WV GIS Technical Center
(July 1, 2015 – June 30, 2016)
2016 Annual Report

The West Virginia GIS Technical Center, located in the Department of Geology and Geography, West Virginia University, provides focus, direction, statewide coordination, and leadership to users of geographic information systems (GIS), digital mapping and remote sensing within the State of West Virginia. The Center was established by Executive Order 4-93 to provide coordination and technical support in the development and operation of geographic information systems (GIS) for the State.

The Center maintains two major web portals to distribute spatial data and information in the State. The **WV GIS Clearinghouse** (http://wvgis.wvu.edu**)** catalogs over 300 unique datasets valued at more than $50 million dollars, while **MapWV.gov** (http://mapwv.gov) provides a public gateway to online mapping resources in the Mountain State. These geospatial services are distributed through virtualized servers located at the Center with a storage capability of 120 TB. Web usage statistics reveal that over the last four quarters, the WV GIS Technical Center's site hosted an average of 464 visitors a day for a total of 170,150 visits by 60,869 unique visitors. Its companion site, MapWV.gov, hosted 223,276 unique visitors for an average of 1,229 visits per day.

To reduce the duplication of costly data development efforts among organizations, the Center plays a crucial role in not only serving critical spatial data to state users but in updating and integrating local geospatial data within state and national geospatial databases. These framework data layers are utilized by almost all **state agencies, communities,** and the **general public** for emergency response, risk assessment, economic development, energy resource exploitation and management, transportation, natural resources, community planning, tax assessments, and health studies to name a few. This past year the Center focused on the development of the geospatial data layers listed in Table 1 to enhance the State's Spatial Data Infrastructure. The continued development and publishing of GIS layers through a state clearinghouse node hosted by the Center supports the Mineral Lands Mapping Program and other vital programs in the State that depend on current and accurate base mapping layers.

Table 1: Statewide Data Services provided by Center

DATA LAYER	PURPOSE
Aerial Imagery	Integrated hi-resolution aerial imagery from 21 counties into a statewide leaf-off imagery web map service
Parcels	Integrated parcel data from 15 counties into statewide parcel web layer for WV Flood Tool
Addresses	Integrated addressing data for 25 counties into statewide addressing layers for address matching services and online applications
Public Lands	Updated county and state public lands for the national Protected Areas Database
Hydrography	Updated stream geometries for three watersheds that changed due to mining or new roads for the National Hydrography Dataset
Other Layers	Updated statewide recreational trails and advisory flood heights for Approximate Zone A flood hazard areas

In addition to developing and updating geospatial base layers for the State, the Center also supports multiple state agencies with e-governance applications to meet their regulatory, communication, and information exchange goals (Table 2). The very successful WV Flood Tool (www.mapWV.gov/flood), for example, provides floodplain managers, insurance agents, developers, real estate agents, local planners

and citizens with an effective means by which to make informed decisions about the degree of flood risk for a specific area or property. Importantly, the WV Flood Tool is recognized by the WV Division of Homeland Security and Emergency and FEMA as the authoritative source for Advisory Flood Height determinations in the State and was widely used during the June floods which was reflected in the doubling of the web application usage during this period. Other state agencies for which the Center provides technical assistance for their online mapping applications include the State Historic Preservation Office, WV Division of Natural Resources, and WV Department of Transportation. The Center also supported federal initiatives for energy carbon sequestration (http://www.natcarbviewer.org) and terrestrial biosphere carbon (www.carbonscapes.org).

Table 2: Statewide Map Applications provided by Center

APPLICATION	PURPOSE	AGENCY SUPPORTED
WV Flood Tool	Make flood hazard determinations for flood insurance (www.mapwv.gov/flood)	WV DHSEM
SHPO Map Viewer	Conduct Cultural Resource Section 106 reviews (www.mapwv.gov/SHPO)	SHPO
Statewide Addressing & Mapping System (SAMS)	Update address sites and road centerlines required for emergency response (www.mapwv.gov/address)	WV DHSEM, E-911 Address Coordinators
Hunting and Fishing	Search and identify hunting and fishing destinations (http://www.mapwv.gov/huntfish)	WV DNR
WV Trail Inventory	View publicly accessible recreational trails in the State (http://www.mapwv.gov/trails)	WV DOT
Highway Plans Locator	View archival highway plans (http://www.mapwv.gov/dotplans)	WV DOT
Conservation Planning Interagency Coordination Tool	Determine conservation planning measures for endangered species in support of environmental site evaluations for West Virginia landowners (www.mapwv.gov/ICT)	WV DNR, NRCS

This past year the WV GIS Technical Center continued to assist the WV Geospatial Community with advisory services, training programs, and the implementation of new mapping standards. These services are coordinated with the WV Office of GIS Coordination and WV Association of Geospatial Professionals. During the devastating June floods, for example, the Center provided technical mapping services at the request of the WV National Guard for emergency response. In statewide outreach the Center was the lead organizer of the 2016 WV GIS Conference which was attended by 150 state and county representatives and included presentations from technical and policy leaders. Other educational services included organizing and hosting six instructor-led GIS training courses and presenting on the Center's geospatial initiatives and applications at the 2016 WV GIS Conference, WV Floodplain Management Association Conference, Eastern Panhandle GIS Users Group Meeting, WVDOT GIS User Day Meeting, WVDOT/MPO/FHWA Transportation Planning Conference, and mid-year meeting of the WV Association of Geospatial Professionals. Lastly, the Center was instrumental in drafting the new WV189CSR5 "Tax Map Sales" Legislative Rule which was approved during the 2016 legislative session.