

# **Scope of Work**

## **Next-Generation MetroGIS Needs Assessment**

### **(Purchase Order # 10006952 / Contract #10I018 )**

#### **1. Introduction**

The project purpose and deliverables, as described in MetroGIS's Request For Proposals (Attachments A-D), are hereby incorporated by reference into this agreement between the Metropolitan Council ("Council") on behalf of MetroGIS and Applied Geographics ("AppGeo"), with the exception of deliverable 3 (Attachment A). Deliverable 3 envisioned "Identify process and organizational development needs faced by MetroGIS that must be addressed to effectively implement solutions to priority shared information needs". Due to budget constraints, MetroGIS has decided to postpone work on Deliverable 3 to a separate project.

#### **2. Refined Expectations**

The principle deliverable of this project is to articulate next generation information needs defined as shared priorities of the MetroGIS community. This deliverable will clearly document preferences and expectations for the "what"; setting the stage for developing the "how". More specifically, the "what" reports on the following topic areas:

- Gaps in existing regional data solutions and priority shared information needs,
- New priority shared information needs,
- Potential partnership opportunities (policy implications to be addressed in the "how" phase),
- Technology options that could help MetroGIS deploy solutions to meet shared information needs (e.g. web service and geospatial applications)

The processes used by AppGeo are expected to foster a shared understanding of public value that could be created if the information needs were addressed – public value that is created not only through the respective organizations but also through other organizations or directly to the taxpayer in general. The criteria used to define these next-generation "priority" shared information needs will thus need to be broader than the ranking criteria used for the previous assessment conducted in 1996-97, incorporating the concept of greatest public value. That is, the ranking system should not be limited to the needs of the local and regional government that are represented on the MetroGIS Policy Board as was the case with the initial assessment.

Finally, web service technology and geospatial application capabilities have greatly expanded since the initial MetroGIS shared information needs assessment. Possible solutions pertaining to ease of access, form, quality, currency, and reliability that focused on data in the first go around now need to also apply to web services and applications that consume data. These newer capabilities have also resulted in organizational and work flow complexities not present at the time of the previous assessment. It is recognized that these issues must be resolved to effectively minimize duplication of effort related to producing and maintaining geospatial data, services and applications. However, this "what" phase of the priority shared information needs assessment is limited to identifying these organizational and work flow issues for investigation as a next step.

#### **3. Tasks and Schedule**

The approach proposed by AppGeo (Attachment E) to accomplish the project purpose and deliverables referenced in Section 1 is hereby incorporated by reference into this agreement, with the exception of Task 4, Organizational Development Needs. Task 4 was proposed in response to deliverable 3, which has since been declared to be beyond the

scope of this agreement. The schedule proposed for Tasks 1-3 and the final reporting are hereby accepted as originally proposed and illustrated in the following table:

Task	October	November	December	January	February	March	April
Task 1	Initiation, workshop planning and registration	Workshop, interviews, synthesis, design and launch online survey	Analysis and report preparation, draft report, final report				
Task 2			Scope planning; methodology decisions	Evaluation and analysis	Write up results		
Task 3			Scope planning; identify respondents	Outreach (workshop, interviews, etc., TBD)	Analysis and write up results		
Final Report					Compile Draft Report	Draft Final Report; Presentation to MetroGIS Coordinating Committee	Presentation to MetroGIS Policy Board; Final Report

#### 4. Fee

The fee for Task 1 is a Firm Fixed Price (FFP) of \$15,000. The base fee for Tasks 2, 3, and those tasks related to the final report is \$25,000. The estimated break down, by task, is shown in the following table. Up to an additional \$10,000, for a total maximum project cost of \$50,000, may be authorized by the MetroGIS Project Manager to provide for more in depth evaluation on topics important to the study deliverables discovered during the course of the study. For Tasks 2 and 3, for example, the funding range reflects the potential for the scope of analysis and outreach to be broadened (to accommodate more respondents) or deepened (to involve more variables in the analysis). All pricing (FFP and ranges) is inclusive of travel and labor.

Specifically, AppGeo will work with MetroGIS to refine the methods and deliverables for each task that provide the highest benefits, and that reflect an optimal allocation of the available funding across the various tasks/deliverables.

