

WaterSMART Use and Availability Assessment (aka National Water Census)



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WaterSMART Kickoff Workshop

February 23, 2010

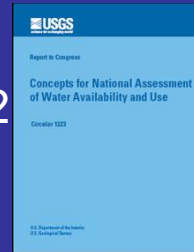
Water Census: Accounts for the changing amount, quality, and use of water resources across the Nation.

Overarching objective for the Water Census:

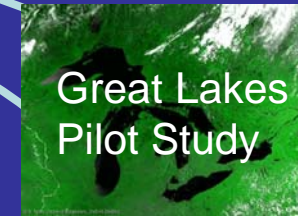
To place technical information and tools in the hands of stakeholders, allowing them to answer water availability questions.

How did we get to where we are today?

2002



2005



2011

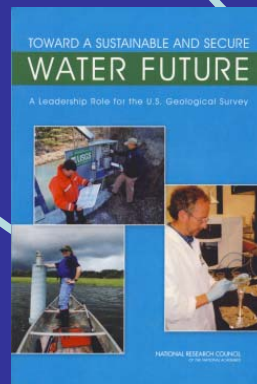


Water Availability and Use Assessment

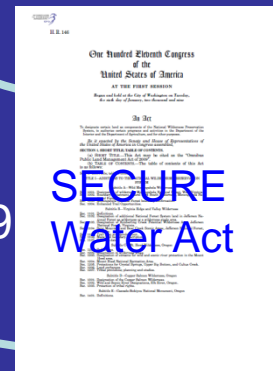
2007



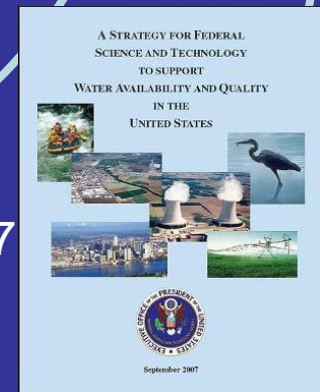
2009



2009



2007



How do the National Water Census and WaterSMART Interrelate?



Is a Department of Interior Initiative on water conservation. It includes activities in:

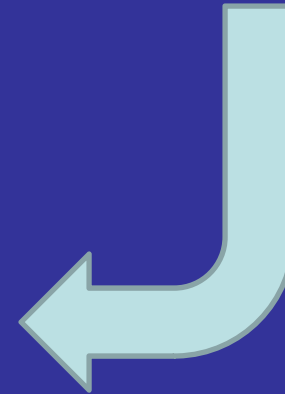
- Bureau of Reclamation
- US Geological Survey
- Office of the Ass't. Sec. for Water and Sci.

The Nation Water Census

is an integral part of USGS Science Strategy to conduct an ongoing assessment of the Nation's water resources



The Water Availability and Use Assessment proposed in the 2011 budget is part of WaterSMART and the National Water Census



What is USGS doing to launch
the Water Census?

USGS Implementation Team

Water Use

Ecological Flow

Groundwater

Water Quality

Biology

Geography

Geology

Climate Change

Great Lakes Pilot

Surface Water

Information Technology

Program
Integration

Water
Use

Ecological
Flows

Availability
Indicators

Products,
Info Mgmt,
Decision
Support

- USGS Implementation Team produces short “concept papers”
- Work through Advisory Committee on Water Information/Sustainable Water Resources Roundtable (ACWI / SWRR) to refine the concepts and products to meet stakeholders goals
- Develop a draft implementation plan

