

The National Stream Internet Project

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Accurate, high resolution information does not exist for the status and trends of water quality and aquatic biotas throughout the 1,000,000s of river and stream kilometers across North America. Without that information, prioritization of limited resources for conservation and management proceeds inefficiently. In recent decades, however, massive amounts of water quality, biological surveys, and habitat condition data have been collected by state, federal, tribal, and private organizations. Those data could be used to develop high-quality information if a nationally consistent analytical infrastructure existed. The Stream Internet Project is funded by the U.S. Fish & Wildlife Service's Landscape Conservation Cooperatives program to develop that national infrastructure. When complete, the project will facilitate convenient application of sophisticated spatial statistical models designed specifically for data measured on stream networks (spatial models are described at the SSN/STARS website: <http://www.fs.fed.us/rm/boise/AWAE/projects/SpatialStreamNetworks.shtml>). The spatial network models can be applied to databases characterized by clustered locations, which provides a strong incentive to develop comprehensive, interagency databases. The spatial models outperform traditional statistical techniques and enable predictions at unengaged/unmonitored sites, which facilitates development of high-resolution status maps for full river networks (to see a regional application of Stream Internet technologies, visit the NorWeST website: <http://www.fs.fed.us/rm/boise/AWAE/projects/NorWeST.html>). As better information is developed for streams and rivers, it will enable more efficient use of conservation resources and empower managers to be more effective resource stewards.