Task	Deliverable	Base Costs	Estimated additional with prior approval
Task 1	Updated and Prioritized Shared Information Needs	\$15,000 (Firm Fixed Price)	N/A
Task 2	Evaluation and Analysis of Shared Information Needs	\$7,500	Approx. \$6,000
Task 3	Detailed Investigation of Commercial and Non-governmental Shared Information Resources and Needs	\$10,000	Approx. \$4,000
	Final Report & Two Onsite Presentations	\$7,500	
	<i>Sub Totals</i>	<i>\$40,000</i>	<i>Up to \$10,000</i>
	<i>Maximum</i>		<i>\$50,000</i>

## ATTACHMENT A

### *Project Purpose, Scope, and Expectations (Excerpt from RFP – Published August 16, 2010)*

**Purpose and Deliverables:** This proposed next-generation needs assessment is to provide the foundation for an action plan to ensure that limited resources are used to tackle the highest priority shared geospatial-related needs of the MetroGIS community. The following broad deliverables are sought via this assessment:

1. Identify priority shared geospatial data, web service, and application needs of local and regional government that serve the MetroGIS community.
2. Identify geospatial needs of non-government interests which align with those of MetroGIS's local and regional government interests and are of sufficient value to warrant acknowledgement as candidates for cross-sector collaborative solutions.

MetroGIS leadership desires the following topics to be addressed, to the extent practical, in the course of addressing the above-described deliverable, in preparation of the next-phase action planning:

- 1) Define emerging shared needs that are important to realizing MetroGIS's [vision and mission](#), be they technology or organizational in nature.
- 2) Compare and contrast the relative value and priority of previously identified needs (Attachment B) against emerging needs.
- 3) Describe the relative level of support needed to accomplish next-generation top priority shared geospatial needs
- 4) Identify opportunities for interaction/collaboration that cross the boundary between public and non-public interests (e.g., "If you do this, we can do that...").

An action plan, in which specific strategies are articulated to act on the findings of the subject needs assessment, is not a deliverable of this project.

#### **Project Management Expectations:**

- 1) **Funding:** The project is proposed to begin in September 2010. Completion is desired by April 2011. Up to \$15,000 has been allocated for the 2010 component. Funding for the 2011 component is included in MetroGIS's 2011 budget request. However, the 2011 project funding cannot be guaranteed until the Metropolitan Council approves its 2011 budget, which is not scheduled to occur in December 2010. The needs assessment proposal should offer a work plan that is staged accordingly.
- 2) **Project Oversight:**
  - a) The MetroGIS Staff Coordinator will serve as project manager.
  - b) A Project Advisory Team will be created, whose members include individuals with appropriate expertise from the MetroGIS community. The project manager will serve as lead support to this team. The consultant will work under general direction of the Project Advisory Team.
- 3) **Consultant Roles And Responsibilities:**
  - a) Submit a draft written report for review and comment by the project manager and members of the Project Advisory Team, which documents the study process and includes a written narrative describing the findings for each above stated assessment deliverable.
  - b) Address comments on the draft report, modify the draft report accordingly, and submit a written final report to the Project Advisory Team within a timeframe consistent with agreed upon milestones.

- c) Present the assessment results to the MetroGIS Coordinating Committee at its March 2011 meeting and the MetroGIS Policy Board at its April 2011 meeting.
- 4) Process Expectations:
- a) The assessment methodology must:
- Build upon / be directly comparable to the “shared information needs” component of the first-generation, data-centric, needs assessment conducted by MetroGIS in 1996-97 (Attachment C) and
  - Identify any desired enhancements to regional solutions to shared information needs that have been implemented (Attachment D).
- b) The MetroGIS Staff Coordinator will keep the consultant team apprised of any related developments with the in-progress [MetroGIS's Quantify Public Value \(QPV\) Study](#), which has potential to provide insight relevant to the subject Needs Assessment.

# ATTACHMENT B

## *(Excerpt from RFP)*

### Background Information

#### - Unsolved MetroGIS Objectives and Needs -

- A. **Unresolved Key Needs Defined in Current Business Plan:** Some 30 program objectives were identified in the [2008-2011 MetroGIS Business Plan](#), beginning on page 52.

Although important accomplishments have been achieved over the past three years, substantive progress remains elusive for three of the highest-priority objectives defined in the 2008-2011 Business Plan:

- Defining Shared Application Needs,
- Accomplishing Partnerships with Non-Government Interests,
- Securing Adequate Technical Coordination Capacity.

Remaining relevant to changing stakeholder needs, a higher-order goal of the three above-cited objectives, will not be possible unless sufficient support resources are captured. Capture of such resources is not possible unless the value of collaborative solutions to shared geospatial needs is clearly understood by executives and policy makers.

- B. **Benefits/Public Value Created:** A compelling public value creation case needs to be made to realize sustained resource contributions from multiple sources. The MetroGIS [Quantify Public Value \(QPV\) Study](#) was pursued to address this need, specifically to develop a means to measure public value created via the MetroGIS geospatial commons (spatial data infrastructure).

