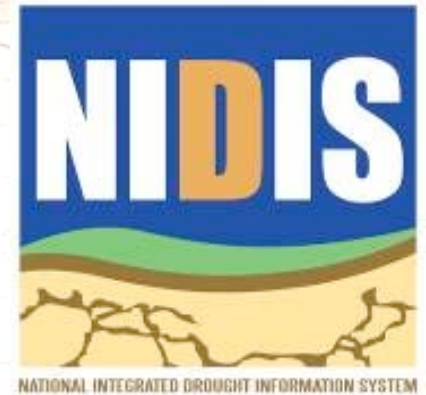


**ESIP Federation Meeting, Santa Barbara, CA
July 7th, 2009**



Leveraging Web Services in a Portal Environment

Jason Symonds



NOAA's National Climatic Data Center

Contents

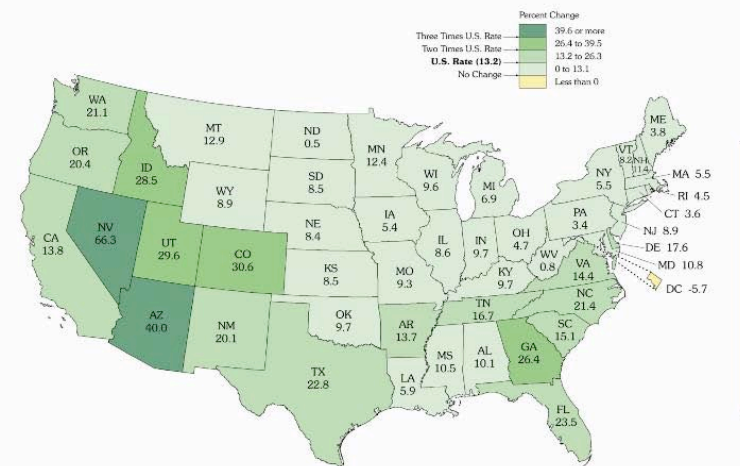
- NIDIS Background
- NIDIS USDP Requirements and technical evaluations
- USDP infrastructure web services
- Content aggregation through web services
- Data Visualizations using web services
- Summary



Societal Challenges and Climate

Increased vulnerability

- Society is changing - increasing urbanization, aging populations, overdevelopment in coastal regions, and regions with limited water supply



- Darker areas denote faster growth rates.

- Nevada (66%) and Arizona (40%) lead the nation.

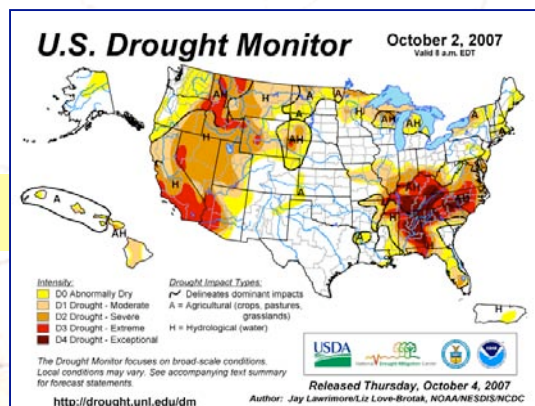
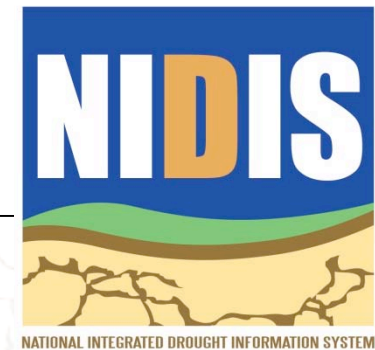
- Intermountain states average about 30%.



What is NIDIS?

National Integrated Drought Information System: An integrated, interagency national drought monitoring and forecasting system that provides:

- An **early warning & forecast system** for drought.
- Drought impact and causation **education**.
- Information for drought **mitigation**.
- An interactive, web-based **drought portal**.
- Improved **observational** capabilities.

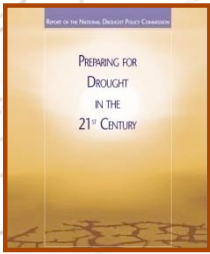


NIDIS Builds Upon Collaborative Successes!