Stakeholders on ACWI/SWRR Committee

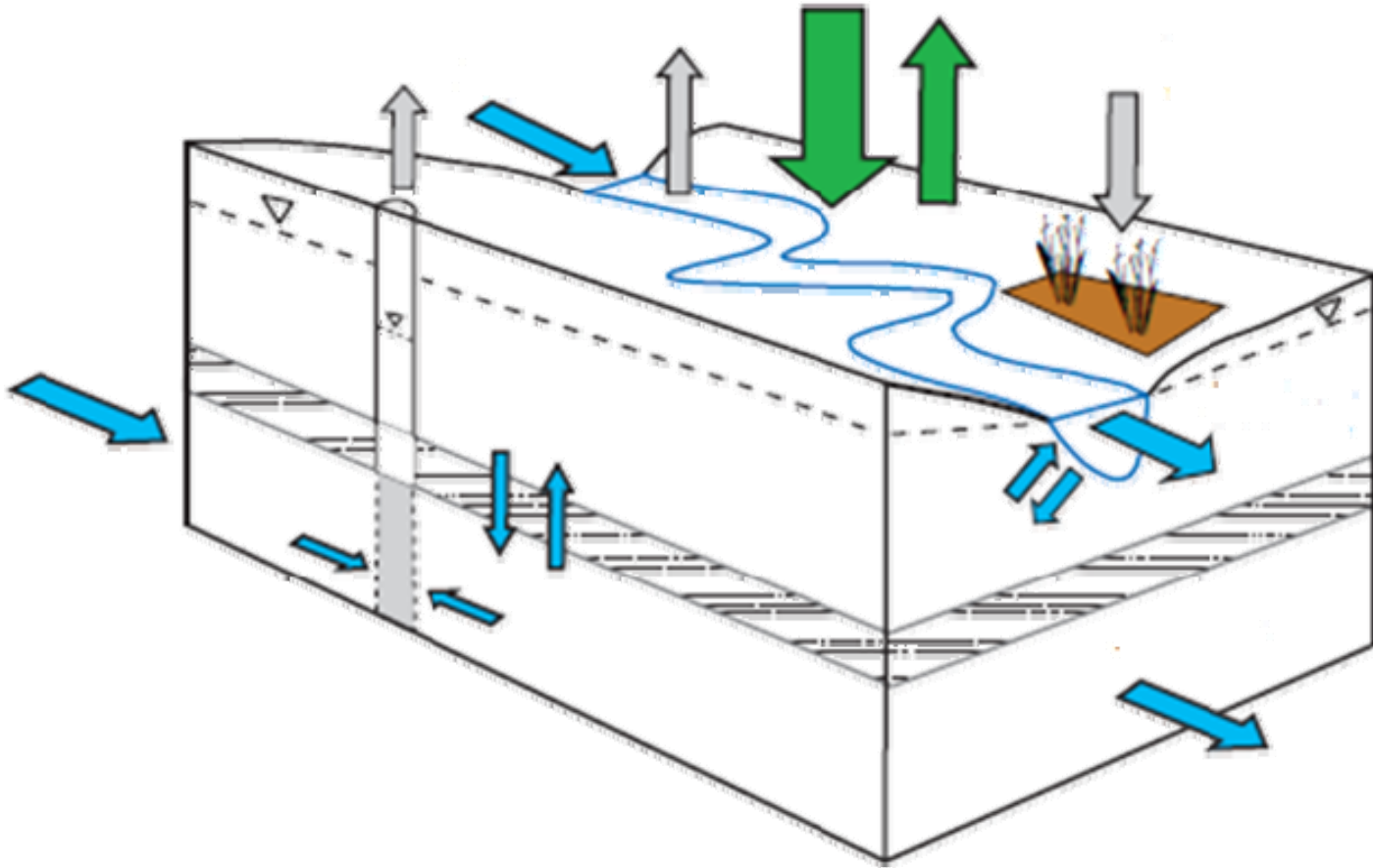
Organization	Acronym
Association of Fish and Wildlife Agencies	AFWA
Association of Metropolitan Water Agencies	AMWA
Association of State Drinking Water Administrators	ASDWA
American Water Resources Association	AWRA
American Water Works Association	AWWA
Interstate Council on Water Policy	ICWP
National Ground Water Association	NGWA
The Nature Conservancy	TNC
Western States Water Council	WSWC
Bureau of Reclamation	BOR
US Dept. of Energy - Energy Information Administration	DOE - EIA
NOAA National Weather Service	NOAA-NWS
US Army Corps of Engineers	USACE
US Dept. of Agriculture - Economic Research Service	USDA - ERS
US Dept. of Agriculture - NASS	USDA - NASS
US Dept. of Agriculture - NRCS	USDA - NRCS
US Dept. of Agriculture - Forest Service	USDA - USFS
US Environmental Protection Agency	USEPA

What do our plans currently
look like?

