Reach Address Database (RAD)

Seamless, rapid integration of water-related program data
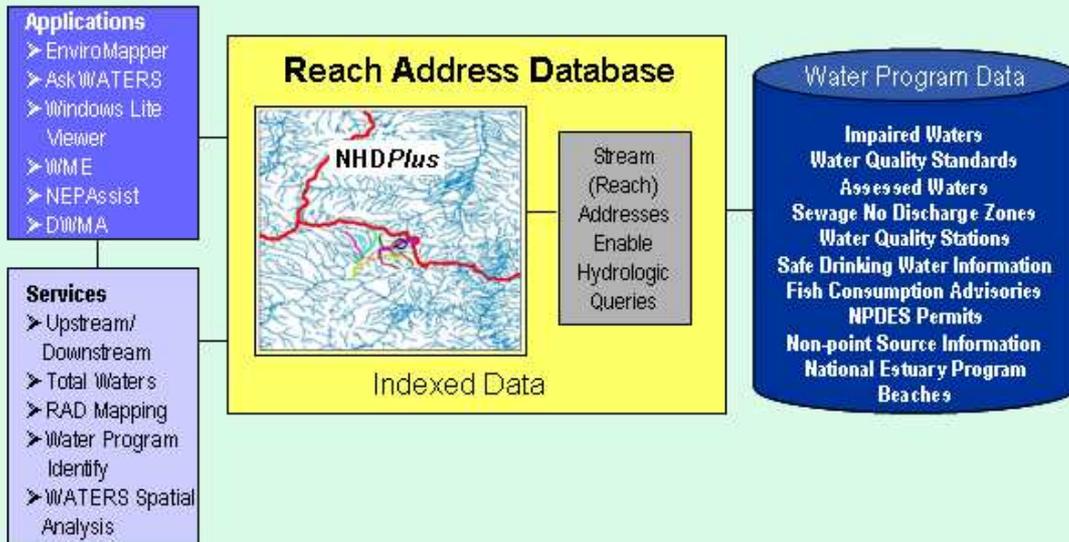
What is it?

The Reach Address Database (RAD) is a national spatial database which serves as the hub for the WATERS architecture. The RAD is EPA's central repository for two primary types of data-- NHD*Plus* features and attributes, and program data features, usually in the form of references to the NHD reach features. Both types of data are spatial in nature, providing access to the data from a variety of GIS applications. All spatial data in the RAD are accessible through both the ESRI Spatial Database Engine (SDE) and Oracle Spatial.

What does it do?

The RAD supports the standard spatial data storage, query, and retrieval functions; however, the central purpose and power of the RAD is the seamless, rapid integration of water-related program data. By the inclusion of NHD indexing in program data collections, programs gain the ability to link their data to all other referenced data.

www.epa.gov/waters/about/rad.html

The WATERS spatial analysis service utilizes the RAD to perform holistic analyses across multiple programs. Answering questions such as "Are there NPDES permits on this impaired water for copper?" or "What is the status of water upstream or downstream of this waterbody?" become possible.

In addition, inter-jurisdictional analyses (state-to-state differences) and cross-program checks (program-to-program differences) also become possible. These types of analyses are possible directly against the RAD or through the development of database and web services that extend these analytical capabilities to applications and end users.

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"WATERS – A Strategic Resource for Informed Decision-Making"