



## March 2009

Welcome to the thirty-sixth edition of the **MassGIS GISette**, a bi-monthly newsletter e-mailed to over 1700 of 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 e-mails 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](#).

While our primary intent in publishing the GISette is to disseminate information related to MassGIS initiatives and data development in particular, we also see the GISette as a means of communicating public agency GIS news. So we encourage readers to send in updates or announcements concerning public agencies that they would like included in the GISette. We particularly want to encourage submission of announcements concerning data development projects. Announcements should be sent to Paul Nutting at [paul.nutting@state.ma.us](mailto:paul.nutting@state.ma.us).

### Distribution of USGS 2008 Orthoimages

The [2008 USGS Orthophotos](#) are now ready for distribution. The entire project area, Eastern Mass. inside and slightly beyond I-495, was entirely funded by the USGS and flown by its contractor, EarthData, at a 30cm resolution in three bands of color (RGB). Select towns were done at a 15cm resolution in 4 bands (RGB and near infrared). Because the data were compiled and projected differently than our usual imagery, a lot of processing and a different [tiling scheme](#) were needed. Data at both 15cm and 30cm resolutions can be obtained by downloading individual tiles in MrSID format. DVD's of MrSID mosaics can be purchased using the [order forms](#). We will also accept orders for Geotiff tiles, but these are very large and need to be loaded onto a hard drive supplied by the customer. Someone ordering only a very few Geotiff tiles can order and receive them on DVD, up to two DVDs. We are currently working with the USGS to finalize a project to acquire 30cm pixel resolution imagery for the remainder of the state, with a flight contracted by the USGS planned for this spring. This will also include acquiring the IR band for the '08 imagery.

### MassGIS and the 2010 US Census

For the upcoming decennial Census, the Census Bureau hired Harris Corporation for a massive data improvement effort, the MTAIP (MAF/TIGER Accuracy Improvement Project), the aim of which is to increase the geographic accuracy of its TIGER database by realigning its linework to better quality base data. In Massachusetts, Harris Corp. used the 1:5,000 centerline road network developed by the Executive Office of Transportation and MassGIS. In the spring of 2008, MassGIS received a copy of this newly realigned data. Unfortunately, we discovered some systemic errors. When the roads themselves were more accurate, the non-road feature town boundaries were not locked into place and were dragged out of position in many locations. The Census Bureau acknowledged that this is something several states had been reporting, and asked if we could provide corrections, via the BAS (Boundary Annexation Survey) program. Per the guidelines listed in the BAS program documentation, over 4,000 polygons were identified and submitted to the Census Bureau... polygons that represented areas where one or more locations along official town boundaries (as delineated from survey points) deviated by 30 feet or more from the accepted boundary. The Census Bureau received these corrections from us in April 2008.

A few weeks ago, MassGIS received a CD from the Census Bureau containing the new geographic data that should have incorporated our corrections. A cursory examination has thus far revealed that many of the corrections were implemented, but others were not. Further, there appear to be a few new anomalies where the process of incorporating the corrections created errors that weren't there before. There also appears to be a problem in the corrections made at the city/town level not propagating into the other levels of geography (i.e. corrected town boundary not reflected in block level geography). We are in contact with the Census Bureau and believe that we can

work with them to identify and resolve the most serious of the remaining issues. Please note that the data available for download on the [Census website](#) are **NOT** currently representative of the geography that contains the corrections made by the BAS project. As soon as there is a product that incorporates as many as possible of our edits, MassGIS will update its website to make it available for public use.

## Some Restricted Data Now Unrestricted

Because of the sensitive nature of several of the datalayers on our data download page, you are [required to register](#) before you are sent a link to the ftp site. The [Department of Environmental Protection](#) has determined that several of the restricted layers no longer require this level of security and can be freely downloaded.

They are: [DEP Wellhead Protection Areas \(Zone II, IWPA\) Datalayers](#)  
[Surface Water Supply Protection Areas \(ZONE A, B, C\)](#)

You'll still [need to register](#) to receive a link to:

- Public Water Supplies (Wells)
- DEP BWP Major Facilities
- Transmission Lines

## Database Updates

- **NHESP Certified Vernal Pools Layer Updated - 2/19/2009**  
The Natural Heritage & Endangered Species Program (NHESP) has updated the [Certified Vernal Pools](#) layer. The dataset is published in the 14th Edition of the Massachusetts Natural Heritage Atlas and is effective beginning January 23, 2009.
- **C21E and AUL Point Layers Updated - 2/19/2009**  
MassDEP has updated the Tier Classified Oil and/or Hazardous Material Sites (MGL c. 21E) and Oil and/or Hazardous Material Sites with Activity and Use Limitations (AUL) layers. For the C21E layer, 208 sites were added and 601 were removed. For the AUL layer, 103 sites were added and 11 were removed.
- **Updates to DEP Public Water Supply Layers - 2/18/2009**  
The MassDEP GIS Group has updated the following layers:
  - [Public Water Supplies](#)
  - [Zone IIs, IWPA](#)
  - [Surface Water Supply Protection Areas \(Zone A, B, C\)](#)
  - [Surface Water Supply Watersheds](#)

Significant enhancements made to the delineations of existing SWP Zones and Watershed areas. Updates to the PWS feature classes and supporting tables can be considered as supplemental to the December 2008 update and include only a small number of changes to the PWS source locations and protection area features (zero (0) sources were added, five (5) were moved and four (4) were removed).

