attached in Appendix A.

Email: A separate email address was established for the GIS staff that provided direct contact between municipal staff and the GIS staff. As well, it proved to be an efficient way to reach all partnering municipalities quickly with any updates, newsletters or progress reports.

<u>Agenda Item at Quarterly Board of Directors Meetings</u>: An update has been provided at each of the quarterly Commission Board meetings which includes a progress update by DRRSS Staff and a copies of income statements and newsletters for that period.



Project Revenues and Expenses

A simple summary of expenses and revenues is found in Table 2 and a more detailed set of income statements is attached in Appendix B.

Table 2 Oldman River Regional Urban GIS Project Program Accounting

Category	Revenue	Expenses
Total REVENUE	239,1000	
Total EXPENSES		200,310.61
NET INCOME	38,789.39	

A net surplus of \$ 38,789,39 was realized at the end of December 2003. This was a result of the following:

- Equipment was purchased at lower costs than quoted.
- Software licensing was less than anticipated.
- Increased use of Internet and telephone contact reduced travel and meeting expenses.



As well, once the project team was notified that the project was selected for the three-year pilot project, more detailed costing of work to be completed in years 2 and 3 was undertaken. This included seeking firm quotes for additional software requirements and air photo acquisition. After conferring with grant administrators, the project team was informed that surplus funds could be carried over into the subsequent years of the project. The decision was made to trim back costs where possible in Phase I in order offset future costs in the coming two years.

This has no effect on the implementation or scheduling of the next phases of the project but may affect the proposed budgets of the next two years as surpluses are utilized to meet the increased costs of implementing Phases II and III. The most significant budget change will occur in Phase III regarding the cost of acquiring air photography for each community as the estimated cost presented in the grant application was \$43,000 while updated quotes place the cost closer to \$82,000.



Summary of Experiences

In retrospect, the first year of the Oldman River Regional Urban GIS Project has meet and exceeded the expectations of the project team. Although many successes have been realized, there have been a number of obstacles that needed to be overcome in order to continue the momentum of the project.

Benefits of the Pilot Project:

 Creating and establishing a GIS is an enormous task. It requires a solid foundation of basic information that must be accurate in order continue to build additional layers of information. The most reported failure of Geographic Information Systems is that a system grows too fast and relies on inaccurate information. This creates an unstable foundation that leads to the collapse of the whole system.

The Pilot Project Initiative benefits the Oldman River Region Urban GIS Project because the task of building the GIS components have been carefully planned to ensure that a solid foundation is created before the next phase is undertaken. By ensuring that the project will continue for three years, the expectations on behalf of the partnering municipalities have been set. They understand and have agreed to the slow and steady construction of the system and therefore the tendency to jump ahead and push on before the system is ready has been eliminated.

2. Working with 19 municipalities has been a challenge but an incredibly rewarding experience. As the information requirements of the communities are quite similar, it has benefited project staff by having the ability to incorporate requests from some municipalities for the benefit of all participating communities. As well, this project has presented a unique opportunity for staff from



different municipalities and ORRSC to share ideas and build relationships. The benefit of the three-year project allows a certain level of trust to be built and shared among the partners over an extended period of time.

Unexpected Project Developments:

- 3. A significant development was the addition of the Town of Claresholm to the Urban GIS project in the spring of 2003. The Town was not a member of the original 18 communities that submitted the application for the project but realized the significance of such an endeavour and later joined. Founding municipal members had discussed prior to submitting the grant application that other municipalities could join the GIS project but would be charged an average of all the grant allocations of the founding 18 members.
- 4. Part of the first year was spent investigating the use of the Municipal Infrastructure Management System (MIMS) as the platform for the second year of the project. The proposed implementation schedule identified the utilization of MIMS and the feasibility of integrating it with the GIS developed in year 1. It was discovered that MIMS was a stand-alone product and the database could not be linked to the system being developed. This lack of integration was unexpected. The decision was made to go forward with the original plan of utilizing MIMS for infrastructure data collection, although that information would be displayed separately from the land use portion of the GIS. Some functionally will be able to be realized in both systems in terms of land use and infrastructure but we do not anticipate further integration in year 2.



