

MetroGIS Fair Share Financial Model Final Report Appendices

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APPENDIX 1 DEFINITION OF TERMS

Advisory Team means collectively the individual members of each MetroGIS Advisory Team. These teams advise the Coordinating Committee on matters to include Data Access, Data Content, Policy, and Standards and other areas that may be defined.

Base subscriber Allocator – Allocator of costs to subscriber classes based on operational and data development costs allocated to the base subscriber fee. The allocation is based on the total dollars allocated to the base subscription fee.

Base Subscriber Allocator – Excluding Counties – Used to allocate the “base subscriber fee” for counties to subscriber classes.¹

Base Subscriber Fee – Fees charged to recoup the costs to serve a customer and is the same for all users.

Base Subscriber Fee – The annual fixed fee to each subscriber. This amount is the same for all subscriber classes.

Coordinating Committee means collectively the individual members of the MetroGIS Coordinating Committee. The Coordinating Committee advises the Policy Board on matters concerning the development and implementation of MetroGIS.

Cost of Data Development - Organizations will not be expected to incur costs to develop or maintain data for MetroGIS that exceed what it would cost to meet their own needs without being appropriately compensated.

Cost of Data Distribution - Organizations will not be expected to contribute more to a MetroGIS data sharing solution than they would incur to obtain, import, and manipulate data for their own needs unless they are appropriately compensated.

Equivalent Effort - No organization will be expected to contribute more to support a MetroGIS data need than it would have to pay to meet its internal needs outside of a collaborative environment.

Existing Business Functions - Organizations will not be expected to maintain data for MetroGIS unless that organization has an internal business purpose to maintain the data.

Forms of Contributions - Contributions may be in several forms, including funding, data, people and equipment.

Geographic Information System (GIS) means a computer-based technology that consists of hardware, software, data, and personal designed to efficiently capture, store, update, analyze, and display all forms of geographically-referenced electronic information.

Geographically-referenced electronic data exist in three forms: graphic (parcel boundaries, street centerlines, planimetric [data captured from aerial imagery such as building foot

¹ MetroGIS costs for counties are shown for informational purposes only. County contributions are assumed to be the contribution of their data. These costs are allocated back to the subscriber classes in proportion to the dollars charged to each subscriber class.

prints, curb lines, and contour elevations]; non-graphic (tabular records that can be associated with graphic data-typical); and digital imagery.

Geospatial data refers to geographically referenced data. The data are both geographic, describing features on the earth's surface, and spatial, describing the location, size, shape, and spatial relationships between these features.

GIS User Group Participation Credit – A credit of \$1,000 for subscribers that participate in a County GIS Users Group consistent with the county based GIS user groups promoted by MetroGIS.

MetroGIS refers to a stakeholder-governed entity that is in the process of being defined. Definition of this entity is intended to evolve through the implementation of the MetroGIS Decision Support Structure and as the participants come to understand the organizational and data needs of the other stakeholders.

Non Staff Costs – Costs related to overhead such as utilities and rent, marketing expense, training of staff and costs of hiring temporary help to develop data,

Number of Subscribers Allocator – Allocation of costs based on the number of subscribers within the class. Used to allocate the “Base Subscriber Fee” to each subscriber class.

Operating Guidelines means the procedures and rules that govern the organizational aspects and decision making of the MetroGIS Policy Board, its Coordinating Committee, and Advisory teams.

Operation Costs-Variable Allocator – Allocation of the staff costs and non-staff costs based on the sum total of the data element allocation scores². Used to allocate the “Variable Subscriber Fee” to each subscriber class.

Other Revenue and Contingency Allocator – Allocator for MetroGIS contingency costs and revenues received from non MetroGIS participants. The allocation is based on total dollars previously allocated to base subscriber fees and variable subscriber fees.

Policy Board means collectively the individual members of the MetroGIS Policy Board. The Policy Board decides policies to effectively guide the development and implementation of MetroGIS.

Priority rating – A value that reflects both the importance of a data need and the degree to which an organization depends on others for meeting that need. Priority rating was determined from the “MetroGIS Informational Needs Survey”.

Scale Factor - A value that reflects the costs of developing data at the appropriate scale to meet the need of most users within the organizational category. A value of 3 reflects large-scale data, which is very costly; a value of 1 reflects small-scale data, which is relatively inexpensive to develop. A rating of 2 was assigned to all subscriber classes with the exception of state and federal, which were assigned a value of 1. The data needs of state and federal are not anticipated to require the scale necessary for classes with a rating of 2. It is recommended that the “Scale Factor” be incorporated into future surveys.

Staff Costs – Wages and benefits related to the MetroGIS staff.

² Data Element Allocation Score is used to allocate the data development and maintenance costs to subscriber classes.

Stakeholder is defined as one of the following classes of participants relative to the MetroGIS initiative:

Essential Participant: Organizations whose participation is vital to the existence of the MetroGIS. They are producers of essential data and/or providers of essential functionality or resources. These organizations are both influencers and beneficiaries of the MetroGIS. (Examples: The seven metro area counties and the Metropolitan Council.)

System Enhancer: Organizations which produce data or possess resources (equipment, staff, or funds) that, although not essential to the existence of the MetroGIS, would enhance the functionality or benefits received from it. These organizations are beneficiaries of the MetroGIS and are influencers to varying degrees based on the importance of their data or resources to the functionality of the MetroGIS and to the degree of their participation. (Examples: Cities, school districts, utilities, watershed districts, state agencies, and federal agencies.) System Enhancer organizations are represented by class of organization, not by individual organizations.

Secondary Beneficiary: Organizations or individuals which are solely users of MetroGIS data or services. They do not produce data or contribute resources that would enhance the functionality of the MetroGIS. (Examples: general public, business geographics, and non-profits.)

Variable Subscriber Allocator – Allocation of costs to subscriber classes based on operational and data development costs allocated to the variable subscription fee.

Variable Subscriber Allocator – Excluding Counties – Used to allocate the “variable subscriber fee for counties to subscriber classes.

Variable Subscriber Fee - A fee based on the number of parcels within each subscriber’s jurisdiction.

Variable Subscriber Fee – The fee to each subscriber based on the number of parcels within their jurisdiction.

APPENDIX 2 STATEMENT OF THE METROPOLITAN COUNCIL'S ROLE

Background: The MetroGIS Visioning/Coordinating Team (representation from all major stakeholder interests) accepted this role statement on January 25, 1996. On February 8, 1996, the Metropolitan Council unanimously adopted this statement of its role in the creation of the MetroGIS.

Statement of Leadership Role

The Metropolitan Council accepts a leadership role to create a metro-wide GIS; an entity through which widespread sharing and exchange of GIS data sets and technology can become a reality among public agencies and private-sector organizations within the seven-county metropolitan area. Leadership is defined as the following activities:

- Finance, coordinate, and support the strategic planning and decision making processes,
- Develop and maintain regional data sets (e.g., land use, census geography/TAZ, road centerline & census address range, soils, imagery, administrative boundaries),
- Provide support (staff and/or equipment) to the visioning/coordination team and to strategic issue teams,
- Finance and support communication with stakeholders (activity status and opportunities to participate),
- Selectively design, finance, coordinate, and staff projects that address local GIS and MetroGIS program needs,
- Facilitate the execution of data/cost sharing agreements among stakeholders,
- Participate financially in a fair share of the long term maintenance of the MetroGIS,
- Any other activities consistent with the strategic plan and acceptable to all affected parties.

APPENDIX 3 TOP THIRTEEN METROGIS INFORMATION NEEDS

Adopted by Policy Board -- May 1997

Rank: Information Need Statement (*I need to know...*)

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

APPENDIX 4 FUNCTIONS APPROPRIATE FOR METROGIS

(Adopted by the MetroGIS Policy Board -- September 30, 1998)

	Functions	Scope	Is Function Currently Provided?
	<u>Coordination and Technical Functions</u>		
1	Promote and endorse voluntary polices which foster coordination of GIS among the region's organizations.	Core	Yes
2	Identify unmet GIS needs with regional significance and act on these needs.	Core	Somewhat
3	Facilitate data sharing agreements and licensing among MetroGIS stakeholders.	Core	Partially -- Interim agreements
4	Develop and endorse standards for GIS data content, data documentation, and data management.	Core	Regionally significant data
5	Require standardized GIS data content, data documentation, and data management for regional datasets.	Core	No
6	Endorse standards for telecommunication protocol and networks.	Core	No
7	Provide a repository of GIS human resources information (centralized job posting/position descriptions).	Desirable	No
8	Develop master contracts for regional GIS projects, when appropriate.	Core	Demonstration Orthoimagery Project
9	Promote development and exchange of GIS applications and procedures that serve GIS needs.	Core	Somewhat
	<u>Data Development and Distribution Functions</u>		
1	Create and maintain datasets for MetroGIS based on identified priorities.	Core	Yes
2	Fill gaps in metadata based on identified priorities.	Core	Partially -- County Agreements
3	Provide a directory of data within region and a mechanism for search and retrieval of GIS data	Core	Data Finder
	<u>Service Functions</u>		
1	Provide technical assistance to participants to retrieve, translate, and use data.	Desirable	Some -- Street Centerlines
	<u>Research Functions</u>		
1	Undertake research to meet common regional GIS needs.	Core	Some
2	Promote collaborative funding of pilot projects that meet regional needs.	Core	Ortho project, I-35W pilot
	<u>Outreach Functions</u>		
1	Identify GIS training and continuing education needs and encourage participation	Desirable	No
2	Advocate for MetroGIS needs and desires with state and federal policy makers	Core	Some - NSDI/PUC
3	Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.	Core	Yes
4	Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities.	Core	Yes
5	Publish MetroGIS newsletter.	Core	Yes
6	Maintain MetroGIS world wide web site.	Core	Yes
7	Market MetroGIS data and products	Core	No

APPENDIX 5 TOP 13 BUSINESS INFORMATION NEEDS AND THEIR ASSOCIATED DATA NEEDS

Data needs in this table were identified in the Business Object Model Forum. *Data needs in italics were identified by stakeholders, but may not be met by MetroGIS.*

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
Jurisdictional Boundaries	<i>Voting districts/Election wards (polygons) to include US Congressional, MN Legislative, County Commission, Ward Precincts</i>	<i>District codes Elected official</i>
	Police precincts (polygons)	<i>Precinct number</i>
	School districts (polygons)	<i>District codes</i>
	Fire districts (polygons)	<i>District codes</i>
	MCDs (polygons)	Standardized county codes (FIPS) Standardized MCD codes MCD name 8 digit code (combination of CO and MCD) <i>MCD 6 character abbreviation MCD description, e.g. Burns Township, Blain (Anoka Co. part) Old Metropolitan Council and Census 6 digit county-MCD code MN Department of Revenue MCD Code; e.g. 0300, 0004 MCD type. C= city, T = Twp, U = unorg. Code to sort alphabetically, e.g. "St." is sorted as "Saint" 1990 population for county-MCDs Viewshed ordinances (Y/N)</i>
	Counties (polygons)	Standardized county codes (FIPS) County name
	Watershed district boundaries (polygons)	<i>District codes</i>
	<i>Tax Increment Financing (TIF) districts (polygons)</i>	
	<i>Tax assessment zones (TAZ) (polygons)</i>	
	<i>Special Assessment Districts (polygons)</i>	
	<i>Soil and Water Conservation Districts (polygons)</i>	
	<i>Solid Waste Boundaries (polygons)</i>	
	<i>Emergency response (E911) jurisdictions (polygons)</i>	
<i>Ambulance service districts</i>		
<i>Post office area (polygons)</i>		
<i>Neighborhood/community boundaries (polygons)</i>		

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
	<i>Library Service District (polygons)</i>	
	<i>Hospital zones (polygons)</i>	
	<i>Indian Reservations (polygons)</i>	
	<i>Housing Authority (HRA) (polygons)</i>	
	<i>Joint Powers Organizations (polygons)</i>	
	<i>Transit zones (polygons)</i>	
	<i>Public Land Survey (lines, polygons)</i>	
	<i>Phone Cell Zones (polygons)</i>	
Street Addresses	Attributes of street centerlines, parcels, occupant data, mileposts, landmarks, public land survey, phone cell zones	
Street Addresses <i>(continued)</i>	<i>Map grid address (polygons)</i>	
	<i>Address within a complex (e.g. on a campus)</i>	
Land Use/ Development Plans	<p>Future land use (polygons) <i>Must overlay with parcel boundaries</i> <i>If using for water features, water feature data classes will need to have the same data specs as parcel boundaries.</i></p>	<p>Regional coding classification for future land use</p> <ul style="list-style-type: none"> <i>Natural area.</i> <i>Open Space</i> <ul style="list-style-type: none"> <i>Passive (OSP)</i> <i>Natural (OSN)</i> <i>Residential</i> <ul style="list-style-type: none"> <i>Single family</i> <i>Multi-family</i> <i>Commercial/Retail</i> <i>Industrial</i>
	<p>Comprehensive/development plan (polygons) <i>Must overlay with parcel boundaries</i></p>	Regional coding classification for future land use
Rights to property	<i>Easements (polygon/Lines)</i>	<p><i>Types of Easements</i></p> <ul style="list-style-type: none"> <i>Scenic</i> <i>Utility</i> <p><i>Type of utility easement</i></p> <ul style="list-style-type: none"> <i>Management Entity</i> <i>NSP</i>
	Road right-of-ways (polygons/lines)	Right of way holder
	<i>Additional information stored as attributes in the parcels database</i>	

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
Parcel Boundaries	Parcels (polygons)	Lot PIN/PID City/Township School district Watershed Tax Increment District Owner Taxpayer Lease Holder Property street address Taxpayer address Land value Building (improvements) value Total value Last (most recent) sale date Last (most recent) sale amount State tax class Tax exemption type Green acres status Agricultural preserve status Tax payment status (current, delinquent, forfeit) Tax capacity Property tax Special assessments Total taxes Building – year built Land area (square feet and acres) Building square footage

Appendix 5: Top 13 Business Information Needs and their associated data needs

Business Information Need	Features	Attributes
<p>Parcel Boundaries <i>(continued)</i></p>	<p>Parcels (polygons) <i>(continued)</i></p>	<p>Tillable acres Land use/type information <i>Legal description</i> <i>Tax PIN</i> <i>Survey type</i> <i>Location of records</i> <i>Date of survey</i> <i>Name of surveyor</i> <i>Preliminary plat name</i> <i>Description of parcel by differing authorities</i> <i>Recorded document number</i> <i>Occupation {renter, owner}</i> <i>Occupant name</i> <i>Occupant: tax paid (income)</i> <i>Occupant: number of children</i> <i>Occupant: ages of children</i> <i>Occupant: names of schools attended</i> <i>Type of ownership</i> <i>Deed restrictions</i> <i>Mortgaged {y/n}</i> <i>Owner: Federal Mortgage Deduction</i> <i>Encumbrances {y/n}</i> <i>Number of units</i> <i>Number of households</i> <i>Owner occupancy status</i> <i>Owner lives on pro p.</i> <i>Owner is landlord</i> <i>Contract holder</i> <i>Escrow agent</i> <i>Restrictive covenants</i> <i>Homestead names</i> <i>Relative homestead names</i> <i>Foreclosure Property {y/n}</i> <i>All documents filed against a property</i> <i>Commercial property occupant</i> <i>Set-aside Land Types</i> <i>CRP</i> <i>RIM</i> <i>Business use type</i> <i>Commercial use type</i> <i>Business Occupancy Rate</i> <i>Number of businesses</i> <i>Number of employees</i> <i>Occupancy by homeless</i> <i>Date first occupied</i> <i>On-site pending requirements</i> <i>TIF development area (Y/N)</i> <i>Number of off-street parking spaces</i></p>

Appendix 5: Top 13 Business Information Needs and their associated data needs

Business Information Need	Features	Attributes
Parcel Boundaries <i>(continued)</i>	Parcels (polygons) <i>(continued)</i>	<i>New development areas</i> <i>Land Restriction (Y/N)</i> <i>Type and duration of restriction</i> <i>Fire number address</i> <i>Street access: location</i> <i>Street access: name of street</i> <i>Street access: volume of traffic</i> <i>Access restrictions</i> <i>Trips generated</i> <i>Owner: disability status</i> <i>Utility company which provides services</i> <i>Location of utility access to unit</i> <i>Access to sewer and water</i> <i>Health Official information</i> <i>Index of housing affordability</i> <i>For sale</i> <i>Water frontage</i> <i>Postal municipality</i> <i>% of impervious materials</i> <i>Contaminated hazardous waste site: type</i> <i>Contaminated hazardous waste site: volume</i> <i>Contaminated hazardous waste site: fees paid</i> <i>Location of underground storage tanks</i>
	Buildings (polygons)	<i>Use type, particularly of multiple use buildings</i> <i>Code violations</i> <i>Size</i> <i>Age</i> <i>Construction materials</i> <i>Home style</i> <i># of rooms by type and size</i> <i># of inspection visits</i> <i>Date of last inspection</i>
	Control points (points)	<i>x-coord</i> <i>y-coord</i> <i>Description of the point (e.g. section corner, street intersection, benchmark)</i> <i>Type of monument</i> <i>Estimate of positional accuracy</i>
	Elevation contours (lines derived from existing grid)	<i>Elevation</i>
	Tax parcels (tabular)	<i>Street address, including unit number, etc.</i> <i>Owner</i> <i>Taxpayer</i> <i>Value</i> <i>Tax rate</i> <i>Classification</i> <i>Tax PIN</i>
Water Features	<i>Ground water flow model (lattice grid)</i>	<i>Depth to water</i> <i>Rate of flow</i>

Appendix 5: Top 13 Business Information Needs and their associated data needs

Business Information Need	Features	Attributes
Water Features <i>(continued)</i>	Aquifer (points)	<i>Aquifer name</i> <i>Formation</i> <i>Yield</i> <i>Capped</i> <i>Permeability</i> <i>Age of water</i> <i>Depth to water surface</i> <i>Rate of flow</i> <i>Depth of aquifer</i> <i>Type of material</i> <i>Sand</i> <i>Bedrock</i>
	Wells (points)	Depth to water Geologic parent material Thickness of geologic parent material pH Rating Susceptibility to pollution
	<i>National Wetlands Inventory (polygons)</i>	<i>Wetland class</i>
	<i>National Wetlands Inventory (points)</i>	<i>Wetland class</i>
	Lakes (polygons, lines)	<i>Name</i> <i>Regime</i> <i>100 year flood level</i> <i>Water level</i> <i>Daily change of water level</i> <i>Depth</i> <i>Shoreline usage</i> <i>Navigable (Y/N)</i>
	Wetlands (polygons, points) <i>Updated yearly</i> <i>High resolution</i>	<i>Wetland classification</i> <i>System</i> <i>Subsystem</i> <i>Regime</i> <i>Vegetation type</i> <i>Name</i> <i>100 year flood level</i> <i>Water level</i> <i>Daily change of water level</i>
	Rivers (polygons)	<i>Name</i> <i>100 year flood level</i> <i>Water level</i> <i>Daily change of water level</i> <i>Navigable (Y/N)</i>
	Streams (lines)	<i>Name</i> <i>Regime:</i> <i>Intermittent</i> <i>Perennial</i> <i>Navigable (Y/N)</i>
	Floodplains (polygons)	<i>Flood frequency</i>
	Flood impact areas (polygons)	

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
Water Features <i>(continued)</i>	Watershed boundaries (polygons)	<i>Major code</i> <i>Minor code</i>
	<i>Storm Ponds (polygons)</i>	
	<i>Watershed of an aquifers (polygons)</i>	<i>Aquifer Name</i> <i>Characteristics</i>
	<i>Ditches (lines)</i>	
	<i>Boat launches (points)</i>	
Existing Land Use	Existing Land Use (polygons) <i>Updated annually</i> <i>1:1 spatial relationship with parcel boundaries</i>	Land Use Code: <i>standardized across metro area</i> <i>Redevelopable land</i> <i>Real Estate Development (R/C)</i> <i>Natural Areas</i> <i>Vacant</i> <i>Vacant Land w/buildings</i> <i>Open space</i> <i>Gravel pits</i> <i>Abandoned Railroad Property</i> <i>Farms/Orchards</i> <i>Prime</i> <i>Not prime</i> <i>Commercial</i> <i>Retail</i> <i>Office</i> <i>Residential</i> <i>Cemeteries</i> <i>Population</i> <i>Remaining capacity</i> <i>Churches</i> <i>Park lands</i> <i>Public</i> <i>Private</i> <i>Buildable land (defined by percent slope and soil type)</i> <i>Succession history (past and current land use)</i> <i>Density</i> <i>Condition of Use - Improved or Vacant (as in vacant land)</i> <i>Occupancy: Occupied or vacant (as in vacant housing)</i> <i>Riparian/wetland/bluff sensitive lands</i>
Census Boundaries	<i>Census tracts (polygons)</i> <i>1:1 spatial relationship with parcel boundaries</i>	<i>Standardized MCD codes</i> <i>Standardized county codes</i> <i>Township</i> <i>Demographic data</i> <i>Annual spending/tract</i>
	<i>Census geography from neighboring counties, including WI (polygons)</i>	<i>Demographic data</i>

Appendix 5: Top 13 Business Information Needs and their associated data needs

Business Information Need	Features	Attributes
Census Boundaries <i>(continued)</i>	Census blocks (polygons) <i>Based on street centerlines</i> <i>Updated yearly.</i>	Block number Block group number Tract number <i>Standardized MCD codes</i> <i>Standardized county codes</i> <i>Township</i> <i># of persons in poverty</i> <i>Income Level</i> <i>Poverty Level</i> <i>Youth Demographics</i> <i>Vehicle ownership [how many per household]</i> <i>Housing density</i> <i>Population density</i> <i>Change of density from previous year.</i> <i># of children</i> <i>Disabled population distribution</i> <i>Address</i> <i>SES Index of heterogeneity</i> <i>Age of population</i> <i>Number of elderly</i> <i>Number of children</i> <i>Growth rate for children</i> <i>College Graduate (y/n)</i> <i>Technical College (y/n)</i> <i>Level of Education</i> <i>Economic Indicators</i> <i>Commuter Ridership</i> <i>Daytime population</i> <i>Index of Deprivation</i> <i>Crime rating</i> <i>Rent or own</i>
Where people live (locations of people, places, and things)	<i>Occupant data (tabular)</i> <i>Related to parcels or street centerlines by address</i>	<i>Street Address</i> <i>Postal Address</i> <i>Occupant</i> <i>Past occupant</i> <i>Phone number</i> <i>Secondary address (1st vs. 2nd floor, apt. no.)</i> <i>Fire number address</i>
	Landmarks (polygons)	Name Street address Some type of landmark classification code (e.g. golf courses, schools, shopping centers, parks)
	Landmarks (points)	Name Street address Some type of landmark classification code (e.g. golf courses, schools, shopping centers, parks)
	Landmarks (line)	Name <i>Street address</i>

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
Where people live (locations of people, places, and things) (continued)	Assessor's data (tabular) Related to parcels by PIN or address	PIN Owner Address Taxpayer address
	Homeless shelters and facilities (tabular) Related to parcels or street centerlines by address	Address
	Resident aliens/ immigrants (tabular) Related to parcels or street centerlines by address	Address Name
	Police information (tabular) Related to parcels or street centerlines by address	Gang address Type of gang Number of crimes at address Type of crimes
	EM Fields over 200 MGG (polygons)	
	High wire locations (lines)	
	Location of heavy material (equipment?) sites (sources?) (points)	
	Hazardous waste sites (points or polygons)	Generator Name
Land Regulations	Zoning (polygons) Must overlay with parcel boundaries	Zoning code Vacant or Occupied Shoreland Wellhead protection area Historical Currently rezoned areas
	MUSA Boundary (Met Council Coverage)	Inside/outside
	Re-zoning History (polygons) Must overlay with parcel boundaries	
Highway/Road Networks	Noise (points)	Measured noise volume (decibels)
	Noise (contours)	Interpolated noise volume (decibels)
	Railroads (centerlines)	Type: Railroad Type of crossing: Grade crossings
	Trails (lines)	Type: Trailway
	Parking lots/structures (polygons)	Name Ownership Type Fee Number of spaces
	People who park in the TAD garage in downtown Minneapolis for \$10/month (tabular)	Name Home address
	Pavement/curb (polygons/lines)	Condition Age
	Sewers (lines)	
	Water utilities (lines, points, polygons)	
	Electric utilities (lines, points, polygons))	
	Gas utilities (lines, points)	
	Telephone utilities (lines, points)	