The study is anticipated to be complete by June 2011. The goal is to develop a trusted, replicable prototype “QPV” methodology. The scope is limited to parcel data and Hennepin County, given the relatively small budget. If successful, the model is expected to provide insight important to development of an effective performance measurement program for MetroGIS’s efforts as well as provide important insight needed to define benefits associate with support of the “fostering collaboration function”; the means by which regional solutions to shared geospatial needs are accomplished. Defining this benefit is a requirement to expanding support of this function beyond the Metropolitan Council, a need that has been recognized for some time by the Policy Board and understood to be vital to long-term stability of this function. More should be known by late fall 2010 whether the study will yield the desired methodology. **The results are expected to provide insight that is important to other important MetroGIS program objective, including the proposed next-generation needs assessment. As such, communication and coordination between the two projects is a must.**

- C. **MetroGIS Goals Related to Demonstrating Value and Catalyzing Partnering**

Four outcomes defined by MetroGIS relate to /serve as drivers for the proposed next generation needs assessment. Their sources are the 2008-2011 MetroGIS Business Plan (organizational goals – OG) and a workshop hosted by MetroGIS in November 2008 to define shared service needs (*project goals – PG*) [order of listing is not intended to imply relative importance]. They offer sound reasoning for outcomes of MetroGIS’s efforts as they serve as vehicles to “demonstrate value to policy makers” and “catalyze partnership” opportunities:

- **Catalyze Partnerships with Public-Private / Non-Traditional Users (OG)**: By catalyzing application development, organizational partnerships, which are important to addressing shared information needs, might also be identified. MetroGIS leadership has defined a goal of catalyzing partnerships that involve multiple sectors and non-traditional users to address shared information. It was hoped that the proposed competition could accomplish the identification of opportunities to act on this goal.
- **Demonstrate the Value of Web Services/Applications to Policy Makers (OG)**: Assist decision makers better understand the value to their business operations that can be realized using web services and / or applications supported by web services when standardized across multiple jurisdictions.
- **Expand Publishing of Web Services (PG)**: An incentive is needed to encourage data owners to publish their data as web services. The thought is that making their services available would lead to development of applications that would be recognized by the data owners as a low risk-high reward means to explore the potential of creating value important to them via publishing services.
- **Implement Geospatial Commons (PG)**: The competition was expected to expedite in-progress work to stand up the infrastructure needed to centralize publishing and finding web services. This proposed infrastructure is now called the Geospatial Commons. MnGeo and MetroGIS were collaborating on this need before the competition idea was conceived. Significant progress has been made towards this end. Regardless of the fate of the competition, this important work should continue to be supported and will facilitate the sharing of data and web services long term.

#### **D. Candidate 2011 Regional GIS (Technical) Projects**

Each of the following candidate projects aligns with one or more the outcomes defined in the Business Plan and is tentatively a candidate project for the 2011 MetroGIS work plan:

- **Place-based Budgeting Web Application**: The idea that the MetroGIS community be considered as a testbed option was conceived by the Staff Coordinator during a NGAC discussion on March 25. This idea was shared with Hennepin County Commissioner Johnson at the NGAC meeting before offering the Twin Cities as candidate testbed location. At the March 31 meeting of the MGAC, staff learned of a similar interest of David Arbeit, state GIO. This type of application functionality has resonated well among policy makers that it has been shared with and acts on a current administration priority.
- **Emergency Preparedness Structures Web Application**: The Emergency Management Preparedness Workgroup oversaw the prototyping via a federal grant of a web-based application that utilizes “crowd sourcing” and web services to populate the locations of and various descriptors (attributes) for hospitals, fire stations, medical clinics, and schools. This proposal would seek to move from prototype to operational application for the Twin Cities.
- **Geospatially Enabling Community Collaboration (GECCo)** initiative of GITA (Geographic Information and Technology Association). The Staff Coordinator learned of this initiative (see Attachment D) while attending the March NGAC meeting. It appears to be well aligned with MetroGIS’s goal to catalyze public-private partnerships. As of this writing, conversations were in progress with GITA leadership to learn more about how MetroGIS might leverage this initiative.

# ATTACHMENT C

## *(Excerpt from RFP)*

### First-Generation (1996-97) MetroGIS Information Needs Assessment

The last comprehensive information needs assessment conducted by MetroGIS was in 1996-97. Thirteen priority shared information needs were identified and are listed below. These data-centric needs guided MetroGIS's efforts for over a decade. The methodology utilized to define these shared information needs was highly participatory. The following is a general description of that process. A summary of regional solutions that have been implemented to address these priority information needs is provided in Attachment D. More information about the processes involved, questionnaires, intermediate deliverables, etc. are provided at [http://www.metrogis.org/data/about/index.shtml#identify\\_needs](http://www.metrogis.org/data/about/index.shtml#identify_needs).

