Appalachian Ohio's Open Geographic Information System Web Access

Local Government Innovation Fund Project Proposal

Submitted by: Gallia County Commissioners

March 1, 2012

Contact Information

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Title: **GIS/CAD Specialist**

County: **Gallia County**

Population: **30,934**

Collaborative Partners

Buckeye Hills - Hocking Valley Regional Development District (Buckeye Hills)
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Muskingum Watershed Conservancy District (MWCD)
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330-343-6647
Fax: 330-364-4161
tfisher@mwcd.org

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Voinovich School of Leadership and Public Affairs at Ohio University (Voinovich School)
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Coshocton County
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740-622-2135
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Population: 36,901

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Population: 40,087

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Fax: 740-962-3703
stevan.hook@morgancounty-oh.gov
Population: 15,054

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Phone: 740-472-2537
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Lonnietustin555@sbcglobal.net
Population: 14,642

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Caldwell, Ohio 43724
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Fax: 740-732-4861
nnce4@verizon.net
Population: 14,645

The partnership agreements will take the form of a memorandum of understanding between the entities listed above. The Counties in the partnership: Gallia, Coshocton, Morgan, Monroe, Noble and Guernsey will be integral in the success of the project as they will be the local knowledge and are the authoritative entities for the data. Gallia County in cooperation with The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will perform fiscal and procedural oversight on this project. The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will provide the majority of technical expertise but will be supported by other members of the partnership where it is necessary to complete tasks that are integral to the success of this project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission will act as project advocates as data development liaisons. Tab 5 contains the memorandum of understanding that each of the partners will sign. We expect the memorandum of understanding to be signed by all parties by April 15, 2012. Resolutions of support from the applicant's and collaborative partners' governing entities as well as letters of support will also be submitted by April 15, 2012.

Project Information

Appalachian Ohio's Open Geographic Information System Web Access

Gallia County, Coshocton County and the Appalachian Ohio Geospatial Data Partnership (AOGDP) are proposing an exciting regional Geographic Information System (GIS) project called the ***Appalachian Ohio's Open Geographic Information System Web Access*** that leverages the benefits of a shared resource.

This proposal significantly supports the underserved communities of Appalachian Ohio by providing a resource that is used by Federal, State, Regional and Local governmental units as well as private interests looking to invest in the future of Appalachian Ohio. More specifically, this online service will be used by the Utica and Marcellus shale gas companies as well as their support organizations. The project outline and description is as follows:

We propose a two phased approach to our program.

Phase One - *Appalachian Ohio's Open Geographic Information System Web Access* is a planning project to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience. This data is available within a web browsing viewer, a data feed that GIS software can consume in real time across a broadband internet connection, or is made available for download so that the end user can utilize the data as may be necessary in some applications. Phase one is broken into a two tiered approach:

> **Tier One** – Counties with existing, trusted GIS parcel data that is regularly maintained and meets the minimum data standard for publication.
>
> **Tier Two** - Counties without GIS parcel data or data that requires conversion into a trusted parcel layer suitable for publication.

Tier One is to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data. Other geospatial base data such as transportation networks and aerial imagery will enhance the parcels within the web service, and the system design will accommodate future county data sets that augment the analysis capability such as soils, watersheds, geologic formations, census, school districts, and voting precincts. Of the participating counties, Gallia and Coshocton Counties have trusted data that is included in this initial deployment of the online data portal. Hardware, software configuration and programming conducted by the experienced staff at the Voinovich School of Leadership and Public Affairs and Buckeye Hills – Hocking Valley Regional Development District will take place in this phase and is designed with scalability in mind to support the addition of counties in Tier Two of the program.

Tier Two includes a study for counties that do not have a fully developed county parcel layer in GIS. This planning study will identify the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance. Prepared documentation will describe the process of parcel data

development with real-world empirical evidence of cost and time requirements of creation and maintenance. Finally, a practical, actionable plan for shared cost between county departments, as well as a "road map" to securing outside funding sources will be completed in this tier.

By the end of Phase One, we will have a shared resource that active Appalachian counties can use to support economic development and more specifically the Marcellus and Utica shale industry. This project will directly integrate with planned Ohio Spatial Data Framework efforts and the highly successful statewide spatial data programs like the Ohio Statewide Imagery Program (OSIP) and Location Based Response System (LBRS) roadway centerline program. An additional benefit is the *Ohio Geographically Referenced Information Program* (OGRIP) will utilize this resource in the creation of their conceptual regional node system, a node system that will consolidate a seamless data fabric for Ohio. **Figure 1** depicts Counties as the authoritative resource using a regional approach to publish their data up to the state and other organizations.

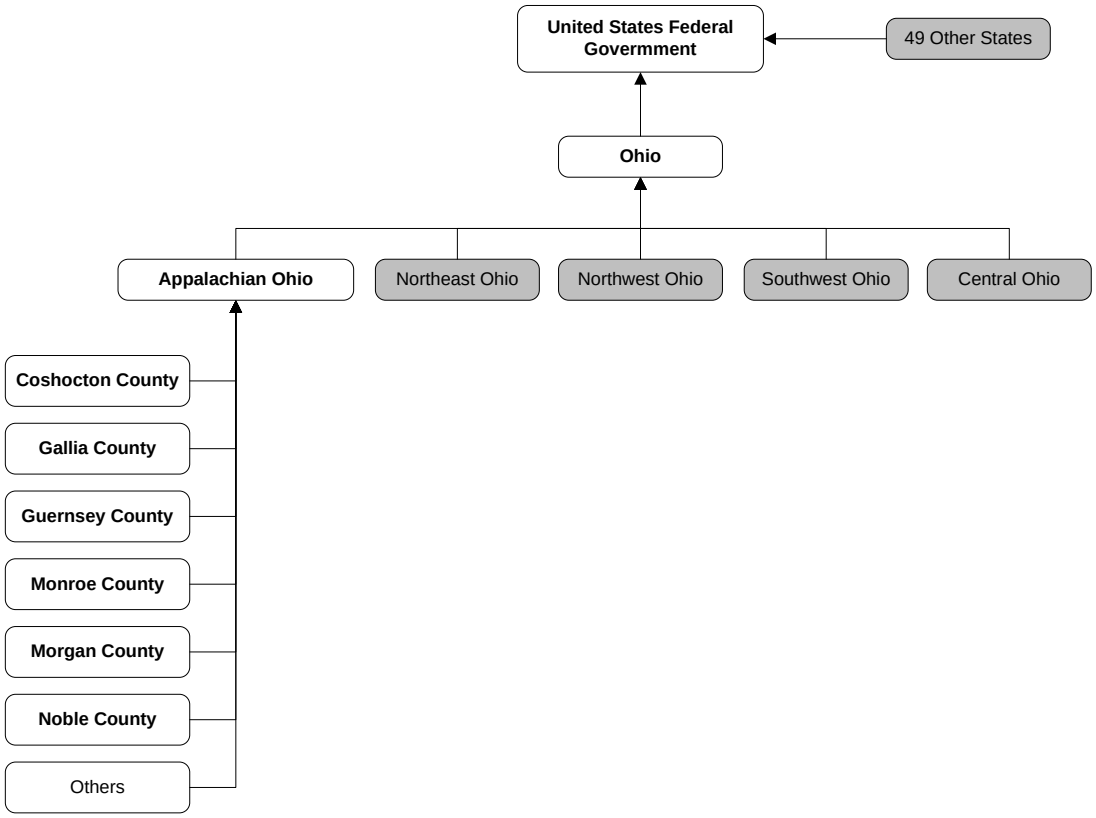

Figure 1

Phase Two will prove the overall scalability of our coproduction project but is not included in this grant request. There are counties in Southeastern Ohio that are not active in this Partnership. Phase two of the project will address this by hosting their data within the Open GIS Web Access. With this seamless regional asset, developers from within and outside Ohio can access these needed resources as they look to locate their businesses and promote the state of Ohio and the Appalachian region.

Award Type Sought

Gallia County and the collaborative partners will be seeking a planning project award to determine the most effective method with which to create and maintain a web mapping interface that will allow counties to publish their parcel data to the web and make it available to a wide audience. This audience not only includes the public, but also oil and gas companies, realtors, assessors, and a number of other entities interested in land ownership within a county.

Problem Statement

With the sudden interest in the Utica and Marcellus shale gas plays in much of the Appalachian region of Ohio, many small counties are struggling to accommodate the increased demand on property records offices. Guernsey County's offices are now open 12 hours per day and courthouses in the smallest counties in the state have been overrun with oil and gas company representatives searching deeds for property within the county. A large part of this is due to the fact that the counties in the region have long been behind the remainder of the state in technology adoption, namely, geographic information systems (GIS). Nowhere is this more apparent than in the area of mapping technology for the management of county parcel information. Using geographic information systems (GIS) to create, manage, and view a county's parcel data is more efficient and productive compared to using paper maps. The use of technology that permits counties to publish their data to the web allows interested parties to gather information and view property much more efficiently and without the need to travel sometimes long distances to a courthouse in order to find property information. The availability of county parcel data on the web will reduce the number of people visiting the office to look for information which will allow workers more time to attend to other tasks.

In 2010, Gallia County entered into a contract with the Voinovich School to create digital parcels in a GIS. Prior to the project, the county was maintaining hard copy maps of each parcel. When a parcel was split or otherwise altered, the draftsperson drew the updated parcel by hand. The owner name and parcel ID number were also updated by hand. If a county resident or any other interested party wanted to view any parcel, he or she was forced to travel to the engineer's office and have an employee find the appropriate map page. The data was in no way linked to the auditor's data and there was no way for the data to be viewed in context with other map data, such as aerial photography, roads, or address points. The result of the conversion from a paper based system to a GIS was a parcel data set that can be edited on a computer, directly linked to the auditor's data, and viewed on a web page. The contract with the Voinovich School was for $65,780 and included the conversion and the creation of a web mapping interface.

Coshocton County had created their county-wide parcels in a GIS and was utilizing a web mapping interface built on older technology. In order to take advantage of the best web mapping technology available, they contracted with the Voinovich School to update the software and web interface to facilitate the public's ability to view county property data. Coshocton County spent $12,000 on this project.

Targeted Approach to Innovation

Coproduction of the mapping services for each of these counties will require far fewer resources and achieve the same goal of making property data available to the public via the web.

Anticipated Return on Investment

Based on the anticipated cost avoidance by implementing the shared map services system, we anticipate the return on investment to be equal to 7.6. This ROI is based on a savings of $855,395 with an initial investment of $100,000. This savings is described in the tables included in the Financial Information section.

Probability for Success and Past Successes

The activity outlined in this proposal has a high probability for success due to the strength of the partnerships existing between the collaborative partners. Prior to the project described in this application, the Voinovich School, the Muskingum Watershed Conservancy District, and Buckeye Hills, along with individual counties such as Gallia, Noble, Monroe, Morgan, and Guernsey collaborated to create the Appalachian Ohio Geospatial Data Partnership (AOGDP) in May 2011. Ohio Valley Regional Development Commission joined in July of 2011. This partnership was formed to promote GIS activities in a 15 county region of Appalachian Ohio. This partnership to date has successfully applied for and received federal grant funds from the FGDC (Federal Geographic Data Committee) to complete a pilot parcel creation project in three counties. This project is under way, and well on its way to successful completion in the summer of 2012. The activity described in this application builds on the work completed in this pilot project, and will serve to build upon those successes. The partners and local governments that were committed to the founding of the AOGDP in 2011, and the completion of the parcel pilot project in 2012, are committed to the next logical step in this project progression. That next step is the purpose of this application, which is bringing this new parcel data, along with pre-developed parcel data from other counties in the 15 county region to the web in a coordinated and cost effective manner. Both Buckeye Hills and the Voinovich School have years of experience of bringing GIS data to the web utilizing ArcGIS Server in an easily accessible and consistent format that can be consumed by interested parties of any kind.

Project Replication and Scalability

As the project continues to grow beyond the scope of this application, additional counties within the region can be included within the service to take advantage of this technology. Because the services are housed on a server in a central location, adding data for additional counties will be a straightforward task. We foresee counties paying a nominal annual fee to be included in the shared map service programs. This fee will be much lower than if the county encumbered the project by itself and will be possible thanks to economies of scale. The project will produce a replicable template for the coproduction of GIS data and web mapping services in order to make that data available to a wide

audience. We anticipate a situation where parcels from all of the member counties of the AOGDP region will be seamless across county lines and have consistent information associated with them. This will facilitate an ease of use for public and private entities to view, search, and query property across county lines.

Current substantial changes in economic demand

As stated earlier, the demand for this data, and its widespread availability on the web, is being driven by the dramatic increase in shale gas and oil exploration activities taking places across Eastern Ohio. Having this data widely accessible on the internet will not only aid these companies as they research properties and natural resources in the region, but this data will also benefit economic development activities, local community development endeavors, and local officials. The costs involved in making parcel data available in not only an easily downloadable fashion, but in an interactive map viewer that allows anyone to interact with the information in real time, is prohibitive to many county governments in the Appalachian region of Ohio. Based on the savings we are anticipating by grouping the development of these map services and web applications together, the barrier for entry for the local counties becomes much more manageable. Outside of the successful receipt of funding for this application, it is unlikely that these services will be brought to fruition via other means.

Financial 52ŏdzŶŜyŕŭl·ŭλ2y

This will be a new project for the counties and partners involved. The savings to be realized are based on the comparison of a model in which a single county attempted to individually create and offer web mapping services for parcel data versus a centralized coproduction of web mapping services for a number of counties in the region.

The anticipated project cost will be $100,000. These funds will be used to conduct a planning project for the design and maintenance of a web mapping service for county parcels for all the participating counties, as well as a scalability plan to include additional interested counties in the future.

Part of the project cost will include the creation and hosting of parcel data in a web accessible template for the counties of Gallia and Coshocton. The web mapping services will be hosted in a central location and each county will be a part of the services. Part of the cost of the project will include planning and implementation for the creation and upgrade of the remaining counties' data so that it can also be included in the shared map service web access model.

Match from the local level includes investments made by two of the coordinating partners, Gallia and Coshocton Counties, in the creation of parcel data and the design and implementation of a web mapping service to make parcel data available to the public. Gallia County has invested $65,780 to convert their parcel data from paper hard-copy maps to a GIS and to build a website that will allow the public to view, query and search for parcels in the county by owner name, parcel identification number, and address. Coshocton County has invested $12,000 to upgrade their software and web mapping system to better serve the public with the ability to view, query and search for parcels in the county. Taken together, the total investment by these two participating counties totals $77,780 and amount to 77.7% of match for the purposes of this grant.

The costs for a single county to establish and maintain a web access presence for parcel data viewing that was outlined in the description can be substantial enough so as to prohibit it from implementing on its own. In 2009, the Voinovich School of Leadership and Public Affairs conducted a feasibility study, called the *Small Utilities GIS Cooperative Feasibility Study,* to determine the most economical means to allow small water systems access to a centralized repository of their GIS data and the ability to edit and use the data. The report is included in the Supporting Documentation. The study indicates that for a single entity to purchase the hardware and software for such a system and to employ the people with the expertise to establish and maintain the system would require an initial outlay as well as an annual cost of maintenance for hardware, software, and staff. The hardware includes servers for both mapping and web services. The software includes programs for desktop mapping, web mapping, and web services. Additionally, staff with the expertise to build and maintain the data and services for this system is required.

Despite the water utility focus of the study, the costs and savings are comparable because the hardware, software, and expertise required are identical to those required for the successful completion of this project. The cost estimates shown here are the most conservative numbers from the study. Based on the 2009 study, the initial outlay for a single county would be $171,079. The annual costs would be

$92,040. If each of the counties within the partnership developed and maintained one of these systems independently, the total initial outlay would amount to over $1,000,000 and the annual costs would exceed $500,000. Alternatively, a central system would save $855,395 at the point of initial system creation and $460,200 annually. The table below outlines the financial projections for three years. The savings, in fact, could be much more. If the counties were to consolidate into a central location with an entity that already possessed the necessary hardware, software, and expertise to maintain the system, they could be expected to pay only an annual fee for the upkeep of the system and hosting services. We foresee the hosting site to be the Voinovich School since they have previously obtained the hardware and software, and have the expertise, to make the project successful.

Estimated three year cost of system without shared services for six counties

System Component	Cost			Total 3 Year Cost
	Year 1	Year 2	Year 3	
Hardware	$324,894	$79,200	$79,200	$483,294
Software	$234,852	$150,000	$150,000	$534,852
Staff	$466,728	$323,040	$323,040	$1,112,808
Total	$1,026,474	$552,240	$552,240	$2,130,954

Estimated three year cost of system with shared services for six counties

System Component	Cost			Total 3 Year Cost
	Year 1	Year 2	Year 3	
Hardware	$54,149	$13,200	$13,200	$80,549
Software	$39,142	$25,000	$25,000	$89,142
Staff	$77,788	$53,840	$53,840	$185,468
Total	$171,079	$92,040	$92,040	$355,159
Savings	*$855,395*	*$460,200*	*$460,200*	*$1,775,795*
Expected Return	***83%***	***83%***	***83%***	***83%***

Memorandum of Understanding

Support for the
Appalachian Ohio's Open Geographic Information System Web Access
Local Government Innovation Fund Project

Section 1: Introduction

The Charter Members of the Appalachian Ohio Geospatial Data Partnership Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC) along with Coshocton County recognize the need for a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience. These counties and organizations have established a history of working together to solve the technical needs of the underserved region of Appalachian Ohio.

In an effort to continue the success of this cooperative partnership Coshocton, Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC) will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer.

Section 2: Purpose

To develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels. This type of Geographic Information System Web Access is typically handled by individual counties and is mostly reserved for counties that have large populations and a large tax base to support such an endeavor. These types of integrated systems have a tremendous start-up and maintenance costs while only a fraction of the hardware and software resources are actually utilized. At a typical three year cost greater than $355,000 per county, a single web portal with combined data from six Appalachian counties is a substantial return on investment. Even with data from six counties, only a fraction of the resource is utilized giving the project the ability to expand to more Appalachian counties and become a regional consolidator/distributer of County maintained and trusted data.

Section 3: Scope

The entities included in the scope of the project include Coshocton, Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC).

Section 4: Policy

Gallia County is responsible for fiscal and process reporting as required by the Local Government Innovation Fund program.

The Voinovich School for Leadership and Public Affairs and Buckeye Hills – Hocking are responsible for the successful technical completion of the project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission are responsible for project promotion as data development liaisons. Other members of the partnership are required to participate in the planning process to ensure the grant project's success.

Section 5: Procedure

1. Assess the current status of parcel data in each signatory county.
2. If GIS compatible parcel data exists, transmit existing data to the Voinovich School/Buckeye Hills. The data (geometry and attributes) will be converted to a format which is compatible with cadastral data standards established by the Federal Geographic Data Committee (FGDC).
3. If GIS compatible parcel data does not exist, representatives from any combination of the Voinovich School, Buckeye Hills, or the Muskingum Watershed Conservancy District will evaluate source data (original surveys, property descriptions, tax maps, to determine the most appropriate method for parcel data development. (Development of parcel data is not part of this specific project.)
4. Once data is received by Voinovich School/ Buckeye Hills, reviewed, and complies with applicable data standards, this data will be added to an individual map service for review by the signatory county.
5. After review is completed by the signatory county and approval is received, the data will be added to the shared map service.
6. Once added, representatives will update all appropriate documentation to reflect the participation of the signatory county.

Section 6: Oversight

Gallia County in cooperation with The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will perform fiscal and procedural oversight on this project. The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will provide the majority of technical expertise but will be supported by other members of the partnership where it is necessary to complete tasks that are integral to the success of this project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission will act as project advocates as data development liaisons.

Signature _____ Date _____

_____

Typed Name and Title of Signatory

Signature_____ Date_____

_____

Typed Name and Title of Signatory

FINANCIAL CONDITION
GALLIA COUNTY

SINGLE AUDIT

FOR THE YEAR ENDED DECEMBER 31, 2010

Dave Yost • Auditor of State

GALLIA COUNTY

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INDEPENDENT ACCOUNTANTS' REPORT

Gallia County
18 Locust Street
Gallipolis, Ohio 45631

To the Board of County Commissioners:

We have audited the accompanying financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate discretely presented component units and remaining fund information of Gallia County, Ohio (the County), as of and for the year ended December 31, 2010, which collectively comprise the County's basic financial statements as listed in the table of contents. These financial statements are the responsibility of the County's management. Our responsibility is to express opinions on these financial statements based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in the Comptroller General of the United States' *Government Auditing Standards*. Those standards require that we plan and perform the audit to reasonably assure whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audit provides a reasonable basis for our opinions.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund, and the aggregate discretely presented component units and remaining fund information of Gallia County, Ohio, as of December 31, 2010, and the respective changes in financial position and where applicable, cash flows, thereof and the respective budgetary comparisons for the General, Motor Vehicle and Gas Tax, Job and Family Services, Board of Developmental Disabilities, and Community Development Block Grant Funds for the year then ended in conformity with accounting principles generally accepted in the United States of America.

As described in Note 25, as of January 1, 2010, the County restated its governmental activities' net assets due to an overstatement in capital assets identified during the County's implementation of a new capital asset inventory system.

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www.auditor.state.oh.us

In accordance with *Government Auditing Standards*, we have also issued our report dated September 15, 2011, on our consideration of the County's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. While we did not opine on the internal control over financial reporting or on compliance, that report describes the scope of our testing of internal control over financial reporting and compliance and the results of that testing. That report is an integral part of an audit performed in accordance with *Government Auditing Standards*. You should read it in conjunction with this report in assessing the results of our audit.

Accounting principles generally accepted in the United States of America require this presentation to include *Management's Discussion and Analysis*, as listed in the table of contents, to supplement the basic financial statements. Although this information is not part of the basic financial statements, the Governmental Accounting Standards Board considers it essential for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any other assurance.

We conducted our audit to opine on the financial statements that collectively comprise the County's basic financial statements taken as a whole. The Federal Awards Expenditures Schedule (the Schedule) provides additional information required by the U.S. Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, and is not a required part of the basic financial statements. The Schedule is management's responsibility, and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. This Schedule was subject to the auditing procedures we applied to the basic financial statements. We also applied certain additional procedures, including comparing and reconciling this information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, in accordance with auditing standards generally accepted in the United States of America. In our opinion, this information is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

Dave Yost
Auditor of State

September 15, 2011

The discussion and analysis of Gallia County's financial performance provides an overall review of the County's financial activities for the year ended December 31, 2010. The intent of this discussion and analysis is to look at the County's financial performance as a whole. Readers should also review the basic financial statements and notes to those respective statements to enhance their understanding of the County's financial performance.

Financial Highlights

Key financial highlights for 2010 are as follows:

- The assets of the County for governmental activities exceeded its liabilities at December 31, 2010, by $29,232,708. Of this amount, $998,630 may be used to meet the County's ongoing obligations to citizens and creditors. The assets of the County for business-type activities exceeded its liabilities at December 31, 2010 by $6,064,740.

- The net assets of governmental activities increased $1,141,384. The net assets of business-type activities increased $364,542.

- For 2010, all revenues of the County totaled $28,534,803. General revenues accounted for $9,131,959 in revenue or 32 percent of all revenues. Program revenues in the form of charges for services and grants and contributions accounted for $19,402,844 or 68 percent of all revenues.

- The County had $26,594,889 in expenses related to governmental activities: $18,614,975 of these expenses was offset by program specific charges for services, grants and contributions. General revenues of $9,121,298, of which $7,051,707 was taxes with the remaining $2,069,591 composed of interest, unrestricted grants and entitlements, and miscellaneous revenues were adequate to provide for these programs.

- As of December 31, 2010, the County's governmental funds reported combined fund balances of $5,923,445, an increase of $686,526 in comparison with the prior year.

- The General Fund's fund balance decreased by $474,430.

Overview of the Financial Statements

This annual report consists of a series of financial statements and notes to those statements. These statements are organized so the reader can understand Gallia County as a financial whole or as an entire operating entity. The statements then proceed to provide a detailed look at specific financial conditions.

This discussion and analysis is intended to serve as an introduction to the County's basic financial statements. The County's basic financial statements are comprised of three components: the government-wide financial statements, fund financial statements, and notes to the basic financial statements.

Government-Wide Financial Statements

The government-wide financial statements are designed to provide readers with a broad overview of the County's finances, in a manner similar to private-sector businesses. The statement of net assets and the statement of activities provide information about activities of the County as a whole, presenting both an aggregate view of the County's finances and a longer-term view of those assets.

The statement of net assets presents information on all of the County's assets and liabilities, with the difference between the two reported as net assets. Over time, increases and decreases in net assets may serve as a useful indicator of whether the financial position of the County is improving or deteriorating. The causes of this change may be the result of many factors, some financial, some not. Non-financial factors include the County's tax base, current property tax laws in Ohio restricting revenue growth, and the condition of the County's capital assets (roads, bridges, sewer lines, etc.). These factors need to be considered when assessing the overall health of the County.

The statement of activities presents information showing how the government's net assets changed during the recent fiscal year. All changes in net assets are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g. uncollected taxes and earned but unused vacation leave).

In both of the government-wide financial statements, the County is divided into two distinct kinds of activities:

Governmental Activities - Most of the County's programs and services are reported here including human services, health, public safety, public works, community and economic development and assistance and general government (legislative and executive and judicial). These services are funded primarily by taxes and intergovernmental revenues including federal and state grants and other shared revenues.

Business-Type Activities - These services are provided on a charge for goods or services basis to recover all or most of the cost of the services provided. The County's sewer operations are reported here.

Component Units - The County's financial statements include financial data for the Gallia-Meigs Regional Airport and Gallco Industries, Inc. These component units are described in the notes to the basic financial statements.

Fund Financial Statements

Fund financial statements provide detailed information about the County's major funds. The County uses many funds to account for a multitude of financial transactions. However, these fund financial statements focus on the County's most significant funds. The County's major governmental funds are the General Fund, Motor Vehicle and Gas Tax, Job and Family Services, Board of Developmental Disabilities, and Community Development Block Grant special revenue funds. A fund is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The County, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the funds of the County can be divided into one of three categories: governmental funds, proprietary funds, and fiduciary funds.

Governmental Funds - Governmental funds are used to account for essentially the same functions reported as governmental activities in the government-wide financial statements. However, unlike the government-wide financial statements, governmental fund financial statements focus on current inflows and outflows of spendable resources, as well as on balances of spendable resources available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term financing requirements.

Because the focus of the governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for governmental funds with similar information presented for governmental activities in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the government's near-term financing decisions. Both the governmental fund balance sheet and the governmental fund statement of revenues, expenditures and changes in fund balances provide a reconciliation to facilitate this comparison between governmental funds and governmental activities.

The County maintains a multitude of individual governmental funds. Information is presented separately in the governmental fund balance sheet and in the governmental statement of revenues, expenditures and changes in fund balances for the major funds, which were identified earlier. Data from the other governmental funds are combined into a single, aggregated presentation. The governmental financial statements can be found on pages 16 through 27 of this report.

Proprietary Funds – The County maintains two different types of proprietary funds: enterprise funds and internal service funds. Enterprise funds are used to report the same functions presented as business-type activities in the government-wide financial statements. The County uses enterprise funds to account for sewer operations. Internal services funds are an accounting device used to accumulate and allocate cost internally among the County's various functions. The County uses an internal service fund to account for its Employee Benefits Trust Fund. Because this service predominately benefits governmental rather than business-type functions, it has been included with governmental activities in the government-wide financial statements. The County's major enterprise funds are the Bidwell/Porter Sewer, KA Sewer, and MV Sewer Funds. The proprietary fund financial statements can be found on pages 28 through 30 of this report.

Fiduciary Funds - Fiduciary funds are used to account for resources held for the benefit of parties outside the County. Fiduciary funds are not reflected in the government-wide financial statements because the resources of those funds are not available to support the County's own programs. The accounting used for fiduciary funds is much like that used for proprietary funds. The County's only fiduciary funds are agency funds. The fiduciary fund financial statement can be found on page 31 of this report.

Notes to the Basic Financial Statements - The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. These notes to the basic financial statements can be found on pages 33 through 69 of this report.

Government-Wide Financial Analysis

You may recall that the statement of net assets provides the perspective of the County as a whole. Table 1 provides a summary of the County's net assets for 2010 compared to 2009:

Table 1
Net Assets

	Governmental Activities		Business-Type Activities		Total	
	2010	2009*	2010	2009*	2010	2009*
Assets						
Current and Other Assets	$ 14,057,843	$ 14,020,071	$ 1,942,352	$ 3,392,667	$ 16,000,195	$ 17,412,738
Capital Assets, Net	23,786,078	22,529,780	8,997,077	5,308,003	32,783,155	27,837,783
Total Assets	37,843,921	36,549,851	10,939,429	8,700,670	48,783,350	45,250,521
Liabilities						
Curent and Other Liabilities	4,865,785	4,881,219	471,009	542,711	5,336,794	5,423,930
Long-Term Liabilities:						
Due within One Year	772,982	1,060,878	39,204	40,531	812,186	1,101,409
Due in more than one year	2,972,446	2,516,430	4,364,476	2,417,230	7,336,922	4,933,660
Total Liabilities	8,611,213	8,458,527	4,874,689	3,000,472	13,485,902	11,458,999
Net Assets						
Invested in Capital Assets Net of Debt	21,802,784	20,556,231	4,444,597	2,800,400	26,247,381	23,356,631
Restricted	6,431,294	6,148,442	-	-	6,431,294	6,148,442
Unrestricted	998,630	1,386,651	1,620,143	2,899,798	2,618,773	4,286,449
Total Net Assets	$ 29,232,708	$ 28,091,324	$ 6,064,740	$ 5,700,198	$ 35,297,448	$ 33,791,522

* Amount Restated – See Note 25.

Business-Type assets increased primarily due to an increase in capital assets as a result of the construction associated with the construction of the Green Township and Mercerville Sewer systems. Governmental Activities assets increased as a result of an increase in capital assets and taxes receivable, which was partially offset by a decrease in cash and cash equivalents and intergovernmental receivable.

Net assets may serve over time as a useful indicator of a government's financial position. In the case of the County, assets exceeded liabilities by $35,297,448: $29,232,708 in governmental activities and $6,064,740 in business-type activities at the end of the 2010 year.

The County's net assets are reflected in three categories: invested in capital assets, net of related debt, restricted and unrestricted.

The County's largest portion of net assets relates to invested in capital assets, net of related debt. This accounts for 74 percent of net assets. The County uses these capital assets to provide services to citizens; consequently, these assets are not available for future spending. Although the County's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since capital assets may not be used to liquidate these liabilities.

The County's smallest portion of total net assets is unrestricted. This accounts for 7 percent of net assets. These net assets represent resources that may be used to meet the County's ongoing obligations to its citizens and creditors.

The remaining balance of $6,431,294 or 19 percent relates to restricted net assets. The restricted net assets are subject to external restrictions on how they may be used.

At the end of the current fiscal year, the County was able to report positive balances in all three categories of net assets, both for the County as a whole, as well as for its separate governmental and business-type activities. The same was true for the prior year.

Table 2 shows the changes in net assets for fiscal year 2010 as compared to 2009:

Table 2
Change In Net assets

	Governmental Activities		Business-Type Activities		Total	
	2010	2009*	2010	2009*	2010	2009*
Revenues						
Program revenues:						
Charges for services	$ 5,322,665	$ 4,189,337	$ 287,255	$ 339,003	$ 5,609,920	$ 4,528,340
Operating grants and contributions	11,666,184	13,495,539	-	-	11,666,184	13,495,539
Capital grants and contributions	1,626,126	278,545	500,614	2,070,452	2,126,740	2,348,997
Total Program Revenues	18,614,975	17,963,421	787,869	2,409,455	19,402,844	20,372,876
General revenues:						
Property taxes	2,978,940	3,031,190	-	-	2,978,940	3,031,190
Sales taxes	4,072,767	4,025,647	-	-	4,072,767	4,025,647
Grants and entitlements	1,300,057	1,404,502	-	-	1,300,057	1,404,502
Investment earnings	321,253	304,810	8,846	9,348	330,099	314,158
Miscellaneous	448,281	353,562	1,815	37	450,096	353,599
Total General revenues	9,121,298	9,119,711	10,661	9,385	9,131,959	9,129,096
Total revenues	27,736,273	27,083,132	798,530	2,418,840	28,534,803	29,501,972
Program expenses						
General government:						
Legislative and executive	3,576,379	3,390,089	-	-	3,576,379	3,390,089
Judicial	1,590,159	1,690,279	-	-	1,590,159	1,690,279
Public safety	5,878,792	5,695,157	-	-	5,878,792	5,695,157
Public works	5,420,893	4,726,449	-	-	5,420,893	4,726,449
Health	3,053,315	2,862,493	-	-	3,053,315	2,862,493
Human services	5,987,290	7,184,496	-	-	5,987,290	7,184,496
Conservation and recreation	222,846	320,813	-	-	222,846	320,813
Community and economic development	546,305	514,765	-	-	546,305	514,765
Other	222,086	266,970	-	-	222,086	266,970
Interest and fiscal charges	96,824	96,124	-	-	96,824	96,124
Intergovernmental	-	94,743	-	-	-	94,743
Bidwell/Porter Sewer	-	-	304,002	287,687	304,002	287,687
Other Enterprise Funds	-	-	129,934	112,135	129,934	112,135
MV Sewer	-	-	52	-	52	-
KA Sewer	-	-	-	20,294	-	20,294
Total expenses	26,594,889	26,842,378	433,988	420,116	27,028,877	27,262,494
Change in net assets	1,141,384	240,754	364,542	1,998,724	1,505,926	2,239,478
Net Assets at January 1	28,091,324	27,850,570	5,700,198	3,701,474	33,791,522	31,552,044
Net Assets at December 31	$ 29,232,708	$ 28,091,324	$ 6,064,740	$ 5,700,198	$ 35,297,448	$ 33,791,522

* Amount Restated - See Note 25.

As noted earlier in this discussion, governmental activities net assets increased $1,141,384 and business-type activities increased $364,542. Overall revenues decreased by $967,169. Expenses decreased by $233,617. The operating grants and contributions decreased due to a decrease in the Job and Family Services program grant funding and the CDBG program. The decrease in human services expenditures is due to decreased funding in the Job and Family Services department. Capital grants and contributions increased in the governmental activities due to amounts received for airport grants and State Issue II Paving, and business-type activities decreased due to the KA Sewer grants completed, which was partially offset by Mercerville Sewer grants that were awarded during 2010. Public Works expenses increased due to increased road and bridge maintenance and repair.

Table 3, for governmental activities, indicates the total cost of services and the net cost of services. The statement of activities reflects the cost of program services and the charges for services, grants, and contributions offsetting those services. The net cost of services identifies the cost of those services supported by tax revenues and unrestricted intergovernmental revenues.

Table 3
Governmental Activities

	2010		2009	
	Total Cost of Services	Net Cost of Services	Total Cost of Services	Net Cost of Services
Program expenses				
General government:				
Legislative and executive	$ 3,576,379	$ 2,143,094	$ 3,390,089	$ 1,745,662
Judicial	1,590,159	835,114	1,690,279	994,935
Public safety	5,878,792	3,811,193	5,695,157	4,307,798
Public works	5,420,893	(762,353)	4,726,449	(234,005)
Health	3,053,315	1,167,956	2,862,493	902,463
Human services	5,987,290	89,607	7,184,496	869,754
Conservation and recreation	222,846	92,574	320,813	277,882
Community and economic development	546,305	324,195	514,765	(388,263)
Other	222,086	181,710	266,970	217,556
Intergovernmental	-	-	94,743	94,743
Interest and fiscal charges	96,824	96,824	96,124	90,432
Total expenses	$ 26,594,889	$ 7,979,914	$ 26,842,378	$ 8,878,957

Of the $26,594,889 of total governmental activities expenses, $18,614,975 or 70 percent was covered by direct charges to users of the services and operating and capital grants. The majority of program revenues are grants, with the remaining portion consisting of fees and charges for services. These charges are for fees charged for real estate transfers, fees for the collection of property taxes throughout the County, for title fees and for court fees. Public safety charges for services include items such as fees for boarding prisoners, patrolling subdivisions, EMS, and for special details. Health includes charges for services provided to clients of the developmentally disabled board. Human services relate to services provided by human services related departments and judicial relates to Title IV-D services provided by courts and other fees collected by the courts.

Additional revenues were provided to both the governmental and business-type activities by the state and federal governments for operations and capital improvements.

Financial Analysis of the County's Funds

Governmental Funds - The focus of the County's governmental funds is to provide information on near-term receipts, disbursements, and balances of spendable resources. Such information is useful in assessing the County's financial requirements. In particular, unreserved fund balance may serve as a useful measure of a County's net resources available for spending at the end of the calendar year.

As of the end of the current year, the County's governmental funds reported combined ending fund balances of $5,923,445. Of this total, $5,639,075 represents unreserved fund balance, which is available for appropriation at the government's discretion within certain legal constraints and purposes restrictions. The remainder of fund balance is reserved to indicate that it is not available for new spending. While a large amount of the governmental fund balances are not reserved in the governmental fund statements, they lead to restricted net assets on the statement of net assets due to their being restricted for use for a particular purpose mandated by the source of the resources such as the state or federal government or the local tax levy.

The General Fund is the chief operating fund of the County. At the end of the current fiscal year, the fund balance of the General Fund was $1,245,104, with a decrease of $474,430. The decrease is attributed to an increase in transfers out, while revenues and expenditures remained consistent with the prior year.

The Motor Vehicle and Gas Tax Fund, Job and Family Services Fund, Community Development Block Grant Fund, and the Board of Developmental Disabilities Fund had fund balance increases in the amounts of $407,740, $427,164, $762, and $168,833, respectively.

Proprietary Funds – The County's major proprietary funds are the Bidwell/Porter, KA Sewer, and MV Sewer Enterprise Funds. The Bidwell/Porter Sewer Fund accounts for the providing of sewer services to the Bidwell/Porter area. For the past few fiscal years, program revenues have not been adequate to cover the costs of the operation. For 2010, the fund had a decrease in net assets of $101,211. The KA Sewer Fund accounts for grant monies that are being utilized to construct the KA sewer system. Net assets of the KA Sewer fund increased $50,614 due to grants received during 2010. The MV Sewer Fund accounts for grant monies that are being utilized to construct the MV sewer system. Net assets of the MV Sewer fund increased $452,344 due to grants received during 2010. Construction of the MV Sewer system is currently in progress.

Budgetary Highlights - General Fund

By state statute, the Board of County Commissioners adopts the annual operating budget for the County. Essentially the budget is the County's appropriations which are restricted by the amounts of anticipated revenues certified by the Budget Commission in accordance with the Ohio Revised Code.

The County had several revisions to the original appropriations approved by the County Commissioners. Overall these changes resulted in an increase from the original budget of $565,354 in the General Fund. This increase was largely due to the fact that the County advanced and transferred out more than originally budgeted.

The General Fund's budgeted revenue increased $57,859 from the original amount during 2010. Fluctuations in growth and diversity have typically not occurred in Gallia County, allowing departmental managers the ability to consistently predict revenues. The County does not increase its estimated revenues unless there are sufficient revenues to cover the total appropriations of the General Fund.

Capital Assets and Debt Administration

Capital Assets

The County's investment in capital assets for its governmental and business-type activities as of December 31, 2010 amounts to $32,783,155 (net of accumulated depreciation). This investment in capital assets includes construction in progress, land and improvements, buildings and improvements, furniture, fixtures, and equipment, vehicles, and infrastructure.

Table 4
Capital Assets at December 31, 2010 and 2009
(Net of Depreciation)

	Governmental Activities		Business-Type Activities		Total	
	2010	2009*	2010	2009*	2010	2009*
Land	$ 488,565	$ 488,565	$ -	$ -	$ 488,565	$ 488,565
Construction in progress	761,591	-	5,011,756	1,166,941	5,773,347	1,166,941
Land improvements	49,058	53,196	-	-	49,058	53,196
Buildings and improvements	6,308,263	6,542,343	3,985,321	4,141,062	10,293,584	10,683,405
Furniture, fixtures and equipment	1,891,612	1,937,238	-	-	1,891,612	1,937,238
Vehicles	1,015,082	1,003,457	-	-	1,015,082	1,003,457
Infrastructure	13,271,907	12,504,981	-	-	13,271,907	12,504,981
Total	$ 23,786,078	$ 22,529,780	$ 8,997,077	$ 5,308,003	$ 32,783,155	$ 27,837,783

* As Restated, See Note 25.

Business-Type Activities construction in progress increased due to the continued construction of the Kanauga Addison (KA) Sewer project and the beginning of the Green Township and Mercerville Sewer projects. For more information regarding the County's capital assets, see Note 7 of the notes to the basic financial statements.

Debt

At December 31, 2010, the County had total long-term debt obligations outstanding of $6,649,871. Of this total, $206,684 is due within one year and $6,443,187 is due in more than one year. Table 5 below summarizes the bonds and loans outstanding:

Table 5
Outstanding Debt, at Fiscal Year End

	Governmental Activities		Business-Type Activities		Total	
	2010	2009	2010	2009	2010	2009
General obligation bonds	$ 1,960,662	$ 1,507,072	$ 1,721,800	$ 1,748,900	$ 3,682,462	$ 3,255,972
Loans payable	295,767	459,954	2,671,642	695,588	2,967,409	1,155,542
Total	$ 2,256,429	$ 1,967,026	$ 4,393,442	$ 2,444,488	$ 6,649,871	$ 4,411,514

See Note 9 to the basic financial statements for detail on the County's long-term debt obligations.

At December 31, 2010, the County had outstanding capital leases for $1,865, with the entire amount due within one year reported in governmental activities.

At December 31, 2010, the County's overall legal debt margin was $13,704,865 with an unvoted debt margin of $6,963,037.

Economic Factors

The County's budget for the General Fund in 2011 is conservative. Much of the reason for the conservative budget centers on the slow down in economic growth and uncertainty of the future economic climate. The County continues to have an unemployment rate that is in line with the state rate and slightly higher than the federal rate. However, all of these rates have increased since 1999. A decline is expected to occur in sales tax revenue, since it is the most volatile and subject to decline if the economic slow down continues. The state legislature has reduced the amounts for state based programs including local government and state funded grant programs which may require more local support in order to maintain the current level of service. The County's business-type activities are expected to increase with the completion of the Kanauga Addison (KA) Sewer project and Mercerville Sewer project in 2011. Also, the County is in the construction stage of the Green Township Sewer project.

Contacting the County's Financial Management

This financial report is designed to provide a general overview of the County's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report, request for additional financial information or about obtaining the separately issued financial statements of the County's component units should be addressed to Larry M. Betz, Gallia County Auditor, Gallia County Courthouse, 18 Locust Street, Gallipolis, Ohio 45631.

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Gallia County

Statement of Net Assets

December 31, 2010

	Primary Government			Component Units	
	Governmental Activities	Business-Type Activities	Total	Gallia-Meigs Regional Airport	Gallco Industries, Inc.
Assets:					
Equity in pooled cash and cash equivalents	$ 4,968,944	$ 393,570	$ 5,362,514	$ 31,944	$ -
Cash and cash equivalents:					149,082
In segregated accounts	78,544	-	78,544	-	-
Cash and cash equivalents:					
With fiscal agents	114,580	-	114,580	-	-
Investments with fiscal agents	119,059	-	119,059	-	-
Materials and supplies inventory	82,038	-	82,038	17,431	10,895
Receivables:					
Property taxes	3,275,991	-	3,275,991	-	-
Sales taxes	634,047	-	634,047	-	-
Accounts	234,628	105,610	340,238	272	3,349
Intergovernmental	4,316,953	1,524,665	5,841,618	-	-
Accrued interest	44,160	-	44,160	-	-
Loan	47,222	-	47,222	-	-
Prepaid items	60,184	-	60,184	-	20
Internal balances	81,493	(81,493)	-	-	-
Capital assets:					
Nondepreciable capital assets	1,250,156	5,011,756	6,261,912	-	-
Depreciable capital assets, net	22,535,922	3,985,321	26,521,243	1,308,199	119,466
Total assets	37,843,921	10,939,429	48,783,350	1,357,846	282,812
Liabilities:					
Accounts payable	504,569	3,974	508,543	-	320
Contracts payable	507,914	240,852	748,766	-	-
Intergovernmental payable	559,073	2,188	561,261	-	194
Retainage payable	-	159,038	159,038	-	-
Accrued wages and benefits	79,217	-	79,217	-	-
Matured compensated absences payable	28,143	-	28,143	-	-
Unearned revenue	3,162,582	-	3,162,582	-	-
Accrued interest payable	-	64,957	64,957	-	-
Deposits held and due to others	24,287	-	24,287	-	-
Deferred proceed of loan	-	-	-	-	-
Long-term liabilities:					
Due within one year	772,982	39,204	812,186	-	-
Due in more than one year	2,972,446	4,364,476	7,336,922	-	-
Total liabilities	8,611,213	4,874,689	13,485,902	-	514
Net assets:					
Invested in capital assets, net of related debt	21,802,784	4,444,597	26,247,381	1,308,199	119,466
Restricted for:					
Roads and bridges	2,774,072	-	2,774,072	-	-
Capital projects	60,138	-	60,138	-	-
Debt service	4,200	-	4,200	-	-
Human services	95,139	-	95,139	-	-
Community development projects	530,244	-	530,244	-	-
Judicial	205,134	-	205,134	-	-
Public Safety	377,489	-	377,489	-	-
Other purposes	526,402	-	526,402	-	-
911	334,167	-	334,167	-	-
Real estate assessment	441,945	-	441,945	-	-
Ohio youth commission	260,056	-	260,056	-	-
Health	822,308	-	822,308	-	-
Unrestricted	998,630	1,620,143	2,618,773	49,647	162,832
Total net assets	$ 29,232,708	$ 6,064,740	$ 35,297,448	$ 1,357,846	$ 282,298

See accompanying notes to the basic financial statements.

Gallia County

Statement of Activities

For the Year Ended December 31, 2010

		Program Revenues		
	Expenses	Charges for Services	Operating Grants and Contributions	Capital Grants and Contributions
Governmental Activities:				
General government:				
Legislative and executive	$ 3,576,379	$ 1,376,129	$ 57,156	$ -
Judicial	1,590,159	708,070	46,975	-
Public safety	5,878,792	1,406,775	660,824	-
Public works	5,420,893	604,029	4,050,866	1,528,351
Health	3,053,315	609,939	1,275,420	-
Human services	5,987,290	544,850	5,352,833	-
Conservation and recreation	222,846	32,497	-	97,775
Community and economic development	546,305	-	222,110	-
Other	222,086	40,376	-	-
Interest and fiscal charges	96,824	-	-	-
Total governmental activities	26,594,889	5,322,665	11,666,184	1,626,126
Business-Type Activities:				
KA Sewer	-	-	-	50,614
Bidwell/Porter Sewer	304,002	193,917	-	-
MV Sewer	52	650	-	450,000
Other Enterprise Funds	129,934	92,688	-	-
Total business-type activities	433,988	287,255	-	500,614
Total primary government	$ 27,028,877	$ 5,609,920	$ 11,666,184	$ 2,126,740
Component Units:				
Gallia-Meigs Regional Airport	$ 221,406	$ 89,291	$ 20,000	$ 275,000
Gallco Industries, Inc.	151,397	46,679	87,138	-
Total component units	$ 372,803	$ 135,970	$ 107,138	$ 275,000

General Revenues:

Property taxes levied for:

General purposes

Board of developmental disabilities

Sales taxes levied for:

General purposes

Public safety

Grants and entitlements not restricted to specific programs

Investment earnings

Miscellaneous

Total general revenues

Change in net assets

Net assets at beginning of year - As restated, see Note 25

Net assets at end of year

See accompanying notes to the basic financial statements.

Net (Expense) Revenue and Changes in Net Assets				
Primary Government			Component Units	
Governmental Activities	Business-Type Activities	Total	Gallia-Meigs Regional Airport	Gallco Industries, Inc.
$ (2,143,094)	$ -	$ (2,143,094)	$ -	$ -
(835,114)	-	(835,114)	-	-
(3,811,193)	-	(3,811,193)	-	-
762,353	-	762,353	-	-
(1,167,956)	-	(1,167,956)	-	-
(89,607)	-	(89,607)	-	-
(92,574)	-	(92,574)	-	-
(324,195)	-	(324,195)	-	-
(181,710)	-	(181,710)	-	-
(96,824)	-	(96,824)	-	-
(7,979,914)	-	(7,979,914)	-	-
-	50,614	50,614	-	-
-	(110,085)	(110,085)	-	-
-	450,598	450,598	-	-
-	(37,246)	(37,246)	-	-
-	353,881	353,881	-	-
(7,979,914)	353,881	(7,626,033)	-	-
-	-	-	162,885	-
-	-	-	-	(17,580)
-	-	-	162,885	(17,580)
2,039,614	-	2,039,614	-	-
939,326	-	939,326	-	-
3,258,247	-	3,258,247	-	-
814,520	-	814,520	-	-
1,300,057	-	1,300,057	-	-
321,253	8,846	330,099	-	589
448,281	1,815	450,096	-	-
9,121,298	10,661	9,131,959	-	589
1,141,384	364,542	1,505,926	162,885	(16,991)
28,091,324	5,700,198	33,791,522	1,194,961	299,289
$ 29,232,708	$ 6,064,740	$ 35,297,448	$ 1,357,846	$ 282,298

Gallia County

Balance Sheet

Governmental Funds

December 31, 2010

	General	Motor Vehicle and Gas Tax	Job and Family Services
Assets:			
Equity in pooled cash and cash equivalents	$ 657,760	$ 1,554,495	$ 36,767
Cash and cash equivalents:			
In segregated accounts	-	-	-
Cash and cash equivalents:			
With fiscal agents	-	-	-
Investments with fiscal agents	-	-	-
Materials and supplies inventory	-	82,038	-
Receivables:			
Property taxes	2,141,994	-	-
Sales taxes	507,238	-	-
Accounts	47,335	3,779	-
Intergovernmental	378,465	1,773,342	220,726
Interfund	170,076	-	1,301
Accrued interest	44,160	-	-
Loan	-	-	-
Prepaid items	60,184	-	-
Total assets	$ 4,007,212	$ 3,413,654	$ 258,794
Liabilities:			
Accounts payable	$ 146,049	$ 126,125	$ 84,401
Contracts payable	-	232,857	-
Accrued wages and benefits	27,662	25,263	-
Intergovernmental payable	156,744	48,249	104,006
Matured compensated absences payable	-	-	-
Interfund payable	-	-	-
Deferred revenue	2,407,366	1,163,630	-
Deposits held and due to others	24,287	-	-
Total liabilities	2,762,108	1,596,124	188,407
Fund Balances:			
Reserved for encumbrances	37,094	-	-
Reserved for materials and supplies inventory	-	82,038	
Reserved for loans	-	-	-
Reserved for unclaimed monies	24,287	-	-
Unreserved:			
Undesignated, reported in:			
General fund	1,183,723	-	-
Special revenue funds	-	1,735,492	70,387
Debt service fund	-	-	-
Capital projects funds	-	-	-
Total fund balances	1,245,104	1,817,530	70,387
Total liabilities and fund balances	$ 4,007,212	$ 3,413,654	$ 258,794

See accompanying notes to the basic financial statements.

Board of Developmental Disabilities	Community Development Block Grant	Other Governmental Funds	Total Governmental Funds
$ 60,387	$ 3,456	$ 2,357,579	$ 4,670,444
947	-	77,597	78,544
114,580	-	-	114,580
119,059	-	-	119,059
-	-	-	82,038
1,133,997	-	-	3,275,991
-	-	126,809	634,047
-	-	183,514	234,628
619,159	411,014	914,247	4,316,953
-	-	-	171,377
-	-	-	44,160
-	-	47,222	47,222
-	-	-	60,184
$ 2,048,129	$ 414,470	$ 3,706,968	$ 13,849,227
$ 26,247	$ 10,222	$ 111,525	$ 504,569
-	2,104	272,953	507,914
-	-	26,292	79,217
60,426	-	189,648	559,073
6,061	-	22,082	28,143
37,500	-	52,384	89,884
1,499,934	411,014	650,751	6,132,695
-	-	-	24,287
1,630,168	423,340	1,325,635	7,925,782
400	-	93,329	130,823
			82,038
-	-	47,222	47,222
-	-	-	24,287
-	-	-	1,183,723
417,561	(8,870)	2,176,444	4,391,014
-	-	4,200	4,200
-	-	60,138	60,138
417,961	(8,870)	2,381,333	5,923,445
$ 2,048,129	$ 414,470	$ 3,706,968	$ 13,849,227

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Gallia County
Reconciliation of Total Governmental Fund Balances to
Net Assets of Governmental Activities
December 31, 2010

Total governmental fund balances		$	5,923,445
Amounts reported for governmental activities in the statement of net assets are different because:			
Capital assets used in governmental activities are not financial resources and therefore are not reported in the funds.			23,786,078
Other long-term assets are not available to pay for current period expenditures and therefore are deferred in the funds.			
Property taxes	301,251		
Charges for services	405,710		
Intergovernmental	2,263,152		
Total			2,970,113
An internal service fund is used by management to charge the cost of insurance to individuals. The assets of the internal service fund are included in governmental activities in the statement of net assets.			298,500
Long-term liabilities are not due and payable in the current period and therefore are not reported in the funds:			
General obligation bonds and loans	(2,256,429)		
Compensated absences	(1,487,134)		
Capital leases payable	(1,865)		
Total			(3,745,428)
Net assets of governmental activities		$	29,232,708

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balances

Governmental Funds

For the Year Ended December 31, 2010

	General	Motor Vehicle and Gas Tax	Job and Family Services
Revenues:			
Property taxes	$ 1,981,970	$ -	$ -
Sales taxes	3,258,247	-	-
Charges for services	1,359,497	541,697	223,255
Licenses and permits	2,677	-	-
Fines and forfeitures	9,532	17,618	-
Intergovernmental	1,340,037	5,010,206	4,132,142
Interest	273,579	32,630	-
Contributions and donations	530	-	-
Other	136,509	58,134	1,968
Total revenues	8,362,578	5,660,285	4,357,365
Expenditures:			
Current:			
General government:			
Legislative and executive	2,518,018	-	-
Judicial	1,166,640	-	-
Public safety	2,754,170	-	-
Public works	280,932	4,432,021	-
Health	124,277	-	-
Human services	301,343	-	4,039,711
Conservation and recreation	178,749	-	-
Community and economic development	-	-	-
Other	222,086	-	-
Capital outlay	103,948	818,000	76,312
Debt service:			
Principal retirement	-	2,318	73,441
Interest and fiscal charges	-	206	587
Total expenditures	7,650,163	5,252,545	4,190,051
Excess of revenues over (under) expenditures	712,415	407,740	167,314
Other financing sources (uses):			
Proceeds from sale of bonds	-	-	-
Transfers in	-	-	259,850
Transfers out	(1,186,845)	-	-
Total other financing sources (uses)	(1,186,845)	-	259,850
Net change in fund balances	(474,430)	407,740	427,164
Fund balances at beginning of year	1,719,534	1,409,790	(356,777)
Fund balances at end of year	$ 1,245,104	$ 1,817,530	$ 70,387

See accompanying notes to the basic financial statements.

Board of Developmental Disabilities	Community Development Block Grant	Other Governmental Funds	Total Governmental Funds
$ 921,695	$ -	$ -	$ 2,903,665
-	-	814,520	4,072,767
499,309	-	2,516,294	5,140,052
-	-	1,594	4,271
-	-	173	27,323
1,439,114	534,671	2,780,443	15,236,613
13,365	-	1,679	321,253
5,850	-	4,432	10,812
2,432	-	249,238	448,281
2,881,765	534,671	6,368,373	28,165,037
-	-	901,853	3,419,871
-	-	478,067	1,644,707
-	-	3,026,958	5,781,128
-	-	329,882	5,042,835
2,615,128	-	111,256	2,850,661
-	-	1,538,421	5,879,475
-	-	44,097	222,846
-	531,805	14,500	546,305
-	-	-	222,086
4,079	2,104	1,052,075	2,056,518
2,340	-	162,414	240,513
172	-	95,859	96,824
2,621,719	533,909	7,755,382	28,003,769
260,046	762	(1,387,009)	161,268
-	-	525,258	525,258
-	-	1,018,208	1,278,058
(91,213)	-	-	(1,278,058)
(91,213)	-	1,543,466	525,258
168,833	762	156,457	686,526
249,128	(9,632)	2,224,876	5,236,919
$ 417,961	$ (8,870)	$ 2,381,333	$ 5,923,445

Gallia County

Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances of Governmental Funds to the Statement of Activities

For the Year Ended December 31, 2010

Net change in fund balances - total governmental funds		$ 686,526
Amounts reported for governmental activities in the statement of activities are different because:		
Governmental funds report capital outlays as expenditures. However, in the statement of activities, the cost of capital assets is allocated over their estimated useful lives as depreciation expense. In the current period, these amounts are:		
Capital asset additions	3,106,908	
Depreciation expense	(1,796,732)	
Excess of capital additions over depreciation expense		1,310,176
Governmental funds only report the disposal of capital assets to the extent proceeds are received from the sale. In the statement of activities, a gain or loss is reported for each disposal.		(53,878)
Revenues in the statement of activities that do not provide current financial resources are not reported as revenues in the funds.		
Property taxes	75,275	
Charges for services	151,019	
Intergovernmental	(655,058)	
Total		(428,764)
Repayment of bond and loan principal and capital leases is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net assets.		240,513
Proceeds of bonds and loans provide current financial resources and are reported as a financing source in the governmental funds, but are not reported as such in the statement of activities.		(525,258)
Some expenses reported in the statement of activities, such as compensated absences, do not require the use of current financial resources and therefore are not reported as expenditures in governmental funds.		116,625
The internal service fund used by management to charge the cost of insurance to individual funds is not reported in the government-wide statement of activities. Governmental fund expenditures and the related internal service fund revenues are eliminated. The net revenue (expense) of the internal service fund is allocated among the governmental activities.		(204,556)
Change in net assets of governmental activities		$ 1,141,384

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balance -

Budget and Actual (Non-GAAP Basis)

General Fund

For the Year Ended December 31, 2010

	Original Budget	Final Budget	Actual	Variance with Final Budget Positive (Negative)
Revenues:				
Property taxes	$ 1,845,989	$ 1,981,970	$ 1,981,970	$ -
Sales taxes	3,200,000	3,297,267	3,297,267	-
Charges for services	1,683,315	1,363,352	1,363,352	-
Licenses and permits	2,910	2,677	2,677	-
Fines and forfeitures	850	55	55	-
Intergovernmental	1,239,314	1,313,370	1,313,370	-
Interest	310,750	272,363	272,363	-
Contributions and Donations	350	530	530	-
Other	70,920	151,752	151,752	-
Total revenues	8,354,398	8,383,336	8,383,336	-
Expenditures:				
Current:				
General government:				
Legislative and executive	2,616,183	2,610,423	2,591,450	18,973
Judicial	1,080,462	1,117,514	1,117,317	197
Public safety	2,872,605	2,850,814	2,843,734	7,080
Public works	300,962	300,316	300,316	-
Health	146,485	124,035	124,035	-
Human services	314,749	309,444	309,267	177
Conservation and recreation	178,500	178,749	178,749	-
Other	227,000	222,606	222,606	-
Capital outlay	25,000	104,013	104,012	1
Total expenditures	7,761,946	7,817,914	7,791,486	26,428
Excess of revenues over (under) expenditures	592,452	565,422	591,850	26,428
Other financing sources (uses):				
Advances - in	32,000	65,921	65,921	-
Advances - out	-	(54,452)	(70,701)	(16,249)
Transfers - in	5,000	-	-	-
Transfers - out	(731,911)	(1,186,845)	(1,186,845)	-
Total other financing sources (uses)	(694,911)	(1,175,376)	(1,191,625)	(16,249)
Net change in fund balance	(102,459)	(609,954)	(599,775)	10,179
Fund balance at beginning of year	1,076,378	1,076,378	1,076,378	-
Prior year encumbrances appropriated	99,478	99,478	99,478	-
Fund balance at end of year	$ 1,073,397	$ 565,902	$ 576,081	$ 10,179

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balance -

Budget and Actual (Non-GAAP Basis)

Motor Vehicle and Gas Tax Fund

For the Year Ended December 31, 2010

	Original Budget	Final Budget	Actual	Variance with Final Budget Positive (Negative)
Revenues:				
Charges for services	$ 248,871	$ 537,918	$ 537,918	$ -
Fines and forfeitures	15,229	17,618	17,618	-
Intergovernmental	4,175,165	5,354,388	5,354,388	-
Interest	28,205	32,630	32,630	-
Other	32,530	58,134	58,134	-
Total revenues	4,500,000	6,000,688	6,000,688	-
Expenditures:				
Current:				
Public works	4,430,179	4,466,515	4,544,936	(78,421)
Capital outlay	403,967	1,202,384	1,449,348	(246,964)
Total expenditures	4,834,146	5,668,899	5,994,284	(325,385)
Net change in fund balance	(334,146)	331,789	6,404	(325,385)
Fund balance at beginning of year	897,732	897,732	897,732	-
Prior year encumbrances appropriated	319,302	319,302	319,302	-
Fund balance at end of year	$ 882,888	$ 1,548,823	$ 1,223,438	$ (325,385)

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balance -

Budget and Actual (Non-GAAP Basis)

Job and Family Services Fund

For the Year Ended December 31, 2010

	Original Budget	Final Budget	Actual	Variance with Final Budget Positive (Negative)
Revenues:				
Charges for services	$ 294,659	$ 277,013	$ 277,013	$ -
Intergovernmental	4,903,156	3,649,618	3,649,618	-
Other	2,569	1,968	1,968	-
Total revenues	5,200,384	3,928,599	3,928,599	-
Expenditures:				
Current:				
Human services	5,202,177	4,128,191	4,128,191	-
Capital Outlay	95,072	76,312	76,312	-
Debt Service:				
Principal	73,441	73,441	73,441	-
Interest and fiscal charges	587	587	587	-
Total expenditures	5,371,277	4,278,531	4,278,531	-
Excess of revenues over (under) expenditures	(170,893)	(349,932)	(349,932)	-
Other financing sources (uses):				
Transfers - in	259,850	259,850	259,850	-
Advances - out	(40,282)	(40,282)	(40,282)	-
Total other financing sources (uses)	219,568	219,568	219,568	-
Net change in fund balance	48,675	(130,364)	(130,364)	-
Fund balance at beginning of year	167,131	167,131	167,131	-
Fund balance at end of year	$ 215,806	$ 36,767	$ 36,767	$ -

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balance -

Budget and Actual (Non-GAAP Basis)

Board of Developmental Disabilities Fund

For the Year Ended December 31, 2010

	Original Budget	Final Budget	Actual	Variance with Final Budget Positive (Negative)
Revenues:				
Property taxes	$ 842,492	$ 921,695	$ 921,695	$ -
Charges for services	457,500	498,651	498,651	-
Intergovernmental	1,231,751	1,311,141	1,311,141	-
Contributions and donations	15,000	5,850	5,850	-
Other	5,000	2,432	2,432	-
Total revenues	2,551,743	2,739,769	2,739,769	-
Expenditures:				
Current:				
Health	2,524,784	2,655,263	2,655,014	249
Capital Outlay	11,500	11,512	11,512	-
Total expenditures	2,536,284	2,666,775	2,666,526	249
Excess of revenues over (under) expenditures	15,459	72,994	73,243	249
Other financing sources (uses):				
Transfers - out	(91,213)	(91,213)	(91,213)	-
Total other financing sources (uses)	(91,213)	(91,213)	(91,213)	-
Net change in fund balance	(75,754)	(18,219)	(17,970)	249
Fund balance at beginning of year	75,691	75,691	75,691	-
Prior year encumbrances appropriated	2,266	2,266	2,266	-
Fund balance at end of year	$ 2,203	$ 59,738	$ 59,987	$ 249

See accompanying notes to the basic financial statements.

Gallia County

Statement of Revenues, Expenditures and Changes in Fund Balance -

Budget and Actual (Non-GAAP Basis)

Community Development Block Grant Fund

For the Year Ended December 31, 2010

	Original Budget	Final Budget	Actual	Variance with Final Budget Positive (Negative)
Revenues:				
Intergovernmental	$ 240,000	$ 534,671	$ 534,671	$ -
Total revenues	240,000	534,671	534,671	-
Expenditures:				
Current:				
Community and economic development	764,535	531,399	531,399	-
Total expenditures	764,535	531,399	531,399	-
Net change in fund balance	(524,535)	3,272	3,272	-
Fund balance at beginning of year	184	184	184	-
Fund balance at end of year	$ (524,351)	$ 3,456	$ 3,456	$ -

See accompanying notes to the basic financial statements.

Gallia County

Statement of Fund Net Assets

Proprietary Funds

December 31, 2010

	KA Sewer	Bidwell/Porter Sewer	MV Sewer	Other Enterprise Funds	Total Enterprise	Governmental Activities Internal Service
Assets:						
Current assets:						
Equity in pooled cash and cash equivalents	$ 1	$ 385,405	$ 5,051	$ 3,113	$ 393,570	$ 298,500
Receivables						
Accounts	-	99,203	-	6,407	105,610	-
Intergovernmental	1,426,783	-	94,057	3,825	1,524,665	-
Total current assets	1,426,784	484,608	99,108	13,345	2,023,845	298,500
Noncurrent assets:						
Non-depreciable capital assets	3,640,648	-	1,032,673	338,435	5,011,756	-
Depreciable capital assets, net	-	3,664,167	-	321,154	3,985,321	-
Total assets	5,067,432	4,148,775	1,131,781	672,934	11,020,922	298,500
Liabilities:						
Current liabilities:						
Accounts payable	-	2,072	-	1,902	3,974	-
Contracts payable	156,751	-	70,135	13,966	240,852	-
Retainage payable	120,656	-	38,382	-	159,038	-
Intergovernmental payable	-	1,048	-	1,140	2,188	-
Interfund payable	50,000	-	3,368	28,125	81,493	-
Accrued interest payable	-	64,957	-	-	64,957	-
Compensated absences	-	-	-	5,354	5,354	-
General obligation bonds payable	-	28,100	-	-	28,100	-
OPWC loans payable	-	5,750	-	-	5,750	-
Total current liabilities	327,407	101,927	111,885	50,487	591,706	-
Long-term liabilities:						
Compensated absences	-	-	-	4,884	4,884	-
General obligation bonds payable	-	1,693,700	-	-	1,693,700	-
OPWC loans payable	-	126,500	-	-	126,500	-
OWDA loans payable	2,234,652	-	8,396	296,344	2,539,392	-
Total long-term liabilities	2,234,652	1,820,200	8,396	301,228	4,364,476	-
Total liabilities	2,562,059	1,922,127	120,281	351,715	4,956,182	-
Net assets:						
Invested in capital assets, net of related debt	1,285,340	1,810,117	985,895	363,245	4,444,597	-
Unrestricted	1,220,033	416,531	25,605	(42,026)	1,620,143	298,500
Total net assets	$ 2,505,373	$ 2,226,648	$ 1,011,500	$ 321,219	$ 6,064,740	$ 298,500

See accompanying notes to the basic financial statements.

Gallia County
Statement of Revenues, Expenses and Changes in Net Assets
Proprietary Funds
For the Year Ended December 31, 2010

	KA Sewer	Bidwell/Porter Sewer	MV Sewer	Other Enterprise Funds	Total Enterprise	Governmental Activities Internal Service
Operating revenues:						
Charges for services	$ -	$ 193,917	$ 650	$ 92,688	$ 287,255	$ -
Other	-	-	170	-	170	447,194
Total operating revenues	-	193,917	820	92,688	287,425	447,194
Operating expenses:						
Personal services	-	32,372	-	31,178	63,550	651,750
Contract services	-	44,729	-	61,474	106,203	-
Materials and supplies	-	10,506	-	7,859	18,365	-
Depreciation	-	133,318	-	22,423	155,741	-
capital outlay	-	-	-	-	-	-
Other	-	5,500	52	7,000	12,552	-
Total operating expenses	-	226,425	52	129,934	356,411	651,750
Operating income (loss)	-	(32,508)	768	(37,246)	(68,986)	(204,556)
Nonoperating revenues (expenses):						
Interest income	-	8,846	-	-	8,846	-
Other non-operating revenues	-	28	1,576	41	1,645	-
Interest and fiscal charges	-	(77,577)	-	-	(77,577)	-
Total nonoperating revenues (expenses)	-	(68,703)	1,576	41	(67,086)	-
Income/(loss) before capital contributions	-	(101,211)	2,344	(37,205)	(136,072)	(204,556)
Capital contributions - intergovernmental	50,614	-	450,000	-	500,614	-
Change in net assets	50,614	(101,211)	452,344	(37,205)	364,542	(204,556)
Net assets at beginning of year - As restated, see Note 25	2,454,759	2,327,859	559,156	358,424	5,700,198	503,056
Net assets at end of year	$ 2,505,373	$ 2,226,648	$ 1,011,500	$ 321,219	$ 6,064,740	$ 298,500

See accompanying notes to the basic financial statements.

Gallia County

Statement of Cash Flows

Proprietary Funds

For the Year Ended December 31, 2010

	KA Sewer	Bidwell/Porter Sewer	MV Sewer	Other Enterprise Funds	Total Enterprise	Governmental Activities Internal Service
Cash flows from operating activities:						
Cash received from customers	$ -	$ 180,689	$ 650	$ 97,705	$ 279,044	$ -
Cash received from other operating receipts	-	-	170	-	170	447,194
Cash payments for personal services	-	(33,031)	-	(29,915)	(62,946)	-
Cash payments for contract services, materials and supplies, and other	(136,682)	(59,367)	-	(81,802)	(277,851)	(651,750)
Net cash provided by (used for) operating activities	(136,682)	88,291	820	(14,012)	(61,583)	(204,556)
Cash flows from noncapital financing activities:						
Cash received from other sources	-	28	1,575	41	1,644	-
Cash received/paid from advances in/out	(1,240)	-	3,369	16,250	18,379	-
Net cash provided by noncapital financing activities	(1,240)	28	4,944	16,291	20,023	-
Cash flows from capital and related financing activities:						
Receipts from capital grants	909,011	-	855,943	-	1,764,954	-
Proceeds from OWDA loan	1,999,152	-	461,809	157,157	2,618,118	
Principal paid on notes and loans	(160,901)	(38,600)	(453,413)	(16,250)	(669,164)	-
Interest paid on notes and loans	-	(78,701)	-	-	(78,701)	-
Acquisition of capital assets	(2,609,340)	-	(865,052)	(157,157)	(3,631,549)	-
Net cash used for capital and related financing activities	137,922	(117,301)	(713)	(16,250)	3,658	-
Cash flows from investing activities:						
Cash received from interest	-	8,846	-	-	8,846	-
Net increase (decrease) in cash and cash equivalents	-	(20,136)	5,051	(13,971)	(29,056)	(204,556)
Cash and cash equivalents at beginning of year	1	405,541	-	17,084	422,626	503,056
Cash and cash equivalents at end of year	$ 1	$ 385,405	$ 5,051	$ 3,113	$ 393,570	$ 298,500
Reconciliation of operating income (loss) to net cash provided by (used for) operating activities:						
Operating income (loss)	$ -	$ (32,508)	$ 768	$ (37,246)	$ (68,986)	$ (204,556)
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities:						
Depreciation	-	133,318	-	22,423	155,741	-
Changes in assets and liabilities:						
(Increase) decrease in assets:						
Accounts receivable	-	(13,228)	-	5,017	(8,211)	-
Increase (decrease) in liabilities:						
Accounts payable	-	2,072	(1,142)	(446)	484	-
Contracts payable	(113,354)	(704)	1,194	-	(112,864)	
Accrued wages and benefits	-	(876)	-	(957)	(1,833)	-
Intergovernmental payable	-	217	-	232	449	-
Retainage Payable	(23,328)	-	-	-	(23,328)	
Compensated absences payable	-	-	-	(3,035)	(3,035)	-
Net cash provided by (used for) operating activities	$ (136,682)	$ 88,291	$ 820	$ (14,012)	$ (61,583)	$ (204,556)

See accompanying notes to the basic financial statements.

Gallia County

Statement of Fiduciary Assets and Liabilities

Fiduciary Funds

December 31, 2010

		Agency
Assets:		
Equity in pooled cash and cash equivalents	$	3,670,626
Cash and cash equivalents:		
In segregated accounts		476,605
Receivables:		
Property taxes		25,428,900
Accounts		246,388
Intergovernmental		1,853,740
Special assessments		49,953
Total assets	$	31,726,212
Liabilities:		
Intergovernmental payable	$	27,820,400
Undistributed monies		3,894,150
Deposits held and due to others		11,662
Total liabilities	$	31,726,212

See accompanying notes to the basic financial statements.

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NOTE 1 - DESCRIPTION OF GALLIA COUNTY AND REPORTING ENTITY

Gallia County, Ohio (the County), was created in 1803. The County is governed by a board of three Commissioners elected by the voters of the County. Other officials elected by the voters of the County that manage various segments of the County's operations are the County Auditor, County Treasurer, Recorder, Clerk of Courts, Coroner, Engineer, Prosecuting Attorney, Sheriff, a Common Pleas Court Judge and a Probate/Juvenile Court Judge. Although the elected officials manage the internal operations of their respective departments, the County Commissioners authorize expenditures as well as serve as the budget and taxing authority, contracting body and the chief administrators of public services for the entire County.

Reporting Entity

For financial reporting purposes, the County complies with the provisions of Governmental Accounting Standards Board (GASB) Statement No. 14, as amended by GASB Statement No. 39, in defining the financial reporting entity. The reporting entity is comprised of the primary government, component units and other organizations that are included to ensure that the financial statements of the County are not misleading. The primary government consists of all funds, departments, boards and agencies that are not legally separate from the County. For Gallia County, this includes the Gallia County Board of Developmental Disabilities, Gallia County Children Services Board, Gallia County Department of Job and Family Services and departments and activities that are directly operated by the elected County officials.

Component units are legally separate organizations for which the County is financially accountable. The County is financially accountable for an organization if the County appoints a voting majority of the organization's governing board and (1) the County is able to significantly influence the programs or services performed or provided by the organization; or (2) the County is legally entitled to or can otherwise access the organization's resources; the County is legally obligated or has otherwise assumed the responsibility to finance the deficits of, or provide financial support to, the organization; or the County is obligated for the debt of the organization. Component units may also include organizations for which the County approves the budget, the issuance of debt or levying of taxes.

Discretely Presented Components Units

The component unit columns in the basic financial statements identify the financial data of the County's component units, Gallco Industries, Inc. and the Gallia-Meigs Regional Airport. They are reported separately to emphasize that they are legally separate from the County.

Gallco Industries, Inc. - Gallco Industries, Inc. is a legally separate, not-for-profit corporation organized under Chapter 1702 O.R.C. and classified as a 501(C)(3) non-profit corporation. Gallco Industries, Inc., under a contractual agreement with Gallia County Board of Developmental Disabilities, provides sheltered employment for developmentally disabled or handicapped adults in Gallia County. Based on the significant services and resources provided by the County to Gallco Industries, Inc. and their sole purpose of providing assistance to the developmentally disabled and handicapped adults of Gallia County, Gallco Industries, Inc. is reflected as a discretely presented component unit of Gallia County. Gallco Industries, Inc. operates on a calendar year basis. Complete financial statements of the component unit can be obtained from the offices of Gallco Industries, Inc., Post Office Box 14, Cheshire, Ohio 45620.

NOTE 1 - DESCRIPTION OF GALLIA COUNTY AND REPORTING ENTITY *(Continued)*

Gallia-Meigs Regional Airport - The Gallia-Meigs Regional Airport operates under a separate board that consists of five members appointed by Gallia County. The Gallia County Commissioners approve the budget, expenditures, fund deficits and are directly responsible for their debt. All of the land and capital assets at the Airport belong to the County. The Airport utilizes the facilities of the County. A manager contracted by the Airport Authority board operates as a fixed based operator. The Airport generates revenue from sales and rental space. Grants are applied for by the County Commissioners in the Airport Authority's name. Meigs County does not contribute financially to the Airport operations. The Gallia-Meigs Regional Airport is reflected as a discretely presented component unit of Gallia County. Financial statements of the component unit can be obtained from the Gallia County Commissioners' Office, Gallia County Courthouse, 18 Locust Street, Gallipolis, OH 45631.

The following entities have been excluded from the County's financial statements because the County is not financially accountable for these organizations nor are these entities for which the County approves the budget, the issuance of debt, or the levying of taxes:

- Gallia County Agricultural Society
- Gallia County Historical Society
- Gallia County Cooperative Extension Services
- Gallia County Rural Water Association
- Community Improvement Corporation
- Gallia County Board of Education
- Gallia-Jackson-Vinton Joint Vocational School
- Gallia, Jackson, Vinton ABLE Center
- Gallia, Jackson, Vinton Retired and Senior Volunteer Program
- Gallia County Animal Welfare, Inc.