Appendix 5: Top 13 Business Information Needs and their associated data needs

Business Information Need	Features	Attributes
Highway/ Road Networks <i>(continued)</i>	<i>Mile markers (points)</i>	<i>Mile Number</i>
	<i>Traffic signs (points)</i>	
	<i>Retaining walls (lines)</i>	
	<i>Culverts (lines)</i>	
	<i>Street signs (points)</i>	
	Streets (centerlines) <i>Should fall within county parcel data road rights-of-way</i>	Street Name Alias Address range Other address information (city, zip, etc.) Street Type <i>Highway</i> <i>Paved Street</i> <i>Gravel road</i> <i>Bridge</i> <i>Ramp</i> <i>Driveway</i> Direction Weight class Posted speed limit Distance in miles (segments) Ownership <i>Private</i> <i>Federal</i> <i>State</i> <i>County</i> Maintenance responsibility Prescriptive use Age (or Year Built) Road surface <i>Asphalt</i> <i>Cement</i> <i>Gravel</i> <i>Dirt</i> Condition Functional class Restriction class <i>Weight</i> <i>Width</i> <i>Height</i> Number of lanes Width Snowplow route <i>Schedule</i> Hazard index Travel time (by segment) Type class <i>One way</i> <i>Restricted turns</i>

Appendix 5: Top 13 Business Information Needs and their associated data needs		
Business Information Need	Features	Attributes
Highway/ Road Networks <i>(continued)</i>	Streets (centerlines) <i>Should fall within county parcel data road rights-of-way</i> <i>(continued)</i>	<i>Currency of updates</i> <i>Access control</i> <i>Non-passing zones</i> <i>Vertical grade</i> <i>Year graded</i> <i>Year paved</i> <i>Road log system</i> <i>Right-of-way width</i> <i>***See TLG dataset for others</i>
	<i>Guard rail (lines)</i>	
	<i>Road geometry (polygons)</i>	
Socio-Economic Characteristics of Areas	<i>Location of births (points)</i>	<i># of Births</i>
	<i>Other needs as attributes of census data, parcels</i>	
Parcel Identifiers	Attribute of parcels	

APPENDIX 6 NSDI FRAMEWORK FUNCTIONS AND TASKS, COMPARED TO FUNCTIONS ADOPTED AS APPROPRIATE FOR METROGIS

Appendix 6: NSDI Framework functions compared to MetroGIS functions		
Framework Theme	NSDI Suggested Tasks	Functions adopted as appropriate for MetroGIS (core function, unless otherwise noted) "Suggested" tasks have not been adopted or determined not appropriate
Executive Guidance	Provides vision and direction for framework development and has the ultimate responsibility for the framework's success:	Guides the development and implementation of MetroGIS (Policy Board)
	Developing a shared vision among stakeholders	Determine the interests to be served by MetroGIS. (Policy Board) Promote and endorse voluntary policies which foster coordination of GIS among the region's organizations. Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.
	Continual education and outreach	Identify GIS training and continuing education needs and encourage participation (Desirable) Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities Publish MetroGIS newsletter. Maintain MetroGIS world wide web site.
	Developing a strategic plan for the enterprise	
	Establishing organizational structures, operational environments, orderly communication methods, decision making, and other governance processes	Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS. Determine the appropriate mechanisms for development and implementation of MetroGIS.(Policy Board) Advise the Policy Board on matters concerning the operation and development of MetroGIS. (Coordinating Committee) Present the Coordinating Committee with plans, studies, and recommendations for action that address policy issues and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team)
	Developing and maintaining policy and funding support for the effort among senior executives and other influential parties	Promote collaborative funding of pilot projects that meet regional needs
	Policy development activities can educate executives about the implications of practices and rally support for changes	Represent core stakeholders (those with membership on the Board) and serve as liaisons with their respective policy bodies (Policy Board). Represent interests that are not core stakeholders but which will benefit from MetroGIS. (Policy Board) Review and adopt policy related to MetroGIS. (Policy Board)
		Advocate for MetroGIS needs and desires with state and federal policy makers.
	Providing a legal foundation for contracts, liability, and other issues	
Coordination	Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants:	
		Present the Coordinating Committee with plans, studies, and recommendations for action that address policy and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team) Perform such other duties as may be prescribed by the Board. (Coordinating Committee)

Appendix 6: NSDI Framework functions compared to MetroGIS functions		
Framework Theme	NSDI Suggested Tasks	Functions adopted as appropriate for MetroGIS (core function, unless otherwise noted) "Suggested" tasks have not been adopted or determined not appropriate
Coordination <i>(continued)</i>	Fostering cooperation and partnerships among organizations	Promote collaborative funding of pilot projects that meet regional needs Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS. Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities.
	Developing agreements and business practices that encourage participation	Facilitate data sharing agreements and licensing among MetroGIS stakeholders. Develop master contracts for regional projects when appropriate.
	Developing consensus on standards	Develop and endorse standards for data content, data documentation, and data management. Require standardized data content, data documentation and data management for regional datasets. Endorse standards for telecommunication protocol and networks.
	Implementing processes and incentives that encourage widespread participation	Promote and endorse voluntary policies that foster coordination of GIS among the region's organizations. Discuss issues related to design, implementation, and operations of MetroGIS. (Coordinating Committee) Discuss new trends and activities relevant to MetroGIS. (Coordinating Committee)
	Providing outreach and education	Identify GIS training and continuing education needs and encourage participation (Desirable) Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities. Publish MetroGIS newsletter. Maintain MetroGIS world wide web site. Provide for coordination and outreach with entities such as the Governor's Council on Geographic Information, LMIC, Mn/DOT, State Demographer, federal agencies, etc. (Coordinating Committee).
	Identify barriers to participation caused by organizations' policies and business practices, and develop alternatives	Undertake research to meet common regional needs
	Encouraging practices that provide for smooth operations	Provide an effective means of communication between the Policy Board, the Committee, and the advisory teams. (Coordinating Committee) Coordinate the work of the advisory teams. (Coordinating Committee)
	Creating business plans for framework development	
	Establishing priorities	Identify unmet GIS needs with regional significance and act on these needs
	Coordinating data access methods	Provide a directory of data within region and a mechanism for search and retrieval of data
	Coordinating data development	
	Working with organizations to avoid duplicating efforts	Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.
	Identifying data to be incorporated into the framework	Identify unmet GIS needs with regional significance and act on these needs
	Pooling available resources	Provide a repository of GIS human resources information (centralized job posting/position descriptions). (Desirable) Promote development and exchange of applications and procedures that serve GIS needs.

Appendix 6: NSDI Framework functions compared to MetroGIS functions		
Framework Theme	NSDI Suggested Tasks	Functions adopted as appropriate for MetroGIS (core function, unless otherwise noted) "Suggested" tasks have not been adopted or determined not appropriate
Coordination <i>(continued)</i>	Ensuring that data are produced for all geographic areas and themes	
	Mediating and resolving conflicting priorities and disputes among participants	
Data Access	Enables participants to obtain framework data:	
	Providing access to data and metadata	Provide for maintenance of Data Finder (suggested) Provide a directory of data within region and a mechanism for search and retrieval of data Present the Coordinating Committee with plans, studies, and recommendations for action that address data access issues and other tasks as may be assigned by the Coordinating Committee. (Technical Advisory Team)
	Product definition, packaging, and documentation	Require standardized data content, data documentation and data management for regional datasets. Endorse standards for telecommunication protocol and networks.
	Product and service promotion and advertising	Market MetroGIS data and products.
	Educating the community about how to obtain, use, and possibly contribute to the data	Identify GIS training and continuing education needs and encourage participation (Desirable) Market MetroGIS data and products.
	Distribution channel development	Market MetroGIS data and products.
		Ongoing coordination of the MN clearinghouse and Data Finder sites
	Participation in the National Geospatial Data Clearinghouse	
	Processing data requests and charges	
	Determining and providing needed data distribution formats	
	Product support	Provide technical assistance to participants to retrieve, translate, and use data (Desirable)
	Reporting and acting on users' concerns	Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee) <i>(Regional Dataset Custodian)</i> Provide staff to explain procedures, pending enhancements, etc. Produce a forum summary Provide a written statement of how suggested enhancements will be or should be addressed. Directing users to other resources Provide technical assistance to participants to retrieve, translate, and use data (Desirable)
	Collecting information useful for detecting trends among users	Undertake research to meet common regional needs
	Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products	Create and maintain datasets for MetroGIS based on identified priorities
Data Development, Maintenance, and Integration	Activities that create and update framework data:	
	Generating original data Field surveys Photogrammetric compilation Digitize maps Converting other records to digital data	Create and maintain datasets for MetroGIS based on identified priorities

Appendix 6: NSDI Framework functions compared to MetroGIS functions			
Framework Theme	NSDI Suggested Tasks	Functions adopted as appropriate for MetroGIS (core function, unless otherwise noted) "Suggested" tasks have not been adopted or determined not appropriate	
Data Development, Maintenance, and Integration <i>(continued)</i>	Revising original data Updating data Improving positional accuracy Increasing data density Adding aliases for attribute data	Create and maintain datasets for MetroGIS based on identified priorities	
	Merging spatial and attribute data from different sources	Create and maintain datasets for MetroGIS based on identified priorities Coordinating spatial and attribute data from different sources (suggested)	
	Documenting the data		
	Creating metadata	Fill gaps in metadata based on identified priorities	
	Reporting on quality		
	Evaluating the data		
	Quality control		
	Evaluating and selecting data for inclusion		
	Integrating the data	Create and maintain datasets for MetroGIS based on identified priorities	
	Horizontal integration (among jurisdictions)		
	Vertical Integration (among themes)		
	Data Management	Ensures the continued viability of framework data; ensures that the whole framework can be assembled from its parts:	
			Present the Coordinating Committee with plans, studies, and recommendations for action that address data content and data standards issues and other tasks as may be assigned by the Coordinating Committee. (Technical Advisory Team)
Maintaining data		Create and maintain datasets for MetroGIS based on identified priorities	
Ensuring data integrity and security			
Developing and evolving data definitions, designs, and models		Develop and endorse standards for data content, data documentation, and data management.	
Developing and evolving other technical specifications		Develop and endorse standards for data content, data documentation, and data management.	
Providing for data archive, backup, retrieval, and disaster recovery			
Monitoring and Response	Measures users' satisfaction with the framework and provides for market analysis:	Insure MetroGIS is meeting the needs of its core stakeholders (organizations represented on the Policy Board)	
		Present the Coordinating Committee with plans, studies, and recommendations for action that address policy and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team) Perform such other duties as may be prescribed by the Board. (Coordinating Committee)	
	Asses users' satisfaction with the framework (data form, ease of revision and integration with other data, currentness, positional and attribute accuracy, completeness, consistency, documentation, accessibility, charges)	Conduct Data User's Forums. <i>(endorsed by Coordinating Committee)</i> ***Regional custodian component under Data Access. Discuss Regional Dataset Custodian's summary and forward recommendations to Policy Board. Undertake research to meet common regional needs Measure users' satisfaction with MetroGIS (suggested) Assess users' satisfaction with regional datasets	
	Identify new needs	Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities.	

Appendix 6: NSDI Framework functions compared to MetroGIS functions		
Framework Theme	NSDI Suggested Tasks	Functions adopted as appropriate for MetroGIS (core function, unless otherwise noted) "Suggested" tasks have not been adopted or determined not appropriate
Monitoring and Response <i>(continued)</i>	Develop responses to users' concerns	
		Assess users' satisfaction with MetroGIS policies and objectives (suggested) Assess users' satisfaction with decision making process Assess users' satisfaction with opportunity for participation Assess users' agreement with policies and objectives Assess users' satisfaction with MetroGIS contract negotiation and administration
		Assess users' satisfaction with MetroGIS data delivery mechanism (suggest) Assess users' satisfaction with technical services Assess users' satisfaction with Data Finder Assess users' satisfaction with ftp site
		Assess users' satisfaction with MetroGIS outreach and communication (suggested) Assess users' satisfaction with <i>Coordinates</i> newsletter Assess users' satisfaction with WEB site Assess users' satisfaction with conferences Assess users' satisfaction with guest speakers Assess users' satisfaction with efforts to keep decision-makers informed about issues and opportunities Assess users' satisfaction with efforts to extend the program to other participants
	Market analysis	
	Identifying target markets and potential customers	Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities. Undertake research to meet common regional needs Analysis of potential customers (suggested)
	Identifying the current and potential size of markets, competition, and market trends and forecasts	Undertake research to meet common regional needs

APPENDIX 7 MetroGIS ROLES AND RESPONSIBILITIES MATRICES

The matrices on the following pages summarize the tasks that have been identified as appropriate to MetroGIS and the roles of the responsible MetroGIS entities with respect of those tasks.

7.1 MetroGIS Responsibilities Matrix Pertinent to All MetroGIS Activities

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in <i>Italics</i>)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior <i>administrators and decision makers with core stakeholder organizations</i> and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)		
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinag Committee (<i>Policy and Advisory Team</i>)		
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)		
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for MetroGIS development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.2 MetroGIS Data-Related Responsibilities Matrix: Data Finder

Components	Tasks Involved	Responsible MetroGIS Entity (<i>Advisor(s) in Italics</i>)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - <i>directing users to other resources</i> 	Coordinating Committee (<i>Technical Advisory Team</i>)	To be determined	Each organization that provides data to MetroGIS
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinag Committee (<i>Technical Advisory Team</i>)	To be determined	Each organization that provides data to MetroGIS
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	Coordinating Committee (<i>Technical Advisory Team</i>)	
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for MetroGIS development 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		

7.3 MetroGIS Data-Related Responsibilities: Highway/Road Networks and Street Address Ranges Dataset

Components	Tasks Involved	Responsible MetroGIS Entity <i>(Advisor(s) in Italics)</i>	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board <i>(Coordinating Committee and Policy Advisory Team)</i>		
Coordination	<ul style="list-style-type: none"> - fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee <i>(Technical Advisory Team)</i>	The Lawrence Group And Metropolitan Council	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee <i>(Technical Advisory Team)</i>	The Lawrence Group	The Lawrence Group with the voluntary assistance of each of the 7 counties
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee <i>(Technical Advisory Team)</i>	The Lawrence Group	The Lawrence Group will collect primary data from counties, US Census, and others
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / MetroGIS - providing for market analysis 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board <i>(Coordinating Committee & Policy Advisory Team)</i>	The Lawrence Group	

7.4 MetroGIS Data-Related Responsibilities Matrix: Regional Minor Civil Divisions and County Jurisdictional Boundaries Dataset

Components	Tasks Involved	Responsible MetroGIS Entity <i>(Advisor(s) in Italics)</i>	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board <i>(Coordinating Committee and Policy Advisory Team)</i>		
Coordination	<ul style="list-style-type: none"> - fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee <i>(Technical Advisory Team)</i>	Metropolitan Council	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee <i>(Technical Advisory Team)</i>	Metropolitan Council to compile a regional coverage	Each of the 7 counties will be responsible for coverage within their county
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee <i>(Technical Advisory Team)</i>	Metropolitan Council maintains and recompiles the regional dataset	Counties maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for MetroGIS development 	Policy Board <i>(Coordinating Committee & Policy Advisory Team)</i>		

7.5 MetroGIS Data-Related Responsibilities Matrix: Regional School District Jurisdictional Boundaries Dataset

Components	Tasks Involved	Responsible MetroGIS Entity <i>(Advisor(s) in Italics)</i>	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	To be determined	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	To be determined	Each of the 72 school districts will be responsible for coverage within their district
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	to be determined	School districts maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for MetroGIS development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

**7.6 MetroGIS Data-Related Responsibilities Matrix: Regional Watershed District
Jurisdictional Boundaries Dataset**

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board <i>(Coordinating Committee and Policy Advisory Team)</i>		
Coordination	<ul style="list-style-type: none"> - fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee <i>(Technical Advisory Team)</i>	To be determined	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee <i>(Technical Advisory Team)</i>	To be determined	Each of the watersheds will be responsible for coverage within their district.
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee <i>(Technical Advisory Team)</i>	To be determined	Watersheds maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee <i>(Policy Advisory Team)</i>		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for MetroGIS development 	Policy Board <i>(Coordinating Committee & Policy Advisory Team)</i>		

7.7 MetroGIS Data-Related Responsibilities Matrix: Regional Existing Land Use Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Each city will likely be responsible for developing the primary data
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Cities likely maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.8 MetroGIS Data-Related Responsibilities Matrix: Regional Land Use Plans Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Each city will likely be responsible for developing the primary data
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Cities likely maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.9 MetroGIS Data-Related Responsibilities Matrix: Regional Parcels Boundaries and Parcel Identifiers Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges <li style="text-align: center;">- determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Each of the 7 counties will likely be responsible for coverage within their county
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Counties likely maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.10 MetroGIS Data-Related Responsibilities Matrix: Regional Land Regulations Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Each city will likely be responsible for developing the primary data
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Cities likely maintain primary data sources
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.8 MetroGIS Data-Related Responsibilities Matrix: Socio-Economic Characteristics of Areas Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	Insight Mapping with the voluntary assistance of the 7 counties and cities.
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	The Lawrence Group will collect primary data from counties, cities, US Census, and others
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

7.8 MetroGIS Data-Related Responsibilities Matrix: Water Features Dataset

Components	Tasks Involved	Responsible MetroGIS Entity (Advisor(s) in Italics)	Custodian (Regional Dataset)	Custodian (Primary Data Source)
Executive Guidance	<ul style="list-style-type: none"> - developing a shared vision among stakeholders - developing a strategic plan for the enterprise - establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes - developing and maintaining policy and funding support for the effort among senior executives and other influential parties - providing a legal foundation for contracts, liability, other issues 	Policy Board (<i>Coordinating Committee and Policy Advisory Team</i>)		
Coordination	<ul style="list-style-type: none"> -fostering cooperation and partnerships among organizations - implementing processes and incentives that encourage widespread participation - encouraging practices that provide for smooth operations - Mediating and resolving conflicting priorities and disputes among participants 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Data Access	<ul style="list-style-type: none"> - providing access to data and metadata - processing data requests and charges - determining and providing needed data distribution formats - reporting and acting on users' concerns - directing users to other resources 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	
Data Development, Maintenance & Integration	<ul style="list-style-type: none"> - generating original data - revising original data - merging <i>and coordinating</i> spatial and attribute data from different sources - documenting the data - evaluating the data - integrating the data 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	The MCD with the voluntary assistance of each of the 7 counties
Data Management	<ul style="list-style-type: none"> - maintaining data - ensuring data integrity and security - developing and evolving data definitions, designs, and models - developing and evolving other technical specifications - providing for data archive, backup, retrieval, and disaster recovery 	Coordinating Committee (<i>Technical Advisory Team</i>)	<i>To be determined</i>	The MCD will collect primary data from counties, US Census, and others
Monitoring and Response	<ul style="list-style-type: none"> - measure users' satisfaction with the framework / <i>MetroGIS</i> - providing for market analysis 	Coordinating Committee (<i>Policy Advisory Team</i>)		
Resource Management	<ul style="list-style-type: none"> - estimating income and expenses - identifying, obtaining, and allocating resources - providing logistical support for framework development 	Policy Board (<i>Coordinating Committee & Policy Advisory Team</i>)		

APPENDIX 8 DATA READINESS ASSESSMENTS

Data readiness tables were prepared for the seven metro counties and used as one source of input for cost estimations found in section 10. Additional background information on current county datasets included documentation that was submitted to MetroGIS to be included in the data sharing agreements. Please note that not all counties maintain all datasets.

8.1 Anoka County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries (MCD and County)	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>								<i>Cities Maintain</i>		
Likely Topological Errors	Yes Hand Digitized	Yes - Made to follow Parcel Boundaries	Yes - made to follow Parcel Boundaries	See Parcels	See Parcels	Made to follow our parcel boundaries	See Parcels		In pretty good shape	Digitized off half section maps
Software Format	Shape File	Shape File	Shape File	Shape File	Shape File	Shape File	Shape File		DBF, MDB, txt	Shape File
Projection, Units, Datum	County Project, Feet, NAD27	County Project, Feet, NAD27	County Project, Feet, NAD27	County Project, Feet, NAD27	County Project, Feet, NAD27	County Project, Feet, NAD27	County Project, Feet, NAD27			County Project, Feet, NAD27
<i>Attributes</i>										
Feature Attributes	1	2	3	4		5				6
Completeness Assessment	99%	100%	99%	99%	99%	100%	99%			99%
Value Consistency	Very consistent	Very consistent	Very consistent	Very consistent	Very consistent	Very consistent	Very consistent		Very consistent	
<i>General</i>										
Metadata Completeness	100%	100%	100%	100%	100%		100%		100%	100%
Data Currency	45 days	45 days	45 days	45 days	45 days		45 days		45 days	45 days

Anoka County Con't

Attribute Data			
	Parcel Identifiers	Socioeconomic Characteristics of Areas	Where People Live
<i>Spatial Features</i>			
Likely Topological Errors	Very few	From outside agencies	Some, not many errors
Software Format	Dbf, mdb, txt	Dbf, mdb, txt	Dbf, mdb, txt
Projection, Units, Datum	N/A	N/A	N/A
<i>Attributes</i>			
Feature Attributes	100%	All that are available from the Census	Pretty good, 98%
Completeness Assessment	Very	Varies	Varies
Value Consistency			
<i>General</i>			
Metadata Completeness	Moderate	N/A	N/A
Data Currency	45 days	Varies	45 days

Anoka County Notes

AREA, PERIMETER, ANNOK_ID, FLAG, SECTION, TOWNSHIP, RANGE, QTR_QTR, SUFFIX, PIN, CITY, MCD, AHNUMB, ABOX, APREFIX(address prefix), ANAME (street name), ATYPE(street type), ASUFX(street suffix), ADDRESS (full address line), ACITY(address city), ASTATE(address state), AZIP(address zip), ACRRT(address carrier route), ASLUSH (sluch code field for address standardization software), COVNAME(coverage name), CLASS, CFCC, CENTRACT, CENBLOCK, PRECINCT, COMMDIST(commissioner), REPDIST(representative), SCHDIST(school district), PRCT(precinct name), ELEMENT(elementary school of parcel centroid), MIDDLE(middle school of parcel centroid), HIGHSCH(highschool of parcel centroid), ZONING (zoning code), ZONE (zoning name), WATERDIST(watershed), ZIP (5 digit zip code for indexing database) X_COORD, Y_COORD

AREA, PERIMETER, PLUM_ID, COMMUNITY(community name), FLAG, SYMBOL (not currently used), ADDRESS (city hall address), ACITY (City Hall address city), ZIP (City Hall zip code), PHONE (City Hall phone number), FAX (City Hall fax number), MCD, SQ_MILES, ACRES, *NUMEROUS CENSUS DATA.

FNODE, TNODE, LPOLY, RPOLY, LENGTH(calculated length of segment in feet), PREFIX(common street name prefix), NAME(common street name), TYPE(street name type), SUFFIX(street name suffix), WHOLE_NAME(entire concatenated street

name), FUNDING(agency with jurisdiction), RDNUMB(road number), ALIAS(alternate road name), FLAG, FRANGE(from address range - not currently used), TRANGE(to address range - not currently used)

Taxable land use codes from the assessor's database.

