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## Mapping Website Enhances Archeology Project

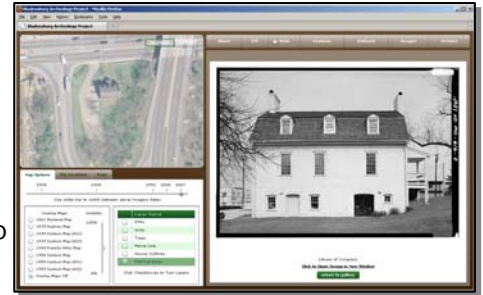
*Tim Palmer, Maryland Environmental Service*

Maryland Environmental Service has created a website to assist in the interpretation and visualization of the many components of the Bladensburg, MD dig. This site was created using ESRI and Adobe Flex technologies.

Users can interact with a map of the Bladensburg area by clicking on a shovel test pit (STP) or a unit to display PDFs and other associated information. STPs are used in the first

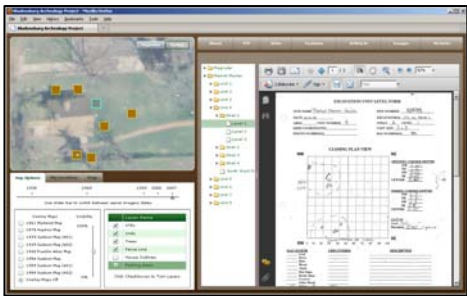
phase of an excavation to help archeologists determine where to conduct further investigation. A unit is a 5ft x 5ft section of ground excavated layer by layer to collect artifacts and soil information which are later used to make inferences about what was there/what went on there. When a unit is selected on the site, users can browse a drop-down tree of bags (containing similar objects from a particular layer) and the count of each type of artifact in each bag.

To create the interactive map, point features such as STPs and unit corners were collected using a handheld Trimble GeoXT GPS unit. Features such as fence lines, house corners, and large trees were mapped as well. In case of poor satellite reception, a laser rangefinder and



compass were used to determine the distance and bearing to a location with excellent satellite reception (the "known" point).

The website is currently password protected and not available to the public; however, related information about the dig can be accessed at <http://bladenarch.blogspot.com>. For more information on the Bladensburg website, please contact Tim Palmer of Maryland Environmental Service at [tpalm@menv.com](mailto:tpalm@menv.com).



## Survey Control Web Map Aids Frederick County Public Works

*Marshall Stevenson, Frederick County*

Frederick County's Enterprise GIS team has recently developed a Survey Control Network Mapping Application for the County's Division of Public Works. This newest web mapping application utilizes ArcGIS Server with Adobe Flex technologies.

Users can employ this mapping

application as a first resource to gather data. Mouse-over graphics provide easy access to survey control information and control monument description cards, while custom-built tools allow the user to search, measure, buffer and identify other information within the County.

Pairing ArcGIS Server with Adobe Flex provides a faster map display, a user-friendly interface with fun interaction and animation, and strong compatibility for a wide range of internet browsers and operating systems.

The Survey Control Network mapping application was

developed fully in-house, which includes all tools, layout and graphics. To use this application or for more information about Frederick County's Enterprise GIS, please visit us at [www.co.frederick.md.us/gis](http://www.co.frederick.md.us/gis).



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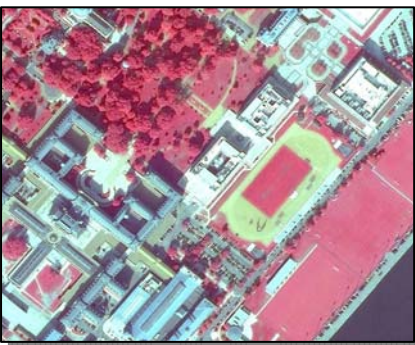
## New NAIP Imagery Collected for the State of Maryland

*Jim Cannistra, GISP - Sanborn*

Aerial Photography is being flown over the State of Maryland as part of the National Agriculture Imagery Program (NAIP). This work is being contracted by the United State Department of Agriculture (USDA) as part of their National Agriculture Imagery Program. The Sanborn Map Company has been contracted to provide this statewide dataset for Maryland and several adjacent States. This dataset will be publically available to the State's Counties and GIS users. The data being produced as part of this project is an update of the previous (2007) statewide NAIP orthoimagery program.