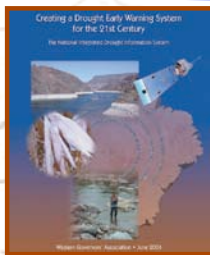
NOAA's National Climatic Data Center

NIDIS Authority



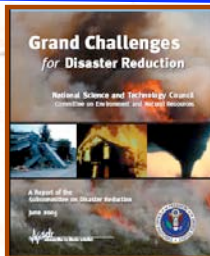
“(We) contend that we can reduce this nation’s vulnerability to the impacts of drought by making **preparedness**— especially drought planning, plan implementation, and proactive mitigation— the cornerstone of national drought policy..”

— National Drought Policy Commission Report, May 2000



“NIDIS should improve and expand the compilation of **reliable data** on the various indicators of droughts, and it should integrate and interpret that data with easily **accessible and understandable tools**, which provide timely and useful information to decision-makers and the general public. Western Governors believe **NOAA should be designated as the federal lead** for NIDIS.

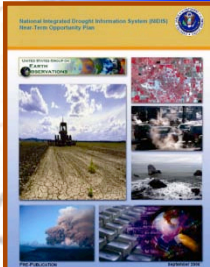
— Western Governor’s Association Report, June 2004



“Characteristics of disaster-resilient communities:

- Relevant hazards are **recognized and understood**.
- Communities at risk know when a hazard event is imminent.
- Individuals at risk are safe from hazards in their homes and places of work.
- Communities experience **minimum disruption** ... after a hazard event has passed.”

— National Science and Technology Council, June 2005



“Near-term opportunities identify observing systems or **integration of components** that meet **high priority societal needs**, and make improvements to inadequate existing systems that can be completed within 5 years and have tangible, measurable results.

- Improved Observations for Disaster Warnings
- Global Land Observation System
- Sea Level Observation System
- National Integrated Drought Information System**
- Air Quality Assessment and Forecast System
- Architecture and Data Management.”

— U.S. Group on Earth Observations, September 2006



Timeline

2004 Western Governors' Association Recommendations for NIDIS

2006 Legislation requiring NIDIS

2007 USGEO Near-term opportunity

2007 Initial Portal accessible

2008 Third incarnation

2009 Regional & International focus



First Incarnation of USDP

The screenshot shows the NIDIS Drought Portal website. At the top, the title "NIDIS Drought Portal" is displayed in large white letters on a dark blue background, with the subtitle "The National Integrated Drought Information System" below it. A navigation bar contains five orange buttons: "Monitoring", "Forecasting", "Impacts", "Planning & Preparedness", and "Education". To the right of the navigation bar is a photograph of a dry, cracked landscape with a person standing in the distance. On the left side of the page, there is a vertical menu with links: "NIDIS HOME", "DROUGHT PORTAL HOME", "WHAT'S NEW?", "CONTACT US", "NIDIS |", "About Us", "Background", "Mission", and "History". Below the menu is a "my page" button with a "Log In" link. The main content area is divided into three sections. The first section is titled "U.S. Drought Monitor" and features a map of the United States with color-coded regions indicating drought severity. The second section is titled "Current Drought Conditions (U.S. Drought Monitor)". The third section is titled "U.S. Seasonal Drought Outlook" and features a map of the United States with color-coded regions indicating drought outlook. The fourth section is titled "Drought Impact Reporter" and features a map of the United States with color-coded regions indicating drought impacts. The fifth section is titled "Drought Forecast (Drought Outlook)". The sixth section is titled "Drought Impacts (Drought Impacts Reporter)".



U.S. Drought Portal - Today

U.S. Drought Portal
www.drought.gov

Navigation: HOME | WHAT IS NIDIS? | CURRENT DROUGHT | FORECASTING | IMPACTS | PLANNING | EDUCATION | RESEARCH | RECOVERY

Search:

Contact Us | Log In | Text-Only

Area Drought Information

Select State... [Go updated!](#)

Select Region... [Go](#)

Maps & Tools

- Map Viewer
- GIS Resources
- Geodata Portal
- Drought Monitor Graphics - **new!**
- Data Visualizations - **new!**

Events & Announcements

- Climate, Drought and Early Warning on Western Native Lands - June 2009
- Climate Reference Network Soil Moisture Meeting - March 2009
- Monitoring Gaps Assessment Workshop - December 2008
- Wildfire: National Seasonal Assessment Workshop - February 2009
- National Hydrologic Warning Council - May 2009