AREA, PERIMETER, CENSUS_ID, TRACT(census tract number), BLOCK(census block number), PRECINCT (precinct number), COMMDIST(commissioner district number), REPDIST(representative district number), TRT(census tract number without leading zeros), BLKGRP (census block group number)

AREA, PERIMETER, LAKE_ID, NAME(name of lake), TYPE, CITY(City where most of lake resides), WET_NUMB (DNR wetland number), WET_NAME(DNR wetland name), SECTION, TOWNSHIP, RANGE

8.2 Carver County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>								<i>Cities Maintain</i>		
Likely Topological Errors	1	9	15	19	19	Census Bureau	27		15	30
Software Format	2	10	10	10	10	10	10		10	10
Projection, Units, Datum	3	3	3	3	3	3	3		3	3
<i>Attributes</i>										
Feature Attributes	4	11	16	20	20	24	28		16	31
Completeness Assessment	5	12(a)	12 (a & b)	21	21	?	29		12 (a & b)	12(a)
Value Consistency	6	6	6	6	6	6	6		6	6
<i>General</i>										
Metadata Completeness	7	13	17	22	22	25	7		17	7
Data Currency	8	14	18	23	23	26	8		18	32

Carver County Con't

Attribute Data			
	Parcel Identifiers	Socioeconomic Characteristics of areas	Where People Live
Spatial Features		<i>Census Bureau</i>	<i>County doesn't maintain</i>
Likely Topological Errors	5		
Software Format	2		
Projection, Units, Datum	3		
Attributes			
Feature Attributes	4		
Completeness Assessment	5		
Value Consistency	6		
General			
Metadata Completeness	7		
Data Currency	8		

Carver County Notes

- Errors are most likely on some parcels where the legal descriptions overlap. The legal description field used in the parcel coverage is actually a shortened and condensed TAX description and by no means should be used as a LEGAL description of said parcels.
- Arc/INFO coverages, ArcView shapefiles and AutoCad v.14 dxf files available
- Projected in UTM (Carver County Coordinates upon request), Meters (Feet), NAD83(86)
- PID, Sname (Last Name, First Name), House_No, Street, Name (Owner Name), Acres, Tacres(Tillable Acres),Agpres (Ag preserve), Sdist (School Dist.), TIF, TDIST (Taxing District), Yearblt, Sq_ft, Use, Ccode (Assessors land use code), TWP, RNG, SEC, Plat (Plat #) Block, Lot, Name1 (Owner name 2nd field), Add1, Add2, Add3, City, State, Zip, Zip4, Legal (Partial Tax Legal), Sitecity, Sitezip, Taxcap, Emvamount, Emvland, Emvbldg, Emvbldgsit, Emvhsg, Emvotherbl, Emvmachine, Emvgreenac, Emvtillabl, Emvwetland, Emvnatprar, Type (type of other owner interest)
- PID missing or mislabeled in 900 of the 22,000 parcels completed. If PID is correct... all other fields are then placed in parcel record.
- All fields are either purely alphanumeric (string) or Numeric
- Metadata is 50% complete using the Datalogr.
- Started in 1997 with COGOed AutoCad dxf files which were then converted into ArcINFO coverages with DXFARC command. The County has been updating them as soon as they are recorded (for the most part). Eventually Carver County will be updating their parcel coverage every month. The County has recently added a date field in ArcINfO to keep track of the dates that they were converted into

ArcINFO coverages, this should also be suitable for keeping a date record of the updates.

9. Jurisdictional boundaries that County uses are either from the DNR (watershed boundaries) and should be accurate. Political watershed boundaries might contain some topographical errors. City voting districts are obtained from cities in the county and are considered accurate.
10. Software format: ArcInfo coverages and ArcView shapefiles.
11. Watersheds: Area, Perimeter(meters), wtrshd#, wtrshd_id, sub1, sub2, sub3, Name, Acres, Perfeet. Voting districts: Area, Perimeter(meters), Vtd98, Vtd_id, County, Mcd, Name, Mcdcode, Vtdcode, Pcode, Win98gov, Municipal, Dis, Primary
12. (a) Complete. (b) Although new County created Centerline is in process of being created and then will be shipped to TLG to be addressed.
13. MetaData in hardcopy
14. DNR files are considered accurate. County will get new updates when they are available. City Voting Districts are done by the city and may change year to year. County tries to get the most recent data available.
15. Errors are very likely!! We are in the process of creating our own centerlines and will send them to TLG for addressing. Some address ranges are not included in centerline coverage.
16. Attributes: Fnode, Tnode, Lpoly, Rpoly, Length, Tlgrds, Tlgrds_id, L_f_add, R_t_add, streetall, F_class, Alt_nam1, Alt_nam2, F_xstreet, T_xstreet, Cencty, Cenmun_l, Cenmun_r, Cencty_r, Fips5_l, fips5_r, Zip5_l, Zip5_r, Cityleft, cityright, Predir, streetname, Type, sufdir, Ctyabrv, Ctyabrv, speed_lim, Oneway, Highwat_nu, tlgid
17. Present Centerline used is from TLG and has Metadata.
18. TLG updates centerline every 3 months.
19. Topological errors are unlikely. Has been in use for several years now. Used the Metcouncils Landuse map and have updated the coverage in 1997 off of DOQ's from the met Council.
20. Fields in Land Use Coverage include: Area, Perimeter (meters), draft_, draft_id, Luse90, Acres, Perfeet (perimeter in feet)
21. Original Land use was done by the Met Council in 1990, the Landuse 97 was created with the Met Council coverage of 1990 as the basemap and updated using the DOQ's from 1997. LandUse 2020 was projected and is considered best guess.
22. Metadata is available in hardcopy form. Not as thorough as the Met Councils Metadata requirements.
23. Luse97 was created in 1997 using MetCouncils 1990 landuse coverage as a base and then updating coverage with 1997 DOQ's from the Met Council.
24. Area, Perimeter (meters), Censusblks, Censusblks, Poly_, Subclass, Subclass_, Rings_ok, Rings_nok, Record_id, State90, County90, tract90, Block90, Sumlev, Mcd90, Place90, Vtd90, Blck
25. Yes, Large hardcopy book
26. Census boundaries from 1990
27. Topological errors should be at a minimum
28. Included in full Legal Description of parcel. Should be requested from county!!
29. Should be complete. Parcel data is updated monthly.
30. Some topological errors likely. Some lakes have several names. County is trying to come up with a agreed upon name, however, is not a priority.
31. Area, Perimeter (meters), Lakes_, Lakes_id, name, Acres, Type.
32. Lake coverage was created in 4/1999 and will only be updated when lake names are changed or physical change occurs.

8.3 Dakota County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>				26	24		27	25		
Likely Topological Errors	1	1	1			1			1	1
Software Format	2,3,4,5 & 6	7	5 & 7			7			7	2,3,4,5,6 & 7
Projection, Units, Datum	8	8	8			8			8	8
<i>Attributes</i>										
Feature Attributes	9	19	20			21			22	23
Completeness Assessment	10	10	10			10			10	10
Value Consistency	11	11	11			11			11	11
<i>General</i>										
Metadata Completeness	12	12	12			12			12	12
Data Currency	13	14	15			16			17	18

Dakota County Notes

1. No topological errors are expected
2. ARC/INFO coverages by section
3. ARC/INFO coverages by extracted area
4. ARC/INFO coverage for entire County
5. DXF file format by extracted area
6. ArcView shapefiles for entire County
7. ArcView shapefiles by extracted area.
8. Dakota County Coordinates, Feet, NAD 83
9. Feature, PIN
10. County is complete
11. Occasional wrong value entered
12. Metadata written
13. Parcels are maintained on a weekly basis
14. Jurisdictional boundaries are changed with annexations – updated from parcels.
15. County Highway network is updated when projects require it - about once a year.
16. Census Boundaries are updated with census information - every 10 years.
17. Street addresses are updated quarterly
18. Water features are updated with aerial photography. We fly the most changed sections in the spring.
19. Cityname, Dccode, Fipscode, and Symbol.
20. Milepost system as used by Dakota County Highway Department in conjunction with MNDOT
21. Census Block, Tract
22. Street_nam, L_f_add, R_f_add, L_t_add, R_t_add, Predir, Street, Typec, Sufdir, Flag, Mile, Int, Old_id, F_class, Alt_nam1, Alt_nam2, Cenmun_l, Cenmun_r, Cencity_l, Cencity_r, Feature, Common, Co_rd, Msas, Us, State, Fed, Leg, Func, Juri, Std, Plat, Dak_func, Dak_func98, Ovrloop, Esn_l, Esn_r
23. Feature
24. The Dakota County Assessor's Office has an existing use code assigned to parcels. This is a field on the parcel shape file.
25. We have zoning as a separate layer: city and township zoning differ in format, comprehensive use plans are currently under review, Ag Preserve and Green Acres are fields on the parcel shape file, well-head protection areas are derived in the Environmental Management Department, Shoreland zoning is a GIS application in our Office of Planning. It utilizes the FEMA floodplane mapping and other datasets.
26. Comprehensive use plans are under review. We have most of the old ones for the major cities in the County. This is a separate layer.
27. Most of these items are fields in the parcel shape file.

8.4 Hennepin County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>				<i>County Surveyor doesn't maintain</i>	<i>County Surveyor doesn't maintain</i>	<i>County Surveyor doesn't maintain</i>	<i>County Surveyor doesn't maintain</i>	<i>County Surveyor doesn't maintain</i>	16	
Likely Topological Errors	1	8	12						17	19,20
Software Format	2	2	2						2	2
Projection, Units, Datum	3	3	3						3	3
<i>Attributes</i>										
Feature Attributes	4	9	13						16	9
Completeness Assessment	5	9	15						17	9
Value Consistency	5	9	15						17	9
<i>General</i>										
Metadata Completeness	6	10	10						10	10
Data Currency	7	11	14						14,18	19

Data Readiness Assessment Cont'

Attribute Data			
	Parcel Identifies	Socioeconomic Characteristics of areas	Where People Live
<i>Spatial Features</i>		<i>County Surveyor doesn't maintain.</i>	<i>County Surveyor doesn't maintain.</i>
Likely Topological Errors	1		
Software Format	2		
Projection, Units, Datum	3		
<i>Attributes</i>			
Feature Attributes	4		
Completeness Assessment	5		
Value Consistency	5		
<i>General</i>			
Metadata Completeness	10		
Data Currency	11		

Hennepin County Notes

1. Errors likely further from section corners. Boundaries digitized from ½ section map mylars. There is 2-4' accuracy at section corners. County has begun a long term project to update parcel boundaries using COGO, data from deeds and field data. Three townships out of 40 are completed.
2. MicroStation™ MGE files in .dgn format
3. Stateplane, Survey Feet, Nad27; the updated dataset will be adjusted to Nad83
4. PID, section,town,range,qq_suffix,munic code, munic name,sewer_dist, addition no,school_dist,watershed,owner_name, mkt_val_200 tax total,tif_project_no,property_status,earliest_delq_yr,forfeit_land,acreage_qty,house_no,frac_house_no,street_name,condo_no,mailing_munic_cd, mailing_munic_nm,zip_code,exempt_cd,agri_ind1,hmstd_cd,property_type_cd,est_land_mkt_val,est_bldg_mkt_val,est_mach_mkt_val,est_tot_mkt_val.
5. Boundary relationship to attributes is an issue. There is a discrepancy between the newly assigned pid to the parcel at the time the plat is being files and the relationship to the current tax year in the attribute file for tax purposes.

6. Hennepin County is currently using their own form for metadata. Metadata is complete for feature names, layer name, projection, format of file and format of attributes linked to the spatial information. The County has plans to switch in the future to Data Logger.
7. Current within two weeks from the time a new plat is filed.
8. Jurisdictional Boundaries were created from legal descriptions. Accuracy level is 3-5' from centerline or other physical feature. Likely errors within water features. Arbitrary lines are extended into water features to a common point for purposes of closing polygons.
9. No attributes
10. No Metadata
11. Data is updated within two weeks of annexation.
12. As platted and filed.
13. Street Name
14. Data is updated within two weeks of new plat.
15. Data inaccuracies may occur in the following two situations: 1. Data is input as a road is platted and in some cases the road doesn't get built, but is still captured in the digital dataset. If the County finds out through the dispatch unit that a road doesn't exist, but is still showing up in the dataset a dummy attribute is assigned to the road. A city would have to vacate a platted street in order to eliminate the line from the digital file. 2. In cases where a road is owned by a government entity, but not dedicated as a right of way, an existing road won't be included in the digital dataset.
16. Street addresses are attached to parcels. The county is doing a project for the Sheriff's dispatching unit to add addresses to intersection points and along the centerlines. County plans are to limit the use of this dataset to the Sheriff's office.
17. Errors are unlikely in the addresses attached to the parcel database. The auditor supplies the addresses and they are checked against the current voter registration list.
18. If a parcel isn't current for the current tax payable year (yr. 1999) , the address will not be available.
19. Water boundaries were originally digitized off the half section maps based on 1950 aerial photos. Boundaries were adjusted to the 1994 aerials. The original high water mark worked for unplatted properties, but was not appropriate for platted properties.
20. Horizontal accuracy for major water bodies is +/- 5 ft. Small ponds are not shown.

8.5 Ramsey County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
Spatial Features				<i>Cities Maintain</i>		<i>Taxation</i>	<i>Many</i>	<i>Cities Maintain</i>	<i>Cities Maintain</i>	<i>DNR</i>
Likely Topological Errors	No	No	Yes		Yes					No
Software Format	ArcInfo	ArcInfo	ArcInfo		Oracle					ArcInfo
Projection, Units, Datum	NAD83 County	NAD83 County	NAD83 County		N/A					NAD83 County
Attributes										
Feature Attributes	1	Area Perimeter City Community	2		3					
Completeness Assessment	None	None	None		None					None
Value Consistency	None	None	None		None					None
General										
Metadata Completeness	In Progress	None	In Progress		In progress					In Progress
Data Currency	To-date	To-date	To-date		2 months					1985 & 96 aerials

Ramsey County

Attribute Data			
	Parcel Identifies	Socioeconomic Characteristics of areas	Where People Live
Spatial Features		<i>Census Bureau</i>	<i>N/A</i>
Likely Topological Errors	No		
Software Format	ArcInfo		
Projection, Units, Datum	NAD83 County		
Attributes			
Feature Attributes	4		
Completeness Assessment	None		
Value Consistency	None		
General			
Metadata Completeness	In progress		
Data Currency	To date		

Ramsey County Notes

1. ALLEYLI(alley line), ALLEYLIC(computed alley line), CORW(county right of way(ROW)), CORWC(computed county ROW), COSARW(county state aid highway ROW), COSARWC(computed county state aid highway ROW), EASEMENT(general easement line), EASEMENTC(computed easement line),FEDRW(federal right of way), FEDRWC(computed federal ROW) ,LAKELI(lake line from half sections), MUNRW(municipal ROW), MUNRWC(computed municipal ROW), RIVERLI(river line from half sections), RRRW(railroad ROW), RRRWC(computed railroad ROW), SIDELOT(plat boundary), SIDELOTC(computed plat boundary), SIDELOTB(sidelot line bold), SIDELOTBC(computed sidelot line bold), STRW(state ROW), STRWC(computed state ROW), TAXLOT(property line-tax purposes), TAXLOTTC(computed property line)
2. C-LCO(county centerlines(C/L)),C-LCOC(computed county C/L),C-LCSAH(county state aid highway C/L),C-LCSAHC(computed county state aid highway C/L),C-LFED(federal C/L),C-LFEDC(computed federal C/L),C-LMUN(municipal C/L),C-LMUNC(computed municipal C/L),C-LST(state C/L),C-LSTC(computed state C/L)
3. Use code in parcel attribute database.
4. Parcel Identification Number(PIN), municipality code, owner information, tax payer information, property information, street code, school district, watershed district code, sewer district code county commissioner district code, city council district code.

8.6 Scott County

Numbers in cells refer to notes, which begin on the following page.

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries MCD	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>			<i>The Lawrence Group (TLG)</i>	<i>Not in GIS</i>		<i>Census Bureau</i>		<i>Cities Maintain</i>	<i>TLG Maintains</i>	<i>DNR Maintains</i>
Likely Topological Errors	1	9			1		1			
Software Format	2	2			2		2			
Projection, Units, Datum	3	3			2		2			
<i>Attributes</i>										
Feature Attributes	4	10								
Completeness Assessment	5	10								
Value Consistency	6	11								
<i>General</i>										
Metadata Completeness	7	12								
Data Currency	8	13								

Scott County

Attribute Data			
	Parcel Identifiers	Socioeconomic Characteristics of areas	Where People Live
<i>Spatial Features</i>		<i>Census Bureau</i>	<i>N/A</i>
Likely Topological Errors	1		
Software Format	1		
Projection, Units, Datum	1		
<i>Attributes</i>			
Feature Attributes	11		
Completeness Assessment	13		
Value Consistency	14		
<i>General</i>			
Metadata Completeness	15		
Data Currency	1		

Scott County Notes

- Errors likely at township lines – Digitized ½ section maps. 1/2 sections edge-matched and map-joined into sections. Sections edge matched and map-joined into townships and split into Minor Civil Divisions (MCD). Townships not edge-matched or joined yet.
- Arc/Info coverages by MCD. Tiled sytem, not a total county coverage.
- Scott County Coordinates, feet, NAD83
- PID – Can also be joined with Assessor tax database.
- PID – 90% complete – currently verifying PID’s.
- Some fields not complete in tax database.
- No metadata at this time.
- New plats entered using cogo with 6-8 weeks of filing.
- Jurisdictional boundaries completed from parcel data.
- Will be adding attribute fields identified by MetroGIS guidelines.
- No metadata at this time.
- Boundaries updated at time of changes.
- Can be linked to Assessor tax database.
- PID’s 90% complete – Currently verifying PID’s
- Some fields not complete in Assessor tax database.

8.7 Washington County

Spatial Features & Attribute Data										
	Parcel Boundaries	Jurisdictional Boundaries	Highway/Road Networks	Land Use Plans	Land Use, Existing	Census Boundaries	Rights to Property	Land Regulations	Street Addresses	Water Features
<i>Spatial Features</i>			<i>The Lawrence Group (TLG)</i>	7	7	<i>Census Bureau</i>	<i>County doesn't maintain</i>	<i>County doesn't maintain</i>	<i>The Lawrence Group (TLG)</i>	
Likely Topological Errors	1									8
Software Format	2	2								2
Projection, Units, Datum	3	3								3
ATTRIBUTES										
Feature Attributes	4									9
Completeness Assessment	100%									75%
Value Consistency	5									5
GENERAL										
Metadata Completeness	100%									100%
Data Currency	6									Current as of June, 1997

Attribute Data			
	Parcel Identifies	Socioeconomic Characteristics of areas	Where People Live
<i>Spatial Features</i>		<i>Census Bureau</i>	<i>County doesn't maintain.</i>
Likely Topological Errors	1		
Software Format	2		
Projection, Units, Datum	3		
<i>Attributes</i>			
Feature Attributes	4		
Completeness Assessment	100%		
Value Consistency	5		
<i>General</i>			
Metadata Completeness	100%		
Data Currency	6		

Washington County Notes

21. Digitized features outside areas of high vertical relief are within 23 feet horizontal accuracy. Digitized areas within high vertical relief tested 120 feet horizontal accuracy. Most features were generated with COGO with a 1.3' horizontal accuracy.
22. Arc/Info, ArcView shapefiles .E00, DXF, DWG formats
23. Washington County Coordinates, NAD83
24. Layers include parcel lines, parcel geocode PIN (13 digit code to link to assessor's database), parcel dimensions, subdivision plat boundaries, road centerlines, ROW, easements +20 ft. in width, railroads, lakes, wetlands, rivers and streams.

25. Automated procedures were developed to test for attribute accuracy and value consistency. Standards adhere to the Washington County Automated Land Information System Manual of Standards and Procedures.
26. Data is current to 30 days from recording in county record system. Updates are monthly.
27. Property use for tax purposes.
28. Water features were obtained by digitizing water level from rectified 1" = 200' aerial photography. Accuracy is approximately 10-20 ft. Water boundaries include all DNR protected lakes, rivers, creeks and wetlands. Lakes and rivers are cut off at the county boundary.
29. Type of water feature.

8.8 Survey Tool for a Regional Data Set Custodian

Name:

Organization:

Position:

Data Set:

MetroGIS Framework Components

Data Access

Data Maintenance & Integration

Data Management

Resource Management

Monitoring and Response

Data Access

1. Did you develop any product definitions (ie. information about coding standards) for the application; time and FTE for product?
2. Did you educate the community about how to use, obtain and provide information on how to contribute data for the project; time and FTE for costs associated?
3. Do you process data requests? Charge for this service?
4. Have you responded to the customer(users) needs for generalized data and customized data for the project? (I.e. real estate information)
5. Do you provide the service of directing users to other resources for information about the dataset or other resources involved with uses of the dataset?

Data Development Maintenance & Integration

1. Describe the tasks that were needed to develop each of the specified datasets.
2. How many hours and people were allocated to perform each task described above?
3. What tasks do you perform to maintain the regional dataset? How much time do these tasks take? What skills are required?

Data Management

1. Were there any data standards or guidelines developed or evolved for definitions, designs or models? Sources of these provided to users and or primary dataset custodians?

Resource Management

1. Time/FTE spent on identifying, obtaining, and allocating resources? Project Management Support including funding, data, technology, and people.
2. Was there any documentation or time spent on estimating income and expenses for the dataset?

Monitoring and Response

1. Do you solicit and respond to user assessments? If yes, have you compiled and evaluated the assessments?

8.9 Survey Tool for a Primary Data Set Custodian

The Fair-Share Financial Model Team is responsible for gathering information from primary and regional GIS data custodians to develop cost profiles for input into a cost model. Counties have been identified as primary data custodians for parcel and jurisdictional boundary information. Any input the counties have to offer to document the costs that may be associated with primary custodianship within a data-sharing environment, the nature of your sharable data, and your relationship with MetroGIS will be greatly appreciated by the team.

Metadata

1. Do you create metadata for your own internal business needs?
2. Would you use Datalogger if you were not a participant of MetroGIS?

Data Access

1. Do you currently maintain an FTP site?

If yes, what kind of bandwidth do you have from your FTP server to the internet?

Does your FTP server have the capacity to store and serve the data you might share with MetroGIS regional custodians?

What method(s) of data transfer does the county employ (tape, CD, FTP, etc.)?

2. What is the incremental cost for current data transfers to other governmental organizations?
3. Are the data transfers a requirement of participation in MetroGIS or would you be transferring the data anyway?
4. If you were going to sell your data, how would you price it? i.e. "we would probably charge by the parcel and charge private parties, but not other government units," or "we would charge \$1 per parcel to anyone except cities within our county."
5. Please estimate the number of FTEs it would take to fulfill a data transfer request from the MetroGIS regional dataset custodian for parcels and jurisdictional boundaries.

Dataset	FTE	Level of Expertise	Frequency
Parcels			
Jurisdictional Boundaries			

Data Maintenance

1. Do you currently notify the jurisdictional boundaries regional data custodian when changes have been made to the county’s data and provide them with the revised dataset? How many FTE are required and how often do you provide revisions?

FTE	Level of Expertise	Frequency

2. Do you have any insights you can share with us about the tasks, costs (in FTE), and level of expertise you think will be required by the regional dataset custodians for integration of your parcel data with the other regional datasets? With the assumption the following standards would be in place.

Attributes: Unique Parcel Identification
Projection Parameters: UTM, meters, NAD83

Data Sharing

1. Is the county a member of a GIS data cooperative outside MetroGIS? If yes, would you describe how the cooperative functions?

Data Sharing Agreement

1. Have you fulfilled your data sharing agreement with MetroGIS ?
2. Are the County data profiles included in the data sharing agreements current? If not, what is different?

Perceived Benefits/Costs

1. Please list all perceived benefits the County derives from participating in MetroGIS ?
2. Please list all perceived costs to the County for participation in MetroGIS.

APPENDIX 9 TASKS, RESPONSIBILITIES, AND COSTS MATRICES

The matrices on the next page summarize the information obtained from interviews that was used as a basis for the cost estimates. Costs are estimated as annual labor costs.

9.1 Tasks, Responsibilities, and Costs, MetroGIS: Pertinent to All MetroGIS Activities

This table describes specific tasks expected of MetroGIS entities for maintaining the ongoing operation of MetroGIS.