The County is associated with the following organizations that are defined as jointly governed organizations, related organizations or shared risk pools. These organizations are presented in Notes 18, 19 and 20 to the basic financial statements.

- Joint Solid Waste Management District
- Gallia-Jackson-Meigs Counties Board of Alcohol, Drug Addiction and Mental Health Services (ADAMH)
- Gallia-Jackson-Meigs Counties Cluster
- Area Agency on Aging District 7, Inc.
- Ohio Valley Resource Conservation and Development Area, Inc.
- Southeastern Ohio Corrections Commission
- Gallia-Meigs Community Action Agency
- Gallia-Jackson Child Abuse and Neglect Advisory Board
- Ohio Valley Regional Development Commission
- Southern Ohio Council of Governments
- O.O. McIntyre Park District
- Bossard Memorial Library
- Gallia Metropolitan Housing Authority
- County Risk Sharing Authority (CORSA)
- County Commissioners Association of Ohio Workers' Compensation Group Rating Plan

NOTE 1 - DESCRIPTION OF GALLIA COUNTY AND REPORTING ENTITY *(Continued)*

The Gallia-Jackson-Meigs Counties Board of Alcohol, Drug Addiction and Mental Health Services (ADAMH) and the O.O. McIntyre Park District are presented as agency funds of the County because the County Auditor serves as the fiscal agent for these organizations.

As the custodian of public funds, the County Treasurer invests all public monies held on deposit in the County treasury. In the case of the legally separate agencies, boards and commissions listed below, the County serves as fiscal agent, but is not financially accountable for their operations nor are they fiscally dependent on the County. Accordingly, the activity of the following districts and agencies are presented as agency funds within the County's financial statements.

Gallia County Health Department is governed by a five member Board of Health which oversees the operation of the Health District. The Board is elected by a District Advisory Council comprised of township trustees, county commissioners and mayors of participating municipalities. The Board adopts its own budget and hires and fires its own staff. The Board has sole budgetary authority, and controls surpluses and deficits. The County is not legally obligated for the Health District's debt.

Gallia County Soil and Water Conservation District is statutorily created as a separate and distinct political subdivision of the State. The five Supervisors of the Soil and Water Conservation District are elected officials authorized to contract and sue on behalf of the District. The Supervisors adopt their own budget, authorize District expenditures, hire and fire staff, and do not rely on the County to finance deficits. The District submits a budget to the Board of County Commissioners for inclusion on the County's annual appropriation resolution. The Ohio Department of Natural Resources provides funding to match what is provided by the County out of the General Fund.

Local Emergency Planning Committee (LEPC) of Gallia County is a single county district. The State Emergency Response Commission designates Emergency Planning Districts within the state. The committee members are recommended by the County Commissioners for approval by the State Emergency Response Commission. The LEPC receives operating resources in the form of grants from the State. The activities of the LEPC are accounted for as an agency fund of the County. The County has no ability to impose its will on the organization. No benefit/burden relationship exists. The County's accountability ceases with the recommendation of appointments of committee members.

Gallia County Council on Aging is operated under a separate board of directors, which currently consists of 18 members from various clubs, companies, and the Gallia County community. Although the County collects tax monies for the Council, the County is not involved in the selection of directors or management of the Council on Aging or in the authorization of expenditures.

Gallia County Family and Children First Council is controlled by an oversight committee. The chair of the County Commissioners serves on the committee. The County is the fiscal agent for the Council's monies.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The basic financial statements of the County have been prepared in conformity with accounting principles generally accepted in the United States of America (GAAP) as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The County follows GASB guidance as applicable to its governmental and business-type activities, and Financial Accounting Standards Board (FASB) statements and interpretations, Accounting Principles Board opinions, and Accounting Research Board bulletins issued on or before November 30, 1989, that do not conflict with or contradict GASB pronouncements or that have been made applicable by the GASB. The County has elected to follow GASB guidance for business-type activities and enterprise funds rather than FASB guidance issued after November 30, 1989. The most significant of the County's accounting policies are described below.

A. Basis of Presentation

The County's basic financial statements consist of government-wide statements, including a statement of net assets and a statement of activities, and fund financial statements which provide a more detailed level of financial information.

Government-Wide Financial Statements - The statement of net assets and the statement of activities display information about the County as a whole. These statements include the financial activities of the primary government, except for fiduciary funds. The activity of the Internal Service Fund is eliminated to avoid "doubling up" revenues and expenses. The statements distinguish between those activities of the County that are governmental and those that are considered business-type activities.

The statement of net assets presents the financial condition of the governmental and business-type activities of the County at year-end. The statement of activities presents a comparison between direct expenses and program revenues for each program or function of the County's governmental activities and for the single business-type activity of the County. Direct expenses are those that are specifically associated with a service, program or department and therefore clearly identifiable to a particular function. The policy of the County is to not allocate indirect expenses to functions in the statement of activities. Program revenues include charges paid by the recipient of the goods or services offered by the program, grants and contributions that are restricted to meeting the operational or capital requirements of a particular program and interest earned on grants that is required to be used to support a particular program. Revenues which are not classified as program revenues are presented as general revenues of the County, with certain limited exceptions. The comparison of direct expenses with program revenues identifies the extent to which each business segment or governmental function is self-financing or draws from the general revenues of the County.

Fund Financial Statements - During the year, the County segregates transactions related to certain County functions or activities in separate funds in order to aid financial management and to demonstrate legal compliance. Fund financial statements are designed to present financial information of the County at this more detailed level. The focus of governmental and enterprise fund financial statements is on major funds rather than reporting funds by type. Each major fund is presented in a separate column. Nonmajor funds are aggregated and presented in a single column. The Internal Service Fund is presented in a separate column on the face of the proprietary fund statement. Fiduciary funds are reported by type.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

B. Fund Accounting

The County uses funds to maintain its financial records during the year. A fund is defined as a fiscal and accounting entity with a self balancing set of accounts. Fund accounting is designed to demonstrate legal compliance and to aid management by segregating transactions related to specific County functions or activities. There are three categories of funds: governmental, proprietary and fiduciary.

Governmental Funds - Governmental funds are those through which most governmental functions typically are financed. Governmental fund reporting focuses on the sources, uses and balances of current financial resources. Expendable assets are assigned to the various governmental funds according to the purposes for which they may or must be used. Current liabilities are assigned to the fund from which they will be paid. The difference between governmental fund assets and liabilities is reported as fund balance. The following are the County's major governmental funds:

General Fund - This fund is the operating fund of the County and is used to account for all financial resources except those required to be accounted for in another fund. The General Fund balance is available to the County for any purpose provided it is expended or transferred according to the general laws of Ohio.

Motor Vehicle and Gas Tax Fund - This fund accounts for the County road and bridge maintenance, repair and improvement programs. Revenue sources include Federal and State grants and distributions.

Job and Family Services Fund - This fund accounts for various Federal and State grants, as well as transfers from the General Fund that are used to provide public assistance to general relief recipients and to pay their providers of medical assistance and certain public social services.

Board of Developmental Disabilities Fund - This fund accounts for the operation of a school, workshop and resident homes for the developmentally disabled. Revenue sources include a county-wide property tax levy and Federal and State grants.

Community Development Block Grant Fund - This fund accounts for federal community development block grant monies. The funds are expended by the County in poverty and low-income areas or awarded to other subdivisions for capital improvement projects that meet the federal criteria.

The other governmental funds of the County account for grants and other resources and capital projects, whose use is restricted for a particular purpose.

Proprietary Funds - Proprietary fund reporting focuses on the determination of operating income, changes in net assets, financial position and cash flows. Proprietary funds are classified as either enterprise or internal service.

Enterprise funds are used to report the same functions presented as business-type activities in the government-wide financial statements. Enterprise funds may be used to account for any activity for which a fee is charged to external users for goods and services. The following are the County's major enterprise funds:

Bidwell/Porter Sewer Fund - The Bidwell/Porter Sewer Fund accounts for the operation of the Bidwell/Porter sewer system.

KA Sewer Fund - The KA Sewer Fund accounts for grant monies that will be utilized to construct the KA Sewer System.

MV Sewer Fund - The MV Sewer Fund accounts for grant monies that will be utilized to construct the Mercerville Sewer System.

Internal Service Fund – The Employee Benefits Trust Fund Internal Service Fund accounts for funds held in reserve to cover excess costs in providing health insurance for the County's employees.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Fiduciary Funds - Fiduciary fund reporting focuses on net assets and changes in net assets. The County's fiduciary funds consist of agency funds. Agency funds are custodial in nature (assets equal liabilities) and do not involve measurement of results of operations.

The County's agency funds account for assets held for political subdivisions in which the County acts as fiscal agent and for taxes, state-levied shared revenues, and fines and forfeitures that have been collected and which will be distributed to other political subdivisions.

C. Measurement Focus

Government-Wide Financial Statements - The government-wide financial statements are prepared using the economic resources measurement focus. All assets and all liabilities associated with the operation of the County are included on the statement of net assets. The statement of activities presents increases (i.e., revenues) and decreases (i.e., expenses) in total net assets.

Fund Financial Statements - All governmental funds are accounted for using a flow of current financial resources measurement focus. With this measurement focus, only current assets and current liabilities generally are included on the balance sheet. The statement of revenues, expenditures and changes in fund balances reports on the sources (i.e., revenues and other financing sources) and uses (i.e., expenditures and other financing uses) of current financial resources. This approach differs from the manner in which the governmental activities of the government-wide financial statements are prepared. Governmental fund financial statements therefore include a reconciliation with brief explanations to better identify the relationship between the government-wide statements and the statements for governmental funds.

Like the government-wide statements, all proprietary fund types are accounted for on a flow of economic resources measurement focus. All assets and all liabilities associated with the operation of these funds are included on the statement of net assets. The statement of revenues, expenses and changes in net assets presents increases (i.e., revenues) and decreases (i.e., expenses) in total net assets. The statement of cash flows provides information about how the County finances and meets the cash flow needs of its proprietary activities.

D. Basis of Accounting

Basis of accounting determines when transactions are recorded in the financial records and reported on the financial statements. Government-wide financial statements are prepared using the accrual basis of accounting. Governmental funds use the modified accrual basis of accounting. Proprietary and fiduciary funds also use the accrual basis of accounting. Differences in the accrual and the modified accrual bases of accounting arise in the recognition of revenue, the recording of deferred revenue, and in the presentation of expenses versus expenditures.

Revenues - Exchange and Nonexchange Transactions - Revenue resulting from exchange transactions, in which each party gives and receives essentially equal value is recorded on the accrual basis when the exchange takes place. On a modified accrual basis, revenue is recorded in the fiscal year in which the resources are "measurable" and become "available". "Measurable" means the amount of the transaction can be determined and "available" means that the resources will be collected within the current fiscal year or are expected to be collected soon enough thereafter to be used to pay liabilities of the current fiscal year. For the County, "available" means expected to be received within sixty days of year-end.

Nonexchange transactions, in which the County receives value without directly giving equal value in return, include sales taxes, property taxes, grants, entitlements and donations. On an accrual basis, revenue from sales taxes is recognized in the period in which the taxable sale takes place. Revenue from property taxes is recognized in the fiscal year for which the taxes are levied (see Note 11). Revenue from grants, entitlements and donations is recognized in the fiscal year in which all eligibility requirements have been satisfied. Eligibility requirements include timing requirements, which specify the year when the resources are required to be used or the year when use is first permitted, matching requirements, in which the County must provide local resources to be used for a specified purpose, and expenditure requirements, in which the resources are provided to the County on a reimbursement basis. On a modified accrual basis, revenue from nonexchange transactions must also be available before it can be recognized.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Under the modified accrual basis, the following revenue sources are considered to be both measurable and available at year-end: delinquent property taxes, sales taxes, charges for services and fees, fines and forfeitures, state levied locally shared taxes (including motor vehicle license fees and gasoline taxes), grants, and interest.

Unearned/Deferred Revenue – Unearned/Deferred revenue arises when assets are recognized before revenue recognition criteria have been satisfied.

Property taxes for which there is an enforceable legal claim as of December 31, 2010, but which were levied to finance fiscal year 2011 operations, have been recorded as unearned/deferred revenue. Grants and entitlements received before the eligibility requirements are met are also recorded as unearned/deferred revenue.

On the governmental fund financial statements, receivables that will not be collected within the available period have also been reported as deferred revenue.

Expenses/Expenditures - On the accrual basis of accounting, expenses are recognized at the time they are incurred.

The measurement focus of governmental fund accounting is on decreases in net financial resources (expenditures) rather than expenses. Expenditures are generally recognized in the accounting period in which the related fund liability is incurred, if measurable. Allocations of cost, such as depreciation and amortization, are not recognized in governmental funds.

E. Budgetary Process

All funds, except agency funds, are legally required to be budgeted and appropriated. The major documents prepared are the tax budget, the certificate of estimated resources, and the appropriations resolution, all of which are prepared on the budgetary basis of accounting. The tax budget demonstrates a need for existing or increased tax rates. The certificate of estimated resources establishes a limit on the amount the County Commissioners may appropriate. The appropriations resolution is the County Commissioners' authorization to spend resources and sets annual limits on expenditures plus encumbrances at the level of control selected by the County Commissioners. The level of control has been established by the County Commissioners at the fund, function and object level for the General Fund and for all other funds.

The certificate of estimated resources may be amended during the year if projected increases or decreases in revenue are identified by the County Auditor. The amounts reported as the original budgeted amounts on the budgetary statements reflect the amounts when the original appropriations were adopted. The amounts reported as the final budgeted amounts on the budgetary statements reflect the amounts in the amended certificate of estimated resources in effect at the time the final appropriations were passed.

The appropriations resolution is subject to amendment by the County Commissioners throughout the year with the restriction that appropriations cannot exceed estimated resources. The amounts reported as the original budgeted amounts reflect the original budget approved by the County Commissioners. The amounts reported as the final budgeted amounts represent the final appropriation amounts passed by the County Commissioners during the year.

F. Cash and Cash Equivalents

To improve cash management, cash received by the County is pooled. Monies for all funds, including proprietary funds, are maintained in this pool. Individual fund integrity is maintained through the County's records. Each fund's interest in the pool is presented as "equity in pooled cash and cash equivalents" on the basic financial statements.

Cash and cash equivalents that are held separately within the departments of the County and not included in the County Treasury are recorded as "cash and cash equivalents in segregated accounts".

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

Interest revenue is distributed by the County to the General Fund, Motor Vehicle and Gas Tax Fund, Other Governmental Funds, and the Bidwell/Porter Sewer Fund. Interest revenue credited to these funds during 2010 amounted to $273,579, $32,630, $1,679, and $8,846, respectively. Interest revenue received by the Board of Development Disabilities Fund of $13,365 relate to the supportive living program monies for which the Southern Ohio Council of Governments acts as fiscal agent (See Note 18).

For presentation on the financial statements, funds included within the Treasurer's cash management pool and investments with original maturities of three months or less are considered to be cash and cash equivalents.

G. Inventory

On the government-wide financial statements, inventories are presented at the lower of cost or market on a first-in, first-out basis and are expensed when used. The consumption method is required for government wide financial statements.

On the fund financial statements, inventories of governmental funds are stated at cost. Cost is determined on a first-in, first-out basis. The cost of inventory items is recorded as an expenditure (purchase method) in the governmental funds.

H. Prepaid Items

Payments made to vendors for services that will benefit periods beyond December 31, 2010, are recorded as prepaid items using the consumption method by recording a current asset for the prepaid amount and reflecting the expenditure/expense in the year in which services are consumed.

I. Capital Assets

General capital assets are those assets not specifically related to activities reported in the proprietary funds. These assets generally result from expenditures in the governmental funds. These assets are reported in the governmental activities column of the government-wide statement of net assets but are not reported in the fund financial statements. Capital assets utilized by the enterprise funds are reported both in the business-type activities column of the government-wide statement of net assets and in the funds.

All capital assets are capitalized at cost (or estimated historical cost) and updated for additions and retirements during the year. Donated capital assets are recorded at their fair market values as of the date received. The County maintains a capitalization threshold of five thousand dollars, with the exception of infrastructure. The County maintains their capitalization threshold for infrastructure as follows: $50,000 for roads, bridges and culverts and $25,000 for all traffic signals, street lighting, signage, guardrails, retaining walls and related items. Improvements are capitalized; the costs of normal maintenance and repairs that do not add to the value of the asset or materially extend an asset's life are not capitalized. Interest incurred during the construction of enterprise fund capital assets is also capitalized.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

All capital assets are depreciated except for land and construction in progress. Improvements are depreciated over the remaining useful lives of the related capital assets. Useful lives for infrastructure were estimated based on the County's historical records of necessary improvements and replacement. Depreciation is computed using the straight-line method over the following useful lives:

Description	Governmental Activities Estimated Lives	Business-Type Activities Estimated Lives
Buildings and Improvements	10-40 years	15-40 years
Land Improvements	20 years	N/A
Machinery and equipment	5-30 years	10 years
Furniture and fixtures	15-20 years	10 years
Vehicles	5-20 years	8 years
Infrastructure	4-115 years	n/a

J. Interfund Balances

On the fund financial statements, receivables and payables resulting from short-term interfund loans and amounts due to or from other funds for services provided and used are classified as "interfund receivables/payables." These amounts are eliminated in the governmental and business-type activities columns of the statement of net assets, except for any net residual amounts due between governmental and business-type activities, which are presented as "internal balances".

K. Compensated Absences

The County reports compensated absences in accordance with the provisions of GASB Statement No. 16, "Accounting for Compensated Absences" as interpreted by Interpretation No. 6 of the GASB, "Recognition and Measurement of Certain Liabilities and Expenditures in Governmental Fund Financial Statements".

Vacation and compensatory time benefits are accrued as a liability as the benefits are earned if the employees' rights to receive compensation are attributable to services already rendered and it is probable that the employer will compensate the employees for the benefits through paid time off or some other means.

Sick leave benefits are accrued as a liability using the vesting method. The liability includes the employees who are currently eligible to receive termination benefits and those employees for whom it is probable will become eligible to receive payment in the future. The County has determined that employees with the County for five to ten years, depending on each department, are probable to receive payment in the future. The liability is based on accumulated sick leave and employees' wage rates at year end.

The entire compensated absence liability is reported on the government-wide financial statements.

For governmental funds, the current portion of unpaid compensated absences is the amount that is normally expected to be paid as payments come due each period upon the occurrence of employee resignations and retirements. These amounts are recorded in the account "matured compensated absences payable" in the fund from which the employees who have accumulated leave are paid. The noncurrent portion of the liability is not reported. For proprietary funds, the entire amount of compensated absences is reported as a fund liability.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

L. Accrued Liabilities and Long-term Obligations

All payables, accrued liabilities and long-term obligations are reported on the government-wide financial statements, and all payables, accrued liabilities and long-term obligations payable from proprietary funds are reported on the proprietary fund financial statements.

In general, governmental fund payables and accrued liabilities that, once incurred, are paid in a timely manner and in full from current financial resources are reported as obligations of the funds. Bonds, capital leases and long-term loans are recognized as a liability in the governmental fund financial statements when due.

M. Fund Balance Reserves

The County reserves those portions of fund balance which are legally segregated for a specific future use or which do not represent available, spendable resources and therefore are not available for appropriation or expenditure. Unreserved fund balance indicates the portion of fund balance which is available for appropriation in future periods. Fund balance reserves have been established for encumbrances, loans, inventory and unclaimed monies.

N. Net Assets

Net assets represent the difference between assets and liabilities. Net assets invested in capital assets, net of related debt, consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowing used for the acquisition, construction or improvement of those assets. Net assets are reported as restricted when there are limitations imposed on their use either through the enabling legislation adopted by the County or through external restrictions imposed by creditors, grantors, or laws or regulations of other governments. The County's policy is to first apply restricted resources when an expense is incurred for purposes for which both restricted and unrestricted net assets are available. Net assets restricted for other purposes include resources restricted for Federal and State grants restricted to expenditure for specified purposes.

Of the County's $6,431,294 of restricted net assets, none are restricted by enabling legislation.

O. Operating Revenues and Expenses

Operating revenues are those revenues that are generated directly from the primary activity of the proprietary funds. For the County, these revenues are charges for services for sewer services and charges to other funds to support the insurance program accounted for in the Internal Service Fund. Operating expenses are necessary costs incurred to provide the goods or services that are the primary activity of the fund. Revenues and expenses not meeting these definitions are reported as nonoperating.

P. Interfund Transactions

Transfers between governmental and business-type activities on the government-wide statements are reported in the same manner as general revenues. Exchange transactions between funds are reported as revenues in the seller funds and as expenditures/expenses in the purchaser funds. Flows of cash or goods from one fund to another without a requirement for repayment are reported as interfund transfers. Interfund transfers are reported as other financing sources/uses in governmental funds and after nonoperating revenues/expenses in proprietary funds. Repayments from funds responsible for particular expenditures/expenses to the funds that initially paid for them are not presented on the financial statements. Interfund transfers within governmental activities and within business-type activities have been eliminated in the government-wide statement of activities.

Q. Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

NOTE 3 - BUDGETARY BASIS OF ACCOUNTING

While the County is reporting financial position, results of operations and changes in fund balance on the basis of generally accepted accounting principles (GAAP), the budgetary basis as provided by law is based upon accounting for certain transactions on a basis of cash receipts, disbursements and encumbrances. The statement of revenues, expenditures and changes in fund balance - budget and actual (non-GAAP basis) is presented for the General Fund and major special revenue funds on the budgetary basis to provide a meaningful comparison of actual results with the budget. The major differences between the budget basis and modified accrual GAAP basis are that:

1. Revenues are recorded when received in cash (budget basis) as opposed to when susceptible to accrual (GAAP basis).

2. Expenditures are recorded when paid in cash (budget basis) as opposed to when the liability is incurred (GAAP basis).

3. Encumbrances are treated as expenditures (budget basis) rather than as a reservation of fund balance.

4. Advances in and advances out are operating transactions (budget basis) as opposed to balance sheet transactions (GAAP basis).

The following table summarizes the adjustments necessary to reconcile the GAAP and budgetary basis statements for the General Fund and major special revenue funds:

Net Change in Fund Balances

	General	Motor Vehicle and Gas Tax	Job and Family Services	Board of Developmental Disabilities	Community Development Block Grant
GAAP Basis	$ (474,430)	$ 407,740	$ 427,164	$ 168,833	$ 762
Net Adjustments for:					
Revenue accruals	86,679	340,403	(428,766)	(141,996)	-
Expenditure accruals	(130,345)	(741,739)	(88,480)	(44,407)	2,510
Adjustment for encumbrances	(81,679)	-	(40,282)	(400)	-
Budget basis	$ (599,775)	$ 6,404	$ (130,364)	$ (17,970)	$ 3,272

NOTE 4 - CASH, DEPOSITS AND INVESTMENTS

A. Primary Government

The investment and deposits of County monies are governed by the Ohio Revised Code. State statutes classify monies held by the County into two categories. Active monies are public monies determined to be necessary to meet current demand upon the County treasury. Active monies must be maintained either as cash in the County treasury, in commercial accounts payable or withdrawable on demand, including negotiable order of withdrawal (NOW) accounts, or in money market deposit accounts.

Inactive deposits are public deposits that the County has identified as not required for use within the current five year period of designation of depositories. Inactive deposits must either be evidenced by certificates of deposit maturing not later than the end of the current period of designation of depositories, or by savings or deposit accounts, including, but not limited to, passbook accounts.

Inactive monies may be deposited or invested in the following securities:

1. United States treasury notes, bills, bonds, or other obligations or security issued by the United States treasury or any other obligation guaranteed as to the payment of principal and interest by the United States, or any book entry zero-coupon United States treasury security that is a direct obligation of the United States;

2. Bonds, notes, debentures, or other obligations or securities issued by any federal government agency or instrumentality, including, but not limited to, the Federal National Mortgage Association, Federal Home Loan Bank, Federal Farm Credit Bank, Federal Home Loan Mortgage Corporation, Government National Mortgage Association, and Student Loan Marketing Association. All federal agency securities shall be direct issuances of federal government agencies or instrumentalities;

3. Written repurchase agreements in the securities listed above, provided that the market value of the securities subject to the repurchase agreement must exceed the principal value of the agreement by at least two percent and be marked to market daily, and that the term of the agreement must not exceed thirty days;

4. Bonds and other obligations of the State of Ohio, or the political subdivisions of Ohio, provided that such political subdivisions are located wholly or partly within the same county as the investing authority;

5. Time certificates of deposit or savings or deposit accounts, including, but not limited to, passbook accounts;

6. No-load money market mutual funds consisting exclusively of obligations described in division (1) or (2) and repurchase agreements secured by such obligations, provided that investments in securities described in this division are made only through eligible institutions;

7. The State Treasurer's investment pool (STAR Ohio);

8. Securities lending agreements in which the County lends securities and the eligible institution agrees to exchange either securities described in division (1) or (2), or cash, or both securities and cash, equal value for equal value;

9. High grade commercial paper in an amount not to exceed 5 percent of the County's total average portfolio;

NOTE 4 - CASH, DEPOSITS AND INVESTMENTS *(Continued)*

10. Certain bankers' acceptances for a period not to exceed one hundred and eighty days and commercial paper notes for a period not to exceed two hundred and seventy days in an amount not to exceed twenty-five percent of the interim moneys available for investment at any one time;

11. Under limited circumstances, corporate debt interests rated in any of the three highest rating classifications by at least two nationally recognized rating agencies;

12. Notes issued by corporations incorporated and operating within the United States, or by depository institutions doing business under any state or United States authority and operating within the United States. Such investments shall not exceed fifteen percent of the County's total average portfolio and meet other requirements; and

13. A current unpaid or delinquent tax line of credit authorized under division (G) of section 135.341 of the Revised Code provided that all of the conditions for entering into such a line of credit under that division are satisfied.

An investment must mature within five years from the date of purchase unless matched to a specific obligation or debt of the County, and must be purchased with the expectation that it will be held to maturity.

Protection of the County's deposits is provided by the Federal Deposit Insurance Corporation, by eligible securities pledged by the financial institution as security for repayment, by surety company bonds deposited with the Treasurer by the financial institution, by a single collateral pool established by the financial institution to secure the repayment of all public moneys deposited with the institution or by Federal Home Loan Bank Letters of Credit.

Investments may only be made through specified dealers and institutions. Payment for investments may be made only upon delivery of the securities representing the investments to the Treasurer or, if the securities are not represented by a certificate, upon receipt of confirmation of transfer from the custodian.

Undeposited Cash

At year-end, the County had $123,819 undeposited cash on hand which is included as part of "equity in pooled cash and cash equivalents."

Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the County's deposits may not be returned. According to state law, public depositories must give security for all public funds on deposit in excess of those funds that are insured by the federal deposit insurance corporation (FDIC) or by any other agency or instrumentality of the federal government. These institutions may either specifically collateralize individual accounts in lieu of amounts insured by the FDIC, or may pledge a pool of government securities valued at least 105% of the total value of public monies on deposit at the institution. The County's policy is to deposit money with financial institutions that are able to abide by the laws governing insurance and collateral of public funds.

As of December 31, 2010, the County's bank balance of $9,874,499 is either covered by FDIC or collateralized by the financial institutions' public entity deposit pools in the manner as described above.

NOTE 4 - CASH, DEPOSITS AND INVESTMENTS *(Continued)*

B. Component Units

Deposits and Investments

Cash and cash equivalents held by Gallco Industries, Inc. is classified as "cash and cash equivalents in segregated accounts" whereas the Gallia-Meigs Regional Airport Authority's balance is classified as "equity in pooled cash and cash equivalents". The County is the fiscal agent for the Airport Authority and reports their portion of cash within an agency fund.

Gallco Industries, Inc. At December 31, 2010, the carrying amount of Gallco Industries, Inc. deposits was $149,082. There are no statutory guidelines regarding the deposit and investment of funds by the non-profit corporation.

Gallia-Meigs Regional Airport Authority At year end, the amount of the Gallia-Meigs Regional Airport Authority equity in the County's internal investment pool was $31,944.

NOTE 5 - INTERFUND RECEIVABLES, PAYABLES AND TRANSFERS

Due to General Fund from:		
Board of Developmental Disabilities	$	37,500
Nonmajor governmental funds		51,083
KA Sewer		50,000
MV Sewer		3,368
Nonmajor enterprise funds		28,125
Total due to General Fund from other funds	$	170,076
Due to Job and Family Services Fund from:		
Nonmajor governmental funds	$	1,301

All balances resulted from the time lag between the dates that (1) reimbursable expenditures occur, (2) transactions are recorded in the accounting system, and (3) payments between funds are made.

NOTE 5 - INTERFUND RECEIVABLES, PAYABLES AND TRANSFERS *(Continued)*

A summary of interfund transfers for 2010 were as follows:

	Transfers from:		
	General	Board of Developmental Disabilities	Total
Transfers to:			
Job and Family Services	$ 259,850	$ -	$ 259,850
Nonmajor governmental funds	926,995	91,213	1,018,208
Total Transfers	$ 1,186,845	$ 91,213	$1,278,058

During 2010, the County made seven transfers totaling $564,285 from the General Fund to the Emergency Medical Services Fund to subsidize the program services. The General Fund also transferred $50,000, $259,850, and $172,121 to Dog & Kennel, Job & Family Services, and the Work Release Program Funds, respectively. In addition, the General Fund transferred monies in the amount of $140,589 to other nonmajor governmental funds to subsidize program services.

NOTE 6 - RECEIVABLES

Receivables at December 31, 2010 consisted of property taxes, sales taxes, accounts (billings for user charged services), accrued interest, loans, interfund, and intergovernmental grants. All receivables are considered fully collectible. A summary of the principal items of intergovernmental receivable follows:

Governmental Activities	
General Fund:	
Local government distributions	$ 237,838
Grants	42,309
Homestead and Rollback	98,318
Total General Fund	378,465
Major Special Revenue Funds:	
Motor Vehicle and Gas Tax	1,773,342
Job and Family Services	220,726
Board of Developmental Disabilities	619,159
Community Development Block Grant	411,014
Total Major Special Revenue Funds	3,024,241
Nonmajor Governmental Funds:	
Industrial Site Improvement Grant	212,256
USDA Rural Business Enterprise Grant	99,000
Prosecutor Victim's Assistance Grant	42,867
Work Release Center Grant	35,050
Ohio Youth Commission	174,014
Sheriff's Bulletproof Vest Grant	3,545
Child Support Enforcement Agency	135,497
Children Services	139,763
Sheriff Overtime Grant 2010	3,362
Sheriff Drug Enforecement Grant	27,719
Recovery Act - Edward Byrne Memorial Justice Assistance Grant (JAG) Program Community Liason Officer	12,445
Domestic Violence Enforcement	13,729
911 Grant	15,000
Total Nonmajor Governmental Funds	914,247
Total intergovernmental receivable	$ 4,316,953

NOTE 6 – RECEIVABLES *(Continued)*

Fiduciary Funds	
Agency Funds	$ 1,853,740

Business-Type Activities	
Major Enterprise Fund:	
KA Sewer	1,426,783
MV Sewer	94,057
Other Enterprise Fund:	
Green Sewer	3,825
Total Enterprise Funds	$ 1,524,665

NOTE 7 - CAPITAL ASSETS

A summary of changes in general capital assets during 2010 were as follows:

	Beginning Balance*	Increases	Decreases	Ending Balance
Governmental activities:				
Nondepreciable capital assets:				
Construction in Progress	$ -	$ 761,591	$ -	$ 761,591
Land	488,565	-	-	488,565
Total nondepreciable capital assets	488,565	761,591	-	1,250,156
Depreciable capital assets:				
Land improvements	130,657	-	-	130,657
Buildings and improvements	10,901,389	9,517	-	10,910,906
Furniture, fixtures and equipment	5,011,070	309,525	-	5,320,595
Vehicles	2,905,779	313,322	(260,297)	2,958,804
Infrastructure	20,343,904	1,712,953	(69,157)	21,987,700
Total depreciable capital assets	39,292,799	2,345,317	(329,454)	41,308,662
Accumulated Depreciation:				
Land improvements	(77,461)	(4,138)	-	(81,599)
Buildings and improvements	(4,359,046)	(243,597)	-	(4,602,643)
Furniture, fixtures and equipment	(3,073,832)	(355,151)	-	(3,428,983)
Vehicles	(1,902,322)	(288,622)	247,222	(1,943,722)
Infrastructure	(7,838,923)	(905,224)	28,354	(8,715,793)
Total accumulated depreciation	(17,251,584)	(1,796,732)	275,576	(18,772,740)
Depreciable capital assets, net	22,041,215	548,585	(53,878)	22,535,922
Governmental activities capital assets, net	$ 22,529,780	$ 1,310,176	$ (53,878)	$ 23,786,078

* As restated, See Note 25.

NOTE 7 - CAPITAL ASSETS *(Continued)*

For governmental activities, depreciation expense was charged to functions as follows:

Governmental Activities	
General government:	
Legislative and executive	$ 118,479
Judicial	17,164
Public safety	190,639
Public works	1,253,434
Health	164,118
Human services	52,898
Total governmental activities depreciation expense	$ 1,796,732

A summary of changes in business-type capital assets during 2010 were as follows:

	Beginning Balance*	Increases	Decreases	Ending Balance
Business-type activities:				
Construction in Progress	$ 1,166,941	$ 3,844,815	$ -	$ 5,011,756
Non-Depreciable Capital Assets	1,166,941	3,844,815	-	5,011,756
Depreciable capital assets:				
Building and improvements	6,215,700		-	6,215,700
Furniture, fixtures and equipment	17,379	-	-	17,379
Total depreciable capital assets:	6,233,079	-	-	6,233,079
Accumulated depreciation:				
Building and improvements	(2,074,638)	(155,741)	-	(2,230,379)
Furniture, fixtures and equipment	(17,379)	-	-	(17,379)
Total accumulated depreciation	(2,092,017)	(155,741)	-	(2,247,758)
Depreciable capital assets, net	4,141,062	(155,741)	-	3,985,321
Business-type activities capital assets, net	$ 5,308,003	$ 3,689,074	$ -	$ 8,997,077

* As restated, see Note 25

The business-type activities of the County are the sewer operations at various subdivisions throughout the County.

The Kanauga Addison Sewer System is estimated to be completed in November 2011. When completed, it will replace the Tara Wastewater Treatment Plant and Lift Station which has a cost of $225,161 and a December 31, 2010 book value of $57,257.

The Green Sewer System will replace the Meadowlook Wastewater Treatment Plant and Rodney II Sewer System which have a cost of $372,840 and a December 31, 2010 book value of $129,841. The Green Sewer System is in the planning stages and will not be completed for several years if funding is obtained.

The increase to construction in progress for business-type activities includes capitalized interest of $22,163.

NOTE 8 - CAPITALIZED LEASES - LESSEE DISCLOSURE

The County has entered into agreements to lease equipment and other assets. Such agreements are, in substance, lease purchases and are reflected as capital lease obligations in the basic financial statements. Capital lease payments are reflected as debt service in the basic financial statements for the governmental funds. New capital leases are, in substance, capital purchases and are reflected as current expenditures and "inception of capital lease" in the fund financial statements. The capital lease obligations reflected below as part of the long-term obligations represent the present value of the net future minimum lease payments on all capital leases. The equipment acquired has been capitalized in the governmental activities in the amount of $17,544.

The following is a schedule of the future minimum lease payments under lease obligations which have been capitalized as of December 31, 2010.

Year Ended	Capital Lease Obligations
2011	$ 2,020
Total minimum lease payments	2,020
Less: amount representing interest	(155)
Present value of minimum lease payments	$ 1,865

NOTE 9 - LONG-TERM OBLIGATIONS

The County's governmental long-term obligations activity for the year ended December 31, 2010, was as follows:

Purpose	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Governmental activities:					
General obligation bonds and loans payable					
Solid waste recycling bond 1998-2012, 4.95%	$ 90,000	$ -	$ (30,000)	$ 60,000	$ 30,000
EMS ambulances loan 2007-2011, 4.19%	57,631	-	(28,216)	29,415	29,415
Early childhood building construction bond 2006-2036, 4.45%	1,417,072	-	(28,153)	1,388,919	29,406
EMS Ford 350 loan 2008-2012, 3.95%	24,335	-	(7,796)	16,539	8,108
Engineer - Gradall XL4100 loan 2008-2012, 3.65%	158,800	-	(51,024)	107,776	52,912
Electronic Document System loan 2007-2010, 4.99%	73,441	-	(73,441)	-	-
Speculative Building Bond 2010-2024, 4.08%	-	250,258	(13,515)	236,743	12,826
Aiport Hanger Bond 2010-2035, 4.34%	-	275,000	-	275,000	6,307
EMS Station loan 2009-2033, 3.99%	145,747	-	(3,710)	142,037	3,860
Subtotal general obligation bonds and loans	1,967,026	525,258	(235,855)	2,256,429	172,834
Compensated absences	1,603,759	833,803	(950,428)	1,487,134	598,283
Capital leases	6,523	-	(4,658)	1,865	1,865
Total governmental activities long-term obligations	$ 3,577,308	$ 1,359,061	$ (1,190,941)	$ 3,745,428	$ 772,982

NOTE 9 - LONG-TERM OBLIGATIONS *(Continued)*

The County's general obligation bond issue for $337,500 was issued for the purpose of constructing a solid waste recycling center. The debt will be retired from recycling center receipts.

The County's loan for $138,570 was issued for the purpose of purchasing a new ambulance for the emergency medical service. The debt will be retired from EMS revenues.

The County's loan for $414,847 was issued for the purpose of purchasing an Electronic Document Management System. The debt will be retired by Job and Family Services revenues.

The County's general obligation bond issue for $1,480,000 was issued for the purpose of constructing an early family and childhood center. The debt will be retired by property taxes levied by the County and rental income received.

The County's loan for $260,000 was issued for the purpose of purchasing a 2008 Gradall Model XL 4100 III 6x4 for the Gallia County Engineer's Office. The debt will be retired from Motor Vehicle and Gas Tax revenues.

The County's loan for $40,000 was issued for the purpose of purchasing a 2008 Ford F-350 for the Gallia County EMS to be utilized as a rescue truck. The debt will be retired from EMS revenues.

The County's bond for $150,000 was issued for the purpose of covering a portion of the costs associated with constructing a building for use as an EMS station. The debt will be retired from EMS revenues.

During 2010, the County issued a bond in the amount of $275,000 for the purpose of the airport hangars #1 and #2 construction project. The debt will be retired from the debt retirement fund from hangar rent received.

During 2010, the County issued a bond in the amount of $250,258 for the purpose of constructing a speculative building in the Gallia County Industrial Park. The debt will be retired from the debt retirement fund via payments from the General Fund.

The County will pay compensated absences out of the fund from which the employees' salaries are paid, with the most significant funds being the General Fund, the Motor Vehicle and Gas Tax Fund, the Job and Family Services Fund, and the Board of Developmental Disabilities Fund. Capital lease obligations will be paid from the fund that maintains custody of the related assets.

Governmental Activities General Obligation Bonds and Loans

Year Ended	Principal	Interest	Total
2011	$ 172,834	$ 98,151	$ 270,985
2012	147,923	90,912	238,835
2013	57,033	84,647	141,680
2014	59,504	82,177	141,681
2015	62,081	79,600	141,681
2016-2020	353,087	355,315	708,402
2021-2025	413,913	271,863	685,776
2026-2030	411,757	183,546	595,303
2031-2035	490,970	85,124	576,094
2036	87,327	3,886	91,213
Total	$ 2,256,429	$ 1,335,221	$ 3,591,650

NOTE 9 - LONG-TERM OBLIGATIONS *(Continued)*

The County's business-type long-term obligations activity for the year ended December 31, 2010, was as follows:

Purpose	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Business-type activities:					
Long-term loans payable:					
OPWC loan payable 2002-2022 0.00%	$ 143,750	$ -	$ (11,500)	$ 132,250	$ 5,750
OWDA loan, 2010, 0%	-	461,809	(453,413)	8,396	-
OWDA loan 2010, 0%	-	520,901	(160,901)	360,000	-
OWDA loan 2008, 5.21%	155,437	157,157	(16,250)	296,344	-
OWDA loan 2009, 1.48%	396,401	1,478,251	-	1,874,652	-
General Obligation:					
Sewer improvement 2001-2040, 4.50%	190,600	-	(3,000)	187,600	3,000
Sewer improvement 2001-2040 4.50%	1,558,300	-	(24,100)	1,534,200	25,100
Compensated absences	13,273	60,224	(63,259)	10,238	5,354
Total business-type activities long-term obligations	$ 2,457,761	$ 2,678,342	$ (732,423)	$ 4,403,680	$ 39,204

The Ohio Public Works Commission (OPWC) loan issued in the amount of $230,000 is for utility construction projects. Property taxes and revenue of the utility facilities have been pledged to repay this debt.

The Sewer Improvement bonds issued in the amount of $1,927,000 are for utility improvement projects. These bonds will be repaid from the Bidwell/Porter Sewer Fund with the revenue from sewer operations.

NOTE 9 - LONG-TERM OBLIGATIONS *(Continued)*

The County has received approval for a $325,000 OPWC loan relating to the Kanauga – Addison Sewer System Project at a rate of 0% interest for a term of 30 years. As of December 31, 2010, no proceeds have been received from the OPWC loan. Property taxes and revenue of the utility facilities have been pledged to repay this debt.

The County was required to secure interim financing relating to the construction of the Kanauga-Addison Sewer System for which the County received a $1,862,000 USDA Rural Development loan relating to the construction. On August 27, 2009, the County secured interim financing for the USDA Rural Development loan with the Ohio Water Development Authority (OWDA) at an interest rate of 1.48% for a term of 40 years. The OWDA loan was used to pay off the 2006 OWDA planning loan related to the project. As of December 31, 2010, $1,874,652 has been disbursed on the OWDA Loan, which includes capitalized interest. The County has pledged future Kanauga – Addison Sewer System customer revenues, net of specified operating expenses, to repay the $1,862,000 OWDA Loan issued in August 2009. Proceeds from the loan provide financing for the construction of the Kanauga – Addison Sewer System. The loan is payable solely from sewer customer net revenues and are payable through 2052. Annual principal and interest payments on the bonds are expected to be less than net revenues. The date of the first repayment is March 2012 with equal annual payments.

In June 2006, the County entered into an agreement with OWDA for a Green Township Sanitary Sewer Study in the amount of $50,000. On August 28, 2008 the County was approved for a $325,000 Green Sewer Phase I Design loan which was used to pay off the Sanitary Sewer Study loan. The current contract term is for an interest rate of 5.21% with $8,125 principal payment amounts semiannually for five years with a final payment date of July 1, 2014 with interest of $75,141 and principal of $251,875. The design loan will be rolled over into a long term construction loan for payment. During 2010, the Green Township Sewer Project OWDA loan had additional disbursements of $157,157. The loan will be repaid from pledged revenues charged for services of the system.

In 2009, the County entered into a Water Pollution Control Loan Fund agreement through OWDA which included assistance from the American Reinvestment and Recovery Act (ARRA) in the amount of $720,000 for additional financing on the Kanauga-Addison Sewer System. This loan has a 0% interest rate and a term of 20 years. $360,000 of this loan is scheduled to be paid with grant funding from the American Reinvestment and Recovery Act. As of December 31, 2010, $520,901 was disbursed on this loan; $360,000 of the loan has been repaid with the above mentioned ARRA grant funding. In accordance with Section 603(d)(1)(c) of the Clean Water Act, the County has established a dedicated source of revenue for repayment of the loan. The dedicated source of repayment for the loan is the sewer use charges in the Gallia County Commissioner's Resolution passed on May 14, 2009. Semi – annual payment amounts are $9,000 with the date of first payment of January 1, 2012.

In 2009, the County entered into a Water Pollution Control Loan Fund agreement through OWDA which included assistance from the American Reinvestment and Recovery Act (ARRA). The total amount relating to the agreement is $569,779 for construction of the Mercerville Sanitary Sewer Project. This loan has a 0% interest rate and a term of 20 years. $450,000 of this loan is schedule to be paid with grant funding from the American Reinvestment and Recovery Act (ARRA). As of December 31, 2010, $461,809 have been disbursed on this loan; $450,000 of the loan has been repaid with the above mentioned ARRA grant funding. In accordance with Section 603(d)(1)(c) of the Clean Water Act, the County has established a dedicated source of revenue for repayment of the loan. The dedicated source of repayment for the loan is the wastewater user fees in the Gallia County Commissioner's Resolution passed on August 27, 2009. Semi – annual payment amounts are $2,994 with the date of first payment of January 1, 2011.

The amortization schedule below does not include the OWDA loans or OPWC loan relating to Kanauga – Addison and Mercerville Sewers due to the projects not being completed as of December 31, 2010.

NOTE 9 - LONG-TERM OBLIGATIONS *(Continued)*

The annual requirements to amortize long-term loan and bond obligations outstanding as of December 31, 2010 are as follows:

	Sewer Improvement			OPWC Loan
Year Ended	Principal	Interest	Total	Principal
2011	$ 28,100	$ 77,481	$ 105,581	$ 5,750
2012	29,500	76,217	105,717	11,500
2013	30,900	74,889	105,789	11,500
2014	32,200	73,499	105,699	11,500
2015	33,700	72,050	105,750	11,500
2016-2020	192,400	336,119	528,519	57,500
2021-2025	239,800	288,752	528,552	23,000
2026-2030	298,700	229,721	528,421	-
2031-2035	372,400	156,156	528,556	-
2036-2040	464,100	64,487	528,587	-
Total	$ 1,721,800	$ 1,449,371	$ 3,171,171	$ 132,250

On September 19, 2002, the Board of County Commissioners approved a resolution for the guaranty of the Gallia County Community Improvement Corporation's Rural Industrial Park Loan in the original amount of $700,000 from the Ohio Department of Development. At December 31, 2010, the balance of the loan was $366,072, and is not reported as an obligation in the accompanying basic financial statements. On March 25, 2011, the remaining balance of the loan was paid in full.

At December 31, 2010, the County's overall legal debt margin was $13,704,865 with an unvoted debt margin of $6,963,037.

NOTE 10 – CONDUIT DEBT OBLIGATIONS

Pursuant to State statute, various industrial revenue bonds have been issued by private industry within Gallia County. The proceeds of the industrial revenue bonds are used by the various private industries for new construction or improvements. The bonds are to be repaid by the recipients of the proceeds and do not represent an obligation of the County. As of December 31, 2010, there was $39,022,824 in industrial revenue bonds issued of which $12,681,448 remains outstanding.

NOTE 11 - PROPERTY TAXES

Property taxes include amounts levied against all real, public utility, and tangible personal property located in the County. Taxes collected on real property (other than public utility) in one calendar year are levied in the preceding calendar year on assessed values as of January 1 of that preceding year, the lien date. Assessed values are established by the County Auditor at 35 percent of appraised market value. All property is required to be revalued every six years. The last revaluation was completed during 2005. Real property taxes are payable annually or semiannually. The first payment is due April 18, with the remainder payable by July 25.

Taxes collected from tangible personal property (other than public utility) in one calendar year are levied in the prior calendar year on assessed values during and at the close of the most recent fiscal year of the taxpayer that ended on or before March 31 of that calendar year, and at the tax rates determined in the preceding year. Due to the phase out which began in 2005, the tangible personal property tax percentage fell to zero in 2009 for businesses. Therefore, Ohio no longer has a general tax on tangible personal property used in business. The tax temporarily applies to telephone and inter-exchange telecommunications companies, which is being passed out to 10% for 2009, 5% for 2010, and zero for 2011. After 2011, tangible personal property, exclusive of public utility tangible personal property, will not be subject to tax. Amounts paid by multi-county taxpayers are due September 20. Single county taxpayers may pay annually or semiannually. If paid annually, payment is due April 30; if paid semiannually, the first payment is due April 30, with the remainder payable by September 20.

Public utility real and tangible personal property taxes collected in one calendar year are levied in the preceding calendar year on assessed values determined as of December 31 of the second year proceeding the tax collection year, the lien date. Certain public utility tangible personal property currently is assessed at 88 percent of its true value. Public utility property taxes are payable on the same dates as real property taxes described previously.

The County Treasurer collects property taxes on behalf of all taxing districts within the County. The County Auditor periodically remits to itself its share of the taxes collected. The County records receipt of these taxes in various funds.

Accrued property taxes receivable represent delinquent taxes outstanding and real, tangible personal, and public utility taxes that were measurable and unpaid as of December 31, 2010. Although total property tax collections for the next fiscal year are measurable, amounts to be received during the available period are not subject to reasonable estimation at December 31 and are not intended to finance 2010 operations. The receivable is therefore offset by a credit to deferred revenue.

The full tax rate for all County operations for the year ended December 31, 2010, was $8.00 per $1,000 of assessed value. The assessed values of real and tangible personal property upon which 2010 property tax receipts were based are as follows:

Category	Assessed Value
Real estate:	
Agriculture	$ 95,558,890
Residential	248,188,270
Commercial	117,350,050
Industrial	5,009,350
Minerals	446,320
Total real estate	466,552,880
Personal property:	
General	613,520
Public utilities	228,717,340
Total personal property	229,330,860
Total assessed values	$ 695,883,740

NOTE 12 - PERMISSIVE SALES TAX

In 1967, in accordance with Section 5739.02 of the Ohio Revised Code, counties were authorized to levy an excise tax of one half to one percent. The tax must be levied pursuant to a resolution of the County Commissioners and a copy of the resolution sent to the Tax Commissioner not later than 60 days prior to the effective date of the tax.

The Tax Commissioner shall, within forty-five days after the end of each month, certify to the Director of Budget and Management the amount of the proceeds of such tax or taxes paid to the Treasurer of State during that month to be returned to the County. The director then provides for payment to the County Treasurer on or before the twentieth day of the month in which the certification is made.

On November 17, 1981, the County Commissioners adopted by resolution a one half percent permissive sales tax as allowed by Sections 5739.026 and 5741.023, Revised Code. On December 29, 1994, the County Commissioners, by recommendation of the State of Ohio Tax Commissioner, repealed one quarter of one percent of the one half of one percent permissive sales tax under Revised Code Sections 5739.026 and 5741.023 and replaced it with a one quarter of one percent under Revised Code Section 5739.021. On March 5, 1987, the County Commissioners adopted by resolution a proposal for an additional one half percent permissive sales tax as allowed by Sections 5705.026 and 5705.023, Revised Code, which was voted upon at a special election held on May 5, 1987, at which time the proposal passed. On August 18, 1994, the County Commissioners adopted by resolution a proposal for an additional one quarter of one percent sales and use tax, for the implementation of 9-1-1 for Gallia County, as allowed by Sections 5739.026 and 5741.023 of the Revised Code, which was voted upon on November 8, 1994, at which time the proposal passed. This item is approved for periods of five years. The most recent renewal was approved on November 16, 2009. In 2010, the General Fund received $3,258,247 and the 9-1-1 Special Revenue Fund received $814,520 in sales and use tax revenue. Sales and use tax revenue is recognized when it is measurable and available.

NOTE 13 - ACCOUNTABILITY AND COMPLIANCE

A. Accountability

The following funds had deficit fund balances as of December 31, 2010:

Major fund:	
Community Development Block Grant	$ 8,870
Nonmajor special revenue funds:	
Child Support Enforcement	15,155
Title IV-D Prosecutor	3,359
Sheriff's Overtime Grant FY`10	2,782
Sheriff's Overtime Initiative FY '10	249
Common Pleas Dispute Resolute	436
State Homeland Security Program (SHSP) Grant	40,587
ARRA Sheriff Proactive Enforcement Grant	30,118
Recovery Act - Edward Byrne Memorial Justice Assistance Grant (JAG) Program Domestic Violence Enforcement	71
2010 FAA Airport Grant	2,914

The deficits in these funds are the result of the application of accounting principles generally accepted in the United States of America and the requirement to accrue liabilities when incurred. The General Fund is liable for any deficits in these funds and provides transfers when cash is required, not when accruals occur. These deficits do not exist on the cash basis.

NOTE 14 - RISK MANAGEMENT

The County is exposed to various risks of loss related to torts, theft or damage to, and destruction of assets, errors and omissions, injuries to employees and natural disasters. During 2010, the County contracted with County Risk Sharing Authority (CORSA), a jointly governed organization, for liability, property, and crime insurance. The CORSA program has a $2,500 deductible.

Coverage provided by the program is as follows:

Property:	
Buildings and contents	$ 63,280,270
Blanket coverage ($100,000,000 annual aggregate pool limit for flood and earthquake)	
Liability:	
General liability	$ 1,000,000
Errors and omissions	1,000,000
Law enforcement	1,000,000
Excess liability	5,000,000
Automobile	1,000,000
Uninsured/underinsured motorist	250,000

Settlement amounts on claims have not exceeded insurance coverage in any of the past three years. There have been no significant reductions in insurance coverage from the prior year.

Workers' compensation benefits are provided through the State Bureau of Workers' Compensation. The County pays all elected officials' bonds by statute. Vision coverage is provided by Vision Service Plan.

The County also provides medical, prescription drug, dental, and life insurance coverage for those employees who choose to participate through a plan with Medical Mutual.

The Plan is a high deductible plan which is self funded to a lower deductible amount to the employees. The premiums are paid by the employees and from each of the respective funds from which the employee is paid.

NOTE 15 - DEFINED BENEFIT RETIREMENT PLANS

A. Ohio Public Employees Retirement System

Plan Description - The County participates in the Ohio Public Employees Retirement System (OPERS). OPERS administers three separate pension plans. The traditional plan is a cost-sharing, multiple-employer defined benefit pension plan. The member-directed plan is a defined contribution plan in which the member invests both member and employer contributions (employer contributions vest over five years at 20 percent per year). Under the member directed plan, members accumulate retirement assets equal to the value of the member and vested employer contributions plus any investment earnings. The combined plan is a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and a defined contribution plan. Under the combined plan, OPERS invests employer contributions to provide a formula retirement benefit similar to, but less than, the traditional plan benefit. Member contributions, whose investment is self-directed by the member, accumulate retirement assets in a manner similar to the member directed plan. While members in the state and local divisions may participate in all three plans, law enforcement (generally sheriffs, deputy sheriffs and township police) and public safety divisions exist only within the traditional pension plan.

OPERS provides retirement, disability, survivor and death benefits and annual cost of living adjustments to members of the traditional and combined plans. Members of the member directed plan do not qualify for ancillary benefits. Authority to establish and amend benefits is provided by Chapter 145 of the Ohio Revised Code. OPERS issues a stand-alone financial report which may be obtained by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642 or by calling (614) 222-5601 or (800) 222-7377.

Funding Policy – The Ohio Revised Code provides statutory authority for member and employer contributions and currently limits the employer contribution to a rate not to exceed 14 percent of covered payroll for state and local employer units and 18.1 percent of covered payroll for law enforcement and public safety employer units. Member contribution rates, as set forth in the Ohio Revised Code, are not to exceed 10 percent of covered payroll. For the year ended December 31, 2010, members in state and local classifications contributed 10 percent of covered payroll while public safety and law enforcement members contributed 10.1 percent. While members in the state and local divisions may participate in all three plans, law enforcement and public safety divisions exist only within the Traditional Pension Plan. For 2010, member and employer contribution rates were consistent across all three plans.

The County's 2010 contribution rate was 14.0 percent, except for those plan members in law enforcement or public safety, for whom the County's contribution was 17.87 percent of covered payroll. The portion of employer contributions used to fund pension benefits is net of post-employment health care benefits. The portion of employer contribution allocated to health care for members in the Traditional Plan was 5.5 percent from January 1 through February 28, 2010, and 5 percent from March 1 through December 31, 2010. The portion of employer contributions allocated to health care for members in the Combined Plan was 4.73 percent from January 1 through February 28, 2010, and 4.23 percent from March 1 through December 31, 2010. Employer contribution rates are actuarially determined.

The County's required contributions for pension obligations to the Traditional Pension and Combined Plans for the years ended December 31, 2010, 2009, and 2008 were $1,540,742, $1,567,883, and $1,595,181, respectively. For 2010, 90 percent has been contributed with the balance being reported as a liability in the respective funds. The full amount has been contributed for 2009 and 2008.

B. State Teachers Retirement System

Plan Description - Certified teachers, employed by the School for Developmental Disabilities, contribute to the State Teachers Retirement System of Ohio (STRS Ohio), a cost-sharing, multiple-employer public employee retirement system. STRS Ohio provides retirement and disability benefits to members and death and survivor benefits to beneficiaries. STRS Ohio issues a stand-alone financial report that may be obtained by writing to STRS Ohio, 275 East Broad Street, Columbus, Ohio 43215-3771, by calling 888-227-7877, or by visiting the STRS Ohio website at www.strsoh.org.

NOTE 15 - DEFINED BENEFIT RETIREMENT PLANS *(Continued)*

New members have a choice of three retirement plans, a defined benefit (DB) plan, a defined contribution (DC) plan and a combined plan. The DB plan offers an annual retirement allowance based on final average salary times a percentage that varies based on years of service, or an allowance based on a member's lifetime contributions and earned interest matched by STRS Ohio funds times an actuarially determined annuity factor. The DC plan allows members to place all their member contributions and employer contributions equal to 10.5 percent of earned compensation into an investment account. Investment decisions are made by the member. A member is eligible to receive a retirement benefit at age 50 and termination of employment. The member may elect to receive a lifetime monthly annuity or a lump sum withdrawal. The combined plan offers features of both the DC plan and the DB plan. In the combined plan, member contributions are invested by the member, and employer contributions are used to fund the defined benefit payment at a reduced level from the regular DB plan. The DB portion of the combined plan payment is payable to a member on or after age 60; the DC portion of the account may be taken as a lump sum or converted to a lifetime monthly annuity at age 50. Benefits are established by Chapter 3307 of the Ohio Revised Code.

A DB or combined plan member with five or more years of credited service who becomes disabled may qualify for a disability benefit. Eligible spouses and dependents of these active members who die before retirement may qualify for survivor benefits. Members in the DC plan who become disabled are entitled only to their account balance. If a member of the DC plan dies before retirement benefits begin, the member's designated beneficiary is entitled to receive the member's account balance.

Funding Policy - For the fiscal year ended June 30, 2010, plan members were required to contribute 10 percent of their annual covered salaries. The County was required to contribute 14 percent; 13 percent was the portion used to fund pension obligations. For fiscal year 2008, the portion used to fund pension obligations was also 13 percent. Contribution rates are established by the State Teachers Retirement Board, upon recommendations of its consulting actuary, not to exceed statutory maximum rates of 10 percent for members and 14 percent for employers. Chapter 3307 of the Ohio Revised Code provides statutory authority for member and employer contributions.

The County's required contributions for pension obligations to STRS Ohio for the years ended December 31, 2010, 2009, and 2008 were $81,253, $86,365, and $96,595, respectively; 96 percent has been contributed for 2010 and 100 percent for fiscal years 2009 and 2008. Of the 2010 amount, $6,969 representing the unpaid contribution for 2009 is recorded as a liability within the respective funds.

NOTE 16 - POSTEMPLOYMENT BENEFITS

A. Ohio Public Employees Retirement System

Plan Description – Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: The Traditional Pension Plan—a cost-sharing, multiple-employer defined benefit pension plan; the Member-Directed Plan—a defined contribution plan; and the Combined Plan—a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing multiple-employer defined benefit post-employment health care plan for qualifying members of both the Traditional Pension and the Combined Plans. Members of the Member-Directed Plan do not qualify for ancillary benefits, including post-employment health care coverage. The plan includes a medical plan, prescription drug program and Medicare Part B premium reimbursement.

In order to qualify for post-employment health care coverage, age-and-service retirees under the Traditional Pension and Combined Plans must have 10 or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The Ohio Revised Code permits, but does not mandate, OPERS to provide health care benefits to its eligible members and beneficiaries. Authority to establish and amend benefits is provided in Chapter 145 of the Ohio Revised Code.

Disclosures for the health care plan are presented separately in the OPERS financial report, which may be obtained by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling 614-222-5601 or 800-222-7377.

NOTE 16 - POSTEMPLOYMENT BENEFITS *(Continued)*

Funding Policy – The post-employment health care plan was established under, and is administrated in accordance with, Internal Revenue Code 401(h). The Ohio Revised Code provides the statutory authority requiring public employers to fund post-retirement health care through contributions to OPERS. A portion of each employer's contribution to OPERS is set aside for the funding of post-retirement health care.

Employer contribution rates are expressed as a percentage of the covered payroll of active members. In 2010, state and local employers contributed at a rate of 14.0 percent of covered payroll, and public safety and law enforcement employers contributed at 17.87 percent. The Ohio Revised Code currently limits the employer contribution to a rate not to exceed 14 percent of covered payroll for state and local employer units and 18.1 percent of covered payroll for law and public safety employer units.

Each year, the OPERS Retirement Board determines the portion of the employer contribution rate that will be set aside for funding of post-employment health care benefits. The portion of employer contributions allocated to health care for members in the Traditional Plan was 5.5 percent from January 1 through February 28, 2010, and 5 percent from March 1 through December 31, 2010. The portion of employer contributions allocated to health care for members in the Combined Plan was 4.73 percent from January 1 through February 28, 2010, and 4.23 percent from March 1 through December 31, 2010.

The OPERS Retirement Board is also authorized to establish rules for the payment of a portion of the health care benefits provided, by the retiree or their surviving beneficiaries. Payment amounts vary depending on the number of covered dependents and the coverage selected. Active members do not make contributions to the post-employment health care plan.

The County's contributions allocated to fund post-employment health care benefits for the years ended December 31, 2010, 2009, and 2008 were $584,707, $660,011, and $719,667 respectively. For 2010,90 percent has been contributed with the balance being reported as a liability. The full amount has been contributed for 2009 and 2008.

The Health Care Preservation Plan (HCPP) adopted by the OPERS Retirement Board on September 9, 2004, was effective January 1, 2007. Member and employer contribution rates increased on January 1 of each year from 2006 to 2008. Rates for law enforcement and public safety employers increased over a six year period beginning on January 1, 2006, with a final rate increase on January 1, 2011. These rate increases allowed additional funds to be allocated to the health care plan.

B. State Teachers Retirement System of Ohio

Plan Description – Certified teachers, employed by the School for Developmental Disabilities, contribute to the cost-sharing, multiple-employer defined benefit Health Plan administered by the State Teachers Retirement System of Ohio (STRS Ohio) for eligible retirees who participated in the defined benefit or combined pension plans offered by STRS Ohio. Benefits include hospitalization, physicians' fees, prescription drugs and reimbursement of monthly Medicare Part B premiums. The Plan is included in the report of STRS Ohio, which may be obtained by visiting www.strsoh.org or by calling 888-227-7877.

Funding Policy – Ohio law authorizes STRS Ohio to offer the Plan and gives the Retirement Board authority over how much, if any, of the health care costs will be absorbed by STRS Ohio. Active members do not contribute to the Plan. All benefit recipients pay a monthly premium. Under Ohio law, funding for post-employment health care may be deducted from employer contributions. For 2010, STRS Ohio allocated employer contributions equal to one percent of covered payroll to the Health Care Stabilization Fund. The County's contributions for health care for the years ended December 31, 2010, 2009, and 2008 were $5,804, $6,163, and $6,899, respectively; 96 percent has been contributed for 2010. The full amount has been contributed for 2009 and 2008.

NOTE 17 - ADDITIONAL DISCLOSURES FOR DISCRETELY PRESENTED COMPONENT UNITS

A. Measurement Focus and Basis of Accounting

Gallco Industries, Inc. uses fund accounting to report on their operations and uses the full accrual basis of accounting as set forth in SFAS No. 117 for non-profit corporations. Gallia-Meigs Regional Airport uses fund accounting to report on their operations and uses the cash basis of accounting that is then converted to accrual accounting at year end.

B. Budgetary Basis of Accounting

Budgetary information for the discretely presented component units is not presented because they are not included in the entity for which the "appropriated budget" is adopted and do not maintain separate budgetary financial records. The fund in which the Gallia-Meigs Regional Airport is maintained is included in the County's appropriation resolutions and certificates of estimated resources.

C. Capital Assets

Property and equipment for the component units are stated at historical cost and are updated for the costs of additions and retirements during the year. Donated capital assets have been recorded at the fair market value at the date of the gift.

The assets for Gallco Industries, Inc. are depreciated on a straight line basis using the following estimated useful lives:

Category	Estimated Life
Buildings and Improvements	20-40 years
Furniture, fixtures and equipment	10 years

A summary of changes in capital assets during 2010 for Gallco Industries, Inc. were as follows:

	Beginning Balance*	Increases	Decreases	Ending Balance
Depreciable capital assets:				
Furniture, fixtures and equipment	$ 252,592	$ -	$ -	$ 252,592
Accumulated depreciation:				
Furniture, fixtures and equipment	(106,968)	(26,158)	-	(133,126)
Capital assets, net	$ 145,624	$ (26,158)	$ -	$ 119,466

* As restated, see Note 25.

The assets for Gallia-Meigs Regional Airport are depreciated on a straight line basis using the following estimated useful lives:

Category	Estimated Life
Buildings and improvements	20-40 years
Furniture, fixtures and equipment	10 years

NOTE 17 - ADDITIONAL DISCLOSURES FOR DISCRETELY PRESENTED COMPONENT UNITS *(Continued)*

A summary of changes in capital assets during 2010 for Gallia-Meigs Regional Airport were as follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Nondepreciable capital assets:				
Construction in Progress	$ -	$ 241,657	$ -	$ 241,657
Depreciable capital assets:				
Buildings and improvements	1,536,442	-	-	1,536,442
Furniture, fixtures and equipment	14,234	-	-	14,234
Total depreciable capital assets	1,550,676	-	-	1,550,676
Accumulated depreciation:				
Buildings and improvements	(422,081)	(55,709)	-	(477,790)
Furniture, fixtures and equipment	(4,678)	(1,666)	-	(6,344)
Total accumulated depreciation	(426,759)	(57,375)	-	(484,134)
Depreciable Capital Assets, Net	1,123,917	(57,375)	-	1,066,542
Capital assets, net	$ 1,123,917	$ 184,282	$ -	$ 1,308,199

NOTE 18 - JOINTLY GOVERNED ORGANIZATIONS

A. Joint Solid Waste Management District

The County is a member of a multi-county Joint Solid Waste Management District (District), which is a jointly governed organization involving Gallia, Jackson, Vinton and Meigs Counties. The purpose of the District is to plan and implement comprehensive and environmentally sound solid waste management facilities and provide for the establishment of waste minimization, waste reduction, and recycling programs. The District was created in 1989, as required by the Ohio Revised Code.

The Gallia, Jackson, Vinton and Meigs Solid Waste District is governed and operated through three groups. A twelve member board of directors, comprised of three commissioners from each county, is responsible for the District's financial matters. Financial records are maintained by the District. The District's sole revenue source is a waste disposal fee for in-district and out-of-district waste. A twenty-five member policy committee comprised of six members from each county and one at-large member appointed by the policy committee, is responsible for preparing the solid waste management plan of the District in conjunction with a Technical Advisory Council whose members are appointed by the policy committee. Each participating county's influence is limited to the number of members each appoints to the board. Continued existence of the District is not dependent on the County's continued participation, no equity interest exists, and no debt is outstanding.

NOTE 18 - JOINTLY GOVERNED ORGANIZATIONS *(Continued)*

B. Gallia-Jackson-Meigs Counties Board of Alcohol, Drug Addiction and Mental Health Services (ADAMH)

The ADAMH Board (Board) is a jointly governed organization. Participants are Gallia, Jackson, and Meigs Counties. The Board provides no direct services but contracts for their delivery. The Board's function is to assess needs, and to plan, monitor, fund and evaluate the services. The Board is managed by eighteen members, five appointed by commissioners of Jackson County, two by commissioners of Gallia County, and three by commissioners of Meigs County which are proportionate to population, four by the Ohio Department of Alcohol and Drug Addiction Services and four by the Ohio Department of Mental Health. Each participating county's influence is limited to the number of members each appoints to the Board. The Board exercises total control of the budgeting, appropriation, contracting and management.

All of the Board's revenue is from state and federal grants awarded to the multi-county board. Since Gallia County serves as the fiscal agent for the Board, the financial activity is presented as an agency fund. Continued existence of the Board is not dependent of the County's continued participation, no debt exists, and the County does not have an equity interest in the Board. During 2010, the County made no contributions to the Board.

C. Gallia-Jackson-Meigs Counties Cluster

Gallia, Jackson and Meigs Counties Cluster provides services to multi-need youth in Gallia, Jackson and Meigs Counties. Members of the Cluster include Gallia, Jackson and Meigs Counties Board of Alcohol Drug Addiction and Mental Health Services, Gallia County Children Services, Gallia County Juvenile Court, Gallipolis City Schools, Gallia County Schools, the regional office of the Department of Youth Services, Gallia County Board of Developmental Disabilities, TASC (Treatment Alternative to Street Crime) of Southeast Ohio, Health Recovery Services-Bassett House, Bureau of Vocational Rehabilitation and the Family Addiction Community Treatment Services. The operation of the Cluster is controlled by an advisory committee which consists of at least one representative from each agency. State grants are received in the name of the Cluster. The continued existence of the Cluster is not dependent on the County's continued participation and no equity interest exists. The Cluster has no outstanding debt.

D. Area Agency on Aging District 7, Inc.

The Area Office on Aging is a regional council of governments that assists ten counties, including Gallia County, in providing services to senior citizens in the Council's service area. The Council is governed by a fifteen member board of directors. The Gallia County Commissioners along with other county organizations can nominate new board members, but they must be representatives of local community service organizations. At least one-half of the board must be over the age of fifty-five. The board has total control over budgeting, personnel and all other financial matters. The continued existence of the Council is not dependent on the County's continued participation and no equity interest exists. The Council has no outstanding debt.

E. Ohio Valley Resource Conservation and Development Area, Inc.

The Ohio Valley Resource Conservation and Development Area, Inc. is a jointly governed organization that is operated as a non-profit corporation. The Ohio Valley Resource Conservation and Development Area, Inc. was created to aid regional planning to participating counties. Gallia County, along with Ross, Vinton, Highland, Brown, Adams, Pike, Jackson, Scioto and Lawrence Counties each appoint three members to the thirty member Council. The Council selects an administrator to oversee operations. The County paid $500 to the Ohio Valley Resource Conservation and Development Area in 2010.

NOTE 18 - JOINTLY GOVERNED ORGANIZATIONS *(Continued)*

F. Southeastern Ohio Corrections Commission

The Southeastern Ohio Corrections Commission was formed for the purpose of planning to build a community jail through State funding. The Commission consists of Gallia, Jackson, and Meigs Counties. The State funding did not become available but the Commission has remained together in the case there would be any new grants to apply for in the future. The Commission consists of nine members which includes the President of the Commissioners, the Common Pleas Judge, and the Sheriff from each county. The Commission's fiscal agent will be the County Auditor of the County in which the jail is placed. The County made no contributions to the Commission in 2010, and the Commission is not dependent on the County's continued participation.

G. Gallia-Meigs Community Action Agency

The Gallia-Meigs Community Action Agency is a non-profit corporation organized to plan, conduct and coordinate programs designed to combat social and economic problems and to help eliminate conditions of poverty within Gallia and Meigs Counties. The agency is governed by an eighteen member board which consists of three commissioners from each county, three business owners from each county, and three low income individuals elected by each county. The three business owners are nominated by other local business owners and the three low income individuals are nominated by local town council meetings. The agency received federal and state monies which are applied for and received by, and in the name of, the Board of Directors. The Gallia County Commissioners apply for the Community Housing Improvement Program Grant and the HOME Grant which are administered and implemented by the Community Action Agency. The County is the fiscal agent of the grant, but the grants are used by the Community Action Agency to improve low income family housing in Gallia County. Community Action contracts for expenses that relate to the grants and then the County Commissioners issue the payments. The Board exercises total control of the budgeting, appropriation, contracting and management. Continued existence of the Community Action Agency is not dependent upon the County's continued participation, nor does the County have an equity interest in the agency. The agency is not accumulating significant financial resources and is not experiencing fiscal distress that may cause an additional financial benefit to or burden on the County.

H. Gallia-Jackson Child Abuse and Neglect Advisory Board

The Child Abuse and Neglect Advisory Board is controlled by a five member board. The purpose of the Child Abuse and Neglect Advisory Board is to prevent child abuse and neglect. Each county's commissioners appoint two members and there is one at large member. The at large member currently is the Gallia-Jackson-Meigs Counties Board of Alcohol, Drug Addiction and Mental Health Services director. The organization receives $20,000 a year through the State from birth registration fees of which $19,400 is sent directly to the Ohio Children's Trust Fund Board. The Gallia-Jackson-Meigs Counties Board of Alcohol, Drug Addiction and Mental Health Services, a jointly governed organization, receives $600 a year for administrative services. Continued existence of the Board is not dependent upon the County's continued participation, nor does the County have an equity interest in the Board. The Board is not accumulating significant financial resources and is not experiencing fiscal distress that may cause an additional financial benefit to or burden on the County. The Board currently does not prepare year end financial statements due to the limited amount of financial activity.

I. Ohio Valley Regional Development Commission

The Ohio Valley Regional Development Commission is a jointly governed organization that serves a twelve county economic development planning district in southern Ohio. The Commission was formed to influence favorably the future economic, physical and social development of Adams, Brown, Clermont, Fayette, Gallia, Highland, Jackson, Lawrence, Pike, Ross, Scioto, and Vinton Counties. Membership is comprised of elected and appointed county, municipal and township officials or their officially appointed designees, as well as members of the private sector, community action agencies and regional planning commissions. The Commission is not dependent upon Gallia County for its existence. In 2010, the County paid $5,255 to the Ohio Valley Regional Development Commission for membership.

NOTE 18 - JOINTLY GOVERNED ORGANIZATIONS *(Continued)*

J. Southern Ohio Council of Governments

The County is a member of the Southern Ohio Council of Governments (the "Council"), which is a jointly governed organization created under Ohio Revised Code Section 167.01. The governing body consists of a thirteen member board with each participating County represented by its Director of its Board of Developmental Disabilities. Member counties include: Adams, Athens, Brown, Fayette, Gallia, Highland, Jackson, Lawrence, Pickaway, Pike, Ross, Scioto, and Vinton Counties. The Council acts as fiscal agent for the Gallia County Board of Developmental Disabilities' supportive living program monies. The activity and cash balances associated with these activities are reported within the Board of Developmental Disabilities Fund in the accompanying financial statements. Financial statements can be obtained by writing to the Southern Ohio Council of Governments, VA Medical Center, Building 8, 17273 State Route 104, Chillicothe, Ohio, 45601. In 2010, the County paid $48,450 to the Southern Ohio Council of Governments for contract services.

NOTE 19 - RELATED ORGANIZATIONS

A. O.O. McIntyre Park District

The County Probate Judge is responsible for appointing the three-member board of the O. O. McIntyre Park District. Removal of the members requires due process. The County has no ability to impose its will on the organization nor is a burden/benefit relationship in existence. The Park District has a one-half mill property tax that is collected by Gallia County and then transferred into the Park District agency fund. In addition, the Park District receives 1 percent of the County's share of Undivided Local Government Revenue Assistance and State income taxes. These items totaled $10,306 in 2010. The District is its own budgeting and taxing authority and has no outstanding debt. The County Auditor serves as the fiscal agent for the District; therefore, the financial activity is reflected in the Park District County agency fund.

B. Bossard Memorial Library

The Bossard Memorial Library is statutorily created as a separate and distinct political subdivision of the State. Four trustees of the Library are appointed by the County Commissioners, and three trustees are appointed by the judges of the Common Pleas Court. The Library has a 1.3 mill property tax that is collected by Gallia County into the Library agency fund. Although the County collects and distributes the tax, this function is strictly ministerial and the County provides no contributions of its own. The board of trustees possesses its own contracting and budgeting authority, hires and fires personnel and does not depend on the County for operational subsidies. Due process is required to remove board members.

C. Gallia Metropolitan Housing Authority

The Gallia Metropolitan Housing Authority is a nonprofit organization established to provide adequate public housing for low income individuals and was created pursuant to State statutes. The Authority is operated by a five member board. Two members are appointed by the City of Gallipolis, one member is appointed by the probate court judge, one member is appointed by the common pleas court judge, and one member is appointed by the County Commissioners. The Authority receives funding from the Federal Department of Housing and Urban Development. The board sets its own budget and selects its own management, and the County is not involved in the management or operation. The County is not financially accountable for the Authority.

