

West Virginia Association of Geospatial Professionals

ANNUAL REPORT 2011



Mapping the Mountain State

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2010-11 WVAGP Board of Directors



CURRENT WVAGP Board (2010-2011) Members

Last Name	First Name	Organization	Sector	Work Location	Term Expires
Evans	Larry	WV Department of Environmental Protection	State	Charleston	2011
Fagan (Vice-President)	Todd	Jefferson County E-911	County	Charles Town	2011
Neidig	Craig	U.S. Geological Survey	Federal	Charleston	2011
Selfridge	Jennifer	Stone Energy Corporation	Private Sector	Morgantown	2011
Shaffer (President)	Robert	Wood County Assessor's Office	County	Parkersburg	2011
Donaldson (Secretary)	Kurt	WV GIS Technical Center, WVU	Education & Research	Morgantown	2012
Elkhansa	Hussein	WV Dept. of Transportation	State	Charleston	2012
Ervin	Connie	Preston County Assessor's Office	County	Kingwood	2012
Meadows	Eric	Appalachian Geographic and IT Solutions	Private Sector	Putnam County	2012
Paybins (Treasurer)	Katherine	U.S. Geological Survey	Federal	Charleston	2012
Scott	Melissa	Greenbrier County	County	Lewisburg	2012
Simental (Ex officio)	Tony	WV GIS State Coordinator	State	Charleston	

OFFICERS' REPORTS
(July 1, 2010 through June 30, 2011)

PRESIDENT'S REPORT

This past year the WVAGP Board worked earnestly to advance professional development and outreach opportunities for its members.

Summary of WVAGP Accomplishments

1. Training Workshops: Provided training opportunities for professional development at significantly discounted rates for members
2. Information Exchange and Networking: Organized GIS presentations and information exchange events. Presentations were posted online for those members who could not attend the meeting.
3. Outreach Activities: Participated in GIS Day, WV Geography Bee, and other professional organizations.
4. GISIC Resolution: Prepared a resolution recognizing the GIS Certificate Institute (GISCI) as the organization capable of providing a complete certification program to the broad spectrum of GIS professionals in the West Virginia GIS community
5. GIS Planning/Coordination: Assisted the State GIS Coordinator and other organizations with GIS planning and initiatives.
6. Membership: Increased our membership rolls to 200 GIS professionals. WVAGP and the WV Society of Professional Surveyors (WSPS) became allied members to enhance coordination efforts.

Training and Information Exchange

- *Training Workshops:* Conducted an online training survey to schedule the following workshops: Cartography, GPS, ArcGIS 10 Desktop, GPS, Internet Mapping, and Cadastral GIS.
 - URISA Cartography & Map Design Workshop (April 2010)
 - GPS & Coordinate Systems (June 2010)
 - What's new in ArcGIS 10 (June 2010)
 - Arc GIS Desktop Level II & III (July 2011)
 - IAAO Cadastral GIS Courses (Fall 2011)
- *Meeting Presentations:* The WVAGP membership scheduled presentations and network opportunities for its members at two regular meetings. Whenever possible, presentations were posted online.
 - August 2010 Eastern Panhandle GIS Users Group Meeting: Practical Applications of GIS, Jefferson County Parcel Mapping, NHD, ArcGIS 10 Lands Record Management
 - December 2010 WVAGP Meeting: Writing a Successful GIS RFP, WV Water & Sewer

GIS Project, Multispectral Sensing using UAV, Coal Fields LiDAR Update, Marion County's GIS Program, Pictometry Image Update

- June 2011 WVAGP/EPAN Annual Meeting: Internet Mapping, Census Mapping, GISCI Certification, etc.
- *Training Reimbursement Policy:* Approved and implemented a training reimbursement policy for its members. The WVAGP Board approved a training reimbursement plan in which members who do not get reimbursed for their training and conference expenses can be reimbursed by the WVAGP for up to \$150 per event for up to two WVAGP events per year.

Outreach

- *GIS Day:* On November 17, 2010, GIS professionals converged on the Capitol to increase the awareness of geospatial technologies in the State. Governor Tomblin signed a GIS Proclamation prepared by Tony Simental, WV State GIS Coordinator.
- *WV Geography Bee:* WVAGP was a sponsor of this year's Geographic Bee which was held Friday, April 1 at Concord University.
- *WVSPS approved as Allied Member:* WVAGP and WV Society of Professional Surveyors became allied members to better coordinate issues of common interest.
- *Speaker Invitations:* Reported on WVAGP activities at the annual conferences of the WV Society of Professional Surveyors and Association of Assessors.
- *Distinguished Service Awards:* Presented Distinguish Service Awards to Tim Prescott and Michael Dougherty.