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Executive Guidance <i>Guides the development and implementation of MetroGIS (Policy Board)</i>	Developing a shared vision among stakeholders	<p><i>Determine the interests to be served by MetroGIS</i></p> <p><i>Promote and endorse voluntary policies which foster coordination of GIS among the region's organizations</i></p> <p><i>Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.- establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes</i></p> <p>Continual education and outreach</p> <ul style="list-style-type: none"> - <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> - <i>Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities</i> - <i>Publish MetroGIS newsletter.</i> - <i>Maintain MetroGIS world wide web site.</i> 	480 Hours	20% Exec 42% Policy 28% GIS	\$18,000
	Developing a strategic plan for the enterprise		220 Hours	73% Exec 18% Policy 9% GIS	\$9,750
	Establishing organizational structures, operational environments, orderly communications, decision making, and other governance processes	<p><i>Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.</i></p> <p><i>Determine the appropriate mechanisms for development and implementation of MetroGIS.(Policy Board)</i></p> <p><i>Advise the Policy Board on matters concerning the operation and development of MetroGIS. (Coordinating Committee)</i></p> <p><i>Present the Coordinating Committee with plans, studies, and recommendations for action that address policy issues and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team)</i></p>	178 Hours	48% Exec. 40% Policy 12% GIS	\$7,250

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Executive Guidance <i>Guides the development and implementation of MetroGIS (Policy Board)</i> (continued)	Developing and maintaining policy and funding support for the effort among senior executives and other influential parties	<i>Promote collaborative funding of pilot projects that meet regional needs</i> Policy development activities <i>Represent core stakeholders (those with membership on the Board) and serve as liaisons with their respective policy bodies (Policy Board).</i> <i>Represent interests that are not core stakeholders but which will benefit from MetroGIS. (Policy Board)</i> <i>Review and adopt policy related to MetroGIS. (Policy Board)</i>	180 Hours	44% Exec. 44% Policy 12% GIS	\$7,250
	<i>Advocate for MetroGIS needs and desires with state and federal policy makers.</i>		590 Hours	73% Exec. 24% Policy 3% GIS	\$26,200
	Providing a legal foundation for contracts, liability, other issues		76 Hours	11% Exec. 78% Policy 11% GIS	\$2,700
Coordination <i>Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants:</i>	<i>Present the Coordinating Committee with plans, studies, and recommendations for action that address policy and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team)</i>		115 Hours	44% Exec. 53 % Policy 3% GIS	\$4,650
	<i>Perform such other duties as may be prescribed by the Board. (Coordinating Committee)</i>		57 Hours	43% Exec. 53% Policy 4% GIS	\$2,300

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Coordination <i>Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants: (continued)</i>	Fostering cooperation and partnerships among organizations	Promote collaborative funding of pilot projects that meet regional needs <i>Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS.</i> <i>Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities.</i> Developing agreements and business practices that encourage participation <i>Facilitate data sharing agreements and licensing among MetroGIS stakeholders.</i> <i>Develop master contracts for regional projects when appropriate.</i> <i>(NA: Aggregate demand and purchase hardware, software, service contracts, etc.)</i> Developing consensus on standards <i>Develop and endorse standards for data content, data documentation, and data management.</i> <i>Require standardized data content, data documentation and data management for regional datasets.</i> <i>Endorse standards for telecommunication protocol and networks.</i>	340 Hours	25% Exec. 41% Policy 34% GIS	\$18,992

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Coordination <i>Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants: (continued)</i>	Implementing processes and incentives that encourage widespread participation	<i>Promote and endorse voluntary policies that foster coordination of GIS among the region's organizations. Discuss issues related to design, implementation, and operations of MetroGIS. (Coordinating Committee) Discuss new trends and activities relevant to MetroGIS. (Coordinating Committee) Providing outreach and education Identify GIS training and continuing education needs and encourage participation (Desirable) Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities. Publish MetroGIS newsletter. Maintain MetroGIS world wide web site. Provide for coordination and outreach with entities such as the Governor's Council on Geographic Information, LMIC, Mn/DOT, State Demographer, federal agencies, etc. (Coordinating Committee). Identify barriers to participation caused by organizations' policies and business practices, and develop alternatives Undertake research to meet common regional needs</i>	170 Hours	24% Exec. 52% Policy 24% GIS	\$6,290

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Coordination <i>Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants: (continued)</i>	Encouraging practices that provide for smooth operations	<i>Provide an effective means of communication between the Policy Board, the Committee, and the advisory teams. (Coordinating Committee)</i> <i>Coordinate the work of the advisory teams. (Coordinating Committee)</i> Creating business plans for MetroGIS development Establishing priorities <i>Identify unmet GIS needs with regional significance and act on these needs</i> Coordinating data access methods <i>Provide a directory of data within region and a mechanism for search and retrieval of data (NA: Manage MetroGIS data holdings at centralized MetroGIS site.)</i> Coordinating data development Working with organizations to avoid duplicating efforts <i>Maintain liaison relationships with committees and organizations with similar objectives to MetroGIS.</i> Identifying data to be incorporated into the MetroGIS regionally significant data <i>Identify unmet GIS needs with regional significance and act on these needs</i> Pooling available resources <i>Provide a repository of GIS human resources information (centralized job posting/position descriptions). (Desirable)</i> <i>Promote development and exchange of applications and procedures that serve GIS needs.</i> Ensuring that data are produced for all geographic areas and themes	542 Hours	20% Exec. 32% Policy 48% GIS	\$19,300
	Mediating and resolving conflicting priorities and disputes among participants				

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Data Access <i>Enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	<p><i>Present the Coordinating Committee with plans, studies, and recommendations for action that address data access issues and other tasks as may be assigned by the Coordinating Committee. (Technical Advisory Team)</i></p> <p><i>Provide resources for maintenance of Data Finder (suggested)</i></p> <p>Product definition, packaging, and documentation</p> <p><i>Require standardized data content, data documentation and data management for regional datasets</i></p> <p><i>Endorse standards for telecommunication protocol and networks.</i> <i>(NA: Require standards for telecommunication protocol and networks.)</i> <i>(NA: Endorse standards for software and hardware.)</i></p> <p>Product and service promotion and advertising</p> <p><i>Market MetroGIS data and products</i></p> <p>Educating the community about how to obtain, use, and possibly contribute to the data</p> <p><i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i></p> <p><i>Market MetroGIS data and products.</i></p> <p>Distribution channel development</p> <p><i>Market MetroGIS data and products</i></p>	57 Hours	43% Exec. 53% Policy 4% GIS	\$2,300
	Reporting and acting on users' concerns <i>Note: how does this differ from the Monitoring & Reporting Function?</i>	<p>Collecting information useful for detecting trends among users</p> <p><i>Undertake research to meet common regional needs</i></p> <p>Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products</p>	240 Hours	17% Exec. 17% Policy 66% GIS	\$8,300
	<i>Directing users to other resource</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	40 Hours	100% GIS	\$1,250

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data data; ensures that the whole MetroGIS regionally significant data can be assembled from its parts:</i>	<i>Present the Coordinating Committee with plans, studies, and recommendations for action that address data content and data standards issues and other tasks as may be assigned by the Coordinating Committee. (Technical Advisory Team)</i>		114 Hours	44% Exec. 52% Policy 4% GIS	\$4,600
Data Access <i>Enables participants to obtain MetroGIS regionally significant data: (continued)</i>	Developing and evolving data definitions, designs, and models	<i>Develop and endorse standards for data content, data documentation, and data management</i>	60 Hours	100% GIS	\$1,850
	Developing and evolving other technical specifications	<i>Develop and endorse standards for data content, data documentation, and data management.</i>	60 Hours	100% GIS	\$1,850
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data data; ensures that the whole MetroGIS regionally significant data can be assembled from its parts:</i>	<i>Present the Coordinating Committee with plans, studies, and recommendations for action that address policy and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team)</i>		58 Hours	43% Exec. 53% Policy 4% GIS	\$2,340
	<i>Perform such other duties as may be prescribed by the Board. (Coordinating Committee)</i>		58 Hours	43% Exec. 53% Policy 4% GIS	\$2,340
	Asses users' satisfaction with the MetroGIS regionally significant data (data form, ease of revision and integration with other data, currentness, positional and attribute accuracy, completeness, consistency, documentation, accessibility, charges)	<i>Conduct Data User's Forums (endorsed by Coordinating Committee)* Discuss Regional Dataset Custodian's summary and forward recommendations to Policy Board. Undertake research to meet common regional needs Measures users' satisfaction with MetroGIS (suggested) Identify new needs Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities. Develop responses to users' concerns</i>	500 Hours	24% Exec. 36% Policy 40% GIS	\$18,250

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data data; ensures that the whole MetroGIS regionally significant data can be assembled from its parts:</i>	<i>Assess users' satisfaction with MetroGIS policies and objectives (suggested)</i>	<i>Assess users' satisfaction with decision making process Assess users' satisfaction with opportunity for participation Assess users' agreement with policies and objectives Assess users' satisfaction with MetroGIS contract negotiation and administration</i>	112 Hours	100% Policy	\$3,900
	<i>Assess users' satisfaction with MetroGIS data delivery mechanism (suggest)</i>	<i>Assess users' satisfaction with technical services Assess users' satisfaction with Data Finder Assess users' satisfaction with fip site</i>	80 Hours	100% GIS	\$2,500
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data data; ensures that the whole MetroGIS regionally significant data can be assembled from its parts:</i> (continued)	<i>Assess users' satisfaction with MetroGIS outreach and communication (suggested)</i>	<i>Assess users' satisfaction with Coordinates newsletter Assess users' satisfaction with WEB site Assess users' satisfaction with conferences Assess users' satisfaction with guest speakers Assess users' satisfaction with efforts to keep decision-makers inforMedium about issues and opportunities Assess users' satisfaction with efforts to extend the program to other participants</i>	372 Hours	9% Exec. 91% GIS	\$12,150
	Market analysis (Note: too narrow a concept)	<i>Identifying target markets and potential customers Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities. Undertake research to meet common regional needs Analysis of potential customers (suggested) Identifying the current and potential size of markets, competition, and market trends and forecasts Undertake research to meet common regional needs</i>	260 Hours	8% Exec. 31% Policy 62% GIS	\$8,750
Resource Management <i>Leverages MetroGIS development efforts with those of other activities to increase the available resources:</i>	<i>Determine the appropriate mechanisms for development and implementation of MetroGIS.(Policy Board)</i>		339 Hours	44% Exec. 54% Policy 2% GIS	\$13,750

9.1 All MetroGIS activities for maintaining ongoing operations					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Resource Management <i>Leverages MetroGIS development efforts with those of other activities to increase the available resources:</i>	<i>Advise the Policy Board on matters concerning the operation and development of MetroGIS. (Coordinating Committee)</i>		84 Hours	60% Exec. 36% Policy 5% GIS	\$3,600
	<i>Present the Coordinating Committee with plans, studies, and recommendations for action that address policy issues and other tasks as may be assigned by the Coordinating Committee. (Policy Advisory Team)</i>		115 Hours	43% Exec. 53% Policy 4% GIS	\$4,650
Resource Management <i>Leverages MetroGIS development efforts with those of other activities to increase the available resources: (continued)</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness <i>Undertake research to meet common regional needs Promote collaborative funding of pilot projects that meet regional needs</i>	105 Hours	43% Exec. 38% Policy 19% GIS	\$4,200
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	<i>Promote collaborative funding of pilot projects that meet regional needs Provide a repository of GIS human resources information (centralized job posting/position descriptions). (Desirable)</i>	84 Hours	95% Exec. 5% GIS	\$4,000
	Providing logistical support for MetroGIS regionally significant data development				

9.2 Tasks, Responsibilities, and Costs, MetroGIS: Data Finder

This table describes specific tasks expected of MetroGIS with respect to metadata development and providing access to data.

9.2 MetroGIS: Data Finder					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i>	Staff Time	Level of Effort	Costs
Coordination <i>Ensures that the contributions of many organizations meld smoothly, and encourages productive relationships among the participants:</i>	Fostering cooperation and partnerships among organizations	Developing agreements and business practices that encourage participation <i>Develop procedural guidelines for modifying metadata:</i> <i>How notice of need for revisions should be given</i> <i>When changes warrant submittal of revised metadata</i> Developing consensus on standards <i>Develop and endorse standards for data content, data documentation, and data management.</i> <i>Require standardized data content, data documentation and data management for regional datasets.</i> <i>Endorse standards for telecommunication protocol and networks.</i>	40 Hours	High Skill FTE	\$1,500

9.3 Tasks, Responsibilities, and Costs, Regional Datafinder: Data Finder Staff, Data Finder

This table, beginning on the next page, describes the potential tasks required for metadata development development and providing access to data. These tasks are all the responsibility of the single FTE devoted to Data Finder. Identification of tasks and time estimates for accomplishing these tasks were taken from Data Finder documentation¹ and interviews with Rick Gelbmann and Tanya Mayer, Metropolitan Council.

9.3 Regional Datafinder: Data Finder Staff, development and maintenance costs.

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted Suggested in interview</i>	Subtasks NSDI suggested <i>MetroGIS adopted Suggested in interview</i>	Time Estimate per file	Level of Effort	Costs
<p>Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i></p>	<p>Documenting the data</p>	<p>Creating metadata <u>Regular contributor</u> <u>Using DataLogr (req. 16 flds)</u> <u>Data at hand</u> <u>Must dev. data for some fields</u> <u>Using template (may Req. 270 flds)</u> <u>QA/OC for metadata (strongly encouraged)</u> <u>Staff training & education</u> <u>Transmit file to DF staff (e-mail or diskette)</u> <u>Infrequent contributor</u> <u>If have means, same as regular</u> <u>If don't have means</u> <u>Make arrangements w/DF staff</u> <u>Comprehensive metadata</u> <u>Phone conference or site visit</u> <u>16 field record</u> <u>Fill out form</u> <u>Maintaining the metadata</u> <u>Fill gaps in metadata based on identified priorities</u> <u>Resolve questions from Data Finder staff</u> <u>Notify DF staff when file obsolete & should be deleted</u> <u>Submit requests to update metadata records</u> <u>Notify DF staff of admn changes to update (i.e. contact info)</u> Reporting on quality</p>	<p>700 hours</p>	<p>Med Skill FTE</p>	<p>\$19,500</p>
<p>Data Access <i>Enables participants to obtain MetroGIS regionally significant data:</i></p>	<p>Providing access to data and metadata</p>	<p>Product definition, packaging, and documentation <u>Define & document:</u> <u>Limitations on use</u> <u>Limitations on distribution</u> <u>Fee arrangements</u> <u>Copyright</u> <u>Other proprietary aspects</u> <u>If MN public org. freedom of info & data practices obligations</u> <u>Provide internal contact</u> <u>via e-mail</u> <u>via web</u> <u>Provide own security</u> <u>e-mail</u> <u>ftp</u></p>	<p>40 hours</p>	<p>Med Skill FTE</p>	<p>\$1,100</p>

9.3 Regional Datafinder: Data Finder Staff, development and maintenance costs.

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <i>Suggested in interview</i>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <i>Suggested in interview</i>	Time Estimate per file	Level of Effort	Costs
	Processing data requests and charges	<u><i>Supply their data to users</i></u> <u><i>Directly</i></u> <u><i>Via e-mail</i></u> <u><i>Via ftp</i></u> <u><i>Indirectly</i></u> <u><i>Via CD</i></u> <u><i>Via tape</i></u> <u><i>Via diskette</i></u>	275 hours	Med Skill FTE	\$7,600
	Determining and providing needed data distribution formats	Product support	100 hours	Med Skill FTE	\$2,800
	Reporting and acting on users' concerns	Collecting information useful for detecting trends among users	40 hours	Med Skill FTE	\$1,100
	Directing users to other resources		16 hours	Med Skill FTE	\$450

9.4 Tasks, Responsibilities, and Costs, Regional Dataset Custodian, The Lawrence Group: Street Centerlines and Address Ranges Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS Highway/Road Networks and Street Address Ranges Dataset. Identification of tasks and time estimates for accomplishing these tasks were taken from interviews with The Lawrence Group (TLG).

4 Regional Dataset Custodian, The Lawrence Group: Highway/Road Networks and Street Address Ranges Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	25 Hours	High Skill FTE	\$720
	Processing data requests and charges	No subtask breakdown for this task.	48 Hours	Medium Skill FTE	\$1,100
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	48 Hours	Medium Skill FTE	\$1,100
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	16 Hours	Medium Skill FTE	\$360
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	17 Hours	Medium Skill FTE	\$400
Data Development, Maintenance & Integration <i>activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	2,057 Hours	Medium Skill FTE	\$47,300

4 Regional Dataset Custodian, The Lawrence Group: Highway/Road Networks and Street Address Ranges Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	30 Hours	Medium Skill FTE	\$700
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	452 Hours	Medium Skill FTE	\$10,400
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	No Estimate	No Estimate	No Estimate
Data Management <i>insures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities (NA: Manage MetroGIS data holdings at centralized MetroGIS site.)</i>	0 Hours		\$0
	Ensuring data integrity and security	No further breakdown to subtasks for this task	127 Hours	Medium Skill FTE	\$2,920
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	129 Hours	Medium Skill FTE	\$2,960
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	31 Hours	Medium Skill FTE	\$710
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	16 Hours	Medium Skill FTE	\$360
Resource Management <i>averages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	24 Hours	High Skill FTE	\$680
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	128 Hours	High Skill FTE	\$3,700

4 Regional Dataset Custodian, The Lawrence Group: Highway/Road Networks and Street Address Ranges Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	32 Hours	Medium Skill FTE	\$740

Note: Since TLG developed and maintains this dataset for their internal needs, their tasks are not now costs of MetroGIS. The current cost is that of the licensing fee (actually, only that portion of the licensing fee above what Met Council and Mn/DOT would have paid to get the license for their internal use only).

9.5 Tasks, Responsibilities, and Costs, Regional Dataset Custodian, Metropolitan Council: Regional Minor Civil Divisions and County Jurisdictional Boundaries Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS county and MCD (minor civil division) regional jurisdictional boundaries dataset.

9.5 Regional Dataset Custodian, Metropolitan Council: Regional Minor Civil Division and County Jurisdictional Boundaries Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	8 Hours	Medium Skill FTE	\$248
	Processing data requests and charges	No further breakdown to subtasks for this task	20 Hours	Medium Skill FTE	\$500
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	8 Hours	Medium Skill FTE	\$248
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	8 Hours	Medium Skill FTE	\$248
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	8 Hrs.	Medium Skill FTE	\$248
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	40 Hrs.	Medium Skill FTE	\$1,000

5 Regional Dataset Custodian, Metropolitan Council: Regional Minor Civil Division and County Jurisdictional Boundaries Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	16 Hrs.	Medium Skill FTE	\$400
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	16 Hrs.	Medium Skill FTE	\$400
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	32 Hrs.	Medium Skill FTE	\$800
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i>	24 Hrs.	Medium Skill FTE	\$600
	Ensuring data integrity and security	No further breakdown to subtasks for this task	20 Hrs.	Medium Skill FTE	\$500
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	12 Hrs.	Medium Skill FTE	\$300
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	10 Hrs.	Medium Skill FTE	\$250
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	8 Hrs.	Medium Skill FTE	\$200
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	2 Hrs.	Medium Skill FTE	\$50
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	No Estimate	No Estimate	No Estimate
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	8 Hrs.	Medium	\$200

Note: Since the Metropolitan Council develops and maintains this dataset for its own internal use, there are no integration costs to MetroGIS, but costs in the model are included for an update and a maintenance fee adjustment.

2.6 Tasks, Responsibilities, and Costs, Regional Dataset Custodian, (To Be Determined): Regional School District Jurisdictional Boundaries Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS school district regional jurisdictional boundaries dataset.

2.6 Regional Dataset Custodian, (To Be Determined): Regional School District Jurisdictional Boundaries Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
Data Access <i>Enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	120 Hours	High Skill FTE	\$3,720
	Processing data requests and charges	No further breakdown to subtasks for this task	300 Hours	Medium Skill FTE	\$7,500
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i> <i>(NA: Provide technical assistance to participants with hardware and software problems, application development, and project)</i> <i>(NA: Provide a centralized service bureau.)</i>	120 Hours	Medium Skill FTE	\$3,000
	Reporting and acting on users’ concerns	<i>Co-Host Data User’s Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	120 Hours	Medium Skill FTE	\$3,000

o Regional Dataset Custodian, (To Be Determined): Regional School District Jurisdictional Boundaries Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	120 Hrs.	Medium Skill FTE	\$3,000
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	<i>Merging and coordinating spatial and attribute data from different sources</i>	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	600 Hrs.	Medium Skill FTE	\$15,000
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	300 Hrs.	Medium Skill FTE	\$7,500
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	300 Hrs.	Medium Skill FTE	\$7,500
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	500 Hrs.	Medium Skill FTE	\$12,500
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> (NA: Manage MetroGIS data holdings at centralized MetroGIS site.)	380 Hrs.	Medium Skill FTE	\$9,500
	Ensuring data integrity and security	No further breakdown to subtasks for this task	228 Hrs.	Medium Skill FTE	\$5,700
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	190 Hrs.	Medium Skill FTE	\$4,750
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	100 Hrs.	Medium Skill FTE	\$2,500
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	100 Hrs.	Medium Skill FTE	\$2,500

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	35 Hrs.	Medium Skill FTE	\$875
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task			
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	100 Hrs.	Medium	\$2,500

9.7 Tasks, Responsibilities, and Costs, Regional Dataset Custodian, (To Be Determined): Regional Watershed District Jurisdictional Boundaries Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS watershed regional jurisdictional boundaries dataset.

9.7 Regional Dataset Custodian, (To Be Determined): Regional Watershed District Jurisdictional Boundaries Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
Data Access <i>Enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	28 Hours	High Skill FTE	\$872
	Processing data requests and charges	No further breakdown to subtasks for this task	75 Hours	Medium Skill FTE	\$1,875
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i> <i>(NA: Provide technical assistance to participants with hardware and software problems, application development, and project)</i> <i>(NA: Provide a centralized service bureau.)</i>	28 Hours	Medium Skill FTE	\$872
Data Access <i>Enables participants to obtain MetroGIS regionally significant data:</i>	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	28 Hrs.	Medium Skill FTE	\$872
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	28 Hrs.	Medium Skill FTE	\$872

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	Create and maintain datasets for MetroGIS based on identified priorities Coordinating spatial and attribute data from different sources (suggested)	150 Hrs.	Medium Skill FTE	\$3,752
	Documenting the data	Creating metadata Fill gaps in metadata based on identified priorities Reporting on quality	75 Hrs.	Medium Skill FTE	\$1,876
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	65 Hrs.	Medium Skill FTE	\$1,642
	Integrating the data	Create and maintain datasets for MetroGIS based on identified priorities Horizontal integration (among jurisdictions) Vertical Integration (among themes)	122 Hrs.	Medium Skill FTE	\$3,050
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; nsures that the whole structure can be assembled from its parts:</i>	Maintaining data	Create and maintain datasets for MetroGIS based on identified priorities (NA: <i>Manage MetroGIS data holdings at centralized MetroGIS site.</i>)	95 Hrs.	Medium Skill FTE	\$2,375
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; nsures that the whole structure can be assembled from its parts:</i>	Ensuring data integrity and security	No further breakdown to subtasks for this task	75 Hrs.	Medium Skill FTE	\$1,876
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	56 Hrs.	Medium Skill FTE	\$1,400
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	48 Hrs.	Medium Skill FTE	\$1,200
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	28 Hrs.	Medium Skill FTE	\$700
	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	10 Hrs.	Medium Skill FTE	\$250

7 Regional Dataset Custodian, (To Be Determined); Regional Watershed District Jurisdictional Boundaries Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task			
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	28 Hrs.	Medium	\$700

9.8 Tasks, Responsibilities, and Costs, Regional Dataset Custodian (To Be Determined): Regional Existing Land Use Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS existing land use regional dataset.

9.8 Regional Dataset Custodian, (To Be Determined): Regional Existing Land Use Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	150 Hours	High Skill FTE	\$5,250
	Processing data requests and charges	No further breakdown to subtasks for this task	350 Hours	Medium Skill FTE	\$9,800
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i> <i>(NA: Provide technical assistance to participants with hardware and software problems, application development, and project)</i> <i>(NA: Provide a centralized service bureau.)</i>	100 Hours	Medium Skill FTE	\$2,800
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	60 Hours	High Skill FTE	\$2,100
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	32 Hours	Medium Skill FTE	\$900
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	570 Hours	Medium Skill FTE	\$15,950

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	125 Hours	Medium Skill FTE	\$3,500
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	45 Hours	Medium Skill FTE	\$1,250
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	100 Hours	Medium Skill FTE	\$2,800
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>(NA: Manage MetroGIS data holdings at centralized MetroGIS site.)</i>	475 Hours	Medium Skill FTE	\$13,300
	Ensuring data integrity and security	No further breakdown to subtasks for this task	50 Hours	Medium Skill FTE	\$1,400
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	760 Hours	High Skill FTE	\$26,600
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	60 Hours	High Skill FTE	\$2,100
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	30 Hours	Medium Skill FTE	\$850
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	100 Hours	High Skill FTE	\$3,500
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	100 Hours	High Skill FTE	\$3,500

6 Regional Dataset Custodian, (10 Be Determined): Regional Existing Land Use Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort Skill FTE	Costs
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	30 Hours	Medium	\$850

9.9 Tasks, Responsibilities, and Costs, Regional Dataset Custodian (To Be Determined):Regional Land Use Plans Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS land use plans regional dataset.