NOTE 20 - SHARED RISK POOLS

County Risk Sharing Authority (CORSA)

The County Risk Sharing Authority, Inc. (CORSA) is a jointly governed organization among thirty-nine counties in Ohio. CORSA was formed as an Ohio nonprofit corporation for the purpose of establishing the CORSA Insurance/Self Insurance Program, a group primary and excess insurance/self-insurance and risk management program. Member counties agree to jointly participate in coverage of losses and pay all contributions necessary for the specified insurance coverage provided by CORSA. This coverage includes comprehensive general liability, automobile liability, certain property insurance and public officials' errors and omissions liability insurance.

Each member county has one vote on all matters requiring a vote, to be cast by a designated representative. The affairs of CORSA are managed by an elected board of not more than nine trustees. Only county commissioners of member counties are eligible to serve on the board. No county may have more than one representative on the board at any time. Each member county's control over the budgeting and financing of CORSA is limited to its voting authority and any representation it may have on the board of trustees. CORSA has issued certificates of participation in order to provide adequate cash reserves. The certificates are secured by the member counties' obligations to make coverage payments to CORSA. The participating counties have no responsibility for the payment of the certificates. CORSA is not dependent upon Gallia County for its continued existence, nor does the County have an equity interest in CORSA. The County's payment for insurance to CORSA in 2010 was $181,546.

County Commissioners Association of Ohio Workers' Compensation Group Rating Plan

The County is participating in a group rating plan for workers' compensation as established under Section 4123.29 of the Ohio Revised Code. The County Commissioners Association Service Corporation (CCAOSC) was established through the County Commissioners Association of Ohio (CCAO) as a group purchasing pool.

A group executive committee is responsible for calculating annual rate contributions and rebates, approving the selection of a third party administrator, reviewing and approving proposed third party fees, fees for risk management services and general management fees, determining ongoing eligibility of each participant and performing any other acts and functions which may be delegated to it by the participating employers. The group executive committee consists of seven members. Two members are the president and treasurer of CCAOSC; the remaining five members are representatives of participants. These five members are elected for the following year by the participants at a meeting held in the month of December each year. No participant can have more than one member of the group executive committee in any year, and each elected member shall be a County Commissioner.

NOTE 21 - RELATED PARTY TRANSACTION

During 2010, Gallia County provided facilities, certain equipment, transportation and salaries for administration, implementation and supervision of its programs to Gallco Industries, Inc., a discretely presented component unit of Gallia County. Rehabilitative services provided directly to clients of Gallco Industries by the County amounted to $87,138.

During 2010, the County appropriated and paid $20,000 to the Gallia-Meigs Regional Airport, a discretely presented component unit of Gallia County which is classified as operating grants and contributions on the statement of activities.

NOTE 22 - GALLIA COUNTY LANDFILL

In 1978 Gallia County established the Gallia County Sanitary Landfill. The County contracted with Greg Fields to operate the landfill when it opened. In 1991 Mid-American Waste Systems, Inc. (Mid-American) purchased Greg Fields' business. At this time Gallia County operated the landfill on its own for a three month period until the County signed the lease agreement with Mid-American in June 1991. In 2001 the County signed the current lease agreement with USA Waste Services, Inc. (Waste Management). The lease agreement states that Waste Management is the operator of the landfill and that the County is to receive a portion of the landfill fees. The lease also states that Waste Management will comply with Ohio Environmental Protection Agency (EPA) closure and post closure requirements; therefore, Waste Management is responsible for these costs unless the County does not renew the lease agreement. The EPA department issued a Sub-Title D that states that landfill operators are to purchase a Financial Assurance Bond for the closure and post closure costs and Waste Management has met the requirement.

NOTE 23 - DECLINING MORTGAGE LOANS

Gallia County administers a loan program with funds provided by the U.S. Department of Housing and Urban Development, through the Ohio Department of Development, Office of Housing and Community Partnerships. The purpose of this program is to provide loans to low and moderate income families for home improvements. Loans are provided as declining mortgage loans with the intent that they do not have to repay 85% of the loan (85% of the loan released at the end of either a 5 or 10 year period), unless they would sell the residence before the 5 or 10 year period ended. The remaining 15% would remain as a mortgage to the property until such time as the owner either pays it off or sells the property. When the owner repays the remaining 15%, these monies are deposited into the County's Housing Program Income Fund and then used as a match to current Home Investment Partnerships Program Grants. As of December 31, 2010 the total amount of loans outstanding was $140,944. Due to the nature of these loans, they do not constitute a receivable or pledge and the loans accordingly have not been reported in the accompanying basic financial statements.

NOTE 24 - CONTINGENT LIABILITIES

The County has received federal and state grants for specific purposes that are subject to review and audit by the grantor agencies or their designee. These audits could lead to a request for reimbursement to the grantor agency for expenditures disallowed under terms of the grant. Based on prior experience, the County Commissioners believe such disallowances, if any, will be immaterial. Several claims and lawsuits are pending against the County. In the opinion of the County Prosecuting Attorney, any potential liability would not have a material adverse effect on the basic financial statements.

NOTE 25 – RESTATEMENT OF NET ASSETS

The capital assets of the County were overstated in the previous year. The County obtained and updated their own capital asset inventory system. These restatements had the following effect on beginning net assets:

	Governmental Activities	Business-Type Activities	Other Enterprise Funds
Net Assets, December 31, 2009	$ 28,669,469	$ 5,695,102	$353,328
Restatement for capital assets	(578,145)	5,096	5,096
Restated Net Assets, January 1, 2010	$ 28,091,324	$ 5,700,198	$358,424

Component Unit

Gallco Industries restated their beginning balance by the amount of $7,095 due to an error in their capital asset depreciation.

NOTE 26 – CONTRACT COMMITMENTS

The Gallia County Commissioners had the following contracts outstanding as of December 31, 2010:

Contractor	Contract Amount	Amount Paid at 12/31/10	Balance 12/31/10
Trimat Construction – KA Sewer	$3,806,685	$2,680,359	$1,126,326
Stantec – Engineering – KA Sewer	667,400	615,910	51,495
Trimat Construction – MV Sewer	483,312	380,752	102,560
Stantec – Engineering – MV Sewer	127,204	125,885	1,319
SJM Construction – Spec Building	488,357	309,042	179,315
United Survey – Tara Estates Sewer Rehab	163,553	0	163,553
PDK Construction – Guardrail Project	238,441	0	238,441
Scioto Valley Precast – Box Culvert	98,950	0	98,950
Shelly Company – Paving Project	234,535	0	234,535

NOTE 27 – CHANGE IN ACCOUNTING PRINCIPLES

For 2010, the County has implemented Governmental Accounting Standards Board (GASB) Statement No. 57, "OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans," and Statement No. 58, "Accounting and Financial Reporting for Chapter 9 Bankruptcies."

GASB Statement No. 57 addresses issues related to the use of the alternative measurement method and the frequency and timing of measurements by employers that participate in agent multiple-employer other postemployment benefit (OPEB) plans (that is, agent employers). The requirements in this Statement will allow more agent employers to use the alternative measurement method to produce actuarially based information for purposes of financial reporting and clarify that OPEB measures reported by agent multiple-employer OPEB plans and their participating employers should be determined at the same minimum frequency and as of a common date to improve the consistency of reporting with regard to funded status and funding progress information. The implementation of this statement did not result in any change in the County's basic financial statements.

GASB Statement No. 58 provides accounting and financial reporting guidance for governments that have petitioned for protection from creditors by filing for bankruptcy under Chapter 9 of the United States Bankruptcy Code. The requirements in this statement will provide more consistent recognition, measurement, display and disclosure guidance for governments that file for Chapter 9 bankruptcy. The implementation of this statement did not result in any change in the County's basic financial statements.

NOTE 28 – SUBSEQUENT EVENTS

On February 17, 2011, the Commissioners approved signing a supplemental WPCLF loan form for an additional $100,000 in 0% WPCLF loan funds.

On April 14, 2011, the Commissioners approved OWDA Cooperative Agreement to increase the Green Sewer Design Loan by $163,000.

On April 14, 2011, the Commissioners approved a change order for the Spec Building Project for $106,795, which includes pouring concrete floor, installation of a 600-amp main breaker, and installation of underground conduit.

On April 21, 2011, the Commissioners approved contracting with Quickmow Inc. for the 2011 Gallia County Roadside Mowing Project at a cost of $159,686.80.

NOTE 28 – SUBSEQUENT EVENTS *(Continued)*

On April 28, 2011, the Commissioners approved entering into a 20 year lease to purchase agreement with Ohio Valley Trackwork for the County's Industrial Park Speculative Building. On September 1, 2011, the Commissioners approved an addendum to the lease agreement for requested change orders totaling $112,487. The result was a total building cost of $749,987 and lease administrative fee of $149,998. The monthly lease and administrative payment fee are to be paid to the Gallia County Board of Commissioners on the first day of each month with the first monthly payment amount of $3,748.74 and subsequent monthly payment amounts of $3,749.94.

On May 12, 2011, the Commissioners approved signing an OPWC letter of acceptance for funding of the Williams Hollow Slip Repair Project. The grant will provide $182,506 with the remaining $45,626 to be paid from the Gallia County Motor Vehicle and Gas Tax Fund. On June 23, 2011, the Commissioners approved awarding the contract for this project to U.S. Bridge.

On May 26, 2011, the Commissioners approved contracting with the Shelly Company for the County Paving Project at $118,820.90.

On July 7, 2011, the Commissioners, approved and signed the OPWC grant agreement pertaining to the 2011 County Engineer Road Improvement Project which provides $550,000 in grant monies in addition to $595,026 in Gallia County Motor Vehicle and Gas Tax funding.

On July 7, 2011, the Commissioners approved the Pavement Marking Project bid of $129,961 from Mar-King Construction.

On July 7, 2011, the Commissioners approved an additional loan of $500,000 through OWDA for the KA Sewer project. The loan was awarded to Gallia County on July 28, 2011.

On July 7, 2011, the Commissioners approved contracting with Shelly Company for Issue I Paving for $1,041,276.30.

On July 14, 2011, the Commissioners approved a change order, which increased the Trimat Contract for the KA Sewer from $3,806,685 to $4,154,831.49.

On July 21, 2011, the Commissioners approved contracting with Hoon Inc. for the CDBG Formula Grant Ohio Township Fire Substation Project Grant for $140,238. This was increased to $155,206 by the Commissioners on August 11, 2011.

On August 18, 2011, the Commissioners awarded the bid for the Airport Fuel Farm Project to Thompson Petroleum Inc for a total of $342,300 contingent upon receipt of a grant from the Federal Aviation Administration (FAA) for the project. On August 18, 2011, the Commissioners approved the Final FY 2011 FAA Vision-100 grant application for a federal amount of $364,853 which would require a local match amount of $19,203.

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GALLIA COUNTY

FEDERAL AWARDS EXPENDITURES SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2010

FEDERAL GRANTOR/ *Pass Through Grantor* Program Title	Pass Through Entity's Number	Federal CFDA Number	Disbursements
UNITED STATES DEPARTMENT OF AGRICULTURE			
Passed through Ohio Department of Education:			
Child Nutrition Cluster:			
School Breakfast Program	070615-05PU-2010	10.553	$5,778
	070615-05PU-2011		3,225
Total School Breakfast Program			9,003
National School Lunch Program	070615-LLP4-2010	10.555	9,225
	070615-LLP4-2011		4,906
Total National School Lunch Program			14,131
Total Child Nutrition Cluster			23,134
ARRA-Child Nutrition Discretionary Grants Limited Availability	2010	10.579	2,520
Passed through Ohio Department of Job and Family Services:			
State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	G-1011-11-5039	10.561	178,203
ARRA - State Administrative Matching Grants for the Supplemental Nutrition Assistance Program	G-1011-11-5039		19,381
Total Supplemental Nutrition Assistance Program			197,584
Direct from Federal Government:			
Water and Waste Disposal Systems for Rural Communities - grant	N/A	10.760	131,513
Water and Waste Disposal Systems for Rural Communities - loan			1,471,303
Total Water and Waste Disposal Systems for Rural Communities			1,602,816
Total U.S. Department of Agriculture			1,826,054
UNITED STATES DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT			
Passed through Ohio Department of Development:			
Community Development Block Grants/State's Program			
Water and Sanitary Sewer Competitive Grant Program	B-W-08-1AY-1	14.228	403,540
Neighborhood Stabilization Program (NSP) Grant	B-Z-08-075-1	14.228	129,787
Community Development Program	B-F-09-1AY-1	14.228	150,535
Community Housing Improvement Program	B-C-09-1AY-1	14.228	55,895
ARRA - Water and Sanitary Sewer Program	B-R-09-1AY-1	14.255	399,533
Community Development Program	B-F-10-1AY-1	14.228	1,542
CDBG Revolving Loans	B-E-98-025-1	14.228	1,680
Total Community Development Block Grants/State's Program			1,142,512
Home Investment Partnerships Program			
Community Housing Improvement Program	B-C-09-1AY-2	14.239	193,640
Total U.S. Department of Housing and Urban Development			1,336,152
UNITED STATES DEPARTMENT OF THE INTERIOR			
Direct from Federal Government:			
Payments in Lieu of Taxes	N/A	15.226	6,296
Total U.S. Department of the Interior			6,296
UNITED STATES DEPARTMENT OF JUSTICE			
Direct from Federal Government:			
Bulletproof Vest Partnership Program	N/A	16.607	3,190
ARRA-Assistance to Rural Law Enforcement to Combat Crime and Drugs Competitive Grant Program	2009-SD-B9-0031	16.810	94,053
Passed through the Ohio Department of Youth Services:			
Juvenile Accountability Block Grant	2007-JB-009-B076	16.523	15,000
Passed through the Ohio Department of Public Safety:			
Edward Byrne Memorial Justice Assistance Grant Program Cluster			
Edward Byrne Memorial Justice Assistance Grant Program	2009-JG-LLE-5214	16.738	11,986
ARRA - Edward Byrne Memorial Justice Assistance Grant (JAG) Program/Grants to States and Territories	2009-RA-A02-2275	16.803	36,323
Direct from Federal Government:			
ARRA - Edward Byrne Memorial Justice Assistance Grant (JAG) Program / Grants To Units of Local Government	2009-SB-B9-2216	16.804	568
Total Edward Byrne Memorial Justice Assistance Grant Program Cluster			48,877
Total United States Department of Justice			161,120

FEDERAL AWARDS EXPENDITURES SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2010
(Continued)

FEDERAL GRANTOR/ *Pass Through Grantor* Program Title	Pass Through Entity's Number	Federal CFDA Number	Disbursements
UNITED STATES DEPARTMENT OF LABOR			
Passed Through Workforce Investment Act Area 7:			
Workforce Investment Act (WIA) Cluster:			
WIA Adult Program	N/A	17.258	$172,669
WIA Adult Program Administrative			883
Total WIA Adult Program			173,552
ARRA - WIA Adult Program		17.258	31,304
WIA Youth Activities		17.259	209,149
WIA Youth Activities Administrative			718
Total WIA Youth Activities			209,867
ARRA - WIA Youth Activities		17.259	10,194
ARRA - WIA Youth Activities Administrative			1,047
Total ARRA - WIA Youth Activities			11,241
WIA Dislocated Workers		17.260	45,013
WIA Dislocated Workers Administrative			2,082
Total WIA Dislocated Workers			47,095
ARRA - WIA Dislocated Workers		17.260	2,831
ARRA - WIA Dislocated Workers - Rapid Response			99,992
Total ARRA - WIA Dislocated Workers			102,823
Total Workforce Investment Act (WIA) Cluster			575,882
Total United States Department of Labor			575,882
UNITED STATES DEPARTMENT OF TRANSPORTATION			
Direct from the Federal Government:			
Airport Improvement Program	3-39-0101-0708	20.106	23,440
	3-39-0101-0910		18,453
Total Airport Improvement Program			41,893
Passed Through Ohio Department of Transportation:			
Highway Planning and Construction	PID75878	20.205	467,040
	PID87063		107,084
	PID87414		50,000
	PID87665		15,500
Total Highway Planning and Construction			639,624
Passed Through Ohio Department of Public Safety:			
Highway Safety Cluster:			
State and Community Highway Safety	HVEO-2010-27-00-00-00306-00	20.600	8,142
	HVEO-2011-27-00-00-00375-00/01		1,681
Total State and Community Highway Safety			9,823
Alcohol Impaired Driving Countermeasures Incentive Grants I	HVEO-2010-27-00-00-00306-00	20.601	8,142
	HVEO-2011-27-00-00-00375-00/01		1,681
Total Alcohol Impaired Driving Countermeasures Incentive Grants			9,823
State Traffic Safety Information System Improvements Grants	GG-2010-27-00-00-00877-00	20.610	90,000
Total Highway Safety Cluster			109,646
Total United States Department of Transportation			791,163
UNITED STATES DEPARTMENT OF EDUCATION			
Passed through Ohio Department of Education:			
Special Education Cluster:			
Special Education-Grants to States	070615-6BSF-2011	84.027	10,656
	070615-6BSF-2010		22,181
Total Special Education-Grants to States			32,837
Special Education-Preschool Grants	070615-PGS1-2010	84.173	4,623
	070615-PGS1-2010		9,032
Total Special Education-Preschool Grants			13,655
ARRA-Special Education-Grants to States	2010	84.391	28,800
ARRA-Special Education-Preschool Grants	2010	84.392	246
Total Special Education Cluster			75,538
Total United States Department of Education			75,538

GALLIA COUNTY

FEDERAL AWARDS EXPENDITURES SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2010
(Continued)

FEDERAL GRANTOR/ *Pass Through Grantor* Program Title	Pass Through Entity's Number	Federal CFDA Number	Disbursements
UNITED STATES ELECTION ASSISTANCE COMMISSION			
Passed through Ohio Secretary of State:			
Help America Vote Act Requirements Payments	HAVA Title II, 251	90.401	$369
Total United States Election Assistance Commission			369
UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES			
Passed Through Ohio Department of Job and Family Services:			
Promoting Safe and Stable Families	G-1011-11-5040	93.556	55,684
ARRA - Child Support Enforcement	G-1011-11-5039	93.563	226,825
Child Support Enforcement	G-1011-11-5039	93.563	558,533
Total Child Support Enforcement			785,358
Child Welfare Services - State Grants	G-1011-11-5040	93.645	7,704
ARRA - Foster Care Title IV-E	G-1011-11-5040	93.658	8,048
Foster Care Title IV-E	G-1011-11-5040	93.658	136,699
Foster Care Title IV-E	G-1011-06-0418	93.658	47,956
Total Foster Care Title IV-E			192,703
Adoption Assistance	G-1011-11-5040	93.659	111,131
ARRA-Adoption Assistance	G-1011-11-5040	93.659	112
Total Adoption Assistance			111,243
Social Services Block Grant - Title XX	G-1011-11-5039	93.667	514,497
Child Abuse and Neglect State Grants	G-1011-11-5040	93.669	1,279
Chaffee Foster Care Independence Program	G-1011-11-5040	93.674	5,084
Temporary Assistance for Needy Families	G-1011-11-5039	93.558	1,436,579
ARRA-Temporary Assistance for Needy Families	G-1011-11-5039	93.714	110,790
Total Temporary Assistance for Needy Families:			1,547,369
Child Care and Development Cluster:			
Child Care and Development Block Grant	G-1011-11-5039	93.575	6,268
Child Care Mandatory and Matching Funds of the Child Care and Development Fund	G-1011-11-5039	93.596	82,471
Total Child Care and Development Cluster			88,739
Medical Assistance Program	G-1011-11-5040	93.778	635
	G-1011-11-5039		384,390
Total Medical Assistance Program			385,025
Total Passed Through Ohio Department of Job and Family Services			3,694,685
Passed Through Ohio Department of Development Disabilities:			
Social Services Block Grant - Title XX	N/A	93.667	15,794
Medical Assistance Program	N/A	93.778	31,049
Total Passed Through Ohio Department of Development Disabilities			46,843
Total United States Department of Health and Human Services			3,741,528
UNITED STATES DEPARTMENT OF HOMELAND SECURITY			
Passed Through Ohio Emergency Management Agency:			
Emergency Management Performance Grants	2009-EP-E9-0061	97.042	15,174
	2010-EP-00-0003		20,069
Total Emergency Management Performance Grants			35,243
Homeland Security Grant Program	2008-GE-T8-0025	97.067	40,339
Homeland Security Grant Program - Citizen Corps	2007-GE-T7-0030		4,837
Total Homeland Security Grant Program			45,176
Total United States Department of Homeland Security			80,419
TOTAL FEDERAL AWARDS EXPENDITURES			**$8,594,521**

The Notes to the Federal Awards Expenditures Schedule is an integral part of the Schedule.

GALLIA COUNTY

NOTES TO THE FEDERAL AWARDS EXPENDITURES SCHEDULE
FOR THE YEAR ENDED DECEMBER 31, 2010

NOTE A – SIGNIFICANT ACCOUNTING POLICIES

The accompanying Federal Awards Expenditures Schedule (the Schedule) reports the County's federal awards programs' disbursements. The Schedule has been prepared on the cash basis of accounting.

NOTE B – MATCHING REQUIREMENTS

Certain Federal programs require the County to contribute non-Federal funds (matching funds) to support the Federally-funded programs. The County has met its matching requirements. The Schedule does not include the expenditure of non-Federal matching funds.

NOTE C – COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) REVOLVING LOAN PROGRAMS

The County has a revolving loan fund (RLF) program to provide low-interest loans to businesses to create jobs for low to moderate income persons and also to lend money to eligible persons to rehabilitate homes. The Federal Department of Housing and Urban Development (HUD) grants money for these loans to the County, passed through the Ohio Department of Development (ODOD). The Schedule reports loans made and administrative costs as disbursements on the Schedule. The County uses loan repayments and interest received to make additional loans, which the Schedule also reports. Subsequent loans are subject to the same compliance requirements imposed by HUD as the initial loans. In addition, with the approval of ODOD, the County may use repaid monies for Community Improvement projects.

These loans are collateralized by mortgages on the property.

Activity in the CDBG revolving loan fund during 2010 is as follows:

Beginning loans receivable balance as of January 1, 2010:	$52,626
Loans made	0
Loan principal repaid	(5,403)
Ending loans receivable balance as of December 31, 2010:	$47,223
Cash balance on hand in the revolving loan fund as of December 31, 2010	$20,341
Administrative costs expended during 2010	1,680
Total Value of RLF Portion of the CDBG Program	$69,244
Other Grants Administered through the CFDA # 14.228 and 14.255 Program	1,140,832
Total CDBG CFDA # 14.228 and 14.255 Program:	$1,210,076

The table above reports gross loans receivable. Of the loans receivable as of December 31, 2010, delinquent amounts due are $0.

In addition, the County has Declining Mortgage Loans outstanding in the amount of $140,944. These loans are not reported on the Schedule and are also not reported on the Basic Financial Statements. See Note 23 to the Basic Financial Statements. The cash balance on hand in the Housing Program Income Fund at December 31, 2010 was $22,284. Expenditures from the Housing Program Income Fund during 2010 were $0.

NOTE D – CHILD NUTRITION CLUSTER

The County commingles cash receipts from the U.S. Department of Agriculture with similar State grants. When reporting expenditures on this Schedule, the County assumes it expends federal monies first.

NOTE E – WORKFORCE INVESTMENT ACT (WIA) EXPENDITURES

Expenditures for the Workforce Investment Act (WIA) programs are presented on the Schedule of Federal Awards Expenditures as cash basis expenditures for the WIA Fund during 2010 less refunds and reimbursements received in the WIA Fund during 2010.

NOTE F – SUBRECIPIENTS

The County passes certain federal awards received from the Workforce Investment Act Area 7 to other governments or not-for-profit agencies (subrecipients). As Note A describes, the County records expenditures of Federal awards to subrecipients when paid in cash.

As a subrecipient, the County has certain compliance responsibilities, such as monitoring its subrecipients to help assure they use these subawards as authorized by laws, regulations, and the provisions of contracts or grant agreements, and that subrecipients achieve the award's performance goals.

NOTE G – OHIO DEPARTMENT OF DEVELOPMENTAL DISABILITIES

The Gallia County Department of Developmental Disabilities received federal financial assistance from the Ohio Department of Mental Retardation and Developmental Disabilities for the following programs (which are audited at the state level and reported in the State Single Audit Report):

CFDA # 93.767	Children's Health Insurance Program
CFDA # 93.778	Medicaid Cluster (Individual Options, Level One Waiver, and Targeted Case Management Programs)

NOTE H – TRANSFER BETWEEN FEDERAL PROGRAMS

During 2010, the County made allowable transfers of $347,055 from the Temporary Assistance for Needy Families (93.558) program to the Social Services Block Grant (93.667) program. The amount reported for the Temporary Assistance for Needy Families program on the Supplementary Schedule excludes the amount transferred to the Social Services Block Grant program. The amount transferred to the Social Services Block Grant program is included in the federal program expenditures for these programs. The following table shows the gross amount drawn for the Temporary Assistance for Needy Families program during 2010 and the amount transferred to the Social Services Block Grant program.

Temporary Assistance for Needy Families	$1,894,424
Social Services Block Grant	($347,055)
Total Temporary Assistance for Needy Families	$1,547,369

NOTE I – OHIO DEPARTMENT OF JOB AND FAMILY SERVICES

The Gallia County Department of Job and Family Services, Children Services Board, and Child Support Enforcement Agency received federal financial assistance from the Ohio Department of Job and Family Services that are required to be audited at the County level for the following programs:

CFDA # 10.561	State Administrative Matching Grants for the Supplemental Nutrition Assistance Program
CFDA # 93.556	Promoting Safe and Stable Families
CFDA # 93.558 /714	Temporary Assistance for Needy Families (TANF)
CFDA # 93.563	Child Support Enforcement
CFDA # 93.575/596	Child Care and Development Cluster
CFDA # 93.645	Child Welfare Services – State Grants
CFDA # 93.658	Foster Care-Title IV-E
CFDA # 93.659	Adoption Assistance
CFDA # 93.667	Social Services Block Grant (Title XX)
CFDA # 93.669	Child Abuse and Neglect State Grants
CFDA # 93.778	Medical Assistance Program
CFDA # 93.674	Chaffee Foster Care Independence Program

Dave Yost • Auditor of State

INDEPENDENT ACCOUNTANTS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS REQUIRED BY *GOVERNMENT AUDITING STANDARDS*

Gallia County
18 Locust Street
Gallipolis, Ohio 45631

To the Board of County Commissioners:

We have audited the financial statements of the governmental activities, the business-type activities, each major fund, and the aggregate discretely presented component units and remaining fund information of Gallia County, Ohio (the County), as of and for the year ended December 31, 2010, which collectively comprise the County's basic financial statements and have issued our report thereon dated September 15, 2011, wherein we noted the County restated its governmental activities' net assets. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in the Comptroller General of the United States' *Government Auditing Standards*.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the County's internal control over financial reporting as a basis for designing our audit procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of opining on the effectiveness of the County's internal control over financial reporting. Accordingly, we have not opined on the effectiveness of the County's internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting that might be significant deficiencies or material weaknesses. Therefore, we cannot assure that we have identified all deficiencies, significant deficiencies or material weaknesses. However, as described in the accompanying Schedule of Findings we identified certain deficiencies in internal control over financial reporting, that we consider material weaknesses.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, when performing their assigned functions, to prevent, or detect and timely correct misstatements. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and timely corrected. We consider Findings 2010-01 and 2010-02 described in the accompanying Schedule of Findings to be material weaknesses.

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www.auditor.state.oh.us

Compliance and Other Matters

As part of reasonably assuring whether the County's financial statements are free of material misstatement, we tested its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could directly and materially affect the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and accordingly, we do not express an opinion. The results of our tests disclosed no instances of noncompliance or other matters we must report under *Government Auditing Standards.*

We also noted certain matters not requiring inclusion in this report that we reported to the County's management in a separate letter dated September 15, 2011.

The County's responses to the Findings identified in our audit are described in the accompanying Schedule of Findings. We did not audit the County's responses and, accordingly, we express no opinion on them.

We intend this report solely for the information and use of management, the Board of County Commissioners, and federal awarding agencies and pass-through entities, and others within the County. We intend it for no one other than these specified parties.

Dave Yost
Auditor of State

September 15, 2011

Dave Yost • Auditor of State

INDEPENDENT ACCOUNTANTS' REPORT ON COMPLIANCE WITH REQUIREMENTS APPLICABLE TO EACH MAJOR FEDERAL PROGRAM AND ON INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY OMB CIRCULAR A-133

Gallia County
18 Locust Street
Gallipolis, Ohio 45631

To the Board of County Commissioners:

Compliance

We have audited the compliance of Gallia County, Ohio (the County), with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) *Circular A-133, Compliance Supplement* that could directly and materially affect each of Gallia County's major federal programs for the year ended December 31, 2010. The Summary of Auditor's Results section of the accompanying Schedule of Findings identifies the County's major federal programs. The County's management is responsible for complying with the requirements of laws, regulations, contracts, and grants applicable to each major federal program. Our responsibility is to express an opinion on the County's compliance based on our audit.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits included in the Comptroller General of the United States' *Government Auditing Standards*; and OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to reasonably assure whether noncompliance occurred with the compliance requirements referred to above that could directly and materially affect a major federal program. An audit includes examining, on a test basis, evidence about the County's compliance with those requirements and performing other procedures we considered necessary in the circumstances. We believe our audit provides a reasonable basis for our opinion. Our audit does not provide a legal determination on the County's compliance with those requirements.

In our opinion, the County complied, in all material respects, with the requirements referred to above that could directly and materially affect each of its major federal programs for the year ended December 31, 2010.

Internal Control over Compliance

The County's management is responsible for establishing and maintaining effective internal control over compliance with the requirements of laws, regulations, contracts, and grants applicable to federal programs. In planning and performing our audit, we considered the County's internal control over compliance with the requirements that could directly and materially affect a major federal program, to determine our auditing procedures for the purpose of opining on compliance and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of opining on the effectiveness of internal control over compliance. Accordingly, we have not opined on the effectiveness of the County's internal control over compliance.

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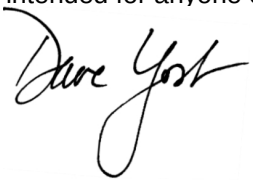
A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, when performing their assigned functions, to prevent, or to timely detect and correct, noncompliance with a federal program compliance requirement. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a federal program compliance requirement will not be prevented, or timely detected and corrected.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control over compliance that might be deficiencies, significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above.

However, we noted a matter involving federal compliance or internal control over federal compliance not requiring inclusion in this report, that we reported to the County's management in a separate letter dated September 15, 2011.

We intend this report solely for the information and use of management, the Board of County Commissioners, others within the entity, federal awarding agencies, and pass-through entities. It is not intended for anyone other than these specified parties.



Dave Yost
Auditor of State

September 15, 2011

GALLIA COUNTY

SCHEDULE OF FINDINGS
OMB CIRCULAR A-133 § .505
DECEMBER 31, 2010

1. SUMMARY OF AUDITOR'S RESULTS

(d)(1)(i)	**Type of Financial Statement Opinion**	Unqualified
(d)(1)(ii)	**Were there any material control weaknesses reported at the financial statement level (GAGAS)?**	Yes
(d)(1)(ii)	**Were there any significant deficiencies in internal control reported at the financial statement level (GAGAS)?**	No
(d)(1)(iii)	**Was there any reported material non-compliance at the financial statement level (GAGAS)?**	No
(d)(1)(iv)	**Were there any material internal control weaknesses reported for major federal programs?**	No
(d)(1)(iv)	**Were there any significant deficiencies in internal control reported for major federal programs?**	No
(d)(1)(v)	**Type of Major Programs' Compliance Opinion**	Unqualified
(d)(1)(vi)	**Are there any reportable findings under § .510(a)?**	No
(d)(1)(vii)	**Major Programs (list):**	Water and Waste Disposal Systems for Rural Communities Grant/Loan – CFDA # 10.760 Community Development Block Grants/State's Program – CFDA #'s 14.228 and 14.255 Housing Investment Partnership Program – CFDA # 14.239 Highway Planning and Construction – CFDA #20.205 Workforce Investment Act Cluster (WIA) – CFDA #'s 17.258, 17.259, and 17.260 Temporary Assistance for Needy Families Cluster - CFDA # 93.558 and 93.714 Child Support Enforcement - CFDA # 93.563 Medical Assistance Program - CFDA # 93.778
(d)(1)(viii)	**Dollar Threshold: Type A\B Programs**	Type A: > $ 300,000 Type B: all others
(d)(1)(ix)	**Low Risk Auditee?**	No

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS

FINDING NUMBER 2010-01

Material Weakness

A detailed listing of capital assets including annual additions and deletions should be maintained and provided to individuals responsible for the compilation of the County's basic financial statements. This listing should include all assets owned or leased by the County in accordance with the County's capital asset capitalization policy.

In the past, for a capital asset listing of items not including infrastructure, the County relied on reports provided by Industrial Appraisal Company which indicate a February 23, 2001 appraisal date and are updated annually as a result of inventory change reports submitted by the County Auditor's Office. For infrastructure, the County relies on information maintained by the Gallia County Engineer's Office and provided to the GAAP conversion company.

The County Auditor's Office relies on the departments to complete inventory change reports indicating additions, deletions, transfers, and corrections when capital assets are purchased or disposed. The information is then submitted to Industrial Appraisal Company to update the County's Property Inventory and Accounting Cost Record Report which served as the capital asset listing for capital assets not including infrastructure.

Over the past several years, entries were made by the GAAP conversion company as a result of their review or audit adjustments to record items not included on the County's Property Inventory and Accounting Cost Record Report.

On January 28, 2010 the Board of County Commissioners approved allowing the County Auditor, Larry Betz, to purchase software from his budget for a new capital asset inventory system. Further, on April 29, 2010 the Board of County Commissioners approved a capital asset policy.

For the December 31, 2010 year end, the County's capital assets excluding infrastructure were manually input into the capital asset software either by taking amounts from Industrial Appraisal Company Property Inventory and Accounting Cost Record Report or for items not in the aforementioned report, by manually calculating accumulated depreciation and entering amounts into the software. The County's GAAP conversion company provided assistance in regards to previously adjusted items, etc.

Infrastructure amounts were recorded based on information provided by the County Engineer's Office to the GAAP conversion company.

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-01 (Continued)

Material Weakness – Capital Asset Listing (Continued)

During our current year testing, several errors were noted as follows:

- Governmental Type Activities included a prior period adjustment in a net amount of ($578,145) which was unsupported in regards to what comprised the differences by asset class. During our review of this amount, we noted the following:
    - The 2007 Electronic Document Management System with a cost of $414,847 which was manually recorded in the past was not completely recorded on the capital asset listing. $30,227 of items were included on capital asset listing, resulting in an understatement of $384,620 (excluding effects of depreciation).
    - The 2009 Board of Development Disabilities Playground equipments recorded in the prior year financial statements in an amount of $100,317 (excluding effects of depreciation) was not noted on the current year listing.
    - Several items relating to a 2007 audit adjustment were not noted as being recorded in the current capital asset listing.

- Errors in accumulated depreciation were noted in a total amount of $144,644 understatement for Governmental Type Activities and $16,691 understatement for Airport items as a result of accumulated depreciation being incorrectly computed for items which were not already recorded in the Industrial Appraisal Company Property Inventory and Accounting Cost Record Report.

- Although there was not a prior period adjustment relating to the Airport, we identified a 2008 adjustment amount of $18,770 (excluding effects of depreciation) which was not deemed recorded.

- Business Type Activities included an unsupported prior period adjustment in a net amount of ($68,293). However, during our review of this amount, it was determined that a 2007 WWTP Upgrade in the amount of $81,543 (excluding effects of depreciation) was not recorded on the financial statements.

- The following business type activities differences were noted during testing:
    - A difference of ($3,381) was noted in comparing the BP Sewer listing to amount recorded on the financial statements whereas a difference of $3,382 was noted in comparing Other Enterprise listing to amount recorded on the financial statements.
    - An overstatement in the amount of $450,419 was noted in Mercerville Sewer Construction in progress
    - An overstatement in the amount of $374,149 was noted in Kanauga Addison Sewer Construction in progress
    - Kanauga Addison Sewer Construction in progress included software in the amount of $13,990 and a vehicle in the amount of $24,438.

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-01 (Continued)

Material Weakness – Capital Asset Listing (Continued)

- The following infrastructure differences were noted during testing:
  - An overstatement to roads additions was noted in an amount of $1,912,074 (excluding effects of depreciation) which was the result of amounts used to record additions being based on estimated amounts as compared to actual amounts.
  - Retaining Wall / Piling net additions / deletions was overstated by $204,120 (excluding effects of depreciation) as a result of additions in the amount of $454,125 being recorded whereas the actual amount was $202,802 and deletions in the amount of $69,157 being recorded whereas the actual amount was $21,954. The differences in capital asset addition amounts were the result of the County using estimated instead of actual amounts to record additions.
  - Information included in the spreadsheets used by the GAAP conversion company to support infrastructure recorded on the financial statements does not agree with information provided by the County Engineer's Office in regards to useful lives of bridges in which depreciation is being determined, etc. We noted that the County Engineer's Infrastructure has not been incorporated into the new software used by the County Auditor's Office for asset tracking. Also, various reconciling items such as prior period adjustments etc are required to reconcile amounts in the spreadsheets to financial statements amount. The County Auditor should incorporate the County Engineer's infrastructure into the capital asset software.

A search for unrecorded governmental activities capital asset additions for 2010 revealed several unrecorded capital asset additions. As a result of our search, we noted the following:

<u>Additions</u>

- 2010 Construction in Progress relating to the Airport in the amount of $77,698 was not recorded

- 2010 Governmental Type Activities unrecorded capital assets totaling $1,278,955 with December 31, 2010 estimated accumulated depreciation of $29,447 were not included in the capital asset listing. This amount included the following items:
  - 2 2011 International 7400 4 x 2 Vehicles - $146,372
  - 2 2011 GMC Sierra 1500 Vehicles - $46,911
  - 2011 F250 4 x 4 Vehicle - $23,189
  - Location Based Response System GIS/GPS Road Centerline Project - $155,000
  - 3 2010 Ford Crown Victoria Vehicles and related equipment - $88,850
  - CCTV Equipment - $7,750
  - Fire suppression / fire alarm system - $10,975
  - Security Video Surveillance Equipment - $12,000
  - Sprinkler system - $16,800
  - Suspended / recessed ceiling - $9,517
  - Industrial Park Speculative Building Site Excavation - $75,500
  - Underground Primary Facilities for Speculative Building - $20,406
  - Land Purchase relating to Speculative Building - $116,258
  - Industrial Park Speculative Building Construction in Progress - $549,427

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-01 (Continued)

Material Weakness – Capital Asset Listing (Continued)

These errors resulted in the financial statements being materially misstated due to errors in capital asset amounts. Adjustments have been made to the financial statements for Governmental and Business Type Activities.

Maintaining systems to support financial statements is management's responsibility. The lack of a system could result in the misstatement of capital assets in the County's basic financial statements.

We recommend the County continue to develop and maintain a detailed listing of capital assets including annual additions and deletions to provide to individuals responsible for the compilation of the County's basic financial statements.

Further, we make the following recommendations:

- County Engineer infrastructure should be integrated into the County's capital asset listing. The County Auditor and County Engineer should work together to develop polices for recording infrastructure and a listing should be prepared according to policies to be put into the asset software system. If revised estimated original costs, capitalization thresholds, and useful lives for infrastructure are desired, they should be implemented at this time. Annual additions to infrastructure should be based on actual activity of the County Engineer's Office.
- The County Auditor should distribute capital asset inventory listings annually to each of the County department heads. The department heads should review the listings for unrecorded capital asset additions and deletions and submit corrections back to the County Auditor timely. As part of this review, the County Auditor's Office could read the County Commissioner's minute record, review expenditure listing, and review auction records for unrecorded items.
- A review should be performed to ensure that the capital asset listing is being maintained according to the Capital Asset Policy and / or that the Capital Asset Policy agrees to how items are being recorded.
- A review of the assets in the asset system software should be reviewed in order to identify any errors, etc. such as items which should have books costs and salvage values not having amounts, etc.

Officials' Response:

The goal is to ultimately eliminate audit adjustments; however, this is an ongoing process and requires a cooperative effort by the County, the County's consultant for financial reporting, and the County's consultant for engineering for sewer (wastewater treatment) construction services.

In regards to the capital asset audit adjustments, the County has made significant progress in this area. A new capital asset management system has been implemented during 2010 and 2011 which is being utilized for all capital assets with the exception of infrastructure capital assets being maintained by the County Engineer's Office. The County will work with the County Engineer to ensure that all infrastructure maintained by the County Engineer is properly integrated into the County's capital asset management system. The County will also work with the County Engineer to ensure that all additions and disposals during each fiscal year are properly recorded and transmitted to the County Auditor's Office for entry into the capital asset management system.

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-01 (Continued)

Material Weakness – Capital Asset Listing (Continued)

Officials' Response (Continued):

It will be imperative to have the various County departments involved in the capital asset addition and disposal area so all information is properly transmitted to the County Auditor. The County plans to have a meeting with the County's consultant for financial reporting and all County departments/agencies in December of 2011 to discuss each departments/agencies' responsibilities in relation to capital asset accounting and reporting. Without accurate reporting from the various departments and agencies of the County, it is not practicable to minimize the audit adjustments; however, with accurate and timely reporting from the County's departments and agencies, the County should be able to eliminate audit adjustments related to capital assets.

During the above mentioned meeting, the County will also distribute information requests to all departments and agencies and provide explanations to ensure that all financial related information is properly prepared, reported, and submitted to the County Auditor and County Commissioners. This should help minimize problems in reporting various assets and liabilities, improper classifications of revenues and expenditures and ensure consistency in reporting for the County.

The County Auditor, County Commissioners, and the County's consultant for financial reporting will work closely to ensure that all budgetary information per the original source documents, the financial reports from the accounting system and the actual budgetary financial statements are consistent and include all reclassifications of revenues and expenditures.

The County plans to utilize the wastewater treatment engineering firm to assist in making sure that all construction activity is properly recorded by the County so that the information in the capital asset management system adequately reflects all construction activity each fiscal year. Since the engineering firm is actively involved in monitoring the construction activity, they are in an ideal position to help the County properly accumulate and record such activity as it occurs and as the capital assets are placed into service.

We believe that the above steps will help to ensure that the County maintains the highest level of financial accountability and minimizes any financial reporting errors.

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-02

Material Weakness

A formal policy should be enacted by the Board of County Commissioners for maintaining a capital asset listing. This policy should include, but not be limited to, the following: capitalization threshold, categories or classes of assets, method of cost determination, method of depreciation, useful lives and methods of acquisition or disposal. Further, the policy should establish procedures relating to the recording of infrastructure including the following items: determination of values / method of capitalization, useful lives, items to be included in infrastructure, condition by each type of asset, and a documentation to indicate at what point an asset has had an improvement that increases its efficiency to the point the old asset value needs removed and the new value recorded (such as total repaving and not just patching of a road).

On January 28, 2010 the Board of County Commissioners approved allowing the County Auditor, Larry Betz to purchase software from his budget for a new capital asset inventory system. Further, on April 29, 2010 the Board of County Commissioners approved a capital asset policy.

Per review of the new policy adopted, we note the following:

- The new policy indicates fair value of $5,000 or more for criteria but does not include the threshold amounts which are being used for capitalizing infrastructure. Infrastructure amounts are being capitalized based on threshold amounts approved on December 18, 2008 which include threshold amounts of $50,000 for roads, bridges, and culverts; and $25,000 for traffic signals and other infrastructure.
- Infrastructure classification indicates: roads, bridges, drainage systems, streetlights, water and sewer systems but does not include guardrail and piling / retaining wall which are being recorded on the County's financial statements.
- Useful lives are not indicated in the capital asset policy.
- The new policy indicates that assets with a value over $1,000,000 and all infrastructure purchases will have a 10% salvage value (unless a lower market or standard salvage value is easily obtainable). We noted one item with a salvage value which we feel was an error because the item was a piece of equipment and the salvage value was equal to the cost.
- The new policy includes sections regarding roles / responsibilities; records retention; tagging; and disposal and transfer however, unrecorded additions were identified in an amount of $1,278,955 for Governmental Activities and $77,698 for Airport.

The County had a separate policy which was approved May 1, 2008 for capitalization of infrastructure capital assets which indicates the County Engineer and County Auditor will work together to develop a comprehensive infrastructure capital asset reporting system which will eventually be integrated with the County capital asset reporting system for all other capital assets.

The County should ensure the capital asset policy is updated to comply with the requirements of GASB Statement Number 34 for the reporting of capital assets to prevent material misstatement of the County's financial statements.

2. FINDINGS RELATED TO THE FINANCIAL STATEMENTS REQUIRED TO BE REPORTED IN ACCORDANCE WITH GAGAS (Continued)

FINDING NUMBER 2010-02 (Continued)

Material Weakness – Capital Asset Policy (Continued)

We make the following recommendations regarding the County's Capital Asset Policy:

- The Capital Asset policy should be revised to include infrastructure thresholds approved on December 18, 2008 or infrastructure above $5,000 should be recorded on the County's financial statements. The policy should be reviewed with the County Engineer to determine whether difference thresholds are desired for infrastructure.
- Infrastructure classification should be revised to include guardrail and retaining wall / piling.
- Useful lives should be incorporated into the capital asset policy and assets should be reviewed to ensure useful lives are consistent with what is included in the policy. Infrastructure should be reviewed with the County Engineer to determine useful lives to be used for infrastructure.
- The concept of salvage value should be reviewed and either implemented in the capital asset listing or the policy should be revised to eliminate salvage value wording.
- A method to identify unrecorded capital asset additions and deletions should be incorporated into the policy such as departmental reviews and reviewing County Commissioner's Minute Record, auction results, and expenditure listings.
- A detailed review should be performed to ensure that assets are being recorded on the financial statements according to the policy and / or that the policy agrees to how assets are being reported.

We further recommend the County Commissioners, County Auditor, and County Engineer work together to develop a comprehensive capital asset reporting system.

Officials' Response:

The County is attempting to correct these problems before the next audit.

3. FINDINGS FOR FEDERAL AWARDS

None.

GALLIA COUNTY

SCHEDULE OF PRIOR AUDIT FINDINGS
OMB CIRCULAR A-133 §.315(b)
DECEMBER 31, 2010

Finding Number	Finding Summary	Fully Corrected?	Not Corrected, Partially Corrected; Significantly Different Corrective Action Taken; or Finding No Longer Valid; ***Explain***
2009-01	Noncompliance citation under Ohio Rev. Code Section 325.071 for amount issued to Sheriff for over-appropriating the Furtherance of Justice appropriation.	Yes	
2009-02	Material weakness recommending the County develop and maintain a detailed listing of capital assets and the infrastructure be integrated into the capital asset listing.	No	Not Corrected. Reissued as Finding Number 2010-01.
2009-03	Material weakness recommending the County adopt a formal policy for maintaining a capital asset listing which incorporates the requirements of GASB Statement Number 34 and integrates the policy for reporting infrastructure.	No	Not Corrected. Reissued as Finding Number 2010-02.

GALLIA COUNTY

CORRECTIVE ACTION PLAN
OMB CIRCULAR A-133 § .315(c)
DECEMBER 31, 2010

Finding Number	Planned Corrective Action	Anticipated Completion Date	Responsible Contact Person
2010-01	The County is attempting to correct these problems before the next audit.	12/31/11	Larry Betz, County Auditor
2010-02	The County is attempting to correct these problems before the next audit.	12/31/11	Larry Betz, County Auditor

Dave Yost • Auditor of State

GALLIA COUNTY FINANCIAL CONDITION

GALLIA COUNTY

CLERK'S CERTIFICATION

This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
SEPTEMBER 29, 2011

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B01003

TOTAL POPULATION
Universe: Total population
2006-2010 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.

	Coshocton County, Ohio		Gallia County, Ohio		Guernsey County, Ohio	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total	37,046	*****	30,943	*****	40,351	*****

	Monroe County, Ohio		Morgan County, Ohio		Noble County, Ohio	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total	14,751	*****	15,113	*****	14,634	*****

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2006-2010 American Community Survey (ACS) data generally reflect the December 2009 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2000 data. Boundaries for urban areas have not been updated since Census 2000. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2006-2010 American Community Survey

Explanation of Symbols:

1. An '**' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '***' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

Local Government Innovation Fund Program

Application ScorÉÎÇ

Lead Applicant	Gallia County Commissioners
Project Name	Appalachian Ohio's Open Geographic Information System \

✔	**Grant Application**

or

☐	**Loan Application**

The Local Government Innovation Fund Council
77 South High Street
P.O. Box 1001
Columbus, Ohio 43216-1001
(614) 995-2292

Local Government Innovation Fund Project Scoring Sheet

Section 1: Financing Measures

Financing Measures	Description	Criteria	Max Points	Applicant Self Score	Validated Score
Financial Information	*Applicant includes financial information (i.e., service related operating budgets) for the most recent three years and the three year period following the project. The financial information must be directly related to the scope of the project and will be used as the cost basis for determining any savings resulting from the project.*	Applicant provides a thorough, detailed and complete financial information	**5**	◉	
		Applicant provided more than minimum requirements but did not provide additional justification or support	**3**	○	
		Applicant provided minimal financial information	**1**	○	
			Points	5	0
Repayment Structure (Loan Only)	*Applicant demonstrates a viable repayment source to support loan award. Secondary source can be in the form of a debt reserve, bank participation, a guarantee from a local entity, or other collateral (i.e.,emergency rainy day , or contingency fund, etc.).*	Applicant clearly demonstrates a secondary repayment source.	**5**	○	
		Applicant does not have a secondary repayment source.	**0**	○	
			Points	0	0
Local Match	*Percentage of local matching funds being contributed to the project. This may include in-kind contributions.*	70% or greater	**5**	◉	
		40-69.99%	**3**	○	
		10-39.99%	**1**	○	
			Points	5	0
			Total Section Points	10	0

Section 2: Collaborative Measures

Collaborative Measures	Description	Criteria	Max Points	Applicant Self Score	Validated Score
Population	*Applicant's population (or the population of the area(s) served) falls within one of the listed categories as determined by the U.S. Census Bureau. Population scoring will be determined by the **smallest** population listed in the application. Applications from (or collaborating with) small communities are preferred.*	Applicant (or collaborative partner) is not a county and has a population of less than 20,000 residents	**5**	◉	
		Applicant (or collaborative partner) is a county but has less than 235,000	**5**	○	
		Applicant (or collaborative partner) is not a county but has a population 20,001 or greater.	**3**	○	
		Applicant (or collaborative partner) is a county with a population of 235,001 residents or more	**3**	○	
			Points	5	0
Participating Entities	*Applicant has executed partnership agreements outlining all collaborative partners and participation agreements and has resolutions of support. (Note: Sole applicants only need to provide a resolution of support from its governing entity.)*	More than one applicant	**5**	◉	
		Single applicant	**1**	○	
			Points	5	0
			Total Section Points	10	0

Local Government Innovation Fund Project Scoring Sheet

Section 3: Success Measures

Success Measures	Description	Criteria	Points	Applicant Self Score	Validated Score
Expected Return	*Applicant demonstrates as a percentage of savings (i.e., actual savings, increased revenue, or cost avoidance) an expected return. The return must be derived from the applicant's cost basis. The expected return is ranked in one of the following percentage categories:*	75% or greater	**30**	●	
		25.01% to 74.99%	**20**	○	
		Less than 25%	**10**	○	
			Points	30	0
Past Success	*Applicant has successfully implemented, or is following project guidance from a shared services model, for an efficiency, shared service, coproduction or merger project in the past.*	Yes	**5**	●	
		No	**0**	○	
			Points	5	0
Scalable/Replicable Proposal	*Applicant's proposal can be replicated by other local governments or scaled for the inclusion of other local governments.*	The project is both scalable and replicable	**10**	●	
		The project is either scalable or replicable	**5**	○	
		Does not apply	**0**	○	
			Points	10	0
Probability of Success	*Applicant provides a documented need for the project and clearly outlines the likelihood of the need being met.*	Provided	**5**	●	
		Not Provided	**0**	○	
			Points	5	0
			Total Section Points	50	0

Section 4: Significance Measures

Significance Measures	Description	Criteria	Points Assigned	Applicant Self Score	Validated Score
Performance Audit Implementation /Cost Benchmarking	*The project implements a single recommendation from a performance audit provided by the Auditor of State under Chapter 117 of the Ohio Revised Code or is informed by cost benchmarking.*	Project implements a recommendation from an audit or is informed by benchmarking	**5**	○	
		Project does not implement a recommendation from an audit and is not informed by benchmarking	**0**	●	
			Points	0	0
Economic Impact	*Applicant demonstrates the project will a promote business environment (i.e., demonstrates a business relationship resulting from the project) and will provide for community attraction (i.e., cost avoidance with respect to taxes)*	Applicant clearly demonstrates economic impact	**5**	●	
		Applicant mentions but does not prove economic impact	**3**	○	
		Applicant does not demonstrate an economic impact	**0**	○	
			Points	5	0
Response to Economic Demand	*The project responds to current substantial changes in economic demand for local or regional government services.*	Yes	**5**	●	
		No	**0**	○	
			Points	5	0
			Total Section Points	10	0

Section 5: Council Measures

Council Measures	Description	Criteria	Points Assigned
Council Preference	*Council Ranking for Competitive Rounds*	**The Applicant Does Not Fill Out This Section**; This is for the Local Government Innovation Fund Council only. The points for this sectionis based on the applicant demonstrating innovation or inventiveness with the project	
		Total Section Points (10max)	

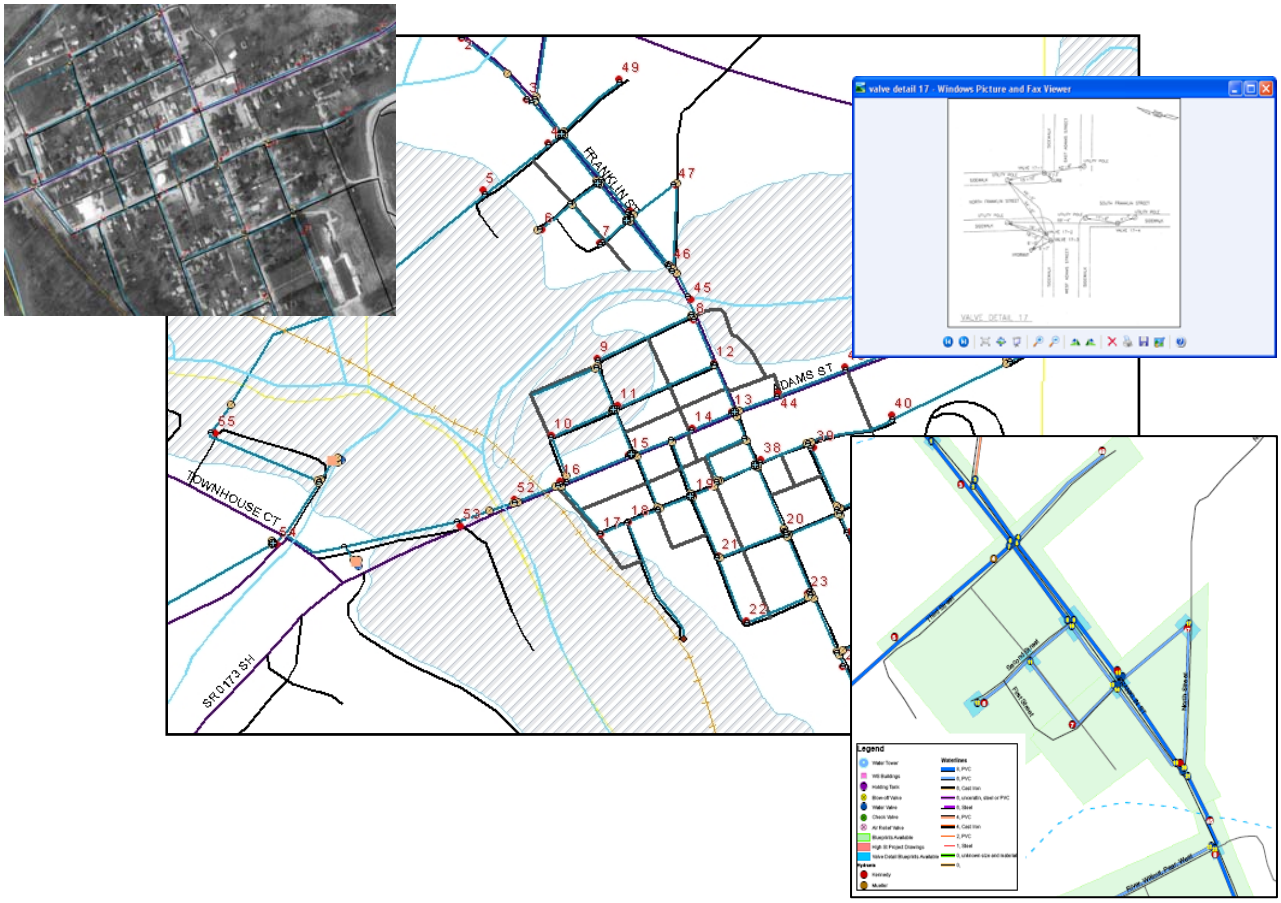
Scoring Summary

	Applicant Self Score	Validated Score
Section 1: Financing Measures	10	0
Section 2: Collaborative Measures	10	0
Section 3: Success Measures	50	0
Section 4: Significance Measures	10	0
Total Base Points:	80	0

Reviewer Comments

Small Utilities GIS Cooperative Feasibility Study

Developing a Web-Based GIS Cooperative for Small Utilities and Municipalities



The Voinovich School of Leadership and Public Affairs at Ohio University
December 2009

Small Utilities GIS Cooperative Feasibility Study

Developing a Web-Based GIS Cooperative
for Small Utilities and Municipalities

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City of Columbiana
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Village of Enon
City of Geneva
Highland County Water Company
City of Hillsboro
Jackson County Water
Jefferson County Water and Sewer District
City of Mingo Junction
Village of Lakemore
Village of Monroeville
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EXECUTIVE SUMMARY

Project Background

This feasibility study was produced through a partnership between the Ohio Rural Community Assistance Program (Ohio RCAP), Ohio University's Voinovich School of Leadership and Public Affairs, the Village of Carrollton, Ohio, and 21 additional municipalities and utilities in the State of Ohio. The feasibility study was made possible by a Local Government Services and Regional Collaboration (LGSRC) grant from the Ohio Department of Development. When the LGSRC grant program was announced, RCAP identified a number of small utilities and municipalities that were interested in exploring the possibilities of a cooperative approach to GIS, including the Village of Carrollton, which volunteered to be the lead grant applicant and fiscal agent for the project. RCAP and the Village of Carrollton secured the services of Ohio University's Voinovich School of Leadership and Public Affairs to produce the feasibility study, which was completed between December 2008 and December 2009.

Project Purpose and Scope

The purpose of this study is to investigate the feasibility of establishing a cooperative web-based Geographic Information System (GIS). The proposed web-based system would store water and wastewater utility data for multiple utilities and municipalities at a central host site and make that data available to those entities on an ongoing basis – for both viewing and editing purposes – via the internet. By driving down costs through economies of scale, and also by making GIS less complex to use, this approach is intended to provide small utilities and municipalities with GIS technology that would otherwise be out of their reach.

The feasibility of the proposed web-based system was evaluated from three key perspectives: technical, organizational, and financial.

Technical issues addressed in the feasibility study fall into two key categories. First, the study addresses the technical requirements and feasibility of the proposed web-based system: is it feasible, and if so, how? Second, the study addresses the technical capacities – hardware, software, staff expertise, and staff training – that would be required of each utility and municipality wishing to participate in the proposed web-based system. These two categories of technical questions are clearly related from a feasibility standpoint since GIS has limited value if it is too complicated to use. If a web-based GIS is feasible to implement but requires an overly burdensome level of technical expertise among its users, then such a system is probably not feasible from the practical standpoint of many small utilities and municipalities. Therefore, the technical feasibility of the proposed web-based system centers upon the feasibility of providing web-based GIS capabilities *without* requiring a significant level of hardware, software, or GIS-related staff expertise to exist among system users.

Organizational issues addressed in the feasibility study focus upon how to structure decision-making and financial participation in the proposed cooperative.

Financial issues addressed in the feasibility study relate to both the technical and organizational questions: how much would it cost to meet the technical requirements of the proposed web-based system, and how would those costs be supported through a cooperative organizational structure?

Project Activities

The project included the following activities:

- Stakeholder engagement including three webinars that provided project updates to, and solicited input from, utilities and municipalities participating in the feasibility study;
- Identification and review of existing inter-governmental GIS management systems;
- Four surveys of participating utilities and municipalities focusing respectively on 1) water utility information, 2) wastewater utility information, 3) electrical utility information, and 4) overall cost and benefit expectations among participants;
- Review of existing and newly-emerging web-based editing and map publishing tools;
- Review of organizational frameworks for GIS cooperatives and cooperative governmental services generally;
- Development of an experimental web-based GIS management system;
- Collection of water and wastewater utility data utilizing GPS units and development of an initial geodatabase in the Village of Carrollton;
- Development of cost estimates;
- Development of a proposed implementation plan, schedule, and budget; and
- Identification of potential program funding sources.

Conclusions about Feasibility

This study supports several key conclusions regarding feasibility. First, the proposed web-based system is technically feasible utilizing existing hardware and software tools. Second, the proposed web-based system is feasible to implement without placing a high technical burden on its users: it would provide small utilities and municipalities with enormously powerful and beneficial tools that could be readily utilized on a day-to-day basis by utility operators using only a computer, an internet connection, and a modest amount of training and support. Third, based on many successful examples of multiple governments sharing many kinds of services and the costs thereof, it is clearly feasible to create a cooperative structure through which the proposed-web-based system would be provided, managed, and financially supported.

Fourth, perhaps the greatest feasibility challenge relates to starting up the proposed cooperative, and this challenge stems from two factors. First, utilities and municipalities will need to collect utility data and convert it into GIS format prior to the establishment of the web-based system. Second, initial data collection will need to be completed among a minimum scale of utilities and municipalities – as measured by the combined number of utility connections – in order for the cooperative to achieve significant economies of scale and drive down costs for each participating utility and municipality.

Key Organizational Considerations

A Council of Governments (COG) is recommended as the most appropriate structure for the proposed cooperative based primarily on the capacity of a COG structure to facilitate mutual commitments and decisions among multiple governments.

As opposed to starting up a new, staffed organization, the proposed COG should utilize the infrastructure and capacities of existing organizations to develop and provide the proposed GIS services to COG members. More specifically, the COG should:

1. Designate a fiscal agent to manage the COG's funding and contracts;
2. Designate an entity to manage the COG's activities and oversee its services to members; and
3. Subcontract with a private firm or university to provide the web-based GIS services to COG members.

It is recommended that RCAP play the lead role in managing the COG's affairs and overseeing services to its members. RCAP could also be the COG's fiscal agent, but would not need to be – another entity could play the fiscal agent role and then subcontract with RCAP to oversee the COG's operations. While it may be appropriate in the future to establish a new, staffed organization to directly manage the COG's funding and provide web-based GIS services directly to its members, this approach is not recommended prior to and during the COG's initial years of operation because of the more significant cost, timeframe, inflexibility, and risk involved in this approach.

Overview of the Proposed Cooperative

The success of the proposed cooperative is dependent upon successfully achieving all five of the following purposes:

1. Assisting multiple local utilities and municipalities in initially collecting data and converting it into GIS format;
2. Providing a web-based mechanism that would allow these entities to view, manipulate, and edit this data after it is collected;
3. Providing the training and technical support required in order for these entities to utilize the web-based GIS tools;
4. Providing these forms of assistance without requiring each member entity to have sophisticated GIS software or high levels of knowledge about GIS; and
5. Providing these forms of assistance to entities in more than one geographic region.

The proposed cooperative's key partners and roles are as follows:

1. A Council of Governments (COG) to structure the sharing of costs, benefits, and decision-making related to the proposed GIS services;
2. A fiscal agent that manages funding and contracts on behalf of the COG;
3. A coordinating organization – RCAP – that:
    a. Oversees the operations of the COG;
    b. Coordinates GIS service delivery to COG members; and
    c. Provides front-line customer support to COG members.
4. A GIS Data Host Site – such as a private firm or university – that:
    a. Stores water and wastewater utility GIS data on behalf of utilities and municipalities that are members of the COG;
    b. Makes that data available to members for viewing and editing via the internet;
    c. Ensures that GIS data for each member is kept secure and current, reflecting edits initiated by members on an ongoing basis;
    d. Provides training to members on the use of the web-based system; and
    e. Coordinates service delivery to members in collaboration with RCAP staff; and
5. Staff within each member utility and municipality that are active users of the web-based system and are responsible for ensuring the accuracy of the GIS data on an ongoing basis.

Because of the benefits of internet technology and web-based GIS software, the proposed cooperative would allow multiple utilities and municipalities to share the costs of hardware, software, and staff that each would otherwise need to support on its own.

Capabilities provided via the web-based system would include the following:

- Viewing Maps of Utility Systems in order to see the locations of utility system assets such as water lines, water meters, hydrants, and valves;
- Panning with Maps in order to view different geographic areas within a municipality or utility system;
- Zooming with Maps in order to see utility system elements at different scales or levels of detail;
- Viewing Utility System Data in Table Form in order to see attribute information about each utility system asset, such as the diameter of a water line, what it is made out of, what company manufactured it, when it was installed, when it was repaired, etc.;

- Turning Map "Layers" On and Off in order to view utility system features in relation to other geographic features including streets, aerial photos, soils, floodplains, political boundaries, railroads, streams, and lakes, as well as additional layers such as parcels, zoning, sidewalks, edge of pavement, structures, and building footprints that may be available depending on county;

- Searching Utility System Data in order to locate utility assets based on specific attributes, such as valve type, water line diameter, hydrant manufacturer, or any other information that is included in the database and that the member entities deem important;

- Querying Utility System Data based on more than one attribute at a time in order to find utility system assets that share multiple attributes;

- Editing and Adding to Utility System Data in order to ensure that each entity's respective geodatabase includes more information and continually updated information over time;

- Conducting Planning and Analysis Based on GIS Data in order to more efficiently respond to problems and plan for projects and maintenance;

- "Hyperlinking" Files such as drawings and customer billing information to the database;

- Extracting Data from the Geodatabase for use with GIS software or with a mobile GPS device;

- Making Data Available as "Live Maps" to Designated Third Parties such as regional planning commissions or engineering firms;

- Color-Coding Map Symbols based on Key Attributes to enable quick recognition of active versus inactive meters, utility features in need of repair, or other utility feature attributes deemed significant to highlight in this manner; and

- Potentially Linking Customer Billing and Asset Management Software to the web-based GIS.

The Proposed Implementation Scale and Timeframe

The target start-up scale for the proposed cooperative is 100,000 combined utility connections among participating utilities and municipalities. This equates to 25 utilities and municipalities at an average size of 4,000 utility connections, or a smaller number of entities at a larger average size. Implementation is proposed to occur over the course of three years, with the first two years focused on recruiting and completing data collection with founding COG members and the third year focused upon formally establishing the COG and commencing its GIS services to members.

The Proposed Implementation Plan

The proposed implementation plan has four phases:

Phase One: Outreach and COG Member Recruitment

Phase One implementation activities – proposed to be led by RCAP – would focus upon recruiting utilities and municipalities to become members of the proposed COG and facilitating mutual commitments among these entities to establish the COG and undertake initial GIS data collection activities prior to its establishment. This phase would include the development (with legal counsel) of initial drafts of two documents that will be required in order to create the proposed COG: 1) an Agreement to Establish the COG; and 2) COG Bylaws. These legal documents will be important for utility and municipality administrators to review as part of considering whether to found the proposed COG. These documents would not tie participating entities to any commitments, and would not need to be signed by participants, until the COG is actually established (in Implementation Phase Three). Nonetheless, they will be important to share in draft form during Phase One in order to illustrate the kind of commitments and benefits that COG membership would entail.

Phase Two: Data Collection

The proposed implementation plan sets a goal of completing initial data collection among entities that have a combined size of 100,000 or more utility connections over the course of two years – 40,000 in year one, 60,000 in year two. This scale is projected to provide the economies of scale required in order to make first-year COG membership fees attractive to members. Participating entities and RCAP would consider alternative approaches to data collection and identify the most appropriate approach or mix of approaches to utilize. One potential approach with many advantages is for RCAP to hire a GIS Technician(s) to perform data collection. The scope of initial data collection would be kept relatively narrow in order to minimize its cost and time requirements, and would be based upon the use of mobile GPS units as the primary method for data collection.

Phase Three: COG Start-up

As the scale of utilities and municipalities that have completed initial data collection approaches the target scale of 100,000 combined utility connections, RCAP would be in a position to convene these parties to formally create the COG. This phase of the process would entail:

1. Finalizing the COG's scope of services and operational framework;
2. Soliciting bids and selecting a subcontractor to provide the web-based GIS data hosting services as well as associated training and technical support to COG members;
3. Identifying grant funding to be sought to support start-up costs;
4. Finalizing first-year membership fees;
5. Finalizing the Agreement to Establish the COG and the COG's Bylaws with assistance from legal counsel;

6. Securing legislative resolutions from each member entity authorizing its participation in the COG; and

7. Developing and signing a contract with the selected GIS Data Host Site subcontractor.

Phase Four: COG Operation

In Phase Four, the COG would begin to operate with the key partners and roles described above: a fiscal agent managing funding and contracts; RCAP organizing the COG's activities, coordinating service delivery, and providing front-line customer service; a GIS Data Host Site managing the central GIS database; and member utilities and municipalities utilizing the web-based system and its support services.

Cost Estimates and Proposed Cost-Sharing

The total estimated implementation cost is just over $800,000. Including all phases of the implementation plan, 69% of the costs are proposed to be supported by participating utilities and municipalities, with 31% supported by resources to be secured by RCAP. Phases Two and Four will require the most significant levels of investment by member utilities and municipalities. Data collection in Phase Two is projected to cost $2.96 per utility connection for participating entities, while COG membership fees in Phase Four are projected to be $2.54 per utility connection.

The estimated implementation budget is shown by implementation phase in Table 1. The proposed cost sharing approach is shown by implementation phase in Table 2.

TABLE 1
ESTIMATED IMPLEMENTATION BUDGET

Phase	Description	Cost	Cost (%)
One	Outreach and Member Recruitment	$ 82,883	10%
Two	Data Collection	$ 359,421	44%
Three	COG Start-Up	$ 41,480	5%
Four	COG Operation	$ 336,163	41%
Total		**$ 819,946**	**100%**

TABLE 2
PROPOSED IMPLEMENTATION COST SHARING

Phase	Description	Total Cost	Proposed Cost Sharing		Proposed Cost Sharing (%)	
			Grants	Members	Grants	Members
One	Outreach & Member Recruitment	$ 82,883	$ 82,883	--	100%	--
Two	Data Collection	$ 359,421	$ 48,172	$ 311,249	13%	87%
Three	COG Start-Up	$ 41,480	$ 41,480	--	100%	--
Four	COG Operation	$ 336,163	$ 81,902	$ 254,261	24%	76%
Total		**$ 819,946**	**$ 254,437**	**$ 565,509**	**31%**	**69%**

FEASIBILITY STUDY BACKGROUND AND INTRODUCTION

This feasibility study was produced through a partnership between the Ohio Rural Community Assistance Program (Ohio RCAP), Ohio University's Voinovich School of Leadership and Public Affairs, the Village of Carrollton, Ohio, and 21 additional municipalities and utilities in the State of Ohio.

The feasibility study was made possible by a Local Government Services and Regional Collaboration (LGSRC) grant from the Ohio Department of Development. When the LGSRC grant program was announced in 2008, RCAP was aware of several communities that were interested in GIS, but were not able to pursue it or fully implement it in their operations due to cost and staffing limitations. RCAP began contacting communities to determine their interest level in investigating a cooperative approach to GIS. The Village of Carrollton volunteered to be the lead applicant and fiscal agent. After RCAP and the Village of Carrollton investigated universities with the potential to produce a feasibility study, Ohio University's Voinovich School of Leadership and Public Affairs was selected due to its experience in GIS, its experience in local government collaboration, and its ability to assemble a comprehensive team of experts to work on the study. The feasibility study was developed between December 2008 and December 2009.

Participating Municipalities and Utilities

Municipalities and utilities that participated in the feasibility study are listed in Table 3.

TABLE 3
MUNICIPALITIES AND UTILITIES
PARTICIPATING IN THE FEASIBILITY STUDY

Participating Municipalities	Participating Utilities
Village of Carrollton	Brilliant Water District
City of Columbiana	Buckeye Water District
Village of Dillonvale	Highland County Water Company
Village of Enon	Jackson County Water
City of Geneva	Jefferson County Water and Sewer District
City of Hillsboro	Scioto Water, Inc.
Village of Monroeville	Village of Byesville
Village of Mount Pleasant	City of Mingo Junction
Village of New Carlisle	City of New Lexington
Village of Tiltonsville	Village of Lakemore
Village of Wellington	
Village of Yorkville	

Defining GIS and its Benefits

A **Geographic Information System (GIS)** is defined by webgis.com as "an organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information."

As defined by the Richland County (OH) GIS Consortium, GIS is "a computer-based system that relates data and information to maps and geography. The most powerful aspect of GIS is that it links features in a computer map with a corresponding database that carries information describing the features in the map." GIS, therefore, is not just a way to make maps but is more significantly a way for decision-makers to efficiently organize, access, and utilize information. GIS capacity provides many specific benefits to utilities and municipalities, including the ability to:

- Quickly identify the location, depth, size, materials, age, and condition of all utility system features;
- View utility maps over all sorts of other map layers, including zoning, floodplains, roads, parcels, soils, census data, political boundaries, etc.;
- Enter new service connection points and service lines, locate existing service connections from coordinates in the GIS using a GPS unit, and in some instances link the information to customer billing databases;
- Quickly access and print scanned images of original engineering blueprints, photos, inspection reports, hand drawings, equipment manuals, etc;
- Quickly identify service areas and addresses that would be affected by closing a specific valve or by a line break;
- Access and update maps and asset inventory data; and
- Preserve institutional memory when operators and other personnel retire or leave.

Defining the Problem

GIS has several key components – computer hardware, computer software, geographic data, and trained personnel – that must work in concert with one another in order for the system to work. While many cities and counties across Ohio and the nation have developed and utilized GIS to better manage their infrastructure and services, many small to mid-size municipalities have found some or all components of GIS to be out of their reach due to prohibitive cost, lack of expertise and computer skills, and/or limited staff time.

In most cases, small utilities and municipalities do not have the internal resources to properly start up a GIS, or to maintain it after its initial set-up. A utility or small municipality may spend thousands of dollars on software, hardware, and the development of GIS data, but not be able to provide the level of staff time, staff training, and/or technical support required in order to utilize these GIS resources. Other municipalities may consider investing in software and hardware, but be unable to convert their existing data into GIS format without consultant fees or technical expertise that are out of their reach. Unlike larger cities and most counties, utilities and municipalities serving

populations under 10,000 rarely have the professional staff on hand to develop and support a GIS. If a utility invests the time and money to train one or two staff persons, it is usually very difficult to replace them when they leave.

Defining a Solution: A Cooperative Approach to GIS

One potential way to make GIS feasible for small utilities and municipalities is to develop a cooperative approach. From a cost-benefit perspective, a cooperative approach to GIS would be similar to other types of cooperative governmental services, such as multiple school districts joining together to purchase text books and other supplies, or social service agencies in multiple counties sharing administrative staff. By pooling resources across multiple governments, economies of scale can be achieved. In turn, each government that participates can obtain desired benefits at a lower cost than could be achieved if each government procured or provided these services separately.

Beyond analyzing whether a cooperative approach to GIS could achieve economies of scale and drive down costs on a per-unit basis, this feasibility study is specifically concerned with three critical factors:

1. Geographic Dispersion. This feasibility study is not concerned with one, fixed set of potential participants in one geographic area. Rather, its goal is to assess the feasibility of creating a web-based GIS cooperative that small utilities and municipalities throughout the state of Ohio would find desirable and realistic to join.

2. Web-Based GIS Technology. Because of the geographic dispersion of potential participants in the proposed GIS cooperative, essential factors in its feasibility include the internet and associated web-based GIS technology. This approach assumes that GIS data is "hosted" at a central site and made accessible to participating governments via the internet.

3. Redefining Local GIS Infrastructure Needs. Web-based GIS technology has the capacity to fundamentally change the level of hardware, software, and staff investment required in order for GIS to be operational at the local level. Therefore, this feasibility study is not merely concerned with getting to an operational scale that drives down costs, but with making GIS altogether less complex for local governments to develop and use.

OVERVIEW OF PROJECT ACTIVITIES

Preparation of this feasibility study included a number of interconnected activities:

Project Planning

The Voinovich School, with input from RCAP and the Village of Carrollton, developed and coordinated implementation of the project work plan.