#### **MetroGIS First-Generation Priority Shared Business Information Needs**

*(Note, the “#xx” that follows each need statement corresponds to a pre-ranking listing 87 mutually exclusive information needs.*

Rank	Information Need Statements <i>( I need to know...)</i>
1	the boundaries and characteristics of a specified jurisdiction ( <i>ex: city, school district, county, police and fire districts</i> ). <b>(Jurisdictional boundaries #47)</b>
2	the street addresses for specified locations. <b>(Street addresses #42)</b>
3	about land use or development plans that have been officially adopted by public bodies.  <b>(Land use plans #10)</b>
4	who has rights to a property, including ownership, leases, easements, rights-of-way.  <b>(Rights to property #1)</b>
5	the boundaries and location of a specified parcel. <b>(Parcel boundaries #44)</b>
6	the locations and characteristics of water features ( <i>ex: lakes, wetlands, floodplains, aquifers, watersheds</i> ). <b>(Lakes, wetlands, etc. #31)</b>
7	how a piece of land is being used, including whether or not it is vacant. <b>(Land use, existing #4)</b>
8	the boundaries and characteristics of census areas ( <i>ex: census blocks, block groups, tracts</i> ). <b>Census boundaries #48)</b>
9	where people live and how to contact them. <b>(Where people live #2)</b>
10	the regulations that affect the use of a piece of land, such as zoning. <b>(Land Regulations #6)</b>
11	the locations and characteristics of roads/highways. <b>(Highway / road networks #27)</b>
12	the socioeconomic characteristics of an area's population ( <i>ex: census tract, count, city</i> ).  <b>(Socioeconomic characteristics of areas #71)</b>
13	a unique identifying attribute of a land parcel, such as parcel ID. <b>(Parcel identifiers #46)</b>

## Overview of Process Used to Define the First-Generation Shared Information Needs.

Although the business needs of local and regional government were the principal drivers for setting the above-listed priorities, numerous representatives of non-government as well as state and federal government interests, interacting from a metropolitan perspective, also participated in identification of these first-generation shared information needs.

The process was highly participatory, including over 125 stakeholder participants and three separate events over a period of 9 months. The project was undertaken to tackle the highest priority need of the MetroGIS community at that time “*identify the data sets and their characteristics which provide the greatest utility for the Metro Area GIS data user community*”. Local government interests were defined as cities, townships, school districts, watershed districts and watershed management organizations, soil and water conservation districts, counties, as well as organizations that perform services that are an extension of local government interests: economic development partnership, school district consortia, etc. The terms “regional government” and “metropolitan perspective” mean public organizations whose jurisdiction is the seven-county, Minneapolis-St. Paul metropolitan area (e.g., Metropolitan Council, Metropolitan Mosquito Control District, Metropolitan Airports Commission, and Metropolitan Emergency Services Board).

The initial phase of the process utilized six focus groups, organized by significant government responsibility:

- Community Development, Planning, and Research.
- Human, Social, and Educational Services, Public Health (code enforcement, Licensing, and Nursing) and Libraries.
- Parks, Environmental Protection, Natural Resources.
- Property Records.
- Public Safety and Judicial.
- Public Works, Utilities, Transportation, Communication.

Each of these six focus groups was populated with 20-25 individuals possessing extensive content expertise and representing all forms of government that serve the seven county Minneapolis-St. Paul metropolitan area, together with academic, non-profit and for profit interests. Each was simultaneously facilitated in a separate room in the same the building. The goal was for each group to offer as many responses as possible, using a variety of facilitation methods, to the question “What information do I need to do my job”. More than 850 individual responses were captured. With the aid of Advanced Information Strategies (ASI), the responses were consolidated into 87 mutually exclusive information need statements.

The second major phase involved two, multiple day, business object modeling exercises. The result was a comprehensive business object framing model comprised of interconnected “model fragments” for most of the 87 consolidated information needs. Note, **the business object framing model component is not desired to be repeated for the second-generation assessment.** The exercises offered limited value to subsequent efforts to define solutions to the subject information needs and also did not provide any value for the exercise to rank the 87 needs according to their relative importance.

The final phase involved asking the 125 focus group participants to participate an exercise to the rank the relative importance of each of 87 mutually exclusive information needs relative to their respective organizations’ business needs. The survey asked the respondents to answer two questions, on a scale of 1-5, for each of the 87 information needs:

- 1) How important is having this information to my organization’s business operations?
- 2) How depend is my organization on another organization(s) to obtain this data from which to secure this information?

The result was the 13 priority (regionally significant) information needs listed above. These information needs are not only significant to the internal business operations of key MetroGIS stakeholders. Designation as “regionally significant” also means that a dataset maintained by one organization has significant utility by other governmental organizations that serve the metropolitan area. The more multi-jurisdictional applicability across the various focus groups, the more regionally significant. As such, these 13 information needs cannot be fully addressed without collaborative measures among the stakeholders.

In May of 1997, the Policy Board endorsed this listing of 13 priority information needs, along with a plan of action to begin developing regional/collaborative solutions for each.