GISCI Certification

- *GISCI Resolution:* Prepared a resolution recognizing the GIS Certificate Institute (GISCI) as the organization capable of providing a complete certification program to the broad spectrum of GIS professionals in the West Virginia GIS community. The objective is for both the WV GIS Policy Council and WVAGP Policy Council to recognize GISCI as a GIS certification program.
 - Presented the GISCI resolution to the WV GIS Policy Council for approval; the resolution will be considered at the next meeting.
 - Presented the GISCI resolution to the WVAGP membership for consideration and approval.
- *GIS Certification Reimbursement:* The WVAGP Board approved a policy to reimburse 50% of the GIS certification or renewal fee for its members who reside or work in West Virginia.

GIS Planning/Coordination

- Assisted the State GIS Coordinator and other organizations with the following GIS plans:
 - GIS Strategic Plan
 - WV Cadastral Business Plan
- Promoted GIS initiatives of the Office of GIS Coordination to include statewide broadband

and water/sewer GIS projects.

Communications

- Communicated with members using ConstantContact Email Marketing, WVAGP ListServe, Facebook, and WVAGP website.
- Published two newsletters in December 2010 and June 2011.

WV GIS Conference

- From results of a membership survey, 2012 WV GIS Conference has been scheduled for May 8-11 at the WVU Downtown Campus in Morgantown.

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This year it has been a pleasure to work with the WVAGP Board, the State GIS Coordinator (Tony Simental), and members of the association. Our goals this past year have been met or exceeded in most cases, and I am looking forward to serving another year and hope that it will be as productive as this past year.

In the future, I want to continue quarterly training for WVAGP members. Other future goals include assisting the Office of GIS Coordination to complete a statewide cadastral layer and collect new statewide leaf-off orthophotography. It is also noteworthy that the assessors in our State voted to move to IAS World which links the Assessors Database (IAS) with GIS – one more reason for counties to move forward with Parcel Level GIS in our State.

Lastly, I want to thank our State GIS Coordinator, Tony Simental, RTI, and others in the GIS community for laying the foundation for these major GIS initiatives of which will involve many members of the GIS community to become successful.

Robert Shaffer, GISP
President, WVAGP

VICE-PRESIDENT'S REPORT

The WVAGP Board of Directors has had monthly meetings over the past year in which numerous discussions have occurred and many important motions have been passed. The Board has been very actively involved in issues affecting the WVAGP membership in our state, such as training, outreach, professional certification and relationships with other professional associations like surveyors.

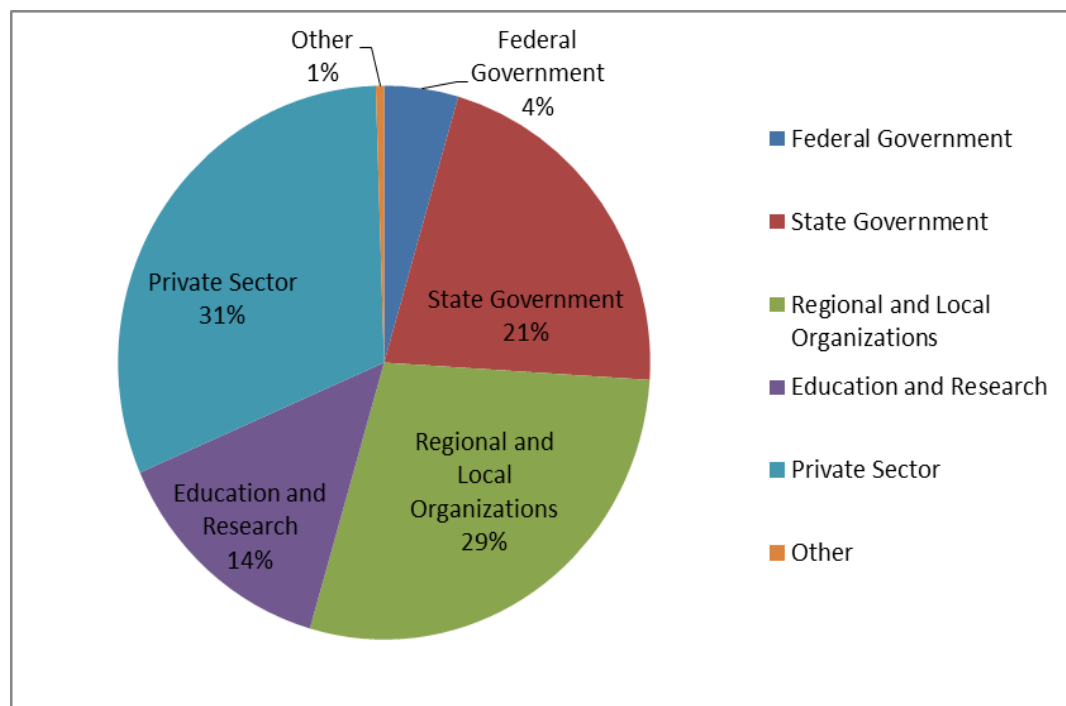
Aside from regular Board meetings, your Vice President has been heavily involved, as Matt Mullenax's co-chair, with the Joint WVAGP/EPan Conference held in June 2011 at the National Conservation Training Center in Shepherdstown, WV. We arranged four separate training sessions on Tuesday with a social mixer in the evening for those out-of-towners. On Wednesday morning we will hold our typical Eastern Panhandle GIS User Group forum with several presentations and a map gallery competition. The afternoon session will be devoted to the WVAGP Annual Business Meeting and election of new Board Members and Officers. With over 120 mapping professionals attending each day, the response has exceeded our expectations and association membership has risen. User surveys have identified quality training opportunities as a high priority among our members. As WVAGP Vice President and event co-chair, I have volunteered alongside many dedicated, hardworking individuals to make these initiatives a reality. With the continued success of each WVAGP event, our members and local users enjoy professional advantages across our Mountain State and the Mid-Atlantic Region.

