

Issues Concerning Partnership Acquisition of High-Resolution Land Cover and LiDAR Data Raised by the CBP Principals' Staff Committee at their December 11th, 2014 Meeting

Updated February 3, 2015 in Response to Feedback from Jurisdictional Partners Amended to Include Specific Responses Back to Comments from PA DEP and CBP LGAC

Background

At the December 11th Principals' Staff Committee (PSC) meeting, Karl Berger, CBP Land Use Workgroup co-chair, updated members on the number one priority of the Chesapeake Bay TMDL 2017 Mid-Point Assessment: incorporating local land use information into the Partnership's Phase 6 Chesapeake Bay watershed modeling tools. Joel Dunn and Jeff Allenby, Chesapeake Conservancy, then briefed the PSC members on their proposal for the acquisition of high resolution land cover data for the entire Chesapeake Bay watershed. While the Conservancy's proposal was very well received by PSC members, during the resulting discussion, a number of concerns and issues were raised about the work being proposed.

Current Status

The Chesapeake Conservancy has presented their proposal to the following Chesapeake Bay Program (CBP) committees and partners:

- Chesapeake Bay Program Office—October 6th
- CBP Management Board—November 13th
- CBP Land Use Workgroup—November 20th
- USGS Associate Directors and OMB—December 18
- CBP Principals' Staff Committee—December 11th
- Chesapeake Bay Commission—January 8th
- CBP Modeling Workgroup—January 14th

Additional briefings are being scheduled as requested by the committees (e.g., Water Quality Goal Implementation Team, Agriculture Workgroup) and partners.

This paper addresses issues and concerns raised by PSC members at the meeting on December 11.

Issues Raised

To what degree will the Chesapeake Conservancy's proposal address the Partnership's need to develop a watershed-wide local land use and land cover dataset for the Partnership's Phase 6 Chesapeake Bay Watershed Model?

The Chesapeake Conservancy presented their proposal at the November 20th CBP Land Use Workgroup meeting. The Workgroup was supportive of the proposal but wanted to ensure that the timing and specifications of the product met the Partnership's needs for the Phase 6 land use dataset. Based on follow up work and evaluation by the Chesapeake Bay Program Office's (CBPO) Land Data Team, led by Peter Claggett (USGS), the Team confirmed that the land cover

dataset proposed by the Chesapeake Conservancy will provide one of the key foundational elements for constructing the Phase 6 land use dataset.

A variety of data are needed to construct the 21-class Phase 6 Land Use Database. (At its October 7-8, 2014 meeting, the Partnership's Water Quality Goal Implementation Team approved the Land Use Workgroup's recommended 21-classes of land use, subject to refinement depending on the outcomes of work on land use specific pollutant loading rates.) Most importantly, we need data for high-resolution land cover which are normally produced with just 5-7 classes such as impervious cover, tree canopy, herbaceous vegetation, bare ground, and water. Land cover represents the conditions of the land surface but does not represent how the land is used or managed. For example, impervious surfaces can be identified in a land cover map but land use or planimetric data are needed to separate roads from other types of impervious cover. Parcel, zoning, and land use data are needed to differentiate developed open space from agriculture. Moreover, aerial and satellite spectral imagery cannot penetrate through tree canopy to identify roads or streams in densely wooded areas nor can it tell us where urban tree canopy should be interpreted as a "forest".

Please see Table 1 in the attached paper entitled "The Role and Value of High-resolution Land Cover and Elevation Data within the Chesapeake Bay Program Partnership" for more details on exactly how the local land use, parcel, and zoning data will be used to develop the Phase 6 Land Use Database.

Therefore, to construct the Phase 6 Land Use Database the CBP Land Use Workgroup has requested that states, the District, and local jurisdictions provide it with the best available data on land cover, land use, parcels, zoning, sewer service areas, and MS4 boundaries. Recognizing most jurisdictions will not have complete coverages of all these data sets, the CBP Land Use Workgroup will use an agreed to set of methodologies in the absence of specific sets of data to generate the 21-classes of land use.

How do we go about the collection, interpretation and public presentation of the resultant watershed-wide land cover data and still respect privacy concerns?