Stakeholder Engagement

During development of the feasibility study, RCAP and the Voinovich School informed and solicited input from the utilities and municipalities participating in the feasibility study in the following ways:

- A project kick-off webinar was held in January 2009 to review the project scope and timeline, provide some introductory information about GIS, and solicit input from participants;
- A second webinar, held in May 2009, reviewed progress to date, provided initial cost information, and provided a more in-depth demonstration of the capacities and benefits of GIS;
- A third webinar was held in October 2009 to review a partial draft feasibility study report; and
- Throughout the course of the study, RCAP maintained contact with participating utilities and municipalities about project progress and assisted in the completion of participant surveys.

Identification and Review of Inter-Governmental GIS Systems

The Voinovich School performed research regarding existing inter-governmental GIS systems (as well as some intra-governmental systems) within and outside Ohio. Through internet research and initial discussions with local experts, examples were identified in which multiple governments have cooperatively developed and/or managed GIS data and/or a GIS system. Over 20 entities were then contacted, and phone interviews were conducted with those who responded to inquiries. Follow-up interviews were conducted in some cases, and additional entities were also identified and contacted later in the process.

Surveys of Participating Utilities and Municipalities

The Voinovich School and RCAP developed four surveys which RCAP distributed to participating utilities and municipalities. RCAP then collected the survey responses and the Voinovich School summarized the results. Three of the surveys were targeted respectively to the operators of water, wastewater, and electric utilities, focusing on utility system information and local staff and technical issues. The fourth survey was targeted to appropriate management personnel, focusing on the GIS

cost and benefit expectations among decision-makers. The survey questions and summaries of responses for three of these four surveys are provided in Appendices J-L. The electric utility survey questions and responses are not provided because only one entity completed this survey.

Review of Web-Based Editing and Map Publishing Tools

The Voinovich School researched existing and newly emerging web-based GIS editing and map publishing tools. This assessment was based on the Voinovich School's own experience, interviews with other GIS practitioners, and interviews with GIS hardware and software vendors. The assessment reviewed requirements and costs relating to computer hardware and software, internet-based GIS services, and personnel.

Review of Organizational Frameworks for a Cooperative GIS System

The Voinovich School reviewed options for structuring the management of a GIS cooperative serving multiple utilities and municipalities. After identifying a Council of Governments (COG) approach as the most appropriate structure for this endeavor, the Voinovich School performed internet research and interviewed representatives of multiple COGs in Ohio as well as attorneys and state officials knowledgeable about COGs in Ohio. Based on this research, the Voinovich School evaluated several alternative ways to structure a COG and deliver GIS services through a COG.

Experimental Web-based GIS Management System

In this experiment, the Voinovich School loaded sample GIS datasets from Athens County, Ohio, and the Village of Carrollton, Ohio onto a test server housed at the Voinovich School and examined the capabilities of ESRI ArcGIS Server Technology in relation to web-based GIS data editing and management. This component of the study played a vital role in assessing the feasibility and requirements of the proposed cooperative system.

Data Collection in the Village of Carrollton

The Village of Carrollton, with assistance from RCAP and the Voinovich School, hired a student intern to collect and digitize all of the components of the water distribution system, sewage and stormwater collection systems, and other assets in the Village of Carrollton. This dataset was then utilized by the Voinovich School as part of the experimental web-based management system described above. The time requirements of the process were monitored so that it could be utilized as a primary basis for developing cost estimates relating to data collection.

Development of Cost Estimates

The Voinovich School, with assistance from RCAP, developed cost estimates for the proposed GIS cooperative based on the project elements described above. Cost estimates were developed in two phases. First, cost estimates were developed for multiple GIS Data Host Site scenarios which vary by scale and organizational structure. Second, a preferred scenario was identified, and more comprehensive cost estimates were then developed also including the costs of organizing and administering the COG, completing initial data collection, and training system users.

Development of a Proposed Implementation Plan, Schedule, and Budget

The Voinovich School, with input from RCAP, developed an implementation plan, schedule, and budget for the proposed GIS cooperative.

Identification of Potential Program Funding Sources

RCAP researched funding sources and developed recommendations about potential sources to pursue for each of the proposed cooperative's key cost categories:

1. Initial data collection
2. Start-up of the cooperative; and
3. Annual operation of the cooperative.

OVERVIEW OF THE PROPOSED GIS COOPERATIVE

Benefits of Membership in the Proposed Cooperative

The proposed cooperative would provide a website, along with training and support services, to enable its member utilities and municipalities to benefit from GIS technology that would otherwise be out of their reach. The web-based cooperative would allow staff at each member utility and municipality to:

- Take advantage of GIS technology with a minimal level of training and up-front expense for local infrastructure;
- Build a geodatabase including multiple types of utility system information that can be viewed and manipulated in both map and table form, expanded and updated with new data over time, and used to support powerful operational and asset management capabilities that would otherwise not be possible;
- Perform routine data viewing and editing tasks with a minimal level of time per task;
- Perform these tasks with minimal system requirements – a computer, an internet connection, a printer, and potentially a mobile GPS device and a scanner;
- Obtain assistance with some tasks that would be beyond the staff expertise and software that is expected to exist within each member utility or municipality; and
- Obtain the benefits of GIS technology at a fraction of the cost and technical expertise that would otherwise be required within each member utility or municipality.

The Structure of the Proposed Cooperative

Regarding organizational structure, these are the key recommendations discussed within this feasibility study:

1. The most appropriate structure for the proposed cooperative is a Council of Governments (COG);
2. The COG should designate an existing entity as the COG's fiscal agent as opposed to starting up a new, staffed organization to manage the COG's funding and contracts;
3. The COG – through its fiscal agent – should contract with RCAP to manage the COG's activities and its services, including the provision of front-line customer service by a GIS Technician on RCAP's staff; and
4. The COG – through its fiscal agent – should subcontract with a private firm or university to provide the web-based data hosting services to COG members.

The structure of the proposed cooperative is discussed further in Chapter 7, where it is illustrated in Figures 5 and 6.

Key Partners and Roles

The proposed GIS cooperative would require four key partners:

1. **Utility and Municipality Administrators.**

   Without committed utility and municipality administrators, the proposed cooperative cannot be established. In short, administrators would be in charge of the cooperative, which would be comprised of, for, and by them.

   While administrators, in many cases, would not directly use the web-based GIS tools or the associated support services, they will play critical roles prior to the establishment of the cooperative structure and then within and outside that structure after it is established.

   First, prior to the establishment of the proposed COG, administrators will need to take some risks and make some investments in initial GIS data collection. The proposed web-based system is not feasible in the absence of these initial investments.

   Second, administrators or designees thereof will need to make key decisions within the proposed COG after it is established. These decision-making roles will entail guiding the development of the COG's services over time and committing to the costs of these services through membership fees.

   Third, administrators will have a critical role *outside of the COG's structure* in providing the direction, support, expectations, and resources that will enable front-line staff to fully take advantage of the services and capacities made available through the COG. All else equal, the cooperative's resources will increase or decrease in value for each member based primarily on how much and how well each member uses those resources. The desired level of utilization must be established, monitored, and improved over time primarily by each member according to its goals, not by the COG or its contractors.

2. **A Coordinating Entity: RCAP.**

   The proposed cooperative cannot be established without an entity willing and able to make a multi-year, strategic investment in organizing it. In addition, the cooperative will need to be administered and partially staffed by an organization that is functionally and geographically well-positioned to serve the needs of its members. In both cases – start-up and ongoing operation – RCAP is the best candidate, for several related reasons:

   - RCAP initially pulled together the partners in this feasibility study, secured resources to support it, and provided invaluable input and guidance in its development, all of which illustrate a strong knowledge base, strong relationships with partners, and an organizational commitment to bringing GIS technology within the reach of RCAP's partner utilities and municipalities;

- Because of RCAP's presence in multiple parts of the state, and its strong relationships with utilities and municipalities in all of these areas, RCAP is uniquely positioned to play a central role in the COG's proposed service-delivery model;

- RCAP has strong relationships with public and private funders that may be promising candidates for providing resources to support start-up of the proposed COG; and

- RCAP has expertise in how utilities operate, in utility asset management, and in GIS.

RCAP is proposed to have four key roles in establishing and administering the COG:

1. RCAP should take the lead in the process of creating the cooperative, including tapping into existing or projected revenue streams to the extent feasible, and securing additional grant resources, to incentivize initial investment in data collection among utilities and municipalities;

2. RCAP should consider employing GIS Technicians and possibly interns to assist in the initial data collection process, after convening participating utilities and municipalities to discuss this approach in comparison to a consultant-based approach.

3. RCAP should be the lead manager of the COG's activities, for the reasons described above: its clear commitment to establishing the cooperative, its relationships with utilities and municipalities in multiple parts of the state, its relationships with pertinent funders, and its expertise in utility operation, asset management, and GIS. In addition, because of the roles that RCAP will have played in establishing the COG, RCAP will be uniquely positioned to transition into an administrative role for the COG once it is operational.

4. RCAP should employ a GIS Technician to provide front-line customer support to members of the COG after it is established.

3. A GIS Data Host Site.

In order for the proposed web-based system to be feasible, a GIS Data Host Site will be required in order to:

1. Store and manage multiple geodatabases on behalf of each member (a unique geodatabase for each member of the COG).

   A geodatabase is similar to other kinds of databases, with the added dimension that all data is "geo-referenced." For example, a geodatabase includes information about specific utility assets like a water valve (who manufactured it, which customers it is associated with, whether it is active or inactive, etc.), but also includes geographic coordinates that enable the location of that asset to be accurately depicted on a map.

2. Make the data available to each member via the internet and a customized web-based interface.

   This interface would allow each member of the COG to access its geodatabase stored at the GIS Data Host Site. This is the primary means by which the cooperative system would drive down costs per member, since the members would share the costs of a single hardware, software, and staff infrastructure that each would otherwise need to support on its own.

3. Maintain and improve the web-based interface over time.

   The web-based interface would commence with a powerful set of tools available to each COG member, but could also be modified and enhanced over time according to the collective goals of COG members. For example, customer billing and asset management software could be integrated into, or connected to, the web-based GIS.

4. Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all member geodatabases.

   Data needs to be entered and manipulated in certain ways in order for each geodatabase to function properly. Within the proposed COG, these data standards would need to be applied consistently across all member geodatabases in order for the cooperative system to work as efficiently as possible. It would be the GIS Data Host Site's responsibility to provide quality control oversight based on these standards.

5. Provide training to members about how to use the web-based system.

   In most day-to-day cases, local staff would be able to perform key tasks directly by utilizing the web-based interface. In some more complicated cases, local staff would be provided with assistance by an RCAP GIS Technician. Specific types of viewing and editing tasks, capabilities, and associated staff support roles are described below.

6. Ensure that each member's geodatabase is kept up-to-date, reflecting edits performed either by local operators or by RCAP GIS Technicians assisting operators. The data editing process and roles within it for local staff, the RCAP GIS Technician, and the GIS Data Host Site are described below.

7. Ensure that each member's data is kept secure.

The GIS Data Host Site could be a private firm or university, and would be selected by RCAP in concert with COG members based on a bid solicitation process that would occur at the time the proposed COG is formed.

4. Utility and Municipality Staff.

Utility and municipality staff would be the primary users of the resources and services provided through the COG. However, they would not be passive users: they would have primary responsibility for ensuring that the data initially collected and then stored at the GIS Data Host Site is accurate.

The roles of operators would progress through three phases: collecting the data, viewing and using the data, and updating and adding to the data.

- First, operators would need to assist in the data collection process to occur prior to the formal establishment of the COG. In this process, operators would not have primary responsibility for collecting the data (that is proposed to be done through assistance from RCAP staff and/or consultants). However, operators would need to provide support to this process, answer questions, and review draft maps in order to highlight missing or inaccurate information.

- Second, after the COG is established and its web-based services become operational, operators would receive training and begin to build use of the cooperative's website into their daily activities. Initial use of system tools would consist of viewing maps and data and learning how to find particular types of information when needed.

- Third, over time, operators would need to become more comfortable with editing existing data, adding new data, and performing data analysis functions as utility system changes occur and are planned over time.

The importance of ongoing data monitoring and editing roles among front-line staff points to the significance of the key leadership roles described above for utility and municipality administrators. On the one hand, there would need to be an expectation that front-line staff will utilize the resources made available through the web-based system, but this expectation cannot come primarily from within the cooperative structure: each COG member would need to set its own expectations for its own staff. On the other hand, there would need to be an understanding that the data stored at the GIS Data Host Site is only as up-to-date or comprehensive as each user wants it to be and ensures it to be. If there is a line break or a new construction project in any given utility or municipality – in which case the geodatabase would need to be edited accordingly – staff at the GIS Data Host Site would have no way of knowing this information unless local operators initiate data editing to reflect system changes.

Operators would not be on their own to perform data editing – training and assistance would be provided for that – but they would need to incorporate ongoing attention to data updating into their work routines in order to increase the amount of information that the geodatabase contains and prevent it from becoming inaccurate over time. This will require expectations to be communicated by administrators, and also support for operators during their process of learning how to use the web-based system.

Key partners and roles within the proposed cooperative are discussed further in Chapter 7, where they are illustrated in Figures 5 and 6.

Local System Requirements

Local staff would only need a computer capable of accessing the internet in order to view and manipulate data stored at the GIS Data Host Site. Staff would only need to connect to the website and become familiar with user-friendly tools that will be explained and practiced as part of training to be provided to them.

Based on tests conducted with the experimental website developed as part of the feasibility study, a dial-up connection will be sufficient to access and edit GIS data, but will be somewhat slower than more powerful internet connections. The experimental website is a partial and simplified version of the interface that would be set up for each of the utilities and municipalities within the proposed COG. Testing was conducted using each of the connection speeds reported by the utilities and municipalities participating in the feasibility study: Dial-up, DSL, Cable, and T1/Ethernet (see Appendices J and K for a summary of internet speeds reported by survey respondents – see question #21 in Appendix J and question # 18 in Appendix K). Testing was conducted to assess the speed of loading, zooming, panning, using tools such as identifying and magnifying, and turning map layers on and off.

Each of the connection speeds appeared to perform adequately for the tasks which operators would be performing within the proposed system. Certainly, as the speeds move up the continuum from dial-up to T1/Ethernet, the speed at which tasks can be performed becomes faster.

Dial-up

Opening the initial map took about 30 seconds to 1 minute. Refreshing the map after zooming or panning took about 15-20 seconds. Refreshing the map after turning a layer on or off took about 20-30 seconds. The "identify" and "magnify" tools worked as expected. This is the slowest connection that is likely to be encountered, and it can therefore be assumed that higher connection speeds will be acceptable if the web interface is acceptable at this speed. (One out of eleven respondents to the water system survey, and two out of ten respondents to the wastewater system survey, reported a dial-up connection).

DSL

Opening the initial map took about 15-30 seconds. Refreshing the map after zooming or panning took about 5-10 seconds. Refreshing the map after turning a layer on or off took about 10-15 seconds. The "identify" and "magnify" tools worked as expected.

Cable

Opening the initial map took about 15-30 seconds. Refreshing the map after zooming or panning took about 5-10 seconds. Refreshing the map after turning a layer on or off took about 10-15 seconds. The "identify" and "magnify" tools worked as expected.

T1/Ethernet

Opening the initial map took about 3-5 seconds. Refreshing the map after zooming or panning took about 5-10 seconds. Refreshing the map after turning a layer on or off took about 3-5 seconds. The "identify" and "magnify" tools worked as expected.

Given the wide range of existing internet connection speeds, it will become imperative that the web interface is as simple and non-processor-intensive as possible. The base data, such as aerial photography and roads, should be cached to allow for the fastest map drawing possible. "Caching" refers to a process in which sections of maps are pre-drawn at various scales so that the images of the map are rendered much more quickly compared to being drawn each time the user pans or zooms while using the web-based interface. The design of the map will also determine how quickly it is rendered over the internet. The map should be as simple as possible so that it draws quickly even with a slower internet connection. Labeling should be held to a minimum and symbols should be simple.

In addition to viewing the data, some testing was completed using the editing functionality. Staff at the Village of Carrollton logged onto the website and attempted to edit data points and lines as well as attribute data. It was found that the edit function worked well and is expected to perform effectively for the participating municipalities and utilities. The test was completed using a DSL connection.

Training

Staff from each member utility and municipality would receive training as soon as the web-based system becomes operational, so that the system could be used to practice key tasks immediately following the training. This training would occur over the course of 2-3 days, and would include:

- An introduction to key GIS concepts and terms;
- An overview of what a geodatabase is and how it can be utilized;
- How to use the web-based interface in order to:
  - Log onto the system;
  - View, pan, and zoom with maps;
  - Turn map layers on and off;
  - Identify attributes of each geographic feature;
  - Search and query the database to identify and locate specific elements within the utility network; and
  - Edit and update both the attributes and locations of elements within the utility network.

System Capabilities and Support

The proposed web-based system and the staff supporting it would provide member utilities and municipalities with the following capabilities:

Viewing Maps

Each member of the cooperative would be able to view information about their water and wastewater utility system, in both map and table form. For example, staff would be able to quickly enter the website and view:

- The locations of utility system assets such as water lines, water meters, hydrants, valves, etc;
- Descriptive information about each mapped asset such as what material a water pipe is made of and when it was manufactured, installed, or repaired;
- The locations of these assets relative to other geographic features such as roads, waterways, and additional features that will be visible within the website.

Panning with Maps

By using a standard computer mouse and common pointing, clicking, and dragging functions, staff can "pan" across maps, meaning "dragging" the map to view different geographic areas within a municipality or utility system.

Zooming with Maps

Again using easy pointing and clicking functions of a mouse, staff can zoom in and out to see utility system maps at different scales or levels of detail.

Viewing Utility System Data

In addition to the ability to view maps, staff would be able to view data tables including information about each point or line shown in the maps. A point is a symbol on the map representing the location of a utility asset that has a single geographic location, such as a water meter, water valve, or manhole. A line is a geographic feature that extends between two points, such as a water line. Staff can view each of these features in map form, but can also view data tables that include information about each feature – called "attribute" information – such as the diameter of a water line, what it is made out of, what company manufactured it, when it was installed, and when it was repaired.

Turning Map "Layers" On and Off

In addition to utility data, the website would include other map "layers" including streets, aerial photos, soils, floodplains, political boundaries, railroads, streams, and lakes. These layers would not be part of each utility or municipality's geodatabase, but would be available through the website (these layers are publicly available and would be obtained from sources such as ODOT, ODNR, USGS, and the Ohio Office of Information Technology). Additional layers may also be available,

depending on county, such as parcels, zoning, sidewalks, edge of pavement, structures, and building footprints. The website would provide local staff with the ability to turn these layers on and off depending on what information they desire to view along with the utility features.

Searching Utility System Data

Staff would be able to search for utility assets based on specific attributes, such as valve type, water line diameter, hydrant manufacturer, or any other information that is included in the database and that each COG member deems important. This search function would create a list of all assets that have the specified attribute that is used to perform the search.

Querying Utility System Data

Staff would be able to search for utility information based on more than one attribute at a time – a process which is called a query. Using this function, staff would be able to pick selected attributes of utility assets by using a drop-down menu, select more than one attribute, and generate a list of all of the system assets that have those attributes – for example, lines of a certain diameter AND a specific type of material AND installed during the same year or range of years.

Editing and Adding to Utility System Data

The attribute information that could be viewed by any participating entity would be limited primarily by 1) what information each entity deems important to include in the database; and 2) how much staff time each is willing and able to devote to initially entering data into the database. As described in Chapter 7, establishing the web-based system as soon as possible will require the scope of initial data collection to be narrowed in order to minimize the cost and timeframe required. The initial data collection process therefore need not and should not endeavor to complete or "populate" all of the possible attribute fields for all utility system features. The initial data collection process should focus on collecting and entering the most critical information in order to reduce the costs of initial data collection and expedite start-up of the web-based system.

Ensuring that staff are trained to add attribute information, and that they build time for these tasks into their work planning, will therefore be a critical aspect of making each member's geodatabase more complete and accurate over time.

Using the web-based interface and the training provided, local staff would be able to directly perform edits such as:

- Changing the attribute information for a particular asset if that information is inaccurate or changes;
- Adding a new point (such as a new water meter) or new line;
- Deleting a point or line;
- Changing the location of a line or point (editing the "spatial data" associated with an asset).

Using the web-based interface, after training, local staff would require about 2-5 minutes to edit a point feature, 3-10 minutes to add or change a line feature, and 2-5 minutes to add or edit attribute information for any feature.

Editing Utility System Data with Assistance from RCAP Staff

Since the proposed web-based system would be specifically tailored in order to minimize the need for extensive amounts of GIS software and expertise at each member site, local staff would require assistance with some types of tasks. For example, if utility system changes affect not only a single physical feature, such as a water line or water meter, but also affect the way that water flows within the system overall, local staff would require assistance to ensure that these changes are properly reflected in edits to the geodatabase.

For types of edits that are beyond the capabilities provided via the website, assistance would be provided by the RCAP GIS Technician. For example, data that is captured with a GPS unit would need to be uploaded to the database stored at the GIS Data Host Site by the RCAP GIS Technician. In most cases, if this data is captured with GPS units by local staff, it could be sent to the RCAP GIS Technician via email. The Technician would then "post-process" the data if need be and update the database at the GIS Data Host Site. "Post-processing" means using known coordinates on the earth to update the coordinates that were collected with the GPS unit in order to make them more accurate.

The RCAP GIS Technician would also be available to assist operators via phone or email with any questions about using the website and/or GPS units. If required, the GIS Technician would be able to visit local sites to assist staff in the use of GPS units.

"Version Control" at the Host Site

Whether editing tasks are performed directly by local staff via the website or by local staff with assistance from the RCAP GIS Technician, each edit would not be complete until the database administrator at the GIS Data Host Site finalizes the edits within the central data server and then posts the updated information onto the website so that it can be viewed and utilized, in its updated form, by local staff. This process can be described using the terms versioning, remote locations, parent database, child database, reconciliation, and posting.

The technology to be employed by the GIS Data Host Site would enable multiple versions of each member's geodatabase to co-exist at any point in time. This means that previous versions of each database – historical versions – could be stored and retrieved if needed. But it also means that one version would need to be identified at the GIS Data Host Site as the most current, accurate version that is made accessible to members via the cooperative's website. The up-to-date version of each geodatabase is referred to as the "parent database." Any edit to the parent database creates a "child" version of the database. When edits to geodatabases are performed at remote locations (locations other than the GIS Data Host Site) either by local staff or by RCAP GIS Technicians, a child database would be created. Staff at the GIS Data Host Site would first ensure that the new data has been entered in an appropriate form, and secondly would reconcile the parent and child versions of the database by identifying the child version as the new parent version. After this occurs, staff at the GIS Data Host Site would post the new parent version onto the website, and at that point local staff

would be able to view their up-to-date geodatabase, including the most recent edits that local staff initiated. It is anticipated that the entire reconciliation and posting process would occur within 24 hours of each edit initiated by local staff or RCAP staff.

Planning and Analysis

The data accessible via the website would enable local staff to more efficiently plan for projects, maintenance, and trouble-shooting. For example:

- When planning for a project, staff would be able to quickly identify the location and information about lines and other assets that would be affected by the project;
- Staff would have the ability to assess the impact of shutting off water to properties downstream of the shutoff location;
- Staff could utilize the data to efficiently dispatch crews to certain locations along the utility network, or to features connected to a particular asset within the network.

"Hyperlinking" Maps and Documents to Geographic Features

GIS Data Host Site staff would develop and incorporate into the web-based interface the capability for local staff to "hyperlink" or attach documents such as maps, drawings, and customer billing information directly to the geodatabase. After the file is attached to the geodatabase – for example, a map or drawing pertaining to a particular utility system feature – the file name would appear in one of the attribute fields associated with that asset in the geodatabase. Local staff could then click on the file name and the document would be promptly retrieved for viewing. For hard-copy maps that are not in digital format, this process would first require the documents to be scanned and converted into digital files, and therefore purchasing a scanner may be beneficial for participating entities. Large format drawings and maps would need to be taken to a vendor in order to be scanned before they could be hyperlinked to the geodatabase.

Extracting Data

Using the web-based interface, local staff would have the ability to extract and download data for use with GIS software or for use with a mobile GPS device. Users would be able to draw a polygon around an area and download the data within that polygon, or to download the entire dataset for a utility system if desired.

Making Data Available as "Live Maps" to Designated Third Parties

If desired, users would be able to provide third parties such as regional planning commissions or engineering firms with online access to their utility system data. This would be accomplished by publishing datasets as a "Map Service" within the website and by providing an access code to designated third parties, who could then go to the website and download the desired datasets.

Color-Coding Map Symbols based on Key Attributes

Based on the needs of participating entities, map symbols could be designed to appear in different colors based on information in the attribute fields for utility system features. For example, if a water meter has an attribute field for "active" or "not active" in reference to the associated water account, the symbol for the water meter could be set to reflect which of these two different conditions is accurate. Or, in order to visually track valve activity on a map, the color of the symbol for the valve could be set to change if the last valve exercise date is older than 6 or 12 months. Or, if an attribute field for a utility system feature reflects needed repairs, the color of the feature's map symbol could be set to reflect these repair needs, for example showing all features for which repairs are marked "urgent" in a particular color.

Linking Customer Billing and Asset Management Software to GIS

There are multiple examples of local governments integrating other software programs, such as customer billing and asset management software, into GIS in order to increase the efficiency of maintenance, analysis, capital budgeting, billing, and reporting. This could be done within the proposed web-based system, but the additional costs of doing this are not included in the implementation budget in this feasibility study.

There may be a wide variety of programs that potential members of the cooperative are already using for billing and asset management, and so it would not be practical to address the specifics of integrating each one of these programs into the proposed web-based system. The ability to connect these programs to the GIS database at the GIS Data Host Site will depend upon the software that is used at each site and that software's ability to connect to outside databases. If all of the participating utilities and municipalities use the same software, then integrating these programs into the web-based system could clearly be accomplished more efficiently and less expensively. Within the proposed cooperative, it would not be necessary for all members to integrate additional software into their GIS; it could be optional for each member (for additional costs).

This feasibility study does not recommend any specific customer billing or asset management software, or estimate the costs of integrating this software into the proposed web-based system. However, the Voinovich School and RCAP held very informative conversations with a number of software vendors during the feasibility study, and RCAP continues to investigate alternatives for this potential dimension of the proposed web-based system.

EVALUATION OF COOPERATIVE GIS MODELS

Research about cooperative structures for governmental services including GIS was conducted via internet searching, document searching through the University of Ohio library system, and communications by phone and email with key informants. In total, over 60 resources were utilized in the research process, including governing documents and staff input from over 30 organizations, as well as secondary resources. These sources are listed in the References section of this report.

The evaluation of cooperative GIS models was approached from three related perspectives:

1. What models currently exist for the cooperative delivery of GIS services, what services are delivered through these models, and what roles do governmental entities play within these structures?
2. What models currently exist for the collective delivery or procurement of services to or by multiple governmental entities (not limited to GIS services)?
3. What are the most pertinent lessons about key operational requirements, service delivery approaches, decision-making, and cost-sharing to be drawn from these examples?

Models for Cooperative GIS Services

Types of GIS Cooperatives

There are many examples of cooperative GIS efforts throughout the Unites States, including:

- Cooperative efforts among agencies within single governments;
- Cooperative efforts among multiple governments, some with non-profit, university, and/or business partners;
- Cooperative efforts initiated and facilitated by universities; and
- Ongoing relationships and one-time projects with limited cooperative dimensions.

Purposes of GIS Cooperatives

In addition to variations in participation structures, existing cooperative GIS efforts have many different purposes and combinations of purposes. Key purposes among these cooperative efforts include the following:

- To increase awareness of GIS and its benefits among entities that have not yet adopted GIS technology;
- To create common policies and standards regarding the development, purchase, storage, management, or sharing of geospatial data;
- To create common approaches to the initial collection and conversion of geospatial data;

- To provide technical advice and support to entities in their initial set-up of GIS hardware and software;
- To provide training to users of GIS hardware and software;
- To increase the level of convenient access to geospatial data by the general public;
- To share geospatial data among cooperative members and/or with the general public;
- To provide map-making and geospatial analysis services; and
- To provide online data viewing and editing capabilities to cooperative members and/or the general public.

The Critical Purposes of the Proposed GIS Cooperative

The success of the proposed cooperative is dependent upon successfully achieving all five of the following purposes:

1. Assisting multiple utilities and municipalities in initially collecting data and converting it into GIS format;
2. Providing a web-based mechanism that allows these entities to view, manipulate, and edit this data after it is collected;
3. Providing the training and technical support required in order for these entities to utilize the web-based GIS tools;
4. Providing these forms of assistance without requiring each member entity to have sophisticated GIS software or high levels of knowledge about GIS; and
5. Providing these forms of assistance to entities in more than one geographic region.

Key Findings

Many of the identified examples that come closest to combining the five critical purposes listed above are county-level governments providing support and services to municipalities within those counties. This pattern appears to exist in large measure because the data management and mapping interests of County governments coincide in significant ways with the interests of municipalities within their respective counties. In these examples, County governments are not merely providing services to municipalities that pay fees in return, but are supporting much of the required infrastructure and costs based in part on their own self-interest in the accuracy and completeness of GIS data within their respective counties. In turn, these relationships are often made possible by shared use of tax revenues originating from residents and businesses in all participating municipalities. These examples include a heavy emphasis on shared data collection costs and shared data, some emphasis on County-provided training and assistance with municipal-level hardware and software set-up and operation, and some limited web-based dimensions. These county examples provide important guidance regarding some cost estimating issues, but do not represent appropriate models for funding approaches since there is not any realistic funding analogy between county

governments in these examples and the coordinating entity that will be required for the proposed cooperative.

Among the identified examples, the most common structure for providing GIS services to multiple governments, aside from County governments, is a Council of Governments (COG) or Regional Planning Agency (RPA) structure. These structures have similarities, but a COG structure can be utilized to serve more than one geographic region, while an RPA structure cannot.

Among examples of web-based GIS services, there are:

- Many single- and multi-government examples of systems that allow governmental entities and the general public to *view* limited GIS data sets online;
- Many examples of online data-sharing across multiple governments and non-governmental entities; and
- One example of data from multiple governments being available at multiple, redundant data servers accessible by all of these governments online.

These examples provide some important lessons. However, in cases where data is shared online among two or more governmental units, each participating government requires GIS software, a substantial level of staff expertise, and in many cases an on-site data server at each location to store the data. In some cases, data editing and updating is not possible online, and updated data is transferred from one entity to another in the form of a storage medium such as a compact disk. These examples shed only partial and indirect light on how to provide *online data editing* capabilities to multiple governmental entities – not just online viewing capabilities, which are fairly common. Moreover, these examples do not illustrate how to provide these capabilities *without* requiring participating entities to have a significant level of GIS software and in-house GIS expertise.

While this feasibility study is focused on an *inter*-governmental cooperative framework, many of its findings have been drawn from *intra*-governmental examples, particularly with respect to estimating the staff time required to administer a database serving multiple users in multiple locations. While the analogies are not perfect, the individual agencies in these examples are analogous to individual governments in an inter-governmental scenario; the database administrator serving these agencies is analogous to a database administrator at the GIS Data Host Site serving multiple governments; and the computer network connecting these agencies is analogous to the internet in an inter-governmental scenario. The means of transferring information between the database administrator and the entities at multiple locations is different: a network typically performs this function within a government, while the internet would serve this function between governments. But the database administration tasks have many similarities.

The Basis for Developing Recommendations

There were no examples identified that encompassed all five of the critical purposes listed above for the proposed cooperative. As a result, the recommendations in this feasibility study are based upon:

1. Lessons drawn from many dissimilar examples, none of them entirely analogous to the proposed GIS cooperative;

2. Lessons drawn from the Voinovich School's own experience with several pertinent efforts involving data collection, web-based GIS, and database administration;
3. The experimental web-based system developed by the Voinovich School during the course of the feasibility study;
4. Data collection efforts undertaken by the Village of Carrollton with assistance from RCAP and the Voinovich School during the course of the feasibility study;
5. Staff cost estimates for database administration extrapolated from intra-governmental examples; and
6. A front-line customer service approach developed in collaboration with RCAP.

Models for Cooperative Governmental Services

Models Evaluated

Intergovernmental cooperative efforts (not limited to GIS) were identified in the following structural forms:

- Councils of Government;
- Regional Planning Agencies;
- Cooperative Agreements;
- Consortiums;
- Committees;
- Memoranda of Agreement (MOA) or Understanding (MOU).

Benefits of a Council of Governments (COG) Structure

A Council of Governments (COG) is recommended as the most appropriate structure for the proposed GIS cooperative, for the following key reasons:

- It is the most common structure for the joint provision or procurement of products and services among multiple governments.

  A COG approach is by far the most common approach identified, nationwide and within the State of Ohio, for the joint provision or procurement of services among multiple governmental units. It therefore has a significant track record, and many existing examples, to draw upon.

- It is tailor-made for the purposes of the proposed GIS cooperative.

  The commonality of the COG approach is not surprising or incidental: the COG structure has been established and embedded in state law precisely in order to assist governmental entities in jointly making decisions and sharing resources.

- It provides geographic flexibility.

  A COG approach has many similarities to a Regional Planning Agency approach, but the latter is not appropriate because the proposed cooperative is intended to accommodate members in more than one geographic region of the state. A COG approach can be utilized to achieve geographic flexibility by allowing the proposed entity to have members from multiple parts of the state. The vast majority of existing COGs in Ohio focus upon one geographic area and have member governments that are geographically contiguous with one another. There is at least one existing COG in the state of Ohio – the Regional Income Tax Agency (RITA) – that is essentially a statewide organization and does not require geographic contiguity among its members.

- It provides significant administrative and decision-making flexibility.

  Existing COGs illustrate a significant amount of flexibility regarding decision-making and the management of funding, staff, and contractual services. More specifically, a COG's operations can be handled through an existing organization, and therefore a COG does not require the establishment of a new, staffed organization in order to operate.

- It provides significant membership flexibility.

  Membership in a COG is also flexible in terms of member types. Many existing COGs have governmental as well as non-governmental members and partners, as well as some members that receive services and pay membership fees and others that do not.

- It provides a binding structure embedded in state law.

  A Council of Governments provides a binding structure, embedded in state law, which cannot be achieved through looser mechanisms such as consortiums or committees, and cannot be achieved in a cooperative fashion with private contracts. While committees and consortiums are often very effective means of bringing parties together and facilitating joint decision-making, they do not provide the kind of legal structure required in order for participants to have confidence in the binding nature of mutual commitments, particularly financial commitments. The converse is also true: a COG is more difficult to establish than looser forms of collaboration. But this, it could be argued, is precisely the point. Participating entities need to have a compelling interest in obtaining the services to be provided through the cooperative structure. If this interest is not sufficiently compelling, then they won't be interested in entering into binding commitments, or in investing the time required in order to make these commitments mutually with multiple other entities. This process therefore ensures that participating utilities and municipalities are truly committed to the endeavor.

- It mitigates risk by providing a transparent structure for members to make mutual decisions and commitments.

  This is perhaps the most compelling characteristic of a Council of Governments structure. A COG requires Bylaws, as well as municipal resolutions by participating entities, that are transparent forms of commitment. Significantly, these commitments are not primarily between each member and a central service provider, but are commitments that all members are concurrently making to one another to share the costs and risks of obtaining services that no member is able or willing to obtain independently.

Is a New Structure or Cooperative Structure Really Needed?

While a COG structure is a highly reasonable choice given the benefits described above, establishing a COG will nonetheless require a significant investment of time (and probably patience) among all participating entities (This process is described in detail in Chapter 7). Therefore, it is important to address one basic question: is a new COG – or any cooperative structure at all – really necessary?

Alternatives

1. Fold the Cooperative Into an Existing Organization

   One alternative would be to fold administration of the proposed GIS cooperative into the operations of an existing organization. This would have some clear benefits since it would eliminate the need for a new organization. Indeed, recommendations described in Chapter 5 suggest the benefits of utilizing RCAP's existing administrative structure to support the proposed COG. However, this recommendation is for an existing administrative structure *to support the COG, not supplant its purpose or eliminate the need for it.*

2. Fold the Cooperative Into an Existing COG

   Folding the proposed GIS cooperative into an existing COG could also have potential benefits, but this would not support the purpose of the proposed cooperative, for two key reasons. First, most existing COGs (as well as Regional Planning Agencies) are tied to specific geographic regions, and therefore could not achieve a key goal of the proposed web-based system: to be available to utilities and municipalities in multiple parts of the state. Second, the purposes of existing COGs that may have statewide service areas may be so different from the purposes of the proposed GIS cooperative that mixing these purposes would make little sense. For example, the only existing statewide COG that was identified during the feasibility study is the Regional Income Tax Agency (RITA). The expertise required in order to operate this COG, and the interests of its members, are too dissimilar to expect that the two sets of functions and member interests could co-exist.

3. Form a Consortium, Committee, or Cooperative Agreements

   Other potential cooperative structures – such as consortiums, committees, and cooperative agreements – do not provide the kind of binding and transparent legal structure required to facilitate the significant funding commitments that the proposed cooperative would require.

These structures often provide significant flexibility to allow members to flow in and out, to participate at high or low levels, to participate in name only, or to participate without any binding legal commitment to participate financially. This flexibility is in fact a key benefit of these approaches: they can attract participation without commitments that may be viewed by some members as too burdensome or cost-prohibitive.

4. Utilize a Market-Driven Fee-for-Service Approach

   One final alternative is to have no cooperative structure at all, which could be accomplished by viewing the proposed GIS services as just that: services to be provided to customers in exchange for fees facilitated through private contracts. This approach is worthy of consideration, but needs to be evaluated based on a clear definition of potentially conflicting missions, an assessment of risks, and probably a level of analysis including formal market analysis that is beyond the scope of this feasibility study. This approach is analyzed in the following section.

Key Challenges of a Fee-for-Service Approach

Assessing the challenges and risks entailed in providing the desired GIS services through a fee-for-service approach illustrates why a COG structure is ideally suited for the proposed cooperative.

This section utilizes RCAP as an example to illustrate key points relating to the potential risks involved in starting up the proposed GIS cooperative. These illustrations do not represent RCAP's intentions to take, or not take, any of the illustrated approaches. They are intended to guide the evaluation of alternative approaches that RCAP and participating utilities and municipalities may consider in determining how best to establish the desired GIS services.

Providing the desired GIS services through a fee-for-service approach could be accomplished through numerous service-delivery structures including an existing or new business, non-profit, for-profit subsidiary of a non-profit, or university. For example, under this approach, RCAP or another entity could develop and price GIS services and offer those services to customers including utilities and municipalities.

The proposed cooperative has not been analyzed in this feasibility study as a business venture to be undertaken by RCAP or any other entity on a fee-for-service basis. Rather, the return on investment has been defined as the development among participating utilities and municipalities of GIS capacities that would otherwise be out of their reach – which is the key mission RCAP is trying to achieve in investigating the feasibility of the proposed cooperative. Nonetheless, the possibility of providing the proposed GIS services without requiring a new cooperative structure is worth considering, especially if it makes the process less burdensome on the participating entities. A preliminary analysis of this alternative is useful, even if that analysis is necessarily limited.

Under any scenario, it is assumed that RCAP would need, at minimum, to cover its costs associated with starting up and operating the proposed cooperative, through a mix of existing and planned revenue streams, additional grant funding to be secured, and funding provided by participating utilities and municipalities. In order to accomplish this, it would not be inappropriate for RCAP or any other non-profit entity to approach this challenge from a business planning perspective. Indeed,

profit-generating "social enterprises" are playing an increasingly important role in making non-profits more self-sufficient. However, if RCAP endeavored to develop and market GIS services, utilities and municipalities would judge this approach based on one key basis: confidence that a high-quality and desirable service would be provided in a cost-effective and timely manner.

There would be two key sets of challenges inherent in this approach.

1. Potentially Conflicting Goals

   An approach based exclusively on fee-for-service relationships between a provider and customers could fundamentally conflict with the goals and means of establishing a cooperative. A fee-for-service approach could certainly provide GIS services. However, providing services in this manner would not necessarily require a cooperative structure of any kind, and arguably should not be connected to one. The service provider, seeking to earn profit or at least break even, would not necessarily want to tie its decision-making rationale exclusively to any specific set of clients or limit itself to the set of customers or services anticipated in this feasibility study. The initial challenge would therefore reside in approaching the problems described in this feasibility study from an entirely different perspective requiring detailed market analysis, potentially a re-definition of the services and potential customer base involved, and a business plan and marketing strategy.

2. High Risk

   The second set of challenges relate to the risks that RCAP or another entity would need to incur in order to provide the proposed GIS services on a fee-for service basis. These risks relate to the unique challenges of providing the proposed services to the small utilities and municipalities to which it would be offered.

Applying a Market-Driven Model

Employing a fee-for-service approach, using RCAP as an example service-provider, requires adopting a market-driven model. In this model – significantly limited in this example by a fixed set of services and customers – the assumed universe of potential customers would be limited to the utilities and municipalities with which RCAP has existing relationships, and the assumed services to be developed and marketed would be limited to the services described in this feasibility study:

1. Assisting utilities and municipalities in initially collecting utility data and converting it into GIS format;

2. Providing a web-based mechanism that would allow these entities to view, manipulate, and edit data after it is collected; and

3. Providing the training and technical support required in order for these entities to utilize the web-based GIS tools.

The challenges inherent in providing these services would make offering them in a fee-for-for-service manner a very risky endeavor, whether the goal was to break even within an existing non-profit structure or to earn a profit within a subsidiary or altogether separate entity.

The anticipated set of GIS services would not be simple or inexpensive to establish. The proposed cooperative faces a unique challenge: its goal is to provide a web-based GIS data hosting service to entities that, for the most part, do not have any GIS data to host. This means that initial data collection must happen before the proposed web-based service would have any value to prospective customers. More specifically, it means that data collection must be completed among a sufficient scale of entities in order for the initial scale of the cooperative to be large enough to drive down the costs for each member to a level that a business plan might deem marketable. This initial member recruitment and data collection process is projected to cost over $400,000 – *prior to* the establishment of the web-based services. That is, at least $400,000 is required simply to provide a sufficient base of potential customers to which the service would be offered. In addition to these initial costs, the web-based data hosting services to be offered would have first-year costs of over $300,000.

Risk Considerations for RCAP

The scenario just described would be less of a problem for RCAP if data collection could be effectively marketed as a stand-alone service. But this is precisely what cannot be reasonably done in the situation at hand. The biggest challenge in starting up the web-based service on a fee-for-service basis is this: the value of initial data collection to potential customers cannot be separated from the value of the proposed web-based service itself. Customers would not see much value in paying for data collection services if they could not reasonably expect to have an affordable GIS infrastructure to utilize and maintain the data after it is collected. Therefore, RCAP could not significantly limit its start-up investment or risk by offering data collection services as a stand-alone service, since customers would need to have a reasonable expectation that a cost-effective GIS system would be available to them after data collection. Indeed, the current absence of such a system is a primary reason that many utilities and municipalities have not already moved forward with initial GIS data collection.

To make data collection services marketable, RCAP would therefore need to wrap the web-based service or some other means of providing local GIS infrastructure into the data collection service being offered and priced. Fee-for-service contracts would therefore entail a significant amount of risk for RCAP unless RCAP were convinced that it would attract enough customers to purchase both the data collection and web-based hosting services, and in turn that RCAP would be able to deliver both sets of services to all customers within the cost and timeframe specified in each contract.

Due to this high level of risk – and in the absence of a formal market study – this feasibility study does not provide a sufficient basis to recommend that RCAP or any other entity pursue the establishment of the proposed GIS services exclusively on a fee-for-service basis. Within the proposed cooperative approach, fee-for-service contracts will certainly play a role in cases where utilities and municipalities receive direct assistance from RCAP or other entities, but those contractual relationships would be pursued within the context of commitments made mutually among participating entities to share the costs and risks of the infrastructure required to provide those services.

Risk Considerations for Utilities and Municipalities

Risk considerations are equally important from the perspective of utilities and municipalities that may be interested in joining the proposed cooperative. Assuming that RCAP or another coordinating entity is not willing to assume all of the start-up costs and risks, utilities and municipalities would need to share these costs and risks. Since start-up of the web-based service at a reasonable cost per member is contingent upon a sufficient scale of members, few entities will be willing to make up-front financial commitments if they do not have evidence that other entities are willing to do likewise. Moreover, their willingness to incur data collection costs will be tied to an expectation that the web-based system will actually be established – again, in the absence of this service, initial data collection is a much less attractive investment. So, therefore, mutual commitments are not only needed from multiple entities to move forward with data collection. These commitments must to be tied to mutual commitments to share the costs of the ultimate goal: the web-based GIS infrastructure.

It is important to emphasize that all parties must be willing to take some risks in order for the proposed cooperative to be established. While these risks cannot be eliminated entirely, a cooperative structure is recommended most importantly in order to minimize the risks to all parties by sharing that risk among them.

The Risk-Mitigating Benefits of a Council of Governments Structure

The primary benefit of a Council of Governments structure is that it provides a means for mitigating the risks described above, for both RCAP and participating utilities and municipalities. It mitigates these risks – in a way that multiple, private, fee-for-service contracts cannot – by requiring mutual commitments to be made simultaneously and transparently by multiple entities. These commitments would be made through a series of phases ultimately leading to a formal, collective decision-making structure: the proposed Council of Governments.

The recommended process for starting up the proposed COG is explained in detail in Chapter 7. However, building on the risk-mitigation discussion above, it is useful to highlight the key elements and phases of that process:

- By investing initial resources in outreach and recruitment activities, RCAP will lessen the risks of participation perceived by utilities and municipalities. This will be accomplished first and foremost by RCAP's ability to articulate the benefits and projected costs of the proposed cooperative. Even though establishing the COG is not the first activity to be undertaken – data collection must happen first – the attractiveness of the proposed web-based GIS infrastructure will fundamentally drive how utilities and municipalities view the costs and risks of data collection;

- As some utilities and municipalities initially agree to participate, RCAP's perceived risks in investing further resources will be lowered, and it will be positioned to allocate or secure additional resources for the effort;

- As RCAP can demonstrate initial commitments among some utilities and municipalities, this will lower the risks of participation perceived among additional entities, since they will be able to see that others are willing to share the risk;

- An initial cohort of utilities and municipalities will provide the critical mass required in order to develop an operational and cost-sharing approach for initial data collection;

- As the initial cohort of entities proceeds with data collection, RCAP will be positioned to recruit another cohort of entities to do likewise. The proposed implementation plan sets a goal of completing initial data collection among entities that have a combined size of 100,000 utility connections over the course of two years – 40,000 in year one, 60,000 in year two. This scale is projected to provide the economies of scale required in order to make first-year COG membership fees attractive to prospective members. It is possible – under the best-case scenario – that a sufficient scale of committed entities will be identified in one round of outreach and member recruitment, in which case data collection could feasibly be completed in one year, not two, and a second or third round of outreach will not be necessary;

- As the scale of all entities that have completed initial data collection approaches the target scale of 100,000 combined utility connections, RCAP will be in a position to convene all of these parties in order to formally create the COG. This phase of the process will entail:

    1. Finalizing the COG's scope of services and operational framework;
    2. Soliciting bids and selecting a subcontractor to provide the web-based data hosting services and associated training and technical support services to COG members;
    3. Identifying grant funding to be sought to support start-up costs;
    4. Finalizing first-year COG membership fees;
    5. Finalizing two legal documents – an Agreement to Establish the COG and the COG's Bylaws – that will have been developed in draft form prior to the initial outreach process;
    6. Securing legislative resolutions from each member entity authorizing its participation in the COG;
    7. Developing and signing a contract with the selected GIS Data Host Site subcontractor; and
    8. Commencing the COG's first year of operation.

The next chapter analyzes administrative, program management, and GIS service delivery options to be considered in the process of establishing the proposed COG.

ADMINISTRATIVE, PROGRAM MANAGEMENT, AND GIS SERVICE DELIVERY OPTIONS

Within a Council of Governments (COG) structure, there are a number of alternative ways to administer the COG, manage and coordinate its programmatic elements, and deliver services to its members. This chapter describes and evaluates these options, as summarized in Figure 1.

Administrative Options

There are two basic administrative options for the proposed Council of Governments:

- Administrative Option #1: Create a New Administrative Structure for the COG

  Under this approach – the **"New Organization Model" –** the COG would create a new organization that directly manages the COG's funding and hires its own staff.

- Administrative Option #2: Name a Fiscal Agent to Manage COG Funds, Staff, and Contracting

  Under this approach – the **"Fiscal Agent Model" –** the COG's Bylaws would designate a fiscal agent to be responsible for the administration of COG funding and contracts.

These two options were evaluated based on interviews with personnel at existing COGs, interviews with individuals involved in starting up COGs, the experiences of other organizations and Voinovich School staff that have faced similar programmatic start-up choices, and some basic logic about what it takes to start-up a new administrative structure compared to utilizing one that already exists.

The Fiscal Agent Model is preferable to the New Organization Model, for four key reasons:

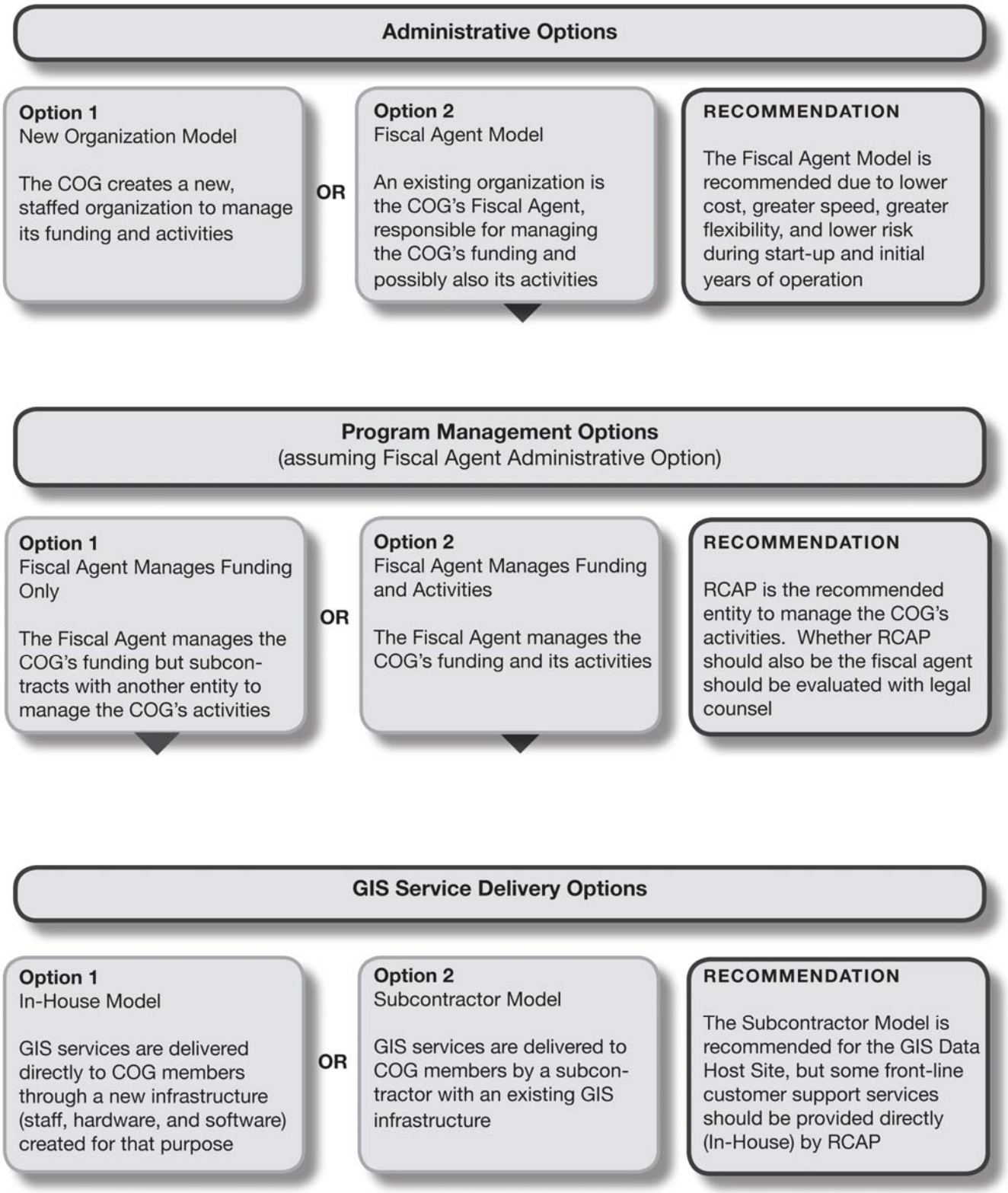
1. Greater Speed

   Start-up can happen faster within an existing administrative structure, since it is not necessary for an existing organization to undertake many start-up activities that would be required for a new organization, such as obtaining new office space, establishing accounting and human resource systems and procedures, and hiring new staff.

2. Lower Risk

   There is significant risk involved in creating a new staffing/hardware/software infrastructure that may not be sustainable in the future (that is, if the effort fails). Hence, the Fiscal Agent approach provides an easier exit strategy if needed.

Figure 1: COG Administration, Program Management, and GIS Service-Delivery Options



3. Lower Cost

   Cost estimates were not developed in order to evaluate these two options. However, the New Organization Model can be safely assumed to be significantly more expensive than the Fiscal Agent Model based on its need to obtain or develop office space, human resource systems, and accounting capacities, among other capacities, that already exist within existing organizations.

4. No Compelling Reason to Start a New, Staffed Organization

   Since naming a fiscal agent is allowable within a COG and has all of the advantages described above, there would need to be a compelling reason not to select the Fiscal Agent Option. There is no such reason within the framework of this feasibility study.

For these reasons, the Fiscal Agent Model is recommended. The COG's fiscal agent could be RCAP, one of the COG's member utilities and municipalities, or another organization that is not a COG member.

Program Management Options

If the COG chooses the Fiscal Agent Administrative option, as recommended here, it will need to identify not only a fiscal agent but also an organization responsible for playing lead program management roles on behalf of the COG. This entity and the fiscal agent could be the same organization or two different organizations.

RCAP is the recommended entity to play the lead program management roles on behalf of the COG, for reasons partially reviewed earlier in this report:

- RCAP initially pulled together the partners in this feasibility study, secured resources to support it, and provided invaluable input and guidance in its development, all of which illustrate a strong knowledge base, strong relationships with partners, and an organizational commitment to bringing GIS technology within the reach of RCAP's partner utilities and municipalities;

- Because of RCAP's presence in multiple parts of the state, and its strong relationships with utilities and municipalities in all of these areas, RCAP is uniquely positioned to play a central role in the cooperative's service delivery model;

- RCAP has strong relationships with public and private funders that may consider providing resources to assist in start-up of the proposed cooperative;

- RCAP has expertise in how utilities operate, in utility asset management, and in GIS;

- If the recommendations in this feasibility study are followed, RCAP will have played the lead role in starting up the COG, and in the process will have developed an extensive understanding of the issues that will be critical to the COG's success;

- RCAP would have a level of neutrality that no member municipality or utility could have, and would be unique among participants because it would be providing services to the COG, not receiving services from it;

- Finally, RCAP will have developed and may wish to sustain a role in helping prospective COG members complete initial data collection, and will want to coordinate this role with other roles pertaining to the COG.

In order to play the lead program management role on behalf of the COG, RCAP would not need to be the COG's fiscal agent. Existing COGs reflect an enormous level of flexibility in state statute: there are many different ways to structure the flow of funding and decision-making, any number of which could allow RCAP to play the proposed lead role. It would be possible, for example, for a utility or municipality that is a COG member to be the COG's fiscal agent, and then to contract with RCAP for services to be provided to the COG. It would also be possible for an organization that is not a COG member to be the fiscal agent. The advantages and disadvantages of alternative approaches need to be determined by RCAP and COG members with advice from legal counsel when the time for COG start-up arrives.

GIS Service Delivery Options

In any of the administrative and program management options described above, additional decisions would be required regarding how to deliver the proposed web-based GIS services.

There are two basic GIS service delivery options:

- GIS Service Option #1: Develop In-House Web-Based GIS Capacity

  Under this approach – the **"In-House Model" –** RCAP would hire its own GIS staff, purchase its own hardware and GIS software, and directly provide the web-based GIS services to COG members.

- GIS Service Option #2: Subcontract for Web-Based GIS Capacity

  Under this approach – the **"Subcontractor Model"** – RCAP would subcontract with another entity, such as a private firm or university, to provide the web-based GIS services.

The evaluation of these options is based in part on the same factors involved in deciding among administrative options, as discussed above. In most cases, it is reasonable to expect that building in-house capacities will take more time and entail more cost and risk than subcontracting for those capacities. In addition, with respect to the specific needs of the proposed GIS cooperative, two other factors provide a basis for recommending the Subcontractor Model:

1. Attracting and Retaining the Appropriate Types and Levels of Staff

   An existing entity that does GIS work can assign fractions of existing staff to a project, whereas starting up a new internal GIS capacity for this project would present a challenge of

bringing on board no more or less staff capacity than is actually needed and paid for by the project: 1/3 of a GIS Manager, 1/4 of a GIS Technician, 1/10 of an IT Manager, etc.

2. Adjusting to Shifting Staff Demands and Revenue Streams

   In addition to start-up challenges, adjusting the composition of in-house staff over time would be much more challenging than subcontracting for services from another entity that has other GIS clients and revenue streams supporting its GIS infrastructure.

As detailed in Chapter 6, the Subcontractor Model appears to have significant GIS-specific cost advantages over the In-House Model, in addition to the more general start-up cost advantages described in this chapter. However, it should be emphasized that these cost advantages are not the primary rationale for favoring the Subcontractor Model. Even if the Subcontractor Model was more expensive – unless the cost difference was extreme – the Subcontractor Model would still be the recommended choice for start-up and initial operation of the proposed GIS services because of the risk, flexibility, and speed factors involved. Once the COG has been successfully established and its membership grows in size, it may make more sense for the COG and/or RCAP to develop in-house GIS capacities as opposed to subcontracting for the web-based GIS services.

Conclusions: The Preferred Model

The analysis presented above supports the following key recommendations regarding the preferred cooperative model:

1. A Council of Governments (COG) is the most appropriate structure for the proposed cooperative;

2. The COG should designate an existing entity as the COG's fiscal agent as opposed to starting up a new, staffed organization to manage the COG's funding and contracts;

3. The COG should designate RCAP to be the lead agency responsible for managing the COG's activities and its services to members (in order to play this role, RCAP could also be the fiscal agent but would not need to be); and

4. The COG (through its fiscal agent) should subcontract with a private firm or university to play the role of GIS Data Host Site.

While the Subcontractor Model is preferred for the GIS Data Host Site, it must be emphasized that the proposed implementation model described in Chapter 7 also includes key in-house roles to be played by RCAP staff. As emphasized earlier in this report, a critical purpose of the proposed cooperative is to provide local GIS capacities without requiring an extensive amount of GIS software or GIS expertise to exist at each member site. One consequence of this approach is that some tasks will not be possible for local staff to complete without assistance to be provided by a GIS Technician proposed to be on RCAP's staff. In regard to front-line customer support functions, an in-house approach is preferable to a subcontractor approach for three key reasons:

First, because of RCAP's presence in multiple parts of the state and its existing relationships with utilities and municipalities in each of these areas, a GIS Technician on RCAP's staff is likely to be in a much better position to provide front-line customer service to members of the COG than would a GIS Technician employed by a remote GIS Data Host Site subcontractor.

Second, because the proposed GIS Technician position would be an entry-level position requiring modest amounts of hardware and software, it would not be an overly burdensome challenge for RCAP to build this in-house capacity.

Third, as discussed in greater detail in Chapter 7, it is likely that RCAP will already have one or more GIS Technicians on its staff by the time the COG is established, since RCAP GIS Technicians may play key roles in the process of data collection leading up to the establishment of the COG. As a result, RCAP will be uniquely positioned to build upon the existing relationships between the RCAP Technician(s) and COG members.

Finally, it should be emphasized that the Subcontractor Model may have fewer advantages, and more disadvantages, as the COG develops and increases in size over time. The Subcontractor Model has particular advantages due to the start-up nature of the proposed cooperative that it might not have after the proposed GIS services have been established and can be shown to be successful and marketable at a more predictable cost.

GIS DATA HOST SITE REQUIREMENTS AND COST ESTIMATES

This chapter builds upon the previous chapters by focusing on one organizational aspect of the proposed cooperative – the GIS Data Host Site – in order to further define the preferred implementation model and its estimated costs.

The preferred implementation model must be defined based upon four key criteria:

1. Organizational issues;
2. Technical issues;
3. The scale of the cooperative; and
4. Cost.

The previous two chapters addressed the first of these criteria, recommending that the proposed cooperative should be established through a Council of Governments (COG) structure in which the COG designates an existing entity to be the COG's fiscal agent; the COG designates RCAP to be the lead agency responsible for managing the COG's activities and its services; and the COG subcontracts with another entity to play the role of GIS Data Host Site.

This chapter addresses all four of these criteria simultaneously in order to assess whether and how technical costs would be impacted by the scale and organizational structure of the COG.

This chapter does not address all costs associated with the proposed COG. The implementation budget detailed in Chapter 8 is based partly upon the GIS Data Host Site cost estimates provided in this chapter, but also includes cost estimates for organizing and administering the COG, initial GIS data collection, and training.

As emphasized in the previous chapter, the Subcontractor Model is recommended over the In-House Model for the GIS Data Host Site somewhat independent of cost: the Subcontractor Model is recommended even if it is more expensive than the In-House Model, for reasons related to speed, flexibility, and risk. Nonetheless, the costs of the GIS Data Host Site are estimated in this chapter for both the In-House and Subcontractor Models in order to 1) identify any key cost differences that may exist between the two models; and 2) determine whether the In-House Model could have enough of a cost advantage over the Subcontractor Model to outweigh its speed, flexibility, and risk disadvantages.

Models and Costs Evaluated

The Voinovich School developed cost estimates for multiple scenarios under both the In-House and Subcontractor Models for the GIS Data Host Site. For each model, cost estimates were developed for four different cooperative scales as measured by number of combined utility connections – eight different scenarios in total. These options were evaluated in order to:

- Assess economies of scale – that is, if and how much costs would decrease per utility connection as the overall system scale increases;
- Identify and explain key structural cost differences among the two models and their sub-options; and
- Identify an optimal, or minimal, scale that the cooperative would need to reach in order to bring costs-per-member to a level that would be attractive to initial members.

Table 4 provides a summary of the eight GIS Data Host Site models evaluated. The four system scales – ranging from less than 10,000 utility connections to 100,000-125,000 utility connections – were established based on different software licenses that exist for each of these scales. For all eight of these options, costs were estimated for the provision of web-based GIS data hosting services by the GIS Data Host Site.

TABLE 4
GIS DATA HOST SITE MODELS EVALUATED

	Total Number of Utility Connections			
	Less than 10,000	10,000-49,999	50,000-99,999	100,000-125,000
In-House Model	1A	1B	1C	1D
Subcontractor Model	2A	2B	2C	2D

Costs Included in the Estimates

The following costs were estimated in this phase of the study:

- Hardware, software, and staff costs for the GIS Data Host Site.

Costs not Included in the Estimates

The following costs were not estimated in this phase of the study because they were not expected to be appreciably impacted by the different organizational or scale scenarios being evaluated and/or because their costs would be more significantly impacted by unknown local variables:

- The costs for organizing and administering the COG;
- The costs for initial GIS data collection by each utility and municipality;
- The costs for training;
- Costs that would be required at each participating utility and municipality site in order to view and edit the centrally-hosted data.

All of these costs are included in the implementation budget discussed in Chapter 8.

Hardware Requirements and Costs

Hardware Requirements

For both the In-House and Subcontractor Models, the hardware cost estimates are based on the hardware requirements shown in Table 5. The specific hardware items utilized for cost estimating were chosen based on the specifications for the pertinent ESRI software, which can be reviewed at ESRI's website: see http://wikis.esri.com/wiki/display/ag93bsr/ArcGIS+Server). The hardware items listed in Table 5 are consistent with the hardware bundles shown at: http://www.esri.com/partners/apps/hw_promo/index.cfm.

TABLE 5
HARDWARE REQUIREMENTS FOR THE GIS DATA HOST SITE

Hardware Items	Basis for Low Estimate	Basis for High Estimate
Server for ArcGIS	Dell PowerEdge R900	IBM x3850 M2
Warranty for Server for ArcGIS	Standard extended warranty	Standard extended warranty
Server for Data	Dell PowerEdge R710	IBM x3550 M2
Warranty for Server for Data	Standard extended warranty	Standard extended warranty
Tape Backup hardware	LaCie Biggest S2S	LaCie Biggest S2S
Server Hosting Service*	Co-location proposal from the Karcher Group	

*Server Hosting Service refers to the potential need to house the servers at another location in the event that the GIS Data Host Site entity (in either the In-House or Subcontractor Model) does not have adequate space on site (which would be the case for the Voinovich School). The cost estimates are based on a proposal from the Karcher Group, which includes the following:

- 4U of rack space with power and bandwidth;
- 10 Mbit/Sec maximum bandwidth (additional bandwidth available);
- Firewall administration and management;
- Microsoft-certified staff;
- 24X7 monitoring with power backup;
- Free reboots during business hours.

Hardware Costs

Hardware cost estimates for the In-House and Subcontractor Models are shown in Table 6. Both models are assumed to require the same hardware and hardware costs.

TABLE 6
ESTMATED HARDWARE COSTS FOR THE GIS DATA HOST SITE
In-House and Subcontractor Models (Same for both Models)

	Total Utility Connections among Participating Entities							
	10,000 or less		10,001-49,999		50,000-99,999		100,000-125,000	
	Cost Range		Cost Range		Cost Range		Cost Range	
	Low	High	Low	High	Low	High	Low	High
Hardware Items								
Server for ArcGIS	$ 14,763	$ 24,002	$ 14,763	$ 24,002	$ 14,763	$ 24,002	$ 14,763	$ 24,002
Warranty for Server for ArcGIS	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Server for Data	$ 8,311	$ 10,017	$ 8,311	$ 10,017	$ 8,311	$ 10,017	$ 8,311	$ 10,017
Warranty for Server for Data	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Tape Backup Hardware	$ 2,675	$ 2,675	$ 2,675	$ 2,675	$ 2,675	$ 2,675	$ 2,675	$ 2,675
Server Hosting Service	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200	$ 13,200
Set-Up Total	**$ 40,949**	**$ 51,894**	**$ 40,949**	**$ 51,894**	**$ 40,949**	**$ 51,894**	**$ 40,949**	**$ 51,894**
Annual Total *	**$ 13,200**	**$ 13,200**	**$ 13,200**	**$ 13,200**	**$ 13,200**	**$ 13,200**	**$ 13,200**	**$ 13,200**

*All hardware costs are set-up costs except for the Server Hosting Service, which would be an annual operating cost.

Software Requirements and Costs

Software Requirements

Table 7 summarizes the software that would be needed in both the In-House and Subcontractor Models. This information is based on the Voinovich School's professional understanding of system requirements derived from work in similar projects, confirmed and augmented via interviews with other GIS practitioners, the experimental web-based GIS system developed and tested over the course of the feasibility study, and ongoing dialogue with representatives from ESRI. ESRI is not the only software option, but it is being used by all of the GIS practitioners that were interviewed as part of the feasibility study. For this reason, along with the Voinovich School's familiarity with these software products, ESRI was identified as the preferred software suite, even though it is known that some other software products are less expensive.

Software Costs

Table 8 shows estimated software costs for the In-House and Subcontractor Models at the four scales evaluated. The key software cost differences between the two models are explained by two assumptions. First, in terms of start-up costs, it is assumed that a subcontractor that is well-positioned to provide the required GIS services would already own some of the required software (the software items marked with an asterisk (*) in Table 7). Conversely, it is assumed that these software items would need to be purchased by an entity initially setting up in-house GIS capacities. Second, in terms of annual costs for these software items (marked with a double asterisk (**) in Table 7), it is assumed that the subcontractor would be serving a number of clients with this software and would charge each client (including the COG) a portion of the annual license fee – in this case, 25%, assuming that the COG is one of four clients and that the license fees are split equally among the four clients.

TABLE 7
SOFTWARE REQUIREMENTS FOR THE GIS DATA HOST SITE
In-House and Subcontractor Models

	Number of Utility Connections (K=1,000)							
	<10K	10K-49K	50K-99K	100K-125K	<10K	10K-49K	50K-99K	100K-125K
	Software Requirements (X if applicable)							
Software Items	In-House Model				Subcontractor Model			
Tape Backup software (Backup Exec) - Initial	X	X	X	X	X	X	X	X
Server 2008 - Initial	X	X	X	X	X	X	X	X
SQL 2008 Standard - Initial	X	X	X	X	X	X	X	X
ArcGIS Server Advanced Enterprise - Initial				X	X *	X *	X *	X *
ArcGIS Server Advanced Enterprise - Annual				X	X**	X**	X**	X**
ArcInfo Concurrent license - Initial (2 seats)				X	X *	X *	X *	X *
ArcInfo - Annual				X	X**	X**	X**	X**
ESRI Network Analyst extension - Initial				X	X *	X *	X *	X *
ESRI Network Analyst extension - Annual				X	X**	X**	X**	X**
Small Government ELA - Annual	X	X	X					

*See explanation under "Software Costs" above.
**See explanation under "Software Costs" above.

TABLE 8
ESTIMATED SOFTWARE COSTS FOR THE GIS DATA HOST SITE
In-House and Subcontractor Models

	Number of Utility Connections (K=1,000)			
	<10K	10K-49K	50K-99K	100K-125K
In-House Model				
Start-Up	$ 14,190	$ 14,190	$ 14,190	$ 63,463
Annual	$ 25,000	$ 35,000	$ 50,000	$ 14,872
Subcontractor Model				
Start-Up	$ 14,190	$ 14,190	$ 14,190	$ 14,190
Annual	$ 3,718	$ 3,718	$ 3,718	$ 3,718

Staff Requirements and Costs

Staff Requirements

Staff costs for the proposed cooperative are particularly challenging to estimate, for two key reasons:

1. There were no strong or complete analogues for the proposed web-based system identified during the research process, as discussed in Chapter 4;

2. The amount of staff support required by each member of the proposed cooperative rests significantly upon how – and how much – each member chooses to utilize the web-based system and its support services.

Since there do not appear to be any ideal models upon which to base estimates of utilization within the proposed cooperative system, the estimates presented in this report are based on extrapolations from multiple dissimilar examples, and then from limited example scales to other system scales.

The staff cost estimates for the In-House Model are extrapolated from information provided during interviews with primarily city-level and county-level GIS practitioners. These extrapolations are based upon:

1. Asking these practitioners to estimate what FTE percentage of their ongoing database administration work is associated with utility data;

2. Applying this FTE percentage to typical salaries for the required personnel, as listed in industry salary survey resources;

3. Making some educated judgments, based on the Voinovich School's pertinent GIS experience, about how the level of effort for key staff positions would change as the overall scale of utility data increases or decreases compared to the source examples; and

4. Treating a database administrator's workload within a web-based system as roughly equivalent to that workload in a network-based system.

The staff cost estimates for the Subcontractor Model are based on estimates of the resources that would be required in order for the Voinovich School to provide the web-based data hosting and maintenance services. This approach may understate average subcontractor costs since universities can sometimes have cost advantages compared to private firms, and therefore it amplifies cost differences between the In-House and Subcontractor Models.

The cost estimates in both the In-House and Subcontractor Models are based on the staff position and FTE assumptions shown in Tables 9 and 10. Table 9 shows the estimated staff requirements for setting up the GIS Data Host Site. Table 10 shows the estimated staff requirements for operating the GIS Data Host Site for 12 months. Appendix C includes job descriptions for all of the position titles listed in both tables.

TABLE 9 STAFF POSITIONS AND ESTIMATED FTE REQUIREMENTS FOR GIS DATA HOST SITE SET-UP								
	Number of Utility Connections (K=1,000)							
	<10K		10K-49K		50K-99K		100K-125K	
	Hrs	FTE	Hrs	FTE	Hrs	FTE	Hrs	FTE
GIS Manager (database administrator)	83	0.040	125	0.060	125	0.060	146	0.070
GIS Systems Software Analyst	104	0.050	104	0.050	104	0.050	104	0.050
IT Manager	104	0.050	104	0.050	104	0.050	104	0.050

TABLE 10 STAFF POSITIONS AND ESTIMATED ANNUAL FTE REQUIREMENTS FOR THE GIS DATA HOST SITE								
	Number of Utility Connections (K=1,000)							
	<10K		10K-49K		50K-99K		100K-125K	
	Hrs	FTE	Hrs	FTE	Hrs	FTE	Hrs	FTE
GIS Manager (database administrator)	312	0.150	832	0.400	1196	0.575	1560	0.750
GIS Systems Software Analyst	416	0.200	416	0.200	416	0.200	416	0.200
IT Manager	208	0.100	208	0.100	208	0.100	208	0.100

Annual salary assumptions for both the In-House and Subcontractor Models are shown in Table 11. The salary figures for the In-House Model are based upon average GIS industry rates provided in *Urban and Regional Information Systems Association (URISA) 2003 Salary Survey for IT/GIS Professionals* adjusted to 2009 based on a rate obtained at http://www.inflation.com (a 16.20% increase between January 2003 and January 2009).

The salary figures for the Subcontractor Model are based on Voinovich School 2009 salaries. The benefits rate for the In-House Model is based on the May 2009 national average private sector rate (34.3%) obtained from the Bureau of Labor Statistics at http://www.bls.gov/ncs/ect/. The benefits rate for the Subcontractor Model is based on the Voinovich School and varies by position (for the three positions shown, respectively from top to bottom, these rates are 33.76%, 31.43%, and 28.92%). The Voinovich School's indirect rate (39%) was utilized for both the Subcontractor and In-House Models. Salary range calculations use the figures shown in Table 11 for the low estimates, increased by 20% to generate the high estimates.

TABLE 11
STAFF SALARY ASSUMPTIONS FOR THE GIS DATA HOST SITE
In-House and Subcontractor Models

IN-HOUSE MODEL	Salary	Benefits (Rate=.343)	Salary + Benefits	Indirect (rate=.39)	Total: Salary + Benefits + Indirect
GIS Manager	$ 64,455	$ 22,108	$ 86,563	$ 33,760	$ 120,323
GIS Systems Software Analyst	$ 58,100	$ 19,928	$ 78,028	$ 30,431	$ 108,459
IT Manager	$ 75,530	$ 25,907	$ 101,437	$ 39,560	$ 140,997
SUBCONTRACTOR MODEL	Salary	Benefits (Rate Varies*)	Salary + Benefits	Indirect (rate=.39)	Total: Salary + Benefits + Indirect
GIS Manager	$ 54,454	$ 18,384	$ 72,838	$ 28,407	$ 101,245
GIS Systems Software Analyst	$ 62,712	$ 19,710	$ 82,422	$ 32,145	$ 114,567
IT Manager	$ 75,005	$ 21,691	$ 96,696	$ 37,712	$ 134,408

Staff Costs

Staff cost estimates for the In-House and Subcontractor Models – based on the assumptions described above – are shown in Tables 12 and 13. Table 12 shows the estimated staff costs for setting up the GIS Data Host Site. Table 13 shows the estimated staff costs for operating the Host Site for 12 months.