Integration of programs around the Theme of Water Availability



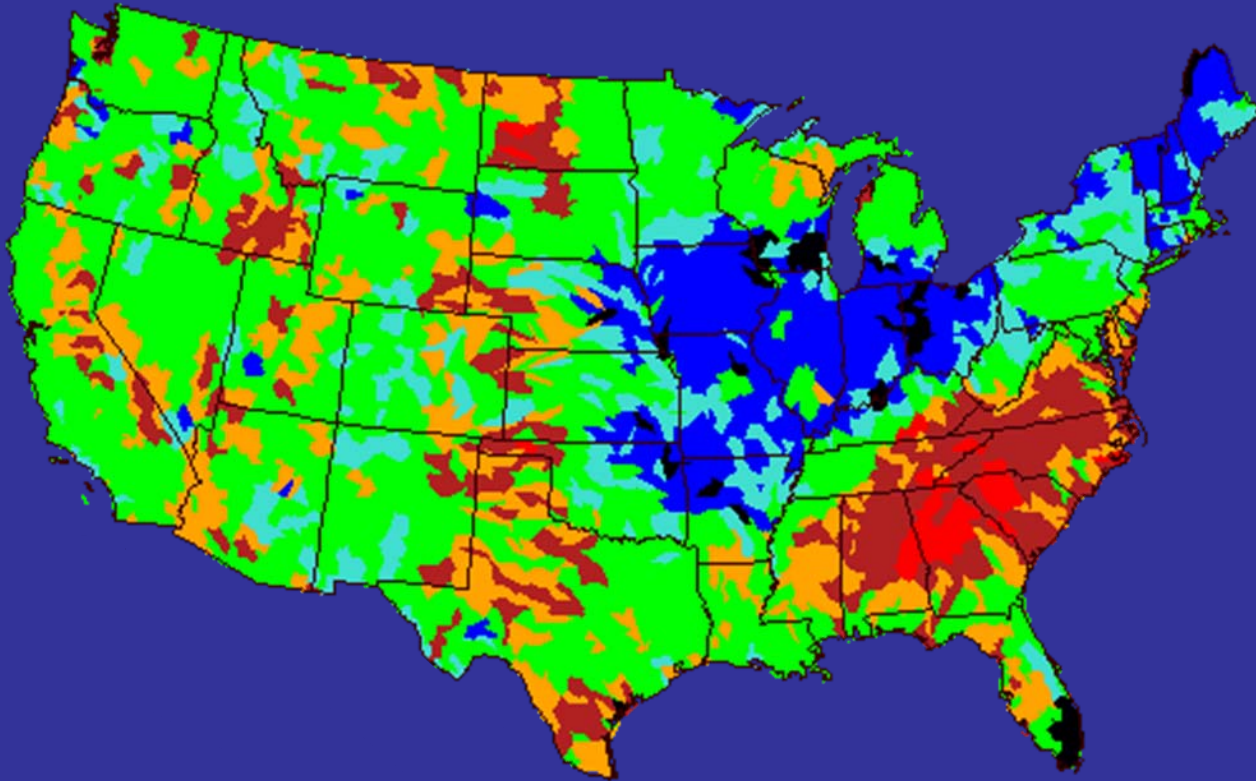
Account for water availability with a “budget”



