



Regional Planned Land Use Dataset: Launch Forum

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**Forum Summary prepared by
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In Brief: On May 23, 2002, MetroGIS held a launch forum for the regional planned land use dataset, which had been in development for several years. The goal was to introduce the dataset and talk about its potential uses, as well as discuss the next MetroGIS initiative, the regional existing land use dataset. Co-sponsors of the forum included MetroGIS; North I-35W Corridor Coalition; Sensible Land Use Coalition; the Minnesota Chapter of the American Planning Association; and the Metropolitan Council. In attendance were more than 50 planners, GIS staff and officials from local communities, counties, regional and state agencies, and representatives of private consulting firms and nonprofit organizations.¹ Participants evaluated the value of the forum to their work and, on a scale of 1 to 4 (4 being the highest), gave it an average rating of 3.19. On the same scale, participants rated their understanding of MetroGIS's objectives at 2.31 prior to the forum, and at 3.25 after the forum.²

Welcome

Victoria Reinhardt, chair of the MetroGIS Policy Board, welcomed participants to the forum and gave an overview of the afternoon. She introduced the speakers for the forum: Dr. Will Craig, Associate Director of the Center for Urban and Regional Affairs at the University of Minnesota, and chair of the MetroGIS Coordinating Committee; Dennis Welsch, Community Development Director for the City of Roseville; David Windle, GIS Coordinator for the City of Roseville; Paul Hanson, GIS Specialist at the Metropolitan Council; Terry Schneider, MetroGIS Policy Board Member on behalf of the Association of Metropolitan Municipalities; and Carol Swenson, Senior Research Fellow at the Design Center for American Urban Landscape, University of Minnesota.

MetroGIS: Vision and Function

Will Craig gave a brief overview of how MetroGIS was formed, its vision³ and core functions.⁴ Based upon an extensive survey of the region's data users, the MetroGIS Policy Board in May 1997 endorsed a list of 13 top priority information needs. Subsequently, MetroGIS developed a process whereby participants collaboratively develop regional solutions (datasets) to the common stakeholder information needs. The data solutions currently available include:

- Street centerlines and address ranges
- MCD/county jurisdictional boundaries
- Land cover
- Digital ortho-imagery
- Census geography (1990, 2000)
- Parcels
- Planned land use

In progress are two additional datasets: existing land use, and lakes, wetlands and rivers.

¹ See Attachment A for a list of the organizations represented at the forum.

² See Attachment B for a summary of the forum evaluation.

³ "Provide an ongoing, stakeholder governed, metro-wide mechanism through which participants easily and equitably share geographically referenced data that are accurate, current, secure, of common benefit and readily usable."

⁴ Foster GIS Coordination Among Stakeholders, Oversee Regional Solutions To Common Information Needs, and Support MetroGIS DataFinder (www.datafinder.org). See <http://www.metrogis.org/about/index.shtml> for more information.

Regional Planned Land Use Dataset: *Evolution of a Regional Coding Scheme*

Roseville Community Development Director Dennis Welsch talked about the need for a regional planned land use dataset from a planner's perspective. In 1992, Roseville was introduced to GIS, and subsequently used the tool to develop its updated comprehensive land use plan. By 1994, Welsch said, it became clear that the value of GIS as a tool was "only as good as the data within and outside the boundaries of the city." Was the data reliable? Usable? Comparable?

For example, as the city strategized how best to define the market for two large office parks in Roseville, it was useful to know what surrounding communities had in their industrial/office parks and how land values compared. But each city in the area around Roseville had its own way of defining land uses. Definitions of clean land, vacant land, and brownfields differed. Cities each had different ideas of what constituted a mixed-use development. The cities couldn't even agree on the definition of a duplex, they found.

In 1995 the community development directors of several area cities began meeting to address issues of common concern, such as transportation, housing and land contamination. They formed the I-35W Coalition (www.I35W.org). It became clear that GIS would be an essential tool for their joint planning efforts. Recognizing that their data were not consistent, the cities invited Dakota County's economic development director to talk with them about a five-city land use comparison done in Dakota County.

About the same time, MetroGIS had identified future and existing land use as two top priority information needs. MetroGIS Coordinator Randall Johnson recognized that a regional land use dataset would be very difficult to develop without a smaller prototype, managed by respected members of the local planning community, to lay the groundwork.