As part of this program, imagery acquisition, geo-referencing, and data delivery of 1-meter GSD (ground sample distance) orthoimagery products are being produced. Aerial photography is being flown with a Z/I Imaging Digital Mapping Cameras (DMC) which has the capability for the collection of color, color infrared and black/white imagery data within a single mission.

Aerial photography was flown during the summer (2009) during leaf on conditions. Imagery acquisition began



in mid-June and is expected to be complete by the end of September.

### **Product Specifications:**

Imagery is being produced in accordance with the following specifications.

#### Imagery:

1-meter, RGB and NIR (near infrared), 8-bit image orthoimagery

#### Tiling:

DOQQ tile format and Compressed County Mosaics (CCM)

#### Format:

JPEG2000 format

#### Coordinate System:

NAD83, UTM Zone 17 or 18, meters

#### DEM Source:

USGS National Elevation Dataset (NED)

#### Horizontal Accuracy:

95% of check points within 6 meters

#### Cloud Cover:

Less than 10%

Data will be quality controlled by the USDA Farm Services Agency (FSA) prior to it being released to the State and local government stakeholders. Since Maryland is a partner with the USDA on the NAIP acquisition, draft imagery (that is not yet QC'd) is being provided to the State as MrSID formatted compressed county mosaics. The draft imagery will be available from the Department of Natural Resources as it is received.

Samples of the recently acquired imagery at 1:1 resolution are provided in the accompanying images.

### **Area of Coverage**

The area of coverage is statewide. The only exception is an area around Aberdeen Proving Grounds which is off-limits due to security concerns. Approximately 2800 exposures cover the entire State. Approximately 93% of the State was flown as of mid-September. One of the benefits of the 2009 program is that several adjacent states were also contracted for 2009

imagery. This includes the States of West Virginia, Delaware, Virginia, and Washington, D.C. This data is also being produced by Sanborn using digital camera technology. This aerial footprint represents a unique regional multi-state dataset for regional applications that cut across County/State boundaries. Flight planning was also done on a regional basis so flight lines are not broken at State lines. This will support consistency of radiometry across imagery.

### **NAIP Imagery Applications:**

This NAIP imagery is used extensively as a base layer for GIS programs in FSA's County Service Centers and is used to maintain FSA's Common Land Unit (CLU) boundaries. There are a wide variety of other applications that can also be supported including:

- Impervious surface analysis
- Vegetation and canopy mapping / forest inventory
- Land Use/Land Cover mapping
- Potential wildfire risk area assessment
- Green-space analysis and planning
- Change detection / habitat loss over time
- Utility Easement encroachment from vegetation
- Land/Water separation

Many of the applications utilize the CIR wavelengths. Planimetric, DEM / DTM and topographic data compilation can also be compiled using the source imagery. Data can be compiled to a scale/accuracy comparable to 1"=400' scale mapping. Data can also be reformatted, reprojected, retiled as needed for specific applications as well.

For more information contact:

#### Sanborn

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## MSGIC Projects Status Reports

### July – October

#### **Street Centerlines in Maryland**

##### Completed Tasks:

1. Centerline discussion meeting  
September 9

##### Next Period Tasks:

1. The next Centerline Working Group meeting
  - 1.1 The centerline working group is expected to present the history and status of the project to the county centerline coordinators
  - 1.2 County input on centerline project

##### Next Period Deliverables:

1. Power point presentation explaining the history, status, and future of a single statewide centerline

##### Action Items:

1. Compiled survey updates sent out to working group (Ashley Buzzeo)  
*Completed*

2. Update to cost proposal matrix (Doug Adams) *Completed*

3. Centerline working group communication tool (Mike Sheffer)  
*Completed*

#### **Transportation/Centerline (CAP Grant)**

##### Completed Tasks:

1. An extension was requested to complete the work with regional partners by January 31, 2010.
2. Conference call beginning technical discussion for hardware setup

##### Next Period Tasks:

1. CGIS will provide Technical support to MW COG to help with the Hardware setup to push data to The National Map
2. MW COG will complete the work needed to merge the State wide datasets to create the regional dataset
3. CGIS will assess the response rate on the MOU and Letter of Intent (LOI)

