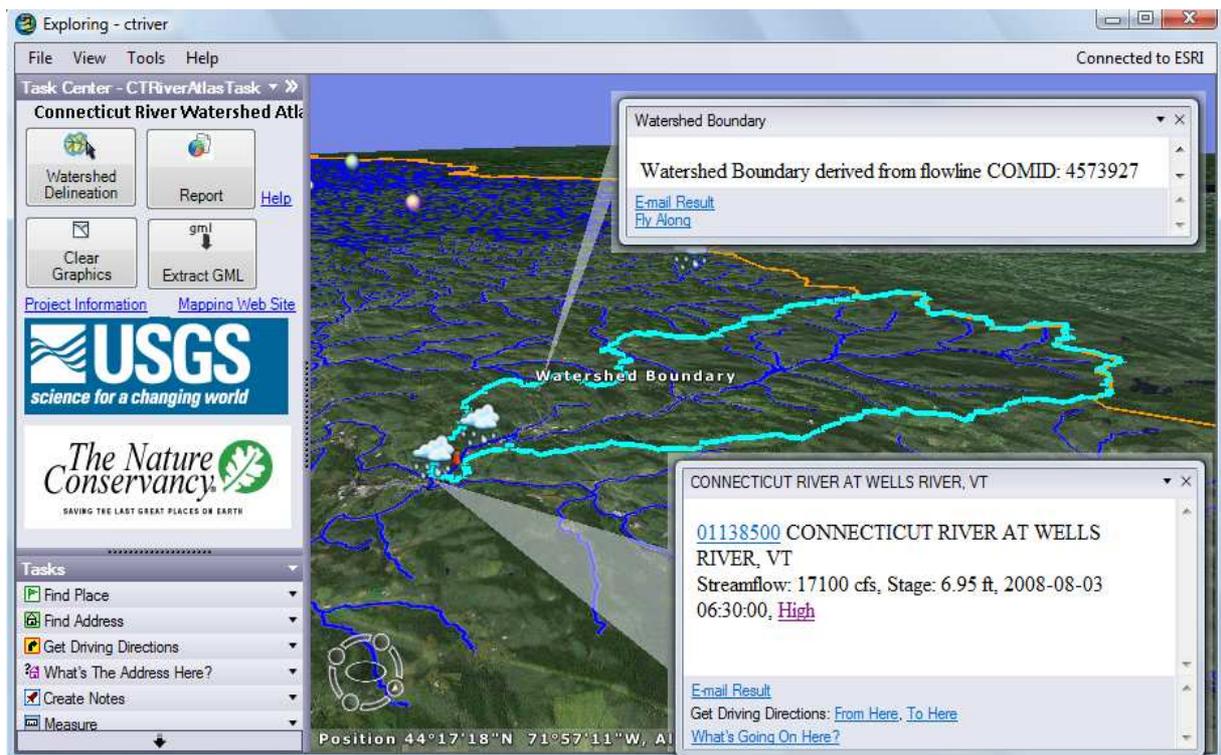


Developing a Service-Oriented Architecture (SOA) for the NHDPlus Navigation Tools for Geospatial Analysis of the Connecticut River Watershed Atlas

Project Description:

A Service-Oriented Architecture (SOA) toolset was developed for the Connecticut River Watershed Atlas. The framework of the Connecticut River Watershed utilizes the stream network of the National Hydrography Dataset Plus (NHDPlus). The toolset delivers PDF reports containing watershed delineation maps and related spatial attributes based on flowline selections. The benefits of the custom toolsets allow organizations to perform geospatial analysis based on watershed boundaries generated on-the-fly via NHDPlus navigation functionality. With the NHDPlus Watershed and Feature Report tools, users are able to access multiple stream and watershed information precomputed for approximately 12,500 stream segments or flowlines of the NHDPlus in the Connecticut River Watershed. The SOA includes an advanced GIS web application, Google maps, and ArcGIS Explorer 3D clients. ArcGIS Server 9.3 technology is used as the foundation for WFS feature extraction functionality. Custom query tools built using ArcGIS server allow users to explore the data and locate features. Linkages to stream-gaging information in near real-time from the USGS WaterWatch website is incorporated into the Atlas.





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