## **ATTACHMENT D**

### ***(Excerpt from RFP)***

#### **MetroGIS Regional Solutions to Shared Information Needs Implemented to Date**

Eight regional datasets, three foundation web services, and two applications have been implemented thus far to address shared geospatial information needs of the MetroGIS community. Several additional regional solutions to shared geospatial needs are also in process. [Click here](#) to access a PowerPoint presentation in which a summary of these accomplishments is provided. Additional background information about what constitutes a shared information need and specific solutions can be viewed at <http://www.metrogis.org/data/about/index.shtml#whatis>.

Each regional data solution (to a priority shared information need) is comprised of three components. These components are detailed in a regional policy statement that accompanies each solution and each is endorsed by the MetroGIS Policy Board. The components are:

- Content specifications,
- Custodial roles and responsibilities to manage a particular solution,
- Acceptance of responsibility by willing organization, with a related business need and sufficient operational capacity, to manage the solution.

MetroGIS created a consensus-based, broadly representative process to identify desired specifications for data needed to answer each priority information need as well as candidate custodians for these data and their responsibilities. Specifically, the process involves:

- Identifying priority regional information needs common to stakeholder organizations, in particular, those government interests represented on the MetroGIS [Policy Board](#) (cities, counties, metropolitan, school and water management districts).
- Identifying data needed to answer each priority information need.
- Identifying primary and regional data custodians and their responsibilities.
- Defining critical standards, integration and aggregation specifications, and institutional policies necessary for MetroGIS stakeholders to share commonly needed priority data.

The seven NSDI Framework Functions, outlined in the [Framework Handbook](#) published January 1998, have also been incorporated into this methodology.

Information about each of regional solution that has been implemented to date can be viewed at <http://www.metrogis.org/data/index.shtml>. Additional information, including adopted Regional Policy Statements, can be accessed via links from this main webpage. Note, that for several of the priority information needs, more than one regional dataset solution is involved. In many cases, a many-to-one relationship exists between a particular information need and the data types required to address it. The table provided on the following page provides a listing of the organizations that have agreed to support regional solutions to shared information needs of the MetroGIS Community.

**ATTACHMENT E**

**Excerpt from Proposal  
Submitted by Applied Geographics (AppGeo)  
(*September 3, 2010*)**

**(*See Next Page*)**

# 1 APPROACH

## 1.1 PROJECT UNDERSTANDING

MetroGIS's mission, activities, plans, and projects provide the **context** for this project. MetroGIS's mission and goals, and the eight major activity areas described in its 2008-2011 Business Plan emphasize the development of information resources, information sharing and collaboration among for-profit, non-profit, and government constituencies within the region. Over the years, MetroGIS has identified and described a range of shared information needs and collaborative solutions. This process has included a 1996-97 Information Needs Assessment, which selected 13 priority needs from more than 80 identified needs, and several subsequent stakeholder forums, the most recent of which was held in November 2008.

Along with the identification of priority shared information needs, MetroGIS has been successful in creating regional datasets, web services, and applications to address shared geospatial information needs. In a related project, MetroGIS's Quantify Public Value Study, MetroGIS is developing tools for quantifying the value of collaborative solutions and data assets. And, MetroGIS plans to contract for an evaluation of a Geospatial Collaborative Testbed for regional street centerline data that would be a model for public-private collaboration for geospatial data creation and maintenance.

**Motivating** this project in particular are the observations (Attachment B of the RFP) that

- Additional shared information needs continue to emerge and these need to be evaluated (prioritized) relative to previously identified needs
- For profit entities have a potential stake in creating, supporting and using regional geospatial information resources, and this opportunity needs to be better understood and incorporated into MetroGIS's shared information strategy
- Technical coordination capacity and resources of MetroGIS must be adequate to the scope and scale of creating and sustaining shared information resources

To the above list, the AppGeo Team would add the following **observations**:

- The GIS technology environment is constantly evolving offering new platforms, methods, and tools, e.g., cloud computing and web mapping services, that are having a profound effect on the scope, costs, and approaches to shared services and data maintenance
- Models and paradigms for creating/maintaining shared geospatial data (information) resources are evolving, e.g., crowd sourcing and public-private partnerships
- Expectations and ways that users within and outside of government access and use geospatial information are evolving, e.g., smart phones and other mobile devices, online geospatial data libraries
- The non-governmental sector is diverse in terms of resources and mission statements (e.g., it includes small, regional, and non-profit organizations as well as large, national, commercial vendors); in particular, understanding the business models and interests of commercial data providers will be key to designing public-private partnerships

The **purpose** of this project is to support MetroGIS goals and efforts by identifying additional shared information needs for both governmental and non-governmental entities, and to identify process and organizational requirements of MetroGIS itself that are necessary for fulfilling those needs.

The three specific **deliverables** identified in the RFP are:

1. Identify priority shared geospatial data, web service, and application needs of local and regional government that serve the MetroGIS community.
2. Identify geospatial needs of non-government interests which align with those of MetroGIS's local and regional government interests and are of sufficient value to warrant acknowledgement as candidates for cross-sector collaborative solutions.

