

PA Lidar Working Group Formative Meeting
PEMA HQ
August 16, 2017

Purpose – Meet and define objectives, scope and membership for a PA Lidar Working Group

Attendees:

State Partners:

PEMA – Jeff Thomas, Executive Deputy Director, Jeff Boyle, 911 Director, Steve Bekanich, BORM Director, Jeff Jumper, State Meteorologist, Tom Hughes, State Hazard Mitigation Officer, Sandeep Chaudhary

PA DEP (phone) – Carrie Tropasso, GIS
DCNR Geological Survey – Gale Blackmer
DCNR Forestry – Joe Petroski
PennDOT – Frank DeSendi
Shippensburg University- Scott Drzyzga

Federal Partners:

Allegheny National Forest (phone) – Jeanne Hickey
Marcie Dunn – USDA/NRCS
USGS – Scott Hoffman

Others:

PA Magic/PAFPM – Eric Jespersen
PA MAPPS – Howard Hodder, HRG
Susquehanna River Basin Commission – Jeff Zimmerman
PASDA-PSU – Scott Dane

Meeting commenced at 10:15AM and concluded at 12:10PM

Agenda

- | | |
|----------------------|--|
| 10:00 – 10:15 | Introductions - participants indicate interests in and uses for existing and new lidar coverage for PA. |
| 10:15 – 10:30 | PEMA Remote Sensing Program – Status and Plans |
| 10:30 – 11:30 | Open Discussion on needs and plans for acquisition, management, and use of QL2 (or better) lidar data. Topics to include: <ul style="list-style-type: none">• Data specifications• Statewide costs estimates<ul style="list-style-type: none">○ Data acquisition |

- Data storage and management
- Application development
- Analysis and applications
- Responsibilities
- Potential partners

11:30 – 12:00 Action Items

PEMA - Steve Bekanich opened the meeting and provided a brief discussion on why all were invited and the interest PEMA has in acquiring LIDAR data across the Commonwealth (flood inundation mapping and other related programs). Jeff Thomas provided comments from the Executive Office at PEMA and Jeff Boyle provided an update on the imagery project out of the 911 office.

USGS, Scott Hoffman discussed the BAA and GPSC programs. BAA is in its 3rd year; there is a webinar tomorrow that he will send information out on (to include a recorded link for those who can't make tomorrow's session). BAA-USGS used the funds and user manages and grant application period opens in September and runs through October; GPSC program is managed by USGS. Unknown how much of the funds will be available (thinking \$25 million). Chesapeake Bay Program is funding ½ million for 3DEP project. Data goes to the National Elevation Data Set. Goal for USGS – obtain QL2 data for the whole country in 8 years. A national GIS datamap for wishes of federal agencies was shown at: www.seasketch.org

PAMAGIC – No funds to contribute, members have ideas and interest in the applications and bigger picture – what is the working group's end state. Would like assistance in defining the Lidar/Elevation Data Theme for the GeoBoard Base Map project. Will it be freely shared (yes). Brought up that DHS/FEMA HSGP, CTP & EMPG, DOT and DCNR funds were used in the last LIDAR initiative. Dauphin County used the BAA process to acquire data and just beginning to utilize the data but private sector and SRBC are using it Group should organize for the next off-leaf cycle. Hope is that PASDA could house the data in addition to the USGS repository

Shippensburg University – Scott discussed the recent William Penn Foundation funds being used by the university in the Delaware River Watershed. On a team to look at predictive urban modeling up to 2024 for Washington DC. They participate in projects with NY, NJ, PA, MD and Delaware as well. Don't bring funds but collaboration and analysis expertise. Have used best available data for canopy and surface covers. Participated in the creation of 1 meter land data cover, which is also being used by engineering firms in the MS4 area.

PASDA – Currently house information from Ortho and LIDAR runs. LIDAR data is the most popular download on their site. Natural Gas industry and engineering firms using the data. Have hosted PAMAP data since 2005 – hoping for QL1 buy-ups – feature extractions, fields and be able to identify Return on Investments. PAMAP ten years ago took a quantum leap. Maurie Kelly met with Sandeep this week about hosting NG911 imagery. Recently upgraded servers and able to handle the QL2 lidar data it might get. PASDA is funded, in part by PA's Office of Administration each year.

