Chesapeake Bay Program

Phase 6 Land Use Review

Frequently Asked Questions (FAQ)

Link to USGS Phase 6 Land Use Viewer website: http://chesapeake.usgs.gov/phase6/

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1. Data Review and Production

When will the USGS Phase 6 Land Use Viewer website be ready for local jurisdictions to review data?

The USGS Phase 6 Land Use Viewer website is live (link: http://chesapeake.usgs.gov/phase6/) and accessible by anyone. Draft versions of the Phase 6 land use data will be loaded to the website as they are received and processed by the Chesapeake Bay Program (CPB) Land Data team, at which point local counties will be contacted to begin their review. A schedule of anticipated review dates will be posted to the CBP webpage (link: http://www.chesapeakebay.net/calendar/event/23454/) when that information becomes available.

Will Virginia be conducting a review of the land cover data with the local jurisdictions?

Virginia has contracted the production of their land cover data to Worldview Solutions Incorporated (WSI), after which an in-depth QA/QC process of the land cover data will be conducted by Sanborn. Questions regarding Virginia jurisdiction's participation in the review effort of the land **cover** data should be directed to James Davis-Martin, VA DEQ (James.Davis-Martin@deq.virginia.gov).

Is there a list of all jurisdictions that have submitted local land use data to the Chesapeake Bay Program (CBP)?

Yes – this information is forthcoming, and will be posted to the CBP webpage (link: http://www.chesapeakebay.net/calendar/event/23454/).

If there are errors in the land cover data that are not corrected, will they be fixed in the production of the land use data?

If there are errors in the land cover data that are not resolved through either the rigorous county review or QA/QC process, then those errors will persist in the land use data. However, there is a target accuracy range for the final land use data product of between 85%-95%. The review and production of both the land cover and land use datasets will be targeted to correcting either widespread, or systematic errors in the land cover/use classification.

Will non-profit organizations and federal agencies be able to review and submit comments on the land use data?

For non-profit organizations, please contact Fred Irani (firani@usgs.gov) with your request to review or access the land **use** data. Federal agencies will have access to a separate, web-based tool (Federal Facility Editor) in order to submit feedback. This editor tool will include features to edit the proportions of land uses within the federal facility footprint, and will be used to inform the Phase 6 suite of modeling tools.

Who should local jurisdictions contact to provide supplemental local data to inform the creation of the land use dataset?

Fred Irani, U.S. Geological Survey at the CBP, will receive supplemental data from local jurisdictions. Contact information: firani@usgs.gov

2. Data Accessibility

Will the land cover and land use data be available for download during the review process?

Yes – to download this data, please contact the organization responsible for developing either the land cover or land use data. The Chesapeake Conservancy (CC) is producing land cover data for the District of Columbia, Maryland, New York, and West Virginia. As a subcontractor to CC, the University of Vermont's (UVM) Spatial Analysis Laboratory is producing the land cover data for Delaware and Pennsylvania. Worldview Solutions Incorporated (WSI) is producing the land cover data for Virginia. The Chesapeake Bay Program Land Data Team is producing all of the land use data used to inform the Phase 6 suite of modeling tools.

Contact information:

Phase 6 Land Use Database:

U.S. Geological Survey: Fred Irani, firani@usgs.gov

High-resolution Land Cover Datasets:

Chesapeake Conservancy: Cassandra Pallai, cpallai@chesapeakeconservancy.org

University of Vermont: Jarlath O'Neil-Dunne, Jarlath.ONeil-Dunne@uvm.edu

Virginia Department of Environmental Quality: James Davis-Martin,

James.Davis-Martin@deq.virginia.gov

3. **Land Cover and Land Use Data Specifics**

Which organization is developing the wetland data for Pennsylvania?

This data is being developed by the Upper Susquehanna Coalition, in partnership with the UVM Spatial Analysis Laboratory.

What kind of attributes are contained in the 1-meter land cover data?