9 Regional Dataset Custodian (to be determined): Regional Land Use Plans Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	150 Hours	High Skill FTE	\$5,250
	Processing data requests and charges	No further breakdown to subtasks for this task	350 Hours	Medium Skill FTE	\$9,800
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i> <i>(NA: Provide technical assistance to participants with hardware and software problems, application development, and project)</i> <i>(NA: Provide a centralized service bureau.)</i>	100 Hours	Medium Skill FTE	\$2,800
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	60 Hours	High Skill FTE	\$2,100
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	32 Hours	Medium Skill FTE	\$900
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	570 Hours	Medium Skill FTE	\$15,950

Regional Dataset Custodian (to be determined): Regional Land Use Plans Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	125 Hours	Medium Skill FTE	\$3,500
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	45 Hours	Medium Skill FTE	\$1,250
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	100 Hours	Medium Skill FTE	\$2,800
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities (NA: Manage MetroGIS data holdings at centralized MetroGIS site.)</i>	475 Hours	Medium Skill FTE	\$13,300
	Ensuring data integrity and security	No further breakdown to subtasks for this task	50 Hours	Medium Skill FTE	\$1,400
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	760 Hours	High Skill FTE	\$26,600
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	60 Hours	High Skill FTE	\$2,100
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	30 Hours	Medium Skill FTE	\$850
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	100 Hours	High Skill FTE	\$3,500
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	100 Hours	High Skill FTE	\$3,500
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	30 Hours	Medium Skill FTE	\$850

Note: The workgroup process for land use plans will not be completed in time for our report. However, the work being done by the 155-w Coalition is of great interest as a possible model for MetroGIS. One option may be that MetroGIS contract with a consultant to provide the same services Jerry Happle is now providing MetroGIS. The same regional land use classification scheme used for existing land use is extended to the land use plans.

9.10 Tasks, Responsibilities, and Costs, Regional Dataset Custodian (To Be Determined): Regional Parcel Boundaries and Parcel Identifiers Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS parcels regional dataset.

.10 Regional Dataset Custodian (to be determined): Parcels Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	330 Hours	High Skill FTE	\$11,400
	Processing data requests and charges	No further breakdown to subtasks for this task	726 Hours	Medium Skill FTE	\$20,000
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	198 Hours	Medium Skill FTE	\$5,450
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	132 Hours	High Skill FTE	\$4,550
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	65 Hours	Medium Skill FTE	\$1,800
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	1188 Hours	High Skill FTE	\$41,100

10 Regional Dataset Custodian (to be determined): Parcels Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u>Suggested in interview</u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	264 Hours	High Skill FTE	\$9,250
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	100 Hours	High Skill FTE	\$3,500
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	198 Hours	Medium Skill FTE	\$3,850
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i>	990 Hours	Medium Skill FTE	\$27,700
	Ensuring data integrity and security	No further breakdown to subtasks for this task	100 Hours	High Skill FTE	\$3,500
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	1,600 Hours	High Skill FTE	\$56,000
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	130 Hours	High Skill FTE	\$4,550
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	65 Hours	Medium Skill FTE	\$1,850
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	200 Hours	High Skill FTE	\$7,000
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	200 Hours	High Skill FTE	\$7,000
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	65 Hours	High Skill FTE	\$2,300

9.11 Tasks, Responsibilities, and Costs, Regional Dataset Custodian (To Be Determined): Regional Land Regulation Dataset

This table describes the Regional Dataset Custodian’s specific tasks required for the MetroGIS land regulations regional dataset.

.11 Regional Dataset Custodian (to be determined): Regional Land Regulation Dataset					
Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
Data Access <i>enables participants to obtain MetroGIS regionally significant data:</i>	Providing access to data and metadata	Product definition, packaging, and documentation Product and service promotion and advertising <i>Market MetroGIS data and products.</i> Educating the community about how to obtain, use, and possibly contribute to the data <i>Identify GIS training and continuing education needs and encourage participation (Desirable)</i> <i>Market MetroGIS data and products.</i> Distribution channel development <i>Market MetroGIS data and products.</i>	265 Hours	High Skill FTE	\$9,300
	Processing data requests and charges	No further breakdown to subtasks for this task	583 Hours	Medium Skill FTE	\$16,300
	Determining and providing needed data distribution formats	Product support <i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i> <i>(NA: Provide technical assistance to participants with hardware and software problems, application development, and project)</i> <i>(NA: Provide a centralized service bureau.)</i>	159 Hours	Medium Skill FTE	\$4,450
	Reporting and acting on users’ concerns	<i>Co-Host Data User's Forum with MetroGIS.(endorsed by Coordinating Committee)</i> <i>Provide staff to explain procedures, pending enhancements, etc.</i> <i>Produce a forum summary</i> <i>Provide a written statement of how suggested enhancements will be or should be addressed.</i> Collecting information useful for detecting trends among users Responding to market conditions and demands, such as needs for generalized data and customized sets of data and products <i>Create and maintain datasets for MetroGIS based on identified priorities</i>	106 Hours	High Skill FTE	\$3,700
	<i>Directing users to other resources</i>	<i>Provide technical assistance to participants to retrieve, translate, and use data (Desirable)</i>	53 Hours	Medium Skill FTE	\$1,500
Data Development, Maintenance & Integration <i>Activities that create and update MetroGIS regionally significant data:</i>	Merging and coordinating spatial and attribute data from different sources	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> <i>Coordinating spatial and attribute data from different sources (suggested)</i>	954 Hours	Medium Skill FTE	\$26,700

.11 Regional Dataset Custodian (to be determined): Regional Land Regulation Dataset

Component <i>Component Objective</i>	Tasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Subtasks NSDI suggested <i>MetroGIS adopted</i> <u><i>Suggested in interview</i></u>	Staff Time	Level of Effort	Costs
	Documenting the data	Creating metadata <i>Fill gaps in metadata based on identified priorities</i> Reporting on quality	212 Hours	Medium Skill FTE	\$5,900
	Evaluating the data	Quality control Evaluating and selecting data for inclusion	80 Hours	Medium Skill FTE	\$2,250
	Integrating the data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i> Horizontal integration (among jurisdictions) Vertical Integration (among themes)	159 Hours	Medium Skill FTE	\$4,450
Data Management <i>Ensures the continued viability of MetroGIS regionally significant data; ensures that the whole structure can be assembled from its parts:</i>	Maintaining data	<i>Create and maintain datasets for MetroGIS based on identified priorities</i>	795 Hours	Medium Skill FTE	\$22,250
	Ensuring data integrity and security	No further breakdown to subtasks for this task	80 Hours	Medium Skill FTE	\$2,250
	Developing and evolving data definitions, designs, and models	No further breakdown to subtasks for this task	1272 Hours	Medium Skill FTE	\$35,600
	Developing and evolving other technical specifications	No further breakdown to subtasks for this task	106 Hours	Medium Skill FTE	\$3,000
	Providing for data archive, backup, retrieval, and disaster recovery	No further breakdown to subtasks for this task	53 Hours	Medium Skill FTE	\$1,500
Resource Management <i>Leverages MetroGIS regionally significant data development efforts with those of other activities to increase the available resources:</i>	Estimating income and expenses. Funding sources include appropriations, grants, service contracts, joint development agreements, and fees and similar sources of income. Expenses include labor costs, contracts, supplies, equipment, and indirect costs.	Consideration of the utility of funding, i.e. is it accompanied by unacceptable constraints, such as incompatible data formats or restrictions on use. Consideration of not only the amount of expenditures, but also their effectiveness	159 Hours	High Skill FTE	\$5,550
	Identifying, obtaining, and allocating resources. Resources include funding, data, technology, and people.	No further breakdown to subtasks for this task	159 Hours	High Skill FTE	\$5,550
	Providing logistical support for MetroGIS regionally significant data development	No further breakdown to subtasks for this task	53 Hours	High Skill FTE	\$1,850

APPENDIX 10 - DETAILED COST ESTIMATES

PLEASE BE ADVISED THE WORKSHEETS PRESENTED IN APPENDIX 10 ARE INTERMEDIATE ANALYTICAL PRODUCTS DESIGNED TO BE USED BY CONSULTING TEAM MEMBERS IN DIGITAL FORM TO AID THEM IN CALCULATING COSTS. FINAL COSTS MAY DIFFER BASED UPON ADDITIONAL BUSINESS ASSUMPTIONS USED IN THEIR CALCULATION. THE PAPER COPIES OF THE SPREADSHEETS ARE PROVIDED TO AID THE READER COMPREHEND THE COMPLEXITY OF THE ANALYSIS UNDERTAKEN AND VALUES OF THE COST FACTORS. REVIEW OF THE DIGITAL VERSION IS REQUIRED TO TRACE THE RELATIONSHIPS BETWEEN COST FACTORS AND RESULTING CALCULATED VALUES.

MetroGIS Fair Share Financial Model Cost Worksheet

Draft of 7/20/99

Work Sheet Contents:

- 1 Detailed Summary Worksheet (this worksheet)
- 2 General Summary Worksheet
- 3 Parcels & PINs
- 4 Jurisdictional Boundaries: counties and MCDs
- 5 Jurisdictional Boundaries: school districts
- 6 Land Use Plans/Development Plans and Existing Land Use
- 7 Land Regulations
- 8 Rights to property
- 9 Jurisdictional Boundaries: watershed districts
- 10 Where people live and how to contact them
- 11 Task Sequencing (all data needs)
- 12 Staff Tasks
- 13 Task Sequencing (all but most expensive data needs)

It is highly unlikely that the 13 data needs would be addressed in the same year.

STAFF COSTS (FULLY LOADED @ 50% OF PAYROLL)

FTE Top 3 Data Needs				Top Three Data Needs Only		Top 13 Data Needs			
Creation Yr	Maint. Yr	Creation Yr	Maint. Yr	Creation Yr	Maint. Yr	Creation Yr	Maint. Yr		
				Year 2000					
				\$241,000					
Met Council staff budget for MetroGIS									
1	1	1	1	Executive Director (#1)	\$104,000	\$104,000	\$104,000	\$104,000	
1	1	1	1	Policy Coordinator	\$72,800	\$72,800	\$72,800	\$72,800	
1	1	1	1	Technical Coordinator	\$61,100	\$61,100	\$61,100	\$61,100	
2.2	0.9	3.6	1.5	Senior GIS Technician (#2 & 3)	\$142,716	\$56,080	\$234,814	\$96,023	
2.7	1.2	6.2	2.9	GIS Technician (#2 & 3)	\$138,574	\$61,764	\$321,902	\$149,633	
1	1	1	1	Administrative Assistant	\$32,500	\$32,500	\$32,500	\$32,500	
Non-Staff Costs (from list of approved MetroGIS tasks)									
Note #									
Coordination and Technical Functions									
#4	1	Promote & endorse voluntary policies which foster coordination of GIS among the region's organizations			\$20,000	\$20,400	\$20,400	\$30,000	\$30,000
	2	Identify unmet GIS needs with regional significance and act on these needs.			\$2,000	\$3,000	\$3,000	\$5,000	\$5,000
	3	Facilitate data sharing agreements and licensing among MetroGIS stakeholders			\$75,000	\$75,000	\$75,000	\$75,000	\$75,000
	4	Develop and endorse standards for GIS data content, data documentation, and data management			\$1,000	\$1,010	\$1,010	\$4,000	\$4,000
	5	Require standardized GIS content, data documentation, and data management for regional data sets			\$1,000	\$1,010	\$1,010	\$1,100	\$1,100
	6	Endorse standards for telecommunication protocol and networks							
	7	Provide a repository of GIS human resources information			\$0	\$0	\$0	\$0	\$0
	8	Develop master contracts for regional GIS projects, when appropriate			\$0	\$0	\$0	\$0	\$0
	9	Promote development and exchange of GIS applications and procedures that serve MetroGIS needs.			\$0	\$0	\$0	\$0	\$0
	*	Cost of periodic contracts for consultant work (for example, Telecommunications Study)				\$65,000	\$65,000	\$65,000	\$65,000
Data Development and Distribution Functions									
#5	1	Create and maintain datasets for MetroGIS based upon identified priorities			\$3,000	See data sets costs			
#6	2	Fill gaps in metadata based on identified priorities			\$5,000	\$0		\$0	
#7	3	Provide a directory of data within the region and a mechanism for search and retrieval of GIS data (this includes hosting the mechanism)			\$65,000	\$26,000	\$26,000	\$26,000	\$26,000
#8		Need for additional servers & communications in following years					\$25,000		\$25,000

	Service Functions					
#9	1	Provide technical assistance to participants to retrieve, translate, and use data.	\$10,000	\$5,000	\$5,000	\$5,000
		Research Functions				
#10	1	Undertake research to meet common regional GIS needs		\$3,000	\$3,000	\$5,000
#11	2	Promote collaborative funding of pilot projects that meet regional needs		\$25,000	\$25,000	\$25,000
		Outreach Functions				
	1	Identify GIS training and continuing education needs and encourage participation		\$0	\$0	\$0
	2	Advocate for MetroGIS needs and desires with state and federal policy makers		\$0	\$0	\$0
	3	Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS		\$0	\$0	\$0
	4	Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities	\$2,000	\$2,100	\$2,100	\$2,100
	5	Publish MetroGIS Newsletter/Brochures	\$6,500	\$7,150	\$7,150	\$7,150
	6	Maintain MetroGIS world wide web site		\$0	\$0	\$0
	7	Market MetroGIS data and products		\$30,000	\$6,000	\$30,000
#18		Organizational overhead as a function of FTEs (not on list)				
Cost per FTE	4800	* Rent		\$42,530	\$29,043	\$66,254
Cost per FTE	1320	* Electric, security, phone & misc. utilities		\$11,696	\$7,987	\$18,220
Cost per FTE	600	* Office Furniture		\$5,316	\$3,630	\$8,282
		* General purpose office equipment & computers (excluding web site and GIS processing equipment)		\$42,530	\$29,043	\$66,254
Cost per FTE	2400	* Legal services		\$21,265	\$14,521	\$33,127
Cost per FTE	1800	* Payroll and accounting services		\$15,949	\$10,891	\$24,845
Cost per FTE	600	* Specialized human resources services		\$5,316	\$3,630	\$8,282
		* Repair services for copiers, printers, general purpose computers and othe office equipment		\$7,974	\$5,445	\$12,423
Cost per FTE	1400	* Travel costs		\$12,405	\$8,471	\$19,324
Cost per FTE	400	* Professional association and publication costs		\$3,544	\$2,420	\$5,521
Cost per FTE	3400	* Misc. office, operational, & specialized unforeseen technical Publication, printing and distribution not counted elsewhere (raised due to pho0ne conversion with Randy)		\$30,126	\$20,572	\$46,930
		MetroGIS Web Site maintenance		\$11,000	\$3,000	\$11,000
				\$5,000	\$5,000	\$5,000
#19		Totals	\$431,500	\$1,030,013	\$796,567	\$1,432,929
						\$998,721

MetroGIS Most Important Data Needs

MetroGIS Priority: T=Top Three, S=Secondary

Worksheet:#

Recommended Scenario

Dataset Development year
Dataset Maint. Yr

	MetroGIS Priority	Worksheet:#	Recommended Scenario	Dataset Development year	Dataset Maint. Yr	
	T	3 Parcels	Four	Cost	\$50,141	\$23,356
	S	3 Parcel Identifiers		High FTE	181%	49%
				Med.FTE	61%	61%
				LowFTE	1%	1%
#12	T	Highway/Road Networks (from TLG)	Two	Cost	\$0	\$3,000
	T	Street Addresses (from TLG)				
#13	T	4 Jurisdictional Boundaries: counties and MCDs	Four	Cost	\$0	\$0
				High FTE	0%	0%
				Med.FTE	2%	1%
				LowFTE	6%	2%
	T	5 Jurisdictional Boundaries: school districts	Four	Cost	\$0	\$0
				High FTE	23%	22%
				Med.FTE	183%	50%
				LowFTE	0%	0%
	T	9 Jurisdictional Boundaries: watershed districts	Four	Cost	\$0	0%
				High FTE	16%	16%
				Med.FTE	14%	4%
				LowFTE	0%	0%

	S	6 Land Use Plans/Development Plans	Four	Cost	\$15,000	\$4,000
	S	6 Existing Land Use		High FTE	95%	36%
				Med. FTE	152%	56%
				Low FTE	1%	1%
	S	7 Land Regulations (zoning)	Four	Cost	\$0	\$0
				High FTE	34%	17%
				Med. FTE	156%	76%
				Low FTE	1%	1%
#14	S	Census Boundaries (from TLG)	Two	Cost	\$0	\$0
	S	Water Features (From MMCD)	Two	Cost	\$0	\$0
#15	S	Socioeconomic Characteristics of Areas (John Carpenter)	Two	Cost	\$1,500,000	\$900,000
#15						
#16	S	10 Where people live and how to contact them (USPS & US West)	One	Cost	\$266,000	\$266,000
#16				High FTE	4%	4%
				Med. FTE	9%	9%
				Low FTE	0%	0%
#17	S	Socioeconomic Characteristics of Areas (Met Council)	Two	Cost	\$0	\$0
	S	8 Rights to property (County tax records)	One	Cost	\$0	\$0
				High FTE	10%	5%
				Med. FTE	34%	27%
				Low FTE	0%	0%

Notes

- # 1
2 MetroGIS is Area Integrator/Aggregator & picks up all current Data Finder work from Met Council
3
4 Operational costs for the support teams, committee, Board, and travel
5 Includes hardware, software, and data purchase/licensing and is included in data set costs
6 This becomes in-house labor.
7 Data Finder is taken over by MetroGIS and expanded to serve all user access needs.
8 Server and bandwidth needs of an expanded Data Finder will require additional investment in Maint. Years
9 Technical assistance is mainly accounted for at the dataset level
10 Operational funds to help GIS/LIS, Governor's Council, and Uof M activities in this area.
11 Money is provided for funding participation as a way to "prime the pump"
12 Existing share of MetroGIS data maintenance cost. Data development paid by Met Council and Mn/DOT
13 Provided by Met Council/PCA, would be redone by MetroGIS using parcel base
14 Provided by Met Council to MetroGIS. Met Council is spending \$35,000 for upgraded 1990 census geography
15 Best quality, currency, and detail. Done at the block face level on the parcel base
Purchase: \$1.50/HH* 1 million HH in metro, 60% annual maintenance.
16 US West: \$.07/record, 950,000 records assumed. This does not account for unlisted phone numbers.
Assumes USPS data is received free.
17 Build by met Council on parcel base created by Area Integrator and contributed to MetroGIS
18 This is not listed on budget documents received from MetroGIS
19 Total overhead costs include:
* Employee benefits and indirect payroll (30% of direct payroll)
* Organizational overhead (125% of direct payroll)
* Some of the tasks listed as line items under Non-payroll Costs

MetroGIS Fair Share Financial Model Cost Worksheet

Fixed costs of MetroGIS and addressing 3 top priority data needs	Year of dataset creation	\$1,014,767	Year of dataset maint.	\$729,535
Fixed costs of MetroGIS and addressing 13 top priority data needs	Year of dataset creation	\$3,070,529	Year of dataset maint.	\$2,026,683

Labor Costs	High Skill FTE	Med. Skill FTE	High Skill FTE	Med. Skill FTE
Annual salary	\$50,000	\$40,000	\$50,000	\$40,000
Load Rate (benefits, etc.)	30%	30%	30%	30%
Cost /FTE	\$65,000	\$52,000	\$65,000	\$52,000

Cost Item	Dataset Creation Year			Dataset maintenance year		
	Labor Cost	Non-labor Cost	Total Cost	Labor Cost	Non-labor Cost	Total Cost
Basic Costs						
Basic staff costs	\$270,400			\$270,400		
Basic non-staff costs (#1)		\$413,323	\$683,723		\$318,323	\$588,723

#	Marginal Cost of Datasets	High Skill FTE	Medium Skill FTE	Labor Cost	Non-labor Cost	High Skill FTE	Medium Skill FTE	Labor Cost	Non-labor Cost		
	Parcels (#2)	181%	61%	\$149,160	\$50,141	49%	61%	\$63,078	\$23,356	\$199,301	\$86,433
	Parcel Identifiers (#2)										
	Highway/Road Networks (#2)									Met Council	Met Council
	Street Addresses (#2)										
	Jurisdictional Boundaries: counties and MCDs (#3)	0%	8%	\$4,204	\$0	0%	3%	\$1,770	\$0	\$4,204	\$1,770
	Jurisdictional Boundaries: school districts	23%	183%	\$109,829	\$0	22%	50%	\$40,099	\$0	\$109,829	\$40,099
	Jurisdictional Boundaries: watershed districts	16%	14%	\$17,709	\$0	16%	4%	\$12,509	\$0	\$17,709	\$12,509
	Rights to property (County tax records)	10%	34%	\$24,230	\$0	5%	27%	\$17,344	\$0	\$24,230	\$17,344
	Land Use Plans/Development Plans (#2)	95%	152%	\$140,821	\$15,000	36%	56%	\$52,466	\$4,000	\$155,821	\$56,466
	Existing Land Use (#2)										
	Land Regulations (zoning)	34%	156%	\$102,935	\$0	17%	76%	\$50,562	\$0	\$102,935	\$50,562
	Census Boundaries (#4)									Met Council	Met Council
	Water Features (#5)									M M C D	M M C D
	Socioeconomic Characteristics of Areas: demographic (#6)				\$1,500,000				\$900,000	\$1,500,000	\$900,000
	Socioeconomic Characteristics of Areas: economic (#7)									Met Council	Met Council
	Where people live and how to contact them (#8)	4%	9%	\$6,777	\$266,000	4%	9%	\$6,777	\$266,000	\$272,777	\$272,777

Notes

- #1 Due to sequencing of data development we assume data creation staff needs would never exceed the level of the top 3 data needs as shown in col. H on Sheet #1.
- #2 These two data needs will be addressed together in one dataset creation effort
- #3 Assumes cost for improving the positional accuracy of dataset using parcel base & for maintenance
- #4 Currently provided by Met Council. Met Council has contracted (\$35,000) for improved 1990 census geography.
- #5 We assume data from MMCD would be used in trade for parcel & ownership data.
- #6 Population, households, age of household members, tenure, household size, family type all at "block face" level of aggregation
- #7 Economic characteristics from various public sources at higher level of aggregation than the above.
- #8 Dataset created from USPS & US West data geocoded to street centers with address ranges
- #9 The blue coded datasets can not be created until the parcels dataset is done
The yellow coded datasets are dependent upon the roads dataset

	Combined Resources		Carver County		Anoka County		Hennepin County		Scott County		Ramsey County		Dakota County		Washington County		See Note #		
	Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year				
Spatial Features:			3%		13%		41%		3%		19%		12%		9%				
hr/dataset			30,000		110,000		360,000		29,000		168,000		105,000		76,000				
Topological Errors			11	11	40	40	131	131	11	11	61	61	38	38	28	28	1		
Software Format			0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
Projection, Etc.			3	3	10	10	33	33	3	3	15	15	10	10	7	7	3		
Attributes:																			
hr/attribute																			
Feature Attributes				0		0		0		0		0		0		0	4		
Completeness			2	2	2	2	2	2	2	2	2	2	2	2	2	2	5		
Value Consistency			2	2	2	2	2	2	2	2	2	2	2	2	2	2	6		
General:																			
hr/dataset																			
Metadata Completeness			58	0	213	0	697	0	56	0	325	0	203	0	147	0	7		
Data Currency			1	1	1	1	1	1	1	1	1	1	0	0	1	1	8		
Added Server Capacity	\$29,431	\$7,396															9		
Added Digital Comm	\$20,710	\$15,960															10		
Server/Comm Maint.	300	210															11		
General Coordination	224	224															12		
App. Development	600	0															14		
User Technical Support	240	240															15		
MetaData	40	20															16		
App. Maintenance	120	220															19 Data		
Dataset Development	90	0															20 Integrator		
Dataset Maintenance	30	40															21 Creation year		
																	Maintenance year		
Annual Dollar Cost	\$50,141	\$23,356	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,141	\$23,356	
FTE Expert/Manager	0.81	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13	0.81	0.49
FTE Intermediate	0.38	0.37	0.01	0.01	0.03	0.03	0.09	0.09	0.01	0.01	0.04	0.04	0.03	0.03	0.02	0.02	17	0.61	0.61
FTE Entry Level	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18	0.01	0.01

NOTES

- #1 Obvious topological errors are flagged and an error attribute is written for each such record to the attribute table. Correcting these errors would require review and reconciliation of legal descriptions and possible re-survey and will not be done. Edge Matching work between data sets to improve registration is included here. Other topology assumed correct from data source.
- #2 Shape Files or Arc/INFO coverages are the standard, this refers to the time required to translate from other formats.
- #3 The standard is UTM Zone 15 extended, Meters, NAD 83.
If projection, unit or datum changes are required the following must be done:
 Shape file to Arc/INFO coverage (if needed)
 Establish projection parameters (one time per county)
 Project coverage
 Coverage to shape file
In situations where parcels are contained in multiple datasets (expected), this process would need to be done for each set. This would be automated with an AVL. The time estimate based on quarterly processing & number of parcels.
- #4 Only unique record ID and PIN or PID are required.
- #5 Must be completed by data owner. Assume 12 correct PIN entries per hour on average by entry level labor. Area Integrator would have labor in technical liaison & assessment of perform.
- #6 Must be consistent. If not, Area Integrator would fix.
- #7 Research by data provider, metadata completion by Area Integrator.
- #8 Source data updated quarterly or better. The Area Integrator has no control over this.
- #9 \$8,000 Server for Web site, Data Finder, FTP, data storage, with installation & set up
\$15,000 GIS workstation & software/technician FTE

\$3,000 Server maintenance
\$4,000 Workstation & software maintenance/FTE
- #10 1.544 Mb/sec T1 circuit. \$330/mo circuit charge, \$4,000 circuit installation & hardware.
\$1,000/mo ISP charge, \$750 ISP installation. This would provide a 5 or 6 second transfer rate per megabyte at full capacity.