TABLE 12
ESTIMATED STAFF COSTS (INCLUDING BENEFITS AND INDIRECT)
FOR GIS DATA HOST SITE SET-UP
In-House and Subcontractor Models

	Total Utility Connections							
	10,000 or less		**10,001-49,999**		**50,000-99,999**		**100,000-125,000**	
	Cost Range		**Cost Range**		**Cost Range**		**Cost Range**	
	Low	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
In-House Model								
GIS Manager	$ 4,813	$ 5,775	$ 7,219	$ 8,663	$ 7,219	$ 8,663	$ 8,423	$ 10,107
GIS Systems Software Analyst	$ 5,423	$ 6,508	$ 5,423	$ 6,508	$ 5,423	$ 6,508	$ 5,423	$ 6,508
IT Manager	$ 7,050	$ 8,460	$ 7,050	$ 8,460	$ 7,050	$ 8,460	$ 7,050	$ 8,460
Total	$ 17,286	$ 20,743	$ 19,692	$ 23,631	$ 19,692	$ 23,631	$ 20,895	$ 25,074
Subcontractor Model								
GIS Manager	$ 4,050	$ 4,860	$ 6,075	$ 7,290	$ 6,075	$ 7,290	$ 7,087	$ 8,505
GIS Systems Software Analyst	$ 5,728	$ 6,874	$ 5,728	$ 6,874	$ 5,728	$ 6,874	$ 5,728	$ 6,874
IT Manager	$ 6,720	$ 8,064	$ 6,720	$ 8,064	$ 6,720	$ 8,064	$ 6,720	$ 8,064
Total	$ 16,499	$ 19,798	$ 18,523	$ 22,228	$ 18,523	$ 22,228	$ 19,536	$ 23,443

TABLE 13
ESTIMATED ANNUAL STAFF COSTS (INCLUDING BENEFITS AND INDIRECT) FOR THE GIS DATA HOST SITE
In-House and Subcontractor Models

	Total Utility Connections							
	10,000 or less		10,001-49,999		50,000-99,999		100,000-125,000	
	Cost Range		Cost Range		Cost Range		Cost Range	
	Low	High	Low	High	Low	High	Low	High
In-House Model								
GIS Manager	$ 18,048	$ 21,658	$ 48,129	$ 57,755	$ 69,186	$ 83,023	$ 90,242	$ 108,290
GIS Systems Software Analyst	$ 21,692	$ 26,030	$ 21,692	$ 26,030	$ 21,692	$ 26,030	$ 21,692	$ 26,030
IT Manager	$ 14,100	$ 16,920	$ 14,100	$ 16,920	$ 14,100	$ 16,920	$ 14,100	$ 16,920
Total	**$ 53,840**	**$ 64,608**	**$ 83,921**	**$ 100,705**	**$104,977**	**$125,973**	**$ 126,034**	**$ 151,240**
Subcontractor Model								
GIS Manager	$ 15,187	$ 18,224	$ 40,498	$ 48,598	$ 58,216	$ 69,859	$ 75,934	$ 91,121
GIS Systems Software Analyst	$ 22,913	$ 27,496	$ 22,913	$ 27,496	$ 22,913	$ 27,496	$ 22,913	$ 27,496
IT Manager	$ 13,441	$ 16,129	$ 13,441	$ 16,129	$ 13,441	$ 16,129	$ 13,441	$ 16,129
Total	**$ 51,541**	**$ 61,849**	**$ 76,852**	**$ 92,223**	**$ 94,570**	**$ 113,484**	**$ 112,288**	**$ 134,746**

Overall Cost Estimates for the GIS Data Host Site

Based on the hardware, software, and staff requirements and costs described above, Tables 14-17 summarize the overall cost estimates for the GIS Data Host Site.

Set-up Costs

Host site set-up costs include the initial purchase of hardware and software and the staff time required to set up the website including installing the geodatabase developed for each utility and municipality prior to the establishment of the GIS Data Host Site.

These costs are estimated to be roughly equal between the two models for cooperative scales up to 100,000 utility connections. Above 100,000 connections, the Subcontractor model is estimated to be substantially less expensive than the In-House Model, by a factor of 36-40% (see Table 15). This difference is explained almost entirely by differences in software costs, which explain 97% of the difference (see Table 16). This results partly from the premise that the In-House Model would require the up-front purchase of GIS software that a GIS subcontractor would already own in many cases, and therefore that more set-up costs would need to be supported by members of the cooperative in the In-House Model compared to the Subcontractor Model. In addition, the bulk of software expenses for the In-House Model are incurred in the form of annual rather than up-front fees up to a scale of 100,000 utility connections, a situation which is reversed above that scale.

Annual Costs

Host site annual costs consist of annual software license fees, staff, and the cost of a server hosting service.

These costs are estimated to be significantly lower in the Subcontractor Model, by a factor ranging from 15% to 34% across all scales (see Table 15). These cost differences are explained at all scales by a mix of staff and software differentials, with staff costs accounting for 58% of the difference, and software costs accounting for 42% of the difference, at the largest scale evaluated (see Table 17).

Annual Costs per Utility Connection

These costs are calculated by dividing the total annual cost by the number of utility connections at the top of each utility connection range (see Table 14). As expected, the cost difference per utility connection is identical to the overall cost difference annually, in percentage terms – ranging from 15% to 34% across all scales (see Table 15).

TABLE 14
OVERALL GIS DATA HOST SITE COST COMPARISONS
In-House and Subcontractor Models

		Total Number of Utility Connections			
		Less than 10,000	10,000-49,999	50,000-99,999	100,000-125,000
HOST SITE SET-UP COSTS					
In-House Model	Low	$ 72,425	$ 74,831	$ 74,831	$ 125,307
	High	$ 86,827	$ 89,714	$ 89,714	$ 140,431
Subcontractor Model	Low	$ 71,638	$ 73,662	$ 73,662	$ 74,675
	High	$ 85,882	$ 88,312	$ 88,312	$ 89,527
HOST SITE ANNUAL COSTS					
In-House Model	Low	$ 92,040	$132,121	$168,177	$154,106
	High	$102,808	$148,905	$189,173	$179,312
Subcontractor Model	Low	$ 68,459	$ 93,770	$111,488	$129,206
	High	$ 78,767	$109,141	$130,402	$151,664
HOST SITE ANNUAL COSTS PER UTILITY CONNECTION					
In-House Model	Low	$ 3.68	$ 2.64	$ 1.68	$ 1.23
	High	$ 4.11	$ 2.98	$ 1.89	$ 1.43
Subcontractor Model	Low	$ 2.74	$ 1.88	$ 1.11	$ 1.03
	High	$ 3.15	$ 2.18	$ 1.30	$ 1.21
REDUCTION IN ANNUAL COSTS PER UTILITY CONNECTION WITH EACH INCREASE IN SCALE					
In-House Model	Low	n/a	28%	36%	27%
	High	n/a	28%	36%	24%
Subcontractor Model	Low	n/a	32%	41%	7%
	High	n/a	31%	40%	7%

TABLE 15
OVERALL GIS DATA HOST SITE COST DIFFERENTIALS
In-House and Subcontractor Models
(figures equal In-House Model costs minus Subcontractor Model costs)

	Total Number of Utility Connections			
	Less than 10,000	10,000-49,999	50,000-99,999	100,000-125,000
HOST SITE SET-UP COSTS				
Low	$ 787	$ 1,169	$ 1,169	$ 50,633
High	$ 945	$ 1,402	$ 1,402	$ 50,904
HOST SITE ANNUAL COSTS				
Low	$ 23,581	$ 38,350	$ 56,689	$ 24,900
High	$ 24,041	$ 39,764	$ 58,770	$ 27,649
HOST SITE ANNUAL COSTS PER UTILITY CONNECTION				
Low	$ 0.94	$ 0.77	$ 0.57	$ 0.20
High	$ 0.96	$ 0.80	$ 0.59	$ 0.22
HOST SITE SET-UP COSTS (%)				
Low	1%	2%	2%	40%
High	1%	2%	2%	36%
HOST SITE ANNUAL COSTS (%)				
Low	26%	29%	34%	16%
High	23%	27%	31%	15%
HOST SITE ANNUAL COSTS PER UTILITY CONNECTION (%)				
Low	26%	29%	34%	16%
High	23%	27%	31%	15%

TABLE 16
GIS DATA HOST SITE SET-UP COSTS BY CATEGORY
In-House and Subcontractor Models

		Total Number of Utility Connections			
		Less than 10,000	**10,000-49,999**	**50,000-99,999**	**100,000-125,000**
In-House Model					
Hardware	Low	$ 40,949	$ 40,949	$ 40,949	$ 40,949
	High	$ 51,894	$ 51,894	$ 51,894	$ 51,894
Software	Low	$ 14,190	$ 14,190	$ 14,190	$ 63,463
	High	$ 14,190	$ 14,190	$ 14,190	$ 63,463
Staff	Low	$ 17,286	$ 19,692	$ 19,692	$ 20,895
	High	$ 20,743	$ 23,631	$ 23,631	$ 25,074
Total	Low	$ 72,425	$ 74,831	$ 74,831	$125,307
	High	$ 86,827	$ 89,714	$ 89,714	$140,431
Subcontractor Model					
Hardware	Low	$ 40,949	$ 40,949	$ 40,949	$ 40,949
	High	$ 51,894	$ 51,894	$ 51,894	$ 51,894
Software	Low	$ 14,190	$ 14,190	$ 14,190	$ 14,190
	High	$ 14,190	$ 14,190	$ 14,190	$ 14,190
Staff	Low	$ 16,499	$ 18,523	$ 18,523	$ 19,536
	High	$ 19,798	$ 22,228	$ 22,228	$ 23,443
Total	Low	$ 71,638	$ 73,662	$ 73,662	$ 74,675
	High	$ 85,882	$ 88,312	$ 88,312	$ 89,527
Difference: In-House cost minus Subcontractor cost (Based on High-Low Average)					
Hardware		$ -	$ -	$ -	$ -
Software		$ -	$ -	$ -	$ 49,273
Staff		$ 866	$ 1,286	$ 1,286	$ 1,496
TOTAL		$ 866	$ 1,286	$ 1,286	$ 50,768
Percent of Cost Differential Explained By:					
Hardware		0%	0%	0%	0%
Software		0%	0%	0%	97%
Staff		100%	100%	100%	3%

TABLE 17
GIS DATA HOST SITE ANNUAL COSTS BY CATEGORY
In-House and Subcontractor Models

In-House Model					
Hardware	Low	$ 13,200	$ 13,200	$ 13,200	$ 13,200
	High	$ 13,200	$ 13,200	$ 13,200	$ 13,200
Software	Low	$ 25,000	$ 35,000	$ 50,000	$ 14,872
	High	$ 25,000	$ 35,000	$ 50,000	$ 14,872
Staff	Low	$ 53,840	$ 83,921	$ 104,977	$126,034
	High	$ 64,608	$100,705	$ 125,973	$151,240
Total	Low	$ 92,040	$132,121	$ 168,177	$154,106
	High	$102,808	$148,905	$ 189,173	$179,312
Subcontractor Model					
Hardware	Low	$ 13,200	$ 13,200	$ 13,200	$ 13,200
	High	$ 13,200	$ 13,200	$ 13,200	$ 13,200
Software	Low	$ 3,718	$ 3,718	$ 3,718	$ 3,718
	High	$ 3,718	$ 3,718	$ 3,718	$ 3,718
Staff	Low	$ 51,541	$ 76,852	$ 94,570	$ 112,288
	High	$ 61,849	$ 92,223	$ 113,484	$ 134,746
Total	Low	$ 68,459	$ 93,770	$ 111,488	$ 129,206
	High	$ 78,767	$ 109,141	$ 130,402	$ 151,664
Difference: In-House cost minus Subcontractor cost (Based on High-Low Average)					
Hardware		$ -	$ -	$ -	$ -
Software		$ 21,282	$ 31,282	$ 46,282	$ 11,154
Staff		$ 2,529	$ 7,775	$ 11,448	$ 15,120
TOTAL		$ 23,811	$ 39,057	$ 57,730	$ 26,274
Percent of Cost Differential Explained By:					
Hardware		0%	0%	0%	0%
Software		89%	80%	80%	42%
Staff		11%	20%	20%	58%

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Conclusions

Key Explanations for Cost Differences between the In-House and Subcontractor Models

Staff and software costs are clearly both significant drivers of the estimated cost differences between the two models. This is partly a function of lower staff costs within a university (used as the basis for the Subcontractor Model), compared to average salaries for similar positions within the GIS industry as a whole, which are assumed to be the salaries that a private entity would need to pay in order to bring on in-house GIS staff. In addition, the likelihood that a GIS subcontractor would already own GIS software that would need to be purchased in the In-House model provides a significant cost advantage for the Subcontractor Model.

Economies of Scale and Estimated Costs per Utility Connection

Economies of scale are evident in both the In-House and Subcontractor Models (see Table 14). However, since overall costs and costs per utility connection are significantly lower at every scale in the Subcontractor Model compared to the In-House Model, the proposed cooperative could achieve the desired economies of scale substantially faster through the Subcontractor approach. For illustration, the range of costs per connection achieved in the In-House Model at a scale of 99,999 utility connections ($1.68-$1.89) overlaps with the cost range achieved in the Subcontractor Model at half that scale ($1.88-$2.18 per connection at a scale of 49,999 connections). (Again, these costs are calculated by dividing the total annual cost by the number of utility connections at the *top* of each utility connection range.)

The Target Start-up Scale for the Proposed COG

Based on the economies of scale illustrated in Table 14, the target start-up scale for the proposed COG should be 100,000 combined utility connections among the founding member utilities and municipalities. As shown in Table 14, it is clear that significant drops in cost per utility connection occur between a scale of 10,000 and 50,000 connections, followed by another significant drop between 50,000 and 100,000 connections. For illustration, the high-end cost estimates for the Subcontractor Model drop by 32% between 10,000 and 50,000 connections (from $2.74 to $1.88) and by 41% between 50,000 and 100,000 connections (from $1.88 to $1.11). Increasing the scale to 125,000 connections only yields an additional drop of 7%, from $1.11 to $1.03.

This pattern in economies of scale suggests that a target scale of 100,000 combined utility connections provides a reasonable basis for developing a proposed implementation plan and budget for the proposed COG. If a more detailed implementation plan and cost estimating process suggests the need to increase the scale to greater than 100,000 connections, those upward adjustments can be made. However, given the significant reduction in cost per connection that is projected to occur between 50,000 and 100,000 combined utility connections, it appears that shooting for a smaller start-up scale would significantly diminish the economies of scale that can be achieved through a cooperative framework.

Other Costs to Consider

The limitations of the cost estimates described in this chapter must be kept in mind. The GIS Data Host Site is only one piece of the cost puzzle. The implementation budget described in Chapter 8 also factors in the costs of organizing and administering the COG, data collection to occur prior to the establishment of the COG, and training to be provided to system users.

Cost Compared to Speed, Flexibility, and Risk

It must be emphasized that the recommendation in favor of the Subcontractor Model relates more to speed, flexibility, and risk considerations than it does to cost considerations. *Even if* the Subcontractor Model was more expensive than the In-House Model – unless the cost difference was extreme – the Subcontractor approach would still be recommended. Choosing a more expensive or equally expensive option is certainly reasonable if it lessens risk and increases speed and flexibility. Conversely, choosing the lowest-cost option is not advisable if it increases the risks to be undertaken and decreases the level of speed and flexibility to be obtained. Therefore, even though the Subcontractor Model does appear to be less expensive then the In-House Model for the GIS Data Host Site, this cost differential is *not* the primary reason for recommending the Subcontractor Model. However, these cost advantages do augment the other advantages of the Subcontractor Model.

IMPLEMENTATION PLAN

This chapter describes a proposed implementation plan to occur through four phases over the course of three years, with an ultimate goal of establishing a Council of Governments (COG) with member utilities and municipalities including at least 100,000 combined utility connections. The assumed number of participating utilities and municipalities – 25 – is based on an assumed average of 4,000 utility connections per entity, roughly equivalent to the average number of utility connections among utilities and municipalities participating in this feasibility study (4,020).

The target start-up scale of 100,000 combined utility connections is based on the economies of scale described in the previous chapter. The proposed organizational structure – a COG supported by a fiscal agent, a program administration entity (RCAP), and a GIS Data Host Site subcontractor – is based upon the analysis described in the previous three chapters. The budget for each phase is described briefly in this chapter and in greater detail in Chapter 8.

Overview of the Preferred Model

The key recommendations of the previous three chapters can be summarized as follows:

1. A Council of Governments (COG) is recommended as the most appropriate structure for the proposed cooperative based primarily on the capacity of a COG structure to facilitate mutual commitments and decisions among multiple governmental units;

2. As opposed to starting up a new, staffed organization, the proposed COG should utilize the infrastructure and capacities of existing organizations to develop and provide the proposed GIS services to COG members. More specifically, the COG should 1) designate a fiscal agent to manage the COG's funding and contracts; 2) designate an entity to manage the COG's activities and oversee its services to members; and 3) subcontract with a private firm or university to play the role of GIS Data Host Site;

3. RCAP should play the lead role in managing the COG's affairs and overseeing services to its members. RCAP could also be the COG's fiscal agent, but would not need to be – another entity could play the fiscal agent role and then subcontract with RCAP to oversee the COG's operations, including the services to be provided by the GIS Data Host Site;

4. While it may be appropriate in the future to establish a new, staffed organization to directly manage the COG's funding and provide the web-based GIS services to its members, this approach is not recommended prior to and during the COG's initial years of operation because of the more significant cost, timeframe, inflexibility and risk involved, compared to a subcontractor approach.

Overview of the Implementation Process and Timeframe

The proposed implementation process has four phases:

- Phase One: Outreach and COG Member Recruitment;
- Phase Two: Data Collection;
- Phase Three: COG Start-up; and
- Phase Four: COG Operation.

Phases One and Two would be overlapping and interlinked, with activities in Phase One focused upon recruiting entities to become members of the proposed COG, and activities in Phase Two focused upon providing data collection assistance to these entities so that they will be positioned to establish the COG and benefit from its web-based GIS services.

When a sufficient number of entities have completed data collection in Phase Two, RCAP would convene these entities in Phase Three to formally establish the COG, identify the resources required to support it, and commit to first year COG membership fees. After the COG is established, COG Operation would commence in Phase Four.

Phase One (Outreach and COG Member Recruitment) and Phase Two (Data Collection) are projected to require two years. Phase Three (COG Start-Up) and the beginning of Phase Four (COG Operation) would occur during year three of implementation.

The proposed implementation plan is incremental and potentially conservative in assuming that the process of recruiting COG members and assisting them with data collection (Phases One and Two) may need to occur more than once with different groups of utilities and municipalities. That is, rather than making the best-case assumption that the number of utilities and municipalities required in order to reach the target start-up scale will choose to participate all at once, it is assumed more conservatively that an initial group of entities will commit to starting the process and will undertake data collection, in turn incentivizing a second group to do likewise, and then perhaps a third group, and so on.

Through this process, the implementation plan assumes that entities including a combined 40,000 utility connections will complete data collection during year one of implementation, followed by entities totaling 60,000 connections in year two, thereby reaching the desired total of 100,000 connections by the beginning of year three, when the COG would be formally established and the web-based GIS services would commence operation.

Ways to Expedite Implementation

There are four key ways in which the implementation timeframe can be simplified and possibly expedited:

1. If a fewer number of utilities and municipalities are required in order to reach the target start-up scale of 100,000 combined utility connections;

2. If the required number of entities commit to establish the COG all at once instead of in phases;

3. If these entities are willing to support a greater proportion of the implementation costs than is assumed in this implementation plan; and/or

4. If the start-up scale is reduced.

For example, ten entities at an average size of 10,000 utility connections each would reduce logistical challenges and staff requirements significantly compared to a recruitment and data collection process requiring the participation of 25 entities at an average size of 4,000 connections. Likewise, if a sufficient number of utilities and municipalities are recruited and choose to proceed with data collection as one cohort, thereby eliminating the need for a second or third cohort of entities to be recruited, the logistical burden of Phases One and Two will be substantially diminished. Third, implementation can be simplified and expedited by minimizing the need to raise grant funding. As dependence on grant funding among participating utilities and municipalities goes up, their level of control over the implementation timeframe will go down since funding decisions and actions by other parties will be required in order to move the process forward. Finally, implementation could be expedited by reducing the start-up scale, but this would require each participating entity to pay higher first-year membership fees on a per-connection basis.

Key Implementation Issues

The following will be among the most important issues during the implementation process:

1. The symbiotic relationship between data collection and data hosting;

2. Mutual risk-taking among partners in the COG start-up process;

3. Expediting the timeframe for COG start-up by narrowing the scope of initial data collection; and

4. Clearly defining the COG's core purpose in order to simplify the process of recruiting founding members and minimize the costs of COG start-up.

The Symbiotic Relationship between Data Collection and Data Hosting

The central challenge in establishing the proposed web-based cooperative is discussed at length in Chapter 4: a web-based GIS data hosting service is envisioned for utilities and municipalities that, for the most part, don't currently have any GIS data to host. For illustration, among thirteen respondents to the survey of water utility systems conducted as part of the feasibility study, eleven (85%) have not had any portion of their water distribution system mapped using GIS (see Appendix J). Among ten respondents to the wastewater survey, nine (90%) have not had any portion of their wastewater distribution system mapped using GIS (see Appendix K). This means that initial data collection by utilities and municipalities needs to happen first, prior to the establishment of the proposed COG and its web-based GIS services. The timeframe for COG start-up will therefore be dictated first and foremost by the pace and scale of initial data collection among utilities and municipalities.

The Significance of Mutual Risk-Taking among COG Start-up Partners

The relationship between data collection and COG start-up, in turn, will define the relationships among RCAP, as organizer of the COG, and the utilities and municipalities that RCAP will be recruiting for the COG. First, utilities and municipalities will need to have confidence in RCAP's commitment to securing resources for start-up of the COG and its data-hosting services; otherwise, initial investment in data collection will be much less attractive. Second, RCAP will need to have confidence in the commitment to accomplish initial data collection among a sufficient number of utilities and municipalities; otherwise, RCAP will not be able to demonstrate the leverage it needs in order to secure grant funding for data collection or COG start-up. Third, the participating utilities and municipalities will need to have confidence in one another that each will be concurrently taking the initial data collection steps required in order for the COG to be established. Risk-taking by each of these partners needs to be matched by risk-taking by other partners.

Expediting COG Start-up by Narrowing the Scope of Initial Data Collection

The timeframe for COG start-up will be tied to the scope of data collection: what data is collected, by what methods, in what form, and to what level of detail.

Defining the initial data collection process and standards should be driven by the following four objectives:

1. Strike a balance between level of detail desired and level of resources required.

   Initial data collection needs to be completed only to the level of detail required in order for utilities and municipalities to significantly benefit from this data through the proposed COG once it is established. If the standards are set too low, the resulting datasets will not include the minimal information that utility operators will want to access easily upon start-up of the COG and its web-based services. On the other hand, if these standards are set too high, the initial data collection process will require a greater level of resources and will introduce logistical complications, in turn delaying the time at which COG start-up can occur.

2. Recognize that additional data collection can occur in the future.

   Initial data collection should be undertaken with a clear understanding that additional data collection, data entry, and data editing can occur in the future – a process that the services to be provided by the COG, once it is established, will be specifically designed to facilitate. As long as all information deemed essential by participants is collected, the goal of establishing the web-based service in a cost-effective and expedited fashion should be considered more important than initially building a "complete" geodatabase of utility information for each utility and municipality.

3. Build additional data entry into the planning for the COG's first year of operation.

   It is not only true that future data entry and editing *can* occur after a geodatabase is initially created. Future data entry and data editing *must be* performed in order to keep the geodatabase accurate over time. In this sense, data collection is never truly "complete."

   During the first year of the COG's operation, trainings should be provided to personnel at each participating utility and municipality about how to use the web-based system to edit information in the initially-created database. This training will be essential in order for personnel to adequately understand how to use and benefit from the services provided through the COG and will ensure that personnel are active participants in monitoring the accuracy of the data over time. Trainings should also emphasize local flexibility in populating data fields as sparsely or comprehensively as each member desires. The data collection process that occurs prior to COG start-up should therefore provide a strong starting point while also anticipating the kinds of tasks that municipal personnel will need to understand how to perform in order to improve the accuracy and level of detail in their GIS data over time. There is no question that local staff will learn more about the contents and capacities of their respective geodatabases if they are deliberately engaged in the process of developing the geodatabases.

   For example, the initial geodatabase should include accurate information about the location of water meters and water lines, but it need not include all of the attribute information associated with these utility assets such as the type of pipe and when it was installed, manufactured, or repaired. The location of utility system assets is an essential starting point, but deciding what information to add to the database in the future should involve staff within each participating entity, based on the level of additional detail that each desires.

4. Ensure that common data collection standards are employed by all participating utilities and municipalities.

   All participating entities should collect data according to the same standards and methods, so that providing training and technical support as part of this process can be done efficiently and consistently across all participating entities. This will make the data collection process easier and less expensive to undertake, but will also make providing a consistent level of support and services to COG members easier and less expensive after the COG is established.

In terms of content, the data collection process leading up to establishment of the proposed COG should emphasize the collection of a limited set of data points, based on the "water model" geodatabase template that has been developed by ESRI.

In terms of process, mobile GPS units should be employed as the primary data collection method. This process will not require scanning existing maps and geo-rectifying hard-copy information with the GPS-collected information. Entities may choose to do this additional work at a later date, and this work could potentially be supported through the COG once it is established. However, collecting key data points with GPS units and completing a limited number of attribute fields will be sufficient in order to position entities to start using and benefiting from GIS technology through the web-based system.

Appropriately Defining the Core Purpose of the Proposed COG

In order to simplify the process of COG start-up, the COG's core purpose must be properly defined and deliberately limited.

At the outset, as the proposed organizer of the COG, RCAP needs to advertise both benefits and costs. Keeping the benefits relatively narrow and fixed will enable RCAP to accurately articulate what the COG will offer and what it will cost to be a member. Otherwise, if additional benefits are offered to one potential joiner, the entire set of benefits for all potential joiners needs to be re-priced, and it will become very hard for anyone to follow a moving target or have any confidence in the changing cost projections. And, since expanding projected benefits will increase projected costs, adding services in order to attract some joiners can be expected to lead to the loss of others. While this inflexibility can be expected to discourage some entities, it will be an essential factor in making COG start-up feasible.

The "quid pro quo" for initial inflexibility is that utilities and municipalities, after they become COG members, will become part of its decision-making structure and can determine how the COG and its services evolve over time. Then, as more entities join, costs per member could conceivably stay constant or go down even as additional services are added.

In particular, a recruitment approach that combines both data collection and data hosting into the advertised benefits and costs of the proposed COG is strongly discouraged. Without knowing which entities are interested in joining the COG and what their existing conditions are, it would be highly complex and inaccurate to develop a dependable projection of COG membership fees including both data collection and data hosting costs. In turn, a less accurate, more expensive, and harder-to-explain cost structure will provide a much weaker basis for member recruitment. It is therefore preferable to keep data collection explicitly outside the proposed COG's cost and membership fee structure. This is a key reason that COG start-up is recommended to happen after, not before, data collection.

The web-based GIS infrastructure to be provided to members through the proposed COG must remain squarely in focus as the key benefit that will attract members to join the COG. Allowing the COG's proposed focus to creep beyond this will make it more expensive and more difficult to establish.

Implementation Phase One: Outreach and COG Member Recruitment

Phase One implementation activities are illustrated in Figure 2.

Preparing for Outreach

RCAP would begin the implementation process by first determining its organizational and financial capacity to proceed with the activities described in Phases One and Two. Then RCAP would prepare a set of recruitment materials including:

1. A description of the proposed COG's purpose, scope of services for its members, and projected costs and membership fees at the target start-up scale;

2. A description of the data collection process that entities would need to complete in order to be eligible for COG membership;

3. A description of data collection assistance potentially available from RCAP; and

4. A draft Agreement to Establish the proposed COG and draft COG Bylaws (prepared by legal counsel).

Retaining Legal Counsel

Prior to conducting extensive outreach, RCAP should retain legal counsel to develop initial drafts of two documents that will be required in order to establish the proposed COG: 1) an Agreement to Establish the COG; and 2) COG Bylaws. In addition to the outreach materials listed above that RCAP should create, drafts of these legal documents will be important for utility and municipality administrators to review as part of considering whether to found the proposed COG. These documents would not tie participating entities to any commitments, and would not need to be signed, until the COG is actually established (in Phase Three). Nonetheless, they will be important to share in draft form during Phase One in order to illustrate the kind of commitments and benefits that COG membership would entail.

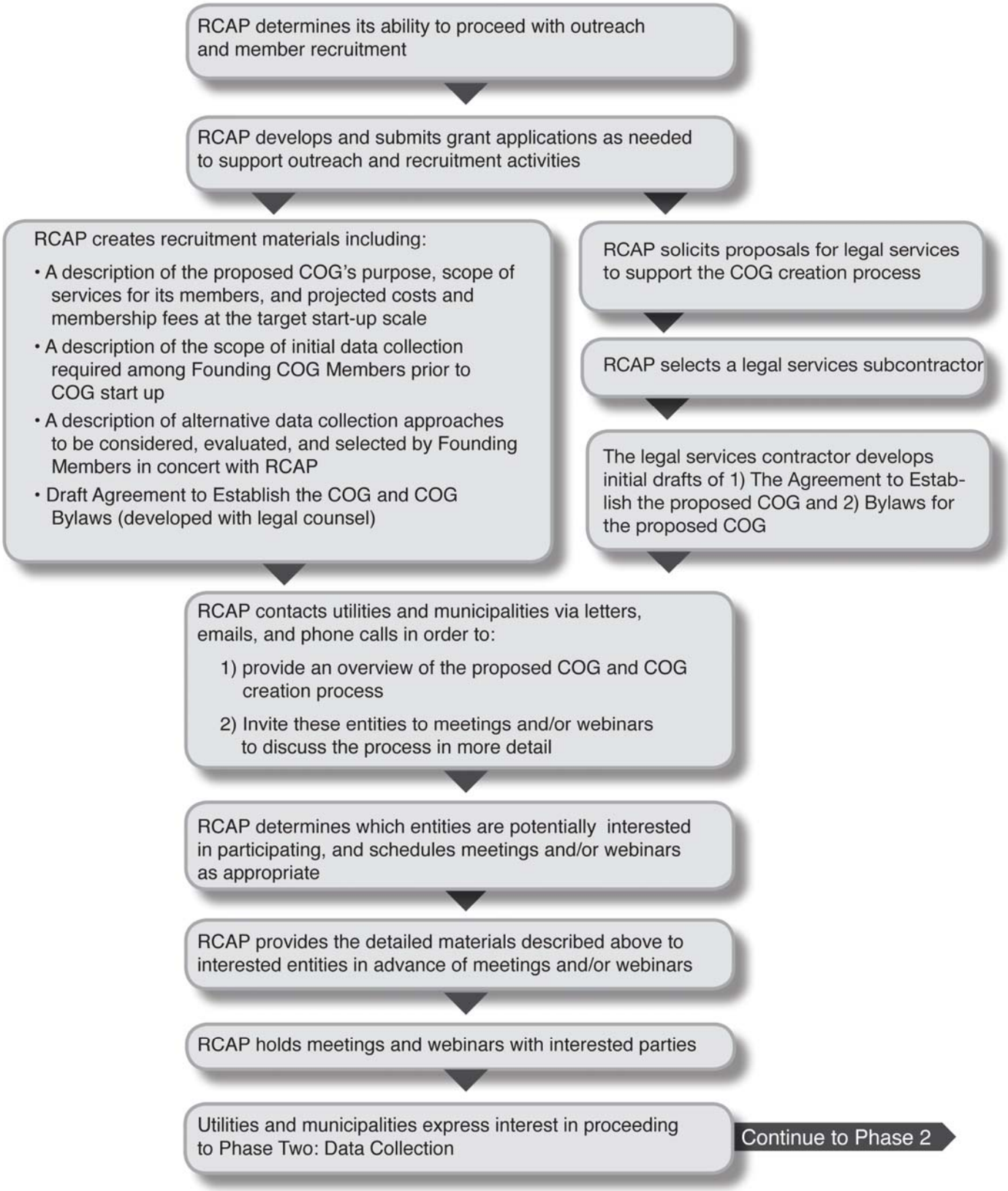
Initial Outreach

Next, building on its relationships with utilities and municipalities through each of its regional agents, RCAP would contact these entities and describe the proposed Council of Governments. This information should be distributed in the form of letters and emails to a targeted audience of prospective members and should be followed up quickly with phone calls. The proposal's primary "ask" should be two-fold:

1. Who would consider joining such an entity given the projected benefits and costs per member?

2. Who would consider undertaking initial data collection, within the next year, in order to be in position to join the proposed COG?

Figure 2: Implementation Phase 1 - Outreach and COG Member Recruitment



Initial Meetings and Webinars

Those entities that respond favorably to initial outreach should be invited to participate in meetings and/or webinars at which the more detailed materials described above would be discussed.

Entities that express interest in joining the proposed COG would then proceed to Phase Two in order to evaluate potential approaches to data collection and to make financial commitments to undertake data collection.

Estimated Phase One Costs and Proposed Cost Sharing

The total cost for Phase One is estimated to be $82,883. These costs are proposed to be supported entirely by RCAP and/or grant funding to be obtained by RCAP. Budget details are provided in Chapter 8.

Implementation Phase Two: Data Collection

RCAP would commence this phase – illustrated in Figure 3 – by convening interested utilities and municipalities in order to discuss data collection goals and approaches.

Scope of Data Collection

In order to explain the desired outcome of the data collection process, RCAP should employ a readily accessible model – the water utilities model available from ESRI (see http://support.esri.com/index.cfm?fa=downloads.dataModels.filteredGateway&dmid=16.). This model, which was utilized by the Village of Carrollton to perform data collection during the feasibility study, already contains all of the water and wastewater utility data fields that are likely to be desired by utilities and municipalities.

RCAP and participating entities would initially need to agree upon how much data collection is desired prior to start-up of the COG. As discussed earlier in this chapter, these decisions will significantly impact the cost and complexity of initial data collection, the time it will take to complete, and the overall timeframe for COG start-up. This process should not seek to populate all of the data fields in the ESRI water model, but rather to collect the information that is essential in order for the web-based system to be initially beneficial to its users. It should be emphasized that the web-based system itself will enable utility staff to add more data over time.

The data collection process should make clear distinctions between "assets" – features like water lines and meters – and "attributes" that describe those assets, such as water line diameter. Collecting accurate information about the locations of key assets should clearly be a priority within the initial data collection process, and some attribute fields may also be deemed priorities by participants. However, the process should not endeavor to complete all of the possible attribute fields, unless there appears to be a consensus among the parties to do so – and to incur the additional costs of doing so. Key information to be collected should include the locations of all of the features listed in Table 18. The scope of data collection will be clarified among the participants by adding and/or subtracting to this list of features and specifying which attribute fields associated with these assets are deemed initially critical to complete.

Figure 3: Implementation Phase 2 - Data Collection

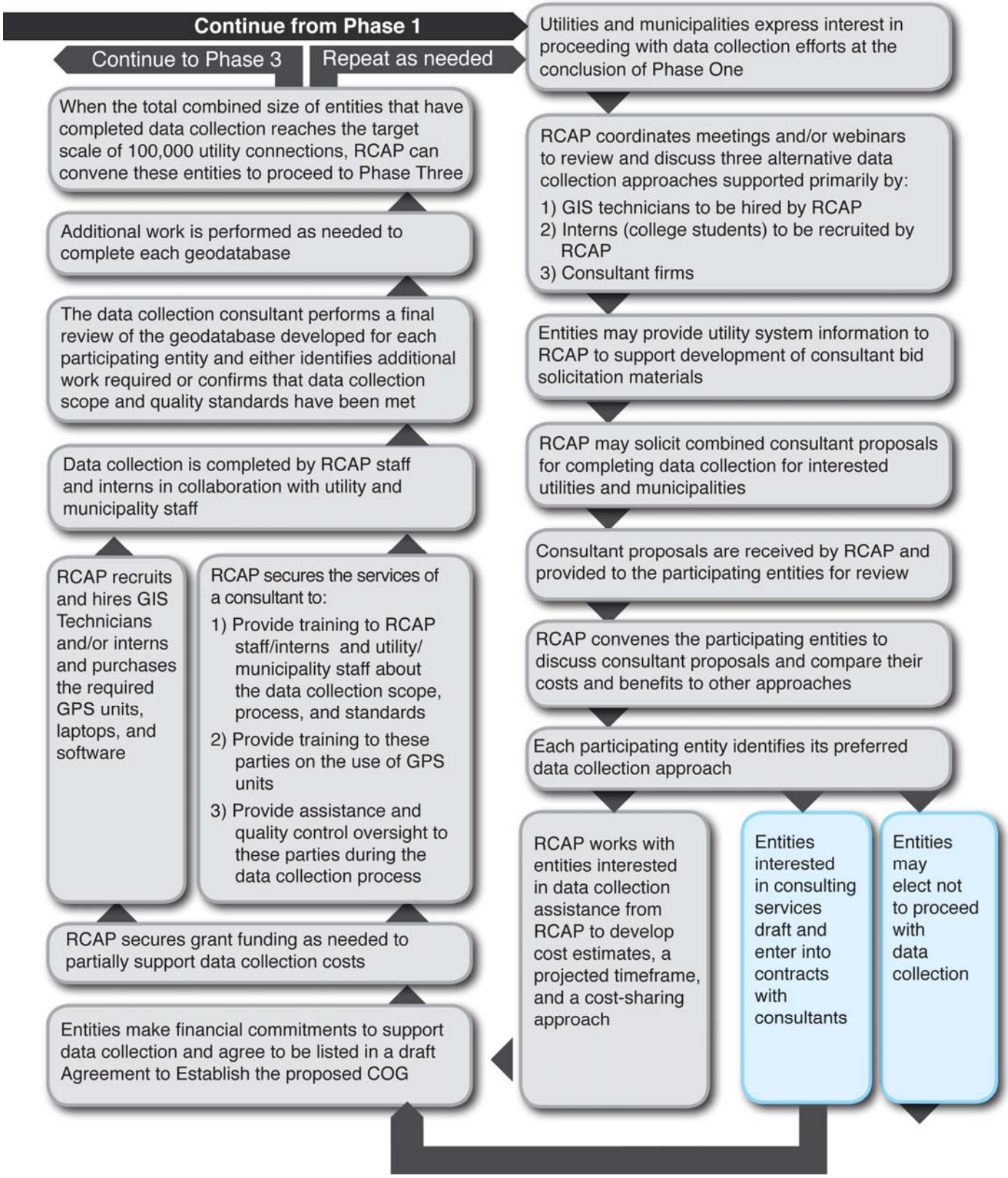


TABLE 18 PRIORITY UTILITY SYSTEM FEATURES IN THE INITIAL DATA COLLECTION PROCESS	
Water Utility Features	**Sanitary Sewer Features**
Water lines	Sanitary sewer pipes
Water meters	Laterals
Services	Manholes
Fittings	Sewage pumping stations
Valves	Outfalls
Wells	
Fire hydrants	
Tanks	
Booster stations	
Clearwells	
Washwater tanks	
Sampling stations	

Primary Method of Data Collection

The data collection process should utilize mobile GPS units as the primary method of data collection, and should not endeavor to collect and integrate information contained in hard-copy maps unless there appears to be a consensus among participants to do so – and to incur the additional costs of doing so. Entities may choose to do this additional work at a later date, and this work could be supported in part through the COG structure once it is established. However, this work is not necessary in order for fairly robust geodatabases to be initially created, and in turn for the proposed COG and its web-based GIS services to be established sooner than they otherwise would be.

Alternative Approaches to Data Collection

After the scope of data collection is solidified, RCAP and the participating utilities and municipalities should identify the most appropriate approaches for completing data collection. Three approaches should be discussed and evaluated:

1. Data collection performed by GIS Technicians employed by RCAP;
2. Data collection performed by interns (college students with GIS backgrounds) to be recruited by RCAP; and
3. Data collection performed by data collection consultants.

All three of these approaches would be premised upon the use of GPS units as the primary method of data collection.

Based on data collection cost estimates developed as part of this feasibility study (described in Chapter 8), RCAP will be able to provide participating utilities and municipalities with projected costs for data collection performed through either of the first two approaches. In addition, utilizing

a prototype scope of services for data collection provided in Appendix A, RCAP could offer assistance in the solicitation of bids from private contractors to perform this work.

If a sufficient number of entities express interest in exploring a consultant-based approach, RCAP would then request information from each entity to be provided to consultants along with a request for proposals for data collection. After proposals are submitted, RCAP and each entity would compare these proposals to the costs and benefits of the other two approaches, and each entity would identify its preferred approach. Then, each entity would choose one of three options: 1) to not proceed with data collection; 2) to enter into a contract with a private consultant; or 3) to enter into an agreement with RCAP to assist with data collection.

Evaluation of Alternative Approaches to Data Collection

The three data collection approaches to be considered – GIS Technicians hired by RCAP, interns hired by RCAP, and consultant firms – each have advantages and disadvantages. All things considered, an intern-based approach has the fewest advantages and the most disadvantages. The key disadvantage of an approach based primarily upon full-time GIS Technicians compared to interns – higher cost – is outweighed by its advantages: greater predictability, consistency, and productivity. Consultants could have several key advantages over RCAP GIS Technicians – most notably greater speed – which may or may not be outweighed by higher cost. Conclusions about this comparison cannot be drawn without the actual solicitation of bids for specific utilities and municipalities during the implementation process.

Interns Compared to GIS Technicians

The key potential advantage of an intern-based approach is cost: interns such as college students often have many of the required skills and can typically perform data collection at a lower hourly cost compared to GIS Technicians or consulting firms. However, there are four likely disadvantages to this approach.

First, the utilities and municipalities that may choose to join the proposed COG are not known, which means in turn that their locations relative to colleges and universities are not known. Therefore, there is little basis for a firm recommendation in favor of this approach for logistical reasons – it simply may not be a realistic approach based on the locations of participating entities relative to nearby colleges and universities that may or may not have students trained in GIS skills.

Second, internships are typically limited to part-time or summer-only arrangements. In a part-time internship situation, it would typically take longer and probably be more sporadic for an intern to make progress compared to a full-time worker employed by either RCAP or a consulting firm. In a summer internship situation, there is a fixed upper limit to the number of hours – about 400 – that any intern can work in any year. This means that the work of many such interns would need to be cobbled together in order to make significant progress in a number of locations simultaneously and/or that an intern would not have enough time to follow data collection through to completion in a given location, thus requiring a new person to step in and complete the job. Finally, a dependence on summer internships would require the entire data collection process to be organized around only 3 months of the year, and for all of the moving parts to fall into place when needed in all locations.

Third, recruiting interns – particularly ones with the right skill sets in the right locations – can often be very time-consuming, resulting in a significant lag time between the decision to use an intern in a particular location and the actual start of work. This approach would therefore be very unpredictable and potentially very unreliable.

Fourth, the challenges of recruiting, training, and supervising workers are magnified when more workers are required. For illustration, as explained in Chapter 8, it is estimated that a worker can complete the data collection tasks required for the purposes of the proposed COG at a rate of .068 hours per utility connection, which equates to about 272 hours of work for a utility or municipality with 4,000 utility connections. Assuming this level of productivity and assuming that 400-hour summer internships were utilized, reaching the desired data collection scale of 100,000 combined utility connections would require the recruitment of – and successful employment of – no less than seventeen different interns (100,000 connections times .068 hours per connection equals 6800 hours; 6800 hours divided by 400 hours equals seventeen 400-hour internships). Assuming that some of these internships would not transpire as anticipated and that coordination among multiple interns would introduce inefficiencies, it is likely that the number of interns needed would actually be higher and that significant numbers of loose ends would be left untied. Performing the same amount of work would only require 3.27 full-time-equivalent GIS Technicians (6800 hours divided by 2080 hours), presenting a much less complicated recruiting, training, and supervision scenario.

Cost is the only disadvantage of full-time GIS Technicians compared to interns. In the case of RCAP, it is estimated that the difference in hourly cost would be $9.44 per hour ($17/hour for an intern compared to $26.44/hour for an entry-level GIS Technician). At a data collection scale of 100,000 combined utility connections – estimated to require 6800 hours of labor – this represents a total cost differential of $64,192 (6800 hours times $9.44/hour). On a per-utility connection basis, the difference would be 64 cents ($1.79 compared to $1.15). For a utility or municipality with 4,000 utility connections, the cost difference would be $2,568 ($7,192 compared to $4,624).

However, given the disadvantages of an intern-based approach described above, these cost differentials may be illusory to a significant extent, for three key reasons.

1. The disadvantages of the intern-based approach have real financial costs, even if they cannot be predicted very precisely. Every hour spent by staff recruiting, hiring, orienting, and supervising new interns has a cost. Based on the analysis described above, an intern-based approach to data collection would require at least seventeen interns, and probably more due to some turnover and lower productivity. If it is assumed that the actual number would be more like twenty interns, compared to 3.27 full-time GIS Technicians needed for the same volume of work, administrative costs can be assumed to be over 600% higher in the intern-based approach (20 divided by 3.27 equals 6.11).

2. The advantages of GIS Technicians have real financial benefits. Assuming that a GIS Technician becomes 10% more efficient than an average intern, the total number of work hours needed would be reduced accordingly – at a scale of 100,000 utility connections, this would mean a difference of 680 hours of work needed (6120 hours compared to 6800).

3. In addition to introducing higher administrative costs and more inefficiency, using interns as the primary approach would introduce a significant potential for complete failure in some

instances. If the required number of summer interns simply cannot be found, cannot be found in a timely fashion, or are ineffective in some cases (none of which are unreasonable expectations), some utilities and municipalities will simply not get what they expected to get in a contractual relationship with RCAP to provide data collection services. Since data collection would need to be completed simultaneously in a number of different locations prior to the start-up of the COG, this kind of shortcoming would have a multiplied effect. That is, a failure to achieve data collection outcomes for any one participating entity also means that the collective effort will have fallen short of the overall expectations for progress among all participating entities. For this reason combined with all of the others described above, the intern-based approach is by far the most risky among the three approaches analyzed here.

There may be situations in which an intern-based approach is appropriate and can be very effective. For example, the intern who performed data collection in the Village of Carrollton as part of the feasibility study did so quite effectively. However, this conclusion does not mean that multiple such individuals could be predictably recruited and deployed simultaneously. While a small number of interns are anticipated in the implementation budget, this approach is not recommended as the primary data collection approach to be pursued. It should be employed as a secondary approach when and if there is a good fit between participating utilities and municipalities and internship opportunities that may be identified in specific locations.

GIS Technicians Compared to Consultants

Compared to RCAP GIS Technicians, consulting firms could potentially have two key advantages – greater speed and lower risk – and two key disadvantages – greater cost and less capacity-building for RCAP.

In-house approaches often take more time and are often more risky compared to subcontractor approaches, as emphasized in the comparison of In-House and Subcontractor Models for the GIS Data Host Site in Chapter 5. Similar factors are pertinent with regard to GIS data collection services, although the contrast between the two models is probably less significant in the case of data collection because data collection services are less technically complex and capital-intensive than the provision of web-based data hosting services to multiple governments. Therefore, there is not as compelling a case to be made in favor of a subcontractor approach to data collection as there is in regard to the GIS Data Host Site. Nonetheless, generally speaking, an entity such as RCAP would 1) need to incur some organizational risks in an in-house approach that would not exist within a subcontractor approach; and 2) probably take longer to get started with data collection work compared to a consulting firm that already has the required staff and equipment available and ready to deploy.

These potential risk and speed advantages of consulting firms could be amplified by the number of entities participating in data collection at any given time. For example, a very aggressive implementation timeframe may be realistic if the desired scale of committed utilities and municipalities (100,000 combined utility connections) is achieved all at once as a result of one round of outreach and member recruitment. In this best-case scenario, it may be possible to proceed much more quickly with data collection in all locations by working with one or more consulting firms compared to achieving the required scale and speed of data collection capacity within RCAP.

In the data collection process, consulting firms could also have two key disadvantages compared to RCAP GIS Technicians.

One potential disadvantage of consultants – higher costs – cannot be determined until data collection bids are solicited and received for the actual participating entities. If consultant bids are significantly more expensive than the projected costs of RCAP GIS Technicians, these cost disadvantages could mitigate against the potential speed and risk advantages of consultants.

There could be a second disadvantage of a consultant-based approach, depending in part on RCAP's organizational goals. Since it is proposed that RCAP employ a GIS Technician to support COG members once the COG is established, there would be value in beginning to build this RCAP staff capacity during the data collection phase leading up to COG start-up. Moreover, strong relationships and consistent communication between RCAP and participating utilities and municipalities will be essential ingredients for success during both data collection and COG operation. Relationships built between RCAP GIS Technicians and participating entities during the data collection phase would help provide a strong basis for a smooth transition to COG operation. Conversely, the communication and relationship-building process could potentially be more challenging with the involvement of one or more consulting firms, compared to RCAP staff.

In summary, full-time GIS Technicians are preferable to interns in the data collection process, and GIS Technicians and consultants both have advantages and disadvantages that cannot be adequately compared prior to the solicitation of consultant proposals for the specific entities involved.

Linking Data Collection Commitments to the COG Member Recruitment Process

In order for the data collection process to be linked deliberately to the ongoing Phase One process of recruiting members for the proposed COG, RCAP should ask entities that choose to move ahead with data collection to agree to be listed as prospective COG members in the draft Agreement to Establish the COG. Since this agreement would not need to be signed until the COG is actually established, there would be no binding commitment entailed in agreeing to be listed in it as a prospective member. However, agreeing to be listed in the draft agreement would make clear each entity's intention to participate in the COG creation process and ultimately to establish the COG. A growing number of entities listed in this draft agreement will provide RCAP with significant leverage in recruiting additional entities and attracting interest from potential funders of COG start-up.

Partners in Data Collection Assistance from RCAP

In the event that RCAP chooses to provide direct data collection assistance to utilities and municipalities, this approach will require four key partners:

1. RCAP;
2. The participating utilities and municipalities;
3. University partners willing to assist in the recruitment of interns (in cases where the intern-based approach is deemed most appropriate); and
4. A consultant to provide training and quality control oversight to the process.

Process for Data Collection Assistance from RCAP

If and when entities identify assistance from RCAP as their preferred approach to data collection – and make commitments to support the associated costs – RCAP would proceed along two parallel tracks: recruiting the GIS Technicians and interns required, and applying for grant funding to partially support data collection costs. Data collection would then proceed through these steps:

1. RCAP secures the services of a consultant to provide Quality Assurance/Quality Control (QA/QC) oversight to the data collection process and to provide training to GIS Technicians and interns as well as utility and municipality staff regarding:

    - The scope and standards of data collection to be achieved;
    - The key elements of the ESRI water model to be used as a common template for data collection;
    - The use of GPS units for data collection; and
    - The assistance from utility and municipality staff that will be required in order to support RCAP GIS Technicians and interns.

    (Appendix D provides bid specifications for the Data Collection Training and Quality Assurance/Quality Control consultant.)

2. The training is provided by the selected consultant;

3. The RCAP GIS Technicians and interns are deployed to the participating entities;

4. The Technicians and interns perform data collection with assistance from local staff. The primary forms of assistance from local staff would be to:

    - Orient Technicians and interns to the utility system including its overall geographic extent, existing maps that provide accurate representations of where key system elements are located, and notations of key instances in which key assets are not visible above-ground or are not accurately depicted in existing maps or drawings;
    - Potentially accompany Technicians and interns as they collect data points with GPS units, especially in instances where assets are not visible above-ground;
    - Potentially flag the locations of utility system features not visible above-ground;
    - Review draft maps created based on the data points collected and identify any inaccuracies or omissions evident in these maps; and
    - Learn about the process of collecting information with GPS units if staff wish to develop these skills and purchase GPS units.

5. The Technicians and interns perform "post-processing" work to ensure that the geodatabases conform to the standards established for the process. Meeting these standards will be required in order for the geodatabases to properly function within the web-based system after it is established, and will ensure that start-up of the web-based system can occur promptly and efficiently when that time arrives.

   If certain standards are not met in the data collection process, multiple problems will have to be fixed during the COG's first year of operation, in turn driving up the COG's first-year costs, undermining the projected first-year COG membership fees that will have been advertised, and delaying the anticipated timeframe for launch of the web-based services.

   The Quality Assurance/Quality Control (QA/QC) consultant would assist the Technicians and interns in meeting the following data collection standards:

   Connectivity

   Where graphic elements visually meet, they must also digitally meet. All confluences of line and polygon data must be exact. In other words, all lines that connect must be snapped to each other and all points must be snapped to a line. There must be no overshoots, undershoots, offsets, or pseudo nodes. Lines that connect polygons must intersect those polygons precisely; that is, every end point must be an intersection point of the respective polygon.

   Line Quality

   There should be no jags or hooks or zero-length segments. Any lines that are straight, or should be straight, should be digitized using only two points that represent the beginning and ending points of the line.

   Segmentation

   The digital representation of linear elements must reflect the visual network structure of the data type. An element should not be broken or segmented unless that segmentation reflects a visual or attribute code characteristic.

6. The Quality Assurance/Quality Control (QA/QC) consultant determines whether the data collection standards have been met and either confirms that they have been met or provides guidance on additional work required;

7. The Quality Assurance/Quality Control (QA/QC) consultant may provide assistance to RCAP GIS Technicians and interns in final post-processing of the data so that standards are met;

8. When the Quality Assurance/Quality Control (QA/QC) consultant confirms that initial data collection standards have been met in each case, the participating entities are deemed prepared to enter the COG.

Estimated Phase Two Costs and Proposed Cost Sharing

The total costs for the data collection phase are estimated to be $359,421. In the proposed cost-sharing approach, the cost for GPS units, laptops, software, and training (representing 13% of total costs) would be supported by grant funding to be secured by RCAP. The remaining costs – for RCAP GIS Technicians/interns and for the Quality Assurance/Quality Control (QA/QC) oversight consultant – would be supported by participating utilities and municipalities. Details of the data collection budget are provided in Chapter 8.

Table 19 shows estimated data collection costs for the utilities and municipalities participating in the feasibility study, assuming that each completed data collection with assistance from RCAP during implementation year one. To develop these estimates, the total costs of data collection to be supported by utilities and municipalities in year one were divided by the total scale of data collection to be completed in that year – 40,000 utility connections – to generate a cost per utility connection of $2.96, or $2,960 per 1,000 connections. This cost per connection was then applied to the number of connections for each entity to generate an estimated cost for each entity.

Feasibility Study Participant Survey Responses Regarding Data Collection Costs

Table 20 summarizes feasibility study participant survey responses regarding data collection costs. The actual utility and municipality names and pertinent number of utility connections are not provided in this table, but the survey respondents are arranged by utility system size (number of utility connections) and their responses are presented on a cost-per-utility-connection basis.

Respondents were asked to select what range of costs each would be willing to pay for initial data collection. The response summary suggests that the estimated data collection cost per utility connection shown in Table 19 ($2.96) is higher than most of the respondents (7 out of 11) would be willing to pay. Nonetheless, the estimated data collection costs appear to be within an acceptable range for a significant minority of the respondents – 36% (4 out of 11). The responses suggest, somewhat surprisingly, that the smaller utilities and municipalities are willing to pay more on a per-connection basis for data collection than are the larger ones among these respondents.

Since the sample size in this survey is quite small, no firm conclusions can be drawn regarding small utilities and municipalities in general in the state of Ohio. However, these survey responses suggest that there probably are a significant number of utilities and municipalities potentially interested in completing data collection at the cost levels estimated in this feasibility study.

TABLE 19*
ESTIMATED COSTS PER UTILITY/MUNICIPALITY FOR RCAP-ASSISTED DATA COLLECTION

Cost per Utility Connection				$ 2.96
Cost per 1,000 Connections				$ 2,960
Example Participants**	Water Customers***	Sewer Customers***	Total Utility Connections	Cost
Village of Carrollton	1,741	1,502	3,243	$ 9,603
City of Columbiana	2,925	2,808	5,733	$16,975
Village of Dillonvale	475		475	$ 1,406
Village of Enon	1,300		1,300	$ 3,849
City of Geneva	2,416	2,559	4,975	$14,731
City of Hillsboro	2,800	2,800	5,600	$16,582
Village of Monroeville	625	555	1,180	$ 3,494
Village of Mount Pleasant	260		260	$ 770
Village of New Carlisle	2,200	3,200	5,400	$15,989
Village of Tiltonsville	650	655	1,305	$ 3,864
Village of Wellington	1,800	1,800	3,600	$10,660
Village of Yorkville		540	540	$ 1,599
Brilliant Water District	672		672	$ 1,990
Buckeye Water District	4,735		4,735	$14,020
Highland County Water Co.	11,000		11,000	$32,571
Jackson County Water	5,800		5,800	$17,174
Jefferson Co. Water & Sewer	7,235	2,065	9,300	$27,537
Scioto Water District	7,250		7,250	$21,467

*The estimated costs shown in this table assume that data collection occurs during year one (2010) of the proposed implementation plan. Costs would be slightly higher in year two (2011) due to wage inflation.
**This does not mean that *all* of these entities are assumed to be participating. It shows the cost that each entity would pay at the estimated cost per utility connection if each did participate.
***Figures from feasibility study grant application.

TABLE 20:
FEASIBILITY STUDY PARTICIPANT SURVEY RESPONSES REGARDING DATA COLLECTION COSTS

Respondent Number (listed from smallest to largest utility system - #1 is the smallest)	How Much is Respondent Willing to Pay for Initial GIS Data Collection (Cost per Utility Connection)*		Is Estimated Cost per connection ($2.96) within or below Cost Range Selected by Respondent? (Y=Yes; N=No)
	Cost Range		
	Low	High	
1	$0.00	$0.00	N
2	$1.92	$3.85	Y
3	$3.83	$7.66	Y
4	$3.08	$4.63	Y
5	$0.56	$1.11	N
6	$2.11	$3.17	Y
7	$0.50	$1.00	N
8	$0.87	$1.74	N
9	$0.86	$1.72	N
10	$0.69	$1.38	N
11	$0.54	$1.08	N
Number of Respondents for which estimated cost is within or below cost range selected by respondent			4
Average System Size (number of utility connections) among these respondents			2,646
Number of Respondents for which estimated cost is above cost range selected by respondent			7
Average System Size (number of utility connections) among these respondents			5,533

*Responses were not requested on a per-utility connection basis but are expressed in this manner in this table by dividing the respondent-identified cost range figures by the respondent's number of utility connections. Respondents were asked to select from the following cost ranges:

1. $2,500-$4,999
2. $5,000 - $9,999
3. $10,000-$14,999
4. $15,000-$24,999
5. $25,000-$29,999
6. $30,000-$34,999
7. Unwilling to spend any money on initial data collection.

Implementation Phase Three: COG Start-Up

The COG Start-Up Phase is illustrated in Figure 4.

Broadly defined, "COG Start-up" includes all of the activities described above, since these activities will be necessary in order to get the scale of initial COG membership to the target scale of 100,000 combined utility connections.

However, "COG Start-up" is also a more specific phase of the implementation process in which:

- The COG is formally created;
- Its Bylaws are finalized and approved by participants with assistance from legal counsel;
- Its operating structure and scope of services to members are defined in the Bylaws;
- Its first-year membership fees are determined and committed to by members;
- A fiscal agent is designated and its roles are defined in the Bylaws; and
- Municipal resolutions are secured from participating entities to authorize their participation in the COG.

Two Parallel Tracks: Legal and Financial

COG start-up should proceed along two parallel tracks:

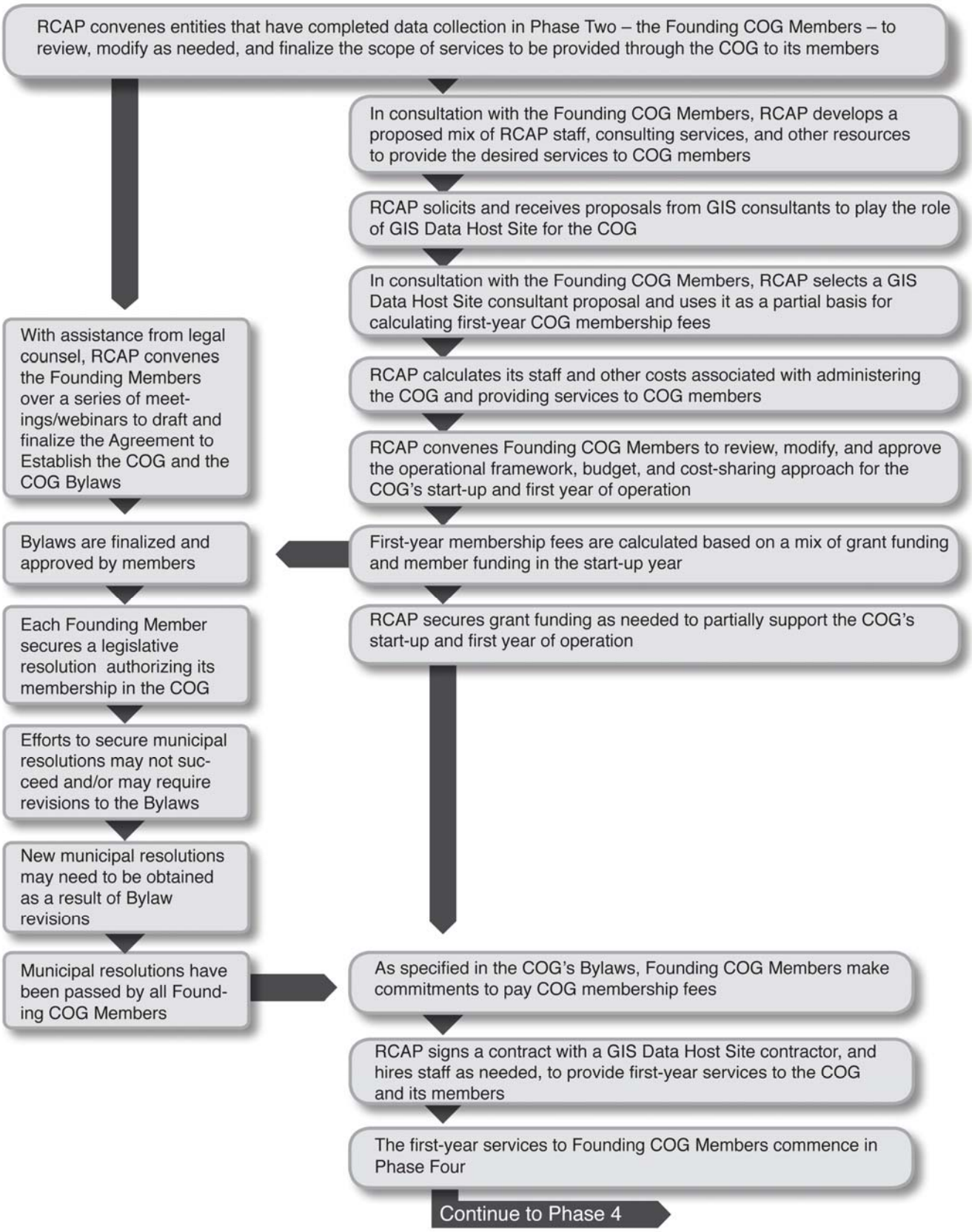
The Legal Track

First, all participating entities should be brought together to complete development of the Agreement to Establish the COG and the COG Bylaws, initial drafts of which will have been prepared by legal counsel and shared with participants during Phase One. This process would presumably be supported by the same legal counsel involved in Phase One. After the Bylaws are completed and approved by members, each member's legislative body, if applicable, will need to pass a resolution authorizing the entity to join the COG. It is possible that decisions made by these legislative bodies may require revisions to the Bylaws, and that the Bylaw approval process may need to be repeated.

The Financial Track

Second, the COG's scope of services, service-delivery components, budget, cost-sharing approach, and membership fees need to be established, and in turn incorporated as appropriate into the development of COG Bylaws occurring along the legal track. The two tracks would come together after the COG's first-year membership fees are determined, at which point the members would be positioned to approve the Bylaws based on a clear understanding of the financial commitments entailed in doing so.

Figure 4: Implementation Phase 3 - COG Start-Up



Transitioning from COG Start-up to COG Operation

The activities in the COG Start-Up Phase are obviously linked to the activities in the COG Operation Phase because one phase establishes the terms for the other. Ensuring the smoothest possible transition from one phase to the next will require building clear linkages between the legal and financial tracks in the COG Start-Up Phase.

There are two sets of issues to be considered in order to ensure the smoothest possible transition to COG Operation in Phase Four: determining financial feasibility and enabling the process to move forward simultaneously along both the legal and financial tracks.

Determining Financial Feasibility

Starting-up the COG's operations must be deemed feasible by the founding members at a specified cost per member.

The costs estimated in this feasibility study can provide an initial starting point for this assessment, but the feasibility determination cannot truly be made until: 1) proposals are solicited and received from prospective GIS Data Host Site subcontractors; 2) the members decide what proportion of these costs they are willing to bear; and 3) they decide how much dependence they wish to have on grant funding. One cost-sharing scenario is described in the Phase Four section below. However, the costs could be split in numerous ways depending on the actual costs calculated at that time, how many members are actually participating, how large they are in terms of utility connections, and how much they are willing to pay. All else equal, start-up can happen more quickly if members are willing to support more of the start-up costs themselves. Conversely, more dependence on grant funding will lower costs per member, but will mean that start-up may take longer to occur.

This trade-off between member-supported costs and the start-up timeframe will be a key issue that members need to resolve. It may be determined that the projected costs are too high, and that additional members will need to be recruited to complete data collection before the COG can be established. If this becomes the case, then this process could be facilitated by soliciting subcontractor proposals to identify a specific scale at which membership fees would fall to a level that all participants would deem feasible. This would then provide a specific target in terms of the scale of additional member recruitment and data collection to be completed.

Enabling the Process to Move Forward Along Both the Legal and Financial Tracks

The mix of grant funds and member funds that is established as a goal must be reflected in the process of developing the COG's Bylaws and securing municipal resolutions authorizing each member to join the COG. This should be done in a manner that allows the legal and financial tracks to support rather than paralyze one another.

Assuming that some grant funding will be required for COG start-up, it will be important to avoid a situation in which start-up activities become paralyzed by an inability to finalize the COG's Bylaws and move forward. To accomplish this, it is recommended that the COG's Bylaws stipulate commencement of first-year membership fees to be contingent upon the completion of specified start-up activities to be funded by sources other than the members. In this manner, the Bylaws can

be finalized without requiring all start-up funding to have already been secured: the COG's Bylaws will provide some protection by stipulating that activities supported by non-member funds must be completed before membership fee commitments are binding. This will enable the process of securing start-up funding to move forward by essentially using the membership fee commitments reflected in the Bylaws as evidence of matching fund commitments by members to leverage grant-funding for start-up. Alternatively, finalization of the Bylaws could be put off until all non-member start-up resources have been secured, but this may make securing those resources more difficult in the absence of clear commitments from members that many grantors may require.

Furthermore, writing the Bylaws in a way that makes the commencement of membership fees contingent upon other non-member resources being secured first will provide a level of assurance to each member's legislative body, in turn encouraging the passage of resolutions before all start-up resources may have been secured. In this manner, the two processes of securing municipal resolutions and securing grant resources for start-up can move forward on parallel tracks as opposed to one process needing to wait for the other one to be completed. Therefore, the process of securing municipal resolutions – which could be a time-consuming one in any case – will be expedited as much as possible.

Key Issues to be Defined in COG Bylaws

In addition to linking the development of COG Bylaws to the COG funding strategy, there are several other key issues to be clarified in the COG's Bylaws:

Fiscal Agent Roles

As discussed in Chapter 5, naming a fiscal agent is the key means by which the COG can avoid the expenses and risks associated with establishing a new, staffed organization to administer the COG's funding and services. For reasons outlined in that chapter, RCAP is proposed to play the lead role in administering the COG's services. This could be accomplished through two alternative approaches:

1. RCAP could be named the fiscal agent, meaning it would have primary fiscal responsibilities on behalf of the COG in addition to having the primary programmatic and organizing roles; or

2. Another entity could be named the COG's fiscal agent, and in turn contract with RCAP to oversee delivery of services to COG members.

The most appropriate fiscal structure is a determination best left to RCAP and founding COG members with advice from legal counsel during the COG Bylaw development process. In any case, the fiscal agent will need to keep a separate set of accounting records on behalf of the COG, and these records will be audited by the State Auditor's Office separate from the fiscal agent's other financial records. As part of the COG start-up process, the appropriate accounting staff should contact the State Auditor's Office to clarify the form of record-keeping and the frequency of reporting and auditing that will be required. State law suggests a significant level of flexibility in regard to auditing form and frequency, and leaves these determinations to the discretion of the Auditor's Office on a case-by-case basis.

The COG's Decision-Making Structure

The Voinovich School undertook a review and comparative analysis of existing Ohio COG Bylaws in order to provide an overview of existing COGs and many of the key decision-making issues that should be considered in the process of developing COG Bylaws. These issues are as follows:

Membership

Most COGs form around a core group of founding governmental units, school districts, public universities, and planning committees. In addition to these core members, some COGs allow non-governmental institutions, businesses, private colleges, hospitals, and non-profit organizations to join. A number of COGs have been established exclusively for the collaboration of County Boards of Mental Retardation and Developmental Disabilities (MRDD). Similarly, other COGs have been established to oversee specific services, such as communications networks, the purchasing of supplies and services for school districts, and the collection of income taxes. Although some COGs established to provide a specific service have a closed membership, most welcome new members through an application process requiring approval by all voting members or a Board representing members.

Meetings

Depending on the COG, meetings of the entire membership are referred to as Council or Assembly meetings. These bodies usually consist of the representative or an alternate from each member organization. In the case of COGs established to coordinate the work of Boards of MRDD, each member Board appoints its superintendent to act as the Board's representative at Council meetings. Most other COGs stipulate that the Mayor or Chief Executive of each member organization is charged with selecting a representative to the Assembly. Full Council or Assembly meetings can occur monthly, quarterly, annually, or at another frequency chosen by the members. In addition to these scheduled meetings, most COGs hold special meetings at the request of an officer or a certain percentage of the membership. In order for business to be transacted at Council or Assembly meetings, a quorum of members (usually a majority) generally needs to be present. If a quorum is not met, some COGs have a contingency in place whereby the Executive Committee or Board of Trustees meets in place of the Assembly.

Dues

Almost every COG requires member organizations to pay dues in order to support the purposes of the COG. COGs that provide services, such as the administration of income tax collection or the maintenance of a communications network, tend to charge member municipalities based on their proportional use of the shared program or service. For COGs that require start-up capital, founding members typically share the costs of the initial investment. For most COGs, annual dues are generally required; the cost of these dues is often determined through a population-based formula or another formula established by the Board of Trustees.

Officers and Elections

Most COGs hold annual elections during their yearly organizational meeting to select Assembly officers, Executive Committee members, and/or Board of Trustee members. The most common Assembly officer positions include President, Vice-President, Secretary, and Treasurer. In order for voting to take place, a quorum of Assembly members is usually required. If a quorum is present, Assembly members vote on candidates either nominated at the meeting or beforehand by a nominating committee. Officers are then elected by a majority vote of Assembly members. If officers fail to live up to the standards specified for their position, most Bylaws also include a protocol for removing them, ranging from either a simple two-thirds vote (2/3) in favor of removal to elaborate systems including hearings and spoken defenses. Lastly, the actual duties of Assembly officers vary among COGs depending on the organization's structure and the services that it provides.

Executive Committees

Although not all COGs have Executive Committees, most of the larger COGs with more extensive membership do. The Executive Committee often acts as a governing board and as the core leadership of the organization, exercising such powers as proposing the annual budget and annual work programs, approving contracts, serving as a financial control body, and developing long-term goals and objectives. Concerning the membership of the Executive Committee, every example studied included the current officers of the Assembly. In addition to the four or so officers who sit on the Executive Committee, most include at least one or two at-large members elected from among the broader membership. For certain COGs, the Executive Committee is mandated to include a representative from specific member organizations. For these officers and other at-large or special representatives on the Executive Committee, one year is the normal term length. Similar to the rules governing voting in the larger Assemblies, most Executive Committees require a quorum of members to be present in order to transact business.

Boards of Trustees

Some COGs have Boards of Trustees, while others have neither a Board nor an Executive Committee. Within COGs that have a Board of Trustees, the Board often has the final say in matters pertaining to the COG, often overseeing and approving the actions of the Executive Committee. The Board is often responsible for adopting the annual budget, proposing long-term goals and programming, authorizing contracts, and approving purchases. While some Boards act as an Executive Committee and engage in the actual implementation of programs and policies, other Boards serve more traditional roles, approving Assembly and Executive Committee decisions and focusing on the COG's longer-term direction. Trustees are generally chosen through election or caucus by the Assembly. Varying among COGs, membership on the Board of Trustees includes at-large members, Board-appointed members, ex-officio members, and other mandated members representing cities, villages, school districts, and non-profit organizations. As with the Executive Committee and the Assembly, the Board of Trustees usually requires the presence of a quorum in order to transact business.

Councils and Committees

Most COG Bylaws provide for Councils and committees aside from the Executive Committee. The Executive Committee or the Board of Trustees often establish councils and committees on an ad-hoc basis to study or oversee specific short-term tasks. Other committees are long-standing or semi-permanent components of the COG. Regardless of the duties or nature of the committee members, they are generally appointed by and report directly to the Board of Trustees or Executive Committee. Members of councils and committees do not need to be members of the Assembly or even members of the COG. Concerning their internal organization and operation, committees are typically headed by a Chairman and possibly a Vice-Chairman who are both elected by the members of the committee. Finally, like all of the other constituent bodies of a COG, a quorum is typically required for voting.

Chapter 167 of the Ohio Revised Code – which explains the legal parameters for COGs – is provided in Appendix E, and a list of COGs in Ohio is provided in Appendix I. Drafts of an Agreement to Establish a COG, COG Bylaws, and a municipal ordinance authorizing COG membership are provided in Appendices F-H. These draft documents were developed based on a review of existing COG documents as well as governing documents for several GIS cooperatives. However, they were *not* developed by staff with legal expertise and should *not* be utilized in the outreach and COG member recruitment process without review and modification by experienced legal counsel.

Determining how the COG proposed in this feasibility study should structure its decision-making will require legal counsel and the involvement of the actual participants, which are unknown. Nonetheless, several key points should be emphasized:

- A COG framework clearly provides flexibility to establish multiple different structures for decision-making and multiple levels of involvement by members according to the level and frequency of involvement that each desires to have;

- There are multiple examples, among existing COGs, of the kind of scale-based proportional cost-sharing that the proposed GIS cooperative calls for. In the particular start-up and operational framework recommended in this feasibility study, each member's number of utility connections is probably the most straightforward and equitable basis for calculating membership fees.

  The actual level at which each member will ultimately use the web-based system and other COG services is impossible to predict at this point. As described in the Phase Four section below, specifically tracking the levels and types of system utilization during the COG's first year of operation will be critical in order to better predict system utilization in the future and possibly develop a more complex method of calculating membership fees than is recommended for the COG's first year. In future years, it might therefore be possible to calibrate membership fees not only to the scale of the utility system, but also to a more specific quantity of service types that would be provided to each member. Some existing GIS cooperatives – for example, the Richland County (OH) GIS Consortium – specify an hourly cost for some services over and above the standard or presumed level of services to be provided to each member.

- A COG framework clearly provides multiple ways for entities that are not recipients of COG services to be COG members or partners, and thereby to assist in achieving the mission of the COG and its members. Different types of memberships could be established, including types that receive services and are required to pay membership fees in return, and members that do not receive services and do not pay fees, but nonetheless may participate based on their own interest in achieving the COG's goals. The proposed COG could therefore combine the benefits of its binding structure, in regard to shared financial commitments, with the benefits of looser structures like committees and consortiums that can bring partners to the table to advise and assist the COG in achieving its goals. This approach, in turn, could build relationships between the COG and several GIS-related organizations that currently exist in the State of Ohio to facilitate GIS data sharing and other aspects of GIS.

Estimated Phase Three Costs and Proposed Cost Sharing

The total costs for this phase are estimated to be $41,480. These costs are proposed to be supported entirely by RCAP and/or grant funding to be obtained by RCAP. Phase Three budget details are provided in Chapter 8.

Implementation Phase Four: COG Operation

Phase Four implementation activities are illustrated in Figures 5 and 6. Figure 5 illustrates details of the COG's operation. Figure 6 illustrates the details of the proposed GIS service delivery structure.

Phase Four activities will occur in two categories: Administrative activities and programmatic activities. These categories are not entirely separable, but the distinction is useful in order to clarify the roles of the parties involved.

Administrative Roles and Activities

Administrative roles and activities are those that are required in order for the COG and its services to exist, but do not include the actual provision of GIS services to COG members.

RCAP

As the recommended administrator of the COG, RCAP would be responsible for the following in the COG's first year of operation:

- Managing the COG's fiscal affairs if RCAP is the COG's designated fiscal agent, including keeping a separate set of accounting records on behalf of the COG, reporting to and being audited by the State Auditors' Office, and securing approval for entering into contracts from the COG's Board or Executive Committee as specified in the COG's Bylaws;

- Securing and overseeing all or some of the COG's contractual services, either directly on behalf of the COG if RCAP is the COG's designated fiscal agent, or as a subcontractor to another entity that may be designated the fiscal agent;

- Employing and supervising a GIS Technician to provide front-line customer support services to COG members;
- Communicating with COG members and potentially convening periodic meetings of the COG's Board, Executive Committee, other Committees, and/or its Assembly as specified in the COG's Bylaws. (Alternatively, COG Officers could be charged with all or some of these convening roles.)