As a result, the North I-35W Coalition decided to do a pilot project, with financial support from MetroGIS, to develop a common land use coding scheme for the seven Coalition cities. (For more information, see www.metrogis.org/data/info_needs/planned_land_use/index.shtml). The financial investment by MetroGIS motivated local planners to invest the necessary time to develop a workable scheme, Welsch said, and also built credibility for MetroGIS as a truly participatory organization. Another key to the project's success, he added, was the persistence of Roseville GIS Coordinator David Windle and the assistance of two local consultants, Jerry Happle with PlanSight, a local GIS vendor, and John Carpenter of Excensus.

Introduction to the Regional Coding Scheme

Roseville GIS Coordinator David Windle explained that upon completion of the initial North I-35W Coalition pilot project, MetroGIS engaged a workgroup of city planning professionals, Metropolitan Council staff, Carol Swenson from the University of Minnesota, and Jerry Happle to enhance the prototype planned land use coding scheme to apply region-wide. The goals were to be able to compare land uses between cities, throughout the seven county Metro Area, to be able to look at land use on both a generalized and more detailed level; and to see the relationship between existing and future land use. One of the tasks was adding codes to accommodate land

uses that didn't exist in the pilot project cities, such as active agricultural areas, gravel mining, and intense downtown uses typical of St. Paul and Minneapolis. Concepts recommended by the American Planning Association's "Land-Based Standards Classification Project" were also incorporated into the modified scheme, including a color scheme, where applicable, to map the resulting regional land use designations.

During this phase of the project, the Metropolitan Council was identified as the candidate to be regional custodian of the regional planned land use dataset. Then, in June 2000, testing of the modified prototype coding scheme began. Paul Hanson, GIS Specialist with the Metropolitan Council, built a regional planned land use dataset based upon the coding scheme developed by the community for MetroGIS, and at the same time, the Coalition retained the Design Center at the University of Minnesota to test the coding scheme as part of a 2020 Buildout Study. MetroGIS and Coalition officials kept in touch during the testing phase, which was completed in April 2001.

In May 2001 MetroGIS and the Coalition co-hosted a users forum⁵ to share the results of the testing and get feedback about proposed coding modifications. Participants agreed the dataset would be a valuable planning tool and that efforts should continue to make the dataset operational.

Windle explained the characteristics of the final regional coding scheme. It has a two-level coding system. The first level is more generalized, with 16 land-use designations (such as agricultural, single-family residential, commercial and industrial). The second level is more detailed, and has 55 different designations (for example, neighborhood commercial, community commercial, regional commercial, rural commercial, etc.). Windle showed a series of three slides that compared the individual community land use designations in four adjacent communities in the region to the two levels of the new regional coding scheme. The slides⁶ clearly illustrated how the regional schemes allow for "apples to apples" comparisons between communities that the individual city designations do not.

Building the Regional Database

Paul Hanson, Metropolitan Council GIS Specialist, led the next portion of the forum. He described in general terms how the regional database was built, what it can do and how planners can use it.

Parcel polygons are the basis for the planned land use database, because a goal of MetroGIS is that its regional datasets be interoperable. Parcels are an accepted and widely used boundary definition. Hanson said he looked at the land use designations in the community comprehensive plans and populated that information into the digital polygon data. He sent the resulting maps back to communities to be verified for accuracy.

⁵ For more information about the forum, participants and its results, see the "May 15, 2001 Data Users Forum" section of the text at http://www.metrogis.org/data/info_needs/planned_land_use/index.shtml#specific_info.

⁶ See [Attachment C](#). Several large maps showing the regional land use scheme for the entire region and as well as for subsets of the region were posted at the forum.

The next step was to translate the local land use designations into the regional coding scheme. Once completed, the results were posted on a web site where communities were invited to comment on the interpretation. Local land use designations continue to be a field in the dataset, along with other local attributes and the regional coding scheme.

At the time that building of the database commenced, a work group was formed to look at “intensity of use” measures that could be a valuable supplement to the land use data. For example, it might be useful to know the density as well as the type of housing on a given parcel, or the number of jobs in a particular area. With the group’s input, Hanson created an additional field in the dataset that reflects housing density. Other intensity of use issues, such as households, jobs and job types, property values and square footage will be dealt with in the future, probably as a separate but interoperable database.

