

WebLEM: Web Based Long Term Ecological Monitoring System Development

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Abstract:

The goal of this project is to develop an online ecological database that will give faculty, student, researchers, and the public the ability to share and collaborate on ecological data collected from the Abernathy Field Station (AFS) in Washington County, Pennsylvania. The WebLEM system is designed based on ArcGIS server to support web-based spatial data management. It also provides geoprocessing tools for data users, and deploys mobile applications that allow mobile workforces to dynamically query and update server data remotely with global positioning system (GPS) technology. Basically, the web mapping application for the WebLEM system provides the tools for map navigation, identifying features, measuring distances, finding addresses, and querying and searching attributes. Therefore, it will support advancement of science education in Washington & Jefferson College by providing real-world research experiences to students and increasing the diversity of students who study science.