MetroGIS desires that in completing the above, the consultant also address **four topics**, namely:

1. Define emerging shared needs that are important to realizing MetroGIS's vision and mission
2. Compare and contrast the relative value and priority of previously identified needs with emerging needs
3. Describe the level of support needed to accomplish next-generation to priority shared geospatial needs
4. Identify opportunities for interaction/collaboration that cross the boundary between public and non-public interests

## 1.2 PROJECT CHALLENGE AND CONSTRAINTS

The overarching **challenge** is to complete an analysis of local and regional government and non-government stakeholders shared information needs within an unspecified budget, and to complete the process within the allotted timeframe of less than six months. The initial project budget (for 2010) is \$15,000, which is not sufficient to fund the entire scope of desired activity. Additional resources are anticipated and will be needed.

To **meet these challenges** and provide MetroGIS with the **maximal value and utility**, the AppGeo Team will:

1. Work with the MetroGIS project team to ensure that real progress and a specific deliverable is produced for the initial budget (as described in detail in Section 1.3 Project Approach)
2. Work with MetroGIS to determine the most appropriate order, combination, and focus of tasks and activities to produce the desired deliverables as additional budgetary resources are obtained
3. Draw on the past experience of MetroGIS with workshop and surveys to inform the activities undertaken on this project
4. Utilize MetroGIS's current relationships with its government constituents and representatives to maximize efficiency
5. Take advantage of the in-depth knowledge of our team members, including Terese Rowekamp of Rowekamp Associates, Inc., a former MetroGIS Coordinating Council member and longtime GIS consultant in the region, as well as Michael Turner and Andy Buck of AppGeo who have both worked with the Region and in the State as GIS consultants on significant projects
6. Incorporate prior results (and methods used as described in Attachment C of the RFP) to maintain comparability of current findings with past results, and to promote continuity of analysis and planning.

## 1.3 PROJECT APPROACH

We propose to perform the following activities to complete the project objectives and deliverables.

We've organized our effort to conform to the schedule constraints (completion by March 2011) and budgetary constraints (\$15,000 for the remainder of 2010, with an unspecified additional amount for 2011) identified in the RFP. Specifically, we have proposed an initial task (Task 1) that reviews and updates the list of shared information needs that was developed in 1996-7 and subsequent stakeholder forums. This task will be completed in 2010 for \$15,000. We then propose a series of supplementary activities (Tasks 2-4) that fulfill the project objectives and task deliverables that can be completed by March 2011 should additional funds be made available.

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## TASK 1 UPDATING AND PRIORITIZING SHARED INFORMATION NEEDS

This task builds on the work that has been done by MetroGIS to consolidate stakeholder identification of and ranking of shared information needs. Task activities that we will complete include:

1. **Synthesis:**
  - a) Review the current list of prioritized needs, and revisit the longer list of 87 distinct needs identified in 1997, and any other needs subsequently identified
  - b) Review MetroGIS progress to date and current plans related to meeting prioritized shared information needs
2. **Discovery:**
  - a) Use the workshop registration process to conduct a mini-online survey to invite comment and additions to the current identified information needs list
  - b) Conduct a workshop to allow stakeholders to identify emergent needs (including review of previously identified needs and current information sharing systems)
3. **Prioritization:** Conduct an online ranking exercise to allow stakeholders to rank previously prioritized and emergent needs to create a "priority" listing for future action planning

The MetroGIS 1996-97 needs assessment utilized six focus groups organized by government responsibility (Attachment C of the RFP) that involved 125 participants and that identified 87 mutually exclusive information need statements. This included both government and non-government participants and the assessment spanned nine months.

AppGeo will work with MetroGIS to design an outreach program that reflects this past approach, but that scales the current outreach effort to the available funds and more compressed timeframe. The focal activities will be a **workshop** and an **online survey**. We will seek active participation from MetroGIS and key stakeholders to support the workshop, such as help with "getting the word out" and inviting participation, and with facilitating focus group discussion. We will include government and non-government entities in the workshop.

The **workshop** will start with an overview presentation led and facilitated by AppGeo that reviews the status of shared information systems, data, and services at MetroGIS and its current plans for supporting or expanding those services. We would invite MetroGIS to present and participate actively in conveying accurate information and plans to the attendees.

The workshop presentation will then focus on a review of the set of needs that have been identified to date and provide for discussion to identify additional (unique) needs not on the list, and/or to discuss other aspects of shared information services and access to data. Plenary discussion, small group or

focus group discussion, voting or group polling methods, and other means will be employed to capture ideas, opinions, and information throughout the workshop. We anticipate that the workshop will last for half a day or slightly longer.