[View Archive](#) | [Portal Release Notes](#)

Drought In The News

- Battle over water heats up in drought-stricken California - [USATODAY.com](#)
- Drought alters farm strategies - [HonoluluAdvertiser.com](#)
- A pleasant week ... but where is the rain? - [CharlotteObserver.com](#)
- Dry S.A. is about to get a lot drier - [MySanAntonio.com](#)
- Severity of drought is obvious to observers - [MySanAntonio.com](#)
- Water conservation measures in north, southwest Houston | [Chron.com](#) - [Houston Chronicle](#)
- Popular Lake Travis water levels way down | [AP Texas News](#) | [Chron.com](#) - [Houston Chronicle](#)

[View Archive](#) | [RSS](#)

The U.S. Government's Official Web Portal

Featured Products

Where are Drought Conditions Now? | How is the Drought Affecting Me? | Will the Drought Continue?

U.S. Drought Monitor June 23, 2009
Valid 6 a.m. EDT

Intensity: D0 Abnormally Dry, D1 Drought - Moderate, D2 Drought - Severe, D3 Drought - Extreme, D4 Drought - Exceptional

Drought Impact Types: A = Agricultural crops, pastures, grasslands; H = Hydrological (water); ✓ Databases dominant impacts

Released Thursday, June 25, 2009
Author: M. Brown, L. Love-Breakey, NOAA/NESDIS/NCDC
<http://drought.unl.edu/dm>

Drought Conditions

% Area for U.S., including AK, HI & PR (As of 6.23.2009)
Info Source: National Drought Mitigation Center

Drought Classification	Percentage
None	71.89%
D0	16.76%
D1	6.79%
D2	3.42%
D3	0.53%
D4	0.61%

[Drought Classifications](#) | [View Time Series](#)

Drought Information Statements

Click on a highlighted area to view the current NWS Drought Information Statement or Click Here to select from a list

US Streamflow Drought Conditions

Historic: Jan 10, 2009

USGS | [Gadgets powered by Google](#)

NIDIS Feature

Understanding Drought

[view feature](#)

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NIDIS US Drought Portal Requirements

- Provide one-stop shop for up-to-date drought information
- Establish clearinghouse for drought data from multiple agencies and partners
- Facilitate NIDIS Pilots:
 - Create on-line communities for various stakeholder groups
 - Establish collaborative workspace to enhance research and creation of new data sets and tools
- Develop and enhance GIS resources in support of NIDIS mission
- NIDIS Technical team evaluated a number of solutions
 - Liferay, Oracle Portal, BEA Aqualogic