The Chesapeake Conservancy data will contain pixel counts for each land cover in meters^2 units, as well as the land cover classification key. Supplemental information will be available in separate documentation.

Because the forest use in the CBP Partnership Phase 6 model is defined as trees further than 30-80 feet from impervious non-roads, the model may underestimate areas that are forested buffers, either existing or establishing, along waterways in urban and suburban areas, or they may be classified as trees over turf. Can you explain further?

In densely developed areas, narrow riparian buffers will be classified as trees over turf grass. However, in the majority of the landscape, those trees will be classified as forest.

Will the USGS Phase 6 Land Use calculate riparian forest buffer land areas along streams?

No – the land use data can be downloaded and manually classified, but this capacity is not built in to the modeling.

Can jurisdictions provide local data to classify forested buffers that are incorrectly classified as turf or tree canopy?

The CBP Phase 6 Land Use dataset is not distinguishing between forest and trees over turf, so this will not affect any analysis of forested buffers.

Are headwater streams mapped?

The National Hydrography Dataset is incorporated into the land use dataset, but it does not contain a complete mapping of all streams in the watershed, particularly headwater streams. The CBP watershed model will contain streams that are 100 cubic feet per second or higher.

Where is open space classified in relation to the mapping of agriculture versus turf grass?

If there is data that specifies that land cover, that data can be overlaid to explicitly map open space. In areas where this data is unavailable, open space is classified as the remainder of agricultural land once the data from the agricultural census has been accounted for.

NLCD data can mis-classify very low-density residential areas as pasture land. Is the Phase 6 land use capturing this low-density residential sprawl in the dataset?

The CBP Land Data Team is working on capturing this land use. All impervious surfaces (i.e. buildings and driveways) will be mapped, but local parcel or land use data is needed to inform the classification of low-density residential areas. This data is being incorporated into the land use dataset wherever possible.

How will low density residential development with a closed canopy cover be classified?

In the rare instances where a residential lot may be completely obscured by tree canopy, those impervious surfaces will be captured by parcel data, with a very minor buffer of tree canopy over turf around the impervious structure/roads.

Is there a layer that defines where LiDAR data was available to inform the land cover classification?

Yes – this information will be captured in the Phase 6 USGS Land Use Viewer website showing the available quality and date of the LiDAR imagery, resampled up to 3 meters. This data will not be hosted outside of the National Map.

Will the USGS Phase 6 Land Use Viewer website display local parcel data where it has been provided?

Some local parcel data has been shared with the CBP by the jurisdictions in confidence, and as such that information cannot be openly shared at this time.

Is all low vegetation in developed areas considered turf, and is all turf considered to be fertilized in the model?

The CBP Partnership has information on fertilizer use, which is employed in the model. However, areas of turf grass are only used to distribute known fertilizer applications, and therefore an increase in the

amount of turf grass across the watershed will not correspond to an increase in fertilizer inputs in the model.

4. **Other questions**

How frequently will these land use data be developed and made available?

Dependent upon funding resources, the CBP Partnership hopes to update the high-resolution land use data every 5 years going into the modeling tools.

Is data on conservation easements being incorporated to identify areas where land cover is less likely to change over time?

This is a current area of discussion for the CBP Partnership, and will likely be discussed in a separate webinar in the future. The land use model simulated land use change into the future, and protected lands are accounted for to the extent that information is available.

Will LiDAR dates and land use dates be used to estimate a baseline date for conditions, from which loading and reduction rate calculations will be made for TMDL tracking?

For developing the land cover information in the Phase 6 watershed model, the CBP Partnership is in the processing of coming to consensus on whether to continue using 2010 as the baseline year, or to transition to 2013 as an updated baseline built on the high-resolution land use data. More information about this decision-making can be found on through the Water Quality Goal Implementation Team (link: http://www.chesapeakebay.net/groups/group/Water_Quality_Goal_Implementation_Team).