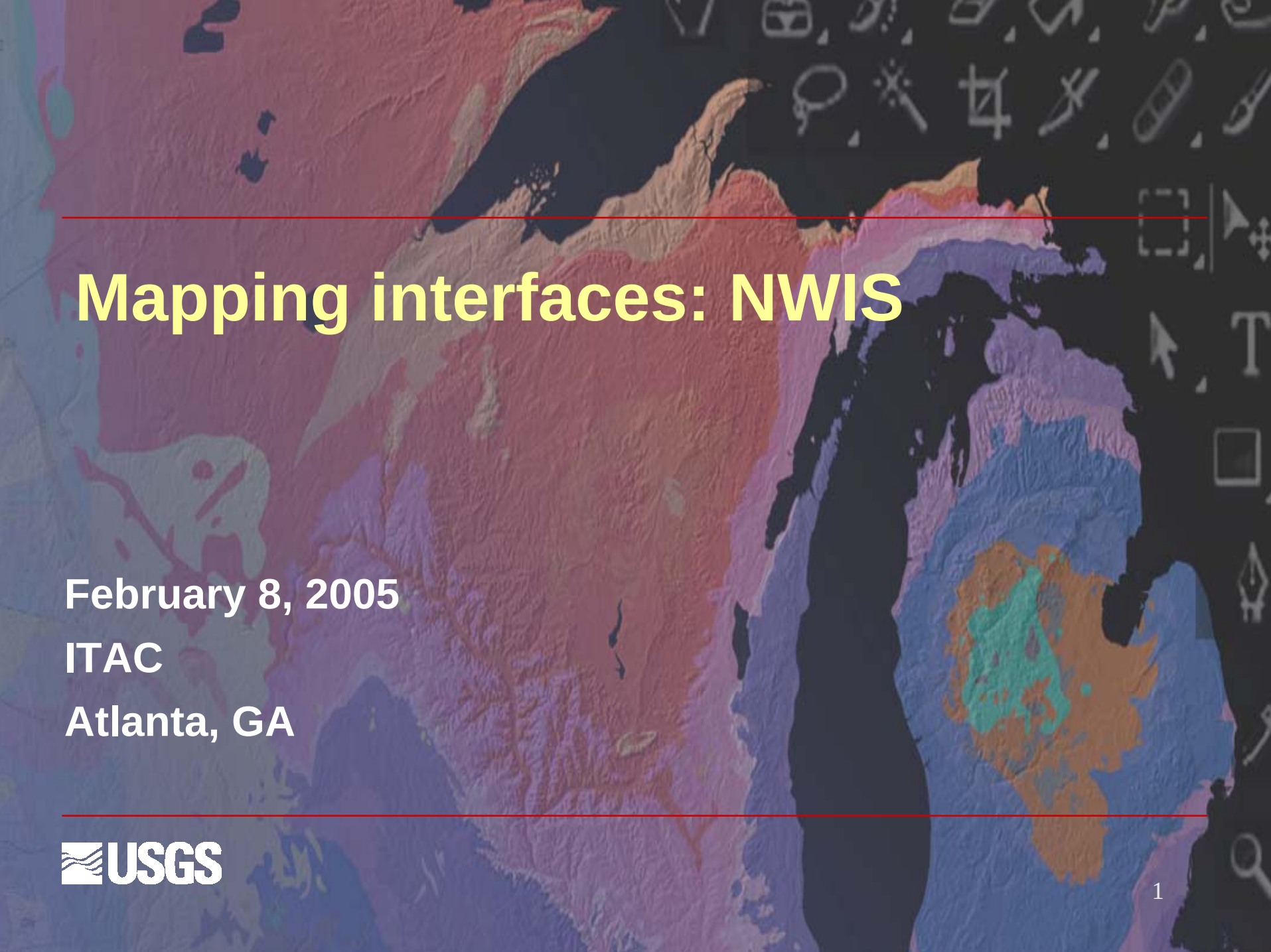




Mapping interfaces: NWIS

February 8, 2005

ITAC

Atlanta, GA



Goals for NWIS Mapper

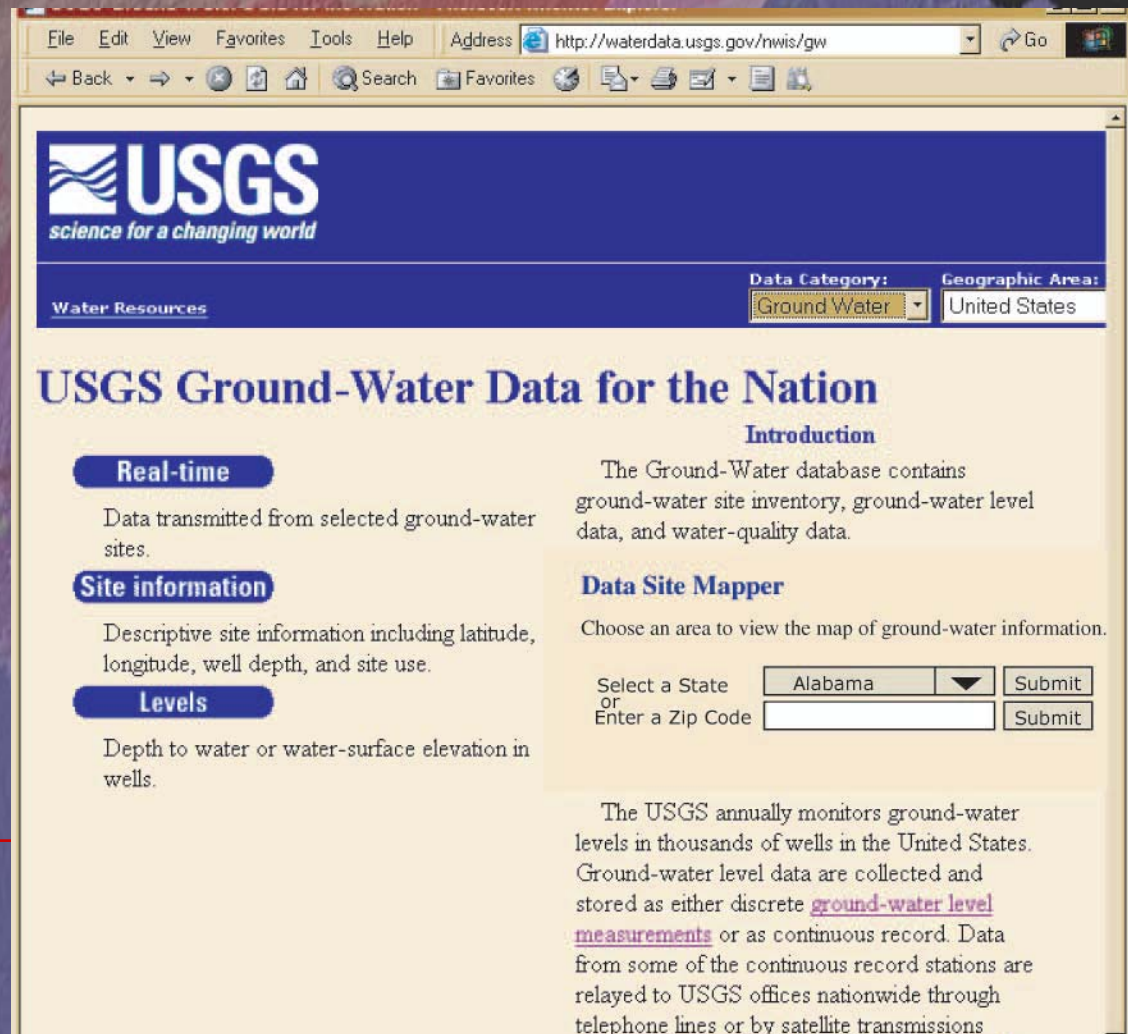
- Provide on-line map interface for current NWIS data users
- View location of stations and sites
- Access data available from NWISWeb or Site Data Sheet.
- Get it done as soon as possible

Goals for NWIS & ADR Mapper

- A straightforward interactive Mapper, with data updated daily, to be implemented and provided to internal users quickly.

Mapper to be launched from NWIS

Example 1



File Edit View Favorites Tools Help Address <http://waterdata.usgs.gov/nwis/gw> Go

Back Forward Stop Home Search Favorites

USGS
science for a changing world

[Water Resources](#)

Data Category: **Ground Water** Geographic Area: **United States**

USGS Ground-Water Data for the Nation

Real-time

Data transmitted from selected ground-water sites.

Site information

Descriptive site information including latitude, longitude, well depth, and site use.

Levels

Depth to water or water-surface elevation in wells.

Introduction

The Ground-Water database contains ground-water site inventory, ground-water level data, and water-quality data.