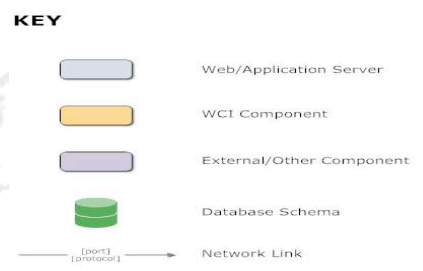
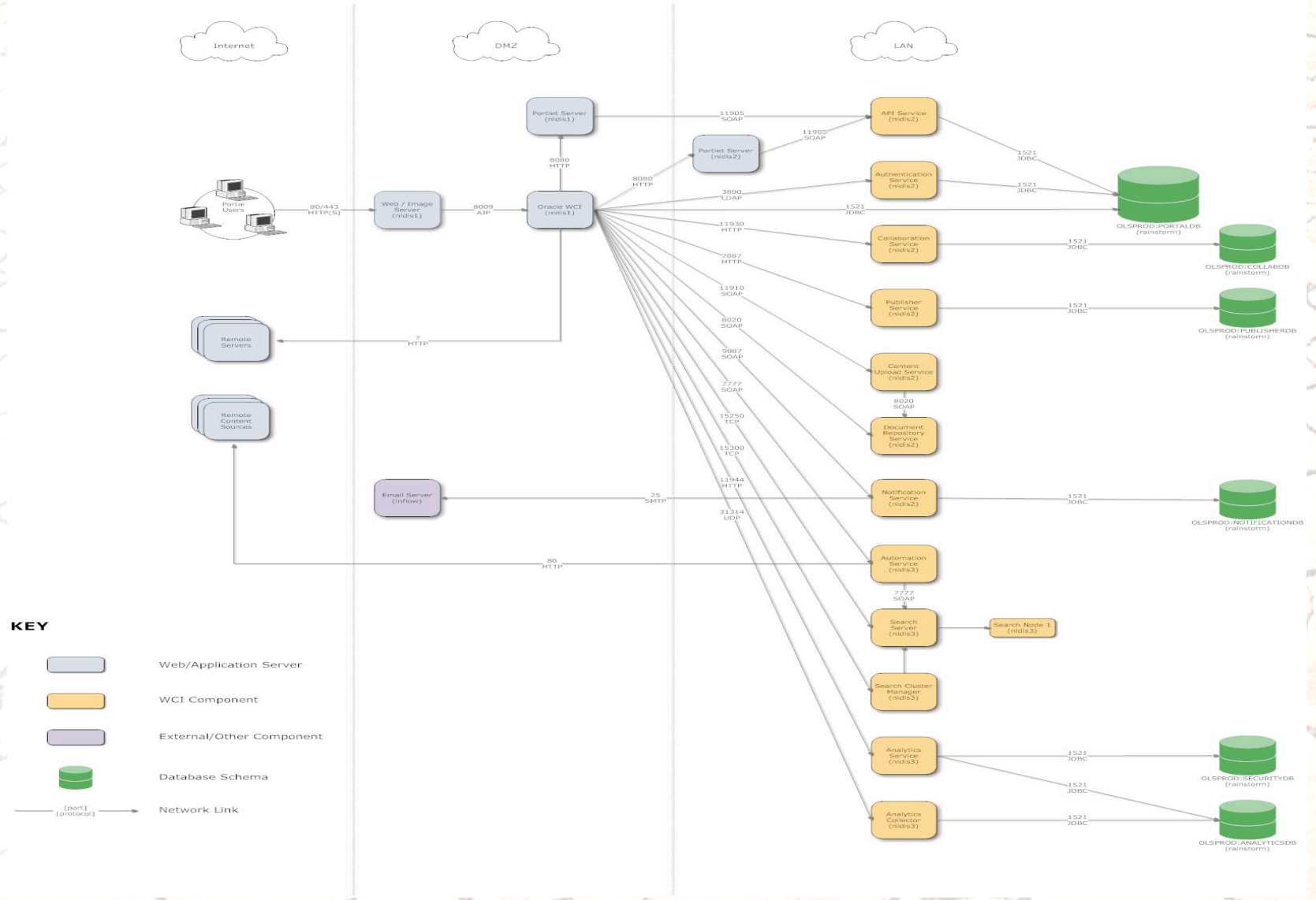
Oracle's Web Center Interaction

- Commercial Off-The-Shelf software package – formerly BEA's Aqualogic
- Follows SOA model
- Able to render anything that responds to an HTTP request in a portlet
- Offers value added services:
 - Collaboration
 - Notification (Email, RSS, etc)
 - Web crawling
 - Search
 - API Service
- Components communicate via SOAP web services



NIDIS Portal Architecture - Component Overview

June 24, 2009



Oracle's WCI – Web Service for Remote Portlet

- Select Remote Server or Remote Host
- Define page/content/application endpoint
- Configure web service options:
 - Gateway concept
 - In-line refresh
 - Transform javascript/css
 - Hosted display mode
 - Apply Security settings
 - Preferences
 - Caching



USDP - Content Aggregation

- USDP leverages a number of different technologies
- JSR standards for portals
 - Not mature enough
 - Scope is at the portlet level, not page or page group
- Future Trends point toward Gadgets and RESTful Web Services to produce Mash Ups



U.S. Drought Portal - Today

U.S. Drought Portal
www.drought.gov

Navigation: HOME | WHAT IS NIDIS? | CURRENT DROUGHT | FORECASTING | IMPACTS | PLANNING | EDUCATION | RESEARCH | RECOVERY

Area Drought Information: Select State... Go updated! | Select Region... Go

Maps & Tools: Map Viewer, GIS Resources, Geodata Portal, Drought Monitor Graphics - new!, Data Visualizations - new!