Appendix A

Newsletters from Year 1

November 2002



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Ready...Set...GO!!

All the planning, organizing and lobbying has paid off !! August 30, 2002 was a very happy day at the ORISA offices when word arrived that the grant application to develop a centralized regional geographic information system was approved.

recap, combined То municipal grant allocations to the project totaled \$232,383. \$185,908 coming from grant allocation and an additional \$46,475 as the 25 percent intermunicipal bonus. The application was approved for a partial enhanced grant of \$224,000 with a total of 96.25 points (31.35 needs points and 65 quality points).

The best news was yet to come. Our project has since been chosen as one of the 3 Year Pilot Projects for 2002, which receives funding based on the allocations of members grant funds in 2003 and 2004.

ORISA staff was busy during September acquiring new hardware. Purchases include a new 42" plotter, color printer, 2 work stations and a computer server.

Staff has started to build on the pilot project developed to test the reliability of existing ORISA data. Municipal staff from Coalhurst have been extremely helpful as we start to work through the data sets and begin to develop a protocol in regards to the kinds and formats of information required and the order the GIS team will need to receive it in.

THINGS TO LOOK FORWARD TO:

- Administrators and related staff meeting in December
- Collection of Tax Roll Database from each municipality
- Acquisition of parcel boundaries for each municipality
- Correction of discrepancies between boundary files and tax roll databases
- Acquisition of database software to setup linkage between map and database
- Discussion of needs of municipalities and the needs of GIS staff
- Budget update

Meet the GIS Team

New staff have been recruited by ORISA to make the "magic" happen.

Tom Graham is the new GIS Analyst or database guy. Fresh off a summer position at the MD of Pincher Creek No. 9, Tom is a native of Pincher Creek and a recent graduate of the University of Lethbridge.

Steven Ellert, formerly of Alberta Environment, has accepted the position of GIS Technologist or map guy and will be working on linking the land use data with the maps.

Trevor Hazell, ORISA's 2002 summer student, has returned part-time to assist in the day-to-day drafting operations.

Rounding out the team is Cal Kembel, a long-time member of ORISA staff. Currently, Cal is in shock as three new people invade his space and commandeer any vacant available space.

Things will continue to be a little cramped until the move to the new building in the early spring.



Graphic Unit Staff Back Row: CAL KEMBEL & STEVEN ELLERT Front Row: TOM GRAHAM & TREVOR HAZELL

Partnering Municipalities

Village of Barnwell Village of Coutts Village of Cowley Village of Lomond Village of Nobleford Village of Warner Town of Cardston 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 Stavely Town of Taber Town of Vulcan

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February 2003



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Database Progress

The Urban GIS Project is proceeding as planned. We are in the process of collecting tax roll databases from the partnering municipalities. The information we are requesting consists of roll numbers, owner name, mailing address, civic address and lot, block, plan.

The Town of Coalhurst was the first municipality to provide us with their database, which was given to us in the form of a paper printout. The Towns of Milk River, Pincher Creek, Magrath, Picture Butte, Vulcan along with the Villages of Coutts and Cowley have all since sent their databases via email, and work has begun on their

files. Receiving the files in a digital format, such as EXCEL, is the best option, but we are capable of accepting other formats.

Work on the forwarded databases includes checking the integrity of the tax roll information against the title mapping layers. By doing so, we have discovered inaccuracies of some of the titles within each municipality.

For example, some titles indicate the parcel is located in the wrong municipality. In addition, we have also been uncovering parcels of land that are unaccounted for by the municipality's tax roll. These problems have been corrected by ordering the required titles, updating the information on the title as well as adding the missing parcels to the municipality's tax roll.