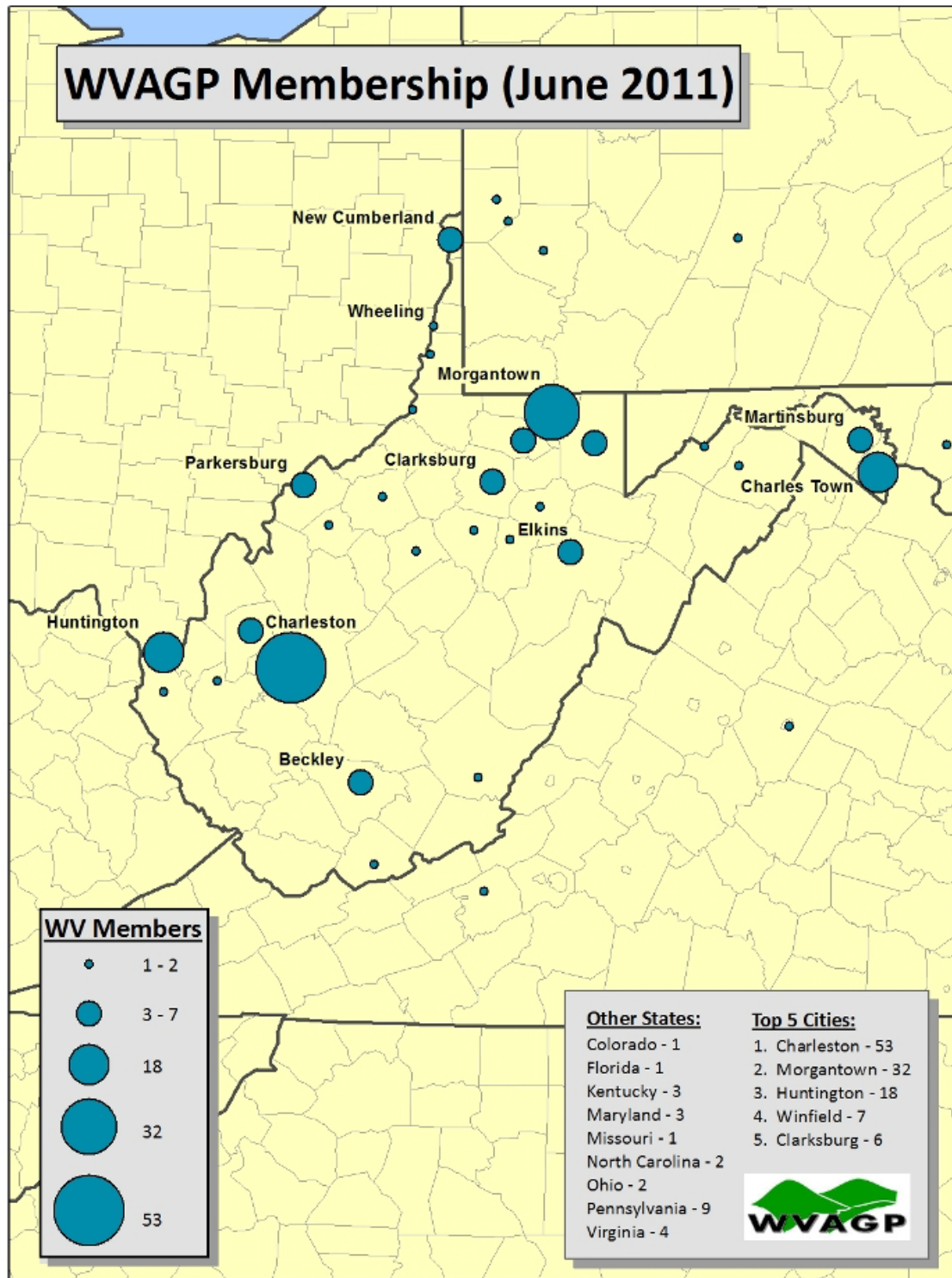
Todd Fagan, GISP
Vice-President

SECRETARY'S REPORT

As of June 9th there were a total of 203 members of which 119 members had paid their current year's (April 1, 2011 – March 31, 2012) dues. The apportionment of the membership and board of directors reflects the broad-level representation of the association.

CONSTITUENCY GROUP	MEMBERSHIP (June 2011)	BOARD OF DIRECTORS (Voting Members)
Federal Government	9	2
State Government	44	2
Regional and Local Organizations	58	4
Education and Research	28	1
Private Sector	62	2
Other	1	0
total	203	11





Kurt Donaldson, GISP
Secretary

TREASURER'S REPORT

Below is the audited financial report for the calendar year 2010 (January 1 – December 31, 2010). The report has been forwarded to the Auditing Committee.

Non-Audited Report of the WVAGP Treasurer for the year ending December 31, 2010

Starting balance	
<i>starting balance on January 1, 2010</i>	\$47,790.07
all income	
Membership only	\$540.00
Membership and Conference	\$36,500.76
WVGIS mgr contribution to conference	\$2,957.54
<i>total income</i>	\$39,998.30
expenses	
Paypal	\$863.55
2010 WV GIS Conference	\$20,281.43
Office expenses, not related to seminars	\$195.00
Communication	\$652.88
Miscellaneous	\$863.55
<i>total expenses</i>	\$22,856.41
Summation	
Deposits	\$39,998.30
Expenses	\$22,856.41
Net Balance for WVAGP accounts for 2010	\$64,931.96
<i>Bank Balance at end of 2010</i>	\$64,931.96

Accomplishments for 2010 include:

- Renewing our non-profit business license
- The conference budget was in the black, with the net income 42% of gross income- the same ratio as in 2008, though with more income, and greater expenses.
- Successfully filing federal tax documents on time and with no problems.
- Keeping a balanced budget for the benefit of membership.

Katherine Paybins,
Treasurer

COMMITTEE REPORTS

(July 1, 2010 through June 30, 2011)

STANDING COMMITTEES

Election Committee