A nationwide system to deliver water accounting information addressing

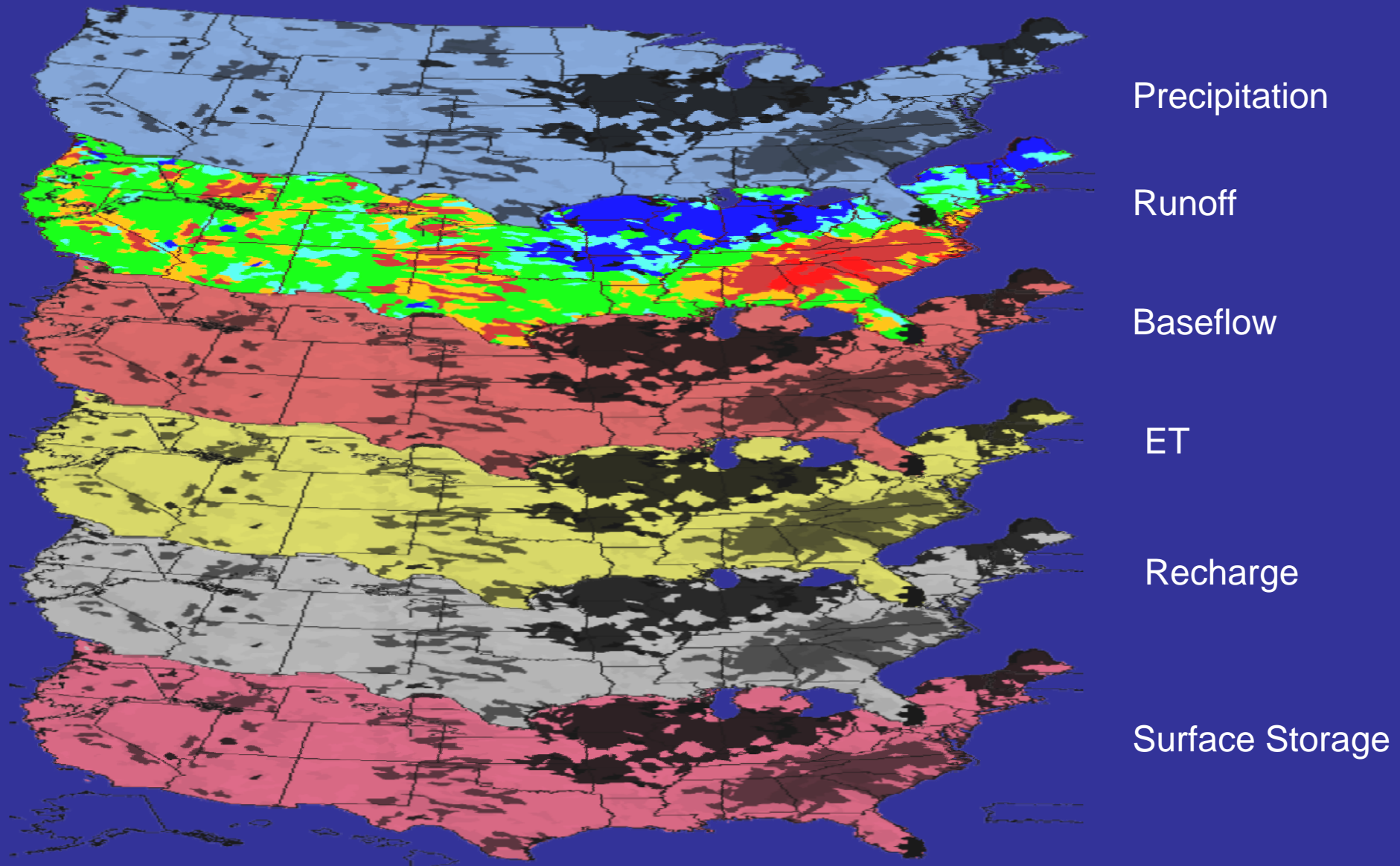
- Precipitation
- Evapotranspiration
- Storage in Reservoirs, Lakes, Snow and Ice
- Surface Water
- Groundwater
 - Recharge rates
 - Water level in aquifers
- Ecological Needs
- Water Withdrawals
- Return Flows
- Consumptive Uses
- Run-of-the-River Uses

Generating and delivering information for water accounting



Envision a seamless coverage of information for
a water accounting component

And if you could get that info for all accounting components



Information Delivery

A web application for delivering water availability information at scales that are relevant to the user

USGS
Idaho StreamStats

ZoomIn ZoomOut Pan GetInfo FullExtent LastExtent EditBasin FlowStats BasinChar ClearBasin Download GageInfo Print Help

Scale
Zoom To: water GO
Enter Water Resource

Map Layers Locator Map
BASE LAYERS
WATER
POLITICAL

USGS Scale 1:7627084

Refresh Map Reset Layers

Accessibility FOIA Privacy Policies and Notices
U.S. Department of the Interior | U.S. Geological Survey
URL: <http://streamstats.usgs.gov/idstreamstats/>
Page Contact Information: StreamStats Help
Page Last Modified: September 17, 2007