The Farm Bill Section 1619 privacy concerns voiced at the PSC meeting are technically not an issue here. Section 1619 pertains to USDA's conservation and common land unit databases and covers:

- State identification and county number (where reported and where located).
- Producer or landowner name, business full address, phone number, Social Security Number, and similar personal identifying information.
- Farm, tract, field, and contract numbers.
- Production shares and share of acres for each Farm Serial Number (FSN) field.
- Acreage information, including crop codes.
- All attributes for Common Land Units (CLUs) in USDA's Geospatial Information System
- Any photographic, map, or geospatial data that, when combined with other maps, can be used to identify a landowner.
- Location of conservation practices

High-resolution imagery, land cover data, and USDA's Cropland Data Layer do not contain information solicited from producers and are not subject to Section 1619 privacy restrictions. The fact that we can use such open access data to characterize farming at a fine (but not parcel) scale may be of concern to farmers, but is not subject to Section 1619 and will not reveal any of the above information that is subject to Section 1619.

Moreover, given that anyone with Internet access can already directly access high-resolution imagery through sites like Google Maps, the proposed land cover data will not reveal information that is not already visually evident in such imagery. Land cover data represent translations of visual images into data that enables their use in models. Essentially, land cover data are abstractions of images and, therefore, serve a different purpose by allowing interpretation of the images to properly represent land use in the model.

Out of respect to farmers and others with similar privacy concerns, however, we must be thoughtful in how, when and where we present and communicate the intended management applications of high-resolution data and information. As work on developing the watershed-wide land cover data set, we will develop, reach agreement on, and then implement a public communications strategy to proactively address any concerns about privacy. The Partnership will coordinate the development of these messages and their delivery through the CBP's Agriculture Workgroup and the Communication Workgroup.

How will the data being collected affect interpretations of Waters of the US?

The data will not affect any interpretations of the definition of "Waters of the US". The Chesapeake Conservancy's proposal only covers the production of high-resolution land cover data for the Chesapeake Bay watershed. The Chesapeake Conservancy's presentation, however, also included an overview of a new "Precision Conservation" tool that they are developing which combines high-resolution land cover with high-resolution overland flow-path analyses. In discussing their tool, they presented a map of synthetic drainage networks derived from LiDAR (Light Detection and Ranging) elevation data showing potential dense drainage networks throughout farm fields on the Delmarva Peninsula. This map raised concerns from PSC members about how the tool, not the proposal to produce land cover data, might impact regulatory interpretations of waters of the US.

The legal definitions of what are considered waters of the US for Clean Water Act Section 404 regulation and compliance is a definitional issue that is completely separate from flow path analysis presented by the Chesapeake Conservancy and technically irrelevant to the Phase 6 Watershed model land use and land cover data set. The synthetic streams and flow paths mapped through the proposed work will not have any official recognition for use in any Clean Water Act Section 404 regulation and compliance action or application.

Geographers and hydrologists have been deriving "synthetic" streams from contour maps for many decades and more recently have relied on LiDAR data and GIS for this purpose. One will always find many more streams on a 1:2,400 scale map compared to the 1:24,000 National Hydrologic Data (NHD). Drainage densities and presumed hydrologic connectivity increases with increasing map scale—no surprises here. However, it is unclear to what degree fine-scale

synthetic streams serve as true preferential flow pathways on the landscape. They may portray denser drainage networks than are evident on 1:24,000 scale maps but, without additional information, we're unsure whether the synthetic streams are swales, gullies, or ephemeral, intermittent or perennial "streams". As a result, this information could not be used to identify any defined "Waters of the US".

How come the proposed work is so relatively inexpensive when it involves collecting land cover data for the entire Chesapeake Bay watershed?

The Chesapeake Conservancy's proposal to develop high-resolution land cover is based on existing aerial imagery and LiDAR data so the cost of new imagery is not factored into their proposal. Fortunately, the USDA Farm Service Agency cost-shares the collection of high-resolution aerial imagery with each Bay state on a 1-3 year cycle. The collection of LiDAR data is generally contracted with counties and state agencies with some cost-share assistance from the USGS, NOAA, or NASA.

With no imagery expenses, production costs focus on staff, software, and computers. The Chesapeake Conservancy has experience in producing high-resolution land cover data and propose to use their experience to train new staff on their classification techniques. The software they propose to use, ENVI, provides state-of-the-art feature extraction capabilities while being competitively priced relative to similar software packages on the market.