The Election Committee has worked hard preparing for the 2011 WVAGP Board of Directors election. We have ten qualified candidates for the five seats that are available. There is one candidate representing the Federal constituency, two candidates representing the State constituency, five candidates representing Regional/Local Government constituency, one candidate representing the Education & Research constituency, and one candidate representing the Private Sector constituency. Ballots and Nominee Profiles were sent out to the membership on May 16, 2011. Election of the new Board of Directors members will be at the annual membership meeting June 15, 2011. The new members' term will begin on July 1, 2011 and will expire June 30, 2013. Members of the election committee included Chairman Jennings Starcher, Matt Mullenax, Kurt Donaldson, Nate Davis and Rex Thaxton.

Jennings Starcher, Chair

Communications Committee

To communicate with its members, the committee utilized the WVAGP website, Constant Contact Email marketing service, WVAGP Members List Serve, and social utility Facebook. In addition, the committee routinely posted news items on the WVAGP website and published two electronic newsletters in December 2010 and June 2011. The committee supported WVAGP events by setting up the online registration and making presentations on the Web accessible via SlideShare/WVGISTC/ WVAGP servers. Presently the committee is working on the 2012 Conference Website. In the future WVAGP will explore communicating with its membership by using Webinars and podcasts.

- ConstantContact Email Marketing
 - Free mailing list (members or non-members)
 - Subscribe/Unsubscribe automatically
 - Newsletters
- WVAGP Member ListServe (WVAGP@LISTSERV.WVU.EDU)
- WVAGP on Facebook
- WVAGP website (News, meeting information, resources, etc.)
- SlideShare/WVGISTC/WVAGP Servers for Presentations

Members of the Communications Committee included Jennifer Selfridge and Eric Meadows. Special thanks to Mike Pizzino and Brian Jacobs for technical support of the WVAGP website.