#11

#12

#13 One FTE (Full Time Equivalent) is calculated as follows:

2080 full time hours per year @ 40 hours/week

-80 Two weeks vacation

-40 Sick time

-80 10 holidays/year

1880 Hours per year equals one FTE

Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done.

This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.

#14

This includes an extension of Data Finder to support direct download from Area Integrator/Aggregator FTP server.

#15

If MetroGIS engages successfully in the activities envisioned it will become the highest profile GIS organization in the Metro area and as such will attract a great deal more attention and questions than currently anticipated.

For political reasons I assume MetroGIS will not refuse to answer phone and other enquiries.

This figure includes Data, Data Finder, and general GIS questions of all kinds and a factor for interruption of other work.

#16

User interface contains the ability to create shape files from a selection set and to save these shape files to an FTP site from which they can be retrieved by the user.

#17

Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.

#18

This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a higher skill level.

#19

This is the time to maintain and provide bug fixes for the enhanced Data Finder.

#20

Creation of dataset and AML to automate the process of Mapjoin, topology creation, and quality assessment.

#21

Updating and running AML detailed in note #20.

Jurisdictional Boundaries: Counties & MCDs

	Carver County	Following year	Anoka County	Following year	Hennepin County	Following year	Scott County	Following year	Ramsey County	Following year	Dakota County	Following year	Washington County	Following year	See Note #		
% parcels in region	3%		13%		41%		3%		19%		12%		9%				
Spatial Features: hr/dataset	30,000		110,000		360,000		29,000		168,000		105,000		76,000				
Topological Errors	8	3													1		
Software Format															2		
Projection, Etc.															3		
Attributes: hr/attribute																	
Feature Attributes	2	1													4		
Completeness															5		
Value Consistency															6		
General: hr/dataset																	
Metadata Completeness															7		
Data Currency															8		
Added Server Capacity															9		
Added Digital Comm															10		
Server/Comm Maint.															11		
General Coordination	8	2													12		
Dataset Development	112														14 Data		
User Technical Support	16	16													15 Integrator		
MetaData	6	2													16		
Dataset Maintenance	0	40													First year		
Annual Dollar Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Following Year	
FTE Expert/Manager	1.70%	1.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.7%	1.1%
FTE Intermediate	6.38%	2.29%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.4%	2.3%
FTE Entry Level	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%

NOES

#1 Data created using parcelhes and street centers

#2

#3

#4 Only unique road D&J with name and type required

#5

#6 Must be consistent frnt Area hte gat wou bfk

#7 Research by data points, not data complete by Area hte gat.

#8

#9

#10

#11

#12

This includes the incidental management time involved in providing data to MetroGIS. It covers time for agreements and meetings on an annual basis.

#13

One FTE (Full Time Equivalent) is calculated as follows:

2080 full time hours per year @ 40 hours/week

-80 Two weeks vacation

-40 Sick time

-80 10 holidays/year

1880 Hours per year equals one FTE

Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done.

This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.

#14

Annual update

#15

Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.

#16

#17

Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.

#18

This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.

Jurisdictional Boundaries: School Districts

	Carver County	Following year	Anoka County	Following year	Hennepin County	Following year	Scott County	Following year	Ramsey County	Following year	Dakota County	Following year	Washington County	Following year	See Note #	
% parcels in region	3%		13%		41%		3%		19%		12%		9%			
Spatial Features: hr/dataset	30,000		110,000		360,000		29,000		168,000		105,000		76,000			
Topological Errors	0		0		0		0		0		0		0		1	
Software Format	0		0		0		0		0		0		0		2	
Projection, Etc.	0		0		0		0		0		0		0		3	
Attributes: hr/attribute																
Feature Attributes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	
Completeness	0		0		0		0		0		0		0		5	
Value Consistency	0		0		0		0		0		0		0		6	
General: hr/dataset																
Metadata Completeness	2	2	2	2	2	2	2	2	2	2	6	6	2	2	7	
Data Currency	1	1	1	1	1	1	1	1	1	1	0	0	1	1	8	
Added Server Capacity															9	
Added Digital Comm															10	
Server/Comm Maint.															11	
General Coordination	8	8	28	28	92	92	7	7	43	43	27	27	19	19	12	
Dateset Development	93		341		1115		90		520		325		235		14 Data	
User Technical Support	5	5	20	20	66	66	5	5	31	31	19	19	14	14	15 Integrator	
MetaData	1	1	5	2	16	7	1	1	8	3	5	2	3	1	16	
Dataset Maintenance	24	31	86	115	282	376	23	30	132	175	82	110	60	79	First year	
Annual Dollar Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Following Year
FTE Expert/Manager	0.82%	0.78%	2.88%	2.72%	9.30%	8.78%	0.80%	0.76%	4.37%	4.12%	2.75%	2.60%	2.01%	1.89%	22.9%	21.6%
FTE Intermediate	6.35%	1.83%	22.87%	6.27%	74.49%	20.16%	6.15%	1.77%	34.85%	9.49%	22.00%	6.15%	15.85%	4.38%	182.6%	50.1%
FTE Entry Level	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%

NOTES

#1 Dataset linked to parcel base via PIN, work in this step already done for parcel base.

#2 Dataset linked to parcel base via PIN, work in this step already done for parcel base.

#3 Dataset linked to parcel base via PIN, work in this step already done for parcel base.

#4 Only unique record ID & jurisdiction name and type required

#5

#6 Must be consistent. If not, Area Integrator would fix.

#7 Research by data provider, metadata completion by Area Integrator.

#8

#9

#10

#11

#12

#13 One FTE (Full Time Equivalent) is calculated as follows:

2080 full time hours per year @ 40 hours/week

-80 Two weeks vacation

-40 Sick time

-80 10 holidays/year

1880 Hours per year equals one FTE

Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done.

This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.

#14

#15 Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.

#16

#17 Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.

#18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.

Existing Land use and Land Use Plans

	Carver County	Maint. Year	Anoka County	Maint. Year	Hennepin County	Maint. Year	Scott County	Maint. Year	Ramsey County	Maint. Year	Dakota County	Maint. Year	Washington County	Maint. Year	See Note #		
% parcels in region	3%		13%		41%		3%		19%		12%		9%				
Spatial Features: hr/dataset	30,000		110,000		360,000		29,000		168,000		105,000		76,000				
Topological Errors	0		0		0		0		0		0		0		1		
Software Format	0		0		0		0		0		0		0		2		
Projection, Etc.	0		0		0		0		0		0		0		3		
Attributes: hr/attribute																	
Feature Attributes	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4		
Completeness	2	2	2	2	2	2	2	2	2	2	0	2	2	2	5		
Value Consistency	50	13	184	46	601	150	48	12	281	70	175	44	127	32	6		
General: hr/dataset																	
Metadata Completeness	5	5	18	18	59	59	5	5	28	28	17	17	12	12	7		
Data Currency	4	4	15	15	49	49	4	4	23	23	14	14	10	10	8		
Added Server Capacity	\$15,000	\$4,000													9		
Added Digital Comm															10		
Server/Comm Maint.															11		
General Coordination	2	2		0		0		0		0		0		0	12		
Dataset Development	89		326		1066		86		497		311		225		14		
User Technical Support	8	8	28	28	90	90	7	7	42	42	26	26	19	19	15		
MetaData	3	3	10	10	33	33	3	3	15	15	10	10	7	7	16 Dataset Creation year		
Dataset Maintenance	0	27		98		320		26		149		93		68	19		
Annual Dollar Cost	\$15,000	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,000	\$4,000	
FTE Expert/Manager	3.41%	1.41%	11.88%	4.55%	38.62%	14.64%	3.21%	1.28%	18.08%	6.89%	11.34%	4.35%	8.24%	3.18%	13	95%	36%
FTE Intermediate	5.21%	1.90%	19.09%	6.96%	62.46%	22.77%	5.03%	1.83%	29.15%	10.63%	18.22%	6.64%	13.19%	4.81%	17	152%	56%
FTE Entry Level	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.00%	0.00%	0.11%	0.11%	18	1%	1%

NOTES

- #1 All land use datasets built upon parcel base, work in this step already done for parcel base.
- #2 All land use datasets built upon parcel base, work in this step already done for parcel base.
- #3 All land use datasets built upon parcel base, work in this step already done for parcel base.
- #4 Required: PIN, County, MCD, Land use code
- #5
- #6 Common generalized categories created and coded based upon an aggregation of city and county classifications
- #7 Done by Area Integrator
- #8 Done by Area Integrator
- #9 One additional GIS workstation & software, annual maintenance in maint. Year
- #10
- #11
- #12 This includes the incidental management time involved in providing data to MetroGIS. It covers time for agreements and meetings on an annual basis.
- #13 One FTE (Full Time Equivalent) is calculated as follows:
2080 full time hours per year @ 40 hours/week
-80 Two weeks vacation
-40 Sick time
-80 10 holidays/year
1880 Hours per year equals one FTE
Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done.
This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.
- #14
- #15 Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.
- #16 User interface contains the ability to create shape files from a selection set and to save these shape files to an FTP site from which they can be retrieved by the user.
- #17 Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.
- #18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.
- #19 Annual update

Land Regulations (zoning)

	Carver County		Anoka County		Hennepin County		Scott County		Ramsey County		Dakota County		Washington County		See Note #		
	3%	Maint. Year	13%	Maint. Year	41%	Maint. Year	3%	Maint. Year	19%	Maint. Year	12%	Maint. Year	9%	Maint. Year			
% parcels in region	3%		13%		41%		3%		19%		12%		9%				
Spatial Features: hr/dataset	30,000		110,000		360,000		29,000		168,000		105,000		76,000				
Topological Errors	0		0		0		0		0		0		0		1		
Software Format	0		0		0		0		0		0		0		2		
Projection, Etc.	0		16		16		16		16		16		16		3		
Attributes: hr/attribute																	
Feature Attributes	5	2	20	8	66	26	5	2	31	12	19	8	14	6	4		
Completeness	2	2	2	2	2	2	2	2	2	2	2	0	2	2	5		
Value Consistency	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6		
General: hr/dataset																	
Metadata Completeness	2	2	2	2	2	2	2	2	2	2	6	6	2	2	7		
Data Currency	1	1	1	1	1	1	1	1	1	1	0	0	1	1	8		
Added Server Capacity	\$0														9		
Added Digital Comm	\$0														10		
Server/Comm Maint.	0														11		
General Coordination	90														12		
Dataset Development	68		251		820		66		383		239		173		14		
User Technical Support	5	5	20	20	66	66	5	5	31	31	19	19	14	14	15		
MetaData	8	3	28	11	90	36	7	3	42	17	26	11	19	8	16		
Dataset Maintenance	27	48	100	175	328	574	26	46	153	268	96	167	69	121			
Annual Dollar Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FTE Expert/Manager	5.77%	0.57%	3.60%	2.08%	11.78%	6.80%	0.95%	0.55%	5.50%	3.18%	3.44%	1.98%	2.49%	1.44%	13	34%	17%
FTE Intermediate	5.35%	2.81%	19.78%	9.60%	62.18%	30.80%	6.04%	2.73%	29.62%	14.51%	19.09%	9.33%	14.01%	6.71%	17	156%	76%
FTE Entry Level	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.11%	0.00%	0.00%	0.11%	0.11%	18	1%	1%

NOTES

- #1 Datasets built upon individual county parcel datasets as provided to Area Integrator, work in this step already done for parcel base.
- #2 Datasets built upon individual county parcel datasets as provided to Area Integrator, work in this step already done for parcel base.
- #3 Datasets built upon individual county parcel datasets as provided to Area Integrator, work in this step already done for parcel base.
- #4 Required: PIN, County, MCD, land regulation code provided by primary data custodian.
- #5 Taken "as is" from primary data custodian
- #6 Taken "as is" from primary data custodian
- #7 Research by data provider, metadata completion by Area Integrator.
- #8 Updated quarterly by Area Aggregator based upon most current data provided by counties and MCDs
- #9 No additional server costs
- #10 No additional communications costs
- #11 No additional server costs
- #12
- #13 One FTE (Full Time Equivalent) is calculated as follows:
 - 2080 full time hours per year @ 40 hours/week
 - 80 Two weeks vacation
 - 40 Sick time
 - 80 10 holidays/year1880 Hours per year equals one FTE
Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done. This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.
- #14 Aggregation of digital data and conversion of hard copy data on parcel base.
- #15 Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.
- #16 User interface contains the ability to create shape files from a selection set and to save these shape files to an FTP site from which they can be retrieved by the user.
- #17 Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.
- #18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.

Rights to Property

	Carver County		Anoka County		Hennepin County		Scott County		Ramsey County		Dakota County		Washington County		See Note #		
	Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year		Maint. Year				
% parcels in region	3%		13%		41%		3%		19%		12%		9%				
Spatial Features: hr/dataset	30,000		110,000		360,000		29,000		168,000		105,000		76,000				
Topological Errors	0		0		0		0		0		0		0	1			
Software Format	0		0		0		0		0		0		0	2			
Projection, Etc.	0		16		16		16		16		16		16	3			
Attributes: hr/attribute																	
Feature Attributes	2	2	2	2	2	2	2	2	2	2	2	2	2	2	4		
Completeness	0		0		0		0		0		0		0	5			
Value Consistency	2	2	2	2	2	2	2	2	2	2	2	2	2	2	6		
General: hr/dataset																	
Metadata Completeness	4	1	4	1	4	1	4	1	4	1	4	1	4	1	7		
Data Currency	4	1	4	1	4	1	4	1	4	1	4	1	4	1	8		
Added Server Capacity	\$0		\$0		\$0		\$0		\$0		\$0		\$0	9			
Added Digital Comm	\$0		\$0		\$0		\$0		\$0		\$0		\$0	10			
Server/Comm Maint.	0		0		0		0		0		0		0	11			
General Coordination	3	1	11	3	37	11	3	1	17	5	11	3	8	2	12		
Dataset Development	4		15		49		4		23		14		10	14			
User Technical Support	1	1	5	5	16	16	1	1	8	8	5	5	3	3	15		
MetaData	1	0	5	2	16	5	1	0	8	2	5	1	3	1	16		
Dataset Maintenance	12	16	45	60	148	197	12	16	69	92	43	57	31	42	Creation year		
Annual Dollar Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Maintenance year		
FTE Expert/Manager	0.42%	0.25%	1.24%	0.63%	3.81%	1.83%	0.41%	0.25%	1.84%	0.91%	1.19%	0.61%	0.89%	0.47%	13	10%	5%
FTE Intermediate	1.40%	1.11%	4.58%	3.43%	11.85%	10.70%	2.23%	1.08%	6.27%	5.12%	4.44%	3.29%	3.59%	2.44%	17	34%	27%
FTE Entry Level	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18	0%	0%

NOTES

- #1 Datasets linked to parcel base via PIN, work in this step already done for parcel base.
- #2 Datasets linked to parcel base via PIN, work in this step already done for parcel base.
- #3 Datasets linked to parcel base via PIN, work in this step already done for parcel base.
- #4 Required: PIN, County, MCD, ownership information by primary data custodian.
- #5 Taken "as is" from primary data custodian
- #6 Taken "as is" from primary data custodian
- #7 Research by data provider, metadata completion by Area Aggregator.
- #8 Updated quarterly by Area Aggregator based upon most current data provided by counties and MCDs
- #9 No additional server costs
- #10 No additional communications costs
- #11 No additional server costs
- #12
- #13 One FTE (Full Time Equivalent) is calculated as follows:
 - 2080 full time hours per year @ 40 hours/week
 - 80 Two weeks vacation
 - 40 Sick time
 - 80 10 holidays/year1880 Hours per year equals one FTE
Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done. This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.
- #14 Aggregation of digital data and conversion of hard copy data on parcel base.
- #15 Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.
- #16 User interface contains the ability to create shape files from a selection set and to save these shape files to an FTP site from which they can be retrieved by the user.
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- #18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.

Jurisdictional Boundaries: Watershed Districts

Cost Estimation Scenario

4

	Carver County		Anoka County		Hennepin County		Scott County		Ramsey County		Dakota County		Washington County		See Note #		
	Carver County	Maint. Year	Anoka County	Maint. Year	Hennepin County	Maint. Year	Scott County	Maint. Year	Ramsey County	Maint. Year	Dakota County	Maint. Year	Washington County	Maint. Year			
% area	13%		15%		20%		12%		6%		20%		14%				
hr/dataset																	
Topological Errors	0		0		0		0		0		0		0		1		
Software Format	0		0		0		0		0		0		0		2		
Projection, Etc.	0		0		0		0		0		0		0		3		
Attributes:																	
hr/attribute																	
Feature Attributes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4		
Completeness	0		0		0		0		0		0		0		5		
Value Consistency	0		0		0		0		0		0		0		6		
General:																	
hr/dataset																	
Metadata Completeness	2	2	2	2	2	2	2	2	2	2	6	6	2	2	7		
Data Currency	1	1	1	1	1	1	1	1	1	1	0	0	1	1	8		
Added Server Capacity															9		
Added Digital Comm															10		
Server/Comm Maint.															11		
General Coordination	29	29	34	34	45	45	27	27	13	13	45	45	31	31	12		
Dateset Development	26		30		40		24		12		40		28		14		
User Technical Support	4	4	5	5	6	6	4	4	2	2	6	6	4	4	15		
MetaData	5	5	6	6	8	8	5	5	2	2	8	8	6	6	16		
Dataset Maintenance	5	7	6	8	8	10	5	6	2	3	8	10	6	7		Data Source	Data Integrator
Annual Dollar Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0	\$0
FTE Expert/Manager	2.09%	2.09%	2.40%	2.40%	3.18%	3.18%	1.93%	1.93%	0.99%	0.99%	3.18%	3.18%	2.24%	2.24%	13	16%	16%
FTE Intermediate	1.82%	0.52%	2.07%	0.57%	2.71%	0.71%	1.69%	0.49%	0.93%	0.33%	2.87%	0.87%	1.95%	0.55%	17	14%	4%
FTE Entry Level	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18	0%	0%

NOTES

- #1 Dataset linked to parcel base via PIN, work in this step already done for parcel base.
- #2 Dataset linked to parcel base via PIN, work in this step already done for parcel base.
- #3 Dataset linked to parcel base via PIN, work in this step already done for parcel base.
- #4 Only unique record ID & jurisdiction name and type required
- #5
- #6 Must be consistent. If not, Area Integrator would fix.
- #7 Research by data provider, metadata completion by Area Integrator.
- #8
- #9
- #10
- #11
- #12
- #13 One FTE (Full Time Equivalent) is calculated as follows:
 - 2080 full time hours per year @ 40 hours/week
 - 80 Two weeks vacation
 - 40 Sick time
 - 80 10 holidays/year1880 Hours per year equals one FTE
Expert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done. This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.
- #14
- #15 Assumes support needs are proportional to number of parcels in county and user support is not the primary job responsibility of person providing it. This figure includes a factor for interruption of other work.
- #16
- #17 Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.
- #18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.

	Creation year	maint. Year	See Note #
hr/dataset			
Topological Errors	0	0	1
Software Format	0	0	2
Projection, Etc.	0	0	3
Attributes:			
hr/attribute			
Feature Attributes	0	0	4
Completeness	0	0	5
Value Consistency	0	0	6
General:			
hr/dataset			
Metadata Completeness	0	0	7
Data Currency	0	0	8
US West Data	\$266,000	\$266,000	9
	\$0	\$0	10
Server/Comm Maint.	0	0	11
General Coordination	40	40	12
Dataset Development	40	40	14
User Technical Support	20	20	15
MetaData	8	8	16
Dataset Maintenance	120	120	19
Annual Dollar Cost	\$266,000	\$266,000	
FTE Expert/Manager	3.62%	3.62%	13
FTE Intermediate	8.51%	8.51%	17
FTE Entry Level	0.00%	0.00%	18

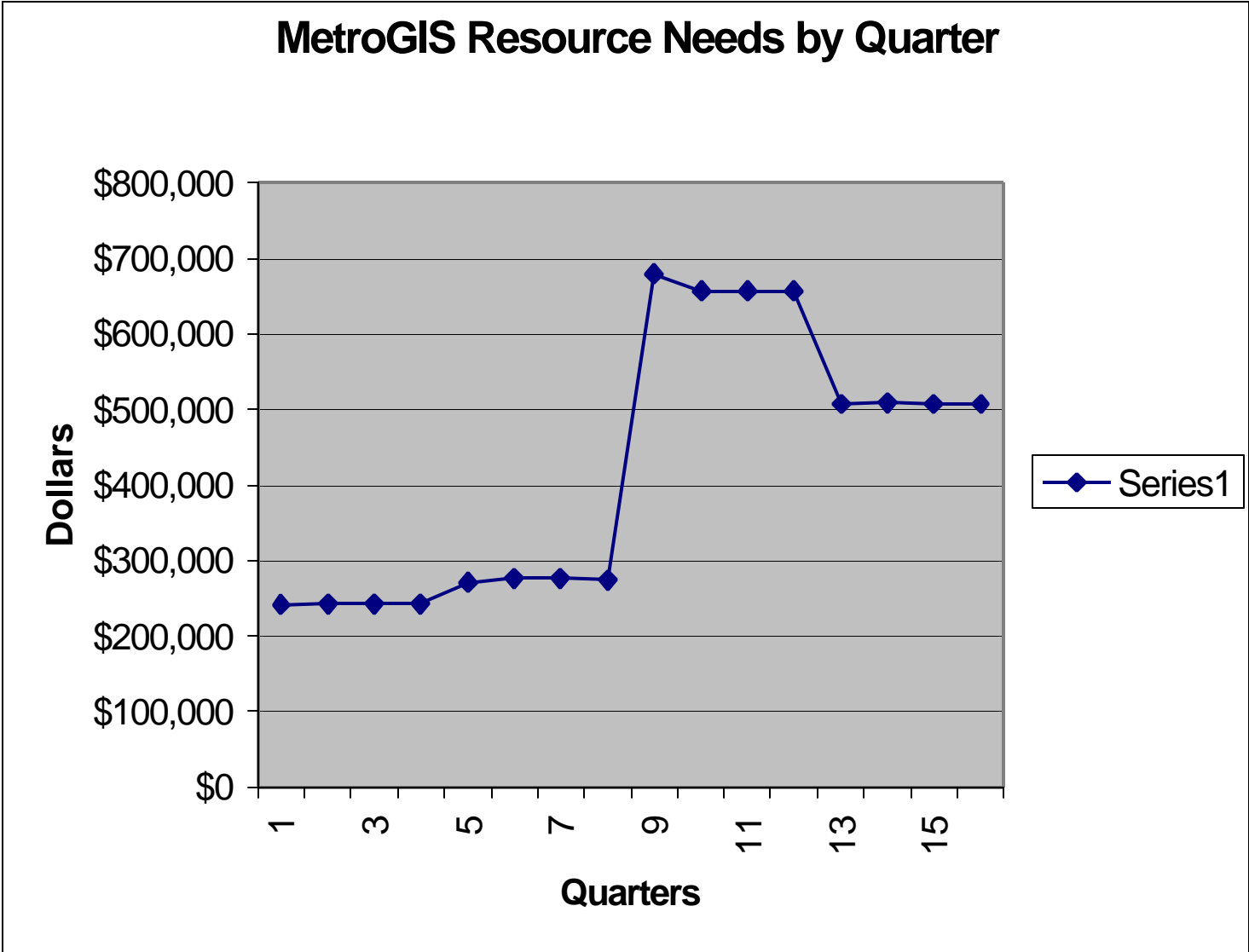
950,000 Phone numbers in Metro
 \$0.07 Cost /phone record
 4 Update/year by Area Integrator

NOTES

- #1 Dataset built upon parcel base, work in this step already done for parcel base.
- #2 Dataset built upon parcel base, work in this step already done for parcel base.
- #3 Dataset built upon parcel base, work in this step already done for parcel base.
- #4 Required: PIN, Name, Street Number, Street, City, Zip, phone number
- #5
- #6
- #7
- #8
- #9 Assuming 950,000 records for 7 country metro at \$.07 per record. This dataset is updated daily by US West Area Integrator would update dataset quarterly
- #10
- #11
- #12
- #13 One FTE (Full Time Equivalent) is calculated as follows:
 - 2080 full time hours per year @ 40 hours/week
 - 80 Two weeks vacation
 - 40 Sick time
 - 80 10 holidays/year
 - 1880 Hours per year equals one FTEExpert/Manager skill level is the highest GIS skill level available at the organization. This person solves the most difficult technical problems and has final responsibility for all technical decisions and all spatial data processing work done. This level provides technical and policy guidance for the lower levels. This level also consults on GIS policy issues.
- #14 This consists of matching names and phone numbers from US West with deliverable addresses from USPS using street address as key. The next step is to address match the resulting file with the TLG road center dataset.
- #15
- #16
- #17 Intermediate skill is the level at which most GIS data processing work is done. This person works semi-independently following methods and policies developed by the Expert skill level. This level is capable of performing all routine spatial data processing activities.
- #18 This is the skill level of the intern or recent graduate. This level does only the conceptually simplest and most repetitive work under the direct supervision of a high skill level.
- #19 Updated quarterly. Each update requires the complete dataset to be recreated.