How does the work proposed by the Chesapeake Conservancy factor into Virginia's plans for acquisition of high resolution land cover data for all of Virginia?

Based on follow-up conversations with Virginia Geospatial Information Network (VGIN) staff and management, Virginia is moving forward with their RFP which will be released in the next two months. The Chesapeake Conservancy is eligible to compete for this work and has stated that they intend to do so. Virginia's RFP contains requirements for the acquisition of high resolution land cover data consistent with the quality of data needed for the Partnership's Phase 6 watershed model land use/land cover data would be provided to the program for Virginia's portion of the watershed.

How will the proposed work be funded?

The Chesapeake Conservancy has provided the estimated costs for the acquisition of high resolution land cover data for the entire Chesapeake Bay watershed areas as well as for the providing data for the full counties along the watershed boundaries. The Land Use Workgroup recommends the Partnership acquire land cover data for the entire watershed plus the full counties along the watershed boundaries for several reasons including:

- For BMPs reported by county, the BMPs can be apportioned within the Bay watershed boundary based on the land cover/land use distributions; and
- Access to data on entire counties is needed in developing future land use/land cover projections used by the Partnership;

The total cost of acquiring high resolution land cover data for the entire Chesapeake Bay watershed + full counties along the watershed boundaries is \$2,045,019.

Virginia is proceeding forward with its RFP to acquire the same high resolution land cover data for its portion of the Chesapeake Bay watershed with funds provided for by their General Assembly.

EPA is providing \$500,000 in FY2015 Chesapeake Bay Program funds towards the cost of acquisition of the high resolution land cover data, bringing down the total cost for the remaining six watershed jurisdictions down to \$941,008.

Therefore, each of the remaining six watershed jurisdictions would contribute funds from their 2015 Chesapeake Bay Regulatory and Accounting Grants in proportion to their land area within the Bay watershed + full counties along the watershed border. The following table provides the costs by the six jurisdictions, accounting for EPA's funding contribution in proportion to their total land area.

| State | Total Area (sq. mi.) of Watershed + Full Counties Along Watershed Boundary | % of Total Area of Watershed+ Full Counties Along Watershed Boundary | Cost (\$) |
|----------------------|---|---|------------------|
| Delaware | 1,943 | 3.2% | 30,082 |
| District of Columbia | 61 | 0.01% | 940 |
| Maryland | 9,695 | 15.8% | 148,531 |
| New York | 14,978 | 24.3% | 228,437 |
| Pennsylvania | 29,824 | 48.5% | 455,933 |
| West Virginia | 5,015 | 8.2% | 77,085 |
| Total | 61,516 | 100.0% | 941,008 |

Does the funding for this proposed work need be competed?

There are existing agreements in place through which this time-sensitive work can be funded. The National Park Service's Chesapeake Bay Office has an existing financial agreement with the Chesapeake Conservancy. EPA could transfer the above funds to the National Park Service through an existing Interagency Agreement. This project could also be competed, however this would result in a delay of at least 6 months, putting the entire 2017 Mid-Point Assessment schedule into jeopardy.

Given EPA is planning to take the funds "off the top" of the jurisdictions' allocated CBRAP grants prior to award to each jurisdiction, EPA will have sole responsibility for the resultant procurement process.

The flow path analysis proposed by the Chesapeake Conservancy is flawed in that it only represents surface water when over half of the water in streams moves through groundwater.

As mentioned above, the Chesapeake Conservancy's Precision Conservation targeting tool—based on overland flowpath analysis from LiDAR—is separate and distinctly different from the Chesapeake Conservancy's proposal to develop high-resolution land cover for the entire Chesapeake Bay watershed.

The Precision Conservation tool is intriguing and provides a synoptic perspective on potential overland flowpaths. Clearly, more work by the partners is needed to address the concerns and issues raised by the PSC members and others. The tool could become more useful and address many of the concerns raised if it was combined with information on geology, soils, and subsurface flowpaths. Further discussion of and work on tool enhancements and management applications will be conducted on a separate, yet parallel path to the proposed work on developing high-resolution land cover data for the entire Chesapeake Bay watershed.