Kurt Donaldson, Chair

Conference Committee

The 2012 WV GIS Conference will be held May 8-11 on the WVU Downtown Campus in Morgantown. It will be hosted by the State GIS Coordinator, WVU's Dept. of Geology and Geography/GIS Technical Center, and WVAGP. The conference is designed for promoting and sharing geographic information and mapping technologies in the Mountain State. The conference will include exhibits, workshops, and presentations from West Virginia's leading GIS professionals. Board members of the committee include Jennifer Selfridge and Connie Ervin.

Kurt Donaldson, Co-Chair

Tony Simental, Co-Chair

Outreach Committee

The level of WVAGP outreach activities reached an increased level of maturity and activity during the last year. The WVAGP President, Board members and many individual WVAGP members participated in activities such as presentations and talks to social and civic organizations, schools, and professional groups throughout the state. Discussions and jointly sponsored activities with organizations such as URISA, the WV Geography Alliance, the State GIS Coordinator's Office, the WV Society of Professional Surveyors, and others have occurred. Several organizational actions of note took place.

- The WVAGP issued the results of its GIS Training Survey in January 2011, which the Board used to prioritize training workshops during the year.
- In cooperation with the WV GIS Coordinator's Office, WVAGP members were involved in planning, organizing and participating in GIS Day displays at the State Capitol on November 17, 2010 during the Legislative Interim Session.
- Members of the WVAGP GIS-Surveying committee cooperated with the WV Society of Professional Surveyors to draft a joint membership agreement supporting the mutual goals of both organizations.
- The WVAGP Board of Directors recognized two members with Distinguished Service Awards for their career contributions to the state GIS program. Tim Prescott, formerly of USDA-NRCS in Morgantown, and Michael Dougherty, formerly of WV DNR, accepted new GIS positions outside of West Virginia.
- WVAGP sponsored the URISA Cartography & Map Design Workshop in Charleston on April 7, 2011.
- WVAGP sponsored \$500 to support the WV Geography Bee held at Concord University in Athens on April 1, 2011.
- WVAGP members provided are involved in the development of the State Cadastral Business Plan as part of the State GIS Strategic Plan, and have participated in the workshop series developing the cadastral business plan. WVAGP members also serve on the State GIS Policy Council and

State GIS Steering Committee.

- WVAGP members were involved in planning, organizing and participating in the Eastern Panhandle GIS Users Group meeting held June 14-15, 2011 in Shepherdstown. The meeting is combined with the 2011 WVAGP Business meeting.
- WVAGP is sponsoring ArcGIS 10 Desktop II & III training during the week of July 25-29, 2011 at the WV GIS Technical Center in Morgantown.

Future WVAGP outreach initiatives include the planning and scheduling of more GIS workshops. Efforts to cultivate relationships, both informal and formal, with other organizations with geospatial interests will continue to be undertaken. “Geomentoring” activities related to academic and professional development, especially at the K-12 and technical college levels, will be encouraged.

Craig Neidig, Chair

Technical Issues Committee

Progress Building West Virginia's CORS Network

The WVRTN (see Figure 1 below) consists of Global Navigation Satellite System (GNSS) CORS which provide code range and carrier phase data to users to improve GPS/GNSS positioning across the state. CORS sites are owned and operated by a number of state agencies, research institutions, and private organizations. The Rahall Transportation Institute (RTI) is responsible for system design, CORS data collection, IT infrastructure, data processing, training and technology transfer.

