

Proposed Acquisition of Consistent, Chesapeake Bay Basinwide Land Cover Data:

Responses to Issues, Current Status, and Request for Decisions

CBP Partnership Principals' Staff Committee Meeting
February 18, 2015



Chesapeake Bay Program
A Watershed Partnership

Questions Raised

1. To what degree does the basinwide land cover data address the Partnership's needs for its Phase 6 Watershed land use/land cover data?
2. How can we ensure we respect privacy concerns?
3. How will the data being collected affect Waters of the US?
4. How does the proposed work factor into VA's own plans?
5. How will the work be funded?
6. What are the plans to also collect high res elevation data?
7. Is this a one time cost or a re-occurring cost to the partnership?

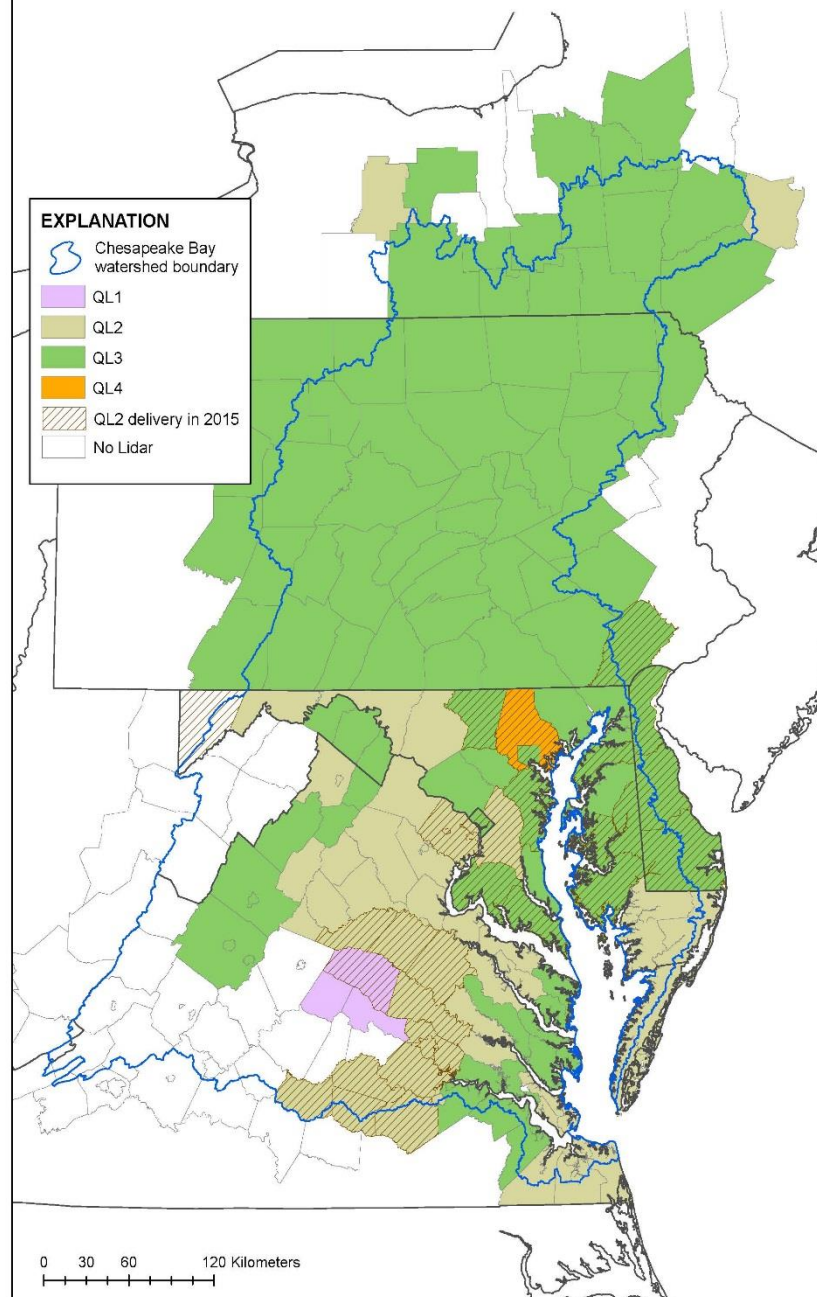
Table 1. Data Desired to Map Phase 6 Chesapeake Bay Watershed Model Land Uses (High-resolution land cover as primary dataset highlighted in red)