While the Partnership's Land Use Workgroup, under the CBP Water Quality Goal Implementation Team, continues to have the lead for overseeing the acquisition of the watershed-wide, high-resolution land cover data, the CBP Healthy Watersheds Goal Implementation Team should take on the responsibility for further consideration of the Precision Conservation tool and its application by partners and the Partnership as a whole.

What are the plans to collect consistent high resolution LiDAR data across the entire Chesapeake Bay watershed?

USGS, through the CBPO Land Data Team, is updating the map of LiDAR data coverage across the entire Chesapeake Bay watershed, with a focus on determining the quality level (i.e., vertical and spatial resolution and accuracy) and the age of the data. For addressing the near-term needs of developing the Partnership's Phase 6 watershed model land use data, USGS, NASA, and EPA are actively discussing opportunities for the acquisition of high-resolution LiDAR data to fill the gaps in current watershed-wide high-resolution LiDAR data coverage. Such a coverage would have the recognized limitations of being based on data of varying quality and age.

Is this a one-time cost or a continuing cost over time to the Partnership?

Municipalities, counties, states, and federal agencies (e.g., NRCS, FSA) have programmatic and regulatory needs for the periodic acquisition of updated high-resolution land cover and LiDAR data. Currently the funding and acquisition of such high-resolution data is coordinated within but not among the Chesapeake Bay jurisdictions and federal agencies. There is an unprecedented opportunity for the Partnership to take on the responsibility for coordinating the funding, acquisition and distribution of resultant data among the Chesapeake Bay watershed jurisdictions and federal agency partners, at a minimal logistical cost and substantial cost savings to the multitude of involved local, state and federal partners. Based on the experiences from the proposed work to produce high-resolution land cover data consistently across the entire Chesapeake Bay watershed and from the CBP Partners' efforts to fill the existing gaps in high-resolution LiDAR data, the Partnership should seriously consider planning for and jointly funding future periodic updating of these high-resolution datasets.

Recommended Next Steps/Path Forward

The following are recommended key next steps for addressing the Partnership's immediate needs for high-resolution land cover and LiDAR data.

Task: Working with the Chesapeake Conservancy, NASA and USGS' National Geospatial Program, develop a more detailed map of current LiDAR holdings in the Bay watershed with dates and quality levels and to develop a list of technical specifications for LiDAR-derived elevation data and high-resolution imagery derived land cover data.

Lead: CBPO Land Data Team

Timing: Late January/mid-February

Partnership Role: CBP Land Use Workgroup coordinated review of initial specifications by the geospatial agencies within each watershed state and the District.

Task: Finalize all the arrangements for funding by EPA and the jurisdictional partners and the funding transfers from EPA to National Park Service, with a subsequent award to the Chesapeake Conservancy and its subcontractors.

Lead: CBPO

Timing: February/March

Partnership Role: CBP Land Use Workgroup review and approval of detailed scope of work.

Task: Secure funding commitments to 'fill in' the identified gaps in the watershed-wide high resolution LiDAR coverage to meet the Partnership's immediate needs for developing the Phase 6 watershed model land use dataset.

Lead: USGS working with NASA and EPA

Timing: March/April

Partnership Role: CBP Land Use Workgroup review and approval of map illustrating gaps in high resolution LiDAR coverage.

Task: Work through the concerns with and needs for enhancing the existing Precision Conservation tool to proceed forward with a Partnership approved tool for application throughout the watershed.

Lead: CBP Healthy Watersheds Goal Implementation Team

Timing: By summer 2015

Partnership Role: Review by the CBP Healthy Watersheds Goal Implementation Team, CBP Water Quality Goal Implementation Team, and Management Board, and approval by the Principals' Staff Committee.

ATTACHMENT A.

Email from Andy Zemba, January 28, 2015, to Nick DiPasquale EPA CBPO Responses to Concerns Raised by PA DEP

Nick – Thank you for the opportunity to express concerns. Per your e-mail below, we are providing comments to you, summarized in the text below and supplemented with tracked comments/questions in the attached document that help to show areas where we have remaining concerns. However, we do believe this all can be worked through.