One of the most important parts of this project is keeping the information up to date. Therefore, we have been asking each municipality to send us the updates to their tax system as they receive them in order to keep our records current.

Tom Graham is the lucky guy who will be working on keeping all 18 databases up to date. You can contact Tom either by email or fax at:

> gisorisa@telus.net or (403) 327-6847

One of the major obstacles so far in the database development process has been the creation of unique parcel ID numbers. The problem is that a single roll number may be used for multiple lots and the corresponding linc number might be for a different collection of lots. This means that a unique number for each lot or portion of a lot does NOT exist. We have solved this by using the tax roll databases, title mapping files and our own base map drawings to determine all the individual parcels in each community. We then assigned our own unique number to each parcel of land and link this

value to the tax roll database.

February Highlights...

- Following up from the December meeting, the GIS team researched the possibility of partnering with some of ORISA's Rural Members to acquire updated air photos. The GIS team has concluded that it will be more cost effective to fly the photos ourselves in Year III as originally proposed.
- The Town of Claresholm has expressed an interest in learning more about the GIS project and the GIS team will be making a presentation to Town Council in February. As discussed in one of the preliminary meetings, the cost to join the Project would be an average of the partnering municipalities contributions, which would be approximately \$13,000. ORISA will keep the partners updated as to any developments.

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Town of Fort Macleod Town of Magrath Town of Milk River Town of Nanton Town of Picture Butte Town of Pincher Creek Town of Stavely Town of Taber Town of Vulcan

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MapGuide Training

The first week of April saw Cal Kembel, Steven Ellert and Tom Graham returning to school. The 3 day in-house training course was taught by *Warren Medernach*, a certified instructor from *IMAGINIT TECHNOLOGIES*. The seminar was arranged by staff to train them in the use of the GIS s of tware program *Mapguide*.

One of the components of *Mapguide* is a viewer which is installed as a "plug-in" to an internet browser such as Microsoft Internet Explorer or Netscape Navigator. Using this viewer the user will be able to access their GIS data.

As different types of 'code' had to be written

for each browser, it was decided to use Internet Explorer because it was the program the majority of the communities were using, it is free, and will work with all the computers that the communities are using.

Staff was instructed on how to create maps by adding different layers, changing color schemes and the overall presentation of maps. Staff was also introduced s o m e basic t o programming that will be required to link the maps to the tax roll databases in order to generate reports, mailing lists, etc. Once we become more fluent in programming the language we will be able to develop tools and

reports that will fit the needs of the users.

Municipal Visits Continue

Staff are continuing their visits to each member municipality. Throughout the spring, the goal is to visit each municipality in order to help get them started on collecting i n f r a s t r u c t u r e information that will be required to continue building the system in Year II.

Tom has created a form in Microsoft Access that will assist municipal staff in for collecting the required d at a. For those communities that do not have Access, a hardcopy of the form is available.

Municipal 2000 Sponsorship Program Grant Update

It is that time of year again. We wanted to remind all participating municipalities that the awarding of the three year pilot project has allocated all or a portion of your grant eligibility for 2003 to the GIS project. Those municipalities with grant eligibility for 2003 received a letter attached to their package sent out by Municipal Affairs indicating the amount of grant funding remaining. Just to remind you, each partner in the GIS is able to participate in one project this year, either an individual or intermunicipal, in addition to the GIS project. If you have any questions, please call:

> Janice Romanyshyn, Coordinator, Grant Policy Alberta Municipal Affairs Municipal Services Branch (780) 427-2225

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Interesting Fact

The Oldman River Region Urban GIS Project was the only project chosen for funding as a Three year Pilot Project out of all the projects submitted last year. Therefore, the group can expect to receive Year II funding as early as May 2003 in the amount of between \$160, 000 and \$170, 000, depending on how the final allocation will be calculated.

September 2003



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MIMS Update

July 10 GIS & MIMS Meeting Summary

Our July 10th meeting was highlighted by a funding up date, a progress-to-date report and a *MIMS* Initiative overview.