| Phase 6 Land Use | Regional/National Moderate Resolution Data | | | County/State High-resolution or Permit data | | | |
|------------------|--|------------------|----------------|---|----------------|--------------|-----------|
| Impervious-roads | LC impervious | Road centerlines | | LC impervious | Roads | | |
| Impervious-other | LC impervious | Housing units | | LC impervious | Buildings | Parking lots | Driveways |
| Tree canopy | LC tree canopy | Road centerlines | Developed area | LC tree canopy | LU Developed | Parcels | Zoning |
| Open space | LC herbaceous/ shrub | Developed area | | LC herbaceous/ shrub | LU Developed | Parcels | Zoning |
| Turf grass | LC herbaceous | Road density | Developed area | LC herbaceous | LU Developed | Parcels | Zoning |
| Construction | | | | Erosion and Sediment Control Permits (disturbed areas) | | | |
| Extractive | | | | Mining, quarry, and gravel pit permits (active/disturbed areas) | | | |
| Commodity crops | LC commodity crops | | | LC herbaceous | LU agriculture | Parcels | Zoning |
| Specialty crops | LC specialty crops | | | LC herbaceous | LU agriculture | Parcels | Zoning |
| Pasture-Forage | LC pasture-forage | | | LC herbaceous | LU agriculture | Parcels | Zoning |
| Farmsteads | LC impervious/ farmstead | | | LC impervious | LU agriculture | Parcels | Zoning |
| Forest | LC tree canopy | Road centerlines | | LC tree canopy | LU forest | | |
| Harvested forest | LC transitions: forest- herbaceous – shrub- forest | | | Timber harvest permit areas | | | |
| Disturbed forest | LC monitoring of insect & fire damage | | | | | | |
| Tidal wetlands | NWI | Bathymetry | Salinity/MHHW | State or county wetland inventory | | | |
| Floodplain wet. | NWI | FEMA | DEM; SSURGO | State or county wetland inventory | | | |
| Headwater wet. | NWI | NHD-H | DEM | State or county wetland inventory | | | |
| Depression wet. | NWI | DEM | SSURGO | State or county wetland inventory | | | |
| Water | NHD-H | DSWE | LC water | LC water | LU water | Streams | |

| Overlay | Regional/National Moderate Resolution Data | | | County/State High-resolution or Permit data | | | |
|----------------------------|---|------------------------|-------------------------------|--|--|--|--|
| MS4 boundaries | 2010 Census Urban Areas/Clusters | | | State or county regulated MS4 areas | | | |
| Federal lands | US Protected Areas Database | | | Federal Facility Editor tool | | | |
| Riparian zone | 100-ft buffer of NHD-H streams | | | | | | |
| Floodplain | FEMA | DEM | SSURGO | | | | |
| Sewer service areas | 1990 Census: % on public sewer | | | State, County, or Treatment Plant sewer service areas (polygons) | | | |
| Fluvial erosion/deposition | DEM (LiDAR) | Storm sewer monitoring | Streamgage & Field monitoring | | | | |

Acronyms: Digital Elevation Model (DEM); Dynamic Surface Water Extent (DSWE); Federal Emergency Management Agency (FEMA); Land cover (LC); Land use (LU); Mean Higher High Water (MHHW); Municipal Separate Storm Sewer Systems (MS4); National Hydrography Dataset – High resolution 1:24,000 scale (NHD-H); National Wetlands Inventory (NWI); Soil Survey Geographic Database (SSURGO).

Chesapeake Bay Watershed Lidar Data by County, January 2015



Benefits to Partners and Partnership

- A basinwide, consistent land cover data for building the **Phase 6 Watershed Model** land use/land cover data set.
- A **baseline** for which to measure the Bay Watershed Agreement's **Land Use Metrics and Measures Outcome**.
- Another source of information supporting **BMP verification** by the jurisdictions and their partners.
- Information needed to improve **geographic targeting** of conservation & restoration actions.
- Significant **cost savings** to hundreds of counties, municipalities, and conservation districts who might otherwise individually contract the production of high-resolution land cover data.

Request for PSC Decision

Approval to proceed forward and:

- 1) Finalize the funding allocations and arrangements
- 2) Work through the Partnership's WQGIT Land Use Workgroup to review and finalize the scope of work and schedule for deliverables
- 3) Initiate the basinwide land cover data acquisition
- 4) Continue ongoing efforts to fill in gaps in other local land data