

July 12, 2011

The Honorable Jim Cawley - Lt. Governor
Chairman – Marcellus Shale Advisory Commission
Commonwealth of Pennsylvania
200 Main Capitol
Harrisburg, PA 17120

RE: Spatial Data Recommendations

Dear Lieutenant Governor Cawley:

Our organization, the Pennsylvania Mapping and Geographic Information Consortium (PaMAGIC), has been providing leadership in the growth and development of GIS in the Commonwealth since 1996. Our group led the way in data standards creation, in advocacy for comprehensive and coordinated data development, and in mutual education and idea-sharing about geographic information among all sectors. Both the energy industry and public agency regulators clearly benefit today from all those actions and from the easy access to high-quality spatial data we enjoy in Pennsylvania. Interestingly, some of the most compelling presentations to the MSAC have been those illustrated by maps and analysis built upon the imagery and spatial data generated by Geographic Information Systems (GIS).

Much of what is characterized in meeting notes from the MSAC published to-date refers to greater coordination and communication among agencies, and among levels of government; GIS is a tool which allows such communication in a very graphic way. Strangely, Pennsylvania is one of only three states without some type of formal GeoSpatial Coordinating Council despite the fact that this concept has been debated here in Pennsylvania for at least 10 years and during four legislative sessions. We offer the following three examples of geospatial development that are much more likely to occur with a Council (in which state and local government, industry, and academia plan and work together) than if a single agency or group attempted the same development:

1. **Create a unified basemap and database of Commonwealth Water Resources (aka hydrography) on which all data about quantity and quality can be assembled and analyzed.** Key examples of the opportunity for more coordinated water data are:
 - a. Our current base mapping for water resources is compiled at a gross scale despite the fact that we have complete topographic coverage from the PAMAP LiDAR Program that would allow much more accurate and refined base mapping.
 - b. Because of legacy data development decisions even that gross scale mapping is not used uniformly, and some Executive Agencies utilize more than one base map depending on the program.
 - c. Marcellus development is generating high-quality data on wetlands and wildlife that should be referenced to a singular base map.

- d. Marcellus development requires comprehensive stormwater management systems. Those systems provide direct links to stream segments that the current base map does not even contain.
 - e. The SRBC has enhanced water quality monitoring stations that are difficult to reference across state lines since base data is not common.
 - f. FEMA's recent and ongoing flood map modernization generated data models that are tightly referenced to PAMAP topography but not to the current base mapping used by agencies.
 - g. Many county governments have developed high-quality base maps of their hydrography, and that include local names for streams; this data is not integrated with the current base map.
 - h. The USGS is willing to support development of higher quality hydrographic mapping on a national basis by supporting each state's own development.
2. **Tighten the linkages and increase data flows between state agencies and local governments, and especially County government.** Key examples of opportunities for enhancements are:
- a. With the elimination of Conservation District permitting for earth disturbance the only real notification for natural gas projects are Act 14 Notices, which are preliminary in nature. Permit materials delivered later to DEP contain more precise and accurate details as to locations and facilities, and such data would be useful at the local level.
 - b. County Emergency Services Departments are routinely addressing driveways for well pads and other facilities and have found ways to increase communications with gas companies. They are the first responders and would benefit from even greater linkage, especially for linear features like roads and pipelines.
 - c. Parcel information (strictly a County function to maintain) has extreme value to both producers and regulators but is generally more available to industry than the state.
 - d. Laws requiring local comprehensive planning are made increasingly difficult to follow without free information flow in this very dynamic gas development cycle.
 - e. Any disbursements of impact fees can be more logically divided with clear spatial understanding of impacts to local communities.
3. **Create pipeline data standards early in the process of development.** Important background concepts for this action include:
- a. Transmission and distribution system mapping is reasonably complete and accurate but information on gathering systems is very limited. Some estimates range as high as 30,000 miles of new pipelines related to Marcellus development.
 - b. Pennsylvania's long history of gas development has resulted in a wide range of data accuracy and completeness among gas producers, especially for low-pressure systems.
 - c. PA One-Call data only includes attributes for location (for safety purposes) rather than data about rights-of-way, pipe sizes, and pressure regimes.
 - d. Future land development could occur on or close to pipelines if local governments have incomplete information in the future.
 - e. The Public Utility Commission has limited experience with spatial data development and analysis.

The environmental and economic controversies associated with the Marcellus Shale are more easily understood and managed with clear and comprehensive information. We will have higher-quality information more quickly, and at the same time build new avenues of communication, with a GeoSpatial Coordination Council that includes public, private and academic interests and ideas. Executive leadership and Legislative guidance are needed, first as a basic policy and then in implementation.

We stand ready to provide whatever additional information or background you might need, and are prepared to engage our membership for the benefit of our Commonwealth. If any clarifications are needed, or assistance required, please contact ejespersen@fisherassoc.com who served as editor of this letter.

Sincerely,

Eric Jespersen	Private Industry
Nicole Ernst	Academia
Dave Gilbert, GISP	Private Industry
Glenn Mohler	County Government
Laura Simonetti	County Government
Brady Stroh, GISP	Academia/Non-profit

For the PaMAGIC Board 2011-2012

N.B. - PaMAGIC Board Members are elected and serve as individuals, and do not speak on behalf of their employers. The PaMAGIC Vision - *"The Citizens of Pennsylvania will have a coordinated, flexible and integrated geographical information infrastructure to support better decision making and more efficient use of limited resources"* – has stood the test of time.