A very informative presentation was given by Rod Schatz of the *MIMS* team on the capabilities and implementation of the *MIMS* tools. Using *MIMS*, municipalities will be able to record their infrastructure inventory, view the data spatially and generate reports. Implementation requires signing a license agreement and attending a MIMS training session.

Most Municipalities have signed the *MIMS* User License Agreements. We are waiting for the final couple agreements to be returned before the y are all sent to *MIMS*.

Thanks to all attendees for taking the time to attend this meeting.

MIMS training will be announced in September.

The Urban GIS Project is gearing up for the 2nd year of the project. Work is continuing on Phase I with the release of Tax Roll and Land Use District information planned for November 2003.

As part of the planning for Phase II, individual meetings with all the administrators and public works foremen have been completed. The purpose of these meetings was to get each municipality started on collecting infrastructure data so as soon as Phase I is completed, work on Phase II could begin.

Two separate software packages will be required by each municipality for the GIS project. *MapGuide* will be used

for the land parcel and Land Use District information while MIMS handle will the infrastructure data. Both programs are capable of viewing both parcel and infrastructure data. MIMS determined was bv ORISA to be the best software package that would meet all of the needs for the infrastructure phase of the project. It is a FREE software program developed for Alberta Municipalities and is a great tool for infrastructure management while MapGuide is a great tool for analyzing and managing land parcel information.

ORISA will be responsible for preparing and

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maintaining the digital CAD files for roads, water, sewer and storm sewers for MIMS. The data required for setting up these digital files will have to be supplied by the municipalities themselves. In the case where no infrastructure data is available, ORISA and the municipality will work together on collecting and creating this data. Each municipality will then be able to enter infrastructure information into the MIMS program. MIMS employees will be responsible for the initial training of municipal staff on the MIMS software. ORISA staff will provide training on the use of MapGuide as well as support for MIMS after the initial training has been completed.

A Reminder to Public Works personnel.....

Please remember to begin collecting any infrastructure data that you may have access to. This includes reports, drawings (blueprints), CAD files or even spreadsheets that may have pertinent information on your infrastructure. This includes roads, sanitary sewer, storm sewer and water sy stems.

December 2003



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Phase I Deployment



The above picture is the screen each municipality will see when they visit the website. Some of the features of the webpage are a large map, tools that allow the user to zoom in/out or move around the map as well as the ability to control the scale of the map. The webpage also allows the user to control the types of information that are displayed on the map.

PHASE I of the Urban GIS Project is ready for use. After just over a year of work the GIS is up and running. GIS staff are currently in the process of making appointments with each participating municipality to install and train municipal staff in the use of the GIS. Every municipality will have access to the system by Christmas. The GIS is accessed through a website which is password protected to allow only the municipal employees access to the information.

The user will have the ability to search the map by tax roll number or owner name and then have the map zoom to that location. This will undoubtedly be a very useful tool. The option to print a map of a particular area for discussion should also prove useful. This includes being able to copy and paste the map view into another software programs such as *Microsoft Word* or *PowerPoint*.

The reporting capabilities of the GIS are another feature that users will find very useful. Whether just viewing the information regarding a particular parcel, or actually printing a full page report the user has a very handy tool at his or her finger tips.

Another feature of this interactive GIS is the ability to buffer selected map features, whether that be a parcel or even a street. Once the buffer layer is created the

The Next Step...

Phase II is beginning immediately and involves the collection of infrastructure data and entering the same into the *MIMS* program. Training on *MIMS* will be in January or February—we'll keep you posted!

user is then able to select all the parcels that fall within the buffer and create a mailing list.

This is an ongoing project that is under constant d e v e l o p m e n t a n d improvement, so any feedback about the project is appreciated.

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Appendix B

Income Statements and the Oldman River Intermunicipal Service Agency 2002 Annual Report