Events & Announcements:

- Climate, Drought and Early Warning on Western Native Lands - June 2009
- Climate Reference Network Soil Moisture Meeting - March 2009
- Monitoring Gaps Assessment Workshop - December 2008
- Wildfire: National Seasonal Assessment Workshop - February 2009
- National Hydrologic Warning Council - May 2009

Featured Products

U.S. Drought Monitor June 23, 2009
Released Thursday, June 25, 2009

Drought Conditions
% Area for U.S., including AK, HI & PR (As of 6.23.2009)
Info Source: National Drought Mitigation Center

None	0.61%
D0	0.53%
D1	3.42%
D2	6.79%
D3	16.76%
D4	71.89%

Drought Information Statements

NIDIS Feature
Understanding Drought

The U.S. Government's Official Web Portal

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USDP Web Services examples

- Drought Monitor Graphics:
 - RESTful Web Service that exposes Drought Monitor Data Archive
 - Used to serve up images in several different contexts throughout the portal (img src references REST endpoint)
 - Can be used to produce presentation style graphics on demand
 - More recently developed user interface for the service



USDP Web Service examples – cont.

- NWS Drought Information Statements:
 - Exposing data source only available on a NWS web page – and NCDC archive
 - Setup an ArcGIS REST web service to facilitate an Interactive Mapping application



NWS Drought Information Statements

The screenshot displays the NOAA National Drought Information System (NDIS) website. The main header includes the NDIS logo and the text "U.S. Drought Portal" with the URL "www.drought.gov". Navigation tabs include HOME, WHAT IS NDIS?, CURRENT DROUGHT, FORECASTING, IMPACTS, PLANNING, EDUCATION, and RESEARCH.

Area Drought Information: A section for selecting a state or region, with a "Go updated!" button.

Featured Products: A section titled "U.S. Drought Monitor" dated May 26, 2009. It includes a map of the United States with color-coded drought severity levels. A legend indicates:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

 Impacts are listed as: A = Agricultural crops, pastures, grasslands; H = Hydrological (water).

Drought Conditions: A section showing the percentage of area affected by drought. A bar chart displays the following data:

- 0.48%
- 0.74%
- 3.88%
- 7.23%
- 17.75%

Drought Information Statements: A section with a map of the United States and a list of statements. A highlighted area on the map indicates a statement for Greenville-Spartanburg, SC, issued on May 14, 2009. The statement text includes: "DROUGHT STATUS IMPROVES... SYNOPSIS... 3 TO 6 INCHES OF RAIN FELL OVER THE MOUNTAINS OF NORTH CAROLINA AND NORTHEAST GEORGIA DURING THE PAST 30 DAYS. THIS HAS HELPED TO ALLEVIATE THE DROUGHT CONDITIONS IN THESE AREAS. ACROSS THE UPSTATE OF SOUTH CAROLINA RAINFALL WAS A BIT LESS, AROUND 1 TO 4 INCHES. MOST AREAS IN THE UPSTATE OF SOUTH CAROLINA AND THE BORDERING NORTH CAROLINA COUNTIES WERE RECORDING ONE HALF TO 2 INCHES BELOW NORMAL FOR THE LAST 30 DAYS. WHILE MOST AREAS IN NORTH CAROLINA... CURRENT DROUGHT CONDITIONS AS OF MAY 6, 2009".

US Streamflow Drought Conditions: A section with a map of the United States showing streamflow drought conditions as of June 01, 2009.

Drought In The News: A section listing recent news articles related to drought, such as "North Dakota hay stocks hurt by weather, flooding" and "Calif. officials approve first water transfers".

Understanding Drought: A section featuring a photograph of a dry landscape with a sign that says "Understanding Drought".

At the bottom of the page, there are links for "Contact Us", "Site Disclaimers", "Privacy Policy", "Accessibility", and "FOIA".



USDP Web Service examples – cont.

- GIS - Mapping and Visualizations:
 - Data from disparate sources, but useful for a scientist to pull into a tool together to visualize or perform simple analysis on data
 - Supports/utilizes OGC Services
 - ESRI ArcGIS REST implementation
 - Services created to expose and/or format data from:
 - Relational Databases
 - HTTP/FTP – Web Servers
 - ASCII – tab delimited data



USDP Map Viewer

The screenshot shows a web browser window titled "drought.gov - Mozilla Firefox" displaying the "U.S. Drought Portal" map viewer. The browser's address bar shows the URL "http://www.drought.gov/portal/server_pt/community/drought.gov/map_viewer". The page header includes the "National Integrated Drought Information System" logo and the "U.S. Drought Portal" title with the website address "www.drought.gov". Navigation links for "HOME", "WHAT IS NIDIS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", and "RESEARCH" are visible. A search bar and a "LOCAL FORECAST" dropdown menu are also present.

