



Virginia Statewide Land Cover Dataset

The Virginia Geographic Information Network (VGIN) and its partners have coordinated the development of a statewide Land Cover Dataset, improving land coverage data to assist localities in planning and implementing stormwater management programs. The Land Cover product leverages the Commonwealth's investment in the VBMP digital orthophotography and is focused on creating a consistent, statewide 1 meter digital land classification. Land Cover data extraction is being publicly provided back to local governments and state agencies in both raster and vector data formats. The *tree canopy over* classes were created by the Chesapeake Conservancy in collaboration with the University of Vermont Spatial Analysis Laboratory. The land cover data was created based on the following classifications:

1. **Roads** - Impervious surfaces that are used and maintained for transportation

11. **Hydro** - Includes drainage network and basins such as rivers, streams, lakes, canals, waterways, reservoirs, ponds, bays, estuaries, and ocean as defined by the NHD.

12. **Automated Hydro extraction under wetlands** – Originally classified as Hydro before wetland data incorporated. Wetlands includes all areas where forest, shrubland vegetation, or perennial vegetation accounts for 25% to 100% of the cover and the soil or substrate is periodically saturated with or covered with water, as provided by the TMI & NWI.

21. **Extracted Impervious** - Includes areas characterized by a high percentage of constructed materials such as asphalt and concrete, buildings and parking lots, and infrastructure as defined by the EPA; this class includes all impervious features extracted through feature automation that did not overlap external datasets provided.

22. **External Impervious** - Similar to previous class; includes all impervious externally developed datasets from state/localities

31. **Barren** - Includes areas with little or no vegetation characterized by bedrock, desert pavement, beach and other sand/rock/clay accumulations, as well as areas of extractive mining activities with significant surface expression as defined by the EPA.

41. **Forest** - Includes areas characterized by tree cover of natural or semi-natural woody vegetation as defined by the EPA, encompassing an acre in size; this class includes deciduous, evergreen, and mixed foliage types.

42. **Tree** - Includes areas characterized by tree cover of natural or semi-natural woody vegetation as defined by the EPA, that does not encompass at least an acre in size; this class includes deciduous, evergreen, and mixed foliage types.

43. **Automated Forest extraction under wetlands** - Originally classified as Forest before wetland data incorporated. Wetlands includes all areas where forest, shrubland vegetation, or perennial vegetation accounts for 25% to 100% of the cover and the soil or substrate is periodically saturated with or covered with water, as provided by the TMI & NWI.

51. **Scrub/Shrub** - Includes areas characterized by natural or semi-natural woody vegetation with aerial stems generally less than 6 meters tall; features classified here will include those that would otherwise be determined Harvested/Disturbed but appear to show unmanaged stunted growth, or managed as easements.

61. **Harvested/Disturbed** - Includes areas of forest clear-cut, temporary clearing of vegetation, and other dynamically changing land cover due to land use activities as defined by the EPA; these features should be categorized only where there is 30% canopy cover or less.

71. **Turf** - Primarily grasses; including vegetation planted in developed settings for erosion control or aesthetic purposes, as well as natural herbaceous vegetation and undeveloped land, including upland grasses and forbs, as defined by the EPA.

72. **Automated Turf extraction under wetlands** - Originally classified as Turf before wetland data incorporated. Wetlands includes all areas where forest, shrubland vegetation, or perennial vegetation accounts for 25% to 100% of the cover and the soil or substrate is periodically saturated with or covered with water, as provided by the TMI & NWI.

81. **Pasture** - Includes areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops as defined by the EPA.

82. **Cropland** - Includes areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber, or is maintained in developed settings for specific purposes as defined by the EPA.

101. **CC Tree Canopy over Roads** - Forest or Tree Cover that overlaps roads rendering the structures partially or completely not visible to plain sight

111. **CC Tree Canopy over Hydro** - Forest or Tree Cover that overlaps hydro rendering the structures partially or completely not visible to plain sight

112. **CC Tree Canopy over Automated Hydro** - Forest or Tree Cover that overlaps automated hydro rendering the structures partially or completely not visible to plain sight

121. **CC Tree Canopy over Extracted Impervious** - Forest or Tree Cover that overlaps extracted impervious rendering the structures partially or completely not visible to plain sight

122. **CC Tree Canopy over External Impervious** - Forest or Tree Cover that overlaps external impervious rendering the structures partially or completely not visible to plain sight

131. **CC Tree Canopy over Barren** - Forest or Tree Cover that overlaps barren rendering the structures partially or completely not visible to plain sight

171. **CC Tree Canopy over Turf** - Forest or Tree Cover that overlaps turf rendering the structures partially or completely not visible to plain sight

172. **CC Tree Canopy over Automated Turf** - Forest or Tree Cover that overlaps automated turf rendering the structures partially or completely not visible to plain sight

181. **CC Tree Canopy over Pasture** - Forest or Tree Cover that overlaps pasture rendering the structures partially or completely not visible to plain sight

182. **CC Tree Canopy over Cropland** - Forest or Tree Cover that overlaps cropland rendering the structures partially or completely not visible to plain sight

Use Limitation

The re-distribution of this dataset for profit is prohibited. Differentiation in mapping methodology, output resolution, and sources of input data for the VBMP 4-band orthophotography product will confound any direct comparison between it and the USGS National Land Cover Dataset. Users are cautioned that direct comparison of these two independently created land cover products is not recommended.

Virginia Geographic Information Network (VGIN), Department of Conservation & Recreation (DCR), Department of Environmental Quality (DEQ), Virginia Department of Forestry (VDOP), Tidal Marsh Inventory (TMI), National Hydrography Dataset (NHD), National Wetlands Inventory (NWI), Virginia Economic Development Partnership (VEDP), Virginia Department of Mines, Minerals, and Energy (DMME), Chesapeake Conservancy, University of Vermont: Spatial Analysis Lab, Worldview Solutions, Inc.