

December 2003

Welcome to the fifth edition of the **MassGIS GISette**, a bi-monthly newsletter emailed to our users and partner agencies to keep them informed of data updates, GIS events, and on-going technology developments. This newsletter will not replace more focused emails that many of you currently receive. A page on our website has been created for the GISette. There you will find back issues of the GISette and an online subscription form.

<http://www.state.ma.us/mgis/GISette.htm>

GIS DAY 2003

On November 19th, MassGIS sponsored a GIS Day event in Great Hall at the Massachusetts State House. By all accounts, it was a great success with about 400 people in attendance. Great Hall is a long rectangular room. The center of the room was furnished with a map gallery, and around the periphery, tables were set up with laptops, PC's and monitors. From 10 am to 2 pm, GIS professionals and students demonstrated their interesting and varied GIS projects and applications to visitors in an ongoing science fair format. During a speaking program at noon, Secretary of Environmental Affairs, Ellen Roy Herzfelder officially debuted MassGIS' new web-based mapping program, OLIVER; and she spoke about how GIS will be used to advance her priorities. Senator Stephen Brewer from central Massachusetts then took the stage to speak about his many experiences with GIS. From its use as a tool while searching for the remains of Molly Bish, to soils mapping, to high school community service projects, Sen. Brewer was very appreciative of the work done by MassGIS as it relates to his district. MassGIS Director, Christian Jacqz, then offered comments on the usefulness and diversity of GIS and accentuated his comments with a PowerPoint show.

It was rewarding to see Laraine Hawkins and her students from Franklin High School explaining their GIS community service projects to a former student who now works in the GIS field; he has committed to returning to the school to inspire current students. Other exhibitors from the GIS education field were Dr. Shirley Griffin from Oakmont High School and Lucia Lovison-Golob of Harvard University. Some of the other non-government participants were Debra Piehl from the Massachusetts Association of Crime Analysts and Ric Skinner of Baystate Health System. Martin von Wyss of the Boston Redevelopment Authority, Joyce Hussein from Stoughton and Doug Greenfield of Newton represented the municipal GIS community. Susan McGrath from the Old Colony Planning Council and Kathy Jacob from the Central Transportation Planning Staff presented a regional planning perspective.

By far, the majority of the participants were from State government agencies, including: Dan Bibel from the State Police; Johanna Meyer & Donna Nelson from the Massachusetts Emergency Management Agency; Dave Kimball from the Department of Conservation and Recreation; Diane Carle from Coastal Zone Management; Kevin Robicheau from the Department of Fish and Game; Dr. Brian Brodeur from the Department of Environmental Protection; Mark Berger and Tom Quattromani from MassHighway; Jane Pfister from Community Preservation at EOEA. From MassGIS, Aleda Freeman demonstrated OLIVER, Dan Marrier displayed 2000 census data grouped by Senate and Representative districts, and Dominique Pahlavan was on hand with a state-wide data set. The Department of Public Health was well represented by Sylvia Hobbs, Sara Kustron,

Shawn Sullivan, Paul Whelan, and Theresa Cassidy.

A GIS Day page on our website will soon be posted, replete with photos and speaker presentations.

Database News

Data Updates

Updates to DEP Datalayers and Hydrographic Layers - 11/20/03

The DEP GIS Group has updated the following layers:

- [Public Water Supplies](#)
- [Zone IIs, IWPA](#)
- [Surface Water Protection Areas \(Zone A, B, C\)](#)
- [Sub-basins](#) - Tiles 6, 9, 13

Updates to Open Space - 11/24/2003

Various updates to several towns. See details on the [Open Space Recent Updates](#) page.

New 1:5,000 Orthophoto Wetlands and Streams Data - 11/20/2003

New and updated tiles. For the areas now covered please see the most current [Status Map](#).

Updates to Soils layers - 11/12/2003

Data for six surveys have been SSURGO-Certified and are now available for download - Essex North, Essex South, Bristol North, Bristol South, Dukes, and Nantucket. In addition, Norfolk-Suffolk has been edited to properly edgematch with adjacent surveys. Soils polygons can now be downloaded by survey area, and Special features are available for download as single statewide layers. See details on the [datalayer description](#) page.

C21e Layer Updated - 11/3/03

DEP GIS Group has updated the [Tier Classified Chapter 21E Sites](#) datalayer.

NPDWSA Layer Update - 10/31/03

DEP GIS Group has updated the [Non-Potential Drinking Water Source Area](#) datalayer.

[Mass. Highway Dept. Roads](#) - 10/17/2003

The mid-year 2003 release, which includes adjustment to the 1:5,000 orthophoto-based road centerlines for eight counties.

New on the Website

Additional Server Speeds Up Map Production

On November 3rd MassGIS deployed an additional server to support the online viewers and web services. Separating ArcIMS (the map production software) from SDE (the data storage system) on different servers is recommended and has sped up ArcIMS' production of maps by 3 to 5 times according to Peter Girard of Applied Geographics, Inc. The changeover does not affect the way users access the online maps or web services. If anyone has problems with any part of the system, please send email to Aleda.Freeman@state.ma.us

Give OLIVER a Try!