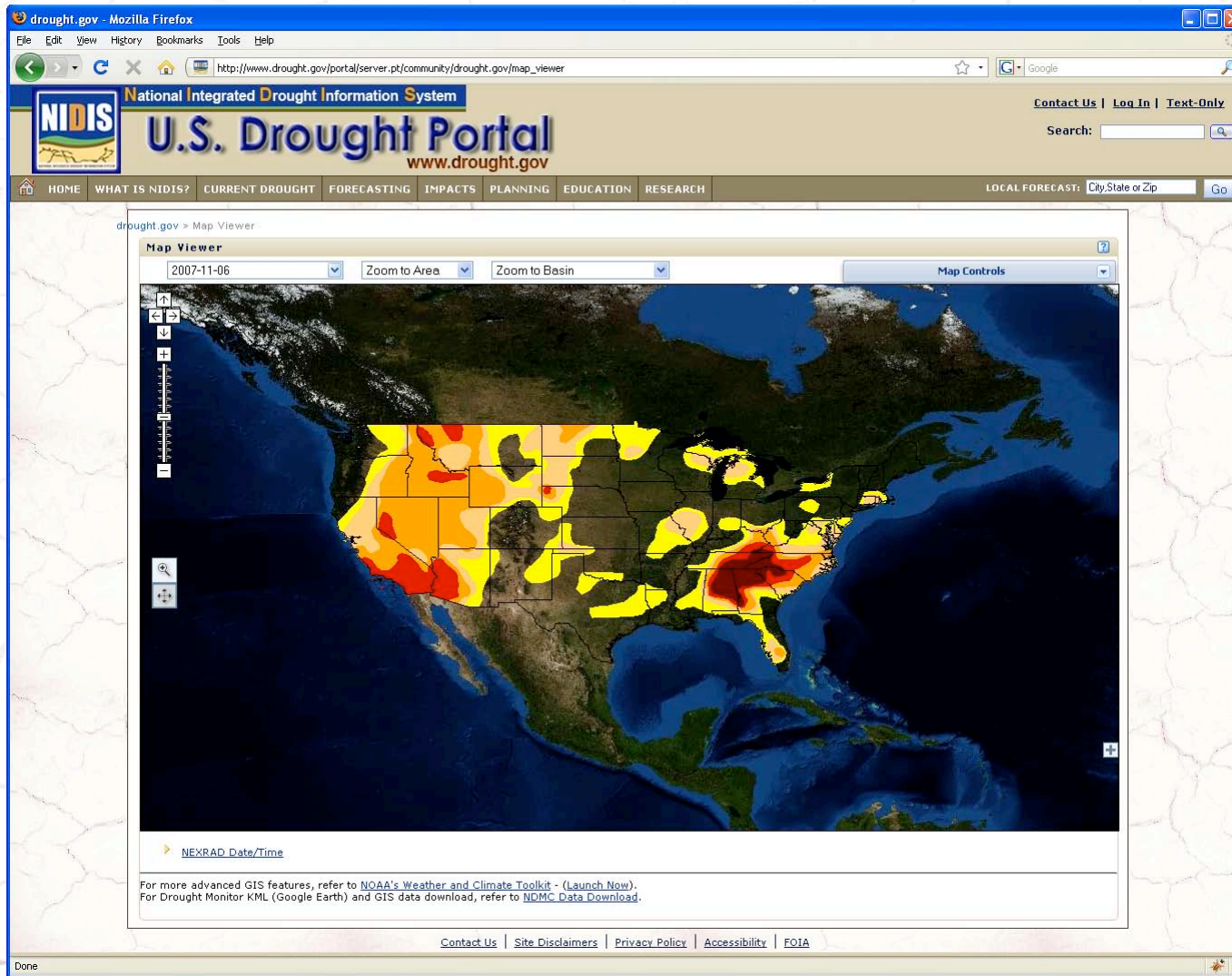
The main content area is titled "Map Viewer" and features a map of the United States with a color-coded overlay representing drought conditions. The map is surrounded by navigation controls, including a "Select Drought Monitor Date" dropdown, "Zoom to Area" and "Zoom to Basin" dropdowns, and a vertical scale bar. A "Map Controls" panel is open on the right side, containing a "Layer Selector" with the following options:

- BaseMap
 - Blue Marble
 - Shaded Relief
 - Shaded Relief - Grayscale
 - Default
- Monitoring
 - U.S. Drought Monitor
- Precipitation
 - Precipitation Index
 - Total Precip (7)
 - Total Precip (30)
 - MaxConDryDays(7)
 - MaxConDryDays(30)

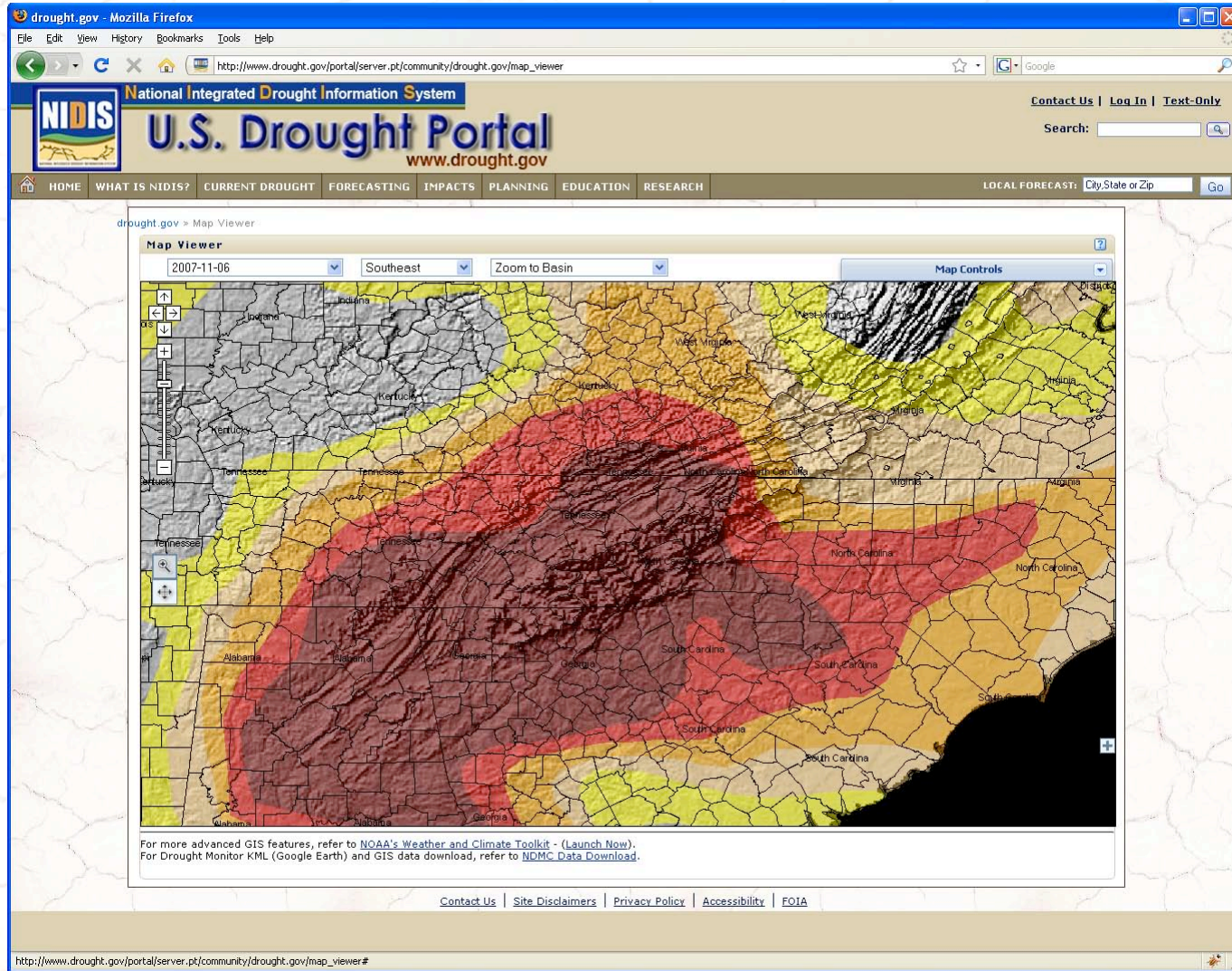
Below the map, there is a "NEXRAD Date/Time" dropdown menu. At the bottom of the map viewer, there is a note: "For more advanced GIS features, refer to NOAA's Weather and Climate Toolkit - (Launch Now). For Drought Monitor KML (Google Earth) and GIS data download, refer to NDMC Data Download." The browser's status bar at the bottom shows "Done".