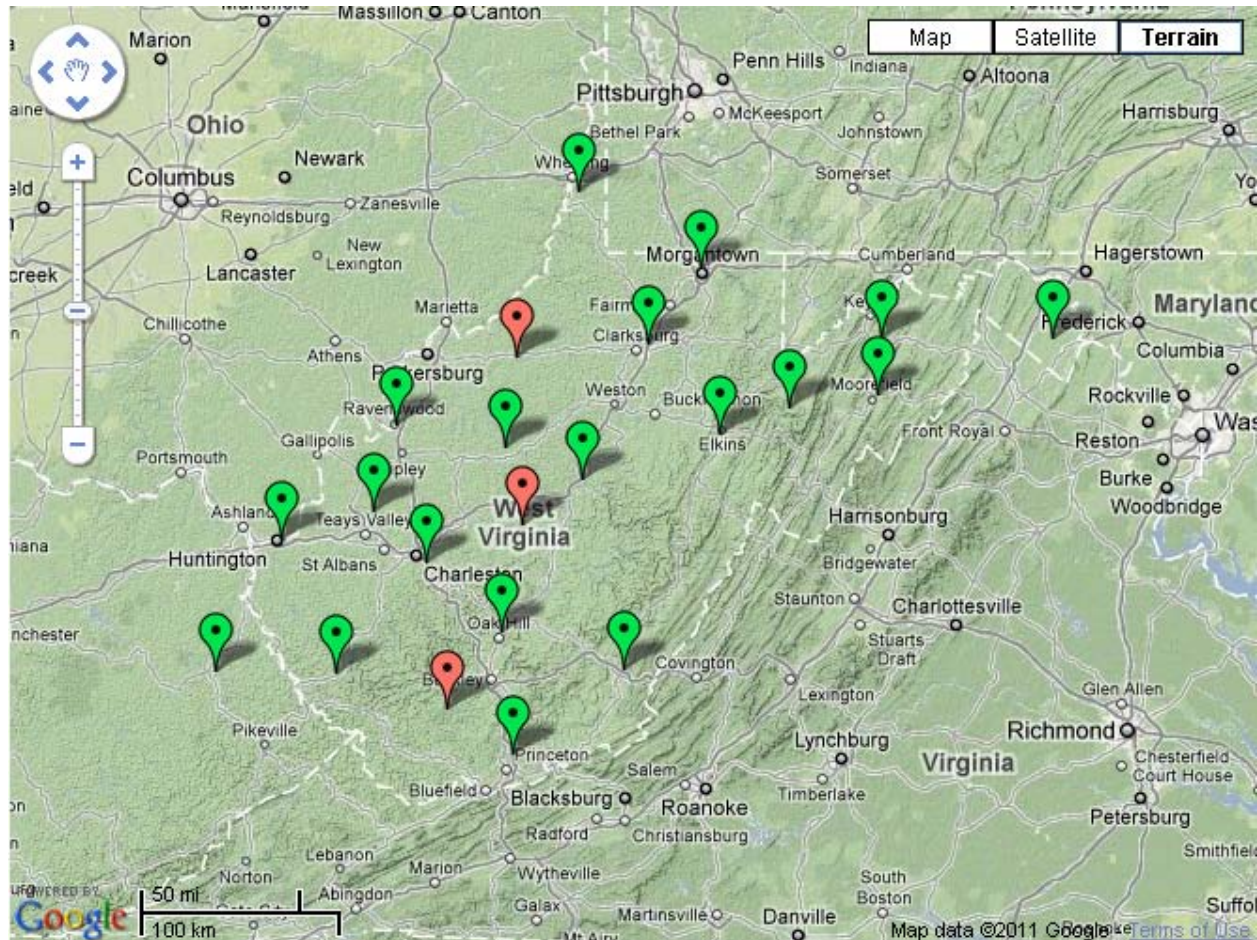


Figure 1: 22 Sensors making us West Virginia's CORS

RTI redistributes CORS static data for post-processing applications. CORS observations are collected at a frequency of 1 Hz. Most CORS track GPS signals L1 C/A, L2, L2 CS (CM+CL), in addition to GLONASS signals L1 C/A, and L2-P. Hourly observation files for each CORS are available in **Receiver INdependent EXchange** (RINEX) format. Hourly data sets are available immediately after the top of the hour.

The WVRTN has the capability to produce Virtual Reference Station (VRS) RINEX observation files for any user specified location within the network. VRS processing combines CORS observations and network process results, with the resulting VRS RINEX observations providing improved accuracy of post-processed data by minimizing CORS proximity error. Registered

users can visit the Reference Data Shop to order observation files.

The State of West Virginia operates the WVRTN to improve geodetic services to State agencies. Any incidental public use is provided as a courtesy by the State, is welcomed and encouraged. Access to the WVRTN is provided free of charge at present, provided users complete the registration process and electronically acknowledge compliance with the end-user agreement.

RTN correctors enable real-time centimeter-level precision from survey grade receivers across the state of West Virginia. The RTK service provides correctors from VRS (modeled RTK), multi-station (nearest CORS), or single base (user selected CORS) modes in RTCM 2.1, 2.3, 3.1, CMR, CMR+, CMRx, and DGPS formats.

The URL to access the network is <http://wv.cors.us/>.

GPS Endangered by FCC Licensing LightSquared

Billionaire owned LightSquared is on the defensive these days, as numerous independent studies have sounded the alarm over the company's plan to build a nationwide wholesale high-speed mobile broadband network that leverages Long-Term Evolution (LTE) technology.

The plan increasingly has come under fire because of the network's potential to interfere with GPS signals across the United States. The company plans to [launch services using L-band satellite spectrum](#), which sits next to GPS spectrum. However, LightSquared must adhere to certain restrictions, which include keeping signals within their assigned frequencies in the L band. The fight has come down to grass roots level WWW resistance with the formation of Coalition to Save Our GPS (see <http://www.saveourgps.org>) and ascended to the level of the involvement by Congress (see <http://www.insidegnss.com/node/2629>).