*AppGeo has organized and facilitated more than 70 similar stakeholder workshops in the past three years on GIS strategic and business planning projects across the nation. Most of these projects also included online surveys and interviews. The AppGeo Project Leader for this project has led and facilitated numerous workshops on more than 10 GIS planning projects at the regional or state scale, including for the State of Minnesota, which involved local and regional government stakeholders and non-government entities. AppGeo has a successful record of working efficiently and effectively to discover, gather and synthesize information from diverse stakeholders using these methods.*

After the workshop and review and analysis of workshop findings, AppGeo will setup an **online survey** or ranking exercise. The survey will be designed to enable respondents to identify (rank) the importance of the different types of geospatial information to their organization. Information about respondents' organization will be collected so that responses can be aggregated by type of respondent (local, regional, governmental, non-government, and so forth) for useful analysis and comparison. A concise set of 3-4 questions will be asked for each type of unique information need. For each type of information need, we plan to include the same two questions as used on the original 1996-7 survey for consistency and so that prior rankings could be compared with the new ranking<sup>1</sup>. We also suggest that one or two additional questions be included for each information type, such as to identify the source of outside information (data), e.g., is it purchased from a commercial source, or obtained freely from public sources? And, does the third party data acquired by organizations require internal processing or compilation before use? These types of questions would greatly help to further characterize the sources and qualities of shared information that are relevant to formulating plans for developing shared information resources and services.

**Interviews** with key stakeholders, selected survey respondents, workshop participants, MetroGIS staff, and others to be identified through the project would be used to supplement this discovery, synthesis, and ranking process.

The **deliverable** from this process would be an update and initial prioritization (based on the stakeholder ranking process) of previously recorded and emergent shared information needs. The written deliverable would include information about the activities and methods used (workshop participation and presentation materials, survey instrument and raw data) as well as a concise presentation of the results – identification of emergent shared information needs; comparison of current findings with previously reported results; and additional recommendations, opinions, feedback on current information sharing systems and resources of MetroGIS. We would plan to present the deliverable in draft form for comment by MetroGIS. We would then finalize the deliverable as a standalone document or as part of a comprehensive final project report covering other project deliverables.

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## TASK 2 FURTHER EVALUATION AND PRIORITIZATION OF SHARED INFORMATION NEEDS

<sup>1</sup> The two questions that were used in 1996-7 to rank each of the identified information needs on a scale of 1-5 were (page 8, Attachment C, RFP): (1) How important is having this information to my organization's business operations?, and (2) How dependent is my organization on another organization(s) to obtain this data from which to secure this information?

Ranking of shared needs based on stakeholder feedback (online survey) provides a valuable starting point for prioritization. In this task AppGeo will consider **other characteristics** in order to further evaluate and prioritize shared information needs. This will provide MetroGIS the option to evaluate and plan for the future development of shared services and data resources in a more comprehensive manner.

First, AppGeo will work with MetroGIS to finalize the **criteria** (variables, analysis) to be applied for comparison of information needs. These could include such factors as: estimated costs of compiling data or other aspects of supplying the information need; estimated value or benefits; opportunity to generate revenue; technical requirements; organizational and business considerations; and so forth. We will coordinate this effort with MetroGIS's Quantify Public Value Study in order to take into account innovative methods that could be used to "value" and prioritize shared information needs. The final determination of criteria and methods will be agreed to between AppGeo and MetroGIS and adjusted to fit the budget.

Depending on the complexity of the evaluation decided upon, AppGeo will apply these methods to all or a subset of the shared information needs identified in Task 1. The **deliverable** from this task will be an evaluation, and an evaluation framework that supports adjustments to the prioritization of shared information needs, including a complete description of the methods and data used to perform the analysis.

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### TASK 3 FURTHER INVESTIGATION OF THE NON-GOVERNMENT SECTOR

This task focuses directly and in detail on the information needs of the **non-government sector**, including for profit firms (that may or may not be located in the region) and non-profit/non-government organizations in the MetroGIS community.

As noted above, the non-government sector contains different audiences that we believe are best approached differently. For example, we would recommend that **commercial data providers** be approached individually in a manner that respects proprietary business concerns in order to foster frank conversation about potential opportunities, business models, public-private partnerships and resource sharing.

The focus of such a conversation would be to understand the extent to which **private sector interests** (profit or return on capital, protection of intellectual property, commercialization of data and services, branding, standards) can be recognized/met while meeting public sector interests, such as the public access to shared services (non-excludability), budget constraints, standards and quality requirements. The **deliverable** would be a document in which AppGeo describes the **ideas, opportunities, and business models** that surfaced from such conversations for use by MetroGIS, while respecting the confidentiality or sensitivity of information shared by interview participants. In cases where interviewees were interested in taking next steps toward collaboration, AppGeo would also provide contacts and other information to MetroGIS.