Have you tried OLIVER, http://maps.massgis.state.ma.us/massgis_viewer/index.htm the new online viewer that allows online mix-and-match of the full MassGIS data catalog and allows downloading of shapefiles for a user-specified geographic area? One user, Tom Walsh, comments: "This is probably the coolest thing I've come across on the Internet this year. I can only imagine all the hours I'm going to spend exploring the state." Give it a try! And as always, please email your feedback to <mailto:Aleda.Freeman@state.ma.us>

Open Space Corner

Hello again Open Space Users!

In the continuing effort to get the OpenSpace data into SDE, updates have been flying into the database. I can't move into SDE until the outstanding edits get checked back in due to the nature of Librarian. This has led to some 40 towns or so getting updated in the last several weeks. See http://www.state.ma.us/mgis/osp_updates.htm to check the current updates to OpenSpace.

Open Space Attribute Focus: *Fee_Owner, Status_Fee_Owner*

Fee_Owner (FO) is the field listing the legal entity that owns the property (pays the taxes) represented by that polygon. This listing may be either the entire name or an abbreviation of a longer name (see below). As there are many different types of owners, the Status_Fee_Owner (SFO) field provides a simple means of generalizing ownership by a code value. The codes currently used for SFO are:

- F Federal (e.g. Army Corps of Engineers)
- S State (e.g. the former DEM now DCR)
- C County (currently obsolete, ownership assumed by state)
- M Municipal (e.g. Town of Abington)
- P Private (e.g. John Doe)
- N Private Non-Profit (e.g. Mass Audubon Society)
- B Public Non-Profit (e.g. Library Foundation)
- W Water Body (e.g. Quabbin Reservoir)
- I Inholding (e.g. private non-openspace parcel completely within a state park)
- O Other (e.g. joint ownership by DEM and a town. Not "S" and not "M")
- X Unknown (If you know what it is, let me know!)
- # Numeric code indicating an ownership conflict (see metadata for more info)

In most instances, the fee owner is straightforward, e.g., the land is owned by X. Enough said. The most common SFO is Municipal (15,449 polygons) followed by Private (12,207). Keep in mind that although numerous, many of these polygons are small – the 5,483 state-owned polygons comprise the spatial majority of OpenSpace (~14% of the polys comprise ~34% of the land).

When a joint ownership has the same SFO (e.g. Joe Smith and Jane Doe), the FO field is coded as Smith/Doe, space permitting. Also, the FO field has no punctuation, no lower case characters, and uses the last name first principle. Therefore, to code a parcel owned by Joe Schmo Jr., it would be FO = "SCHMO JOE JR". The FO field is currently limited to 20 characters, so in many cases there is an abbreviation in the field and not the full name of the owner. These abbreviations are maintained in an info table called OSNAMES. You may contact me to get an export of this listing.

Online Mapping Tips and Tricks

Tip: How to update CD Data Viewer shapefiles with shapefiles extracted with OLIVER

OLIVER and all the online mapping applications <http://www.state.ma.us/mgis/mapping.htm> always draw the most up-to-date datasets that MassGIS has. OLIVER and the other applications pull data from the Oracle database. If you have ordered a Data Viewer (either runtime, ArcView 3- or Arc8-based) on CD since January 2003 your local data viewer is using a data format called shapefiles. For example, if a Data Viewer on CD for the area of Malden was created in May 2003 it could be running on your local machine with a directory structure for data something like this:

c:\massgis\gisdata. Under the gisdata directory are subdirectories of data categories. In November some of the data layers have been updated. You can start OLIVER, zoom to Malden, add one or more datalayers to the map and then extract those layers for the Malden area as shapefiles. The shapefiles downloaded from OLIVER will have the same names (such as openspace_poly.shp) as the shapefiles distributed on the CDs. You can search and replace the old files with the new files. Keep in mind that a shapefile will be 3 actual files - a .shp, a .dbf and a .shx. All 3 files need to be replaced.

Tip: How to add a "dynamic" map to a web page by using OLIVER

OLIVER can help you compose a map that you can put on a web page. The interesting part of this map is that instead of being a static image file such as a JPG or a GIF, it's a URL that tells the MassGIS server how to reconstruct the map using currently available data. For example, start OLIVER, zoom to Malden, add Mass Highway Roads, schools, and hospitals to the map. Then, click the Generate Map URL button (it looks like a bookmark). This URL represents the current map - the layers, styles, extent, and projection. You can attach this URL to an IMAGE tag in an HTML page. If MassGIS adds a new road this afternoon, when someone looks at your web page tomorrow they will see the new road. Sample URL:

<http://maps.massgis.state.ma.us/mapaccess/main.jsp?request=GetMap&service=WMS&version=1.1.0&layers=Massachusetts+Townships,Schools,Hospitals,Major+MHD+Roads&styles=Default,Buildings,Default,Admin&srs=EPSG%3A26986&exceptions=application/vnd.ogc.se+inimage&format=image/png&transparent=false&bgcolor=0xFFFFFFFF&bbox=233501.450988402,905584.1266250807,239773.200988402,911962.8574353153&width=469&height=477&dpi=96>

Note: The URL that OLIVER generates has a slight mistake: The word "style" needs to be "styles", otherwise the map may not correctly draw. This typo will be fixed in the next version of OLIVER.

Any comments or suggestions about the GISette are welcomed paul.nutting@state.ma.us

MassGIS-The Commonwealth's Office of Geographic and Environmental Information is located within the Executive Office of Environmental Affairs and is charged with the collection, enhancement, storage and dissemination of the Commonwealth's geographic data.

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