Hanson cited a variety of possible uses for the future land use data. The data can assist:

- School districts to make enrollment estimates, predict where new schools will be needed or where school boundaries may need to be redrawn.
- Watershed districts to estimate future stormwater runoff and needed storm sewer capacity; and where wetland restoration may be needed.
- Transportation planners to make future trip generation estimates along corridors.
- Sewer system planners to foresee future capacity needs and make capital plans.
- Economic development planners to undertake commercial/business development studies.

The entire future land use dataset is downloadable through DataFinder (www.datafinder.org), where a complete metadata record is available for review. In addition, custom downloads of subsets of the data will be possible through the new MetroGIS DataFinder Café (a link to the DataFinder Café data downloading application is on the DataFinder home page).

Regional Existing Land Use

After a short break, Terry Schneider, a MetroGIS Policy Board and Minnetonka City Council member, reconvened the forum. Schneider talked about the implications of regional land use data—both planned and existing—for better planning in the region. With more constrained resources and rapid growth, communities need to take a view beyond their own borders to understand the implications of their decisions, he said.

Building regional land use datasets is not about imposing uses or definitions on communities but about creating a common vocabulary about uses and their impacts. This allows communities, regional agencies and the Legislature to communicate more effectively with each other and make better decisions.

He said the dialogue is now beginning on the existing land use dataset, and encouraged county and community staff to be involved in its development.

North I-35W Corridor Coalition Uses of Existing and Planned Land Uses In Subregional Buildout Study

An excellent example of the uses of both the existing and future land use datasets is the 2020 Buildout Study being conducted for the North I-35W Coalition by the Design Center for American Urban Landscape at the University of Minnesota. Senior Research Fellow Carol Swenson described the study, which was funded by a Metropolitan Council Livable Communities Demonstration Account grant. The three-year study is designed to compare the impacts on regional systems (e.g. transportation, housing, natural resources) if the seven Coalition communities develop in the way their current comprehensive plans call for vs. a “smart growth” alternative that calls for more compact, mixed-use transit- and pedestrian-friendly development.

To develop the conventional growth scenario, researchers combined the planned and existing land use data to identify areas that might develop or redevelop by 2020. About 15 percent of the total land in the seven cities (7,859 gross acres) is likely to change during the period. The “smart growth” scenario considered existing land use conditions, planned land uses for development and redevelopment centers based on comprehensive plans, and regional transit policy areas. The goal was to identify development centers that could contain transit-supportive densities, mixed uses and diverse, lifecycle housing types.

The smart growth scenario results in more jobs, households and population than the conventional model. It also results in a *decrease* in trips per capita for all trip types, Swenson said, because of the mixed-use centers in the smart growth plan. The proximity of home to jobs, daily goods and services, and transportation options results in more efficient trip generation patterns. The study will be completed by late 2002 and will be available for review at the Center’s web site at http://www.cala.umn.edu/design_center/dcaul.html.

Metropolitan Council’s 2000 Land Use Dataset

Paul Hanson returned to the podium to talk about the next steps planned by MetroGIS to address the existing land use common information need, noting that a forum is tentatively scheduled for fall 2002. He praised the North I-35W Coalition for making good use of regional datasets to do its study, which he said demonstrates how the data operate together and increase planning power.

Existing land use is one of the 13 top priority business information needs identified by the MetroGIS stakeholder community in 1997. MetroGIS is now asking communities to start thinking about what they want in a regional existing land use dataset. While different jurisdictions will have different needs, the basic goal—as with the planned land use data—will be for users to be able to make comparisons across jurisdictional boundaries.

The Metropolitan Council built a regional existing land use dataset for its purposes in 1997, based on aerial photography and tax assessor information, Hanson explained. The database was refined and updated using imagery captured in 2000. Information capture methods were modified to allow for more detail and more specific definitions. This latest version will soon be available to anyone who wishes access, for no fee, via MetroGIS DataFinder. As a starting point

for discussions about a regional solution, Hanson encouraged those in attendance to review the Council's 2000 Land Use dataset and make suggestions for how it could be modified to better meet their needs.

In response to an audience question, Hanson and Council GIS Manager Rick Gelbmann explained that the Minnesota Department of Natural Resources land cover dataset works well with the Council's existing land use data.