*AppGeo has broad experience working with private sector firms who are leading commercial geospatial data providers (and data developers) and direct experience with a public-private partnership involving NAVTEQ and other private sector consultants to collaborate in the development and maintenance of*

*geospatial road centerline data for the State of New York. AppGeo has also led an effort to coordinate the collection and compilation of parcel data across southern New England for a private sector data provider.*

**Information consumers** in the non-government sector within the region are the second group we would focus on in this task. The objective would be to identify/document the needs/business interests of these non-government entities that align their shared information needs with local and regional government interests.

In large part, the data required for this analysis will have already been collected in Task 1, since non-government organization representatives will be invited to the workshop and to participate in the online survey. In this task, AppGeo will first review those findings with respect to the non-government sector. Then AppGeo will supplement those findings through **additional outreach** to non-government entities as needed. This could involve an additional very targeted workshop, and would likely involve interviews with key stakeholders, selected survey respondents, Task 1 workshop participants, and others to be identified through the project.

The **deliverable** from this effort would be a report on the degree of alignment of non-government needs relative to the set of local and regional needs that was revised and prioritized in Tasks 1 and 2 – this includes factors such as similarity of data requirements, data standards, types of access, and so forth. Again, the report would include description of the methods used and of the activities completed to support the analysis and results. It would be presented in draft form for review by MetroGIS before finalization.

#### 1.4 FINAL REPORT AND PRESENTATIONS

As described, each of the above tasks will result in written materials that (1) describe the process followed, including methods, activities completed, and participation, (2) present the results, and (3) include any recommendations of the AppGeo Team.

If MetroGIS requires, these written materials will be assembled into a single draft written report for MetroGIS review and comment (Project Management Expectations, #3, page 3, RFP). AppGeo will address comments on the draft report and submit a final report within the agreed upon timeframe determined at the outset of the project and within the overall time constraint set by the March 2011 meeting of the MetroGIS Coordinating Committee.

AppGeo will present the assessment results at the March 2011 MetroGIS Coordinating Committee meeting and at the MetroGIS Policy Board meeting in April 2011 as required.

#### 1.5 WORKPLAN AND SCHEDULE

A detailed work plan and schedule that covers the agreed upon tasks and subtasks will be developed in consultation with MetroGIS at the beginning of the project.

A general view of the project schedule is presented below. We organize the tasks in a logical and overlapping sequence. The work plan assumes that the necessary budgetary resources are available in a timely manner to allow 2011 tasks to begin in January. AppGeo (and Rowekamp) affirm that they have sufficient staff (as proposed and additional back up staff as needed) to provide the capacity, expertise, and prior knowledge to accomplish the work described in this proposal in the time frame laid out below.

Task	October	November	December	January	February	March	April
Task 1	Initiation, workshop planning and registration	Workshop, interviews, synthesis, design and launch online survey	Analysis and report preparation, draft report, final report				
Task 2			Scope planning; methodology decisions	Evaluation and analysis	Write up results		
Task 3			Scope planning; identify respondents	Outreach (workshop, interviews, etc., TBD)	Analysis and write up results		
Final Report					Compile Draft Report	Draft Final Report; Presentation to MetroGIS Coordinating Committee	Presentation to MetroGIS Policy Board; Final Report

## 1.6 PROPOSED COST

The proposed cost for Task 1 is the Firm Fixed Price (FFP) of \$15,000.

The proposed cost for Tasks 2-4 are estimated as shown in the table. We have broken out the task pricing. We have provided ranges that reflect the fact that we are open to adjusting the scope of effort for those tasks to match the budgetary resources available. For Tasks 2 and 3, for example, the broad proposed price range reflects the potential for the scope of analysis and outreach to be broadened (to accommodate more respondents) or deepened (to involve more variables in the analysis). All pricing (FFP and ranges) is inclusive of travel and labor.

Specifically, we propose and plan to work with MetroGIS to finalize the methods and deliverables for each task that provide the highest benefits, and that reflect an optimal allocation of the available budget across the various tasks/deliverables.

Task	Deliverable	Proposed Costs
Task 1	Updated and Prioritized Shared Information Needs	\$15,000 (Firm Fixed Price)
Task 2	Evaluation and Analysis of Shared Information Needs	\$7,500 - \$15,000
Task 3	Detailed Investigation of Commercial and Non-governmental Shared Information Resources and Needs	\$10,000 – 20,000
	Final Report & Two Onsite Presentations	\$7,500 - 9,000

*We are also prepared to assist MetroGIS actively to research and seek out additional budgetary resources (grants, private sector funding, etc.) that may be tapped to support specific tasks or deliverables. By way of example, AppGeo is intimately familiar with the FGDC's Fifty States Initiative and the Cooperative Assistance Program (CAP) Grants that makes funds available to states and regions for GIS planning, and we can assist MetroGIS to apply for such grant funds.*