The company also must work with the GPS sector to test existing GPS-enabled devices to determine what type of interference its transmissions might cause to those devices. (The company is owned by private-equity firm [Harbinger Capital Partners, which purchased SkyTerra](#) — the former Mobile Satellite Ventures — about a year ago and then folded it into LightSquared.)

And that is where the public-relations game is being played out. The FCC has mandated that LightSquared and the U.S. Global Positioning System Industry Council (USGIC) establish a technical working group (TWG) to investigate the issues. Because of GPS having attained nearly utility status in the United States, many groups are doing their own studies and warning of interference.

Most recently, [RTCA Inc. Special Committee 159 released an executive summary of a report](#) states that GPS aviation receivers would be faced with serious interference from transmissions planned by LightSquared in the upper portion of the 1525–1559 MHz band, which is adjacent to the GPS band. RTCA is an organization that writes GPS avionics specifications for the FAA.

Recently, *GPS World* posted a letter from Bill Range, program director for New Mexico's 911 system, that indicated law-enforcement, fire-service and EMS representatives tested LightSquared's network at Holloman Air Force Base in April to determine whether the company's signals would create interference problems for public-safety communications networks. Range warned that his department's tests "substantiate concerns that the LightSquared network will cause interference to GPS signals and jeopardize 911 and public safety nationwide."

A report due on June 15 — which has heavy input from the GPS community — should finally paint an unequivocal picture of what the real problems are. The question then is: Who is going to pay to fix it? This is what the fight is really going to be about.

For results of lab testing done by Garmin and Trimble see <http://www.gpsworld.com/gnss-system/signal-processing/lightsquared-jamming-report-11030>.

WVAGP's Board recently voted to draft a letter supporting a responsible FCC decision insuring long term viability of GPS and our CORS infrastructure investment.

B-ORG (Broadband-Orchestrated Regional Group) Progress in the Mountain State

Building Server-based geoservices improves on sneakernet delivery of large eSata hard drives insuring that data is current to the second it is used in an Agency's decision making process. By using published geoservices and standing up WWW-based geospatial applications or attaching to the services via ArcGIS Desktop, participants in West Virginia's B-ORG benefit greatly from everyone else's efforts.

Recent successes in this approach include:

[GeoMine](#) – a cloud-based prototype that, for the first time in history, allows visualization of active mining data features throughout most of Appalachia. The project is a joint collaboration between federal and state government Agencies including the West Virginia Department of Environmental Protection, Virginia Department of Mine, Minerals and Energy, Kentucky Department of Natural Resources, US Department of Interior's Office of Surface Mining, US Army Corps of Engineers, US Fish and Wildlife Service and the US EPA. The project is historic in that all participants are providing geoservices that are integrated into a single ArcGIS Server/ESRI Flex API-based application framework in Amazon's cloud computing environment.

[West Virginia's Broadband Geospatial Application](#) – provides a WWW-based mapping application providing users insights via an easily read map that shows a comprehensive picture of existing broadband service. It also identifies areas in the state that still do not have broadband coverage. This program is funded by a grant from the National Telecommunications and Information Administration (NTIA) State Broadband Data & Development Program (SBDD). The app participates in the B-ORG consuming an imagery service originating at the WVDEP.

LiDAR and High Resolution Photogrammetry Progress

Both County and State government level activities in the last year have resulted in expansion of

aerial imagery data within West Virginia having 1 foot pixels or smaller pixel size. The West Virginia Sheriff's Association contracted with Pictometry to fly statewide 1 foot resolution imagery in 2010 is the largest recent initiative. Additionally several counties have completed projects resulting in 6 inch or better data.

LiDAR collection is progressing with total area of West Virginia now having LiDAR collected on at least one date approaching or slightly exceeding 50% of the Mountain State's 24,230 square miles. The largest ongoing project is a collaboration between the Department of Environmental Protection and WVU's Natural Resource Analysis Center ([NRAC](#)). That project's current status is reflected below in Figure 2.