##### Deliverables Met:

1. Developed an ETL tool to transform data into data model using Washington DC data
2. Data collection from SHA and VDOT

##### Next Period Deliverables:

1. Finalized dataset
2. Hardware setup

##### Action Items:

1. Compile the data using the ETL tool
2. Complete hardware setup

#### **Structure (CAP Grant)**

##### Completed Tasks:

1. Final Report

##### Next Period Tasks:

1. OGC WMS Service to be initiated for Structure data submitted by project stakeholders.

##### Deliverables Met:

1. Final Report

##### Next Period Deliverables:

1. OGC WMS Service to be initiated for Structure data.

##### Action Items:

1. Initiate the OGC WMS.
  - 1.1. Develop the OGC WMS to push Structures data to The National Map.

#### **Boundary Working Group**

##### Completed Tasks:

1. Met with MD Archives to review the legal description and nature of county boundaries
  - 1.1. Met with Archives staff in Annapolis to discuss the history of county boundaries, and discussed their connection to the legislative process

##### Next Period Tasks:

1. Review SHA CADD layer developed

in accordance with the Legal Descriptions

- 1.1. SHA will compare the historic dataset with current GIS dataset
- 1.2. SHA will research further to determine which State Agency is statutorily charged with maintaining the county boundaries
- 1.3. Working Group to discuss what the group thinks the boundaries should be used for (i.e. mapping, legal, etc.) and make a recommendation

##### Deliverables Met:

1. This report

##### Next Period Deliverables:

1. Document detailing the results of the dataset comparisons

##### Action Items:

1. Compare the various existing datasets, and review with Archives
2. Create a position paper documenting what the working group determines to be the appropriate use of the county boundaries

#### **CSSC BRAC Application**

##### Completed Tasks:

1. Continued work on GIS application Help documents
2. Continued work on beta GIS Application
3. Delivered and tested beta ETL application

##### Next Period Tasks:

1. Complete GIS application Help documents
2. Deliver and install beta GIS Application
3. Deliver and install ETL beta application on staging infrastructure

##### Deliverables Met:

1. Beta version of ETL application

## Project Status Reports (Continued)

### 1. Delivered ESRI training classes

- 1.1. Introduction to the Multi-user Geodatabase
- 1.2. Introduction to ArcGIS Server
- 1.3. Data Management in a Multi-user Geodatabase

#### Next Period Deliverables:

1. GIS application Help documents
2. Beta GIS application

#### Action Items:

1. Member organization to provide high level domains for access to secure application

### **MD iMap Building Out**

#### Completed Tasks:

- 1.1. StateStat (RecoveryStat) operations switched from SHA's server at Edge Hosting to CGIS.
- 1.2. Phases I and IA of Marylanders Planting Trees completed. To be implemented ASAP. This will include administrative tools and automated updating of the percentage of goal achieved dynamically from a database.

#### Next Period Tasks:

1. Develop an SLA between the State (StateStat Office) and CGIS on response time for updating data and software changes for StateStat and other applications.
2. Discuss with CGIS on 24/7 support.
3. Develop plan for multi-layered security for MD iMap.

#### Deliverables Met:

1. Agenda and issues paper for the October 29 meeting with the Governor, StateStat Office, Governor's Delivery Unit and leading agency executives to discuss progress of MD iMap, opportunities and impediments.

#### Next Period Deliverables:

1. Plan for 24/7 response to reports of system and application operational problems.

#### Action Items:

1. GIO to begin development of a Business Plan for orthos, road centerlines with addresses and parcel maintenance.



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**Secretary** Doug Goldsmith  
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<http://www.msgic.state.md.us/>

## MARK YOUR CALENDAR

### MSGIC Quarterly Meetings

#### Winter

January 20, 2010  
USGS Maryland-Delaware-DC Water Science Center, Catonsville

#### Spring

April 21, 2010  
Location TDB

### Executive Committee Meetings

December 9, 2009  
Howard County Temporary Office Bldg, Montgomery Room

### Conferences

ESRI MUG  
December 9, 2009  
King of Prussia, PA

MACo Winter Conference  
January 6-8, 2010  
Cambridge

ESRI FedUC  
February 17-19, 2010  
Washington, DC

TUgis  
March 15-16, 2010  
Towson