



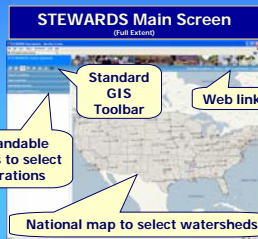
# STEWARDS: A Watershed Data System



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**ABSTRACT:** Comprehensive, long-term watershed data are needed for hydrologic analysis and model development, calibration and validation. To support the Conservation Effects Assessment Project (CEAP) in assessing environmental impacts of USDA conservation programs, a web-based data system was developed: Sustaining the Earth's Watersheds, Agricultural Research Data System (STEWARDS). STEWARDS organizes and documents ARS's long-term watershed data and allows users to search, visualize, and download data using space, time, and topic as key fields. STEWARDS consists of: 1) a centralized site with an ArcGIS Server 9.2-based web mapping interface drawing from a SQL Server 2005 database management system; 2) descriptive data, measurement data, imagery, and GIS layers; and 3) data providers at ARS watershed research sites. The contents (data and descriptive information), user interface, and data delivery are describe. STEWARDS will facilitate 1) researchers in obtaining data for hydrological studies; 2) modelers in retrieving data for calibration and validation; and 3) diverse stakeholders in accessing data to support conservation planning and assessment. Anticipated benefits include preservation of data, increased data use, and facilitation of research within and across watersheds, and enhanced collaboration.

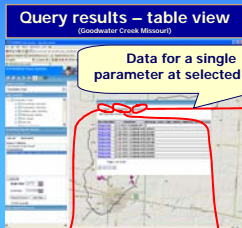
## The Interface and Components



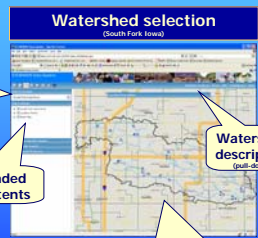
Standard GIS Toolbar  
Web links  
Expandable panels to select operations  
National map to select watersheds



More contents  
Data available at site to search, & query controls



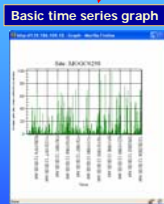
Data for a single parameter at selected site



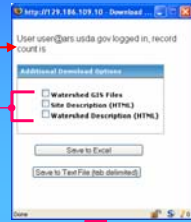
Selected watershed  
Watershed description (Full Screen)  
Panel expanded to show contents  
Map now scaled to watershed



Parameters available  
After one parameter has been selected

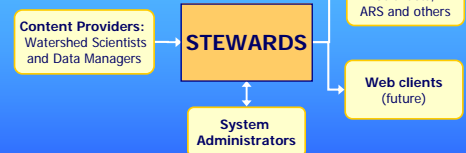


## Downloading Data



- Basic download package
  - o Header page with descriptions
  - o Data table
  - o Data definition table
  - o Applicable methods
  - o Metadata
- Optional items
  - o Watershed GIS files
  - o Watershed description HTML
  - o Site description HTML
- Entire dataset and other files
  - o See tab on login window
  - o Very large files!
- Other zipped files (if available)
  - o e.g., SWAT calibration files, pdf's of publications, or others a watershed uploads.

## The System and its Users



- Operations performed for data upload include:
- Preparing data for STEWARDS in general
  - Building information for the watershed
  - Building all components for each measurement table
  - Uploading to STEWARDS submission site
  - Once notified by STEWARDS administrator, confirm the contents

For more information...  
<http://arsagsoftware.ars.usda.gov/stewards>