RESPONSE: *We agree. Please see our detailed responses below to the comments and concern raised in your email message. We have also made specific edits and addition to the original paper distributed to the PSC. Finally, we have drafted up an additional, more detailed paper entitled “The Role and Value of High-resolution Land Cover and Elevation Data within the Chesapeake Bay Program Partnership” to address questions raised by your email as well as comments provided by the Partnership’s Local Government Advisory Committee. We believe the collection of these three sets of responses address the concerns you have raised.*

We want to be clear that Pennsylvania supports getting the best land use data in the model that we can. We also support that the proposal is being discussed in CBP workgroups; that is an important and effective way to help get additional input for the PSC to consider. But given the significant dollar amounts involved for this proposal, we want to make sure that we still better understand how far the proposed project gets us, and what data would still be missing (recognizing that the memo that you provided was a very good start in getting answers to the questions). We want to do the best we can to avoid creating a situation where it is perceived that the project failed to deliver. It appears that some of the CBP workgroups already have concerns like that (e.g. the land use workgroup expressed concerns on a call yesterday). Projects with dollar amounts like these always create accountability questions, such as why was this sizable amount of funding not used for on-the-ground water quality projects. Having additional information would help us if questions are directed at us. We think we are effectively communicating the information needed in the questions in the bullets below.

It was clear at the last PSC meeting that there was significant interest in this project from the other partners around the table, and Pennsylvania is still open to possibly joining the CBP partners on this project. Again, the memo that you provided helped with answering questions, but here are some remaining points we feel need to be considered:

The memo helps to clarify that data from the proposed project would be used for the Watershed Model, but the memo also mentions that data from this proposed project stops short of providing all the data needed to update the model’s land use information. Page 2 mentions that there is still a need for parcel, zoning and land use data. At the recent PSC meeting, there was a presentation on missing land use information, and Pennsylvania has been working to try to help with the collection of that data, but we are now trying to connect the information from Page 2 with what was presented at the PSC meeting. Can CBP clarify all the categories of information that would still be needed even after data would be collected through this proposed project? Is it only parcel

and zoning information? How far does the project take us in terms of getting all the data needed for the model? Can the model work be completed with the data from this project, combined with additional information that CBP has already obtained?

RESPONSE: *We have attached a more detailed six page paper entitled “The Role and Value of High-resolution Land Cover and Elevation Data within the Chesapeake Bay Program Partnership” which provides both more detailed text and a comprehensive table cross walking exactly where the requested local land use, parcel and zoning data are being used in development of the Phase 6 Land Use Database. To construct the Phase 6 Land Use Database (as outlined in Table 1 in the attached paper), the CBP Land Use Workgroup has requested that states, the District, and local jurisdictions provide it with the best available data on land cover, land use, parcels, zoning, sewer service areas, and MS4 boundaries. Recognizing most jurisdictions will not have complete coverages of all these data sets, the CBP Land Use Workgroup will use an agreed to set of methodologies in the absence of specific sets of data to generate the 21-classes of land use.*

- The land use workgroup meeting that took place yesterday generated questions on the project. Since that meeting took place after your e-mail, can we obtain an update on how the questions from the workgroup will be addressed?

RESPONSE: *We will ask Peter Claggett to send you the record of responses to concerns raised at the January 27th CBP Land Use Workgroup meeting.*

- Pennsylvania would ask that any funding for this project be “taken off the top” of the 15/16 grant, or spread out over 15/16 and 16/17, both of which do not have established workplans yet. Taking the funds “off the top” would eliminate administrative inefficiencies, which makes sense, since our understanding is that EPA has agreed to handle the procurement for this project. This would also eliminate match requirement for those funds that are “taken off the top”. But we would like to clarify that we anticipate that the funds would be fully re-established in future PA awards. If EPA wants to get started before the 15/16 grant, we would suggest that the project be done in phases, if possible, holding PA until the 15/16 funds are taken off the top of our award.

RESPONSE: *EPA will take the funding for this project “off the top” of the 2015/2016 CBRAP funds allocated but not yet awarded to Pennsylvania. Confirming that taking this approach will:*

- *Eliminate administrative inefficiencies;*
 - *Ensure EPA is solely responsible for all procurement actions related to this work;*
 - *Eliminate the match requirement for those funds as they will not be awarded to Pennsylvania; and*
 - *Ensure EPA has taken the funds “off the top” prior to moving forward with award of the next CBRAP grant.*
- Similar to the comment regarding the land use workgroup meeting, we would like to mention that it is important to ensure that comments from meetings other than the PSC, such as the January 8th Chesapeake Bay Commission meeting in early January, have

been considered. On Page 1 of the memo, the CBC and other meetings are mentioned, but the next sentence says that the paper addresses concerns raised at the PSC.

