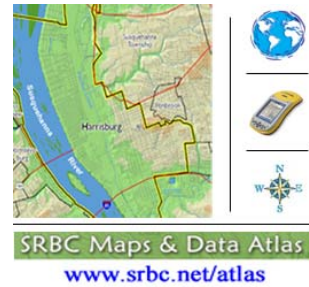


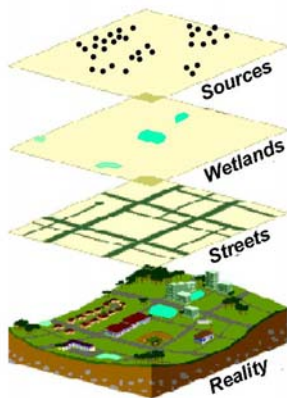
# Susquehanna River Basin Commission Information Sheet

## Geographic Information System (GIS) Program Providing Mapping, Data, and Analysis Support



### What is GIS?

*Geographic Information System (GIS) is a computer technology capable of assembling, storing, analyzing and displaying geographically referenced information. Data can be diverse, coming from many different sources or in various formats such as tables, scanned maps, images, and AutoCAD drawings. While many people relate GIS with producing paper maps, the real power of GIS technology lies in its analytical capabilities. Analysis in GIS focuses on combining layers of spatial information in order to explore the interrelationships of various natural, social, and man-made resources. With GIS, users can build multiple applications for decision-making purposes, perform statistical analysis, or query geo-referenced spatial data in three dimensions.*

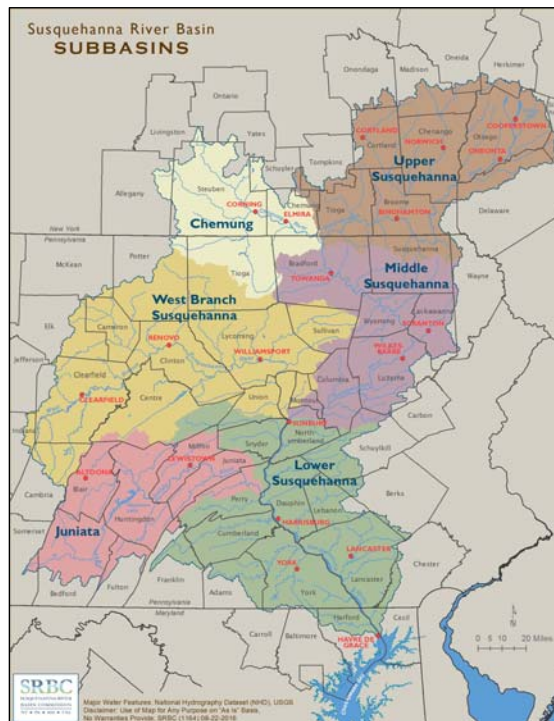


### **GIS Program and Implementation**

The primary objectives of the Susquehanna River Basin Commission (SRBC) GIS Program are to collect, organize, analyze, and distribute geographic information and products aiding in the protection of the water resources of the Basin. SRBC incorporates GIS technology into its water resource management activities including water use planning and permitting, compliance, stream monitoring, and environmental restoration. The GIS Program also promotes data sharing and supports the Commission's public information and outreach efforts.

### **GIS Functionality**

As a database tool, the compilation and integration of data with



locational attributes can reveal spatial relationships not apparent with tabular records. As an analytical tool, geoprocessing can be used to investigate relationships and may uncover new information about an area. GIS also provides a way to communicate findings through visual presentation. As a mapping tool, cartographic data can be displayed in many formats that can be easily understood by a wide audience.