PEMA – Director Thomas stressed that open data for our agency and the Governor’s office is very important. The commonwealth needs a good Base Map with good base layers – Wants the Base LIDAR and Ortho data shares; one place where everyone is looking at the data but PEMA can’t house the data. Have an Request for Proposal almost ready. Cognizant of our procurement cycle. Questions are: How much error can we live with, meet/identify consistency, how to maximize the FEMA dollars that may be available – may need to be very agile over the next 2 weeks if FEMA mapping dollars come through for western PA counties. Director Thomas would like a state status map for the group to include state, federal, academic, private sector initiatives for the next meeting. Sandeep mentioned that counties are interested. Jeff Boyle mentioned that there are 911 dollars to assist; would like to obtain new imagery for 1/3 of the state each year on a cycle once this is complete and provided a quick summary on the NexGen911 and FirstAlert different purposes and needs as it relates to the first responders and the timeline for these to mature (vertical accountability needs). If FEMA funds do come, that would leave 18 counties to be accomplished. The whole state cost regardless of any funds would be an estimated \$7-8 million (44,000 square miles x \$200 per square mile estimate) for QL2 lidar data.

NRCS –\$1.4 million involved in the 3DEP Project for FY2017 – Bay Program and NRCS funding total. 13 counties tentative commitment and could expand to include Huntingdon county if FEMA funds are available for western counties. Question raised on use of Chesapeake funds for Berks and towards Delaware River Basin. Northern Tier run was also mentioned. Maybe another \$2.5 million from possible \$20 million nationally to come to Pennsylvania, or none.

Forest Service – Jeanie would like the group to stick use the BAA process to acquire QL2 data statewide and to define long-range plans for updates. Suggested a capital investment type campaign to see who could fund what (Go Big or Go Home).

It was pointed out that Pictometry was good for Emergency Management and Tax Assessment offices purposes but not for accuracy needs. A DEM from lidar is a huge benefit for creation of high accuracy ortho-imagery.

DCNR – Want the whole state – geographic mapping, hazards like sinkholes, landslides, karst topography. Can use Landsat data for bird migration, use data for Marcellus shale (geologists), rails and trails improvement planning and execution, urban and bio mass tree data, wetness of streams (well pads), hydrography and storm water infrastructure needs.

NRCS – use data for engineering models, wetland determinations. Their data is on a webservice. Funding – already threw in what they had, will look at Huntingdon County LIDAR if FEMA comes through.

PennDOT – Work with other PennDOT offices – use data for flood modeling (recent Climate Change Study completed), archeological and historic preservation needs, Rainfall modeling, – obstacles sometimes is P.E.s tend to always want to operate the same way as they have always done things. Would like to be able to use for bridge overtopping and scouring, safety analysis, road geometry (slope, elevation, curvatures versus actual accident reports which is reactive) and even to monitor billboards.

PADEP – Has broad needs but no funding at this time. Hydrography update prominent in needs.

PA-MAPPS – Howard Hodder said there are numerous MS4 use/needs for mapping BMPs in place. PennDOT is the largest MS4 permit in the state. Huge need for lidar for stormwater management – impervious surfaces, water quality – stormwater authorities are on the rise for development. SRBC - have hydrology and flow path mapping needs; could assist in the placement of mitigation measures due to slopes and small flow paths that the CBP may not have been aware of for their future remediation work projects applications. SRBC is always looking for funding but could provide technical assistance services.

The group agreed to aggressively pursue funds mentioned as possible for the end of this federal fiscal year, and to meet within a month in pursuit of that.

Due-Outs:

- 1) PEMA/BORM - Steve Bekanich, to schedule meeting in mid-September (FEMA funds commitment timeline)
- 2) USGS- Steve Hoffman to provide BAA webinar link for webinar tomorrow (17AUG17)
- 3) State Map to show federal, state, local, academic and private sector LIDAR/Ortho initiatives by next meeting – who? Pattern after federal map that exists/with funding sources
- 4) PEMA BORM - Steve Bekanich to have the slides and 2 handouts sent out to the attendees
- 5) PEMA/BORM - Steve Bekanich to circle back with FEMA Region III Risk Analysis Office
- 6) PEMA/BORM – find out if there is a current State ITQ in place for LIDAR/Ortho work like the federal partners have in place
- 7) PEMA 911 to initiate the LIDAR/Ortho RFP
- 8) PA MAPPS – Howard to provide an estimate on how much efforts will cost – best case scenario for the commonwealth
- 9) PEMA - Invite other partners, e.g. USACE, DRBC, Game Commission and Private sectors.
- 10) All - Look at possible cost shares and maintenance cycle(s).
- 11) PaMAGIC - Engage Working Group members to define desired future update cycles and paths to achieve, as part of the GeoBoard Base Map definition