Data Site Mapper

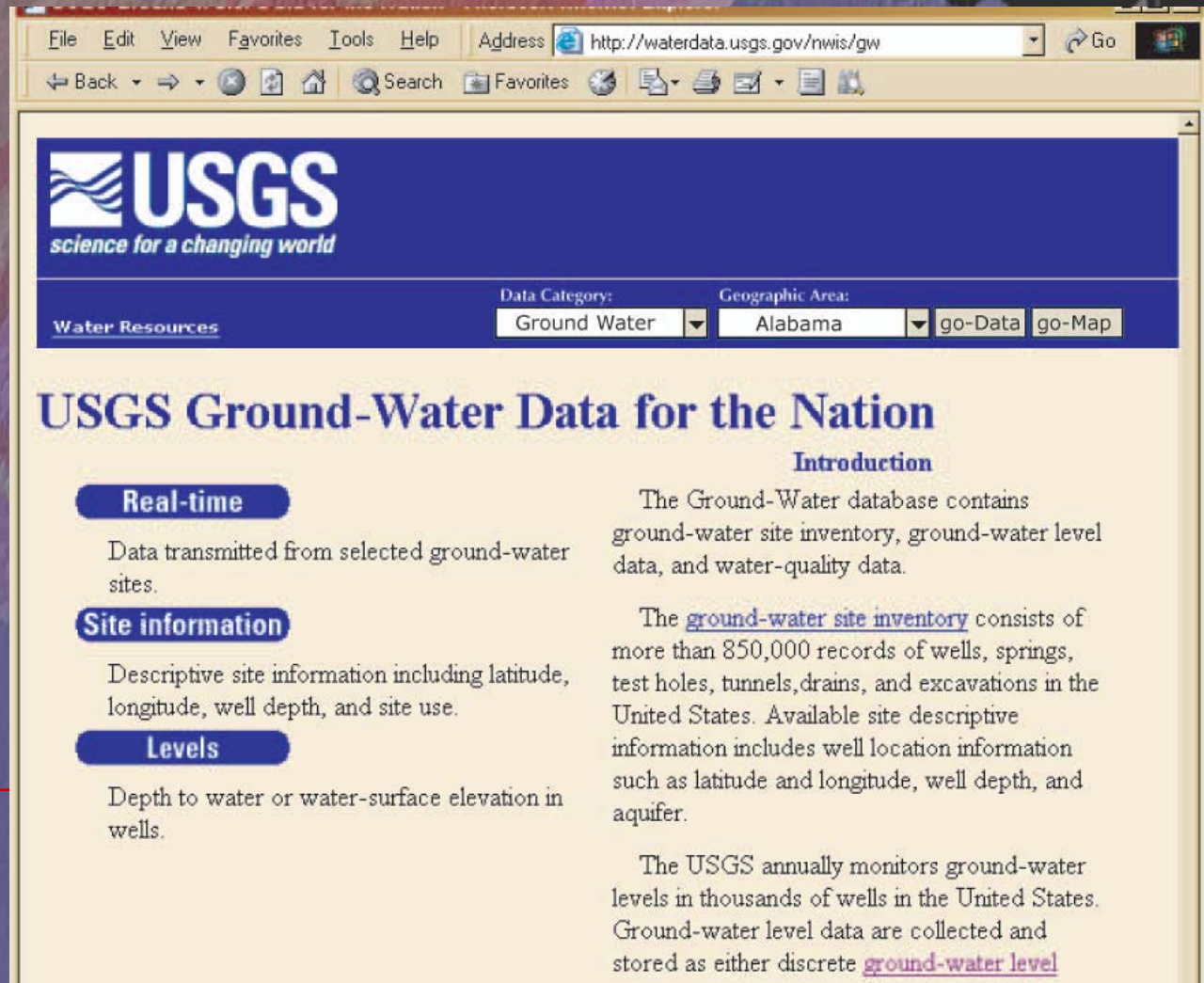
Choose an area to view the map of ground-water information.