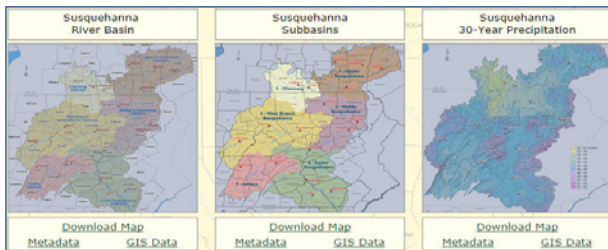
### **GIS Database**

SRBC's GIS Program database is a growing and continuously updated assemblage of data layers. Data sources include the U.S. Geological Survey (USGS), U.S. Environmental Protection Agency (EPA), Pennsylvania Department of Environmental Protection (PADEP), New York State Department of Environmental Conservation

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(NYSDEC) and Maryland Department of the Environment (MDE). Due to data comparability and availability issues among SRBC's three member states (New York, Pennsylvania, and Maryland), an ongoing mission of the GIS Program is to create seamless datasets that encompass the entire Susquehanna River Basin. SRBC maintains approximately 250 GIS datasets, including but not limited to, geology, land use/land cover, soils, elevation, watersheds, streams, precipitation, water quality monitoring sites, and water withdrawals.

**[Map and Data Atlas](http://www.srbc.net/atlas)**  
[www.srbc.net/atlas](http://www.srbc.net/atlas)



The Atlas is a web-based GIS clearinghouse that provides an array of maps and data based on general geographic themes and current SRBC projects. Maps can be viewed on screen or downloaded as high-quality printable Adobe Acrobat (PDF) files. Selected GIS datasets are available for download in ESRI shapefile format.

**[GIS Studies and Applications](#)**

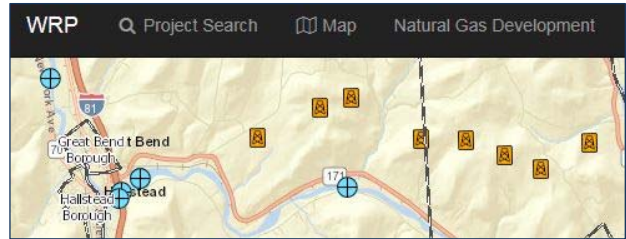
GIS is a key tool used to inform and enhance virtually every SRBC study. ArcGIS Server allows GIS data and geoprocessing tools developed through these studies to be extended into desktop, mobile, and/or web-based mapping applications, thus providing more public information and transparency. Below are some examples of current SRBC projects and interactive mapping websites:

**[Remote Water Quality Monitoring Network](http://www.srbc.net/remotewaterquality)**  
[www.srbc.net/remotewaterquality](http://www.srbc.net/remotewaterquality)



The Network continuously measures and reports water quality conditions of streams throughout the middle and northern areas of the Basin. Users can view real-time data in various formats as well as in a web-based map.

**[Water Resource Portal](http://www.srbc.net/wrp)**  
[www.srbc.net/wrp](http://www.srbc.net/wrp)



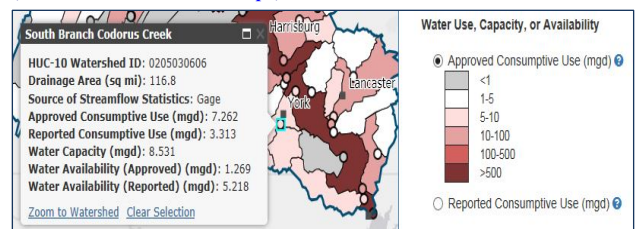
The Portal enhances public access to information on water use projects regulated by SRBC. Users can obtain information on pending and approved projects by tabular queries or spatially through the project location map.

**[Water Quality Portal](http://www.srbc.net/waterqualityportal)**  
[www.srbc.net/waterqualityportal](http://www.srbc.net/waterqualityportal)



The Portal provides public access to in-stream water quality stations sampled for fish, macroinvertebrates, habitat, and water chemistry. Users can select or query station sampling results to track and assess water quality conditions.

**[Cumulative Water Use & Availability Study \(CWUAS\)](http://www.srbc.net/cwuasmap)**  
[www.srbc.net/cwuasmap](http://www.srbc.net/cwuasmap)



The interactive web map displays map layers depicting approved and reported consumptive water use, water capacity, and water availability summarized by watershed. Users can select a watershed of interest and identify key attributes related to water use, capacity, and availability.