MetroGIS Fair Share Financial Model Cost Worksheet

Task Sequencing



Cost Totals	Quarter Number														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
COST ITEM	\$241,436	\$242,203	\$242,203	\$242,501	\$270,324	\$276,368	\$276,490	\$273,747	\$679,047	\$656,978	\$656,978	\$656,978	\$506,978	\$508,748	\$506,978
Basic staff costs	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600
Basic non-staff costs (#1)	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$79,581	\$79,581	\$79,581	\$79,581	\$79,581	\$79,581	\$79,581

Legend	Dataset Creation Period														
Parcels (#2)	\$69,755	\$43,846	\$43,846	\$41,853	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608
Parcel Identifiers (#2)															
Highway/Road Networks (#2)	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Street Addresses (#2)	Dollars only, no in-house labor														
Jurisdictional Boundaries: counties and MCDs (#3)		\$2,102	\$2,102			\$1,770			\$1,770					\$1,770	
Jurisdictional Boundaries: school districts		\$18,671	\$18,671	\$23,064	\$25,261	\$13,180	\$10,983	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025
Jurisdictional Boundaries: watershed districts		\$5,903	\$5,903	\$5,903	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127
Rights to property (County tax records)					\$9,692	\$4,846	\$4,846	\$4,846	\$4,336	\$4,336	\$4,336	\$4,336	\$4,336	\$4,336	\$4,336
Land Use Plans/Development Plans (#2)					\$38,955	\$49,863	\$46,746	\$20,257	\$14,116	\$14,116	\$14,116	\$14,116	\$14,116	\$14,116	\$14,116
Existing Land Use (#2)															
Land Regulations (zoning)						\$10,294	\$17,499	\$42,203	\$32,939	\$12,640	\$12,640	\$12,640	\$12,640	\$12,640	\$12,640
Census Boundaries (#4)															
Water Features (#5)															
Socioeconomic Characteristics of Areas: demographic (#6)									\$375,000	\$375,000	\$375,000	\$375,000	\$225,000	\$225,000	\$225,000
Socioeconomic Characteristics of Areas: economic (#7)	Dollars only, no in-house labor														
Where people live and how to contact them (#8)									\$68,194	\$68,194	\$68,194	\$68,194	\$68,194	\$68,194	\$68,194
	Mostly dollars, very little in-house labor														

Notes

#1 Data Maintenance level non-basic staff costs apply from 9th quarter onward.

MetroGIS Fair Share Financial Model Cost Worksheet

Staff Tasks

Task	Estimated Total Hours Per Year	2135	2042	1616	
		Executive Director Hours/Yr	Policy Coordinat Hours/Yr	GIS Coordinator Hours/Yr	
Secure financing		120	40	40	
Supervise staff		80			
Organizational strategy and policy		160	40	20	
Develop Business Plan		60	40	20	
Address intellectual property rights issues		8	60	8	
Budgeting		45	40	20	
Professional Development		80	80	120	
Coordination and Technical Functions					
1	Promote & endorse voluntary policies which foster coordination of GIS among the region's organizations	60	120	20	Includes resolving questions of equity.
2	Identify unmet GIS needs with regional significance and act on these needs.	40	100	60	
3	Facilitate data sharing agreements and licensing among MetroGIS stakeholders	120	120		Includes resolving questions of equity.
4	Develop and endorse standards for GIS data content, data documentation, and data management			160	
5	Require standardized GIS content, data documentation, and data management for regional data sets			8	
6	Endorse standards for telecommunication protocol and networks			80	
7	Provide a repository of GIS human resources information		4		
8	Develop master contracts for regional GIS projects, when appropriate	80	90	60	
9	Promote development and exchange of GIS applications and procedures that serve MetroGIS needs.	40	40	160	

Data Development and Distribution Functions

1	Create and maintain datasets for MetroGIS based upon identified priorities	40	40	160
2	Fill gaps in metadata based on identified priorities			40
3	Provide a directory of data within the region and a mechanism for search and retrieval of GIS data (this includes hosting the mechanism)			40

Service Functions

1	Provide technical assistance to participants to retrieve, translate, and use data.			40
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Research Functions

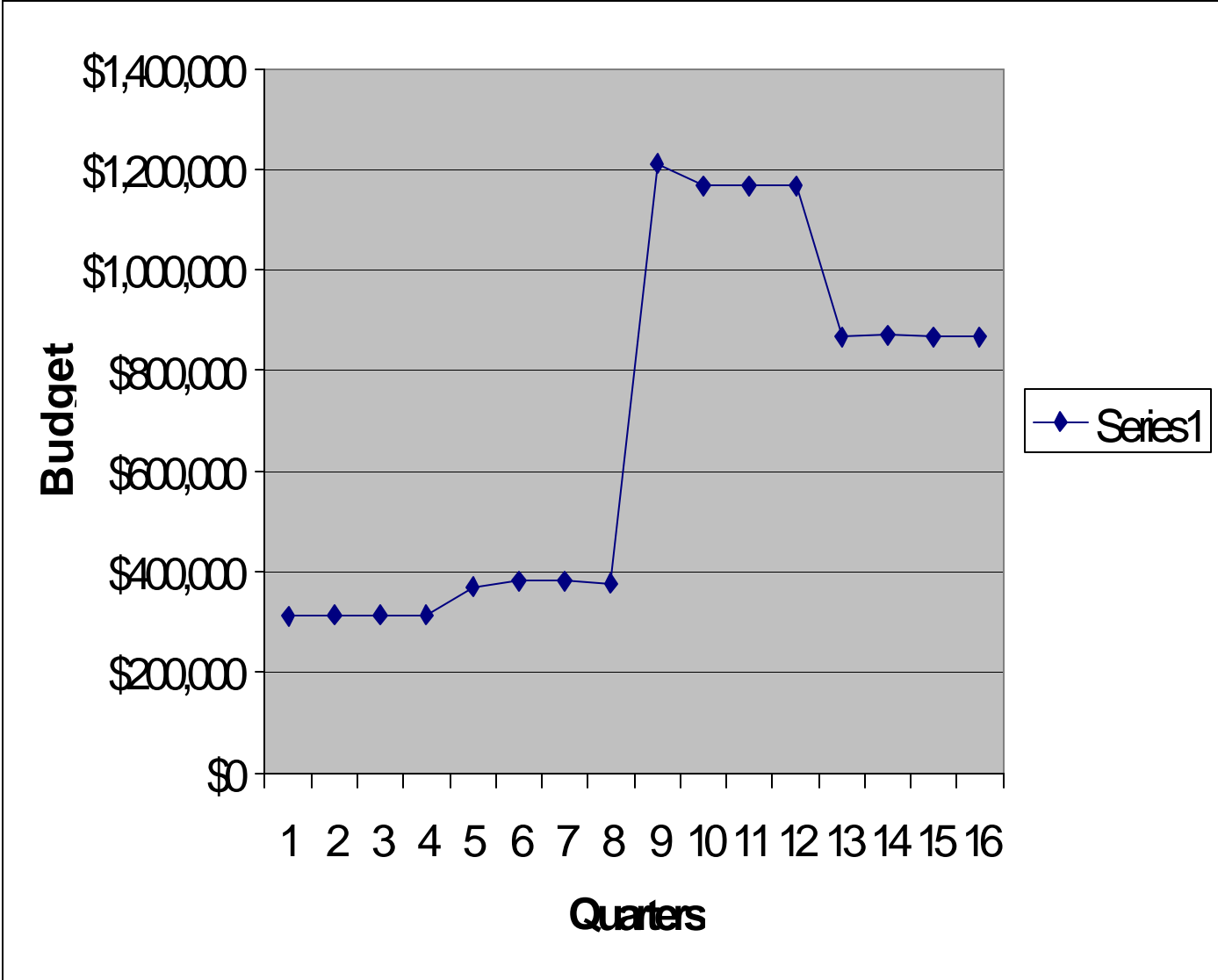
1	Undertake research to meet common regional GIS needs	40	100	120
2	Promote collaborative funding of pilot projects that meet regional needs	80	80	20

Outreach Functions

1	Identify GIS training and continuing education needs and encourage participation	40	90	40	
2	Advocate for MetroGIS needs and desires with state and federal policy makers	430	140	20	
3	Maintain liaison relationships with committees/organizations with similar objectives to MetroGIS	500	610	40	
4	Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities	80	80	80	This includes documenting benefits
5	Publish MetroGIS Newsletter/Brochures	8	40	40	
6	Maintain MetroGIS world wide web site	4	8	40	
7	Market MetroGIS data and products	20	80	160	This includes documenting benefits

MetroGIS Fair Share Financial Model Cost Worksheet

Task Sequencing With Reduced Data Needs



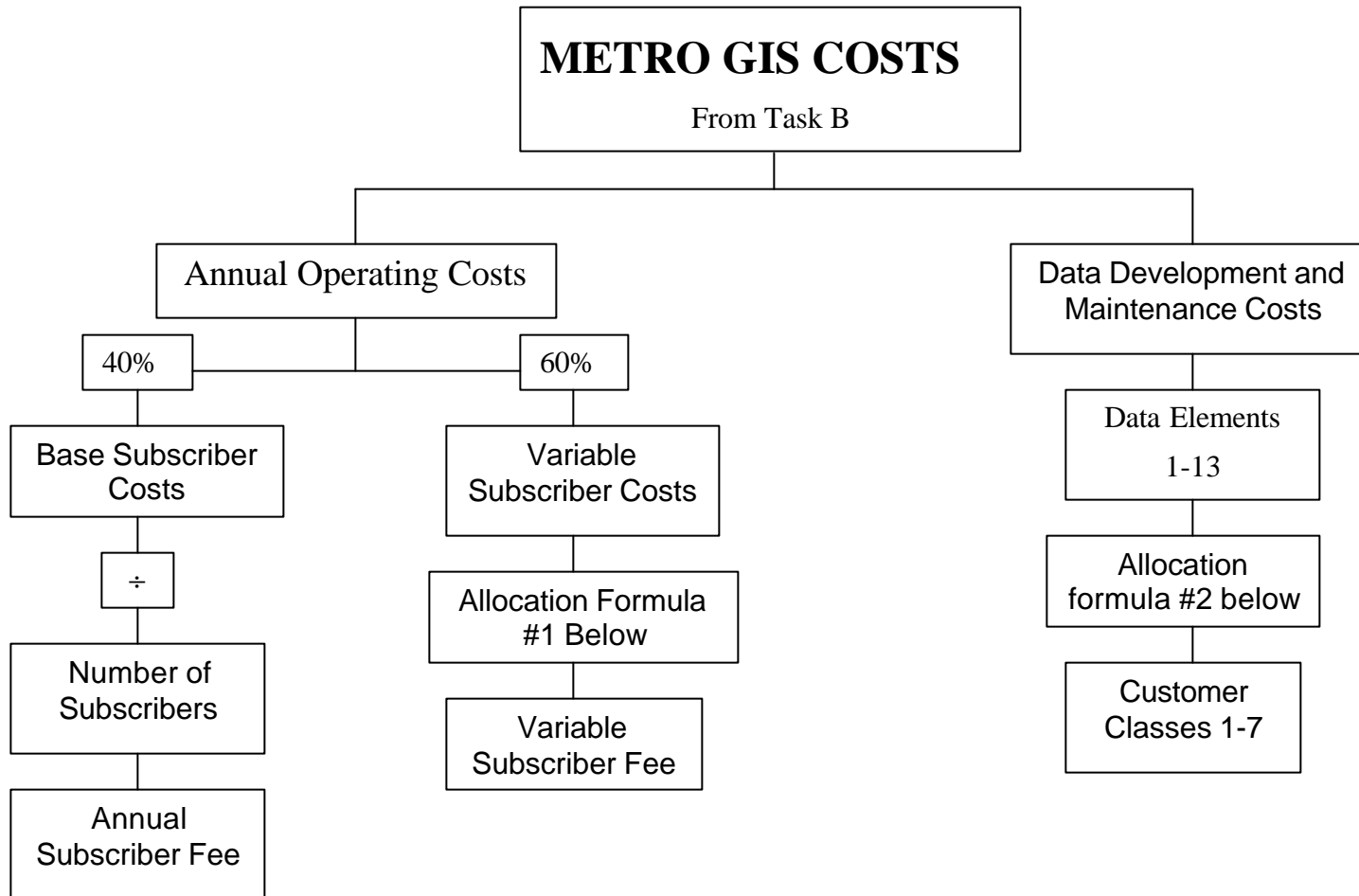
	Quarter Number													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cost Totals	\$311,942	\$313,475	\$313,475	\$314,072	\$369,718	\$381,806	\$382,050	\$376,564	\$1,210,914	\$1,166,775	\$1,166,775	\$1,166,775	\$866,775	\$870,316
COST ITEM														
Basic staff costs (#1)	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600	\$67,600
Basic non-staff costs	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$103,331	\$79,581	\$79,581	\$79,581	\$79,581	\$79,581	\$79,581
Legend	Dataset Creation Period													
	\$70,505	\$71,272	\$71,272	\$71,570	\$99,394	\$105,438	\$105,560	\$102,817	\$531,866	\$509,797	\$509,797	\$509,797	\$359,797	\$361,568
Parcels (#2)	\$69,755	\$43,846	\$43,846	\$41,853	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608	\$21,608
Parcel Identifiers (#2)														
Highway/Road Networks (#2)	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750	\$750
Street Addresses (#2)	Dollars only, no in-house labor													
Jurisdictional Boundaries: counties and MCDs (#3)		\$2,102	\$2,102			\$1,770			\$1,770					\$1,770
Jurisdictional Boundaries: school districts		\$18,671	\$18,671	\$23,064	\$25,261	\$13,180	\$10,983	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025	\$10,025
Jurisdictional Boundaries: watershed districts		\$5,903	\$5,903	\$5,903	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127	\$3,127
Rights to property (County tax records)					\$9,692	\$4,846	\$4,846	\$4,846	\$4,336	\$4,336	\$4,336	\$4,336	\$4,336	\$4,336
Land Use Plans/Development Plans (#2)					\$38,955	\$49,863	\$46,746	\$20,257	\$14,116	\$14,116	\$14,116	\$14,116	\$14,116	\$14,116
Existing Land Use (#2)														
Land Regulations (zoning)						\$10,294	\$17,499	\$42,203	\$32,939	\$12,640	\$12,640	\$12,640	\$12,640	\$12,640
Census Boundaries (#4)														
Water Features (#5)														
Socioeconomic Characteristics of Areas: demographic (#6)									\$375,000	\$375,000	\$375,000	\$375,000	\$225,000	\$225,000
Socioeconomic Characteristics of Areas: economic (#7)	Dollars only, no in-house labor													
Where people live and how to contact them (#8)									\$68,194	\$68,194	\$68,194	\$68,194	\$68,194	\$68,194
	Mostly dollars, very little in-house labor													

Notes

#1 Data Maintenance level non-basic staff costs apply from 9th quarter onward.

APPENDIX 11 FEE DEVELOPMENT PROCESS

11.1 Overview of Fee Development Process



Allocation Score = (Projected # parcels X Priority Rating X Scale Factor) / Total Parcels in Dataset

Formula #1

$$\frac{\text{Sum of class allocation scores}}{\text{Sum of all classes allocation scores}} \times \text{Variable Subscriber Costs}$$

Formula #2

$$\frac{\text{Class Allocation Score}}{\text{Sum of Allocation Scores}} \times \text{Data Element Cost} = \text{Subscriber Class Costs}$$

11.2 Example Calculation - Formula One

Example Formula 1

Development of Variable Operations Cost Allocator

Data Element	Municipals
Jurisdictional Boundaries	1.30
Street Address/Highway/Road Networks	1.28
Land Use Plans/Existing Land Use	1.11
Rights to Property	1.81
Parcel Boundaries/Parcel I.D.	1.47
Lakes, Wetlands, Etc.	1.09
Census Boundaries	1.26
Where People Live	1.49
Land Regulations	1.03
Socioeconomic	1.14
Total Municipal Allocation Scores	12.98
Total All Subscriber Allocation Scores	142.03
Percent of operation costs allocated to Municipals	9%

- 1) Total Municipal Allocation Score divided by All subscriber allocation scores
 = percentage of operational costs allocated to Municipals

11.3 Example Calculation - Formula Two

Example Formula 2

Development of Data Element Cost Allocation

Jurisdictional Boundaries

Cost = \$66,201

Subscriber Class	Class Score	Allocation Percentage	Cost Allocated
Municipals	1.30	7%	\$4,389
School Districts	2.47	13%	8,361
Metropolitan Gov't	6.00	31%	20,302
State Gov't	2.78	14%	9,407
Federal Gov't	1.71	9%	5,786
Watershed Districts	1.19	6%	4,015
Counties	4.12	21%	13,941
Total	19.56	100%	\$66,201

APPENDIX 12 FINANCIAL MODEL SCHEDULES

12.1 Survey Results - Priority Ratings

Survey Results - Priority Ratings							
	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties
Jurisdictional Boundaries	2.09	3.53	3.00	2.78	1.71	3.56	2.06
Highway/Road Networks and Street Address Ranges	2.06	2.19	2.21	1.53	1.32	2.00	2.01
Land use plans/Land use existing	1.80	2.12	2.73	1.81	1.71	2.53	1.80
Rights to Property	2.91	1.11	2.51	0.67	1.21	2.19	1.89
Parcel Boundaries/Parcel I.D.	2.38	1.29	2.28	0.53	0.21	2.16	1.63
Lakes, Wetlands, Etc.	1.75	0.46	2.31	1.33	2.64	1.19	2.01
Census Boundaries	2.03	2.34	2.22	2.17	0.86	1.44	1.76
Where People Live	2.40	2.73	0.70	0.33	0.00	2.88	1.97
Land Regulations	1.66	1.88	2.28	1.50	1.29	2.56	1.64
Socioeconomic Charact of Areas	1.84	1.96	1.89	1.94	1.36	1.94	1.60

Notes:

- 1) Priority ratings were from survey data titled "MetroGIS Information Needs Survey".
- 2) The survey had two components "importance" and "dependency" the average of the two scores were used to determine benefit.
- 3) The following subscriber classes were not specifically isolated in the survey and were tallied separately.
 - a) Schools - Five responses
 - b) Federal - Three responses
 - c) Watersheds - One response - Local/Other benefit rating substituted
 - d) It is recommended the survey be updated and these classes be included in survey results.
- 4) The original 13 data information needs were combined into 10, due to the interrelationship between the data.
 - a) Parcel boundaries were combined with parcel identifiers
 - b) Street addresses were combined with highway/road networks
 - c) Land use plans were combined with land use existing
 - d) Survey results were averaged when data information needs were combined.

12.2 Subscriber Statistics and Allocators

Subscriber Statistics and Allocators	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties	Total
Number of Subscribers Allocator								
Potential Subscribers	173	66	1	1	1	12	7	261
Penetration Rate	15%	30%	100%	100%	100%	30%	100%	
Projected Subscribers	26	20	1	1	1	4	7	59
Number of Subscribers	44%	33%	2%	2%	2%	6%	12%	100%
Number of Parcels Allocator								
Parcels	782,629	882,629	882,629	882,629	882,629	420,258	882,629	3,776,971
Penetration Rate	35%	35%	100%	100%	100%	35%	100%	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Subscriber Parcel Allocator	6%	7%	21%	21%	21%	3%	21%	100%
Operation Costs-Variable Allocator								
Sum of 10 Data Element Scores	13	14	44	15	12	7	37	142
Operation Costs-Variable Allocator	9%	10%	31%	10%	9%	5%	26%	100%
Other Revenue & Exp, Allocator								
	Base Sub. Costs	Var. Sub. Costs						
Total Base Subscriber Costs	230,089	658,757	888,847					
Revenue Allocator	26%	74%						

Subscriber Statistics and Allocators	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties	Total
Class Subscriber Allocator								
Sum of Base Subscriber Costs	100,603	76,761	3,877	3,877	3,877	13,957	27,138	230,089
Base Subscriber Allocator	44%	33%	2%	2%	2%	6%	12%	100%
Sum of Variable Subscriber Costs	60,845	62,463	217,572	63,845	50,958	36,667	166,407	658,757
Variable Subscriber Allocator	9%	9%	33%	10%	8%	6%	25%	100%
County Charge Back Allocator								
Base Subscription	25,188							
Variable Subscription	153,904							
County Charge Back Allocator								
Base Subscriber	86,455	65,966	3,332	3,332	3,332	11,994		174,410
Base Sub. Allocator Excl. Counties	50%	38%	2%	2%	2%	7%		100%
Variable Subscriber	52,381	53,514	263,714	54,335	42,929	31,787		498,660
Variable Sub. Allocator Excl. Counties	11%	11%	53%	11%	9%	6%		100%

Notes:

- 1) Sixteen (16) cities were excluded from participation due to the existing contracts with counties, total parcels estimated at 100,000.
- 2) Penetration rates estimated through consultation with Policy Advisory Team.
- 3) Parcel information provided by MetroGIS.