Select a State
or
Enter a Zip Code

The USGS annually monitors ground-water levels in thousands of wells in the United States. Ground-water level data are collected and stored as either discrete [ground-water level measurements](#) or as continuous record. Data from some of the continuous record stations are relayed to USGS offices nationwide through telephone lines or by satellite transmissions

Mapper to be launched from NWIS

Example 2



The screenshot displays a web browser window with the address <http://waterdata.usgs.gov/nwis/gw>. The page header includes the USGS logo and the tagline "science for a changing world". Below the header, there are filters for "Data Category" (Ground Water) and "Geographic Area" (Alabama), along with buttons for "go-Data" and "go-Map". The main content area is titled "USGS Ground-Water Data for the Nation" and includes an "Introduction" section. The "Introduction" section states that the Ground-Water database contains ground-water site inventory, ground-water level data, and water-quality data. It also mentions that the [ground-water site inventory](#) consists of more than 850,000 records of wells, springs, test holes, tunnels, drains, and excavations in the United States. Available site descriptive information includes well location information such as latitude and longitude, well depth, and aquifer. The USGS annually monitors ground-water levels in thousands of wells in the United States. Ground-water level data are collected and stored as either discrete [ground-water level](#).

USGS
science for a changing world

Water Resources

Data Category: Ground Water

Geographic Area: Alabama

go-Data go-Map

USGS Ground-Water Data for the Nation

Introduction

The Ground-Water database contains ground-water site inventory, ground-water level data, and water-quality data.

The [ground-water site inventory](#) consists of more than 850,000 records of wells, springs, test holes, tunnels, drains, and excavations in the United States. Available site descriptive information includes well location information such as latitude and longitude, well depth, and aquifer.

The USGS annually monitors ground-water levels in thousands of wells in the United States. Ground-water level data are collected and stored as either discrete [ground-water level](#).

NWIS Mapper demonstration

Today we will cover examples of
navigation and design

Small Dell server running internally at
CAPP

<http://sys19capp.er.usgs.gov/imf/sites/usgs/launch.html>

NWIS Mapper demonstration

Data included in demonstration:

- 1,437,676 ground-water sites
- 163,273 surface-water sites
- 5,680 meteorological sites

Total 1,624,827 sites total

Of which,

- 344,241 are water-quality sites

What are next steps?

Internal release

Public release

Further enhancements

Internal release

- Develop stable process for data loading and updates on a regular basis.
 - Interface to Mapper from NWISWeb will be developed by NWIS and coordinated with CAPP.
 - Finalize which geographic data is available and needed for the “locate by layers” tab.
 - Continue to refine the site symbols and refine the scales at which all layers display.
 - Edit banner colors, content, and size and include required USGS Web elements.
-

Public release

- Hardware plan for hosting the NWIS Mapper and possibly other USGS Mapper sites (with WI District)
- Develop a stored query function so the user can choose which results in highlighted sites that meet the criteria selected (possibly before internal release?)
- Continue to improve the cartography of supporting base layers
- Outside mapping services will be able to access NWISWeb data by public release.

After Public release

- Basemap manipulation will be needed to provide simple cartography designed to help the user get oriented in relation to common features. This may include, for example, base screening, projection, and control of scale for OGC layer appearance.
- If possible, implement a standard projection for the OGC WMS layers to allow the display of NWIS site information in anything besides Geographic Coordinates.

Idealized development sequence

- Demo 1/25/05
 - *Major demo changes incorporated by CAPP*
 - NWIS/OWI review and decisions
 - *CAPP IMF enhancements*
 - NWIS/OWI review/questionnaire
 - *Final revisions by CAPP*
 - Internal release/user questionnaire – April 2005
 - Final hardware, maintenance, and volume test
 - *Necessary enhancements*
 - Public release – NWIS Mapper July/August 2005
 - Public release – ADR Mapper October 1, 2005
-

Credits

NWIS Mapper demonstration contributors

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Wendy Danchuk

Dave Briar

Ken Lanfear

Working with NWIS

Data questions:

- What are the attributes to be displayed when use identify tool on a point?
- Will the dataset be updated every night?
- Will the data be pushed or pulled when updated?
- Does a whole site record have to be replaced or can we just replace changed attributes of a site?
- What are the sites if the id number is not 7 or 15 digits? Should they be treated differently?
- Where should the web link go for a site that has no home page?
- Assuming we are using Oracle, can we automate a change table for altering the values for some attributes to make them more user friendly?
- Who will be QC on NWIS mapper data?

Working with NWIS

Mapper questions:

Audience and user questions:

Issues to bring to ITAC [HELP!]

- Map viewer futures
 - Moxie Media, ArcIMS, Dynamic Graphics
- Re-engineering and workflow
 - i.e. Author templates
- Reports tracking
 - Internal requirements
 - OMB data requirements
 - Data base design

Reports tracking