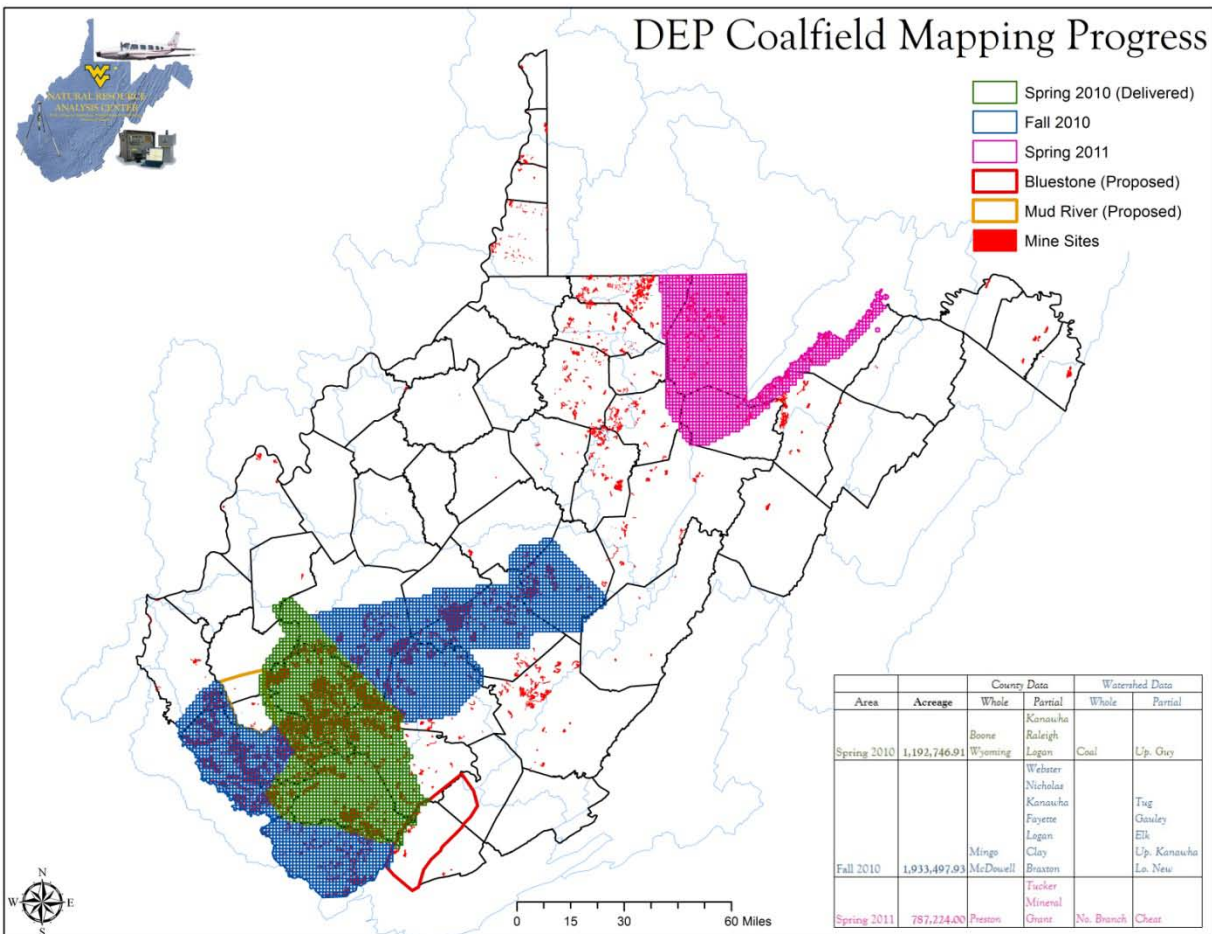


Figure 2: Status of WVDEP/NRAC LiDAR project

WVDEP will soon begin production of derived data products from NRAC's .las deliverables including intensity images, ESRI elevation grids, 2 foot contours, building footprints, hillshades, canopy height, slope and aspect. An independent review of the quality of the data is underway funded by FEMA because of their interest in using the data for DFIRM modernization. Plans are being developed to use the LiDAR data to modernize the WVSAMB 3' elevation grid in areas where change has occurred and the two datasets overlap.

The second largest area covered recently by LiDAR collection was a project flown for Huntington District of the Army Corps of Engineers looking at the New and Kanawha Rivers

below Bluestone Dam. Some of that mission overlaps with the WVDEP/NRAC data and will be used by WVDEP's TAGIS Unit in their quality control checking of the coal fields LiDAR deliverables from NRAC.

Multiple counties also contracted LiDAR in 2010 – 2011.

SPECIAL COMMITTEES

Auditing Committee

The president appointed the Audit Committee to certify the correctness of the Treasurer's financial reports for the calendar year. Members included Tony Simental, Tami Koontz, Melissa Scott.

BYLAWS

WVAGP bylaws can be viewed or downloaded from the Association's website:
<http://www.wvagp.org/Governance.asp>.