Utility and Municipality Administrators

These individuals, or designees thereof, are the key representatives of the COG's members. In short, they are in charge of the COG, which is comprised of, for, and by them. Therefore, the importance of their roles within the COG's decision-making bodies (the Council, Board of Trustees, Executive Committee, and other committees) as defined in the Bylaws cannot be overstated.

Programmatic Roles and Activities

Programmatic roles and activities pertain to the direct provision of GIS services to COG members.

Utility and Municipality Administrators

In addition to the COG administration roles specified in the COG's Bylaws, utility and municipality administrators will play several critical programmatic roles.

First and foremost, administrators will have a critical role in providing the direction, support, expectations, and resources that will enable front-line staff to fully take advantage of the GIS services and capacities made available through the COG. Administrators must initially establish the desired and expected level of system utilization among staff and provide the resources required by staff in order to learn how to use the web-based services. In terms of physical infrastructure, these resources will be modest: a computer, an internet connection, a printer, and possibly a scanner. Perhaps more significantly, administrators must allow and encourage staff to invest the time required in order to initially learn how to use the web-based system and its related support services. Particularly at the outset, administrators will need to allow and encourage staff to attend initial trainings (and could attend trainings themselves), and follow-up by engaging staff in discussions about how the system can be used to support each entity's operational and asset management goals.

In turn, administrators will need to provide guidance and oversight to staff regarding data management priorities. These priorities would be identified through key questions such as: What information not initially included in the entity's geodatabase should be added to the database, and what are the first priorities? For example, administrators may decide that identifying the locations of all historical line breaks is a priority in order to track the pattern of those breaks and develop repair or replacement plans. In this case, front-line staff will need to incorporate these activities into their work plans. Or, administrators may want to anticipate and plan for more significant edits to the geodatabase that will be required to reflect new development or major system alterations. This information can be communicated to RCAP's GIS Technician and staff at the GIS Data Host Site so that the process of performing these edits when the time comes can be clarified and anticipated.

Figure 5: Implementation Phase 4 - COG Structure

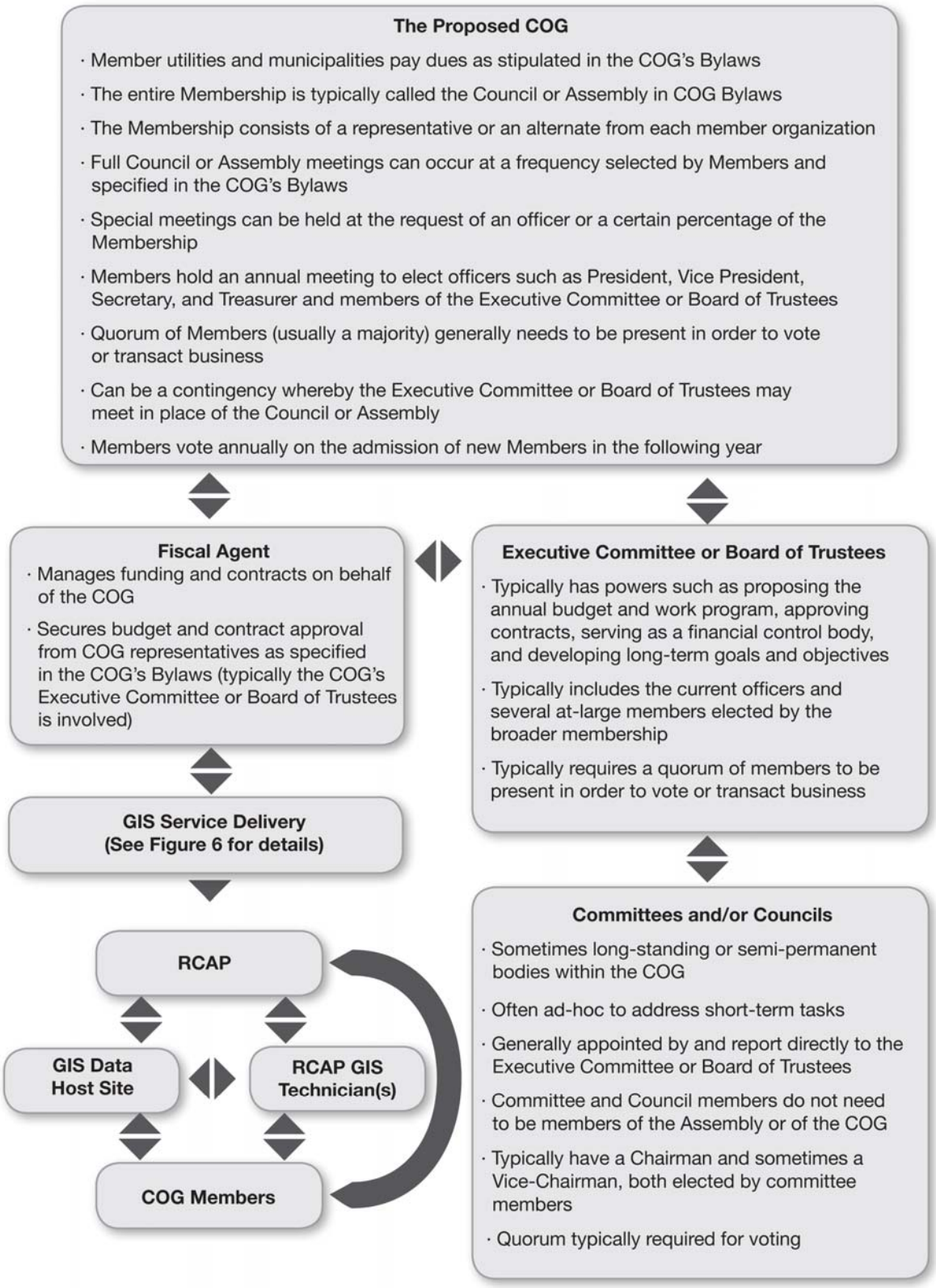
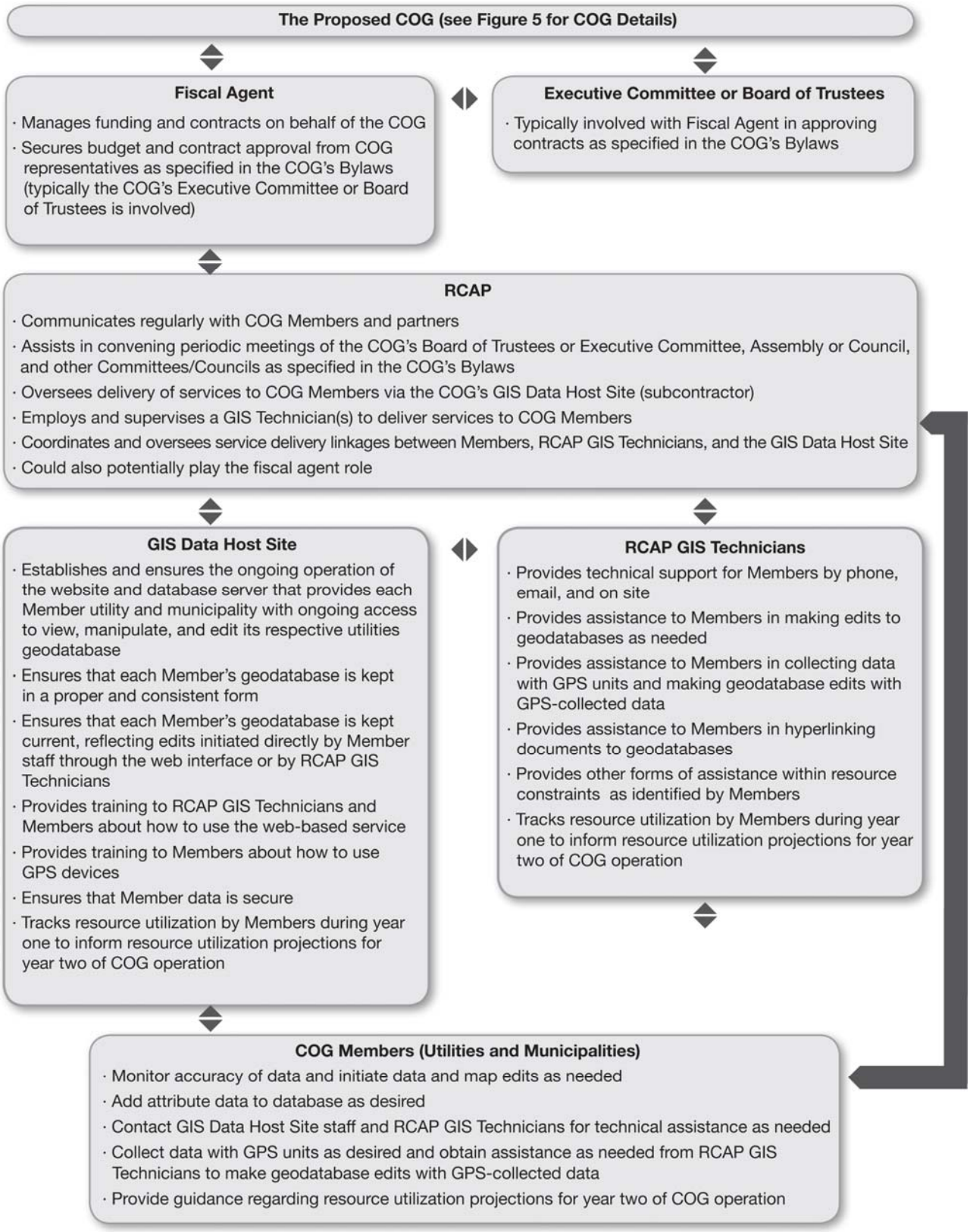


Figure 6: Implementation Phase 4 - GIS Service Delivery



Administrators will also play key roles in informing RCAP about how the web-based system and associated services are working, as well as areas in which the system needs to be improved. While front-line staff can and should communicate to staff at both RCAP and the GIS Data Host Site, administrators will also need to make sure RCAP is aware of any concerns that they may have. Periodic meetings of the COG's decision-making bodies will be important opportunities to evaluate the system, but ongoing communication between administrators and RCAP will also be essential.

RCAP

In addition to the administrative roles described above, RCAP would have primary responsibility for coordinating and overseeing service delivery to COG members. This would entail monitoring and improving the linkages between member sites, RCAP GIS Technicians, and the GIS Data Host Site.

These linkages represent the primary means of delivering benefits to members of the cooperative, and the strength of these linkages will be defining elements of the COG's success. Therefore, one of RCAP's central roles in overseeing the cooperative's service delivery system, especially during the COG's first year of operation, will be to monitor activities, identify what is working well and what is not, and coordinate improved service delivery linkages among all entities involved.

Effective service-delivery linkages will need to occur at five levels, each of which corresponding to the key levels of COG membership benefits.

- Benefit Level One: Data Management Linkages between member sites and the GIS Data Host Site.

  The first and most important service delivery linkages will occur between each member site and the GIS Data Host Site via the COG's website. The online GIS data viewing and editing capabilities provided by the GIS Data Host Site represent the primary value of membership in the COG, since the web-based system eliminates the need for each member to purchase the hardware, software, and staff infrastructure that would otherwise be needed at each member site in order to utilize GIS technology. Each member would be sharing the costs of a single data server, database administrator, website, and information technology support. All other levels of support and services to be provided through the COG build on this foundation, and derive most of their value from it.

  Data management capacities provided via the GIS Data Host Site are not automatic, because the website does not eliminate the need for a database administrator. Data edits initiated either directly through the website by local staff or indirectly with assistance from the RCAP GIS Technician will require the database administrator at the GIS Data Host Site to reconcile edits and then post the updated data on the website for use in its updated form by local staff (this process is described in greater detail in Chapter 3).

- Benefit Level Two: Training Linkages between each member site and the GIS Data Host Site.

  The benefits to be obtained by members via the web-based service will be strongly related to training to be provided by GIS Data Host Site staff regarding how to use the system. At

least two trainings for local staff should be scheduled during the COG's first year of operation, the first to immediately follow the establishment of the cooperative's website, and a second to occur later in the year to provide training to additional staff and to address common problems or questions that participants may have encountered to date.

- Benefit Level Three: Technical Support Linkages between member sites and RCAP GIS Technicians.

  Building on the foundation of the web-based service and associated training, RCAP GIS Technician(s) would provide front-line customer service to COG members, and would be available to assist operators via phone or email with any questions about using the website.

- Benefit Level Four: Data Editing Linkages between member sites, RCAP GIS Technicians, and the host site.

  Some kinds of geodatabase edits will not be possible for utility and municipality staff to perform directly using only the capabilities of the web-based interface and the staff and software capabilities that local sites will be expected to have. For example, if utility system changes affect not only a single physical feature, such as a water line or water meter, but also change the way that water flows within the system overall, local staff will require assistance to ensure that these changes are properly reflected in edits to the geodatabase. If new development will require significant alterations to the utility system, this may also entail forms of edits to the geodatabase that are beyond local capacities.

  In these instances, assistance would be provided by the RCAP GIS Technician. First, local staff would contact the Technician to describe the situation and determine how to proceed. If as-built drawings of the system changes can be provided, RCAP GIS Technicians will probably be able to perform edits on the basis of those drawings. After edits are completed, the RCAP GIS Technician would forward the edits to the GIS Data Host Site, where the database administrator would finalize the edits and then post the updated information onto the website so that it can be viewed and utilized, in its updated form, by local staff.

- Benefit Level Five: Data Collection Linkages between member sites, RCAP GIS Technicians, and the GIS Data Host Site.

  The RCAP GIS Technician would be available to assist local staff in the collection of data points using GPS units. This could occur in two alternative ways. First, if the local entity does not own a GPS unit or requires on-site assistance in initially learning how to use one, the Technician could assist in the actual collection of the data points with a GPS unit. Second, local staff with their own GPS units could collect data points without assistance from RCAP. In either case, the RCAP GIS Technician would be required to "post-process" the data and forward it to the GIS Data Host Site for incorporation into the local entity's geodatabase. In most cases, data from local sites could be transferred to the RCAP GIS Technician via an email message with an attached file.

  During the first year of the COG's operation, at least one training session should be provided to local staff regarding how to use GPS units to collect data and how to provide

GPS-collected data to the RCAP GIS Technicians for post-processing. This training will be most effective if COG members can agree to purchase the same GPS unit model, since the training could then be developed specifically based on that model. It would not be essential for every entity to own a GPS unit, but local GPS capacities could significantly improve each entity's ability to benefit from participation in the COG.

The GIS Data Host Site

The GIS Data Host Site will have five key roles:

- Establish and ensure the ongoing operation of the website and database server so that each member can access and edit its respective geodatabases;
- Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all member geodatabases;
- Ensure that each member's geodatabase is kept up-to-date, reflecting edits initiated directly by local staff via the website or by RCAP GIS Technicians assisting local staff;
- Provide training to RCAP GIS Technicians and members about how to use the web-based service; and
- Provide training to members about how to use GPS devices.

In addition, the GIS Data Host Site must have a robust data security system in place to ensure that the utility data of COG members is protected. For example, the Voinovich School meets HIPAA (Health Insurance Portability and Accountability Act) requirements for the transfer, use, and storage of confidential data. The Voinovich School houses a Microsoft SQL server, web server, and GIS applications server, with a dedicated, fully encrypted 128 bit internal file system. In addition to the use of secure FTP protocols for the transfer of confidential data and 128 bit encryption for secure data storage, the Voinovich School also utilizes a Sonicwall Firewall and Microsoft Active Directory to prevent unauthorized access to the computer system. Windows IIS (Internet Information Services) web server security delivers integrated multi-layered windows server protection. Windows IIS provides application layer protection via integration with the IIS platform as an ISAPI (Internet Server API) filter, protecting against known and unknown exploits and unauthorized web access. Only assigned project staff who have signed a confidentiality agreement including awareness of secure data management protocols are granted access to the secure project folders.

Utility and Municipality Staff

Utility and municipality staff would be the primary users of the resources and services provided through the cooperative. However, they would not be passive users: they would have primary responsibility for ensuring the accuracy of the data initially collected and then stored at the GIS Data Host Site.

After training is provided, local staff will begin to build use of the cooperative's website into their daily activities, in turn becoming increasingly proficient in performing all of the tasks described in detail in Chapter 3, and for which training will be provided by GIS Data Host Site staff:

- Viewing Maps of Utility Systems in order to see the locations of utility system assets such as water lines, water meters, hydrants, and valves;
- Panning with Maps in order to view different geographic areas within a municipality or utility system;
- Zooming with Maps in order to see utility system elements at different scales or levels of detail;
- Viewing Utility System Data in Table Form in order to see attribute information about each utility system asset, such as the diameter of a water line, what it is made out of, what company manufactured it, when it was installed, and when it was repaired;
- Turning Map "Layers" On and Off in order to view utility system features in relation to other geographic features including streets, aerial photos, soils, floodplains, political boundaries, railroads, streams, and lakes, as well as additional layers such as parcels, zoning, sidewalks, edge of pavement, structures, and building footprints that may be available depending on county;
- Searching Utility System Data in order to locate utility assets based on specific attributes such as valve type, water line diameter, hydrant manufacturer, or any other information that is included in the database and that the member entities deem important;
- Querying Utility System Data based on more than one attribute at a time in order to find utility system assets that share multiple attributes;
- Editing and Adding to Utility System Data in order to ensure that each entity's respective geodatabase includes more information and continually updated information over time;
- Editing Utility System Data with Assistance from RCAP Staff as described above;
- Conducting Planning and Analysis Based on GIS Data in order to more efficiently respond to problems and plan for projects and maintenance;
- "Hyperlinking" Files such as drawings and customer billing information to the database using a procedure to be developed and incorporated into the website for this purpose by GIS Data Host Site staff;
- Extracting Data from the Geodatabase for use with GIS software or with a mobile GPS device;
- Making Data Available as "Live Maps" to Designated Third Parties such as regional planning commissions or engineering firms;
- Color-Coding Map Symbols based on Key Attributes to enable quick recognition of active versus inactive meters, utility features in need of repair, or other utility feature attributes deemed significant to highlight in this manner;
- Potentially Linking Customer Billing and Asset Management Software to the GIS.

Estimated Phase Four Costs and Proposed Cost Sharing

The total cost for Phase Four is estimated to be $336,163. In the proposed cost-sharing approach, the staff, hardware, and software costs required to initially set up the GIS Data Host Site are proposed to be supported by grants, with the remaining costs to be supported by COG members through first-year COG membership fees. Phase Four budget details are provided in Chapter 8.

The Challenges of Predicting System and Service Utilization

Chapter 8 provides details about the Phase Four budget and cost estimates. However, it is useful here to address some key components of the cost estimating methodology and the significant level of unpredictability that is inherent in estimating some staff costs.

Predicting how much the web-based system will cost requires predicting both fixed and variable costs. Variable costs are more challenging to predict, and staff costs are the most challenging variable costs to predict within the proposed COG because some of these costs are strongly related to how much the web-based system will be used by each member utility and municipality. This, in turn, is not possible to predict with a high level of accuracy for two key reasons highlighted in Chapter 6.

First, no strong analogues for the proposed web-based system were identified during the feasibility study research process, probably due largely to the relatively recent development of software that enables the online data editing functions that are central to the purpose of the proposed cooperative. This means that staff cost estimates must be extrapolated from examples that differ significantly from the proposed web-based system. In particular, there were no identified examples of multi-government cooperative GIS efforts in which member entities 1) have online data *editing* capabilities that are 2) supported by a central database administrator 3) *without* requiring significant GIS software and GIS expertise to exist at each member site.

To put it another way, the GIS infrastructure (staff, hardware, and software) is far more centralized in the proposed model than it is within any of the web-based examples studied, in turn requiring a relationship between local staff and host site staff that is significantly different in the proposed model compared to the examples studied. A member utility or municipality with GIS software and substantial GIS expertise would be able to directly perform many types of data editing functions that would not be possible within the proposed system without assistance from the RCAP GIS Technician. This results directly from a central purpose of the proposed cooperative: to centralize GIS infrastructure at a host site precisely so that GIS capabilities can be provided to member entities without requiring each one to have extensive amounts of software and staff GIS expertise. Unfortunately, none of the identified examples are providing GIS capabilities in this manner – all are predicated upon a higher level of local GIS software and staff GIS expertise than is anticipated in the proposed cooperative.

Second, because the actual participants in the proposed cooperative are unknown, there is little basis for predicting how – or how much – each member would choose to use the web-based system. Some member entities, for illustration, may make it a key organizational priority to extensively use the web-based system for entry of additional data, while others may choose to use the system more

modestly. Or, some members may have upcoming projects that will entail significant geodatabase edits, while others may not.

Therefore, for both of these reasons, it is challenging to predict the level at which COG members would require some forms of staff assistance from the GIS Data Host Site or the RCAP GIS Technician during the COG's first year of operation. This will be more reasonably predictable after the first year of the COG's operation, during which both RCAP and GIS Data Host Site will have tracked utilization by members in order to measure utilization by both volume and type.

As explained in Chapter 6, estimated first-year staff costs for GIS Data Host Site are based on FTE assumptions extrapolated from several city and county examples in which utilization of a centralized database administrator by multiple agencies is considered analogous to utilization of a centralized database administrator by multiple utilities and municipalities within the proposed cooperative. Based on this methodology, the FTE figures shown in Chapter 6 were utilized as the basis for predicting GIS Data Host Site staff costs related to operation of the web-based system.

Table 21 summarizes the staff positions and estimated staff costs for the COG's first year of operation. For the purposes of clarifying key staff utilization issues, each staff cost is defined as either fixed or variable. The majority of these costs are defined as fixed because they will exist regardless of how – or how much – each member of the COG uses the COG's services. The following costs have been defined as variable:

1. The cost of managing the COG and its delivery of GIS services.

   This cost – represented by RCAP's Senior Rural Development Specialist – is particularly variable for one basic reason: it is not known how many utilities and municipalities will be COG Members. For example, managing relationships and service delivery to 25 entities is likely to be more burdensome than doing so for 10 entities.

2. The cost of providing front-line customer service.

   This cost – represented by the RCAP GIS Technician – will also relate significantly to the number of COG participants, as well as their locations, which are unknown. In addition, this cost is variable because it is not known how much each member will draw upon each type of assistance available from the RCAP GIS Technician.

3. The cost of database administration.

   This cost – represented by the GIS Manager at the GIS Data Host Site – is significantly variable because it is not known how much each member will utilize the web-based system for editing purposes, and in turn what level of effort will be required of the database administrator in order to ensure that the central database is kept current. As described in Chapter 6, the FTE figures utilized for cost estimating purposes assume that the database administrator's level of effort within the proposed system is roughly equivalent to the level of effort associated with utility data within several city- and county-level database administration examples.

TABLE 21 FIXED AND VARIABLE STAFF COSTS FOR RCAP AND THE GIS DATA HOST SITE (2012)					
	FTE	**Hours**	**Hourly Rate**	**Cost**	**Cost Description**
RCAP STAFF COSTS					
Senior Rural Development Specialist	0.250	520	$50.92	$ 26,480	Variable
GIS Technician	1.000	2080	$27.23	$ 56,645	Variable
HOST SITE STAFF COSTS					
Host Site Set-up					
GIS Manager	0.070	146	$53.60	$ 7,826	Fixed
GIS Systems Software Analyst	0.050	104	$60.60	$ 6,302	Fixed
IT Manager	0.050	104	$71.02	$ 7,386	Fixed
Hyperlink Capability Set-Up					
GIS Manager	0.038	80	$53.60	$ 4,288	Fixed
GIS Systems Software Analyst	0.029	60	$60.60	$ 3,216	Fixed
Trainings on Using the System					
GIS Manager (Training One)	0.050	104	$53.60	$ 5,574	Fixed
GIS Manager (Training Two)	0.015	32	$53.60	$ 1,715	Fixed
Training on Using GPS Units					
GIS Manager	0.050	104	$53.60	$ 5,574	Fixed
Host Site Administration					
GIS Manager	0.750	1560	$53.60	$ 83,616	Variable
GIS Systems Software Analyst	0.200	416	$60.60	$ 25,210	Fixed
IT Manager	0.100	208	$71.02	$ 14,772	Fixed

The staff FTE requirements shown in Table 21 can be converted into multipliers. In turn, these multipliers could be modified over time in order to predict staff utilization and associated COG membership fees from year to year as the COG evolves. For the COG's first year of operation, the multipliers used for the staff positions defined as variable costs in Table 21 are shown in Table 22. These multipliers are generated by dividing the number of staff hours by the total assumed number of combined utility connections (100,000).

For each of these positions, activities during the COG's first year of operation should be tracked by type of activity and for each COG Member in order to provide guidance regarding the development of multipliers, projected costs, and associated membership fees during year two of the COG's operation. Revised multipliers could be generated in a general form, as they are in Table 22, or could be developed for different categories of tasks. For example, the RCAP GIS Technician and the GIS Data Host Site's database administrator will both spend time responding to technical assistance questions raised either by phone or email by COG Members, and each will also spend time

performing database editing work on behalf of members. If time spent in each of these task categories (and others) is tracked, then it would be possible to generate multipliers for each task type.

Even if task-specific multipliers are not used to estimate staff costs in future years – that is, if one general multiplier is used for each position as shown in Table 22 – this type of task-specific tracking could be very useful in order to illustrate to prospective new COG members what types and volumes of staff assistance can be expected, on average, in return for membership fees. It is not possible – and could potentially be very misleading – to present first-year benefits and fees in this task-specific manner because there is no reasonable basis for generating such estimates.

TABLE 22
FIRST-YEAR UTILIZATION MULTIPLIERS
FOR SELECTED RCAP AND GIS DATA HOST SITE STAFF

Position	FTE	Hours	Hours per Utility Connection	Hours per 1,000 Connections
RCAP Senior Rural Development Specialist	0.25	520	.0052	5.2
RCAP GIS Technician	1.00	2080	.0208	20.8
Host Site GIS Manager (database administrator)	0.75	1560	.0156	15.6

Determining First-Year COG Membership Fees

For three key reasons, membership fees need to be determined in a different manner for year one of the COG's operation compared to future years.

First, as described above, system utilization is relatively unpredictable, and the actual COG members are unknown, and therefore linking first-year fees to system utilization is not reasonable in the absence of a utilization track record upon which to base the fees.

Second, the first year of the COG's operation will require some start-up expenses that will not be required in future years. In turn, it is assumed that some grant funding may be available to support some of these first-year start-up expenses in order to help establish the COG.

Third – and probably most significantly – starting up the proposed COG will entail a significant amount of risk, as discussed in Chapter 4, and this risk needs to be shared on some equitable basis among all parties involved. RCAP and the GIS Data Host Site will need to mobilize significant resources and/or allocate them in advance to the COG. In turn, each of these entities must be able to count upon a certain level of funding in order to justify the up-front mobilization or allocation of resources for the COG. Linking these funding commitments exclusively to utilization on a fee-for-service basis would be asking RCAP and the GIS Data Host Site to assume too much risk, since the costs of up-front mobilization may not be recouped in this scenario. On the other hand, minimizing utilization assumptions in order to minimize fees for each member entails too much risk that members will end up being underserved, since it creates a situation in which RCAP and the GIS

Data Host Site may not be positioned to provide higher volumes of service in the event that higher volumes are desired by members. In addition, resource flexibility will be vital in the COG's first year: ensuring the availability and flexibility of staff will be critical in order to provide the greatest possible responsiveness to member priorities that are currently unknown. Flexibility will go up if more staff time is available to members.

The COG's first-year costs can be placed into three categories in order to determine first-year membership fees. Table 23 illustrates the approach recommended for the COG's first year, as follows:

1. Grant-Supported Costs.

   These are costs to be supported by grants rather than members. In Table 23, costs placed in this category reflect a two-fold rationale. First, start-up of the proposed cooperative may *require* some grant funding in order to bring membership fees to a level that is marketable to prospective members. Second, there may be grant funding available to support some costs of establishing the COG and its web-based GIS services. As described in the section below regarding potential implementation funding sources, funding for starting-up the COG and its web-based GIS service infrastructure is probably the most promising category for attracting grant funding relative to the other two key cost categories: initial data collection costs and annual operational costs.

2. Common Member-Supported Costs.

   These costs would be shared by all members – via annual membership fees – based upon the size of each entity as measured by number of utility connections.

   Table 22 illustrates the simplest way to define Common Member-Supported Costs, which is to assign all budget line items not to be covered by grants to this category. These costs would then be distributed across all members based on member size (number of utility connections). Under this approach, each entity would commit to paying for a proportion of all costs in this category regardless of utilization.

   For example, certain up-front hardware and software investments will need to be made by RCAP and by the GIS Data Host Site regardless of the overall size of the COG's membership and regardless of how much each member actually ends up using the system and its support services. Especially since resource utilization is so unpredictable, allocating these costs to members based on size is the most sensible and equitable approach.

   Staff costs are another example. At the projected start-up scale of 100,000 utility connections, both RCAP and the GIS Data Host Site will have a significant amount of staff funding contingent upon funding from the COG. Therefore, the COG needs to be in a position to contractually commit to a minimal amount for staff funding even if each COG member does not end up utilizing every hour of staff time that it proportionately pays for as a COG member. Table 22 illustrates the approach recommended for the COG's first year, which is to assign all of the staff costs to the Common Member-Supported Costs column

and then to allocate them proportionately to each member based on member size – not utilization.

3. Fee-for-Service Member-supported Costs.

   These costs would be incurred and supported as needed by each member based on a fee-for-service basis, and would therefore not be included in membership fees.

   The approach illustrated in Table 23 shows no costs in this category for the COG's first year of operation, for the reasons described above: in the COG's first year, each founding COG member should share the risks of COG start-up and commit to a proportionate share of these costs as part of year-one COG membership fees. Based on what is learned about service utilization patterns during the COG's first year of operation, fee-for-service elements could then be incorporated in year two without entailing as much risk as would be entailed in doing so in year one.

   As the COG develops over time, it will become more realistic and useful to augment a membership fee approach with fee-for-service elements. The COG's first year of operation will provide extensive information about how the system was used, what its actual costs were, and what fee-for-service elements might be appropriate to address any imbalances that may be apparent between expected and actual costs. For example, a fee-for-service approach could be utilized in connection to a cap on the number of staff hours to be provided to each member utility and municipality. Membership fees could support a given number of hours, with any additional hours above the cap to be provided at a specified cost per hour. The COG's first year of operation would provide a basis for deciding whether to use such a cap and how the cap should be determined.

   Other fee-for-service examples are more straightforward, and could be incorporated in year one if desired. For example, members may wish to obtain large-format maps from the GIS Data Host Site. It is estimated that a "basic" version of such a map at a scale of 3 by 4 feet would cost about $90 for the Host Site to create and mail to a member.

Projected First-Year COG Membership Fees

Based on the rationale described above, the total first-year COG costs to be supported by members are estimated to be $254,261, with the remaining first-year COG costs ($81,902) to be supported by grants. Dividing this amount by the total assumed number of utility connections (100,000) yields a cost per connection of $2.54. Applying this cost per connection to the utilities and municipalities participating in the feasibility study yields the projected first-year membership fees shown in Table 24 (Please note: these figures are presented as illustrations for each entity individually and do not assume that all of these entities are participating or that no other entities are participating. All of these entities combined do not add up to 100,000 utility connections, and all or some may choose not to participate, so other entities would need to be involved in order to reach the target start-up scale.)

TABLE 23
FIRST-YEAR COG COSTS BY PROPOSED FUNDING CATEGORY

Expense Description	Cost	Grant-Funded	Common Member-Supported	Fee-for-Service Member-Supported
RCAP				
Snr. Rural Development Specialist	$ 26,480		$ 26,480	*
Audit	$ 10,000		$ 10,000	*
ArcEditor Annual License Fee	$ 1,556		$ 1,556	
Legal Services	$ 5,000		$ 5,000	*
GIS Technician	$ 56,645		$ 56,645	*
GIS Data Host Site				
Host Site Set-Up				
Staff				
GIS Manager	$ 7,826	$ 7,826		*
GIS Systems Software Analyst	$ 6,302	$ 6,302		*
IT Manager	$ 7,386	$ 7,386		*
Hardware				
Server for ArcGIS	$ 24,002	$ 24,002		*
Warranty for Server for ArcGIS	$ 1,000	$ 1,000		*
Server for Data	$ 10,017	$ 10,017		*
Warranty for Server for Data	$ 1,000	$ 1,000		*
Tape Backup hardware	$ 2,675	$ 2,675		*
Software				
Tape Backup software (Backup Exec)	$ 1,163	$ 1,163		*
Server 2008	$ 1,029	$ 1,029		*
SQL 2008 Standard	$ 11,998	$ 11,998		*
Hyperlink Capability Development	$ 7,504	$ 7,504		*
Host Site Operation				
Staff				
GIS Manager	$ 83,616		$ 83,616	*
GIS Systems Software Analyst	$ 25,210		$ 25,210	*
IT Manager	$ 14,772		$ 14,772	*
Hardware				
Server Hosting Service	$ 13,200		$ 13,200	*
Software				*
ArcGIS Server Advanced Enterprise	$ 2,593		$ 2,593	
ArcInfo	$ 943		$ 943	*
ESRI Network Analyst Extension	$ 182		$ 182	*
Training				
Trainings (2) On Using the System	$ 8,090		$ 8,090	*
Training Re Using GPS Units	$ 5,974		$ 5,974	*
TOTAL	**$336,163**	**$81,902**	**$254,261**	*****

*It is recommended that no costs be placed in this category in the COG's first year of operation.

TABLE 24
ESTIMATED FIRST YEAR COG MEMBERSHIP FEES AND STAFF UTILIZATION

First Year Membership Total Cost	$254,261
Assumed Scale of COG Membership (Utility Connections)	100,000
Member Cost per Utility Connection	$ 2.54
Host-Site Database Administrator Hours per Utility Connection	0.0156
Host-Site Database Administrator Hours per 1,000 Utility Connections	15.60
RCAP Technician Hours per Utility Connection	0.0177
RCAP Technician Hours per 1,000 Utility Connections	17.70

Example Members*	Total Utility Connections**	Member Fee (Annual)	Member Fee (Monthly)	Host-Site Database Admin. Hours (1560 Total)	RCAP Technician Hours (1768 Total)
Village of Carrollton	3,243	$ 8,246	$ 687	51	57
City of Columbiana	5,733	$14,577	$1,215	89	101
Village of Dillonvale	475	$ 1,208	$ 101	7	8
Village of Enon	1,300	$ 3,305	$ 275	20	23
City of Geneva	4,975	$12,649	$1,054	78	88
City of Hillsboro	5,600	$14,239	$1,187	87	99
Village of Monroeville	1,180	$ 3,000	$ 250	18	21
Village of Mount Pleasant	260	$ 661	$ 55	4	5
Village of New Carlisle	5,400	$13,730	$1,144	84	95
Village of Tiltonsville	1,305	$ 3,318	$ 277	20	23
Village of Wellington	3,600	$ 9,153	$ 763	56	64
Village of Yorkville	540	$ 1,373	$ 114	8	10
Brilliant Water District	672	$ 1,709	$ 142	10	12
Buckeye Water District	4,735	$12,039	$1,003	74	84
Highland County Water Co.	11,000	$27,969	$2,331	172	194
Jackson County Water	5,800	$14,747	$1,229	90	103
Jefferson Co. Water & Sewer	9,300	$23,646	$1,971	145	164
Scioto Water District	7,250	$18,434	$1,536	113	128

* This does not mean that *all* of these entities are assumed to be participating. It shows the cost that each entity would pay if each did choose to participate.
**Figures from feasibility study grant application.

Projected First-Year Staff Utilization

In connection to the staff utilization discussion above, Table 24 also shows the level of staff support that each member would expect to obtain from the RCAP GIS Technician and from the database administrator at the GIS Data Host Site. These figures are based on hours-per-connection multipliers as follows. For the database administrator (GIS Manager) at the GIS Data Host Site, the budgeted hours (1560) have been divided by the total assumed number of utility connections (100,000) to yield a multiplier of .0156 hours per connection, or 15.6 hours per 1,000 connections. For the RCAP GIS Technician, 15% of a full-time Technician's time is assumed to be spent on administrative or indirect activities, leaving 85% of 2,080 hours (1,768) available for service to members. Dividing this number by 100,000 connections yields a multiplier of .0177 hours per connection, or 17.7 hours per 1,000 connections. Applying these multipliers to the size of each of the utilities and municipalities participating in the feasibility study yields the number of expected staff hours for each entity shown in Table 24.

It must be emphasized that these utilization estimates are simply pro-rated, and therefore assume that each member will use resources at the same rate based on its size. While actual utilization cannot be expected to be proportionately identical for each member – some members will use more resources, and some less, on a per-connection basis – this is the most reasonable prediction methodology for the COG's first year, since there is no utilization track record upon which to base a more sophisticated approach.

Other GIS cooperatives have faced a similar challenge of balancing fees with unpredictable utilization, and have chosen a similar approach. For example, the agreement used to initially create the Berkeley County GIS Consortium (in South Carolina) states the following: "The initial contributions to be made by consortium members have been arbitrarily determined to provide a start-up fund for the GIS Center. Future fees after the first year of operation will be tied to the actual costs involved in operating the system and to the member's actual use of the system." While the first-year staff utilization estimates described above are not arbitrary, they are nonetheless indirect extrapolations from examples that are not perfect analogues to the proposed cooperative. In any case, the point is the same: basing membership fees upon utilization is not the recommended approach for the first year of the proposed cooperative. Membership fees should be charged based on utility system size as measured by number of utility connections. Basing fees in part on utilization will become more realistic over time as the COG develops a member utilization track record.

The Holmes County (OH) GIS Consortium is another example. Its membership fees for all "Sustaining Members" are the same, irrespective of member size, and utilization is not specifically prescribed in connection to the fees. Rather, the Consortium's Bylaws contain a provision for addressing a situation in which resource utilization by a "Sustaining Member" is deemed disproportionate: "The GIS Director is responsible for keeping a running tally of man-hours and supplies used by each Sustaining Member subscriber. If the amount of work from any Sustaining Member subscriber becomes disproportionate to the other subscribers the GIS Director shall inform The Consortium and request direction on how to manage the situation, possibly resulting in that subscriber moving to a Special Interest Member status." The Bylaws' provisions for "Special Interest Members" outline a process of developing more specific service and fee arrangements for those members.

Contracting and Invoicing

It is expected that the COG will have at least five contractual relationships in its first year, all managed by the COG's fiscal agent. The COG's fiscal agent will enter into contracts with:

1. RCAP to oversee the COG's activities and service delivery to COG members (unless RCAP is also the fiscal agent);
2. The GIS Data Host Site contractor to provide services to COG members;
3. A legal services contractor;
4. A contractor to perform an audit;
5. Each of the COG members to receive GIS services.

Invoicing procedures should be solidified with legal counsel, but in general the process should work as follows: the fiscal agent will pay subcontractors and the COG members will pay the fiscal agent. For example, the fiscal agent will pay the GIS Data Host Site for services rendered to COG members, and each member will pay the fiscal agent at a frequency to be clarified as part of developing the COG's Bylaws. Payments from members to the fiscal agent, and from the fiscal agent to contractors, could be made monthly, quarterly, or annually.

The manner in which fees are determined clearly impacts the complexity of the invoicing process. If fees are charged based on member size – number of utility connections – the invoicing process will be relatively straightforward. Charging fees based on utilization will require a more complex process in which the GIS Data Host Site invoices the fiscal agent based on each member's resource utilization during the invoicing period, and then the fiscal agent invoices each member accordingly. As discussed above, the utilization-based approach is not recommended for the COG's first year, but could be more appropriate to consider in future years when utilization becomes more predictable. However, this approach may increase administrative costs for the GIS Data Host Site, RCAP, and the Fiscal Agent.

Additional Outreach and COG Member Recruitment

It is assumed that the COG will accept new members and therefore grow in size from its proposed start-up scale of 100,000 combined utility connections. While the implementation budget does not show any costs for outreach, member recruitment, and initial data collection in Phase Four, RCAP and the COG members will need to consider what level of effort to invest in these activities during the COG's first year of operation. While bringing on new members is a valid goal and can be anticipated to drive down membership fees on a per-utility connection basis, it may not be realistic to invest significant time on new member recruitment during the same year that the COG is formally established and commencing its first year of operation. It may be wise to defer significant additional member recruitment activities until after the first year of the COG's operation so that member benefits and costs can be more specifically described to prospective members based on the first year's track record. The COG Bylaws will stipulate the process for admitting new members to the COG.

Projected Second-Year COG Budget and Membership Fees

Table 25 illustrates one scenario for second-year COG costs and membership fees. In order to clarify how second-year costs would be different for the COG overall and for first-year members, this table assumes that the membership size remains at 100,000 combined utility connections and that the staff FTE assumptions stay the same. Even if these variables stay the same, two changes will occur. First, many of the start-up expenses required in year one would not be required in year two. Second, staff costs can be expected to increase by an inflationary factor. Based on these assumptions, Table 25 shows that second-year costs per utility connection would fall slightly compared to year one, from $2.54 per connection to $2.53 per connection. Table 26 illustrates projected second-year membership fees based on these assumptions.

Second-year membership fees would be altered further by: 1) a change in the number and size of new members, if any; 2) revised staff FTE assumptions to be derived from tracking first-year utilization patterns; and 3) additional services or benefits that may be added in year two, such as the integration of customer billing or asset management software.

TABLE 25
ESTIMATED SECOND-YEAR COG BUDGET

Expense Description	**Implementation Year 4 (2013)**
RCAP	
Snr. Rural Development Specialist – .25 FTE	$ 27,274
Audit	$ 10,000
ArcEditor Annual License Fee	$ 1,556
Legal Services	$ 5,000
GIS Technician – 1.0 FTE	$ 58,344
RCAP Subtotal	**$ 102,175**
GIS Data Host Site Subcontractor	
Host Site Operation	
Staff	
GIS Manager	$ 86,362
GIS Systems Software Analyst	$ 26,029
IT Manager	$ 15,246
Hardware	
Server Hosting Service	$ 13,200
Software	
ArcGIS Server Advanced Enterprise – 25% of annual fee	$ 2,593
ArcInfo – 25% of annual fee	$ 943
ESRI Network Analyst Extension – 25% of annual fee	$ 182
Training	
Trainings (2) Re Using the Web-Based System	$ 4,343
Training Re Using GPS Units	$ 2,172
Host Site Subtotal	**$ 151,070**
Total	**$ 253,245**

TABLE 26
ESTIMATED SECOND-YEAR COG MEMBERSHIP FEES

First Year Membership Total Cost			$ 253,245
Assumed Scale of COG Membership (Utility Connections)			100,000
Member Cost per Utility Connection			$ 2.53
Example Members*	Total Utility Connections**	Member Fee (Annual)	Member Fee (Monthly)
Village of Carrollton	3,243	$ 8,205	$ 684
City of Columbiana	5,733	$14,504	$1,209
Village of Dillonvale	475	$ 1,202	$ 100
Village of Enon	1,300	$ 3,289	$ 274
City of Geneva	4,975	$12,587	$1,049
City of Hillsboro	5,600	$14,168	$1,181
Village of Monroeville	1,180	$ 2,985	$ 249
Village of Mount Pleasant	260	$ 658	$ 55
Village of New Carlisle	5,400	$13,662	$1,139
Village of Tiltonsville	1,305	$ 3,302	$ 275
Village of Wellington	3,600	$ 9,108	$ 759
Village of Yorkville	540	$ 1,366	$ 114
Brilliant Water District	672	$ 1,700	$ 142
Buckeye Water District	4,735	$11,980	$ 998
Highland County Water Company	11,000	$27,830	$2,319
Jackson County Water	5,800	$14,674	$1,223
Jefferson Co. Water & Sewer District	9,300	$23,529	$1,961
Scioto Water District	7,250	$18,343	$1,529

* This does not mean that *all* of these entities are assumed to be participating. It shows the cost that each entity would pay if each did choose to participate.
**Figures from feasibility study grant application.

Feasibility Study Participant Survey Responses Regarding Start-Up and Operating Costs

Table 27 summarizes feasibility study participant survey responses regarding start-up and operating costs. The actual utility and municipality names and pertinent number of utility connections are not provided in this table, but the survey respondents are arranged by utility system size (number of utility connections) and their responses are presented on a cost-per-utility-connection basis.

Respondents were asked to select what range of costs each would be willing to pay for start-up and maintenance (annual) of a GIS cooperative. For the purpose of comparing the survey responses to the costs estimated in this feasibility study, start-up costs are defined as the first-year membership fees shown in Table 24 ($2.54 per connection) and annual maintenance costs are defined as the second-year membership fees shown in Table 26 ($2.53 per connection).

The response summary shows that both the estimated start-up cost (a first-year membership fee of $2.54 per connection) and estimated annual cost (a second-year membership fee of $2.53 per connection) are higher than most of the respondents (6 out of 11) would be willing to pay. Nonetheless, the estimated start-up and annual costs appear to be within an acceptable range for a significant minority of the respondents – 45% (5 out of 11) – with respect to both start-up and annual costs.

Somewhat surprisingly, as with the survey responses regarding data collection costs, the responses suggest that the smaller utilities and municipalities are willing to pay more on a per-connection basis for both start-up and annual maintenance of a GIS cooperative than are the larger ones among these respondents.

Since the sample size in this survey is quite small, no firm conclusions can be drawn regarding small utilities and municipalities in general in the state of Ohio. However, these survey responses suggest that there probably are a significant number of utilities and municipalities potentially interested in joining a GIS cooperative at the cost levels estimated in this feasibility study.

TABLE 27:
FEASIBILITY STUDY PARTICIPANT SURVEY RESPONSES REGARDING START-UP AND OPERATING COSTS

Respondent Number (listed from smallest to largest utility system - #1 is the smallest)	How Much is Respondent Willing to Pay for Start-up of a GIS Cooperative? (Cost per utility Connection)*		Is Estimated Cost per Connection ($2.54) within or below Cost Range Selected by Respondent? (Y=Yes; N=No)	How Much is Respondent Willing to Pay for Annual Maintenance of a GIS Cooperative? (Cost per utility Connection)*		Is Estimated Cost per connection ($2.53) within or below Cost Range Selected by Respondent? (Y=Yes; N=No)
	Cost Range			Cost Range		
	Low	High		Low	High	
1	$0.00	$0.00	N	$0.00	$0.00	N
2	$1.92	$3.85	Y	$1.92	$3.85	Y
3	$3.83	$7.66	Y	$1.92	$3.83	Y
4	$3.08	$4.63	N	$3.08	$4.63	Y
5	$0.56	$1.11	N	$0.56	$1.11	N
6	$3.17	$5.28	Y	$2.11	$3.17	Y
7	$3.02	$5.02	Y	$0.50	$1.00	N
8	$0.87	$1.74	N	$1.74	$2.62	Y
9	$1.72	$2.59	Y	$0.86	$1.72	N
10	$1.38	$2.07	N	$0.69	$1.38	N
11	$0.27	$0.54	N	$0.54	$1.08	N
Number of Respondents for whom estimated cost is within or below cost range selected by respondent			5			5
Average System Size (number of utility connections) among these respondents			3,623			3,263
Number of Respondents for whom estimated cost is above cost range selected by respondent			6			6
Average System Size (number of utility connections) among these respondents			5,199			5,499

*Responses were not requested on a per-utility connection basis but are expressed in this manner in this table by dividing the respondent-identified cost range figures by the respondent's number of utility connections. Respondents were asked to select from the following cost ranges:

1. $2,500-$4,999
2. $5,000 - $9,999
3. $10,000-$14,999
4. $15,000-$24,999
5. $25,000-$29,999
6. $30,000-$34,999
7. Unwilling to spend any money to help start-up or maintain a cooperative GIS system

IMPLEMENTATION BUDGET

COG Start-Up Scale and Timeframe

The implementation budget is based on the timeframe and scale of participation by Founding COG Members shown in Table 28. Founding COG Members are utilities and municipalities that agree to establish the COG in Implementation Phase One, undertake initial data collection in Implementation Phase Two, formally create the COG in Implementation Phase Three, and are dues-paying Members of the COG in Implementation Phase Four. The projected number of Founding Members (25) is based on an average of 4,000 utility connections per entity. However, the key number is the target number of combined utility connections (100,000), which is based on the desired economies of scale illustrated in Chapter 6. This number could be reached with a smaller number of Founding Members if their average size is greater than 4,000 utility connections.

TABLE 28:
PROPOSED COG START-UP
TIMEFRAME AND SCALE OF MEMBERSHIP

	Implementation Year		
	1	**2**	**3**
	2010	**2011**	**2012**
Founding Members (Utilities and Municipalities) Completing Data Collection (at avg. 4,000 connections each)	10	15	
Total Utility Connections among Founding Members	40,000	60,000	
End-of Year Scale of Initial Data Collection Completion			
Number of Utilities and Municipalities	10	25	
Total Utility Connections among Members	40,000	100,000	
COG Membership Scale at the time of COG Start-Up			
Number of Members (at avg. 4,000 connections each)			25
Number of Utility Connections			100,000

Implementation Phase One: Outreach and COG Member Recruitment

Table 29 shows the estimated budget for Implementation Phase One.

TABLE 29 IMPLEMENTATION BUDGET PHASE ONE: OUTREACH AND COG MEMBER RECRUITMENT				
Line Number	**Expense Description**	**Implementation Year**		**Total**
		1	**2**	
		2010	**2011**	
RCAP				
1	Senior Rural Development Specialist, .33 FTE, at $48/hour in year 1, $49.44/hour in year 2	$32,947	$33,936	**$ 66,883**
2	Outreach at Conferences (document production, registration, and booth rental)	$ 2,500	$ 2,500	**$ 5,000**
3	Meeting Expenses (Food, Webinar Fees) - 4 meetings/year at $250 each	$ 1,000	$ 1,000	**$ 2,000**
4	Printing and Postage	$ 1,000	$ 1,000	**$ 2,000**
5	Legal Subcontractor for COG Creation	$ 7,000		**$ 7,000**
	RCAP Subtotal	**$ 44,447**	**$ 38,436**	**$ 82,883**
Phase One Total		**$ 44,447**	**$ 38,436**	**$ 82,883**

Basis for Phase One Budget Figures

Line 1. The 2010 hourly rate ($48) was provided by RCAP, and includes the Specialist's salary, benefits, computer, general overhead, and a limited amount of travel. The rate of salary increase in year two (3%) was provided by RCAP. The projected level of effort (.33 FTE) was developed in consultation with RCAP and includes time spent organizing Phase Two data collection activities, which would be occurring at the same time, and in connection to, outreach and member recruitment.

Line 2. These figures, provided by RCAP, represent the estimated costs of preparing COG member recruitment materials for conferences as well as the registration and booth rental costs of conference participation.

Line 3. These figures, provided by RCAP, are the projected costs of holding four meetings and webinars per year.

Line 4. These figures, provided by RCAP, are the projected costs for printing and postage.

Line 5. This figure is based on the legal costs of COG creation in three examples identified during the research process. The range of legal costs among these examples is $6,000-$15,000. To be conservative, high-end estimates are shown here. Legal costs for COG creation have been split into two parts – $7,000 in Phase One, $8,000 in Phase Three.

Implementation Phase Two: Data Collection

Table 30 shows the estimated budget for Implementation Phase Two.

TABLE 30 IMPLEMENTATION BUDGET PHASE TWO: DATA COLLECTION				
Line Number	**Expense Description**	**Implementation Year**		**Total**
		1	**2**	
		2010	**2011**	
RCAP				
1	Senior Rural Development Specialist - included in Phase 1 cost	-	-	**-**
2	GPS Units – 4 total (2 per year.), 1 at $6,100, 3 at $5,600 (Magellan MobileMapper CX)	$ 11,700	$ 11,200	**$ 22,900**
3	Laptops – 4 total (2 per year) at $1500 each	$ 3,000	$ 3,000	**$ 6,000**
4	Software for Laptops – ArcView, 1 in year 1, 2 in year 2, at $1500 each	$ 1,500	$ 3,000	**$ 4,500**
5	ArcView Annual License Fee – 1 in year 2		$ 415	**$ 415**
6	Software for Laptop - ArcEditor, 1 in year 1	$ 5,713	-	**$ 5,713**
7	ArcEditor Annual License Fee – 1 in year 2		$ 1,556	**$ 1,556**
8	GIS Technicians - entry level, 1 in year 1, 2 in year 2, at $26.44/hour	$ 54,995	$ 109,990	**$ 164,986**
9	Interns – 2.4 x 400 hours in year 1; 1.4 x 400 hours in year 2, at $17/hr.	$ 16,320	$ 9,520	**$ 25,840**
	RCAP Subtotal	**$ 93,228**	**$ 138,681**	**$ 231,910**
GIS Subcontractor				
10	Training on Data Collection Standards, Process, and using GPS Units	$ 5,327	$ 1,761	**$ 7,088**
11	Data Collection Quality Assurance/Quality Control (QA/QC)	$ 47,244	$ 73,179	**$ 120,423**
	GIS Subcontractor Subtotal	**$ 52,571**	**$ 74,940**	**$ 127,511**
Phase Two Total		**$ 145,799**	**$ 213,621**	**$359,421**

Basis for Phase Two Budget Figures

Line 1. RCAP staff time required in the data collection phase is included in the staff costs for Phase One.

Line 2. These costs assume that each staff person (either an RCAP GIS Technician or an RCAP intern) has a mobile GPS unit to use for collecting data – two GPS units in year one (1 GIS Technician and one intern) and two more in year two (1 more GIS Technician and one more intern).

Line 3. These costs assume that each staff person (either an RCAP GIS Technician or an RCAP intern) has a laptop to utilize as part of the data collection and post-processing work – two laptops in year one (1 GIS Technician and one intern) and two more in year two (1 more GIS Technician and one more intern).

Line 4. These costs assume that each laptop has the required GIS software. Each laptop except one will require ArcView. One laptop will require ArcEditor to perform more advanced tasks.

Line 5. This is the annual fee in year two for one Arcview License purchased in year one.

Line 6. At least one ArcEditor license will be required to support post-processing functions that are not possible with Arcview software.

Line 7. This is the annual fee in year two for one ArcEditor License purchased in year one.

Lines 8 and 9. The hourly rates for GIS Technicians ($26.44) and interns ($17) were provided by RCAP, and include the salary, benefits, general overhead, and a limited amount of travel. Interns are defined as 400-hour summer internships.

Based on consultation with RCAP, it was determined that full-time GIS Technicians would be preferable to interns in the data collection phase as described in Chapter 7. However, there still may be smaller roles that interns could play in support of the Technicians. The estimated number of GIS Technicians and interns required is based on the following series of calculations (shown in Tables 31 and 32):

1. An hours-per-connection multiplier for data collection work was developed based on the level of data collection productivity achieved by an intern who collected and post-processed data on behalf of the Village of Carrollton during the feasibility study. The number of hours spent by the intern collecting and post-processing water and wastewater utility data (220) was divided by the total number of utility connections in the Village of Carrolton (3,234) to generate an hours-per-connection multiplier (.068).

2. The total scale of data collection projected to be completed during implementation years one and two (40,000 utility connections in year one; 60,000 in year two) was then divided by the hours-per-connection multiplier (.068) to generate a total number of GIS Technician hours required.

3. Based on consultation with RCAP, 15% of a full-time GIS Technician's time (312 hours) was assumed to be spent on administrative duties and then subtracted from the total number of annual work hours (2,080) to generate the number of hours that a full-time GIS Technician would have available for data collection work (1,768).

4. The total number of hours required for data collection in each year was then allocated to a number of full-time GIS Technicians, with the remaining work hours allocated to interns.

TABLE 31
ESTIMATED GIS TECHNICIAN AND INTERN DATA COLLECTION PRODUCTIVITY
(hours-per-connection multiplier based on Village of Carrollton example)

Total Hours Spent on Data Collection including post-processing	220
Total Utility Connections	3,234
Multiplier (Hours per Connection)	0.068

TABLE 32
ESTIMATE OF RCAP GIS TECHNICIANS AND INTERNS REQUIRED FOR DATA COLLECTION
(based on hours-per-connection multiplier from Village of Carrollton example)

	Year One	**Year Two**
Projected Scale of Data Collection (Total Utility Connections)	40,000	60,000
Total GIS Technician and Intern Hours Needed	2,721	4,082
One Full Time GIS Technician – 85% of 2080 hours	1,768	1,768
Second Full Time GIS Technician – 85% of 2080 hours	n/a	1,768
Remaining Work Hours to be performed by Interns	953	546
Number of Interns Needed (400 hours per intern)	2.38	1.36
Total Full-Time Technicians Needed	**1**	**2**
Total 400-hour Interns Needed	**2.4**	**1.4**

Line 10. These figures are based on an estimate of the resources that would be required in order for the Voinovich School to prepare and conduct a training for GIS Technicians and interns about the data collection standards and process as well as the use of GPS units, as shown in Table 33.

TABLE 33 ESTIMATED COSTS FOR DATA COLLECTION TRAINING FOR GIS TECHNICIANS AND INTERNS		
	Implementation Year	
	1	**2**
	2010	**2011**
Hourly rate for GIS Manager	$ 50.26	$ 51.90
Training Preparation Hours	80	8
Cost	$ 4,021	$ 415
Training Hours	24	24
Cost	$ 1,206	$1,246
Printing/Copying	$ 100	$ 100
Total Cost	**$ 5,327**	**$ 1,761**

Line 11. These figures are based on an estimate of the resources that would be required in order for the Voinovich School to play the Quality Assurance/Quality Control (QA/QC) role in the data collection process. These estimates are shown in Table 34.

TABLE 34 ESTIMATED COSTS FOR DATA COLLECTION QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)		
	Implementation Year	
	1	**2**
	2010	**2011**
GIS Manager Hourly Rate	$ 50.26	$ 51.90
Review of Data Collected		
Scale of Data Collection (Total Utility Connections)	40,000	60,000
Seconds per connection	36	36
Total hours	400	600
Technical Assistance for RCAP GIS Technicians		
Number of Participating Utilities and Municipalities	10	15
Hours per Utility/Municipality	8	8
Total Hours	80	120
Technical Assistance for Utility/Municipality Staff		
Number of Participating Utilities and Municipalities	10	15
Hours per Utility/Municipality	6	6
Total Hours	60	90
Total Hours	**540**	**810**
Total Cost	**$ 47,244**	**$ 73,179**

Implementation Phase Three: COG Start-Up

Table 35 shows the budget for Implementation Phase Three.

TABLE 35 IMPLEMENTATION BUDGET PHASE THREE: COG START-UP		
Line Number	**Expense Description**	**Implementation Year 3 (2012)**
RCAP		
1	Senior Rural Development Specialist, .25 FTE, at $50.92/hour in year 3	$ 26,480
2	Printing and Postage	$ 1,000
3	Meeting Expenses (Food, Webinar Fees) - 4 meetings/webinars at $250 each	$ 1,000
4	Accounting Staff (to set up COG accounts and procedures)	$ 5,000
5	Legal Subcontractor for COG Creation	$ 8,000
	RCAP Subtotal	**$ 41,480**
Phase Three Total		**$ 41,480**

Basis for Phase Three Budget Figures

Line 1. The 2010 hourly rate ($48) was provided by RCAP, and includes the Specialist's salary, benefits, computer, general overhead, and a limited amount of travel. The rate of salary increase between year one and three (3% per year) was provided by RCAP. The projected level of effort (.25 FTE) was developed in consultation with RCAP.

Line 2. This figure, provided by RCAP, is the projected cost for printing and postage.

Line 3. This figure, provided by RCAP, is the projected cost of four meetings/webinars per year.

Line 4. This figure, provided by RCAP, represents a preliminary estimate of accounting costs. This assumes that RCAP is the COG's fiscal agent. If RCAP is not the fiscal agent, these accounting costs would not be in RCAP's budget, but they would still need to be incurred by the fiscal agent.

Line 5. This figure is based on the range of legal costs for COG creation in three examples identified during the research process. The range of legal costs among these examples is $6,000-$15,000. To be conservative, high-end estimates are shown here. Legal costs for COG creation have been split into two parts – $7,000 in Phase One, $8,000 in Phase Three.

Implementation Phase Four: COG Operation

Table 36 shows the estimated budget for Implementation Phase Four.

TABLE 36 IMPLEMENTATION BUDGET - PHASE FOUR: COG OPERATION		
Line No.	**Expense Description**	**Imp. Year 3 (2012)**
RCAP		
1	Snr. Rural Development Specialist – .25 FTE, at $50.92	$ 26,480
2	Audit	$ 10,000
3	Legal Services	$ 5,000
4	ArcEditor Annul License Fee	$ 1,556
5	GIS Technician – 1.0 FTE at $27.23/hr.	$ 56,645
	RCAP Subtotal	**$ 99,681**
GIS Data Host Site Subcontractor		
	Host Site Set-Up	
	Staff	
6	GIS Manager	$ 7,826
7	GIS Systems Software Analyst	$ 6,302
8	IT Manager	$ 7,386
	Hardware	
9	Server for ArcGIS	$ 24,002
10	Warranty for Server for ArcGIS	$ 1,000
11	Server for Data	$ 10,017
12	Warranty for Server for Data	$ 1,000
13	Tape Backup hardware	$ 2,675
	Software	
14	Tape Backup software (Backup Exec)	$ 1,163
15	Server 2008	$ 1,029
16	SQL 2008 Standard	$ 11,998
17	*Hyperlink Capability Set-Up*	$ 7,504
	Host Site Operation	
	Staff	
18	GIS Manager	$ 83,616
19	GIS Systems Software Analyst	$ 25,210
20	IT Manager	$ 14,772
	Hardware	
21	Server Hosting Service	$ 13,200
	Software	
22	ArcGIS Server Advanced Enterprise – 25% of annual fee	$ 2,593
23	ArcInfo – 25% of annual fee	$ 943
24	ESRI Network Analyst Extension – 25% of annual fee	$ 182
	Training	
25	Trainings (2) Re Using the Web-Based System	$ 8,090
26	Training Re Using GPS Units	$ 5,974
27	GPS Units (Magellan Mobile Mapper 6) – per unit	$ 1,500
	GIS Data Host Site Subcontractor Subtotal	**$ 236,482**
PHASE 4 Total		**$ 336,163**

B01003

TOTAL POPULATION
Universe: Total population
2006-2010 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, for 2010, the 2010 Census provides the official counts of the population and housing units for the nation, states, counties, cities and towns. For 2006 to 2009, the Population Estimates Program provides intercensal estimates of the population for the nation, states, and counties.

	Coshocton County, Ohio		Gallia County, Ohio		Guernsey County, Ohio	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total	37,046	*****	30,943	*****	40,351	*****

Basis for Phase Four Budget Figures

Line 1. The 2010 hourly rate ($48) was provided by RCAP, and includes the Specialist's salary, benefits, computer, general overhead, and a limited amount of travel. The rate of salary increase between year one and three (3% per year) was provided by RCAP. The projected level of effort (.25 FTE) was developed in consultation with RCAP.

Line 2. This is a high-end estimate based on audit costs from two example COGs identified during the research process.

Line 3. This is a rough estimate of annual COG legal costs.

Line 4. This is the annual fee for one ArcEditor License.

Line 5. This cost is based on an hourly rate ($26.44) provided by RCAP and then increased by an annual rate (3%) provided by RCAP based on the assumption that the GIS Technician will be one of the GIS Technicians already on RCAP's staff during year two of implementation (data collection).

Lines 6-8. These figures are based on the staff FTE and salary assumptions described in Chapter 6. Specifically, these are the low-end staff cost estimates for the Subcontractor Model at a cooperative scale of 100,000-125,000 combined utility connections. The FTE figures for setting up the web-based service include staff time required to convert geodata into web-based format, install the required software, and set up the website.

The salary figures are 2009 Voinovich School salary figures including benefits and indirect costs, adjusted to 2012 (year 3 of implementation) by adding 3% per year to the base salary and 5% per year to the health insurance portion of the benefits. The FTE, salary, and total staff cost figures are shown in Tables 37 and 38.

TABLE 37
ESTIMATED STAFF SALARIES
FOR THE GIS DATA HOST SITE SUBCONTRACTOR

Staff Positions	2009 Figures				Adjusted to Imp. Year 3 (2012)
	Salary	Benefits (Rate Varies*)	Indirect (rate=.39)	Total: Salary + Benefits + Indirect	Total: Salary + Benefits + Indirect
GIS Manager	$ 54,454	$ 18,384	$ 28,407	$ 101,245	$ 111,488
GIS Systems Software Analyst	$ 62,712	$ 19,710	$ 32,145	$ 114,567	$ 126,048
IT Manager*	$ 75,005	$ 21,691	$ 37,712	$ 134,408	$ 147,722

*This figure is a proxy. The manner in which IT support is provided and paid for within Ohio University is currently in flux and is expected to change by 2012. This is the salary that the Voinovich School would expect to pay for an IT Manager if one were on its staff.

TABLE 38 ESTIMATED STAFF COSTS FOR GIS DATA HOST SITE SET-UP					
Staff Positions	**Hrs**	**FTE**	**Annual Salary inc. Benefits and Indirect**	**Hourly Rate**	**Total Cost**
GIS Manager	146	0.070	$ 111,488	$ 53.60	$ 7,826
GIS Systems Software Analyst	104	0.050	$ 126,048	$ 60.60	$ 6,302
IT Manager	104	0.050	$ 147,722	$ 71.02	$ 7,386

Lines 9-13. These figures are based on the hardware requirements described in Chapter 6. To be conservative, high-end cost estimates have been used in the implementation budget. Table 39 summarizes the hardware requirements, the basis for the cost estimates, and the estimates.

TABLE 39 ESTIMATED HARDWARE COSTS FOR THE GIS DATA HOST SITE		
Hardware Items	**Basis for Estimate**	**Cost**
Server for ArcGIS	IBM x3850 M2	$ 24,002
Warranty for Server for ArcGIS	Standard extended warranty	$ 1,000
Server for Data	IBM x3550 M2	$ 10,017
Warranty for Server for Data	Standard extended warranty	$ 1,000
Tape Backup hardware	LaCie Biggest S2S	$ 2,675
Server Hosting Service refers to the potential need to house the servers at another location in the event that the GIS Service entity does not have adequate space on site, which is the case for the Voinovich School.	Proposal from the Karcher Group includes: ➢ 4U of rack space with power and bandwidth ➢ 10 Mbit/Sec maximum bandwidth (additional bandwidth available) ➢ Firewall administration and management ➢ Microsoft-certified staff ➢ 24X7 monitoring with power backup ➢ Free reboots during business hours	$ 13,200

Lines 14-16. These figures are based on the software requirements described in Chapter 6. The software cost estimates are shown in Table 40.

TABLE 40 ESTIMATED SOFTWARE SET-UP COSTS FOR THE GIS DATA HOST SITE		
Software Items	**Basis for Estimate**	**Cost**
Tape Backup Software	Backup Exec	$ 1,163
Server 2008	Windows Server 2008	$ 1,029
SQL 2008 Standard	SQL 2008 Standard	$ 11,998

Line 17. This figure is based on an estimate of the resources that would be required in order for the Voinovich School to develop and integrate into the website the capability for local staff to hyperlink documents to the geodatabase, as shown in Table 41.

TABLE 41 ESTIMATED GIS DATA HOST SITE COSTS FOR DEVELOPING HYPERLINK CAPABILITY			
Staff Positions	**Hours**	**Hourly Rate**	**Cost**
GIS Manager	80	$ 53.60	$ 4,288
GIS Systems Software Analyst	60	$ 60.60	$ 3,216
Total			**$ 7,504**

Lines 18-20. These figures are based on the staff FTE and salary assumptions described in Chapter 6. Specifically, these are the low-end staff cost estimates for the Subcontractor Model at a cooperative scale of 100,000-125,000 combined utility connections. The FTE figures for operating the web-based service include staff time required to maintain the system, provide assistance to local staff and RCAP GIS Technicians, and ensure that each geodatabase is kept current, reflecting edits performed on an ongoing basis by local staff and RCAP GIS Technicians.

The salary figures are 2009 Voinovich School salary figures including benefits and indirect costs, adjusted to 2012 (year 3 of implementation) by adding 3% per year to the base salary and 5% per year to the health insurance portion of the benefits. The base salary figures are shown in Table 37 above. The estimated staff costs for operating the web-based service for 12 months are shown in Table 42.

TABLE 42 ESTIMATED ANNUAL STAFF COSTS FOR THE GIS DATA HOST SITE					
Staff Positions	**Hrs**	**FTE**	**Annual Salary inc. Benefits and Indirect**	**Hourly Rate**	**Total Cost**
GIS Manager	1560	0.750	$ 111,488	$ 53.60	$ 83,616
GIS Systems Software Analyst	416	0.200	$ 126,048	$ 60.60	$ 25,210
IT Manager	208	0.100	$ 147,722	$ 71.02	$ 14,772

*This figure is a proxy. The manner in which IT support is provided and paid for within Ohio University is currently in flux and is expected to change by 2012. This is the salary that the Voinovich School would expect to pay for an IT Manager if one were on its staff.

Lines 22-24. These figures assume that the subcontractor is serving a number of clients with this software and charging each client a portion of the annual license fee – in this case, 25%, assuming that the COG is one of four clients and that the license fees are split equally among the four clients, as shown in Table 43. To avoid confusion about why the software items shown in Table 43 do not appear in Table 40: as discussed in Chapter 6, it is assumed that a subcontractor that is well-positioned to provide the required GIS services already owns these software items and therefore does not need to charge their initial purchase price to the COG. To avoid confusion about why the software items shown in Table 40 do not appear in Table 43: these items do not have annual license fees – only the initial purchase price shown in Table 40.

TABLE 43 ESTIMATED ANNUAL SOFTWARE COSTS FOR THE GIS DATA HOST SITE		
Software Items	**Basis for Estimate**	**Cost**
ArcGIS Server Advanced Enterprise	25% of annual fee ($10,373)	$ 2,593
ArcInfo	25% of annual fee ($3,773)	$ 943
ESRI Network Analyst Extension	25% of annual fee ($726)	$ 182

Line 25. This figure is based on an estimate of the resources that would be required in order for the Voinovich School to prepare and conduct a 3-day training for local staff and RCAP GIS Technicians on the use of the web-based service, as shown in Table 44.

TABLE 44 ESTIMATED COSTS FOR TRAININGS ON USING THE WEB-BASED SERVICE	
	Implementation Year 3 (2012)
First Training	
Hourly Rate for GIS Manager	$ 53.60
Training Preparation Hours	80
Cost	$ 4,288
Training Hours	24
Cost	$ 1,286
Printing/Copying	$ 100
Travel	$ 300
Total Cost	**$ 5,974**
Second Training	
Hourly Rate for GIS Manager	$ 53.60
Training Preparation Hours	8
Cost	$ 429
Training Hours	24
Cost	$ 1,286
Printing/Copying	$ 100
Travel	$ 300
Total Cost	**$ 2,115**
Total Cost: Both Trainings	**$ 8,090**

Line 26. This figure is based on an estimate of the resources that would be required in order for the Voinovich School to prepare and conduct a 3-day training for local staff and RCAP GIS Technicians on the use of GPS units to collect data and on the process of performing geodatabase edits with GPS-collected data, as shown in Table 45.

TABLE 45 ESTIMATED COSTS FOR TRAININGS ON USING OF GPS UNITS	
	Implementation Year 3 (2012)
Training Preparation Hours	80
Cost	$ 4,288
Training Hours	24
Cost	$ 1,286
Printing/Copying	$ 100
Travel	$ 300
Total Cost	**$ 5,974**

Line 27. This is the cost for a Magellan Mobile Mapper 6 GPS Unit. This would be an optional expense for each participating utility and municipality, and is not included in the cost totals. This is a modestly-priced but effective model. All entities wishing to participate in the training about the use of GPS units would be encouraged to purchase this model or another model that all entities can agree upon, so that the training could be tailored to a specific model.

Summary of Implementation Budget by Phase and Year

The total estimated implementation budget is summarized by implementation phase and year in Table 46.

TABLE 46 MPLEMENTATION BUDGET BY IMPLEMENTATION PHASE AND YEAR				
By Implementation Year	**Year 1**	**Year 2**	**Year 3**	**Total**
	2010	**2011**	**2012**	
	$ 190,246	$ 252,057	$ 377,643	**$ 819,946**
By Implementation Phase	**Phase 1**		**Phase 3**	
	$ 82,883		$ 41,480	
	Phase 2		**Phase 4**	
	$ 359,421		$ 336,163	**$ 819,946**

Proposed Implementation Cost Sharing by Phase

The proposed cost-sharing approach is summarized for all phases in Table 47 and detailed for each phase in Tables 48-51.

TABLE 47
PROPOSED IMPLEMENTATION COST SHARING BY IMPLEMENTATION PHASE

Phase	Description	Total Cost	Proposed Cost Sharing		Proposed Cost Sharing (%)	
			Grants	Members	Grants	Members
One	Outreach & Member Recruitment	$ 82,883	$ 82,883	--	100%	--
Two	Data Collection	$ 359,421	$ 48,172	$ 311,249	13%	87%
Three	COG Start-Up	$ 41,480	$ 41,480	--	100%	--
Four	COG Operation	$ 336,163	$ 81,902	$ 254,261	24%	76%
Total		**$ 819,946**	**$ 254,437**	**$ 565,509**	**31%**	**69%**

TABLE 48
PROPOSED COST-SHARING FOR PHASE ONE: OUTREACH AND MEMBER RECRUITMENT

Expense Description	Cost	Source	
		Grants	Members
RCAP			
Senior Rural Development Specialist	$66,883	$66,883	-
Outreach at Conferences	$ 5,000	$ 5,000	-
Meetings and Webinars	$ 2,000	$ 2,000	-
Printing and Postage	$ 2,000	$ 2,000	-
Legal Subcontractor for COG Creation	$ 7,000	$ 7,000	-
RCAP Subtotal	**$82,883**	**$82,883**	**-**
Phase One Total	**$82,883**	**$82,883**	**-**

TABLE 49 PROPOSED COST-SHARING FOR PHASE TWO DATA COLLECTION			
Expense Description	**Cost**	**Source**	
		Grants	**Members**
RCAP			
Senior Rural Development Specialist - included in Phase 1 cost	-	-	-
GPS Units	$ 22,900	$ 22,900	-
Laptops	$ 6,000	$ 6,000	-
Software for Laptops - ArcView	$ 4,500	$ 4,500	-
Arcview Annual License Fee	$ 415	$ 415	-
Software for Laptop - ArcEditor	$ 5,713	$ 5,713	-
ArcEditor Annual License Fee	$ 1,556	$ 1,556	-
GIS Technician(s)	$164,986	-	$164,986
Interns	$ 25,840	-	$ 25,840
RCAP Subtotal	**$231,910**	**$41,048**	**$ 190,826**
GIS Subcontractor			
Training on Data Collection Standards, Process, and GPS Units	$ 7,088	$ 7,088	-
Data Collection Quality Assurance/Quality Control (QA/QC)	$120,423	-	$120,423
GIS Subcontractor Subtotal	**$ 127,511**	**$ 7,088**	**$120,423**
Phase Two Total	**$359,421**	**$ 48,172**	**$311,249**

TABLE 50 PROPOSED COST-SHARING FOR PHASE THREE: COG START-UP			
Expense Description	**Cost**	**Source**	
		Grants	**Members**
RCAP			
Senior Rural Development Specialist	$26,480	$26,480	-
Printing and Postage	$ 1,000	$ 1,000	-
Meetings and Webinars	$ 1,000	$ 1,000	-
Accounting Staff	$ 5,000	$ 5,000	-
Legal Subcontractor for COG Creation	$ 8,000	$ 8,000	-
RCAP Subtotal	**$ 41,480**	**$ 41,480**	**-**
PHASE Three Total	**$ 41,480**	**$ 41,480**	**-**

TABLE 51
PROPOSED COST-SHARING FOR PHASE FOUR:
COG OPERATION

Expense Description	Cost	Source	
		Grants	Members
RCAP			
Senior Rural Development Specialist	$ 26,480	-	$ 26,480
Audit	$ 10,000	-	$ 10,000
ArcEditor Annual License Fee	$ 1,556	-	$ 1,556
Legal Services	$ 5,000	-	$ 5,000
GIS Technician	$ 56,645	-	$ 56,645
RCAP Subtotal	**$ 99,681**	-	**$ 99,681**
GIS Subcontractor – Host Site Start-Up			
Staff			
GIS Manager	$ 7,826	$ 7,826	-
GIS Systems Software Analyst	$ 6,302	$ 6,302	-
IT Manager	$ 7,386	$ 7,386	-
Hardware			
Server for ArcGIS	$ 24,002	$ 24,002	-
Warranty for Server for ArcGIS	$ 1,000	$ 1,000	-
Server for Data	$ 10,017	$ 10,017	-
Warranty for Server for Data	$ 1,000	$ 1,000	-
Tape Backup hardware	$ 2,675	$ 2,675	-
Software			
Tape Backup software (Backup Exec)	$ 1,163	$ 1,163	-
Server 2008	$ 1,029	$ 1,029	-
SQL 2008 Standard	$ 11,998	$ 11,998	-
Hyperlink Software Development and Set-Up	$ 7,504	$ 7,504	-
GIS Subcontractor - Host-Site Operation			
Staff			
GIS Manager	$ 83,616	-	$ 83,616
GIS Systems Software Analyst	$ 25,210	-	$ 25,210
IT Manager	$ 14,772	-	$ 14,772
Hardware			
Server Hosting Service	$ 13,200	-	$ 13,200
Software			
ArcGIS Server Advanced Enterprise	$ 2,593	-	$ 2,593
ArcInfo	$ 943	-	$ 943
ESRI Network Analyst Extension	$ 182	-	$ 182
Training			
Trainings (2) Re Using the System	$ 8,090	-	$ 8,090
Training Re Using GPS Units	$ 5,974	-	$ 5,974
GPS Units optional for each Member			
GIS Subcontractor Subtotal	**$236,482**	**$81,902**	**$154,580**
PHASE Four Total	**$336,163**	**$81,902**	**$254,261**

Potential Implementation Funding Sources

The funding requirements described above can be broken down into the following three categories:

1. Initial data collection costs for individual utilities and municipalities;
2. Start-up costs for the COG and its GIS service infrastructure;
3. Ongoing service operation and maintenance costs.