Hanson closed the forum stating that MetroGIS is encouraging members of the planning community to consider participating in the Existing Land Use Forum and in the work group that will assist MetroGIS to prepare for the forum. Participants at today's forum were asked to fill out an evaluation of the forum and were thanked for attending. With that, the forum ended.

Attachment A

MetroGIS Regional Planned Land Use Dataset Launch Forum

Attendees

Name		Organization
Albrecht	Chris	Howard R. Green
Allen	Ron	Mn/DOT
Andrle	Mark	City of New Brighton
Baker	Stephen	Ramsey County Assessor
Ballentine	Chuck	City of Minneapolis
Bloomer	Mark	I-35W Coalition
Braden	Ann	Metropolitan Council
Butz	Bill	City of Richfield
Carlson	Regan	Met Council
Chapman	Theresa	Mn/DOT
Day	Douglas	MN Pollution Control Agency
Diedrich	Bob	SRF Consulting
Foster	Theresa	Goodhue County
Gelbmann	Rick	Metropolitan Council
Gersmehl	Carol	Macalester College - Geography Dept.
Gute	Mary	CH2M Hill
Hanson	Jean	MN Pollution Control Agency
Harbaugh	Jim	Sanders Wacker Bergly Inc.
Henry	Brad	URS Corp.
Jenson	Kris	City of Hastings
Johnson	Jeremy	City of Blaine
Korthank	Martin	Mn/DOT
Leatham	Lil	HKGI
Leegard	Mike	Mn/DOT
Lindahl	Jason	Northwest Associated Consultants
Lindau	Michelle	City of Hugo
Mandell	Paul	Capitol Area Architectural & Planning Board

McCartney	Molly	I-35W Coalition
Mertens	John	Dakota County
Morey	Peter	Mn/DOT
Nash	Becca	Trust for Public Land
Pahs	Matt	Mn/DOT
Roman	Michelle	City of Roseville
Rosvold	Randy	Metropolitan Council
Schneider	Terry	AMM
Sersland	Carol	URS Corp.
Stark	Christy	Metropolitan Council
Stromberg	Liesa	MN Dept. of Agriculture
Thompson	Bruce	Hennepin County Public Works
Thoreen	Tim	CH2M Hill
Vang	Yang	URS Corp.
Vessel	Dave	Metropolitan Council
Waataja	Janice	City of Minnetonka
Walther	Sean	City of Anoka
Westerlund	Julie	DNR - Metro Region

Attachment B

Evaluation Results: Launch Forum MetroGIS Regional Planned Land Use Dataset

Poor	(1)
Average	(2)
Good	(3)
Outstanding	(4)

Your Understanding Following the Presentations

1. Reason for pursuing a Regional Planned Land Use Dataset	3.25
2. Role of the planning community in its development	3.47
3. Potential use of the regional planned land use dataset	3.13
4. Goals for a Regional Existing Land Use data solution	3.13

Was this Forum.....

1. A valuable use of your time / relevant to your job responsibilities?	3.19
2. Useful in providing new and valuable information and ideas?	3.13

Your Understanding of MetroGIS's Objectives

1. Prior to the forum:	2.31
2. After to the forum:	3.25

Additional Comments:

- Please get some Mn/DOT planners on board. Transportation is affecting our needs, especially corridor analysis and objectives for housing. Provide more outreach to the private sector planners. They work a lot on behalf of smaller communities within the metro. Continual outreach forums need to be held with the 7-region but also to private sector.
- Very informative. Helps in my work with Land Use data for the municipality where I work.
- I think it is good to let people know what is out there and to do some promotion. I am much more inclined to share this with our planning department now than without this. And in greater MN, too.
- Great info! Thanks. I'd like to see you address more info on natural resources and applications for this data in protecting natural resources in the region.
- Much of the audience is new to MetroGIS. It would be helpful to explain a little more about MetroGIS, how it operates, or where to get more information. MetroGIS endorsement process and Policy Board were mentioned without explanation. Same assumption may apply regarding GIS technology knowledge of the audience. Who is the audience? Use a round robin exercise. Who is recording this information?

- Assessor's land use is available in more than one dataset. (i.e. classification, land use code, and multi-family unit count.)
- I think this can be very valuable for the analysis of transportation-related issues. I would hope Mn/DOT & county interests are strongly considered in further development of the tool.