RESPONSE: *This paper only address the issues and concerns raised by the PSC members. Concerns raised by the other committees/partners which have been briefed are either very similar to concerns raised by the PSC (e.g., Chesapeake Bay Commission), been addressed through separate correspondence (e.g., CBP Local Government Advisory Committee), or are of a very technical nature and are being addressed by the Land Use Workgroup working directly with the Chesapeake Conservancy.*

- Thank you for providing information in the memo related to how CBP has considered the concerns raised about 1619. To help even further with 1619 concerns, Pennsylvania has no interest in housing any of the data from this project, and we request that no copies of aerial imagery be sent to us.

RESPONSE: *Understood and we will respect Pennsylvania's approach on this issue.*

- We believe that you are aware that, through our recent grant, we are working on a pilot project with NRCS where they will use aerial imagery for the purpose of counting BMPs, and will report the results to us in aggregate form, similar to how we get NRCS data each year for the model progress runs. We worked successfully with the CBP partners to make a presentation at a CBP Agricultural Workgroup meeting last summer to discuss the project, and how to address 1619-type questions. We received important feedback that helped us develop a workplan that addressed potential concerns in the agricultural sector, and would recommend that you consider having this proposal also discussed at the CBP Ag workgroup.

RESPONSE: *We will reach out to the Agriculture Workgroup co-chairs and coordinator to schedule a briefing for the Workgroup members.*

Kelly mentioned that if you would like to discuss it with her, she would gladly do that, a good number to call would be (717) 783-4693. Just curious, are we the only jurisdiction that commented?

RESPONSE: *Yes, I would like to follow up directly with Kelly. And no, Pennsylvania was not the only jurisdiction to respond to the Secretary Ward's email and provide feedback. We have heard some level of response and feedback from most of the watershed jurisdictions.*

Andy Z

ATTACHMENT B.

January 28, 2015 Email Message from Penny Gross to Nick DiPasquale and Russ Baxter, cc. Molly Ward

EPA CBPO Responses to the Concerns Raised by LGAC Chair Penny Gross

Nick and Russ: I am writing to you in my capacity as chairman of the Local Government Advisory Committee to the Chesapeake Executive Council, to express some strong concerns about the implications of the proposal for watershed-wide acquisition of high resolution land cover data.

While LGAC has not had an opportunity to review the proposal as a committee, it appears that the proposal has the potential to cost localities a lot of money and resources via the staff time that will be necessary to provide local data to, essentially, a commercial entity.

RESPONSE: *Actually, the proposed watershed-wide acquisition of high resolution land cover data will not cost any Bay watershed locality any funding. In fact, we are actually saving our localities significant funding in the long run. Based on an average price that commercial vendors may charge per county, by working through the Chesapeake Conservancy on acquiring the data for the entire Chesapeake Bay watershed at the same time, this bulk purchase will reduce what would be the cost to individual counties for such data by 3x - 7x compared to if they were going to produce the data individually.*

The funding for this first time watershed-wide data acquisition will be funded by EPA (\$500,000) and a land area-based portion of each of the six jurisdictions' forthcoming 2015 Chesapeake Bay Regulatory and Accounting Grant funds. Please see the below table for the allocation of funding responsibilities.

| State | Total Area (sq. mi.) of Watershed + Full Counties Along Watershed Boundary | % of Total Area of Watershed+ Full Counties Along Watershed Boundary | Cost (\$) |
|----------------------|--|--|----------------|
| Delaware | 1,943 | 3.2% | 30,082 |
| District of Columbia | 61 | 0.01% | 940 |
| Maryland | 9,695 | 15.8% | 148,531 |
| New York | 14,978 | 24.3% | 228,437 |
| Pennsylvania | 29,824 | 48.5% | 455,933 |
| West Virginia | 5,015 | 8.2% | 77,085 |
| Total | 61,516 | 100.0% | 941,008 |

Virginia is proceeding forward with its own RFP to acquire the same of high resolution land cover data for its portion of the Chesapeake Bay watershed with funds provided for by their General Assembly.