An analysis of potential funding options for each of these components follows.

Data Collection Costs

After the initial costs of outfitting an individual to collect data – which can be accomplished with a professional-grade GPS unit, laptop, and software – labor represents the bulk of data collection expenses. The time required in order to collect and process the data into usable GIS datasets is expected to be very proportional to the size of a utility. Variables that would affect data collection efficiency include the quality and organization of drawings, maps and other utility records that could be used to help "draw in the lines" for underground infrastructure. Also critical to reducing the amount of labor involved is the availability and knowledge of utility staff or other local representatives that can spend time with a GIS Technician to help them interpret maps, identify maps and records that are no longer current, and literally assist the Technician in finding his/her way around the community. Therefore, while a community would need to directly pay for or otherwise fund the short-term services of a GIS Technician, they would also incur costs for their own time to prepare for and assist that individual. The more preparation and assistance that can be offered to the Technician, the less time he or she would need to spend in the community collecting that data.

One recommendation that has emerged from this study is to use entry-level GIS Technicians and potentially a few interns in order to reduce data collection costs. The suggested proposal is to evenly divide the costs based on the amount of time each one spends in a community. The cost of a GIS Technician can be broken out on a weekly basis. An estimated amount of time can be provided for each utility based on the number of customers and/or the number of data points to be collected. The actual time at the end, however, would be charged to the utility or municipality. If an estimate of 6 weeks was provided, but it only took 5 weeks to complete the data collection and post processing, then the community would only be charged for 5 weeks. A community could also decide to have a "not-to-exceed" price, and instruct the Technician to only collect as much data as their budget allowed, with the expectation that additional money would be budgeted in the next year to complete the work.

Paying for a Technician or Intern's time would ultimately be left up to each participating utility and municipality. Prior to the official start-up of a Council of Governments (COG), one proposal is to have WSOS Community Action Commission, which administers RCAP in Ohio, hire and provide these Technicians and/or Interns on a Fee-for-Service basis. A utility could seek to limit the number of Technician hours and use an employee or volunteer to collect data, with the Technician acting as more of a trainer and consultant. However, the community would then be liable to

purchase a GPS unit, and it is possible that the actual data collection costs would not be significantly reduced if multiple training sessions are required or if there are errors made during data collection.

The possible funding sources to pay for data collection and processing for individual utilities and municipalities would include:

1. Paying directly from water, sewer or storm water enterprise funds if the money can be appropriated. In most cases, this will be the easiest method with the fewest "strings" attached. Given that the cost of an approach utilizing GIS Technicians should be cheaper than hiring a consulting firm on their own, it is anticipated that most participants, particularly the larger communities, will pay for these services out of their annual operating budgets.

2. Adding the activity to another water or sewer project that will be funded in the near future by USDA Rural Development, Ohio EPA or OWDA. A significant advantage with this option is that almost no additional work would be needed to add the supplemental project activity to the total project budget, and any proportionate grant funding might be available to help cover data collection costs.

3. For qualified communities, obtaining an Appalachian Regional Commission (ARC) grant. Potentially, federal prevailing wages could drive up the overall cost, and there would be more administrative time and costs. It is possible that more than one community, particularly in the same county, could be combined under a single grant proposal.

4. Seeking other grants from local foundations, community or economic development offices, and/or other interested parties may be possible in a limited number or instances. Other local government departments (fire, streets), county offices, economic development or port authority offices, etc. could be asked to help contribute, with the important consideration that any additional data a Technician might collect for other entities will increase the amount of time required. Real estate organizations, business associations and/or others that might potentially benefit directly or indirectly may also be willing to assist.

5. If a group of qualified communities could be brought together under a single proposal, it might be possible to fund a GIS Technician under USDA Rural Development's Rural Community Development Initiative (RCDI) program. WSOS Community Action Commission, Ohio University, or some other established agency or non-profit would have to be the applicant. The RCDI program is currently not accepting new applications, but it is expected to reopen in the second half of next year with funds becoming available in 2011.

6. Borrowing funds from the Ohio Water Development Authority or the RCAP Safe Water Fund. Taking out a loan specifically for GIS data collection is not a preferred option, but is always a backstop measure in the event that there are no other options. Representatives of RCAP can provide free assistance to communities under 10,000 population in preparing loan applications.

There are several potential configurations to funding data collection and start-up activities. Data collection can also be expected to continue to partially fund the salary of any GIS Technicians that would be hired to provide service and support to members of the proposed COG.

Start-up Costs

Funding the start-up of the COG and its GIS service infrastructure could be the most difficult task if significant out-of-pocket funds would be needed from participating utilities and municipalities. However, fortunately, it is the most likely cost category for which to attract outside grants and low-interest loans. Potential funding programs include:

1. The Ohio Water Development Authority (OWDA) Research and Development Grant Program can fund equipment and start-up costs, including labor and legal fees. The program can provide up to $200,000 in grant funding. A match is required. The match could include the costs of collecting data for founding members, as well as any documented in-kind hours from founding members, the WSOS Community Action Commission/RCAP, or any other organizations or funders involved. Any additional funds needed could be borrowed, although a COG would need to be legally established before requesting any loan funds. As with the initial grant from the Ohio Department of Development to fund this study, a single municipality would have to be the lead applicant and administrator of the grant, as the Village of Carrollton volunteered to do for this study. The COG could be the applicant for any loan funds.

2. The RCAP Safe Water Fund could potentially provide loan funding to a COG for start-up phase costs, including equipment, labor and to reimburse legal costs. The COG would have to be established as a legal entity before applying for any loans.

3. The Appalachian Regional Commission, as discussed earlier, is a possible funding source if somehow the activities under this grant are specifically benefitting one or more ARC communities. Federal prevailing wages could drive up the overall cost, and there would be more administrative time and costs. It is possible that more than one community, particularly in the same county, could be combined under a single grant proposal.

4. USDA Rural Development could potentially fund an established non-profit or university center through its Community Facilities program to purchase equipment, including GPS units, servers, computers and printers. It cannot fund software or labor. The Community Facilities program would include a grant component, generally 20-30%, and can be paid off at any time without penalty. WSOS Community Action Commission could apply through this program to receive the grant portion to help fund equipment. This program is an option, but not the best fit because WSOS would ultimately be responsible for the payback of the loan portion.

5. From a very limited search, no current foundation grant that was a good fit for this project was identified, however, there are thousands of foundation grant programs in the US, and it is very possible that a good match could be found to provide a portion of the funding for this project. There are foundation grant databases that can be accessed and searched for a reasonable fee, such as http://foundationcenter.org.

Operation and Maintenance Costs

Members would be expected to pay for the full cost of operating the shared GIS services after they are initially established. While it may be possible to obtain grants after the service is up and running to offset future computer and equipment upgrades, or new initiatives that would involve additional consulting fees, normal operation, maintenance and membership costs would not be eligible for grant or loan funding. Each entity would need to include this in their regular operations budget.

REFERENCES

Organizations and Personnel Consulted

1. Azteca Systems/Cityworks, Becky Tamashasky
2. Berkeley County (SC) GIS Consortium, Greg Rines
3. Berkeley-Dorchester-Charleston (SC) Council of Governments, Harun Rashid
4. Bricker and Eckler, LLP, Glenn Krassen
5. Buckeye Hills-Hocking Valley Regional Development District (OH), Bret Allphin
6. Clearwater Council of Governments (OH), Barbara Tatlock
7. Dane County (WI), Majid Allan
8. Delaware County (OH), Shoreh Elhami
9. Eastgate Council of Governments (OH), Patti Atwood and John Getchey
10. ESRI, Jessica Spain and Jim Higgins
11. Fairfield County (OH), Dave Burgei
12. Guernsey County Port Authority (OH), Norm Blanchard
13. Holmes County GIS Consortium (OH), Erik Parker
14. Le-Ax Water District (OH), John Simpson
15. City of Lebanon (OH), Patricia Moehring
16. Lien Forward Ohio Council of Governments, Deborah Flora
17. Lucas County (OH), Jennifer Heckman
18. Maryland State Department of Planning, Peter Conrad
19. National Association of Regional Councils, Naomi Freedman
20. National Consortium for Rural Geospatial Innovations in America (ruralgis.com), Steve Ventura (University of Wisconsin-Madison)
21. Northeast Ohio Network Council of Governments, Shirley Riggs, Doug Burkhardt, Dan Letson, Tom Seesan
22. Ohio Association of Regional Councils, John Getchey
23. Ohio Auditor of State's Office, Karen Huey and Ruthann Sisk
24. Ohio Schools Council, Tom Cottrell and Kelly Rocco
25. Ohio State University Extension, Mike Lloyd
26. Ohio-Kentucky-Indiana Council of Governments, Sarah Fry and Marilyn Osborne
27. Pennsylvania GIS Consortium, Thomas Sweet
28. Regional Income Tax Agency (OH), Lori Starcher
29. Richland County GIS Consortium (OH), Gene Del Greco
30. Village of Ridgefield (OH), Mayor Mike Lyons
31. Ross County Board of Mental Retardation and Developmental Disabilities, Rick Marriott
32. Software Solutions, Inc. (SSI), Larry Hollingshead
33. Southern Ohio Council of Governments, Amy Cartwright
34. United States Department of Agriculture, Debbie Rausch
35. West Alabama Regional Commission (WARC), Jill Hannah

Organizational Documents Reviewed

COGs in Ohio

Clearwater Council of Governments

By-Laws of the Clearwater Regional Council of Governments, April 22, 2009. Provided by Barbara Tatlock, Clearwater Council of Governments.

Cuyahoga Valley Regional Council of Governments

Agreement for Establishment of the Cuyahoga Valley Regional Council of Governments, no date. Retrieved April 24, 2009 at: http://www.cvcog.net/COG/AGREEMENT_FOR_ESTABLISHMENT_CVRCOG[1].pdf

Bylaws of the Cuyahoga Valley Regional Council of Governments, October 9, 2006. Retrieved April 24, 2009 at: http://www.cvcog.net/COG/CVCC_ByLaws_10_9_2006_rev_[1].pdf

Sample Resolution for Accepting COG Agreement, September 27, 2006. Retrieved April 24, 2009 at: http://www.cvcog.net/COG/Sample_COG_Legislation.pdf

Lien Forward Ohio Council of Governments

An Agreement Establishing a Regional Council of Governments by and between Mahoning County, Ohio and the City of Youngstown, Ohio, December 5, 2005. Provided by Deborah Flora, Lien Forward Ohio Council of Governments.

Resolution Authorizing the Execution of an Agreement with the City of Youngstown, Ohio Pertaining to the Establishment of a Regional Council of Political Subdivisions, November 29, 2005. Provided by Deborah Flora, Lien Forward Ohio Council of Governments.

Lien Forward Ohio Council of Governments Bylaws, January 20, 2006. Provided by Deborah Flora, Lien Forward Ohio Council of Governments.

Lien Forward Ohio Council of Governments, Board Meeting Minutes, March 9, 2006. Provided by Deborah Flora, Lien Forward Ohio Council of Governments

Lien Forward Ohio Council of Governments Board Meeting Minutes, March 9, 2006. Provided by Deborah Flora, Lien Forward Ohio Council of Governments

MAGNUM Council of Governments

Agreement Establishing the MAGNUM Regional Council of Governments, draft dated October 2007. Provided by Norm Blanchard, Guernsey County Port Authority.

By-Laws of the MAGNUM Regional Council of Governments, September 30, 2007. Provided by Norm Blanchard, Guernsey County Port Authority.

Miami Valley Regional Planning Commission

Miami Valley Regional Planning Commission Constitution and Bylaws, January 4, 2007. Retrieved July 2, 2009 at: http://docs.mvrpc.org/mvrpcconstbylaw.pdf.

Ohio Schools Council

Bylaws Governing the Ohio Schools Council, May 10, 2005. Provided by Kelly Rocco, Ohio Schools Council.

Ohio-Kentucky-Indiana Regional Council of Governments

Ohio-Kentucky-Indiana Regional Council of Governments Amended and Restated Articles of Agreement and By-Laws, December 2006. Provided by Marilyn Osborne and Sarah Fry, Ohio-Kentucky-Indiana Regional Council of Governments.

Regional Income Tax Agency

Agreement for Participation in a Regional Council of Governments, April 8, 1997. Provided by Lori Starcher, Regional Income Tax Agency (RITA).

Bylaws for the Board of Trustees of the Regional Income Tax Agency of the Regional Council of Governments, December 16, 1971. Provided by Lori Starcher, Regional Income Tax Agency (RITA).

Southern Ohio Council of Governments

By-Laws of the Southern Ohio Council (SOCOG), May 24, 2007. Provided by Amy Cartwright, Southern Ohio Council of Governments.

Southwest Regional 800 MHz Communications Network Council of Governments

Southwest Regional 800 MHz Communications Network Articles of Understanding and Agreement, March, 2005. Retrieved July 1, 2009 at: http://www.northroyalton.org/Council/Legislation/2005%20Ordinances/05-077%20Exhibit%20A.pdf

Toledo Metropolitan Area Council of Governments

Bylaws of the Toledo Metropolitan Area Council of Governments, January 31, 2005. Retrieved July 1, 2009, at: http://www.tmacog.org/Administration/TMACOG_bylaws.pdf.

GIS Cooperatives

Berkeley County (SC) GIS Consortium

Berkeley County GIS Consortium Memorandum of Understanding, 1993. Provided by Greg Rines, Berkeley County GIS Consortium.

Cheyenne/Laramie County GIS Cooperative

Cheyenne/Laramie County Cooperative Geographic Information System Executive Committee By-Laws, October 12, 2006. Retrieved July 20, 2009 at: http://www.clcgisc.com/ByLaws2006.pdf.

Holmes County (OH) Geographic Information System Consortium

Holmes County Geographic Information System Consortium Bylaws, May 22, 2009. Provided by Erik Parker, Holmes County Geographic Information System Consortium.

Maryland State Geographic Information Committee

Bylaws of the Maryland State Geographic Information Committee, April 20, 2005. Retrieved July 22, 2009 at: http://www.msgic.state.md.us/publicat/bylaws2005.pdf.

Richland County (Ohio) GIS Consortium

Richland County GIS Consortium Membership Handbook. Provided by Gene Del Greco, Richland County GIS Consortium.

Richland County, Ohio, Geographic Information System Consortium Bylaws, December 19, 2002. Provided by Gene Del Greco, Richland County GIS Consortium.

Solano County Regional GIS Cooperative

Memorandum of Understanding: the Geographic Data Exchange, Draft, no date. Retrieved July 21, 2009 at: http://uat.solanocounty.com/resources/DepartmentofInformationTechnology/GIS/Coop/REGIS%20MOU.pdf.

South Carolina GIS Coordination

South Carolina GIS Coordination, Memorandum of Agreement (MOA) for GIS Coordination in South Carolina. Retrieved July 21, 2009 at: http://gis.sc.gov/documents/gic/gic_moa.pdf.

Other Documents

Dietrich, Paul, Jeff Ott, and David A. Hansen (2005, July). Managing Your Water Utility with Integrated GIS. Presentation at the 2005 ESRI International User Conference. Retrieved October 27, 2009 at: http://proceedings.esri.com/library/userconf/proc05/papers/pap1960.pdf

Dong, Zhiyuan (n.d). A New Type of Intergovernmental Cooperation: Online Mapping Services. Retrieved February 24, 2009 at: http://www.co.navajo.az.us.

ESRI (2009, Summer). Pennsylvania Federated GIS Enables Data Sharing across County Lines: Counties Maintain Independence and Regional Coordination. *Public Safety Log*. Retrieved September 25, 2009 at: http://www.esri.com/library/reprints/pdfs/publicsafety_pennsylvania.pdf.

Mayo, Melissa L. (n.d.). Enhancing Water Department Efficiency: Using GIS and GPS to produce maps of rural water system features. Retrieved February 24, 2009 at: http://www.esri.com/news/arcuser/0408/bamah2o.html.

Ohio Revised Code, Chapter 117: Auditor of State. Retrieved August 11, 2009 at: http://codes.ohio.gov/orc/117.

Ohio Revised Code, Chapter 167: Regional Councils of Governments. Retrieved February 17, 2009 at: http://codes.ohio.gov/orc/167.

Ohio Commission on Local Government Reform and Collaboration (2009, August). *Annotated Bibliography of Studies and Data on Local Government Reform and Collaboration (Ohio)*. The John Glenn School of Public Affairs at The Ohio State University. Retrieved September 8, 2009 at: http://www.cpmra.muohio.edu/otaohio/commission/ota/Documents/WorkDocs/AnnotatedBibliographyWebAI.pdf.

Pascarella, Tom. Joining Together to Provide Basic Government Services (2008, March). Presentation at the 9th Annual Local Government Officials Conference, March 28, 2008. Retrieved March 11, 2009 at: http://ohiostimulustracker.org/conferences/LGOC/2008PostConference/Joining%20Together%20to%20%20Provide%20Basic%20Govt%20Serv.pdf.

PlanGraphics, Inc. (2003, April). Proposal for Sanitary Sewer Collection/Water Distribution GIS Mapping and Data Attribute Project (RFQ #03-1712). Frankfort, KY: PlanGraphics, Inc.

RCAP Solutions (2005, June). *Mapping, Inventorying and Maintenance Record-Keeping Using GIS for Small Water Systems*. RCAP Solutions, Inc.

Rousculp, Jennifer (2007, November). COGs as a Regional Resource. Retrieved March 11, 2009 at: http://odmrdd.state.oh.us/futures/documents/cogpresentation.pdf.

United States Department of Agriculture (1998, September). Shared-Services Cooperatives. Cooperative Information Report 49. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir49.pdf.

United States Department of Agriculture (1997, February). Understanding Cooperatives: The American System of Business. Cooperative Information Report 45, Section 1. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir451.pdf.

United States Department of Agriculture (1994, October). Understanding Cooperatives: The Structure of Cooperatives. Cooperative Information Report 45, Section 3. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir453.pdf.

United States Department of Agriculture (1999, January). Understanding Cooperatives: Legal Foundations of a Cooperative. Cooperative Information Report 45, Section 9. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir459.pdf.

United States Department of Agriculture (1997, February). Understanding Cooperatives: Strategic Planning. Cooperative Information Report 45, Section 10. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir4510.pdf.

United States Department of Agriculture (1995, March). Understanding Cooperatives: Cooperative Business Management Functions. Cooperative Information Report 45, Section 11. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir4511.pdf.

United States Department of Agriculture (1997, February). Understanding Cooperatives: Base Capital Financing of Cooperatives. Cooperative Information Report 45, Section 12. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir4512.pdf.

United States Department of Agriculture (1995, September). Understanding Cooperatives: How to Start a Cooperative. Cooperative Information Report 45, Section 14. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir4514.pdf.

United States Department of Agriculture (1996, September). How to Start a Cooperative. Cooperative Information Report 7. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir7/cir7.pdf.

United States Department of Agriculture (1997, June). Coops 101: An Introduction to Cooperatives. Cooperative Information Report 55. Retrieved August 5, 2009 at: http://www.rurdev.usda.gov/RBS/pub/cir55/c55text.pdf.

United States Department of Labor, Bureau of Labor Statistics, (2009, March). *Employer Costs for Employee Compensation – March 2009*. Retrieved September 2, 2009 at: http://www.bls.gov/ncs/ect/

Urban and Regional Information Systems Association (URISA) (2003, September). *URISA 2003 Salary Survey for IT/GIS Professionals*. Des Plaines, IL: URISA.

BID SPECIFICATIONS FOR GIS DATA COLLECTION

The purpose of the project is to develop water utility network geodatabases for multiple utilities and municipalities in the State of Ohio (See list below). The completed datasets will be used to establish an enterprise GIS for the participating utilities and municipalities within a Council of Governments created for that purpose. The system will allow each utility and municipality to view and edit its respective utility network geodatabase online.

Project Background

The Ohio Rural Community Assistance Program (Ohio RCAP) is working with a number of utilities and municipalities in the State of Ohio to establish a Council of Governments for the purpose of storing utility network geodatabases at a central host site and making the data available online for member utilities and municipalities to view and edit.

The first step in this effort is to collect utility system data with GPS units and develop a utility system geodatabase for each participating utility and municipality. These geodatabases will be developed using the ESRI water utility model, available at: http://support.esri.com/index.cfm?fa=downloads.dataModels.filteredGateway&dmid=16.

List of Participating Utilities and Municipalities

[This list would be inserted after the first round of outreach and member recruitment conducted in Phase One of the Implementation Plan, along with key information such as number of water and wastewater connections and other descriptions of the utility networks among participating utilities and municipalities.]

Scope of the Project

The scope of work for the project, for each listed utility and municipality, is as follows:

1. Create a geodatabase based on ESRI's Water utilities data model;

2. Meet with staff of participating entities to obtain guidance about the location of utility system features;

3. Use GPS units to collect visible water features, including:
   - Hydrants
   - Valves
   - Meters
   - Tanks
   - Lift stations
   - Network Structures
   - Potentially other water or wastewater utility-related structures [RCAP would insert additional data collection priorities here based on input from participating utilities and municipalities];

4. Import collected data points into the ESRI water model geodatabase;

5. Populate attribute fields in the ESRI water model geodatabase based on information and documentation provided by staff from each participating utility and municipality;

6. Digitize water lines by connecting features and populate tabular data fields based upon information including technical documentation provided by operators; and

7. Establish Quality Assurance/Quality Control (QA/QC) procedures to ensure accuracy and quality of the data.

GIS Data Requirements

The data shall be collected with a GPS unit with at least sub-meter accuracy. The data shall be provided as a file geodatabase based on the ESRI water utilities data model that is compatible with ArcGIS 9.3 software. The geodatabase must meet the following specifications:

Connectivity

Where graphic elements visually meet, they must also digitally meet. All confluences of line and polygon data must be exact. In other words, all lines that connect must be snapped to each other and all points must be snapped to a line. There must be no overshoots, undershoots, offsets, or pseudo nodes. Lines that connect polygons must intersect those polygons precisely; that is, every end point must be an intersection point of the respective polygon.

Line Quality

There should be no jags or hooks or zero-length segments. Any lines that are straight, or should be straight, should be digitized using only two points that represent the beginning and ending points of the line.

Segmentation

The digital representation of linear elements must reflect the visual network structure of the data type. An element should not be broken or segmented unless that segmentation reflects a visual or attribute code characteristic.

Each geodatabase file submitted shall include sufficient metadata compatible with the ArcCatalog .XML format utilizing the FGDC ESRI style sheet. The metadata shall include at a minimum the following:

- An abstract containing a brief narrative summary of the dataset including levels of accuracy and methods of data capture;
- Purpose for creating the data with a summary of the intentions with which the dataset was developed;
- Citation including the name of the organization and/or individual that developed the dataset;

- Maintenance requirements noting the frequency with which changes are to be made to the dataset (if any are necessary) after the initial dataset is completed;
- Theme key words associated with the dataset;
- Contact information for the creator of the dataset and for the creator of the metadata;
- Date the data were published.

Data Specifications

ESRI Water utilities data model. The utility features and attribute fields that must be populated are shown in the table below. The data type and any domains for each data field must be consistent with the ESRI water utilities data model. Additional attributes may be included in the geodatabase. A drawing name field will be included in the attribute table for the features and will be filled out with the name of the electronic as-built drawing that corresponds to that feature. The electronic drawing files will be provided.

Water Features. Water features include the point data captured with the GPS unit for the utility system features listed in the table below. All point features must be snapped to a line feature. The data types for the attributes for each of the features must correspond to the ESRI water utilities data model, including domains for the geodatabase.

Line Features. Line features include the main water line and the laterals connecting the main line to meters, and hydrants. Line features must be snapped to other lines to create an unbroken network.

Attributes. Each feature and line must include the attribute fields that are included with ESRI's water utilities data model and listed in the table below.

Feature	Attribute	Description
Network Structure	Name	The name of the structure
	Source	The source of the information for the Reference
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Pump	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Subtype	The type of feature

Feature	Attribute	Description
	Drawing	Name of the electronic as-built drawing associated with the feature
Fitting	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Sampling Station	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
Lateral Point	Accounted	The account identifier for billing purposes
	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
ClearWell	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
System Valve	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Control Valve	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location

Feature	Attribute	Description
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Manhole	Access Type	The type of access to the structure
	Ground Type	The surrounding type of ground surface
	Water Type	The type of water flowing through the manhole
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
Meter	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Hydrant	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature

BID SPECIFICATIONS FOR THE GIS DATA HOST SITE

The purpose of the GIS Data Host Site is to establish and maintain an enterprise GIS for multiple utilities and municipalities that are members of a Council of Governments established in order to provide this shared service. A GIS Data Host Site is needed in order to store each member utility and municipality's utility system geodatabase and to allow each member to view and edit its geodatabase online. The GIS Data Host Site would also provide training to member utilities and municipalities on how to use the web-based system.

Project Background

The Ohio Rural Community Assistance Program (Ohio RCAP) has worked with a number of utilities and municipalities in the State of Ohio to establish a Council of Governments for the purpose of sharing the costs of a web-based GIS infrastructure. A GIS Data Host Site is required in order to:

1. Establish and ensure the ongoing operation of the website and database server that provides each Member utility and municipality with ongoing access to view, manipulate, and edit its respective utilities geodatabase;

2. Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all Member geodatabases;

3. Ensure that each Member's geodatabase is kept current, reflecting edits initiated directly by Member staff through the web interface or by RCAP GIS Technicians;

4. Provide training to RCAP GIS Technicians and Members on how to use the web-based service;

5. Provide training to Members on how to use GPS devices;

6. Ensure that Member data is secure;

7. Track resource utilization by Members to inform resource utilization projections for future years.

Scope of the Project

1. Establish and ensure the ongoing operation of the website and database server that provides each Member utility and municipality with ongoing access to view, manipulate, and edit its respective utilities geodatabase.
    - Create an ArcGIS Server web-based server interface;
    - Upload each member's geodatabase to the central server so that it is available to each entity to use;

- Incorporate other data layers including streets, aerial photography, soils, floodplains, political boundaries, railroads, streams, and lakes into the web-based interface to enable Members to view utilities data over these layers;
- Ensure that the web interface is available to members and address host site connection problems as they arise.

2. Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all Member geodatabases.
   - Add the data to the SDE geodatabase to make available on ArcGIS Server;
   - Store an ArcSDE geodatabase for each utility and municipality;
   - Assist utilities and municipalities in the initial collection of utility data by ensuring the data collected and input by the utilities is accurate and complete;
   - Assist utilities with data updates to the SDE geodatabase and maintain quality of data in the geodatabase;
3. Ensure that each Member's geodatabase is kept current, reflecting edits initiated directly by Member staff through the web interface or by RCAP GIS Technicians.
   - Create versioned geodatabases for data editing;
   - Allow access to GIS Technicians employed by RCAP for editing the geodatabase and managing edits to the geodatabases;
   - Create an editing task for the web-based ArcGIS Server to edit tabular and geographic data;
   - Develop a method to enable Members to hyperlink documents to their respective geodatabases;
   - Investigate methods to integrate customer billing software into the web-based system.
4. Provide training to RCAP GIS Technicians and Members on how to use the web-based service.
   - After Task 1 is completed, create and conduct a 1-2 day training for Members on using the web interface to view and edit data. The training will be in a central location;
   - At a time to be selected by RCAP, conduct a second 1-2 day training.
5. Provide training to Members on how to use GPS devices.
   - Create and conduct a 1-2 day training on the use of GPS devices, including procedures for transferring data between GPS units and Member geodatabases. The training will be in a central location.

6. Ensure that Member data is secure.
    - See security requirements below.
7. Track resource utilization by Members.
    - Keep detailed records of geodatabase edits initiated by Members and RCAP GIS Technicians, including the type of edit and how much time is spent by GIS Data Host Site staff in finalizing each edit;
    - Keep detailed records of technical assistance requests (phone calls and emails from Members and the RCAP GIS Technician) and time spent by GIS Data Host Site staff in addressing each request;
    - Keep detailed records of any other work tasks performed on behalf of Members.

Requirements

The following specifications shall be construed as minimum and should not be considered a complete list.

Web Requirements

This includes setting up a web interface to allow members to view and edit their geodatabases online. The web interface must provide system users with the following capabilities:

- Viewing Maps of Utility Systems in order to see the locations of utility system assets such as water lines, water meters, hydrants, and valves;
- Panning with Maps in order to view different geographic areas within a municipality or utility system;
- Zooming with Maps in order to see utility system elements at different scales or levels of detail;
- Viewing Utility System Data in Table Form in order to see attribute information about each utility system asset, such as the diameter of a water line, what it is made out of, what company manufactured it, when it was installed, and when it was repaired;
- Turning Map "Layers" On and Off in order to view utility system features in relation to other geographic features including streets, aerial photos, soils, floodplains, political boundaries, railroads, streams, and lakes, as well as other layers such as parcels, zoning, sidewalks, edge of pavement, structures, and building footprints that may be available depending on county;
- Searching Utility System Data in order to locate utility assets based on specific attributes such as valve type, water line diameter, hydrant manufacturer, or any other information that is included in the database and that the member entities deem important;

- Querying Utility System Data based on more than one attribute at a time in order to find utility system assets that share multiple attributes;
- Editing and Adding to Utility System Data in order to ensure that geodatabases include more information and continually updated information over time;
- "Hyperlinking" Files such as drawings and customer billing information to the database;
- Extracting Data from the Geodatabase for use with GIS software or for use with a mobile GPS device;
- Making Data Available as "Live Maps" to Designated Third Parties such as regional planning commissions or engineering firms;
- Color-Coding Map Symbols based on Key Attributes to enable quick recognition of active versus inactive meters, utility features in need of repair, or other utility feature attributes deemed significant to highlight in this manner;
- Potentially Linking Customer Billing and Asset Management Software to the GIS.

ArcGIS Server Requirements

This includes all aspects of setting up and managing the ArcGIS Server system for the Member utilities and municipalities.

1. Set up ArcGIS Server;
2. Set up ArcSDE versioned geodatabase for each Member utility and municipality;
3. Manage ArcSDE geodatabase for each Member utility and municipality;
4. Ensure that edits to the geodatabase for each Member utility and municipality are accurate and that discrepancies are rectified;
5. Ensure that access to ArcGIS Server for each Member utility and municipality is secure.

Personnel Requirements

1. Proficiency with ESRI ArcGIS , Arcinfo, ArcView, ArcIMS, ArcGIS Server, ArcEngine, ArcSDE or comparable GIS tool/skill set;
2. Capable of maintaining MS SQL 2005;
3. Customization of web-based ArcGIS Server interface including development of customized web applications using ArcGIS Server and other related web technologies/programming languages - .NET, JAVA, JS, FLEX, KML,XML/SOAP, AJAX Javascript.

Equipment Requirements

1. Server capable of running ArcGIS Server Enterprise Advanced including:
    a. 1 Quad Core Intel Xeon, 8M Cache, 1066Mhz FSB;
    b. 12GB Memory;
    c. 2 x 146GB 15000 rpm Serial Attached SCSI (SAS) Disk Drives with RAID1;
    d. Two-dual port Gigabit Ethernet NIC;
    e. 8x DVD-ROM, Internal.
2. File backup system.

System Requirements **(**ArcGIS Server for the Microsoft .NET Framework)

1. Microsoft Windows 2003 Server Enterprise & Datacenter, Web ADF for the Microsoft .NET Framework 2.0 or above, Microsoft Visual Studio.

Internet Connection Requirements (Bandwidth)

1. Internet speeds capable of hosting the ArcGIS Server web based interface and SDE geodatabase (requires business class integrated T1).

Security Requirements

1. Security should include at least a fully encrypted 128 bit internal file system with a Firewall or similar security method to prevent unauthorized access to the computer system;
2. Access to the site should be password protected with SSL.

KEY GIS JOB DESCRIPTIONS

GIS Technician

The GIS Technician is assigned duties that are routine, involving heavy amounts of database entry and management and the eventual generation of maps and plats from this data. Technicians do little or no interpretation after the data has been stored in the database software. Other than the main responsibilities of database management and mapping, technicians complete work relating to: digitizing, math, surveying, and technical writing. This is the perfect position for the recent college graduate or novice in the field.

GIS Manager

The GIS Manager encompasses technical skills and administrative knowledge allowing GIS technology to be used properly and efficiently. The GIS Manager must be up to date with any GIS demands and know if the current department, personnel, and software can achieve them. A technical background is a must, but the GIS Manager must also have the abilities of staff supervision and project oversight. The GIS Manager must be detail oriented and have the foresight to communicate various GIS activities with various groups, agencies, departments, and or individuals. The GIS Manager must also set goals and objectives, completion dates, and creating methods of completion, on multiple ongoing projects.

GIS Systems Analyst/Programmer

The GIS Programmer is a heavily technical position that demands an extensive technical background and the need for constant re-education. Almost every programmer designs, creates, updates, or manages GIS software applications. Dividing time between the maintenance of the current software and design of new applications is a must. However the programmer can be called upon to perform other tasks as well, such as GIS mapping, providing internet and web-based support, developing spatial and non-spatial databases, and providing technical support to other GIS professionals. Programmers are expected to know a large number of programming languages and applications such as AML, Microsoft NT, Avenue, SQL, VB (Visual Basic), C, C++, Java, and Oracle. By using these the programmer should not only be able to run them, but improve the current GIS system.

IT/IS Manager

IT/GIS managers oversee IS operations including computer operations, technical support, systems analysis, and programming. The manager often directs other IT/IS areas, establishes technical priorities, standards and procedures, and ensures sufficient systems capacity for organizational needs. The manager must have a great grasp on the newest cutting edge information technology but they should also be comfortable with administrative tasks. An MIS degree and 5 to 8 years experience is required.

Source: *URISA 2003 Salary Survey for IT/GIS Professionals*

BID SPECIFICATIONS FOR DATA COLLECTION TRAINING AND QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The purpose of the project is to develop water utility network geodatabases for multiple utilities and municipalities in the State of Ohio (See list below). The completed datasets will be used to establish an enterprise GIS for the participating utilities and municipalities within a Council of Governments created for that purpose. The system will allow each utility and municipality to view and edit its respective utility network geodatabase online.

Project Background

The Ohio Rural Community Assistance Program (Ohio RCAP) is working with a number of utilities and municipalities in the State of Ohio to establish a Council of Governments for the purpose of storing utility network geodatabases at a central host site and making the data available online for member utilities and municipalities to view and edit.

The first step in this effort is to collect utility system data with GPS units and develop a utility system geodatabase for each participating utility and municipality. The geodatabases will be developed using the ESRI water utility model, available at: http://support.esri.com/index.cfm?fa=downloads.dataModels.filteredGateway&dmid=16.

RCAP staff or interns will collect the data and develop a geodatabase for each participating utility and municipality, but a consultant is required to oversee the data collection process, train RCAP staff and interns about using GPS units to collect data, train RCAP staff and interns about the data collection scope and quality standards that must be achieved, and assist RCAP staff and interns as needed in meeting these standards.

List of Participating Utilities and Municipalities

[This list would be inserted after the first round of outreach and member recruitment conducted in Phase One of the Implementation Plan, along with key information such as number of water and wastewater connections and other descriptions of utility networks among participating utilities and municipalities.]

Scope of the Project

The scope of work for the project, for each listed utility and municipality, is as follows:

1. Create a geodatabase based on ESRI's water utilities data model for purposes of data collection by RCAP staff and interns;

2. Provide training to RCAP staff and interns and utility and municipality staff on the scope, process, and standards of the data collection to be completed;

3. Provide training to RCAP staff and interns on the use of GPS units to collect utility data;

4. Assist RCAP staff and interns in meeting Quality Assurance/Quality Control (QA/QC) process and content standards in order to ensure accuracy and quality of the data.

Creation of a Water Utilities Model Geodatabase

A water utilities model geodatabase will be created for RCAP staff/interns to use for the population of water utility data. The utility features and attribute fields that must be populated are shown in the table below. The data type and any domains for each data field must be consistent with the ESRI water utilities data model. Additional attributes may be included in the geodatabase as specified by RCAP.

Training

The project requires two separate training courses that will be given to RCAP staff/interns and utility/municipality staff – one regarding the data collection process and standards, and one regarding the use of GPS units.

The data collection course will be two to three days in length and will inform RCAP staff and interns about the scope, process and standards of the data collection project. The purpose of the data collection should be discussed as well as the requirements for a successful data collection process. These requirements include the correct use and data population of the ESRI water model geodatabase and the Quality Assurance/Quality Control procedures to be employed during the data collection process.

The GPS course will be a one- or two-day course on the use of GPS devices, including preparing the GPS units for data collection, procedures for data collection, and transferring data between GPS units and Member geodatabases.

Assistance With Quality Assurance/Quality Control Procedures

The project requires assistance to RCAP staff and interns to assure that the data that is loaded into the enterprise geodatabase is useful and accurate. The data will be considered useful and accurate if it meets the GIS Data Requirements and Data Specifications described below.

GIS Data Requirements

Connectivity

Where graphic elements visually meet, they must also digitally meet. All confluences of line and polygon data must be exact. In other words, all lines that connect must be snapped to each other and all points must be snapped to a line. There must be no overshoots, undershoots, offsets, or pseudo nodes. Lines that connect polygons must intersect those polygons precisely; that is, every end point must be an intersection point of the respective polygon.

Line Quality

There should be no jags or hooks or zero-length segments. Any lines that are straight, or should be straight, should be digitized using only two points that represent the beginning and ending points of the line.

Segmentation

The digital representation of linear elements must reflect the visual network structure of the data type. An element should not be broken or segmented unless that segmentation reflects a visual or attribute code characteristic.

Data Specifications

Water Features. Water features include the point data captured with the GPS unit for the utility system features listed in the table below. All point features must be snapped to a line feature. The data types for the attributes for each of the features must correspond to the ESRI water utilities data model, including domains for the geodatabase.

Line Features. Line features include the main water line and the laterals connecting the main line to meters, and hydrants. Line features must be snapped to other lines to create an unbroken network.

Attributes. Each feature and line must include the attribute fields that are included with ESRI's water utilities data model and listed in the table below.

Feature	Attribute	Description
Network Structure	Name	The name of the structure
	Source	The source of the information for the Reference
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Pump	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Fitting	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground

Feature	Attribute	Description
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Sampling Station	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
Lateral Point	Accounted	The account identifier for billing purposes
	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
ClearWell	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
System Valve	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Control Valve	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Manhole	Access Type	The type of access to the structure
	Ground Type	The surrounding type of ground surface

Feature	Attribute	Description
	Water Type	The type of water flowing through the manhole
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Drawing	Name of the electronic as-built drawing associated with the feature
Meter	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature
Hydrant	Water Type	The type of water flowing through the valve
	Install Date	The date the object was installed in the ground
	Location Description	A text description for the location
	Lifecycle Status	The stage of the facility lifecycle
	Subtype	The type of feature
	Drawing	Name of the electronic as-built drawing associated with the feature

OHIO REVISED CODE:
CHAPTER 167: REGIONAL COUNCILS OF GOVERNMENTS

167.01 Regional councils of government.

That governing bodies of any two or more counties, municipal corporations, townships, special districts, school districts, or other political subdivisions may enter into an agreement with each other, or with the governing bodies of any counties, municipal corporations, townships, special districts, school districts or other political subdivisions of any other state to the extent that laws of such other state permit, for establishment of a regional council consisting of such political subdivisions.

Effective Date: 11-17-1967

167.02 Membership.

(A) Membership in the regional council shall be the counties, municipal corporations, townships, special districts, school districts, and other political subdivisions entering into the agreement establishing the council or admitted to membership subsequently pursuant to the agreement establishing the council or the bylaws of the council. Representation on the council may be in the manner as provided in the agreement establishing the council.

(B) If the agreement establishing the council does not set forth the manner for determining representation on the council such representation shall consist of one representative from each county, municipal corporation, township, special district, school district, or other political subdivision entering into the agreement, or subsequently admitted to membership in the council. The representative from each member county, municipal corporation, township, special district, school district, or other political subdivision shall be elected chief executive thereof, or, if such county, municipal corporation, township, special district, school district, or other political subdivision does not have an elected chief executive, a member of its governing body chosen by such body to be its representative.

(C) The director of development shall assist the council in securing the cooperation of all appropriate agencies of the state or of the United States to aid in promoting the orderly growth and development of the area, solving the problems of local government, and discharging the responsibilities and duties of local government in the most efficient possible manner.

(D) Any county, municipal corporation, township, special district, school district, or other political subdivision which has become a member of the council may withdraw by formal action of its governing board and upon sixty days notice to council after such action, or in the manner provided in the agreement establishing the council, provided no such procedure relative to withdrawals in the agreement establishing the council shall require the political subdivision desiring to withdraw to retain its membership in the council for a period in excess of two years.

Effective Date: 11-13-1992

167.03 Powers.

(A) The council shall have the power to:

(1) Study such area governmental problems common to two or more members of the council as it deems appropriate, including but not limited to matters affecting health, safety, welfare, education, economic conditions, and regional development;

(2) Promote cooperative arrangements and coordinate action among its members, and between its members and other agencies of local or state governments, whether or not within Ohio, and the federal government;

(3) Make recommendations for review and action to the members and other public agencies that perform functions within the region;

(4) Promote cooperative agreements and contracts among its members or other governmental agencies and private persons, corporations, or agencies;

(5) Perform planning directly by personnel of the council, or under contracts between the council and other public or private planning agencies.

(B) The council may:

(1) Review, evaluate, comment upon, and make recommendations, relative to the planning and programming, and the location, financing, and scheduling of public facility projects within the region and affecting the development of the area;

(2) Act as an areawide agency to perform comprehensive planning for the programming, locating, financing, and scheduling of public facility projects within the region and affecting the development of the area and for other proposed land development or uses, which projects or uses have public metropolitan wide or interjurisdictional significance;

(3) Act as an agency for coordinating, based on metropolitan wide comprehensive planning and programming, local public policies, and activities affecting the development of the region or area.

(C) The council may, by appropriate action of the governing bodies of the members, perform such other functions and duties as are performed or capable of performance by the members and necessary or desirable for dealing with problems of mutual concern.

(D) The authority granted to the council by this section or in any agreement by the members thereof shall not displace any existing municipal, county, regional, or other planning commission or planning agency in the exercise of its statutory powers.

Effective Date: 03-18-1969

167.04 Adoption of by-laws.

(A) The regional council of governments shall adopt by-laws, by a majority vote of its members, designating the officers of the council and the method of their selection, creating a governing board that may act for the council as provided in the by-laws, and providing for the conduct of its business.

(B) The by-laws of the regional council of governments shall provide for the appointment of a fiscal officer, who may hold any other office or employment with the council, and who shall receive, deposit, invest, and disburse the funds of the council in the manner authorized by the by-laws or action by the council.

(C) The by-laws of a regional council of governments the members of which include, under sections 167.01 and 167.02 of the Revised Code, at least eight counties may include a provision authorizing member attendance and voting at council meetings either in person or by proxy.

Effective Date: 11-17-1967; 2007 HB119 09-29-2007

167.05 Employing personnel.

The council may employ such staff and contract for the services of such consultants and experts, and may purchase or lease or otherwise provide for such supplies, materials, equipment, and facilities as it deems necessary and appropriate in the manner and under procedures established by the by-laws of the council.

Effective Date: 11-17-1967

167.06 Financing programs and operations.

(A) The governing bodies of the member governments may appropriate funds to meet the expenses of the council. Services of personnel, use of equipment, and office space, and other necessary services may be accepted from members as part of their financial support. The members of the council, or the state of Ohio, its departments, agencies, instrumentalities, or political subdivisions or any governmental unit may give to the council moneys, real property, personal property, or services. The council may establish schedules of dues to be paid by its voting members to aid the financing of the operations and programs of the council in the manner provided in the agreement establishing the council or in the by-laws of the council. The council may permit non-member political subdivisions to participate in any of its activities regardless of whether such political subdivisions have paid dues to the council.

(B) The council may accept funds, grants, gifts, and services from the government of the United States or its agencies, from this state or its departments, agencies, instrumentalities, or from political subdivisions or from any other governmental unit whether participating in the council or not, and from private and civic sources.

(C) The council shall make an annual report of its activities to the member governments.

Effective Date: 11-17-1967

167.07 Membership not a public office.

Membership on the council and holding an office of the council does not constitute the holding of a public office or employment within the meaning of any section of the Revised Code. Membership on the council and holding an office of the council shall not constitute an interest, either direct or indirect, in a contract or expenditure of money by any municipal corporation, township, special district, school district, county, or other political subdivision. No member or officer of the council shall be disqualified from holding any public office or employment, nor shall such member or officer forfeit any such office or employment, by reason of his position as an officer or member of the council, notwithstanding any law to the contrary.

Effective Date: 11-17-1967

167.08 Contracts for service.

The appropriate officials, authorities, boards, or bodies of counties, municipal corporations, townships, special districts, school districts, or other political subdivisions may contract with any council established pursuant to sections 167.01 to 167.07, inclusive, of the Revised Code to receive any service from such council or to provide any service to such council. Such contracts may also authorize the council to perform any function or render any service in behalf of such counties, municipal corporations, townships, special districts, school districts, or other political subdivisions, which such counties, municipal corporations, townships, special districts, school districts, or other political subdivisions may perform or render.

Effective Date: 11-17-1967

167.10 Qualifying council defined - general powers.

(A) As used in this section and sections 167.101 to 167.105 of the Revised Code:

(1) "Qualifying council" means a regional council established under section 167.01 of the Revised Code to which both of the following requirements apply:

(a) The council's membership is composed primarily of city, local, and exempted village school districts, or any combination of such districts;

(b) The council is an information technology center approved under section 3301.075 of the Revised Code.

(2) "Securities" means bonds, notes, or other evidence of obligation issued in temporary or permanent form, including book-entry securities.

(B) A qualifying council may acquire, construct, and otherwise improve real and personal property to be used by or for the benefit of the qualifying council or one or more of its members. The acquisition, construction, and improvement may be financed by cash, installment payments with or without a mortgage, lease-purchase agreements, leases with an option to purchase, or securities issued pursuant to section 167.101 of the Revised Code.
Effective Date: 2007 HB119 09-29-2007

167.101 Issuance of securities by qualifying council.

(A) A qualifying council may issue securities only for the purpose described in section 167.10 of the Revised Code. The securities may be secured only by the following:

(1) A pledge of and lien on the revenue of the qualifying council, or such lesser portion of the revenue as may be designated by the qualifying council, whether derived from agreements with its members and other persons or from its ownership or operation of any property, including available rates, charges, rents, interest subsidies, debt charges, grants, or payments by federal or state agencies, but excluding funds received pursuant to section 3301.075 of the Revised Code;

(2) Covenants of the qualifying council to maintain rentals, rates, and charges to produce revenue sufficient to do all of the following:

(a) Pay all the current expenses of the property financed with the proceeds of the securities;

(b) Pay the debt charges on the securities;

(c) Establish and maintain any contractually required special funds relating to the securities or the property acquired, constructed, or improved.

(B) The qualifying council may issue securities to fund or refund the securities issued pursuant to division (A) of this section. The qualifying council also may issue securities in anticipation of the proceeds of the securities issued pursuant to this section.

Effective Date: 2007 HB119 09-29-2007

167.102 Qualifying council securities as special obligations.

Securities issued under section 167.101 of the Revised Code are special obligation securities and are not general obligations of the state, the issuing qualifying council, the members of the issuing qualifying council, or any political subdivision of the state. Such securities shall not constitute debt for which the full faith and credit of the state, the issuing qualifying council, the members of the issuing qualifying council, or any political subdivision of the state may be pledged. The holder or owner of the securities shall have no right to have money raised by taxation by the state or any political subdivision of the state obligated or pledged, and money so raised shall not be obligated or pledged, for the payment of principal or interest or premium on such securities, and each security shall bear on its face a statement to that effect. Money received by the qualifying council pursuant to section 167.06 of the Revised Code shall not be considered money raised by taxation.

Effective Date: 2007 HB119 09-29-2007

167.103 Documents executed by qualifying council officers.

The officers authorized by a qualifying council issuing securities under section 167.101 of the Revised Code shall execute the necessary documents to provide for the pledge, protection, and disposition of the pledged revenues from which debt charges and any special fund deposits are to be

paid. Those necessary documents include the issued securities, trust agreements, leases, and other financing documents.

Effective Date: 2007 HB119 09-29-2007

167.104 Maximum maturity of qualifying council securities.

The maximum maturity of securities issued under section 167.101 of the Revised Code shall be governed by section 133.20 of the Revised Code.

Effective Date: 2007 HB119 09-29-2007

167.105 Application of laws governing state-issued securities.

Except for sections 9.98 to 9.983 and 167.10 to 167.105 of the Revised Code, the securities issued under section 167.101 of the Revised Code shall not be subject to any other provision of the Revised Code governing the issuance of securities by the state, its agencies, or any political subdivision of the state.

Effective Date: 2007 HB119 09-29-2007

DRAFT AGREEMENT TO ESTABLISH A COG

[PLEASE NOTE: This draft has been derived from several example Agreements to Establish COGs, but was NOT prepared by legal counsel. Legal counsel should be retained in order to review and amend this draft prior to its use in outreach and member recruitment for the proposed COG.]

This agreement is made and entered into by the among and below-specified units of government in Ohio, each of which has become a party hereto by causing a counterpart of the Agreement to be signed by an officer duly authorized by the legislative authority of such participating unit of government.

Witnesseth

The following units of government and non-governmental organizations are the original parties to this Agreement:

<INSERT NAMES OF PROSPECTIVE MEMBERS>

The above listed units of government, wishing to establish a regional council of governments pursuant to the *Ohio Revised Code (Chapter 167)*, agree as follows:

I. Name. There is hereby established a regional council of governments, which shall be known as _____ (hereinafter referred to as "the Council").

II. Purpose. The mission of the Council is:

To provide utilities and municipalities that are Council Members with a shared, affordable, user-friendly, internet-based Geographic Information System (GIS) to manage water and wastewater utility system information.

To provide each Council Member with staff assistance in using the shared Geographic Information System.

To share the costs of the Geographic Information System among the Council Members.

To provide the shared Geographic Information System by establishing and operating a GIS Data Host Site that provides the following services to Council Members:

1. Establish and ensure the ongoing operation of a website and database server that provides each Member utility and municipality with ongoing online access to view, manipulate, and edit its respective Geographic Information System (GIS) geodatabase;
2. Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all Member geodatabases;
3. Ensure that each Member's geodatabase is kept current, reflecting edits initiated by Member staff;
4. Provide training to Members on how to use the web-based Geographic Information System;

5. Provide training to Members on how to use GPS devices;
6. Ensure that Member data is secure;
7. Track utilization of the shared Geographic Information System by Members in order to provide Members with information to guide the development of appropriate and equitable membership fees.

Toward these ends, the Council shall have all capacities as set forth in *Ohio Revised Code (Chapter 167)* or any future amendments thereto or as otherwise provided by law.

III. Representation. Each full member of the Council shall be represented at the Council's meetings by the chief executive officer or the chief executive officer's designee. In the case of those member units that do not have an elected chief executive officer, a representative shall be chosen by such body to be its representative. The representative may designate an alternate to represent the member unit in the representative's absence.

IV. Initial Meeting and Bylaws. Within sixty (60) days after the execution of this Agreement by all participating units of government, the Council shall conduct its first meeting, at which time the Council shall, by majority vote of its members, adopt bylaws providing for:

a. The designation and method of selection of the Council officers and appointed officials;

b. The conduct and scheduling of future meetings; and

c. The general conduct of the Council's business.

The Council shall meet, at minimum, on an annual basis.

V. Admission to Membership. Subsequent to the formation of the Council, any unit of government, public or nonprofit agency, or publicly regulated utility within the state of Ohio may be admitted to membership therein pursuant to the bylaws of the Council.

VI. Withdrawal From Membership. Any member may withdraw from the Council sixty (60) days after written notice of such withdrawal is mailed to all other members. Such withdrawal shall not affect the contractual rights set forth herein as to all other parties hereto. When a member has made any financial commitment to the Council or has committed to the Council to perform any other obligation as a member, such financial liability or responsibility to perform such obligation shall extend for the full term of the commitment and shall not be affected by the member's withdrawal from the Council prior to the expiration thereof.

VII. Parliamentary Authority. ***Robert's Rules of Order, Revised***, shall govern all parliamentary procedures of the Council in all cases to which they may be applicable, except to the extent that they are inconsistent with the bylaws or the special rules of order in this organization.

VIII. Audits. The Council shall cause an audit to be performed as required by the Laws of the State of Ohio. A summary of the audit shall be mailed to each member of the Council.

IX. Cancellation of the Agreement. The Council may be dissolved by affirmative vote of two-thirds (2/3) of the members of the full Council provided that a quorum is present as defined in Article VI of this document. Prior to any vote on dissolution, each member shall receive at least forty-five (45) days written notice from the Chair that the matter of dissolution will be voted upon.

Upon an affirmative vote to dissolve the Council, the Council shall immediately cease to do business and shall only do such acts as are required to conclude its affairs. The Chair, Vice-Chair, Treasurer, Secretary, and GIS Manager shall direct all pending business until all Council affairs are concluded. At the conclusion of all Council affairs, any unclaimed assets remaining on the Treasurer's records shall be distributed according to the following schedule:

1. All tangible personal property previously loaned or given to the Council that is clearly identified as to ownership shall be returned to the owner member;

2. All remaining tangible personal property shall be sold at public auction or by sealed bid in accordance with the *Ohio Revised Code (Chapter 307.12)*. The cash proceeds thereof shall be equally divided among all members after all liabilities, if any, have been satisfied.

X. Condition to Obligations. Notwithstanding anything to the contrary stated in this Agreement, no obligation arising in consequence of membership in the Council and requiring legislative and/or Council approval by any participating unit of government shall be binding on such member, unless approved through appropriate legislation or Council action.

XI. Amendments. These Bylaws and any amendments thereto providing for the governance of the Council may be adopted, altered, or repealed at a business meeting by affirmative vote of a majority of the members of the full Council provided that a quorum of a majority of Council members are present.

Written notice of any proposed changes shall be provided to the membership by the Chair at least thirty (30) days prior to the date set for the vote.

XII. Severability. In the event that any part or portion of this Agreement shall be found to be contrary to law and thereby held to be null and void, all other provisions of this Agreement shall remain in full force and effect, and shall not otherwise be affected thereby.

In Witness Whereof, the parties hereto have caused this Agreement to be duly executed on the date indicated by signing a counterpart of the Agreement.

(Executed signature page is retained in the files of the Council.)

Participating Unit of Government

By: _____ Date:

_____

Its: _____

Title

SAMPLE ORDINANCE TO APPROVE COG MEMBERSHIP

[PLEASE NOTE: This draft has been derived from several example ordinances approving COG membership, but was NOT prepared by legal counsel. Legal counsel should be retained in order to review and amend this draft prior to its use in outreach and member recruitment for the proposed COG.]

AN ORDINANCE AUTHORIZING THE <*INSERT SUBDIVISION*> TO BECOME A MEMBER OF THE <*INSERT NAME*> COUNCIL OF GOVERNMENTS, DIRECTING THE <*INSERT CHIEF EXECUTIVE'S NAME*> AND THE FINANCE DIRECTOR TO ENTER INTO THE MEMBERSHIP AGREEMENT, AND APPROVING THE PROPOSED BYLAWS OF THE ORGANIZATION

WHEREAS, cities, towns, public and non-profit agencies, and publicly regulated utilities in the State of Ohio desire to obtain the benefits of a Geographic Information System (GIS); and

WHEREAS, the aforementioned governmental and non-governmental institutions require a medium for evaluating, acquiring, and training their staff members on the technology needed to implement and operate a Geographic Information System; and

WHEREAS, the aforementioned governmental and non-governmental institutions desire to develop a GIS system that will result in improved information management and services; and

WHEREAS, this <*INSERT COUNCIL/BOARD NAME*> has determined it is in the interest of <INSERT SUBDIVISION> to participate in the <*INSERT NAME*> Council of Governments.

NOW, THEREFORE, BE IT ORDAINED by the <*INSERT LEGISLATIVE BODY*> of the <*INSERT SUBDIVISION*>, <*INSERT COUNTY*>, State of Ohio:

SECTION 1. This <*INSERT LEGISLATIVE BODY*> authorizes the <*INSERT SUBDIVISION*> to become a member of the <*INSERT NAME*> Council of Governments and authorizes and directs the <*INSERT CHIEF EXECUTIVE*> and the Finance Director to enter into the Membership Agreement.

SECTION 2. This <*INSERT LEGISLATIVE BODY*> approves and ratifies the Bylaws, as amended from time to time, as the code of regulations of the <*INSERT NAME*> Council of Governments.

SECTION 3. This Ordinance shall take effect and be in force from and after the earliest period allowed by law.

PASSED: _____

_____
President of <*INSERT GOVERNING BODY*>

ATTEST:

_____
<*INSERT CHIEF EXECUTIVE*>

_____
Clerk

Dated: _____

DRAFT COG BYLAWS

[PLEASE NOTE: This draft has been derived from several example COG Bylaws as well as governing documents for several existing GIS cooperatives, but was NOT prepared by legal counsel. This draft does not specify roles for an Executive Committee, Board of Trustees, or any other specific bodies within the COG except for the Council which includes all COG Members. However, it is anticipated that roles for one or more of these bodies will be recommended by legal counsel when legal counsel is retained. It is preferable to leave the definition of additional decision-making bodies within the COG to experienced legal counsel rather than proposing those roles in this draft. In conjunction with this report, RCAP has been provided with copies of existing Bylaws from multiple COGs, as well as a comparative summary of these documents, that will illustrate some of the potential roles to be played by different decision-making bodies within COGs. A brief analysis of the COG Bylaws reviewed is provided in Chapter 7 of this report. Legal counsel should be retained in order to review and amend this draft prior to its use in outreach and member recruitment for the proposed COG.]

<*INSERT NA*ME> Council of Governments
Bylaws

Article I Name

The name of this body shall be the _____ Council of Governments (hereinafter referred to as the "Council").

Article II Mission

The Council shall have all powers set forth in the *Ohio Revised Code (Chapter 167)* or any future amendments thereto or as otherwise provided by law.

The mission of the Council is:

To provide utilities and municipalities that are Council Members with a shared, affordable, user-friendly, internet-based Geographic Information System (GIS) to manage water and wastewater utility system information.

To provide each Council Member with staff assistance in using the shared Geographic Information System.

To share the costs of the Geographic Information System among the Council Members.

To provide the shared Geographic Information System by establishing and operating a GIS Data Host Site that provides the following services to Council Members:

1. Establish and ensure the ongoing operation of a website and database server that provides each Member utility and municipality with ongoing online access to view, manipulate, and edit its respective Geographic Information System (GIS) geodatabase;

2. Ensure that the centrally-hosted data is kept in a proper and consistent form over time and across all Member geodatabases;

3. Ensure that each Member's geodatabase is kept current, reflecting edits initiated by Member staff;

4. Provide training to Members on how to use the web-based Geographic Information System;

5. Provide training to Members on how to use GPS devices;

6. Ensure that Member data is secure;

7. Track utilization of the shared Geographic Information System by Members in order to provide Members with information to guide the development of appropriate and equitable membership fees.

Article III Membership Duties, Representation, and Voting

Membership and Dues

Full membership in the Council shall be extended to the following units of government, other public and non-profit agencies, and publicly regulated utilities: **<INSERT NAMES OF ENTITIES>**.

Any unit of government, public or non-profit agency, or publicly regulated utility within the state of Ohio may petition for membership to the Council. Membership must be approved by affirmative vote of a majority of the members of the full Council provided that a quorum is present as defined in Article VI of this document.

Any member may withdraw from the Council sixty (60) days after written notice of such withdrawal is mailed to all other members. Such withdrawal shall not affect the contractual rights set forth herein as to all other parties hereto. When a member has made any financial commitment to the Council or has committed to the Council to perform any other obligation as a member, such financial liability or responsibility to perform such obligation shall extend for the full term of the commitment and shall not be affected by the member's withdrawal from the Council prior to the expiration thereof.

All full members of the Council shall make a continuing financial commitment to the Council based on a financial formula officially adopted by the Council. An entity that is current on its financial commitment shall be considered as a "full member in good standing".

Full Membership shall be subject to the following:

- Dues will be based on a determined formula;
- One vote per full member;
- Disputes that arise from this are to be settled by majority vote of the Council;

- Sub units of Full members shall have no individual vote. They shall be represented by the full member;
- Projects beyond the scope of these services will require separate contract;
- Full members shall receive all of the services outlined below.

The following services shall apply to full members:

- Ongoing online access to view, manipulate, and edit its respective Geographic Information System (GIS) geodatabase;
- Assistance from staff at a GIS Data Host Site to ensure that Member geodatabases are kept current, reflecting edits initiated by Member staff;
- Training and ongoing technical assistance in using the web-based system;
- Training in the use of GPS devices;
- Assurance of strong data security systems and procedures at the GIS Data Host Site;
- Tracking information about Member utilization of the shared GIS to inform the development of appropriate and equitable membership fees.

Duties

The Council full membership shall have supervision, control and direction of the Council's affairs, shall carry out policies or changes therein within the limits of the Bylaws, shall actively prosecute the Council's purposes, and shall have discretion in the disbursement of its funds. The Council may adopt such policies, rules and regulations for the conduct of its business as shall be deemed advisable, and may, in execution of the powers granted, appoint such agents as it may consider necessary. The policies, decisions and actions of the Council shall be recorded. The Council may delegate powers to the officers, committees and staff as it deems necessary for the administration of the affairs of the Council.

Representation

Each full member of the Council shall be represented at the Council's meetings by the chief executive officer or the chief executive officer's designee. In the case of those member units that do not have an elected chief executive officer, a representative shall be chosen by such body to be its representative. The representative may designate an alternate to represent the member unit in the representative's absence.

Voting

All full members in good standing present at a regular or special meeting of the Council can vote. Each full member has one vote.

Article IV Officers

The following officers shall be elected from among the Council full membership to serve one-year terms beginning on March 1 of each year, and shall include:

- Chair
- Vice Chair

The following officers shall be appointed by the Council Chair and ratified by the Council full membership:

- GIS Manager
- Treasurer
- Secretary

It is expected that all officers, elected or appointed will attend the majority of Council meetings.

Chair

The Chair shall preside over the affairs of the Council and shall perform all other duties incident to the office.

Vice Chair

The Vice Chair shall assist with the affairs of the Council and shall perform all other duties incident to the office. The Vice Chair assumes the duties of the Chair in the absence of the Chair.

Unless a vacancy occurs, the Chair and Vice Chair shall be elected for a one-year term by the majority vote of the full membership of the Council at the Annual Business Meeting, provided that a quorum is present as defined in Article VI of this document.

GIS Manager

[PLEASE NOTE: "GIS Manager" refers to the individual on RCAP's staff in charge of overseeing GIS service delivery to COG Members – assuming that this report's recommendation is followed that RCAP should play the service delivery coordination role on behalf of the COG. "GIS Manager" in this context should not be confused with the "GIS Manager" on the GIS Data Host Site's staff described within the body of this report.]

The GIS Manager will oversee the delivery of GIS services to Council members.

Treasurer

[**PLEASE NOTE:** The Treasurer is the same as the "Fiscal Agent" described in the body of this report.]

The Treasurer shall act as the Council's fiscal officer and have responsibility for all funds in the custody of or placed at the disposal of the Council and, with the concurrence of the Council, shall authorize disbursements from such funds for expenses in a manner that is consistent with sound fiscal policy. Financial records shall be kept on an annual basis. The Treasurer shall present a financial report at each meeting of the Council and at the annual Business Meeting. A duly appointed and ratified Treasurer need not be a member of the Council. An agency can be appointed as Treasurer in lieu of an individual.

Secretary

In addition to the Chair, Vice Chair and Treasurer, a Secretary shall be appointed by the Chair and approved by the Council membership. The Secretary shall maintain the records of the Council including minutes of meetings and membership lists. The Secretary, in collaboration with the Chair, shall prepare the agenda of meetings. The Secretary shall notify the Council members in advance of meetings as defined in Article VI of this document. The Secretary shall prepare minutes of Council meetings and shall submit these minutes to each member within two weeks after each meeting. Following elections, such minutes are to include the results of the election and a roster of all officers. The Secretary need not be a member of the Council.

Article V Task Forces and Work Groups

Task Forces and Work Groups may be established or dissolved by approval of the Council. Task forces or work groups may be established for ongoing purposes, or for a limited duration to accomplish specific tasks on behalf of the Council. A member of a task force or work group need not be a Council member.

Article VI Meetings

The Council shall meet regularly to transact its business. Special meetings may be called at the request of the Chair or the majority of the membership of the Council.

The Council shall hold an Annual Business Meeting which includes the election of the officers in February of each year.

Pursuant to the *Ohio Revised Code (Chapter 121.22)*, Council meetings shall be open to the public, subject to the exceptions contained in Chapter 121.22(G) of the *Ohio Revised Code*. The Council shall establish a policy setting forth a reasonable method whereby any person may determine the time and place of its meetings. The Secretary shall notify all members of the time and location of meetings at least seven (7) days in advance of each meeting.

Transaction of business at meetings of the Council shall be based on a majority of the full membership of the Council present at a particular meeting except for as follows:

- During the election of officers, a majority of all full Council members in good standing shall constitute a quorum;
- For the adoption of changes to these Bylaws, a majority of all full Council members in good standing shall constitute a quorum;
- For the purpose of electing officers, approving new members, amending these bylaws, and dissolving the Council, a quorum is required. In the event that such quorum is not present for at least two consecutive meetings, the members present may vote to use an alternate means to accomplish this business. Should such a motion pass, the primary method shall be the distribution of a printed or emailed ballot to all members prior to the next meeting. In the event that a voting member is unable to attend the next meeting, he or she shall submit his or her completed ballot to the Council Chair in a sealed envelope, which envelope shall be opened, after formal voting, at the same meeting in which the votes are cast. Each vote so received shall be considered as applicable to obtaining a quorum.

The rules contained in the current edition, latest revision of *Robert's Rules of Order, Revised* shall govern the business proceedings of the Council, unless a majority of the members at a business meeting vote to suspend the operation of such rules.

Article VII Compensation

Council members, the Chair, and Vice-Chair shall not receive any form of paid compensation for their services. The GIS Manager, Treasurer, Secretary, and any other employees or contractors hired by the GIS Manager in the execution of his/her responsibilities may each be compensated at a rate agreed upon by the full membership of the Council.

Article VIII Amendments

These Bylaws and any amendments thereto providing for the governance of the Council may be adopted, altered, or repealed at a business meeting by affirmative vote of a majority of the members of the full Council provided that a quorum is present as defined in Article VI of this document.

Written notice of any proposed changes shall be provided to the membership by the Chair at least thirty (30) days prior to the date set for the vote.

Article IX Finance

Fiscal Officer

Financial responsibility for the Council shall rest on the Treasurer, who shall be appointed by the Council Chair and ratified by the Council full membership as indicated in Article IV of this document.

Fiscal Year

The fiscal year of the Council shall commence on July 1.

Audit

The Council Treasurer shall cause an audit to be performed by the Ohio Auditor of State or a licensed public accountant, covering all financial affairs of the Council, in accordance with a timetable set by the Ohio Auditor of State's guidelines. Copies of each such audit shall be transmitted to each member of the Council.

Article X Dissolution

The Council may be dissolved by affirmative vote of two-thirds (2/3) of the members of the full Council provided that a quorum is present as defined in Article VI of this document.
Prior to any vote on dissolution, each member shall receive at least forty-five (45) days written notice from the Chair that the matter of dissolution will be voted upon.

Upon an affirmative vote to dissolve the Council, the Council shall immediately cease to do business and shall only do such acts as are required to conclude its affairs. The Chair, Vice-Chair, Treasurer, Secretary, and GIS Manager shall direct all pending business until all Council affairs are concluded.

At the conclusion of all Council affairs, any unclaimed assets remaining on the Treasurer's records shall be distributed according to the following schedule:

1. All tangible personal property previously loaned or given to the Council that is clearly identified as to ownership shall be returned to the owner member.

2. All remaining tangible personal property shall be sold at public auction or by sealed bid in accordance with the *Ohio Revised Code (Chapter 307.12)*. The cash proceeds thereof shall be equally divided among all members after all liabilities, if any, have been satisfied.

Article XI Effective Date

These Bylaws were duly adopted by a majority of the members of the Council and became effective on _____.

LIST OF COUNCILS OF GOVERNMENT (COGS) IN OHIO

[**PLEASE NOTE:** This list was derived by utilizing the Ohio Auditor of State's website to search for audits filed with the State of Ohio by Councils of Government. It is not necessarily a comprehensive list of COG's in the State of Ohio.]

Organization	**Website**	**Phone Number(s)**
Alliance for Adequate Funding		
Ashtabula County Schools COG		
Butler Twp. City of Dayton Joint Economic Development District	http://www.cityofdayton.org/departments/ed/Pages/JEDDInfo.aspx	937.333.3819
Chagrin Southeast COG		
Champaign Countywide Public Safety Communications Center 911 COG		
CISCO Academy of Northwest Ohio (CANWO)	http://ohiocatc.treca.org/	
Clearwater COG	http://www.clearwatercog.org/	419.898.8264
Cuyahoga Valley Regional Council of Governments		
Defiance-Fulton-Henry Counties		
Eastern Suburban Regional COG		
Eastgate Regional Council of Governments	http://www.eastgatecog.org/	330.779.3800
Erie Regional Planning Commission	http://www.erie-county-ohio.net/erpc/	419.627.7792
Fairways Regional COG		
First Suburbs Consortium of Northeast Ohio COG	http://www.firstsuburbs.org/	
Fulton Henry Counties Council		
Geauga Ashtabula Portage Partnership Inc.		
Heartland Council of Governments		
Lake County COG		
Lake Erie Educational Computer Association COG		
Lake Erie Regional COG		
Licking/Richland COG		
Lien Forward Ohio COG	http://www.mahoningcountyoh.gov/DepartmentsAgencies/Departments/Treasurer/LienForwardOhio/tabid/1230/Default.aspx	

Organization	**Website**	**Phone Number(s)**
Miami Township City of Dayton Joint Economic Development District		
Miami Valley Regional Planning Commission (MVRPC)		
Mid East Ohio Regional Council	http://www.meorc.com/	
Midland COG		330.264.6047
North East Ohio Network	www.neoncog.org	
Northeast Ohio Areawide Coordinating Agency (NOACA)		
Northeast Ohio Public Energy Council	http://www.nopecinfo.org/	888.848.7914
Northern Miami Valley Local Government Association		
Northwest Ohio Waiver Administration Council	www.nowac.com	419.782.4011 888.800.3408
Ohio Mid-Eastern Governments Assoc.	http://www.omegadistrict.org/	740.493.7783
Ohio Municipal Electric Generation Agency Joint Ventures 1,2,3,4,5,6 and MESA		
Ohio Schools Council	http://www.osconline.org/	216. 447.3100 800.264.1326
Ohio Valley Regional Development Commission	http://www.ovrdc.org/	
Ohio-Kentucky-Indiana Regional Council of Governments	http://www.oki.org/	
Perry Joint Economic Development District		
Preble County Schools Regional COG		740.947.2853
Quadco Rehabilitation Center	http://www.quadcorehab.org/	
Regional Income Tax Agency (RITA) of the Regional COG	http://www.ritaohio.com/	Multiple reg'l offices – see website
Richland County Youth and Family Regional COG	http://www.richlandfamilycouncil.org/	
Scioto County Schools Council		

Organization	**Website**	**Phone Number(s)**
Southern Ohio Council of Governments	http://www.socog.net/	740.775.5030
Southwest COG	http://cpi.nmdfa.state.nm.us/content.asp?CustComKey=202522&CategoryKey=202543&WebFileKey=202900&pn=webfilesview&DomName=cpi.nmdfa.state.nm.us	
Southwest Regional 800 MHz Communications Network Council of Governments		
Southwest Suburban Airport COG		
Stark Council of Governments	http://www.co.stark.oh.us/internet/HOME.DisplayPage?v_page=scMain	
Stark County Schools Council of Governments	http://www.starkcouncilofgov.org/	
Summit County COG	www.cvcog.net	
Toledo Metropolitan Area Council of Governments (TMACOG)	http://www.tmacog.org/	419.241.9155
Wayne County Schools Council		
West Central Ohio Network	http://westconcog.org/	937.492.3959
Westshore COG	http://www.capitalregioncog.org/	717.761.6211

WATER UTILITIES SURVEY QUESTIONS AND RESPONSES

13 of 23 surveys were completed and returned to the Voinovich School for a 57% response rate

This survey should be directed to the individual who is responsible for maintaining your water distribution system.

A: General Information:

1. Please tell us about yourself.

Name:_____

Title: _____

Address: _____

City: _____ Zip: _____

Phone: (_____) _____ Fax:(_____) _____

E-mail: _____ Cell (optional): _____

2. What is the name of your water utility\district\municipality? _____

3. What type of entity is your utility? (fill in bubble) *Note: One utility chose two responses.*

- O Municipal Utility *-9*
- O 6119 Regional Water or Sewer District *-1*
- O 6117 Sewer District *-1*
- O 6103 Water District *-2*
- O 501C3 Non-Profit Water or Sewer Company *-1*
- O Other

4. About how many years of experience do you have working with water distribution systems?

13 utilities gave answers ranging from 9 to 29 years for an average of 21 years of experience

5. Which counties, townships, and municipalities does your water utility serve? Please record below.

Counties: *9 utilities reported serving* 9 counties (J*efferson, Columbiana, Belmont, Clark, Scioto, Jackson, Pike, Adams, and Lawrence)*

Townships: *19 townships reported by 7 utilities*

Municipalities: *13 municipalities reported by 12 utilities*

6. Has your community completed a source water protection plan?

Thirteen utilities answered this question

- Yes: *9 (69%)*
- No: *4 (31%)*

7. Approximately how many operators does your water utility employ?

A. Number of full-time operators: *13 utilities gave answers ranging from 1 to 17 operators, for an average of 4.2 per utility*
B. Number of part-time operators: *One utility reported 1 part time operator, another had 2 part-time operators*
C. Number of back-up operators: *Six utilities reported having 1 or 2 back-up operators each*

B. Water Distribution System Size & Documentation

In order for us to define key parameters of implementing a community geographic information system (GIS), we need a sense of the size of your water distribution system and how it is documented.

8. Please provide an estimate for each of the following based on what your municipality\organization\utility is responsible for maintaining.

A. Number of active water service connections: *14 utilities reported a total of 33,283, for an average of* 2,560 *per utility. Number per utility ranged from 550 to 8,000.*
B. Number of inactive water service connections: *9 utilities reported a total of 1,637, for an average of 182 per utility. Number per utility ranged from 2 to 1,375.*
C. Number of lineal feet of water line: *12 utilities reported a total of 6,038,707, for an average of 503,226 per utility. Number per utility ranged from 3,400 to 3,200,000*
D. Number of valves: *10 utilities reported a total of 4,837, for an average of 484 per utility. Number per utility ranged from 50 to 1,018*

9. Please provide an estimate of how many people your water distribution system serves.

13 utilities reported serving a total of 86,416 persons, for an average of 6,647 per utility. Number served per utility ranged from 1,300 to 21,000.

10. Do you treat ground water?

13 utilities answered this question

- Yes: *7 (54%)*
- No: *6 (46%)*

11. Do you treat surface water?

13 utilities answered this question

- Yes: *3 (23%)*
- No: *10 (77%)*

12. Do you buy bulk water from other water systems?

13 utilities answered this question

- Yes: *3 (23%)*
- No: *10 (77%)*

13. Approximately what percentage of your water distribution system is documented in engineering drawings?

13 utilities reported percentages ranging from 20% to 100%. The majority had at least 50% or more of their system documented as drawings.