Streamstats Status News ⚠️

FIRST GOV NOW
The U.S. Government's Official Web Portal

TAKE PRIDE IN AMERICA

Select the area of interest

Generate information on water accounting components

Work with the online tool to construct your water budget

Access trend information

New Authority: Water Use Grants to States

**Estimated Use of Water in
the United States
in 2005**



Circular 1344

U.S. Department of the Interior
U.S. Geological Survey

Flows Needs for Wildlife and Habitat

- Classify the streams across the nation for their hydro-ecological type
- Systematically examine the ecological affects of hydrologic alteration
- Develop flow alteration – ecological response relationships



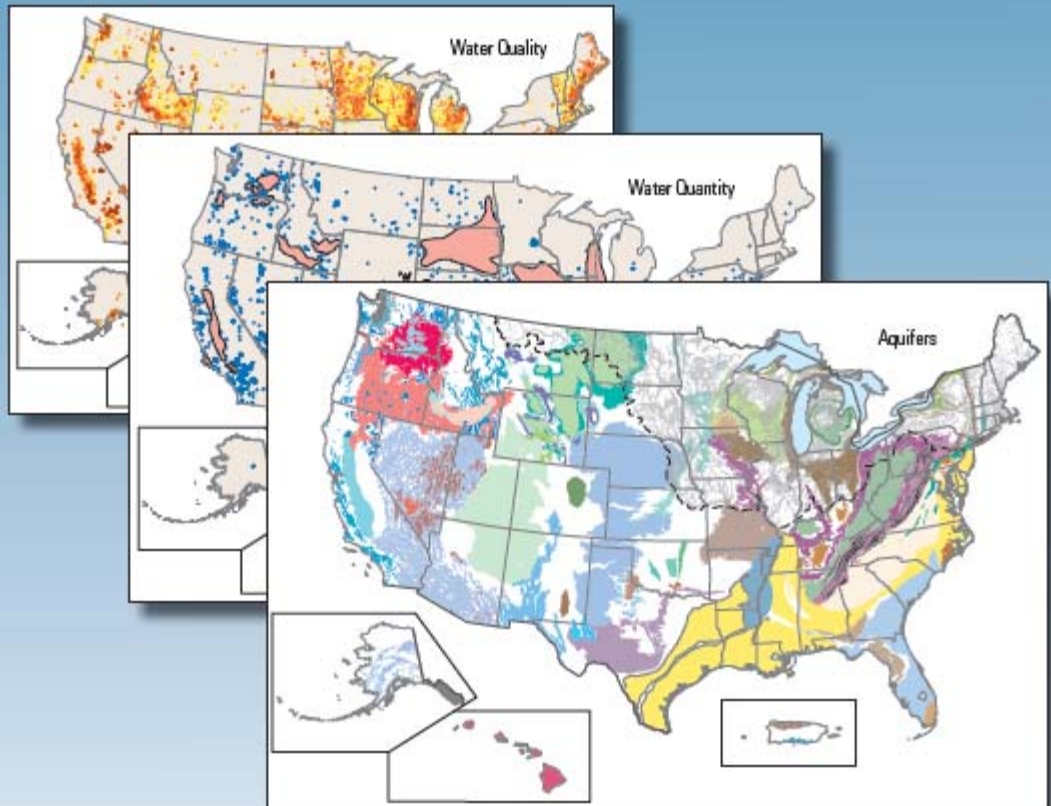
Assess Groundwater's Role in Water Availability

Use the strength of and enhance the resources within this program to provide the information on:

- Recharge
- GW yields
- Changes in storage.
- Saltwater Intrusion
- Trends in GW Indices
- Artificial Recharge
- GW/SW Interactions