In Virginia, at least, local governments are in their budget processes right now, and I doubt that any are including anything of this nature in their budgets, either in terms of dollar costs or staff workplans. Localities will balk at this extra cost in staff time and effort, especially since it appears that this is already rolling down the tracks at them.

RESPONSE: *In the long term, the Chesapeake Bay Program Partnership is working to actually save the watershed's localities significant funds by organizing the acquisition of high resolution land use data on a regular basis (e.g., every 3-4 years) funded by a larger consortium of state, federal and regional partners. Right now, individual counties, municipalities, conservation districts and states are funding their own sets of high resolution data—a very inefficient, fragmented, and expensive approach. As planning proceeds forward on such an approach for the future, we will definitely engage the watershed's localities, initially through LGAC, to ensure they are an integral part of the entire process. We have time for such an engagement with our local partners as any such efforts are still several years down the road.*

This appears to be another disconnect between federal/state and the localities. Since localities have much of this info available in some form already, there is no need to reinvent the wheel, but localities – especially staff – should be involved in the conversation before having this work dumped on them. The value of the proposal needs to be clearly demonstrated and supported by a realistic plan for rolling it out to local governments, large and small, and providing the tools, training, and/or resources they would need to be able to realize the presumed value.

RESPONSE: *You are correct in that through the Chesapeake Bay Program Partnership's Land Use Workgroup, over the past year there have been several efforts to reach out to and work with each county and municipality within the Chesapeake Bay watershed to ask for and receive the readily available local land cover, land use, parcel, and zoning data. The initial request, transmitted in a letter from each respective lead state agency to their county and municipality counterparts, was followed up by direct communications by Chesapeake Bay Program Office Land Data Team members and then staff from EPA's contractor Tetra Tech with locality staff. This local data, in conjunction with the watershed-wide high resolution land cover data, is needed to develop the land use data set for the Partnership's Phase 6 Chesapeake Bay Watershed Model. Efforts were made to put no extra financial and staff resources burden on any locality—requests were only for readily accessing land related data.*

It is my understanding that the states might have to reduce funding to EPA.CPB funded programs in order to cover the costs which, in turn, might well impact funds available to localities for project implementation and other critical services.

RESPONSE: *You are correct, as described above, that the jurisdictions and EPA have agreed to fund this year's acquisition of watershed-wide land cover data through a combination of direct EPA funds and tapping into each jurisdiction's 2015 CBRAP grant funds. The funding implications to localities for project implementation and other critical services are minimal as*

the jurisdictions use these grant funds for compliance, enforcement and other state regulatory uses. Each jurisdiction will receive their full level of Chesapeake Bay Implementation Grant funds, and full access to their share of funds directed toward supporting local governments. In total, EPA will be providing the jurisdictions over \$30 million in state grants for their Chesapeake Bay and watershed restoration work. We believe the investment of \$941,000 in funds, less than 3% of the total 2015 state grants to the jurisdictions, shared across the six jurisdictions will provide much greater returns as we proceed forward in using the watershed-wide land cover data for many shared and individual local waters and Bay restoration decision making purposes.

While I am intrigued by the opportunities LIDAR offers for planning purposes, I urge that you take more time to involve localities in the decision-making before foisting this extra requirement on them.

RESPONSE: *Work is currently underway within the Partnership, led by the U.S. Geological Survey and NASA, to fill in the gaps in high resolution/high quality LiDAR data across the entire Chesapeake Bay watershed. Funds for that work are coming through those two respective federal agency partners. The Chesapeake Bay Program partners are just beginning a dialogue on the possibility of working in collaboration with a consortium of state, federal, regional and local agencies and organizations in supporting regular, watershed-wide acquisition of updated high resolution LiDAR data accessing to all the partners. As planning proceeds forward on such an approach for the future, we will definitely engage the watershed's localities, initially through LGAC, to ensure they are an integral part of the entire process. We have time for such an engagement with our local partners as any such efforts are still several years down the road.*

I hope this information is helpful.

RESPONSE: *Thank you for raising LGAC's concerns to our attention. We need to work very closely with LGAC in the coming months and coming years on ensuring all of us benefit directly from a smart, more efficient, and much less costly approach to acquiring and using these important local land data.*

Penny

Penelope A. Gross
Mason District Supervisor
Fairfax County Board of Supervisors
and Chair, Local Government Advisory Committee