Percentage of system documented in engineering drawings	Number of Utilities	Percent of Utilities
1%-24%	2	15.4%
25%-49%	1	7.7%
50%-74%	1	7.7%
75%-100%	9	69.2%
Total	13	100.0%

14. About how many of these engineering drawings are:

1. In hard-copy paper format only: *10 utilities reported having an average 235 sheets in hard-copy format.*
2. Scanned images (e.g. PDF, JPG): *Three utilities reported having such images, two reported 5 five or less, and one had 539 scanned images.*
3. AutoCAD files: *Four utilities reported having these files, three had 7 or less, and one reported having 12 to 15.*
4. Other: *One utility reported having 4 .dfx file.*

15. About what percentage of your engineering drawings/files are current?

11 utilities percentages from 5% to 100% with 7 reporting between 90% and 100% of drawings/files are current.

Percentage of drawings/ files that are current	Number of Utilities	Percent of Utilities
1%-24%	3	23.1%
25%-49%	0	0.0%
50%-74%	1	7.7%
75%-100%	7	53.8%
Total	11	84.6%

16. How often are your engineering drawings updated, either by hand or electronically?

13 Utilities answered this question

- O Within one week of any changes: *3 (23%)*
- O Within one month of any changes: *1 (8%)*
- O Within three months of any changes: *5 (39%)*
- O Other: *2 (15%) ("small amount of changes", "when needed")*
- O Never: *2 (15%)*

17. Has any portion of your water distribution system been mapped using a GIS system?

13 utilities answered this question

- O Yes: *2 (15%)*
- O No: *11 (85%)*

If yes, what percentage?
One *water system reported 5%, the other 2%.*

18. Do you have any water lines that cannot be readily located or where the location is unknown?

12 utilities answered this question

- O Yes: 5 *(42%)*
- O No: 7 *(58%)*

C. Training and Equipment

A GIS system can be used to track and monitor a variety of information about your water distribution system, including the location of lines, valves, meters and sample sites, the age and types of materials used, and service information such as the location of water line breaks and repairs and inspection information.

19. Are you or other staff members familiar with GIS software?

13 utilities answered this question

- Yes: *2 (15%)*
- No: 11 (85%)

If yes, which software program?
ArcView and Pictometry

20. The use of a GIS for managing your water distribution system typically requires three or more days of GIS software training. Would you or another staff member from your office be willing to attend three days of GIS software training?

13 utilities answered this question

- Yes: *12 (92%)*
- No: *1 (8%)*

21. Some features of a GIS system require internet access. What type of internet connection do you have at your office?

Eleven utilities answered this question

- None: *1 (17%)*
- Dial-up: *1 (8%)*
- Wireless: *0 (0%)*
- DSL: *4 (33%)*
- Cable Modem: *4 (33%)*
- Satellite: *0 (0%)*
- T1, T3 or Ethernet: *1 (8%)*

WASTEWATER UTILITIES SURVEY QUESTIONS AND RESPONSES

10 of 16 surveys were completed and returned to the Voinovich School, for a 63% response rate.

A. General Information

1. Please tell us about yourself.

Name: _____

Title: _____

Address: _____

City: _____ Zip: _____

Phone: (_____) _____ Fax:(_____) _____

E-mail: _____ Cell (optional): _____

2. What is the name of your waste water utility\district\municipality? _____

3. What type of entity is your utility?(fill in bubble)

- O Municipal Utility *-8*
- O 6119 Regional Water or Sewer District *-0*
- O 6117 Sewer District *-2*
- O 6103 Water District *-1*
- O 501C3 Non-Profit Water or Sewer Company *-0*
- O Other _____

4. About how many years of experience do you have working with waste water systems?

10 utilities gave answers ranging from 9 to 37 years, for an average of 20.1 years of experience.

5. Which counties, townships, and municipalities does your waste water utility serve? Please record below.

Counties: *6 utilities reported serving 7 counties (Jefferson [3], Carroll, Ashtabula, Clark, and Belmont)*

Townships: *8 townships reported by 5 utilities*

Municipalities: *10 municipalities reported by 9 utilities*

6. Approximately how many operators does your waste water utility employ?

   A. Number of full-time operators: *Nine utilities gave answers ranging from 1 to 4 operators, for an average of 3 per utility*
   B. Number of part-time operators: *One utility reported a part-time operator*
   C. Number of back-up operators: *Four utilities gave answers ranging from 1 to 3 back-up operators, for an average of 2 per utility*

B. Waste Water Distribution System Size & Documentation

In order for us to define key parameters of implementing a community geographic information system (GIS), we need a sense of the size of your waste water distribution system and how it is documented.

7. Please provide an estimate for each of the following based on what your municipality\organization\utility is responsible for maintaining.

   A. Number of active waste water service connections: *10 utilities reported a total of 14,814, for an average of 1,481 per utility. Number per utility ranged from 550 to 2,278.*
   B. Number of inactive waste water service connections: *Three utilities reported a total of 131, for an average of 44 per utility. Number per utility ranged from 20 to 70. One utility responded "unknown."*
   C. Number of lineal feet of sewer line: *Nine utilities reported a total of 948,419, for an average of 105,380 per utility. Number per utility ranged from 9 to 200,000.*
   D. Number of valves: *Two utilities reported a total of 144, for an average of 72 per utility. One utility reported 680 manholes, while another reported 550 manholes.*

8. Please provide an estimate of how many people your waste water distribution system serves:

   10 utilities reported serving a total of 37,817 persons, for an average of 3,782 per utility. Number served per utility ranged from 1,300 to 7,000.

9. Do you have combined storm water and sanitary sewers?

   10 utilities answered this question
   - O Yes: *3 (30%)*
   - O No: *7 (70%)*

10. Approximately what percentage of your waste water system is documented in engineering drawings? _____%

Percentage of system documented in engineering drawings	Number of Utilities	Percent of Utilities
1%-24%	2	20.0%
25%-49%	2	20.0%
50%-74%	2	20.0%
75%-100%	4	40.0%
Total	10	100.0%

11. About how many of these engineering drawings are:

A. In hard-copy paper format only: *Seven utilities reported having an average of 158.1 sheets in hard-copy format*
B. Scanned images: *One utility reported having five scanned images*
C. AutoCAD files: *Two utilities reported having an average of 7.25 AutoCAD files*
D. Other: *No responses*

12. About what percentage of your engineering drawings/files are current _____%

Percentage of drawings/ files that are current	Number of Utilities	Percent of Utilities
1%-24%	1	14.3%
25%-49%	0	0.0%
50%-74%	3	42.9%
75%-100%	3	42.9%
Total	7	100.1%

Note: Three utilities did not respond to this question.

13. How often are your engineering drawings updated, either by hand or electronically?

10 utilities answered this question

- O Within one week of any changes*: 1(10%)*
- O Within one month of any changes: *2 (20%)*
- O Within three months of any changes: *2 (20%)*
- O Other: *5 (50%)("small amount of changes", "when needed", "infrequently; rely on blueprints to locate; have prints on all new"*
- O Never

14. Has any portion of your waste water system been mapped using a GIS system?

10 utilities answered this question

- O Yes: *1 (10%)*
- O No: *9 (90%)*

If yes, what percentage*? One utility reported 3%.*

15. Do you have underground sewer lines that cannot be cannot be readily located or where the location is unknown?

10 utilities answered this question

- O Yes: *4 (40%)*
- O No: *6 (60%)*

C. Training and Equipment

A GIS system can be used to track and monitor a variety of information about your waste water system, including the location of lines, valves, manholes and pump stations, the age and types of materials used, and service information such as the location of line breaks and repairs.

16. Are you or other staff members familiar with GIS software?

- O Yes: *2 (20%)*
- O No: *8 (80%)*

If yes, which software program?
ArcView and Pictometry

17. The use of a GIS for managing your waste water distribution system typically requires three or more days of GIS software training. Would you or another staff member from your office be willing to attend three days of GIS software training?

Nine utilities answered this question

- O Yes: 9 (100%)
- O No: 0 (0%)

18. Some features of a GIS system require internet access. What type of internet connection do you have at your office?

10 utilities answered this question

- O None: *1 (10%)*
- O Dial-up: *2 (20%)*
- O Wireless: *0 (0%)*
- O DSL: *4 (40%)*
- O Cable Modem: *2 (20%)*
- O Satellite: *0 (0%)*
- O T1, T3 or Ethernet: *1 (10%)*

COSTS AND BENEFITS SURVEY QUESTIONS AND RESPONSES

Introduction

The key purpose of the Cooperative GIS Feasibility Study is to determine if, how, and at what cost it is feasible to create a **Multi-Organization Enterprise GIS System** serving small municipalities in Ohio.

A Multi-Organization Enterprise GIS System is a GIS system that serves multiple organizations but is hosted and managed at a central location or organization. The host site provides multiple other organizations in other locations internet access to the centrally-hosted map data and mapping technology. For small organizations and municipalities, the main benefit of this approach is that GIS technology can potentially be utilized at a lower cost to each municipality if enough municipalities agree to share the centralized system costs. Key points about this kind of cooperative approach include:

- Cooperative members have the ability to view, edit and share data over the internet.
- Multiple members/users can view and edit simultaneously.
- Members/users can edit data in the field using GPS units and/or laptop computers.
- Centralized costs (host site costs) and the cost to each member municipality depend on the overall scale of the system (how much data is being managed) and of the cooperative (how many members).

Responses to the questions below by participants in the feasibility study will assist in the development of recommendations tailored to the goals and expectations of participants.

Key Cost Considerations

One important element of a feasibility study about a cooperative venture is to identify the financial expectations of those considering joining the venture. After reading the following summary of the costs of a Multi-Organization Enterprise GIS System, please respond to the questions about the level of expense that your water district/municipality would be willing to incur in order to have the benefits of GIS technology.

The costs of a Multi-Organization Enterprise GIS System can be considered in three categories:

1) System start-up costs. System start up requires expenses for hardware, software, staff, and training at both the central host site and each member site.

2) Initial data collection costs for each member municipality. Each water district/municipality must initially collect data and bring the data into a GIS database in order to fully benefit from participation in a GIS cooperative. This process can be performed in part by municipal staff utilizing Mobile/GPS units but will also entail costs for another entity (could be a private firm, a university, or a partner organization) to “clean up” data and bring it into a geodatabase. These costs vary significantly across municipalities because of variances in existing conditions and existing mapped information.

3) Ongoing/annual system costs. These annual costs include staff, system maintenance, data updating, training, and licensing costs.

1. To be a member in a cooperative GIS system, how much would your water district/municipality be willing to contribute to system start-up costs?

	Number	Percent
$2,500 - $4,999	3	27.3%
$5,000 –$9,999	2	18.2%
$10,000 – $14,999	3	27.3%
$15,000 – $24,999	2	18.2%
$25,000 - $29,999	0	0.0%
$30,000 to $34,999	0	0.0%
Unwilling to spend any money to help start up a cooperative GIS system	1	9.1%
Total	11	100.0%

2. How much would your water district/municipality be willing to spend on initial data collection?

	Number	Percent
$2,500 to $4,999	3	27.3%
$5,000 to $9,999	5	45.5%
$10,000 to $14,999	2	18.2%
$15,000 to $24,999	0	0.0%
$25,000 to $29,999	0	0.0%
$30,000 to $34,999	0	0.0%
Unwilling to spend any money on initial data collection	1	9.1%
Total	11	100.0%

3. How much would your water district/municipality be willing to spend on an annual basis to be a member of a cooperative GIS system?

	Number	Percent
$2,500 to $4,999	4	36.4%
$5,000 to $9,999	3	27.3%
$10,000 to $14,999	3	27.3%
$15,000 to $24,999	0	0.0%
$25,000 to $29,999	0	0.0%
$30,000 to $34,999	0	0.0%
Unwilling to spend any money annually to maintain a cooperative GIS system	1	9.1%
Total	11	100.0%

Key System Capacities

4. A GIS system can allow utility operators to perform a number of important tasks. Please indicate how important it will be for your utility staff to be able to perform the following tasks with a GIS system:

	Very Important		Important		Neutral		Unimportant		Very Unimportant		Avg. Rating
Quickly identify the location, size, materials, age and condition of all utilities	9	81.8%	1	9.1%	1	9.1%	0	0.0%	0	0.0%	4.73
Quickly identify service areas and addresses that would be affected by closing a specific valve or by a line break	9	81.8%	1	9.1%	1	9.1%	0	0.0%	0	0.0%	4.73
Locate existing service connections using a GPS unit	7	63.6%	3	27.3%	1	9.1%	0	0.0%	0	0.0%	4.55
Enter new service connection points and service lines	6	54.5%	4	36.4%	1	9.1%	0	0	0	0	4.45
View utility maps in relation to other mapped information "layers" such as floodplains,	5	45.5%	3	27.3%	3	27.3%	0	0.0%	0	0.0%	4.18
Integrate GIS and billing database	1	9.1%	5	45.5%	5	45.5%	0	0.0%	0	0.0%	3.64

5. Utilities information is only one kind of information that can be managed and viewed in map form with a GIS system. In order to provide the best guidance on data collection and management approaches, it is important to know what kind of information "layers," in addition to utility information, participants would like to have within their GIS system. Please rate how important it is for your water district/municipality to have the following mapped information layers within your GIS system.

	Very Important		Important		Neutral		Unimportant		Very Unimportant		Avg. Rating
	Nr.	Pct.	Nr.	Pct.	Nr.	Pct.	Nr.	Pct.	Nr.	Pct.	
Parcels	4	36.4%	5	45.5%	2	18.2%	0	0.0%	0	0.0%	4.18
Zoning boundaries	3	27.3%	7	63.6%	1	9.1%	0	0.0%	0	0.0%	4.18
Curbs and sidewalks	2	18.2%	6	54.5%	1	9.1%	2	18.2%	0	0.0%	3.73
Fire station/EMS service areas	2	18.2%	4	36.4%	4	36.4%	1	9.1%	0	0.0%	3.64
Bridges	1	9.1%	5	45.5%	4	36.4%	0	0.0%	1	9.1%	3.45
Street lights	2	18.2%	4	36.4%	2	18.2%	2	18.2%	1	9.1%	3.36
Municipal buildings	1	9.1%	5	45.5%	2	18.2%	3	27.3%	0	0.0%	3.36
Recreation facilities	1	9.1%	4	36.4%	4	36.4%	2	18.2%	0	0.0%	3.36
Signs	1	9.1%	4	36.4%	3	27.3%	2	18.2%	1	9.1%	3.18
Culverts	0	0.0%	4	36.4%	4	36.4%	2	18.2%	1	9.1%	3.00
Parking spaces and meters	0	0.0%	3	27.3%	5	45.5%	2	18.2%	1	9.1%	2.91
Recreation trails	0	0.0%	2	18.2%	6	54.5%	3	27.3%	0	0.0%	2.91
Trees and landscaping	0	0.0%	2	18.2%	7	63.6%	1	9.1%	1	9.1%	2.91
Bus/public transportation routes	1	9.1%	1	9.1%	5	45.5%	4	36.4%	0	0.0%	2.91
Locations of crime incidents	1	9.1%	3	27.3%	2	18.2%	4	36.4%	1	9.1%	2.91
Garbage collection routes	0	0.0%	2	18.2%	5	45.5%	4	36.4%	0	0.0%	2.82
Location of recycling/composting centers	0	0.0%	1	9.1%	5	45.5%	4	36.4%	1	9.1%	2.55

OHIO UNIVERSITY

Voinovich School of Leadership and Public Affairs

Appalachian Ohio's Open Geographic Information System Web Access Project

Cure Document

1. *Budget*

Appalachian Ohio's Open Geographic Information System Web Access Project Budget

Sources of Funds	
LGIF	$100,000
Gallia County financial match (65.8%)	$65,780
Coshocton County financial match (12%)	$12,000
Total	$177,780
Uses of Funds	
Voinovich School	
Match Projects (Gallia and Coshocton Counties)	$77,780
Consultant Fees for Study	$69,600
Travel	$400
Consultant fees for study (Buckeye Hills)	$20,000
Consultant fees for study (OVRDC)	$10,000
Total	$177,780

2. *Match*

Two projects that were completed by the Voinovich School of Leadership and Public Affairs will be used as direct financial match for the Appalachian Ohio's Open Geographic Information System Web Access Project. Both projects are directly related to the proposed study for which the funds are requested. These were both local funds provided to the Voinovich School by the respective county governments:

a. Gallia County contracted with the Voinovich School for $65,780 to convert their paper based parcel information to a geographic information system (GIS) and serve the completed parcels onto a web based mapping site. The project began on January3, 2011 and is ongoing. The scope of work is directly related to the request for funding.

b. Coshocton County contracted with the Voinovich School for $12,000 to upgrade their GIS web portal from an older version of web mapping software (Esri ArcIMS) to the latest version (Esri ArcGIS Server). The project commenced on June 1, 2011 and ended on December 31, 2011. The scope of work is directly related to the request for funding.

The scopes of work and the costs for each of the projects are included in the signed research agreements in a separate submission.

Since the two projects mentioned above are directly related to the proposed project, we feel that and in-kind match is not necessary as it more than satisfies the match requirements.

3. Financial Documentation

Appalachian Ohio's Open Geographic Information System Web Access is a planning project to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience. This data is available within and web browsing viewer, a data feed that GIS software can consume in real time across a broadband internet connection, or is made available for download so that the end user can utilize the data as may be necessary in some applications. The proposal is broken into a two tier approach:

Tier One – Counties with existing, trusted GIS parcel data that is regularly maintained and meets the minimum data standard for publication.

Tier Two - Counties without GIS parcel data or data that requires conversion into a trusted parcel layer suitable for publication.

Tier One is to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data. Other geospatial base data such, transportation networks and aerial imagery will enhance the parcels within the web service, and the system design will accommodate future county data sets that augment the analysis capability such as soils, watersheds, geologic formations, census, school district, voting precincts. Of the participating counties, Gallia and Coshocton Counties have trusted data that is included in this initial deployment of the online data portal. Hardware, software configuration and programming conducted by the experienced staff at the Voinovich School for Leadership and Public Affairs and Buckeye Hills – Hocking Valley Regional Development District will take place in this phase and is designed with scalability in mind to support the addition of counties in Tier Two of the program.

Tier Two includes a study for counties that do not have a fully developed county parcel layer in GIS. This planning study will identify the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance. Prepared documentation will describe the process of parcel data development with real-world empirical evidence of cost and time requirements of creation and maintenance. Finally, a practical, actionable plan for shared cost of between county departments, based on department benefits, as well as a "road map" to securing outside funding sources will be completed in this tier.

By the end of Phase One, we will have a shared resource that active Appalachian Counties can use to support economic development and more specifically the Marcellus and Utica shale industry. This project will directly integrate with planned Ohio Spatial Data Framework efforts and the highly successful statewide spatial data programs like the Ohio Statewide Imagery Program (OSIP) and Location Based Response System (LBRS) roadway centerline program. An additional benefit is the Ohio Geographically Referenced Information Program (OGRIP) will utilize this resource in the creation of their conceptual regional node system, a node system that will consolidate a seamless data fabric for Ohio.

The costs for a single county to establish and maintain a web access presence for parcel data viewing that was outlined in the description can be substantial enough so as to prohibit it from implementing on its own. In 2009, the Voinovich School of Leadership and Public Affairs conducted a feasibility study, called the Small Utilities GIS Cooperative Feasibility Study, to determine the most economical means to allow small water systems access to a centralized repository of their GIS data and the ability to edit and use the data. The report is included in the Supporting Documentation. The study indicates that for a single entity to purchase the hardware and software for such a system and to employ the people with the expertise to establish and maintain the system would require an initial outlay as well as an annual cost of maintenance for hardware, software, and staff. The hardware includes servers for both mapping and web services. The software includes programs for desktop mapping, web mapping, and web services. Additionally, staff with the expertise to build and maintain the data and services for this system is required.

Despite the water utility focus of the study, the costs and savings are comparable because the hardware, software, and expertise required are identical to those required for the successful completion of this project. The cost estimates shown here are the most conservative numbers from the study. Based on the 2009 study, the initial outlay for a single county would be $171,079. The annual costs would be $92,040. If each of the counties within the partnership developed and maintained one of these systems independently, the total combined initial outlay would amount to over $1,000,000 and the combined annual costs would exceed $500,000. Alternatively, a central system would save $855,395 at the point of initial system creation and $460,200 annually. The table below outlines the financial projections for three years. The savings, in fact, could be much more. If the counties were to consolidate into a central location with an entity that already possessed the necessary hardware, software, and expertise to maintain the system, they could be expected to pay only an annual fee for the upkeep of the system and hosting services. We foresee the hosting site to be the Voinovich School since they have previously obtained the hardware and software, and have the expertise, to make the project successful.

Total Cost of System with No Shared Services for Six Counties				
System Component	Cost			Total 3 Year Cost
	Year 1	Year 2	Year 3	
Hardware	$324,894	$79,200	$79,200	$483,294
Software	$234,852	$150,000	$150,000	$534,852
Staff	$466,728	$323,040	$323,040	$1,112,808
Total	$1,026,474	$552,240	$552,240	$2,130,954

Total Cost of System with Shared Services for Six Counties				
System Component	Cost			Total 3 Year Cost
	Year 1	Year 2	Year 3	
Hardware	$54,149	$13,200	$13,200	$80,549
Software	$39,142	$25,000	$25,000	$89,142
Staff	$77,788	$53,840	$53,840	$185,468
Total	$171,079	$92,040	$92,040	$355,159
Savings	*$855,395*	*$460,200*	*$460,200*	*$1,775,795*
Expected Return	***83%***	***83%***	***83%***	***83%***

4. Resolutions of Support

The Resolutions of Support for the counties participating in the project and the letters of commitment for the Voinovich School, Buckeye Hills, OVRDC, and MWCD are included in a separate submission.

5. Partnership Agreements

The partnership agreement is in the form of a memorandum of understanding between the participating entities. The Counties in the partnership: Gallia, Coshocton, Morgan, Monroe, Noble and Guernsey will be integral in the success of the project as they will be the local knowledge and are the authoritative entities for the data. Gallia County in cooperation with The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will perform fiscal and procedural oversight on this project. The Voinovich School for Leadership and Public Affairs at

Ohio University and Buckeye Hills – Hocking Valley Regional Development District will provide the majority of technical expertise but will be supported by other members of the partnership where it is necessary to complete tasks that are integral to the success of this project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission will act as project advocates as data development liaisons. The memorandums of understanding are included in a separate submission.

Other Documents

Letters of Support are enclosed that were written for the application by: Bureau of Land Management, Wayne National Forest, Fairview Industries, Buckeye Hills – Hocking Valley Regional Development District, Coshocton County Commissioners, Coshocton County Engineer, Gallia County Auditor, Gallia County Engineer, Monroe County Auditor, and Monroe County Engineer.

RESEARCH AGREEMENT

This Agreement made as of **June 1, 2011** by and between Ohio University with specified work being completed by the Voinovich School's Institute for Local Government Administration and Rural Development (hereinafter called "OHIO"), and **Coshocton County Engineer's Office**, hereinafter called "SPONSOR".

WHEREAS, SPONSOR desires to obtain the services of OHIO to provide **ArcGIS Server Upgrade services** under the project titled **Coshocton County GIS Web Site Upgrade.**

WHEREAS, OHIO is capable and desires to provide research services to SPONSOR as described in the proposal submitted by OHIO and incorporated herein by reference;

NOW THEREFORE, in consideration of the mutual promises herein contained, SPONSOR and OHIO agree as follows:

ARTICLE I. RESPONSIBILITIES OF OHIO AND SPONSOR

1.1 OHIO will complete the following activities as outlined in the Scope of Work (Attachment A):

1.1.1 Testing and deployment of ArcGIS Server 10.0

1.1.2 Upgrade ArcSDE from version 9.2 to 10.0

1.1.3 Upgrade Coshocton County GIS website for ArcGIS Server 10.0 compatibility

1.2 SPONSOR will complete the following activities as identified in the Scope of Work (Attachment A):

1.2.1 Coshocton County will be asked to install ArcSDE 10.0 and ArcGIS Server 10.0 on the county's server

ARTICLE II. CONSIDERATION

2.1 SPONSOR shall pay, and OHIO shall accept, as full and complete payment for the services outlined in the Scope of Work, the fixed price of **$12,000**. Voucher shall be made payable to Ohio University and mailed to the following address no later than **January 31, 2012**.

Grant Accounting Office
Ohio University
Room 280 HDL Center
Athens, Ohio 45701

2.2 The price set forth in Article 2.1 shall not be modified without a written addendum to this Agreement signed by both parties.

ARTICLE III. TERM/TERMINATION

3.1 This Agreement shall begin on **June 1, 2011** and end on **December 31, 2011**.

3.2 This Agreement may be terminated by mutual agreement. Either party may at any time terminate this Agreement by giving the other party not less then thirty (30) days prior written notice. Upon notice of termination, OHIO shall stop work on the project, and make every reasonable effort to cancel outstanding commitments made to third parties pursuant to the Agreement. SPONSOR shall remain responsible for payment to OHIO for all work performed, costs incurred, and payables due through the date of termination, and for reimbursement to OHIO of all commitments incurred in the contract of the research which cannot be reasonably cancelled.

ARTICLE IV. CONFIDENTIALITY/PUBLICATION

4.1 All documents, including but not limited to surveys and reports prepared and generated under this Agreement are and shall remain the property of OHIO. SPONSOR is hereby granted an irrevocable, royalty-free, nonexclusive right to reproduce, distribute, transmit, display or use the final report for its own purposes.

4.2 SPONSOR recognizes that under OHIO policy, the results of the Project must be publishable and agrees that Researchers engaged in Project shall be permitted to present at symposia, national, or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of Project, provided, however, that SPONSOR shall have been furnished copies of any proposed publication or presentation at least two (2) months in advance of the submission of such proposed publication or presentation to a journal, editor, or other third party. SPONSOR shall have one (1) month after receipt of said copies to respond in writing to OHIO with comments and to identify confidential and/or proprietary information. OHIO agrees to give good faith consideration to SPONSOR's comments and to protect SPONSOR's proprietary and/or confidential information with the same degree of care which it protects its own confidential and/or proprietary information and in compliance with the Confidentiality Agreement between the SPONSOR and OHIO.

4.3 This Agreement is subject to Ohio Revised Code 149.43 regarding disclosure of Public Records.

ARTICLE V. INTELLECTUAL PROPERTY

5.1 All rights and title to inventions, improvements and/or discoveries, whether patentable or copyrightable or not, relating to Project made solely by employees and/or students of OHIO under the Project, hereinafter called "University Intellectual Property", shall belong to OHIO and shall be subject to the terms and conditions of this Agreement.

5.2 Rights to inventions, improvements and/or discoveries, whether patentable or copyrightable or not, relating to Project made solely by employees of SPONSOR shall belong to SPONSOR. Such inventions, improvements, and/or discoveries shall not be subject to the terms and conditions of this Agreement.

5.3 OHIO will promptly notify SPONSOR of any University Intellectual Property conceived and/or

made during the Contract Period under Project. If SPONSOR directs that a patent application or application for other intellectual property protection be filed, OHIO shall promptly prepare, file, and prosecute such U.S. and foreign application in OHIO 's name. SPONSOR shall bear all costs incurred in connection with such preparation, filing, prosecution, and maintenance of U.S. and foreign application(s) directed to said University Intellectual Property. SPONSOR shall cooperate with OHIO to assure that such application(s) will cover, to the best of SPONSOR's knowledge, all items of commercial interest and importance. While OHIO shall be responsible for making decisions regarding scope and content of application(s) to be filed and prosecution thereof, SPONSOR shall be given an opportunity to review and provide input thereto. OHIO shall keep SPONSOR advised as to all developments with respect to such application(s) and shall promptly supply to SPONSOR copies of all papers received and filed in connection with the prosecution thereof in sufficient time for SPONSOR to comment thereon.

5.4 If SPONSOR elects not to exercise its option or decides to discontinue the financial support of the prosecution or maintenance of the protection, OHIO shall be free to file or continue prosecution or maintain any such application(s), and to maintain any protection issuing thereon in the U.S. and in any foreign country at University's sole expense.

5.5 Pursuant to Article 5.3, OHIO grants SPONSOR the first option, at SPONSOR's sole selection, for either a non-exclusive, royalty-free license or, for consideration, an exclusive license with a right to sublicense on terms and conditions to be mutually agreed upon. The option shall extend to a time period of twelve (12) months from the date of termination of the Agreement.

ARTICLE VI. MISCELLANEOUS

6.1 EEOC COMPLIANCE. SPONSOR and OHIO represent that they are in compliance with all equal employment opportunity requirements, under the law, if required, or any other applicable state or federal law.

6.2 DRUG FREE WORKPLACE. SPONSOR and OHIO shall make a good faith effort to ensure that no employee of either party will purchase, transfer, use or possess or be under the influence of alcohol or illegal drugs, or abuse legally obtained drugs while on or about the Project. Except for the term "employee", terms in this provision are used as defined in Rule 123:1-76 of the Ohio Administrative Code.

6.3 ETHICS. SPONSOR and OHIO represent that they are familiar with all applicable ethics law requirements, including without limitations Section 102.04 of The Ohio Revised Code, and certifies that they are in compliance with such requirements.

6.4 DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE to a TERRORIST ORGANIZATION. SPONSOR agrees to complete Attachment B as is required by the Ohio Department of Public Safety through the Division of Homeland Security.

6.5 RELATIONSHIPS. OHIO is an independent contractor and shall be free to exercise its discretion and independent judgment as to the method and means of performance of its work hereunder. Ohio University employees shall not be considered employees of SPONSOR, and neither party to this Agreement, by executing this Agreement, shall be entitled to or eligible for participation in any benefits or privileges given or extended by either party to its "employees".

6.6 ENTIRE AGREEMENT AND AMENDMENTS. This Agreement represents the entire

Agreement between the parties and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by an amendment prepared and signed by both parties.

6.7 GOVERNING LAW. The Agreement shall be governed by the law of the State of Ohio to the exclusion of the law of any other jurisdiction.

6.8 LIABILITY, INDEMNIFICATION OR HOLD HARMLESS. SPONSOR understand(s) that by executing a contract with Ohio University, they are entering into a contract with the State of Ohio, and are therefore subject to the limitations of the State as they pertain to indemnification and holding harmless a party to this contract. The State of Ohio's liability for damages, whether in contract or in tort, shall not exceed the total amount of compensation payable to OHIO under Article II or the direct damages incurred by SPONSOR, whichever is less.

IN NO EVENT SHALL THE STATE OF OHIO BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS, EVEN IF THE STATE OF OHIO KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. (Ohio Revised Code, Section 3345.40).

6.9 NOTICES. All notices under this Agreement given by either party to the other shall be in writing and shall be sent by U.S. mail or express courier, postage prepaid and addressed to the following individuals:

For Ohio University:

Office of Research and Sponsored Programs
Attention: Thea Arocho, Senior Grants and Contracts Manager
105 Research and Technology Center
Ohio University
Athens, Ohio 45701-2979
(740) 593-2856
FAX (740) 593-0379
arocho@ohio.edu

Copies to:

Michael A. Finney, Associate Director for Operations
Voinovich School of Leadership and Public Affairs
Room 109 Building 22, The Ridges
Ohio University
Athens, Ohio 45701-2979
(740) 593-4389
FAX (740) 593-4398
finney@ohio.edu

For SPONSOR:

Frederick T. Wachtel, P.E., P.S.
23194 CR 621
Coshocton OH, 43812
(740) 622-2135
(740) 623-6512

6.10 FACSIMILES. For convenience of communication only, notices or other communications hereunder of fewer than 15 pages may be sent by facsimile transmission.

6.11 ACKNOWLEDGMENTS. OHIO will be given due credit in all written or computer

documentation and publicity resulting as part of this project. Additional resources (staff, clerical and student assistance) for the project are made possible through the Voinovich School of Leadership and Public Affairs at Ohio University.

Approved and Agreed:

OHIO UNIVERSITY

By: Shane E Gilkey

Name: Shane Gilkey

Title: Asst. VP, Office of Research and Sponsored Programs

Date: 7/6/11

SPONSOR

By: Frederick T. Wachtel

Name: Frederick T. Wachtel, P.E., P.S.

Title: Coshocton County Engineer

Date: 7/1/11

10/09 Revised

Attachment A

Scope of Work

At the request of Coshocton County, The Voinovich School of Leadership and Public Affairs proposes to upgrade Coshocton County's GIS web portal from the ArcIMS platform to ArcGIS Server 10.0.

Client Responsibility:
Coshocton County will be asked to install ArcSDE 10.0 and ArcGIS Server 10.0 on the county's server.

Voinovich School Tasks:
The Voinovich School will complete the upgrade of Coshocton County's web portal to ArcGIS Server 10.0 from ArcIMS 9.2. The steps we will be using and the detailed functionality of the upgrade is outlined below. In addition to the upgrade, the Voinovich School will provide 6 months of maintenance and ongoing technical support. This support will begin upon project completion.

GIS Web application Upgrade

Project Background

The Coshocton County GIS is on a centralized Geodatabase that is in ArcSDE - 9.2 on Microsoft SQL 2005 and Web GIS Applications built on top of ArcIMS 9.2. Coshocton County requires the migration of existing data to the ArcGIS Server 10.0 and its current Web GIS Application from ArcIMS to ArcGIS Server.

The role of Coshocton County's GIS Program is to provide geographic data and solutions to various County departments and Local Units of Government. The GIS Program consists of a core team of individuals situated in the County's Engineering and Information Technology (IT) Department.

Coshocton County currently operates and maintains ArcIMS-based websites for internal and external use. The main function of the external website is to allow public lookup and mapping of parcels, roads, jurisdictions, and other public information.

The internal sites serve the needs of internal County departments as well as the County's Cities, Villages, and Townships, by allowing functions like buffering features, creation of mailing labels, and custom query and display of sensitive data layers.

There are currently two broad pathways for ArcGIS Server application design – (1) ESRI's Web ADF and (2) ESRI's Web Mapping API's utilizing Representational State Transfer (REST). The Web ADF option consists of server-side applications created either in Java or the Microsoft .NET framework. ArcGIS Server's Web Mapping APIs allow client-side applications to be created using JavaScript, Adobe Flex, or Microsoft, Silverlight. As outlined in ESRI's ArcGIS 10 and 10.1 Deprecation Plan (available at http://downloads2.esri.com/support/TechArticles/ArcGIS10and101Deprecation_Plan.pdf), ESRI plans to discontinue support for WebADF after version 10.1, and will move entirely to Web Mapping APIs for ArcGIS Server applications. Therefore, it is desired that the application will utilize REST and one of the web mapping APIs (JavaScript).

Proposed Server Infrastructure

The county uses Microsoft Internet Security and Acceleration (ISA) for external reverse proxy. Requests for the mapping application will be directed to the mapping application server, which in

turn will handle requests to ArcGIS Server for map requests or the database servers directly for data from linked tables. The spatial data to be served in the proposed application is contained in the County's enterprise ArcSDE geodatabases, running in SQL Server.

The application will be installed on one of the servers in theApplication Tier. At this time, it is unclear whether the application will be installed on a physical server (Windows Server 2008 R2 x64) or virtual server (Windows Server 2008) using the county's VMWare infrastructure. In either case, a maximum of four (4) CPU cores will be available to the server operating system.

Upgrade Process

The upgrade from ArcIMS to ArcGIS Server will entail the following steps:

1. ArcGIS Server Upgrade
    a) Assistance with installation of ArcGIS Server 10.0 on Coshocton County's server
    b) Testing and deployment of ArcGIS Server 10.0
2. ArcSDE upgrade
    a) SQL Server installation
    b) Upgrade from ArcSDE 9.2 to ArcSDE 10.0
    c) Upgrade of ArcSDE 9.2 geodatabase to ArcSDE 10.0 geodatabase
3. Coshocton County GIS Website Upgrade
    a) Configuration of Coshocton County's GIS website to work with ArcGIS Server 10.0

The upgrade to ArcGIS Server 10.0 is comprised of the following steps:

1. Install ArcGIS Server 10 - GIS Services
    The ArcGIS Server 10 - GIS Services setup program is one of two that comprise ArcGIS Server for the Microsoft .NET Framework. The GIS Services setup includes Server Object Manager (SOM), Server Object Container (SOC), Python, Services Manager, and Web Services (SOAP, REST). See Installing GIS Services for more information.

2. Complete the Post Install
    The Post Install launches automatically at the end of the ArcGIS Server 10 - GIS Services installation.

3. Complete manual system configuration steps
    After completing the post install, several steps are required to manually configure the operating system.

4. Install ArcGIS Server 10 - Web Applications.
    The ArcGIS Server 10 - Web Applications setup program is one of two that comprise ArcGIS Server for the Microsoft .NET Framework. The Web Applications setup includes Applications Manager, Web Applications Developer Framework, and ArcGIS Web API Shortcuts.

The upgrade to ArcSDE 10 is comprised of the following steps:

1. Create a backup of the database.
2. Install the Full-Text Indexing component in the database if not already installed.
3. Remove any custom functionality that may have been added to the ArcSDE geodatabase system tables outside ArcGIS such as triggers, participation in SQL Server replication, or additional

indexes. The upgrade procedure cannot be aware of customizations made to the system tables. If such customizations prevent the alteration of a system table, the upgrade will fail.

4. Make sure that the login used to upgrade the geodatabase has the correct permissions.
5. Install the current release of the ArcGIS client (ArcGIS Desktop, ArcGIS Engine runtime, or ArcGIS Server Standard or Advanced) on a computer that can directly connect to the geodatabase to perform the upgrade.
6. Make sure that there are no users connected to the geodatabase.
7. Stop any ArcSDE services that are running using the Windows Services interface.
8. Uninstall the old release of ArcSDE.
9. Install the new release of ArcSDE.

The upgrade from the ArcSDE 9.2 geodatabase to the ArcSDE 10.0 geodatabase can then be performed through a scripting tool in ArcGIS Desktop or Catalog. This allows the advantage of new functionality available in the latest release of ArcGIS.

Technology Migration from ArcGIS Server 9.2 to 10

This section highlights some of the increased functionality upon migration from ArcGIS Server 9.2 to 10.0.

1. General

a. Solution will be scalable to provide either multiple websites or multiple instances
b. Solution will be easily deployed between development environment and production environment
c. Will support ArcGIS Server 10 (Compact Cache storage format, Data Extraction, Feature attachments, etc.)
d. Accept search parameters via URL variables, and automatically zoom to search results
e. Provide option to utilize Bing and ArcGIS Online (ArcGIS.com) base map services
f. Provide basic help documentation for built-in tools/functions
g. Allow display of disclaimer window upon application startup
h. Cross-browser support for Internet Explorer, Firefox, Safari, Chrome

2. Map Content

a. Provide ability to assign transparency to ArcGIS Server map services, both cached and dynamic
b. Provide ability to overlay multiple ArcGIS Server cached services in the same map frame/display

3. Map Navigation

a. Pan View
b. Zoom to full extents
c. Zoom In (User-defined area)
d. Zoom Out (User-defined area)
e. Zoom to Previous extents (Back) - must keep at least 10 previous extents
f. Zoom to Next extents (Forward) - must keep at least 10 next extents
g. Activity indicator - display notification while map/data is being processed
h. Zoom to Selected Features
i. Show/hide mouse coordinates
j. North arrow
k. Scale bar
l. Map Tips - open callout window by hovering over feature
    a. Zoom to XY Coordinates
m. Pick lists for feature extents zoom (parks, schools, etc.)
n. Option for level-of-detail slider bar for cached services

4. **Map Layer Display Controls**

a. Toggle layer visibility for map layers & images (if used as part of a dynamic map service)
b. Immediate map refresh upon layer change of layer display
c. Ability to group layers and control display of individual layers within groups
   - *Will be allowed grouping at least 2 levels deep*
   - *Will be allowed grouping of annotation layers*
   - *Will be allowed visibility control at the group level*
d. Allow linking to layer metadata

5. **Tools**

a. Identify

(1) Will be able to identify multiple overlapping features on the same layer
(2) Will be able to add identified features to selection
(3) Option to show map coordinates of identify point
(4) Will be allowed for hyper linking based on feature attributes

b. Measure

(5) Change units of the measure tool while executing the tool
(6) Units for display configurable by administrator
(7) Measurements will be retained until cleared by erase control

c. Search / Selection

(8) Select by point, line, or polygon
(9) Select by all feature attributes, including shape attributes (area, length)
(10) Buffer selected features
Select features of a second geometry type based on buffers from a different first geometry type
(11) Provide interface for custom queries using SQL
(12) Remove features from selection set graphically or by SQL query
(13) Search by spatial location (overlay)
(14) Masked text input (i.e., ###-###-#### for phone number) for search text boxes
(15) Search GIS features based on linked attributes
(16) Allow drop-down boxes for search terms

6. Data Linking

a) Allow linking from tables in SQL Server
b) Recognition of related tables defined by ArcGIS geodatabase relationship classes (related tables)

7. Markup

a) Add markup as point, line, polygon, and text
b) Allow modification of markup symbology
c) Polygon markup must be allowed to have a semi-transparent solid fill symbol
d) Allow a user to save markup in application or export markup to standalone file
e) Ability to bring markup file into ArcGIS
f) Allow retrieval of saved markup

8. Print

a) Provide print framework for high-quality cartographic output, with a graphic (WYSIWYG) template designer
b) Provide graphic elements including scale bar, RF scale text, north arrow, disclaimer, logo, print date

Attachment B

Homeland Security Form

********** FOR INSTRUCTIONAL USE ONLY **********

READ BEFORE COMPLETING YOUR DMA FORM

Forms not conforming to the specifications listed below or not submitted to the appropriate agency or office will not be processed.

- To complete this form, you will need a copy of the Terrorist Exclusion List for reference. The Terrorist Exclusion List can be found on the Ohio Homeland Security Web site at the following address:

  http://www.homelandsecurity.ohio.gov/dma/dma.asp

- Be sure you have the correct DMA form. If you are applying for a state issued license, permit, certification or registration, the "State Issued License" DMA form must be completed (HLS 0036). If you are applying for employment with a government entity, the "Public Employment" DMA form must be completed (HLS 0037). If you are obtaining a contract to conduct business with or receive funding from a government entity, the "Government Business and Funding Contracts" DMA form must be completed (HLS 0038).

- Your DMA form is to be submitted to the issuing agency or entity. "Issuing agency or entity" means the government agency or office that has requested the form from you or the government agency or office to which you are applying for a license, employment or a business contract. For example, if you are seeking a business contract with the Ohio Department of Commerce's Division of Financial Institutions, then the form needs to be submitted to the Department of Commerce's Division of Financial Institutions. Do NOT send the form to the Ohio Department of Public Safety UNLESS you are seeking a license from or employment or business contract with one of its eight divisions listed below.

- Department of Public Safety Divisions:
  - Administration
  - Ohio Bureau of Motor Vehicles
  - Ohio Emergency Management Agency
  - Ohio Emergency Medical Services
  - Ohio Homeland Security*
  - Ohio Investigative Unit
  - Ohio Criminal Justice Services
  - Ohio State Highway Patrol

- * DO **NOT** SEND THE FORM TO OHIO HOMELAND SECURITY UNLESS OTHERWISE DIRECTED. FORMS SENT TO THE WRONG AGENCY OR ENTITY WILL NOT BE PROCESSED.

********** FOR INSTRUCTIONAL USE ONLY **********

OHIO DEPARTMENT OF PUBLIC SAFETY
EDUCATION · SERVICE · PROTECTION

OHIO HOMELAND SECURITY
http://www.homelandsecurity.ohio.gov

GOVERNMENT BUSINESS AND FUNDING CONTRACTS

In accordance with section 2909.33 of the Ohio Revised Code

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO A TERRORIST ORGANIZATION

This form serves as a declaration by an applicant for a government contract or funding of material assistance/nonassistance to an organization on the U.S. Department of State Terrorist Exclusion List ("TEL"). Please see the Ohio Homeland Security Division Web site for a copy of the TEL.

Any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided. Failure to disclose the provision of material assistance to such an organization or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree.

For the purposes of this declaration, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, and financial services that are in excess of one hundred dollars, as well as communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials.

COMPLETE THIS SECTION ONLY IF YOU ARE AN INDEPENDENT CONTRACTOR

LAST NAME	FIRST NAME	MI

HOME ADDRESS

CITY	STATE	ZIP	COUNTY

HOME PHONE	WORK PHONE
( )	( )

COMPLETE THIS SECTION ONLY IF YOU ARE A COMPANY, BUSINESS OR ORGANIZATION

BUSINESS/ORGANIZATION NAME	PHONE
Coshocton County Engineer	(740) 622-2135

BUSINESS ADDRESS
23194 CR 621

CITY	STATE	ZIP	COUNTY
Coshocton	Ohio	43812	Coshocton

BUSINESS/ORGANIZATION REPRESENTATIVE NAME	TITLE
Frederick T. Wachtel	County Engineer

DECLARATION

In accordance with section 2909.32 (A)(2)(b) of the Ohio Revised Code

For each question, indicate either "yes," or "no" in the space provided. Responses must be truthful to the best of your knowledge.

1. Are you a member of an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
2. Have you used any position of prominence you have with any country to persuade others to support an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
3. Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
4. Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
5. Have you committed an act that you know, or reasonably should have known, affords "material support or resources" to an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
6. Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List, or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism? ☐ Yes ☒ No

If an applicant is prohibited from receiving a government contract or funding due to a positive indication on this form, the applicant may request the Ohio Department of Public Safety to review the prohibition. Please see the Ohio Homeland Security Web site for information on how to file a request for review.

CERTIFICATION

I hereby certify that the answers I have made to all of the questions on this declaration are true to the best of my knowledge. I understand that if this declaration is not completed in its entirety, it will not be processed and I will be automatically disqualified. I understand that I am responsible for the correctness of this declaration. I understand that failure to disclose the provision of material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List, or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree. I understand that any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided by myself or my organization. If I am signing this on behalf of a company, business or organization, I hereby acknowledge that I have the authority to make this certification on behalf of the company, business or organization referenced on page 1 of this declaration.

APPLICANT SIGNATURE	DATE
X Frederick L. Hochtel	7/1/11

Ohio | Department of Development

John R. Kasich, Governor Christiane Schmenk, Director

April 2, 2012

Seth Montgomery
Gallia County Commissioners
1167 State Route 160
Gallipolis, Ohio 45631

RE: Application Cure Letter

Dear Seth Montgomery:

The Ohio Department of Development (Development) has received and is currently reviewing your application for Round 1 of Local Government Innovation Fund program. During this review Development has determined that additional information is needed for your application. The identified item(s) requiring your attention are listed on the attached page(s). Please respond only to the issues raised. Failure to fully address all the identified items could lead to a competitive score reduction or ineligibility for Round 1 of the Local Government Innovation Fund program. **A written response from the applicant to this completeness review is due to Development no later than 5:00 p.m. on *April 30, 2012*.** Please send the response in a single email to lgif@development.ohio.gov and include "Cure—Project Name" in the subject line.

While this cure letter represents the additional information needed for Development review, the Local Government Innovation Council continues to reserve the right to request additional information about your application.

Thank you once again for your participation in Local Government Innovation program. Please contact the Office of Redevelopment at lgif@development.ohio.gov or 614-995-2292 if you have further questions regarding your application or the information requested in this letter.

Sincerely,

Thea J. Walsh, AICP
Deputy Chief, Office of Redevelopment
Ohio Department of Development

Local Government Innovation Fund Completeness Review

Applicant: Gallia County Commissioners

Project Name: Appalachian Ohio's Open GIS Web Access

Request Type: Grant

Issues for Response

1. **Budget**
   Please provide a line item budget that includes at minimum: 1) the sources of all funds being contributed to the project include **all** sources—cash, in-kind, etc.; 2) the uses of all funds (provide a line item for each use); 3) the total project costs (including the funding request **and** the local match. Please be sure that all uses of funds are eligible expenses as set forth in the program guidelines.

   Example:

   Collaboration Village's Project Budget

   Sources of Funds

LGIF Request	$100,000
Match Contribution (10%)	$ 11,111
Total	$111,111

   Uses of Funds

Consultant Fees for Study	$111,111
Total	$111,111

   Total Project Cost: $111,111

2. **Match**
   For **in-kind contributions**, please provide documentation as outlined in section 2.06 of the Local Government Innovation Fund program policies. Certification of in-kind contributions may only be made for past investments. Anticipated in-kind contributions must be certified **after** the contribution is made.

3. **Financial Documentation (Projections)**
   Please provide financial projections for your funding request. For grant requests, applicants must at minimum, estimate the anticipated savings they are expecting to realize as a result of the study. For loan projects, please provide projections for at least three years to help demonstrate the savings achieved and the repayment source for the loan.

4. **Resolutions of Support**
   Resolutions of support must be provided by the governing body of the main applicant and each collaborative partner. If the collaborative partner is a private entity with no governing body, a letter of support **for the project** is required.

5. **Partnership Agreements**
   Partnership agreements must be signed by all parties listed as collaborative partners.
   Please provide a partnership agreement that at minimum: 1) lists all collaborative partners;

2) lists the nature of the partnership; and 3) is signed by all parties. Please note, partnership agreements must be specific to the project for which funding is requested.

Memorandum of Understanding

Support for the
Appalachian Ohio's Open Geographic Information System Web Access
Local Government Innovation Fund Project

Section 1: Introduction

The Charter Members of the Appalachian Ohio Geospatial Data Partnership Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC) along with Coshocton County recognize the need for a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience. These counties and organizations have established a history of working together to solve the technical needs of the underserved region of Appalachian Ohio.

In an effort to continue the success of this cooperative partnership Coshocton, Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC) will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer.

Section 2: Purpose

To develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels. This type of Geographic Information System Web Access is typically handled by individual counties and is mostly reserved for counties that have large populations and a large tax base to support such an endeavor. These types of integrated systems have a tremendous start-up and maintenance costs while only a fraction of the hardware and software resources are actually utilized. At a typical three year cost greater than $355,000 per county, a single web portal with combined data from six Appalachian counties is a substantial return on investment. Even with data from six counties, only a fraction of the resource is utilized giving the project the ability to expand to more Appalachian counties and become a regional consolidator/distributer of County maintained and trusted data.

Section 3: Scope

The entities included in the scope of the project include Coshocton, Gallia, Guernsey, Monroe, Morgan, Noble, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, the Voinovich School of Leadership and Public Affairs, and the Ohio Valley Regional Development Commission (OVRDC).

Section 4: Policy

Gallia County is responsible for fiscal and process reporting as required by the Local Government Innovation Fund program.

The Voinovich School for Leadership and Public Affairs and Buckeye Hills – Hocking are responsible for the successful technical completion of the project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission are responsible for project promotion as data development liaisons. Other members of the partnership are required to participate in the planning process to ensure the grant project's success.

Section 5: Procedure

1. Assess the current status of parcel data in each signatory county.
2. If GIS compatible parcel data exists, transmit existing data to the Voinovich School/Buckeye Hills. The data (geometry and attributes) will be converted to a format which is compatible with cadastral data standards established by the Federal Geographic Data Committee (FGDC).
3. If GIS compatible parcel data does not exist, representatives from any combination of the Voinovich School, Buckeye Hills, or the Muskingum Watershed Conservancy District will evaluate source data (original surveys, property descriptions, tax maps, to determine the most appropriate method for parcel data development. (Development of parcel data is not part of this specific project.)
4. Once data is received by Voinovich School/ Buckeye Hills, reviewed, and complies with applicable data standards, this data will be added to an individual map service for review by the signatory county.
5. After review is completed by the signatory county and approval is received, the data will be added to the shared map service.
6. Once added, representatives will update all appropriate documentation to reflect the participation of the signatory county.

Section 6: Oversight

Gallia County in cooperation with The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will perform fiscal and procedural oversight on this project. The Voinovich School for Leadership and Public Affairs at Ohio University and Buckeye Hills – Hocking Valley Regional Development District will provide the majority of technical expertise but will be supported by other members of the partnership where it is necessary to complete tasks that are integral to the success of this project. The Muskingum Watershed Conservancy District and Ohio Valley Regional Development Commission will act as project advocates as data development liaisons.

Signature _____ Date 4/19/2012

Misty Casto, Executive Director

Typed Name and Title of Signatory

Signature _____ Date _____

Typed Name and Title of Signatory

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Signature Dane R. Shryock Date 4/16/2012

Dane R. Shryock, President
Typed Name and Title of Signatory

Signature Frederick T. Wachtel Date 4/17/12

Frederick T. Wachtel, Coshocton Co. Engineer
Typed Name and Title of Signatory

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~~Signature~~ _____ Date 4-5-12 Signature_____ Date_____

Harold G. Montgomery, President
Gallia County Commissioners

_____
Typed Name and Title of Signatory
The Voinovich School for Leadership and Public Affairs

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Signature _____ Date 4-11-12

Steven A. Douglass, Vice Pres.
Typed Name and Title of Signatory

Signature _____ Date 4/11/12

Thomas J. Laughman, Member
Typed Name and Title of Signatory

_____ 4/11/12
Steve C. Allen, President

Memorandum of Understanding

Support for the
Appalachian Ohio's Open Geographic Information System Web Access
Local Government Innovation Fund Project

Section 1: Introduction

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Signature _____ Date 04/24/12
Tim Price, President

Signature _____ Date 4/24/12
Carl Davis, Vice President

Signature _____ Date 4/24/12
John Pyles, Commissioner

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Signature Michael C Reed Date 4-23-12

MICHAEL C REED

Typed Name and Title of Signatory

PRESIDENT

Signature Tim Van Horn Date 4-23-12

Tim Van Horn

Typed Name and Title of Signatory

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Signature _____ Date 4-23-12

John Hoopingarner, MWCD Executive Director

Typed Name and Title of Signatory

Signature _____ Date _____

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Noble County Commissioners

Virgil J Thompson — 4-26-12

Virgil Thompson — Date

Robert Nau — 4-26-12

Robert Nau — Date

Gary L Rossiter — 4-26-12

Gary Rossiter — Date

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Signature Shane L Gilkey Date 4/24/12 Signature_____ Date_____

Shane L. Gilkey

Assistant Vice President of Research
Ohio University
Typed Name and Title of Signatory

_____
Typed Name and Title of Signatory

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Signature John W. Hemmings III Date 4-23-12

John W. Hemmings III, Executive Director

Typed Name and Title of Signatory

RESEARCH AGREEMENT

This Agreement made as of **December 30 , 2010** by and between Ohio University with specified work being completed by the Voinovich School's Institute for Local Government Administration and Rural Development (hereinafter called "OHIO"), and **Gallia County**, hereinafter called "SPONSOR".

WHEREAS, SPONSOR desires to obtain the services of OHIO to provide a **digital parcel GIS dataset for Gallia County** under the project titled **Gallia County GIS.**

WHEREAS, OHIO is capable and desires to provide research services to SPONSOR as described in the proposal submitted by OHIO and incorporated herein by reference;

NOW THEREFORE, in consideration of the mutual promises herein contained, SPONSOR and OHIO agree as follows:

ARTICLE I. RESPONSIBILITIES OF OHIO AND SPONSOR

1.1 OHIO will complete the following activities as outlined in the Scope of Work (Attachment A):

1.1.1 Geo-reference scanned plat map drawings using GIS section boundary layer in addition to county-wide orthophoto (flown spring 2007 as part of state-wide imagery program).

1.1.2 Digitally capture parcel lines, lot lines, label points and annotation from geo-referenced plat map images.

1.1.3 Add attribute information to each parcel's label point including County Auditor's tax identification number and County Recorder's deed reference number.

1.1.4 Create an interactive website that will allow the parcels to be viewed and searched.

1.1.5 Assist Gallia County with maintaining and updating their digital parcel dataset.

1.2 SPONSOR will complete the following activities as identified in the Scope of Work (Attachment A):

1.2.1 Delivery of updated tax map scans for Gallia County

1.2.2 Review product at regular intervals and provide feedback

ARTICLE II. CONSIDERATION

2.1 SPONSOR shall pay, and OHIO shall accept, as full and complete payment for the services outlined in the Scope of Work, the fixed price of **$65,780**. Voucher shall be made payable to Ohio University and mailed to the following address no later than **November 30, 2011**.

Grant Accounting Office

Ohio University
Room 280 HDL Center
Athens, Ohio 45701

2.2 The price set forth in Article 2.1 shall not be modified without a written addendum to this Agreement signed by both parties.

ARTICLE III. TERM/TERMINATION

3.1 This Agreement shall begin on **January 3, 2011** and end on **November 1, 2011**

3.2 This Agreement may be terminated by mutual agreement. Either party may at any time terminate this Agreement by giving the other party not less then thirty (30) days prior written notice. Upon notice of termination, OHIO shall stop work on the project, and make every reasonable effort to cancel outstanding commitments made to third parties pursuant to the Agreement. SPONSOR shall remain responsible for payment to OHIO for all work performed, costs incurred, and payables due through the date of termination, and for reimbursement to OHIO of all commitments incurred in the contract of the research which cannot be reasonably cancelled.

ARTICLE IV. CONFIDENTIALITY/PUBLICATION

4.1 All documents, including but not limited to surveys and reports prepared and generated under this Agreement are and shall remain the property of OHIO. SPONSOR is hereby granted an irrevocable, royalty-free, nonexclusive right to reproduce, distribute, transmit, display or use the final report for its own purposes.

4.2 SPONSOR recognizes that under OHIO policy, the results of the Project must be publishable and agrees that Researchers engaged in Project shall be permitted to present at symposia, national, or regional professional meetings, and to publish in journals, theses or dissertations, or otherwise of their own choosing, methods and results of Project, provided, however, that SPONSOR shall have been furnished copies of any proposed publication or presentation at least two (2) months in advance of the submission of such proposed publication or presentation to a journal, editor, or other third party. SPONSOR shall have one (1) month after receipt of said copies to respond in writing to OHIO with comments and to identify confidential and/or proprietary information. OHIO agrees to give good faith consideration to SPONSOR's comments and to protect SPONSOR's proprietary and/or confidential information with the same degree of care which it protects its own confidential and/or proprietary information and in compliance with the Confidentiality Agreement between the SPONSOR and OHIO.

4.3 This Agreement is subject to Ohio Revised Code 149.43 regarding disclosure of Public Records.

ARTICLE V. INTELLECTUAL PROPERTY

5.1 All rights and title to inventions, improvements and/or discoveries, whether patentable or copyrightable or not, relating to Project made solely by employees and/or students of OHIO under the Project, hereinafter called "University Intellectual Property", shall belong to OHIO and shall be subject to the terms and conditions of this Agreement.

5.2 Rights to inventions, improvements and/or discoveries, whether patentable or copyrightable or not, relating to Project made solely by employees of SPONSOR shall belong to SPONSOR. Such inventions, improvements, and/or discoveries shall not be subject to the terms and conditions of this Agreement.

5.3 OHIO will promptly notify SPONSOR of any University Intellectual Property conceived and/or made during the Contract Period under Project. If SPONSOR directs that a patent application or application for other intellectual property protection be filed, OHIO shall promptly prepare, file, and prosecute such U.S. and foreign application in OHIO 's name. SPONSOR shall bear all costs incurred in connection with such preparation, filing, prosecution, and maintenance of U.S. and foreign application(s) directed to said University Intellectual Property. SPONSOR shall cooperate with OHIO to assure that such application(s) will cover, to the best of SPONSOR's knowledge, all items of commercial interest and importance. While OHIO shall be responsible for making decisions regarding scope and content of application(s) to be filed and prosecution thereof, SPONSOR shall be given an opportunity to review and provide input thereto. OHIO shall keep SPONSOR advised as to all developments with respect to such application(s) and shall promptly supply to SPONSOR copies of all papers received and filed in connection with the prosecution thereof in sufficient time for SPONSOR to comment thereon.

5.4 If SPONSOR elects not to exercise its option or decides to discontinue the financial support of the prosecution or maintenance of the protection, OHIO shall be free to file or continue prosecution or maintain any such application(s), and to maintain any protection issuing thereon in the U.S. and in any foreign country at University's sole expense.

5.5 Pursuant to Article 5.3, OHIO grants SPONSOR the first option, at SPONSOR's sole selection, for either a non-exclusive, royalty-free license or, for consideration, an exclusive license with a right to sublicense on terms and conditions to be mutually agreed upon. The option shall extend to a time period of twelve (12) months from the date of termination of the Agreement.

ARTICLE VI. MISCELLANEOUS

6.1 EEOC COMPLIANCE. SPONSOR and OHIO represent that they are in compliance with all equal employment opportunity requirements, under the law, if required, or any other applicable state or federal law.

6.2 DRUG FREE WORKPLACE. SPONSOR and OHIO shall make a good faith effort to ensure that no employee of either party will purchase, transfer, use or possess or be under the influence of alcohol or illegal drugs, or abuse legally obtained drugs while on or about the Project. Except for the term "employee", terms in this provision are used as defined in Rule 123:1-76 of the Ohio Administrative Code.

6.3 ETHICS. SPONSOR and OHIO represent that they are familiar with all applicable ethics law requirements, including without limitations Section 102.04 of The Ohio Revised Code, and certifies that they are in compliance with such requirements.

6.4 DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE to a TERRORIST ORGANIZATION. SPONSOR agrees to complete Attachment B as is required by the Ohio Department of Public Safety through the Division of Homeland Security.

6.5 RELATIONSHIPS. OHIO is an independent contractor and shall be free to exercise its discretion and independent judgment as to the method and means of performance of its work

hereunder. Ohio University employees shall not be considered employees of SPONSOR, and neither party to this Agreement, by executing this Agreement, shall be entitled to or eligible for participation in any benefits or privileges given or extended by either party to its "employees".

6.6 ENTIRE AGREEMENT AND AMENDMENTS. This Agreement represents the entire Agreement between the parties and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by an amendment prepared and signed by both parties.

6.7 GOVERNING LAW. The Agreement shall be governed by the law of the State of Ohio to the exclusion of the law of any other jurisdiction.

6.8 LIABILITY, INDEMNIFICATION OR HOLD HARMLESS. SPONSOR understand(s) that by executing a contract with Ohio University, they are entering into a contract with the State of Ohio, and are therefore subject to the limitations of the State as they pertain to indemnification and holding harmless a party to this contract. The State of Ohio's liability for damages, whether in contract or in tort, shall not exceed the total amount of compensation payable to OHIO under Article II or the direct damages incurred by SPONSOR, whichever is less.

IN NO EVENT SHALL THE STATE OF OHIO BE LIABLE FOR ANY INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS, EVEN IF THE STATE OF OHIO KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. (Ohio Revised Code, Section 3345.40).

6.9 NOTICES. All notices under this Agreement given by either party to the other shall be in writing and shall be sent by U.S. mail or express courier, postage prepaid and addressed to the following individuals:

For Ohio University:

Office of Research and Sponsored Programs
Attention: Thea Arocho, Senior Grants and Contracts Manager
105 Research and Technology Center
Ohio University
Athens, Ohio 45701-2979
(740) 593-2856
FAX (740) 593-0379
arocho@ohio.edu

Copies to:

Michael A. Finney, Associate Director for Operations
Voinovich School of Leadership and Public Affairs
Room 109 Building 22, The Ridges
Ohio University
Athens, Ohio 45701-2979
(740) 593-4389
FAX (740) 593-4398
finney@ohio.edu

For SPONSOR:

Brett Boothe
Gallia County Engineer's Office
1167 State Route 160
Gallipolis, OH 45631
Phone (740) 446-4009
FAX (740) 441-2032

6.10 FACSIMILES. For convenience of communication only, notices or other communications hereunder of fewer than 15 pages may be sent by facsimile transmission.

6.11 ACKNOWLEDGMENTS. OHIO will be given due credit in all written or computer documentation and publicity resulting as part of this project. Additional resources (staff, clerical and student assistance) for the project are made possible through the Voinovich School of Leadership and Public Affairs at Ohio University.

Approved and Agreed:

OHIO UNIVERSITY

By: Shane R Gilkey

Name: Shane Gilkey

Title: Asst. VP, Office of Research and Sponsored Programs

Date: 2/3/11

SPONSOR

By: Brett A. Boothe

Name: BRETT A. BOOTHE

Title: GALLIA COUNTY ENGINEER

Date: 1-4-11

By: Larry M. Betz

Name: LARRY M. BETZ

Title: Gallia Co. Auditor

Date: Jan. 4th 2011

10/09 Revised

Attachment A
Scope of Work

Project Description:
At the request of Gallia County, The Institute for Local Government Administration and Rural Development (ILGARD) will conduct a county-wide parcel conversion from the current paper-based system to a digital GIS system. The datasets for Green and Springfield Townships will also be edited for accuracy. A website will be developed to make the data available to the public.

Client Responsibility:
- Delivery of updated scanned tax maps for county
- Access to information about auditor's database
- Review product at regular intervals and provide feedback

ILGARD Tasks
The following tasks will be completed:
- Geo-reference scanned plat map drawings using GIS section boundary layer in addition to county-wide orthophoto flown spring 2007 as part of the Ohio state-wide imagery program (OSIP)
- Adjust parcel lines for increased accuracy for Green and Springfield Townships that had been completed earlier
- Digitally capture parcel lines, lot lines, label points and annotation from geo-referenced plat map images
- Add attribute information to each parcel's label point including County Auditor's tax identification number and County Recorder's deed reference number
- Join data from the Gallia County Auditor's database to the parcel dataset.
    - Data will be updated on a daily basis
- Create an interactive website that will allow the parcels to be viewed and searched
    - Website will include additional layers, including, but not limited to aerial photo, road centerlines, address points, contour lines, corporation and township boundaries, school districts, flood zones, and sections
    - Website will allow for searches based on address and owner name
    - Web site hosting will be included for the duration of the project
- Assist Gallia County with maintaining and updating their digital parcel dataset by performing maintenance tasks and training Gallia County personnel

Deliverables:
1) A parcel GIS dataset for Gallia County
2) Interactive mapping website
3) Assistance with GIS dataset maintenance
4) GIS services, billed hourly, which may include but are not limited to the following:
    - Custom map creation
    - Large format plotting
    - Reviewing GIS data layers and related databases
    - Compiling existing GIS data
    - General help with relational databases and geodatabase design
    - Providing recommendations on "best available data"

Schedule:
- Project commencement: January 3, 2011. Project deliverables will be delivered by November 1, 2011 to receive full receipt of payment from Gallia County. An invoice will be sent to Gallia County upon completion of every two (2) townships to Gallia's satisfaction.

Pricing:
- Project cost not to exceed $65,780

Attachment B

Homeland Security Form

********** **FOR INSTRUCTIONAL USE ONLY** **********

READ BEFORE COMPLETING YOUR DMA FORM

Forms not conforming to the specifications listed below or not submitted to the appropriate agency or office will not be processed.

- To complete this form, you will need a copy of the Terrorist Exclusion List for reference. The Terrorist Exclusion List can be found on the Ohio Homeland Security Web site at the following address:

  http://www.homelandsecurity.ohio.gov/dma/dma.asp

- Be sure you have the correct DMA form. If you are applying for a state issued license, permit, certification or registration, the "State Issued License" DMA form must be completed (HLS 0036). If you are applying for employment with a government entity, the "Public Employment" DMA form must be completed (HLS 0037). If you are obtaining a contract to conduct business with or receive funding from a government entity, the "Government Business and Funding Contracts" DMA form must be completed (HLS 0038).

- Your DMA form is to be submitted to the issuing agency or entity. "Issuing agency or entity" means the government agency or office that has requested the form from you or the government agency or office to which you are applying for a license, employment or a business contract. For example, if you are seeking a business contract with the Ohio Department of Commerce's Division of Financial Institutions, then the form needs to be submitted to the Department of Commerce's Division of Financial Institutions. Do NOT send the form to the Ohio Department of Public Safety UNLESS you are seeking a license from or employment or business contract with one of its eight divisions listed below.

- Department of Public Safety Divisions:
  - Administration
  - Ohio Bureau of Motor Vehicles
  - Ohio Emergency Management Agency
  - Ohio Emergency Medical Services
  - Ohio Homeland Security*
  - Ohio Investigative Unit
  - Ohio Criminal Justice Services
  - Ohio State Highway Patrol

- * DO **NOT** SEND THE FORM TO OHIO HOMELAND SECURITY UNLESS OTHERWISE DIRECTED. FORMS SENT TO THE WRONG AGENCY OR ENTITY WILL NOT BE PROCESSED.

********** **FOR INSTRUCTIONAL USE ONLY** **********

OHIO DEPARTMENT OF PUBLIC SAFETY
EDUCATION · SERVICE · PROTECTION

OHIO HOMELAND SECURITY
http://www.homelandsecurity.ohio.gov

GOVERNMENT BUSINESS AND FUNDING CONTRACTS

In accordance with section 2909.33 of the Ohio Revised Code

DECLARATION REGARDING MATERIAL ASSISTANCE/NONASSISTANCE TO A TERRORIST ORGANIZATION

This form serves as a declaration by an applicant for a government contract or funding of material assistance/nonassistance to an organization on the U.S. Department of State Terrorist Exclusion List ("TEL"). Please see the Ohio Homeland Security Division Web site for a copy of the TEL.

Any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided. Failure to disclose the provision of material assistance to such an organization or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree.

For the purposes of this declaration, "material support or resources" means currency, payment instruments, other financial securities, funds, transfer of funds, and financial services that are in excess of one hundred dollars, as well as communications, lodging, training, safe houses, false documentation or identification, communications equipment, facilities, weapons, lethal substances, explosives, personnel, transportation, and other physical assets, except medicine or religious materials.

COMPLETE THIS SECTION ONLY IF YOU ARE AN INDEPENDENT CONTRACTOR

LAST NAME	FIRST NAME	MI

HOME ADDRESS

CITY	STATE	ZIP	COUNTY

HOME PHONE	WORK PHONE
( )	( )

COMPLETE THIS SECTION ONLY IF YOU ARE A COMPANY, BUSINESS OR ORGANIZATION

BUSINESS/ORGANIZATION NAME	PHONE
GALLIA COUNTY ENGINEER	(740) 446-4009

BUSINESS ADDRESS
1167 STATE ROUTE 160

CITY	STATE	ZIP	COUNTY
GALLIPOLIS	OHIO	45631	GALLIA

BUSINESS/ORGANIZATION REPRESENTATIVE NAME	TITLE
BRETT A. BOOTHE	COUNTY ENGINEER

DECLARATION

In accordance with section 2909.32 (A)(2)(b) of the Ohio Revised Code

For each question, indicate either "yes," or "no" in the space provided. Responses must be truthful to the best of your knowledge.

1. Are you a member of an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
2. Have you used any position of prominence you have with any country to persuade others to support an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
3. Have you knowingly solicited funds or other things of value for an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
4. Have you solicited any individual for membership in an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
5. Have you committed an act that you know, or reasonably should have known, affords "material support or resources" to an organization on the U.S. Department of State Terrorist Exclusion List? ☐ Yes ☒ No
6. Have you hired or compensated a person you knew to be a member of an organization on the U.S. Department of State Terrorist Exclusion List, or a person you knew to be engaged in planning, assisting, or carrying out an act of terrorism? ☐ Yes ☒ No

If an applicant is prohibited from receiving a government contract or funding due to a positive indication on this form, the applicant may request the Ohio Department of Public Safety to review the prohibition. Please see the Ohio Homeland Security Web site for information on how to file a request for review.

CERTIFICATION

I hereby certify that the answers I have made to all of the questions on this declaration are true to the best of my knowledge. I understand that if this declaration is not completed in its entirety, it will not be processed and I will be automatically disqualified. I understand that I am responsible for the correctness of this declaration. I understand that failure to disclose the provision of material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List, or knowingly making false statements regarding material assistance to such an organization is a felony of the fifth degree. I understand that any answer of "yes" to any question, or the failure to answer "no" to any question on this declaration shall serve as a disclosure that material assistance to an organization identified on the U.S. Department of State Terrorist Exclusion List has been provided by myself or my organization. If I am signing this on behalf of a company, business or organization, I hereby acknowledge that I have the authority to make this certification on behalf of the company, business or organization referenced on page 1 of this declaration.

APPLICANT SIGNATURE	DATE
X Brett A. Booth	12-30-10

2012-23

Resolution of Support

TITLE: A RESOLUTION OF SUPPORT BY COSHOTON COUNTY FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that Coshocton County provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

PASSED AND APPROVED this April 16, 2012.

SIGNED Dane R. Shryock
Dane R. Shryock, President

SIGNED D Curtis Lee
D. Curtis Lee, Vice President

SIGNED Gary L. Fischer
Gary L. Fischer, Commissioner

Journal 53, Page 459

Resolution of Support

TITLE: A RESOLUTION OF SUPPORT BY GALLIA COUNTY FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that Gallia County provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

PASSED AND APPROVED this 5th day of April, 2012.

SIGNED Harold G. Montgomery
Harold G. Montgomery, President

SIGNED Howard J. Foster
Howard J. Foster, Vice President

SIGNED Lois M. Snyder
Lois M. Snyder, Commissioner

GUERNSEY COUNTY COMMISSIONERS

STEVE C. ALLEN
sallen@guernseycounty.org

THOMAS J. LAUGHMAN
tlaughman@guernseycounty.org

Steven A. Douglass
sdouglass@guernseycounty.org

627 WHEELING AVENUE
SUITE 300
CAMBRIDGE, OHIO 43725-2251

CHERYL A. EDWARDS, Clerk
cedwards@guernseycounty.org

1-800-887-0938
Fax (740) 432-9359

(740) 432-9200

A RESOLUTION OF SUPPORT BY GUERNSEY COUNTY FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer.

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that the Board of County Commissioners, Guernsey County, Ohio, provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

A motion was made by Commissioner Laughman, duly seconded by Commissioner Allen to adopt the above resolution.

All Vote Yea.
Board of County Commissioners
Guernsey County, Ohio

Dated April 11, 2012

Steve C. Allen, President

Steven A. Douglass, Vice Pres.

Thomas J. Laughman, Member

Resolution of Support

TITLE: A RESOLUTION OF SUPPORT BY MONROE COUNTY FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that Monroe County provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

MONROE COUNTY COMMISSIONERS

PASSED AND APPROVED 4-9-2012
Date

SIGNED _____
Tim Price, President

SIGNED _____
Carl Davis, Vice President

SIGNED _____
John Pyles, Commissioner

Resolution of Support

TITLE: A RESOLUTION OF SUPPORT BY MORGAN COUNTY FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that Morgan County provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

PASSED AND APPROVED this (date).

SIGNED Michael C Reed PRESIDENT/COMMISSIONERS
(Name and Title of signatory)

SIGNED Tim Van Horn V.P. COMM.
(Name and Title of signatory)

SIGNED_____
(Name and Title of signatory)

Resolution of Support

TITLE: A RESOLUTION OF SUPPORT BY THE NOBLE COUNTY COMMISSIONERS FOR THE APPALACHIAN OHIO'S OPEN GEOGRAPHIC INFORMATION SYSTEM WEB ACCESS APPLICATION TO THE LOCAL GOVERNMENT INNOVATION FUND (LGIF)

WHEREAS: The Local Government Innovation Fund Application titled "Appalachian Ohio's Open Geographic Information System Web Access" was submitted on March 1, 2012

WHEREAS: The partnership will consist of Gallia, Coshocton, Noble, Monroe, Morgan, and Guernsey Counties along with the Voinovich School of Leadership and Public Affairs, the Muskingum Watershed Conservancy District (MWCD), Buckeye Hills – Hocking Valley RDD, and Ohio Valley Regional Development Commission (OVRDC)

WHEREAS: If approved, the project will consist of a planning project in order to determine the most effective means with which to design and maintain a web mapping service that will allow counties to publish their parcel data on the web and make it available to a wide audience

WHEREAS: If approved, the partners will work together to develop and deploy a shared, online data repository for viewing and consuming standardized, accurate and trusted GIS parcel data along with identifying the steps needed to develop a standardized parcel layer that is suitable for publication and ongoing maintenance for counties without a completed parcel layer

WHEREAS: The purpose of the project will be to develop an Appalachian Ohio regional asset that hosts and serves accurate and trusted GIS parcels and reduces costs per county to develop a web portal

WHEREAS: The partner counties will only be asked to assist by providing local expertise and information to the technical team

NOW, THEREFORE, BE IT RESOLVED that Noble County provides its support and approval for the Appalachian Ohio's Open Geographic Information System Web Access application to the Local Government Innovation Fund (LGIF).

PASSED AND APPROVED this (date).

SIGNED Virgil J Thompson
Virgil Thompson

SIGNED Robert Nau
Robert Nau

SIGNED Gary Rossiter
Gary Rossiter