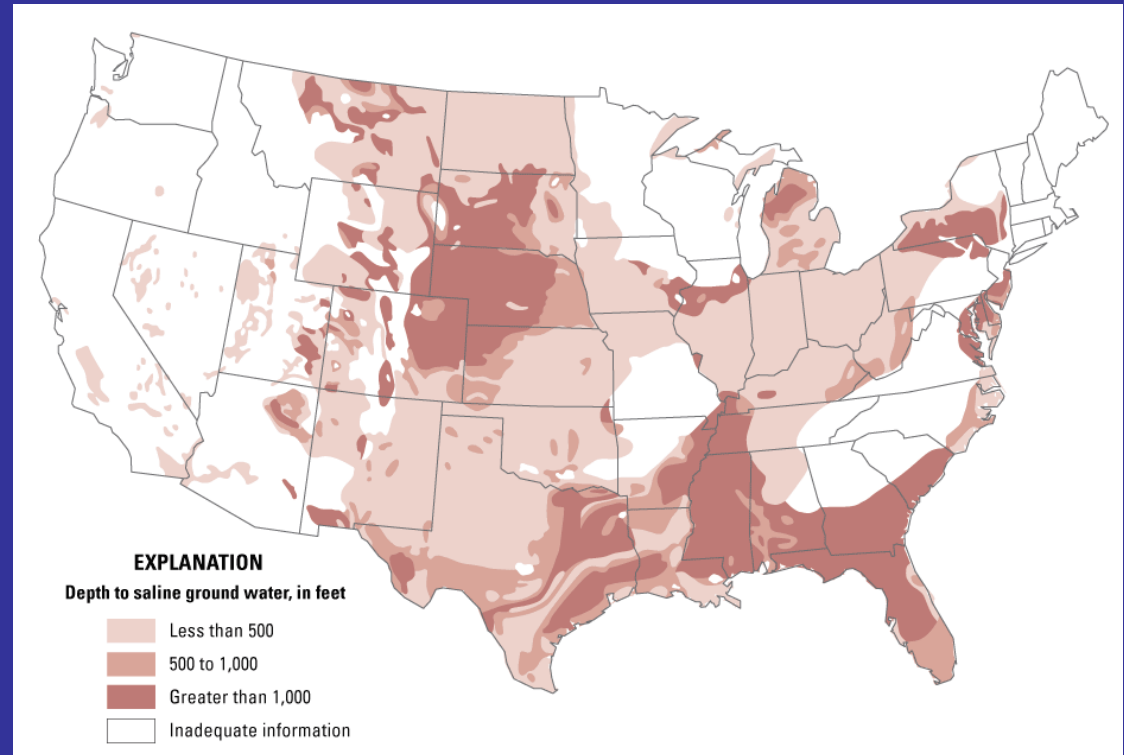
Ground-Water Resources Program

Ground-Water Availability in the United States



Assess the Nation's Brackish Resources

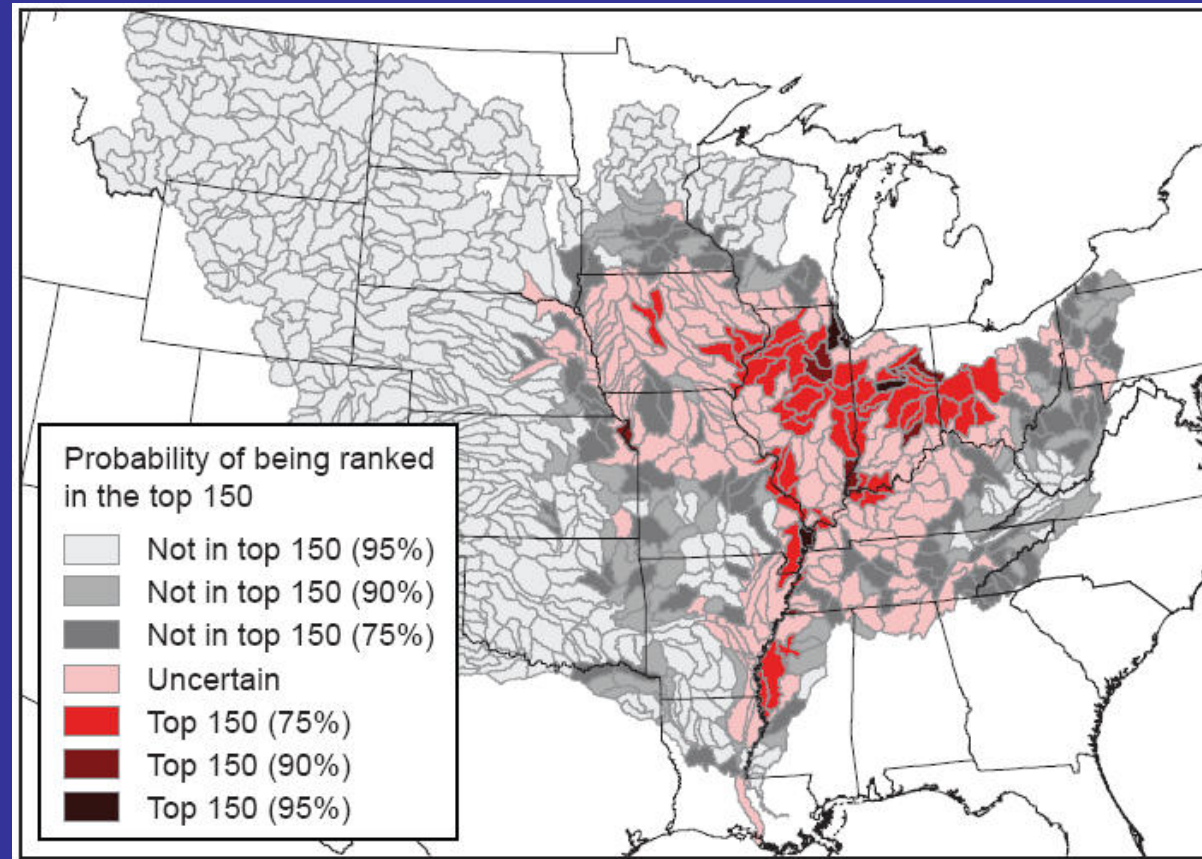
- Locations of the res.
- Hydrologic properties
- Water quality properties
- Current uses



Assess Water Quality's role in Water Availability

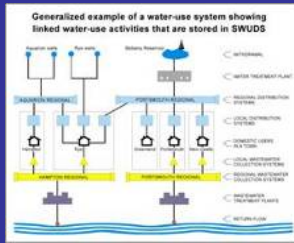
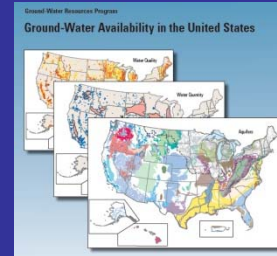
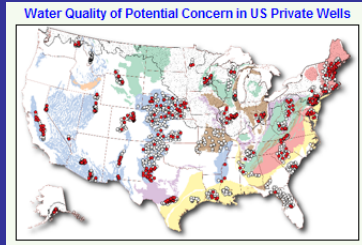
Use the strength of the NAWQA Program and tools like SPARROW to:

- Demonstrate the degree of water quality impairment that limits water availability
- Define the main compounds of importance.
- Relate to water use and return
- Trends



Finally, three studies focused on selected watersheds: the Colorado River, the Delaware River, and the ACF Rivers - where there is significant competition over water resources. Here, the USGS will work collaboratively with stakeholders to comprehensively assess the technical aspects of water availability.

Focused Water Availability Assessments



Water Quality

Groundwater Resources

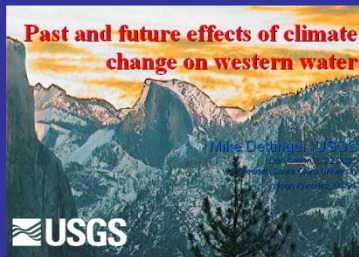
Water Use

SW Trends, Precipitation, etc



Global Change

State, Local, Regional Stakeholder Involvement



Defined Technical Questions to be Answered

“What made the deepest impression upon you?” inquired a friend one day of Lincoln, “when you stood in the presence of the Falls of Niagara, the greatest of natural wonders?”

“The thing that struck me most forcibly when I saw the Falls,” Lincoln responded with characteristic deliberation, “was where in the world did all that water come from?”



The End