12.3 MetroGIS Operating, Maintenance, and Data Development Costs

MetroGIS Operating, Maintenance, and Data Development Costs	Four Year Costs	Annualized Costs	Allocator	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties
<u>Operational Costs</u>										
Staff Costs	\$1,081,600		60% Variable, 40% Base							
Staff Costs - Variable Subscriber Costs		\$162,240	Operation Costs-Variable Allocator	14,822	15,673	50,536	16,655	14,062	8,546	41,946
Staff Costs - Base Subscriber Costs		108,160	Number of Subscribers	47,292	36,084	1,822	1,822	1,822	6,561	12,757
Non-Staff Costs	1,292,092		60% Variable, 40% Base							
Non-Staff Costs – Variable Subscriber Costs		193,814	Operation Costs-Variable Allocator	17,707	18,723	60,371	19,896	16,799	10,209	50,109
Non-Staff Costs – Base Subscriber Costs		129,209	Number of Subscribers	56,496	43,106	2,177	2,177	2,177	7,837	15,240
Total Operational Costs	\$2,300,892	\$575,223		\$136,316	\$113,585	\$114,907	\$40,551	\$34,860	\$33,152	\$120,052
<u>Data Development & Maintenance Costs</u>										
Jurisdictional Boundaries	264,804	66,201	J.D. Allocation Ratio	4,389	8,361	20,302	9,407	5,786	4,015	13,941
Street Addresses/Highway/Road Networks	12,000	3,000	Street Allocation Ratio	259	312	897	310	268	136	818
Land use plans/Land use existing	268,753	67,188	Land Allocation Ratio	4,681	6,220	22,896	7,583	7,184	3,543	15,082
Rights to Property	58,918	14,730	Property Allocation Ratio	1,901	818	5,284	705	1,274	768	3,979
Parcel Boundaries/Parcel I.D.	458,601	114,650	Parcel Allocation Ratio	14,517	8,858	44,907	5,219	2,068	7,073	32,006
Lakes, Wetlands, Etc.		0	Lakes Allocation Ratio	0	0	0	0	0	0	0
Census Boundaries		0	Census Allocation Ratio	0	0	0	0	0	0	0
Where People Live	0	0	People Allocation Ratio	0	0	0	0	0	0	0
Land Regulations	191,418	47,855	Land Reg Allocation Ratio	3,565	4,554	15,779	5,190	4,464	2,952	11,350
Socioeconomic Charact of Areas	0	0	Socio Allocation Ratio	0	0	0	0	0	0	0
Total Data Development & Maint. Costs	1,254,494	313,624		29,314	29,123	110,065	28,415	21,044	18,487	77,175
<u>Other Revenues & Expenses</u>										
Revenues from Non Metro-GIS Participants	(300,000)	(75,000)								
Grants to MetroGIS	(200,000)	(50,000)								
Total Revenues	(500,000)	(125,000)	Other Revenue & Exp. Allocator							

MetroGIS Operating, Maintenance, and Data Development Costs	Four Year Costs	Annualized Costs	Allocator	School Municipals	School Districts	Metropolita n Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties
Other Revenues – Base Subscriber		(32,358)	Base Subscriber Allocator	(14,148)	(10,795)	(545)	(545)	(545)	(1,963)	(3,816)
Other Revenues – Variable Subscriber		(92,642)	Variable Subscriber Allocator	(8,464)	(8,949)	(28,857)	(9,510)	(8,030)	(4,880)	(23,952)
Primary Producer Incentives	300,000	75,000	Direct to Metro-Gov't	0	0	75,000	0	0	0	0
Total Other Revenues & Expenses	(200,000)	(50,000)		(22,612)	(19,744)	45,598	(10,056)	(8,575)	(6,842)	(27,768)
<u>Contingency</u>										
Reserve/Contingency - Total	171,814	42,954	Other Revenue & Exp. Allocator							
Reserve/Contingency - Base Subscriber		11,241	Base Subscriber Allocator	4,915	3,750	189	189	189	682	1,326
Reserve/Contingency - Variable Subscriber		31,713	Variable Subscriber Allocator	2,929	3,008	10,464	3,077	2,458	1,764	8,014
Total Contingency	244,614	42,954		7,843	6,758	10,654	3,266	2,647	2,445	9,340
Costs by Subscriber Class before General	3,600,000	900,000		150,738	129,637	281,328	62,207	50,001	47,240	178,848
<u>General Allocations</u>										
County Participation Reductions	0	0	Direct to Municipals	0	0	0	0	0	0	0
County Charge Back - Variable Subscriber	0	0	Variable Sub. Allocator - Excl Counties	16,158	16,519	80,842	16,788	13,282	9,796	(153,384)
County Charge Back - Base Subscriber			Base Sub. Allocator - Excl Counties	12,623	9,631	486	486	486	1,751	(25,464)
Total Cost by Subscriber Class	\$3,600,000	\$900,000		\$179,519	\$155,787	\$362,656	\$79,481	\$63,770	\$58,787	\$0

Notes:

1. County contribution assumed to be their data. Allocated back to subscriber classes based on total dollars.
2. Cost to develop "socioeconomic" and "where people" was excluded due to the high cost of development.
3. Cost information provided from Task B.
4. Forty percent of the operational costs allocated to Annual Subscription Fee.
5. Counties are rebated a portion of the revenues from private sales.
- 6) Direct to Metro-Gov't is payment of \$75,000 to primary data producers.
- 7) Cost information provided from Task B – Please see Schedule 12.4 – Reconciliation with Task B costs.

12.4 Reconciliation with Task B costs

From Task B.	Task B Total	Less: Socioeconomic	Less: Where People	Adjusted Total
Year One Costs	1,000,543	0	0	1,000,543
Year Two Costs	1,129,130	0	0	1,129,130
Year Three Costs	2,682,182	(1,500,000)	(272,777)	909,405
Year Four Costs	2,061,883	(900,000)	(272,777)	889,106
Total Four Year Costs	\$6,873,738	(\$2,400,000)	(\$545,554)	\$3,928,184

Average Annual Cost from Task B \$982,046

Adjustments to Task B Costs

Contingencies	\$42,954			
Grants Received	(50,000)			
Other Revenues	(75,000)			
Total Annual Adjustments				(82,046)

Projected annual cost to recover from subscribers \$900,000

12.5 Data Development Allocators

Data Development Allocators	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties	Total
Jurisdictional Boundaries								
Cost	\$66,201							
Priority Rating	2.09	3.53	3.00	2.78	1.71	3.56	2.06	18.73
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.30	2.47	6.00	2.78	1.71	1.19	4.12	20
J.D. Allocation Ratio	7%	13%	31%	14%	9%	6%	21%	100%
Costs	4,389	8,361	20,302	9,407	5,786	4,015	13,941	\$66,201
Street Addresses/Highway Road Network								
Cost	\$3,000							
Priority Rating	2.06	2.19	2.21	1.53	1.32	2.00	2.01	13.31
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.28	1.53	4.41	1.53	1.32	0.67	4.02	15
Street Allocation Ratio	9%	10%	30%	10%	9%	5%	27%	100%
Costs	259	312	897	310	268	136	818	\$3,000
Land Use Plans/Existing Land Use								
Cost	\$67,188							
Priority Rating	1.80	2.12	2.73	1.81	1.71	2.53	1.80	14.48
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.11	1.48	5.45	1.81	1.71	0.84	3.59	16
Land Allocation Ratio	7%	9%	34%	11%	11%	5%	22%	100%
Costs	4,681	6,220	22,896	7,583	7,184	3,543	15,082	\$67,188

Data Development Allocators		School	Metropolitan	State	Federal	Watershed		
	Municipals	Districts	Gov't	Gov't	Gov't	Districts	Counties	Total
Rights to Property								
Cost	\$14,730							
Priority Rating	2.91	1.11	2.51	0.67	1.21	2.19	1.89	12.49
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.81	0.78	5.02	0.67	1.21	0.73	3.78	14
Property Allocation Ratio	13%	6%	36%	5%	9%	5%	27%	100%
Costs	1,901	818	5,284	705	1,274	768	3,979	\$14,730
Parcel Boundaries/Parcel I.D.								
Cost	\$114,650							
Priority Rating	2.375	1.285	2.28	0.53	0.21	2.155	1.625	10
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.47	0.90	4.56	0.53	0.21	0.72	3.25	12
Parcel Allocation Ratio	13%	8%	39%	5%	2%	6%	28%	100%
Costs	14,517	8,858	44,907	5,219	2,068	7,073	32,006	\$114,650
Lakes, Wetlands, Etc.								
Cost	\$0							
Priority Rating	1.75	0.46	2.31	1.33	2.64	1.19	2.01	11.69
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.09	0.32	4.62	1.33	2.64	0.40	4.02	14
Lakes Allocation Ratio	8%	2%	32%	9%	18%	3%	28%	100%
Costs	0	0	0	0	0	0	0	\$0
Census Boundaries								
Cost	\$0							
Priority Rating	2.03	2.34	2.22	2.17	0.86	1.44	1.76	13
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.26	1.64	4.44	2.17	0.86	0.48	3.52	14
Census Allocation Ratio	9%	11%	31%	15%	6%	3%	24%	100%
Costs	0	0	0	0	0	0	0	\$0

Data Development Allocators

	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts	Counties	Total
Where People Live								
Cost	\$0							
Priority Rating	2.4	2.73	0.7	0.33	0	2.88	1.97	11
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.49	1.91	1.40	0.33	0.00	0.96	3.94	10
People Allocation Ratio	15%	19%	14%	3%	0%	10%	39%	100%
Costs	0	0	0	0	0	0	0	\$0
Land Regulations								
Cost	\$47,855							
Priority Rating	1.66	1.88	2.28	1.5	1.29	2.56	1.64	13
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.03	1.32	4.56	1.50	1.29	0.85	3.28	14
Land Reg Allocation Ratio	7%	10%	33%	11%	9%	6%	24%	100%
Costs	3,565	4,554	15,779	5,190	4,464	2,952	11,350	\$47,855
Socioeconomic								
Cost	\$0							
Priority Rating	1.84	1.96	1.89	1.94	1.36	1.94	1.60	12.53
Scale Factor	2.00	2.00	2.00	1.00	1.00	2.00	2.00	
Subscriber Parcels	273,920	308,920	882,629	882,629	882,629	147,090	882,629	4,260,447
Allocation Score	1.14	1.37	3.78	1.94	1.36	0.65	3.20	13
Socio Allocation Ratio	8%	10%	28%	14%	10%	5%	24%	100%
Costs	0	0	0	0	0	0	0	\$0

Notes:

- 1) Allocation basis determined through consultation with Consulting Team and Policy Advisory Team.
- 2) Scale factor for all classes have been set to 2, with the exception of state and federal governments which were given a rating of 1.
For definition of scale factor and priority rating, please see definitions in appendix 2 of this report.

12.6 Subscriber Share of Costs at Various MetroGIS Expenses

Class	Percent Share	Share of MetroGIS Expenses:	
		\$500,000	\$900,000
Municipals	20%	\$99,773	179,519
School Districts	17%	86,548	155,787
Metropolitan Gov't	40%	201,476	362,656
State Gov't	9%	44,156	79,481
Federal Gov't	7%	35,428	63,770
Watershed Districts	7%	32,659	58,787
Counties	0%	0	0
Total Costs	100%	\$500,000	\$900,000

Notes:

1) Other revenue sources are anticipated from following organizations:

- Non-Profit Organizations
- Private Users
- Collar Counties
- Federal & State Grants

2) Federal contribution to costs may be received through grants rather than annual contributions.

12.7 Base Subscriber and Variable Subscriber Fees at Various MetroGIS Expenses

	Subscription Fee Breakdown:	
	\$500,000	\$900,000
Base Subscriber Fee	\$2,300	\$4,100
 <u>Variable Subscriber Fee</u>		
Municipals	0.147	0.265
School Districts	0.133	0.240
Metropolitan Gov't	0.226	0.406
State Gov't	0.047	0.085
Federal Gov't	0.038	0.068
Watershed Districts	0.166	0.299

Notes:

- 1) Base subscriber fee is the same for all subscriber classes
- 2) Variable fees are determined by using the variable subscriber fee times number of parcels within the subscribers' boundaries.

12.8 Revenue Proof

	Municipals	School Districts	Metropolitan Gov't	State Gov't	Federal Gov't	Watershed Districts
<u>Revenue Test - \$500,000</u>						
Subscription fees	\$59,685	\$45,540	\$2,300	\$2,300	\$2,300	\$8,280
Parcel Fees	40,408	41,293	200,042	41,943	33,158	24,511
Total	\$100,093	\$86,833	\$202,342	\$44,243	\$35,458	\$32,791
Check Figure	872	666	34	34	34	121
<u>Revenue Test - \$900,000</u>						
Subscription fees	\$106,395	\$81,180	\$4,100	\$4,100	\$4,100	\$14,760
Parcel Fees	72,734	74,328	360,075	75,497	59,684	44,120
Total	\$179,129	\$155,508	\$364,175	\$79,597	\$63,784	\$58,880
Check Figure	532	406	21	21	21	74

*Differences due to rounding subscription fees

12.9 Fee Development - Mature MetroGIS

	Annualized	Municipals	Districts	Metropolitan	State	Federal
	Costs			Gov't	Gov't	Gov't
Total Class Fees	\$900,000	\$179,519	\$155,787	\$362,656	\$79,481	\$63,770
Total Base Subscriber Fees	215,898	107,021	81,658	4,124	4,124	4,124
Base Subscriber Fee	4,124	4,124	4,124	4,124	4,124	4,124
Total Variable Subscriber Fee	684,102	72,498	74,129	358,532	75,357	59,646
Variable Subscriber Fee	0.161	0.265	0.240	0.406	0.085	0.068

APPENDIX 13 SUMMARY OF INFORMATION GATHERED ON GOVERNANCE STRUCTURE

San Diego Data Processing Corporation Bill Bamberger, GIS Service Manager

1. From 1984 until July 1987 the Data Processing Corporation (Corp.) was a nonprofit organization owned by the City of San Diego. An agreement existed among the city, San Diego County, and the Corp. that called for the Corp. to provide services to the city and county.
2. In 1987, the city and county of San Diego established a joint powers agency with an executive director. The Corp. is a separate agency, privately owned, that contracts with the Joint Powers Agency to provide data and technical services and support. It also contracts with the City of San Diego to provide technical services and support. Mr. Bamberger said the relationship with the city is more like a partnership. This arrangement has worked well for all parties.
3. California law dictates that only governments can enter in joint powers agreements.
4. California law allows the Corp. to be a data provider by requiring a license of anyone who wants access to the data. The fee for obtaining a license depends on the kind of organization seeking the license. No specific legislation was needed with respect to California's open records law.
5. The main database used by the Corp. was originally obtained from the local gas and electric company. The database is licensed to the Corp. and there are limits on the Joint Powers Agency regarding distribution of the data. There is currently a 10-year agreement between the gas and electric company and the Joint Powers Agency regarding the database. The term for this agreement expires in 2001, but is subject to re-negotiation for continued use of the database.
6. Mr. Bamberger suggested asking ourselves what's really the function of a joint powers agency. With respect to the City of San Diego / County of San Diego Joint Powers Agency, they see their role as maintaining a base map, providing access to the data, and developing business relationships with third party private sector groups.

Cincinnati Area Geographic Information System (CAGIS) Barbara Quinn, Administrator

1. Core members are CINergy, Cincinnati Bell, the City of Cincinnati and the County. They have signed a contract to form CAGIS. As a matter of confidentiality, CINergy and Cincinnati Bell do not want other utilities added to this core group, so the city and county have respected their concerns. However, other governmental units can be added.

Presently, four city department directors, four county department directors and a vice president from each of the two utilities compose CAGIS as voting members.

2. To avoid any conflicts with the Ohio open records law, CAGIS does not sell data or information, but sells data services or staff time. Staff consider themselves consultants and charge by the hour for their services. Costs are based on the size of a jurisdiction's parcel database (cost per parcel). By doing this, CAGIS is able to spread its administrative costs and recoup all of those costs.

Dakota County GIS Partnership

Gary Stevenson, Director

1. 1987 – Dakota County, Dakota Electric, and 11 cities within the county formed the GIS Partnership. The Partnership operates under an informal agreement whereby all parties to the agreement share costs for development, software, hardware, etc. Because the agreement is informal, it allows a lot of flexibility in terms of how the Partnership operates. There is an informal committee to the Partnership and a user group that meets regularly.
2. Operating under existing laws, the Partnership sells data to the private sector. Data is provided free of charge to governmental units and Dakota Electric.

Portland Metro

Richard (Dick) Bolen, Manager

Data Resource Center

1. Metro is the directly elected regional government that serves more than 1.3 million residents in Clackamas, Multnomah, and Washington counties, and the 24 cities in the Portland, Oregon, metropolitan area. Metro is governed by an executive officer, elected region-wide, and a seven-member council, elected by districts. Metro also has an auditor who is elected region-wide.
 - Metro’s geographic information system is known as the Regional Land Information System (RLIS). Metro GIS is under the Data Resource Center, which is a division within Metro’s Growth Management Services Department.
2. RLIS was developed in 1989. The initial land base was developed from an existing base owned by Portland General Electric. Initially, in 1991, Portland General Electric was part of this group, but they stayed in the CAD world while the rest of the group incorporated new mapping and database software to build their Geographic Information System.
 - RLIS is a multi-participant system, so in addition to Metro staff, there are numerous partners throughout the region who contribute to the success of the system. Maintenance of the system is distributed throughout the region in various other programs.
3. Oregon’s public records law exempts Portland Metro’s GIS data from its regulations. Portland Metro is not the primary record holder of the data – the county is – and Portland Metro is viewed as a service provider. This concept allows Portland Metro to charge for its services and to charge for data, which it distributes in CD form. The fees charged constitute a cost recovery program. The county has to provide data free of charge. Mr. Bolen said they receive approximately \$450,000 in annual revenues, and of this, approximately \$325,000 is in services.
 - Although the data contained in RLIS are considered public records, the Oregon Legislature recognized the special effort required to orchestrate the complexity of a geographic information system. RLIS data are exempt from being provided to the public based simply on the cost of copying. The legislation states that Metro may “impose and collect reasonable fees based on market prices or competitive bids for geographic data that have commercial value... [and] enter into agreements with private persons or entities to assist with marketing such products.

Louisville /Jefferson County Information Consortium (LOJIC)

Bruce Siegle, Metropolitan Sewer District

Curt Bynum, GIS Coordinator

1. Present LOJIC participants include the City of Louisville, Jefferson County, Louisville and Jefferson County Metropolitan Sewer District (MSD), the Property Valuation Administration (PVA) and the Louisville Water Company. MSD serves as the Project Management Agency for the consortium. They took the lead in the initial implementation of LOJIC and solicited formal participation from other public agencies and utilities as early as possible. (MSD owned the copyright on everything.) All agencies were involved in the hardware / software procurement process, system installation, data conversion, training, applications development, and myriad technical issues related to LOJIC implementation.
2. Formal lease / purchase agreements exist between all of the participating agencies. With the exception of the Louisville Water Company, purchase agreements were made for a 15-year period. The Water Company needed a five-year agreement for ownership purposes. All of the participants have representation on the policy committee and standing with the technical committee.
3. In addition to the five formal participants, license agreements have been implemented with a number of Jefferson County's suburban cities, independent Fire Protection Districts, transportation agencies, and the University of Louisville to provide these groups with LOJIC data, ArcView software, training and technical support. A cooperative agreement also exists with the University of Louisville Center for GIS to provide access to the LOJIC database for research, training support and placement of student interns with various LOJIC user agencies. Cooperative demonstration projects and negotiations are underway with the Louisville Gas & Electric Company, the Transit Authority, Greater Louisville, Inc., and the Kentucky / Indiana Regional Planning and Development Agency toward similar partnership agreements to provide access to the LOJIC GIS. Ongoing discussions with other private sector businesses and data developers in the community continue to guide marketing and product direction.
4. In an effort to lay the foundation for cost recovery, LOJIC management played a vital role in amending the Kentucky Open Records Law to allow cost recovery for GIS data and products. The first revision to the law allowed the sale of GIS products and data produced by public agencies. The second revision eliminated the special consideration for GIS data and required that all data produced by public agencies be considered as records in the same way. This has broadened the cost recovery potential for public entities throughout the state.
 - LOJIC's annual operating budget per year is about \$1.2 million. Approximately \$150,000 to \$200,000 is received in revenue from the sale of data and services, which covers costs for aerial photography and some hardware and software. The remaining budget needs are met through dedicated funding by the city and county, water company, and MSD.
5. Structure of LOJIC under MSD:
 - Management Agency consisting of network system support, coordination, training, and technicians.
 - Policy Committee comprised of one representative from each of the five core members.
 - Technical Committee: includes representatives from connecting agencies.
 - According to Mr. Bynum, LOJIC staff is under MSD, but left alone to make decisions and run the program.

Regis (Regional GIS) – Michigan's Grand Valley
John Kelly, c/o Convergent Group

Sharon Steffens, Chairwoman of the Regis Board of Directors (as recently as June 1998) and Supervisor of the Township of Alpine, Michigan

1. The Grand Valley Metropolitan Council formed Regis in 1996.
2. Regis Pilot Project: 7 governments, nine square miles – completed in August
3. Currently 21 communities participating

***Indianapolis Mapping and Geographic Infrastructure System (IMAGIS)
Dave Mockert, Administrator (dmockert@IndyGov.org)***

1. Consortium created in 1986 and includes City of Indianapolis, Marion County, and various utilities: Power & Light, Gas, Water, and Health and Hospital. Indianapolis and Marion County are the primary sources for funding. Remaining members contribute small amount. Proprietary data owned by the utilities is excluded from the database.

In 1996, the City of Indianapolis entered into a 6-year contract with Convergent group to provide additional staffing and management of the GIS efforts of the city and county.

2. Dave will check to see if he can mail a copy of the Agreement creating IMAGIS. As it is set up, the consortium can sell data for cost recovery, but the City of Indianapolis, who has a copyright on the data, cannot sell the data.
3. Indiana University / Purdue University Indianapolis are the custodians of the data. However, the data is housed in the City of Indianapolis. The city provides some hardware and software support. A 3-member staff employed by the University actually works at the city and maintains the data.
4. Municipalities can become associate members of the consortium. Associate members have no voting rights in the consortium, but they can pay a flat fee each year for access to all the data. This would include any updates that had occurred during the year.

***North Metro I-35W Corridor Coalition
Joseph Strauss***

1. Joint Powers Agency consisting of a Board comprising seven mayors and city managers. One of the cities serves as fiscal agent. In the first year or two, each city contributed 16% or 17% of the budget. Coalition looks for continued funding elsewhere; e.g., Met Council, nonprofits, grants, etc.
2. Purchased a server that resides in the City of Roseville. The coalition contracts with an outside GIS coordinator to provide services, applications, etc.
3. The Coalition's goal is to ultimately make data available to the public. They have not yet determined whether or not to sell data or give it away and how they would do this. They do have license agreements with Met Council, Ramsey County, Anoka County, and others to provide data. They would like to develop a partnership of sorts to share data with NSP and Minnegasco.
4. Mr. Strauss will mail a copy of the Joint Powers Agreement.

***Knoxville / Knox County GIS (Regional Land Information System – RLIS)
John Lutz***

1. Agreement among City of Knoxville, Knox County, and Knoxville Utilities Board. (mailing agreement) Knoxville County and parts of five other counties are served by RLIS. The main database feeds the 911-dispatch service and maps 911 calls for service.

2. Policy Board consists of the Mayor of Knoxville, County Executive, and President of the Utilities Board. RLIS was started in 1985 and the Mayor and County Executive at this time provided strong support for a regional land information system. Important to involve top level officials, at least initially.
3. Sells data and services to governments, private sector, and nonprofits. Revenues of approximately \$100,000 are anticipated this year out of a budget of \$1 million. The majority of the funding comes directly from the city, county, and utilities boards. Bonds were issued initially to cover capital costs and operations. These items as well as personnel are now line items in various department budgets.

A sinking fund (currently at \$200,000) is built into the budget each year for land-based maintenance. A depreciation fund (currently approximately \$1 ml) is used for upgrading hardware and software.

4. Suggests that a private model may work better than other models because everyone shares expenses and expertise.

City of Calgary

Bob Eason, GIS Project Director, 403-268-4470

Due to a reorganization, Don Evans is no longer managing the city's GIS project. According to Mr. Eason, the city is attempting to develop a structure for the city in terms of GIS, but they do not expect to have anything in place for another 8-9 months.

Linnet Company

Clark Beattie, Vice President, Geomatics

204-957-7566

1. Company was formed to create the Manitoba Land Information System (MLIS) as a multi-participant project that included the City of Winnipeg, the Province of Manitoba, Manitoba Hydro, Manitoba Telephone System, and Inter-City Gas.
2. Initially, the government owned part of the company, but this is no longer the case. Linnet is a private company owned in equal part by SNC Lavalin, Inc. Stantec, Inc., and the Linett Employee Corporation.
3. Linnet's main activity for the MLIS is to manage, under contract, the spatial data assets for the participants and to distribute these data to the user community under license. They undertake application development projects for the participants and have separate business contracts with them to provide the services they need.