Of the above layers, only the Public Water Supplies are now considered "restricted data" requiring a special request form to download the data. The other datasets are downloadable directly from the data's metadata page.

- **1:25,000 Hydrography Layers Enhanced - 2/18/2009**  
The 1:25,000 USGS Hydrography layer is now known as "MassDEP Hydrography (1:25,000)", an enhanced version of the older dataset. The layer is a hybrid of data based on USGS Digital Line Graphs (DLGs), scanned mylar separates obtained from the USGS, digitized hydrographic features from paper USGS 1:25,000 Topographic Quadrangle maps and data extracted from the MassDEP Wetlands datalayer. Areas within many surface water supply watersheds have been enhanced by using higher resolution streams and lakes from the MassDEP Wetlands datalayer, and many areas have also been field verified. This layer is intended as an interim product that will be incorporated into the USGS's National Hydrography Dataset (NHD) when funding and resources become available.
- **Title 5 Layer Updated - 2/18/2009**  
The hydrologic data source was changed to the MassDEP Hydrography Datalayer and updates were made to the SWP Watersheds datalayer and new Title 5 buffers were generated. In addition, the wetlands from the 1999 MassGIS Land Use datalayer were removed from the buffered areas; wetlands features from the DEP Wetlands datalayer and MassDEP Hydrography are buffered.

- **[Outstanding Resource Waters Layer Updated](#)** - 2/18/2009  
MassDEP updated the layer to include new ORW areas (polygons) representing the 2007 Massachusetts Surface Water Quality Standards. The ORW\_ARC (line) layer was dropped.
- **[DEP BWP Major Facilities Layer Updated](#)** - 2/18/2009  
This update brought the total number of features to 1,552 and included updated classification information presented in the "major" fields: AIR, GWD, HWR, LQG\_MA, LQG\_RCRA, LQTU, TSDF, SWD.
- **[OpenSpace Updated](#)** - 2/2/2009  
The MassGIS Protected and Recreational OpenSpace Datalayer has been updated with various edits in 87 municipalities within the Commonwealth, affecting more than 3,000 acres in total. Numerous conservation restrictions were edited in Groton, Gloucester, Duxbury, and other communities. Spatial adjustments were made to many agricultural preservation restrictions in several towns, including Westborough, Sturbridge, and Leominster. Many dozens of polygons were enhanced in municipalities such as Oak Bluffs, Edgartown, and Easton. A new shapefile and personal geodatabase have been placed on our ftp site.

GIS Technician Peter Grace has added or refined many hundreds of Agricultural Preservation Restrictions (APRs) since July 2008. He is now in the process of trying to find and input some last remaining APRs, at which point these will be complete statewide!

GIS Technician Angelika Bahr, has single-handedly added or improved with better data more than 500 Conservation Restrictions (CRs) in the OpenSpace database since August 2008. More than 1200 features in 115 municipalities totaling 27,700 acres have been added or refined within the OpenSpace database since the last newsletter publication.

- **[State House and Senate Districts Layers Updated](#)** - 1/29/2009  
Attribute changes were made to the polygon layers based on the November 2008 elections. We do our best to keep these up to date; however, sometimes when a vacancy occurs, that will not be noted and the update will not appear until the new Member is sworn.

**[New CZM Regions Layer](#)** - 1/14/2009

The CZM Regions layer represents boundaries used by the Massachusetts Coastal Zone Management Agency for planning and administrative purposes.

## **Online Mapping**

### **DEP's WIRE Program**

In an effort to streamline permitting and reduce the use of paper forms, the Department of Environmental Protection has instituted the [Wetland Information Resource-WIRE](#). While primarily a database system for permitting projects under the Wetlands Protection Act, there is a mapping component for applicants filing on line to locate their projects and ascertain their relationship to pertinent data like priority resource habitats. In-house, the mapping components are integrated with the Oracle database interface and will aid in technical reviews of proposed projects, and compliance and enforcement work. The mapping component has been developed in [OpenLayers](#) using navigation tools and Web Mapping Service (WMS) layers from MassGIS' Geospatial Web Services to overlay natural resource and regulated area information. Conservation Commissions will be able to view the project site, adjust the latitude/longitude if needed, view wetland loss polygons, and view the basic information of the project filings in their town. Training will be conducted by MassDEP's Circuit Rider Program later this year. Training opportunities will be [posted on MassDEP's web site](#). DEP plans to develop other similar online mapping applications soon.

## **Meeting Announcements**

### **Spring NEARC Call for Presentations**

Planning for the spring 09 NEARC is well underway. It will be held on Tuesday, May 12, 2009 at The Smith College Campus Center in Northampton, Massachusetts. Posters, panel discussions and presentations are being sought. To register your proposal, please visit: <http://www3.amherst.edu/~aanderson/nearc/presentationsubmission.html>.

### **Fall NEARC Information**

The 24th annual NEARC Conference will be held in Nashua, NH on October 4-7, 2009. A call for presentations has been sent and abstracts will be accepted only via [www.northeastarc.org](http://www.northeastarc.org).

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Any comments or suggestions about the GISette are welcome – send to [paul.nutting@state.ma.us](mailto:paul.nutting@state.ma.us).

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

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