Drought Monitor from Fall 2007



Carolinas, Fall 2007



Map Controls – Layer Selector

The screenshot displays the U.S. Drought Portal's map viewer interface. The browser window title is "drought.gov - Mozilla Firefox" and the address bar shows "http://www.drought.gov/portal/server.pt/community/drought.gov/map_viewer". The page header includes the "National Integrated Drought Information System" logo and the "U.S. Drought Portal" with the URL "www.drought.gov". Navigation links for "HOME", "WHAT IS NIDIS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", and "RESEARCH" are visible. A search bar and a "LOCAL FORECAST" section with a "Go" button are also present.

The main content area is titled "Map Viewer" and features a map of the United States. Above the map, there are dropdown menus for "Current", "US CONUS", and "Zoom to Basin". The map itself shows a color-coded overlay, likely representing precipitation or drought indices. To the right of the map is a "Map Controls" panel with a "Layer Selector" section. The "Layer Selector" panel lists several layers, with "Total Precip (7)" checked. Other layers include "Precipitation Index", "Total Precip (30)", "MaxConDryDays(7)", "MaxConDryDays(30)", "USSPI", "NEXRAD", "Precip-Daily-Anom", "Precip-Daily-Total", "Precip-Monthly-Anom", "Precip-Monthly-Total", and "Precip-Monthly-Perc". Below the layer selector is a "Transparency Controls" section.

At the bottom of the map viewer, there is a "NEXRAD Date/Time" section with a date and time selector (2005-08-29 13:00:00) and buttons for "Update NEXRAD" and "Current NEXRAD". Below this, there is a note: "For more advanced GIS features, refer to NOAA's Weather and Climate Toolkit - (Launch Now). For Drought Monitor KML (Google Earth) and GIS data download, refer to NDMC Data Download." The status bar at the bottom left shows "Done" and the bottom right shows "2 Errors".



Zoom In and PanTools

The screenshot shows a Mozilla Firefox browser window displaying the U.S. Drought Portal. The browser's address bar shows the URL: http://www.drought.gov/portal/server_pt/community/drought.gov/map_viewer. The page header includes the NIDIS logo, the text "National Integrated Drought Information System", and "U.S. Drought Portal www.drought.gov". Navigation links include "HOME", "WHAT IS NIDIS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", and "RESEARCH". A search bar and a "LOCAL FORECAST" dropdown are also present.

The main content area is titled "Map Viewer" and features a map of the United States. The map is overlaid with a color-coded grid representing drought conditions. A red rectangular box highlights a specific region in the central United States. Above the map, there are dropdown menus for "Current", "US CONUS", and "Zoom to Basin". To the right of the map is a "Map Controls" button. Below the map, there is a "NEXRAD Date/Time" section with a date and time selector set to "2005-08-29 13:00:00" and buttons for "Update NEXRAD" and "Current NEXRAD". At the bottom of the map viewer, there are links for "NOAA's Weather and Climate Toolkit - (Launch Now)" and "NDMC Data Download". The browser status bar at the bottom shows "Done" and "2 Errors".



Map Controls – Transparency

The screenshot displays the U.S. Drought Portal's map viewer interface. At the top, the browser window shows the URL http://www.drought.gov/portal/server_pt/community/drought.gov/map_viewer. The page header includes the NIDIS logo, the text "National Integrated Drought Information System", and "U.S. Drought Portal www.drought.gov". Navigation links for "HOME", "WHAT IS NIDIS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", and "RESEARCH" are visible. A search bar and a "LOCAL FORECAST" dropdown are also present.

The main content area is titled "Map Viewer" and features a map of the United States with a color-coded overlay. Above the map are dropdown menus for "Current", "US CONUS", and "Zoom to Basin". To the right of the map is a "Map Controls" panel with a "Layer Selector" and "Transparency Controls" section. The "Transparency Controls" section includes sliders for "U.S. Drought Monitor", "Total Precip (7)", and "States".

Below the map, there is a "NEXRAD Date/Time" section with a date and time selector set to "2005-08-29 13:00:00" and buttons for "Update NEXRAD" and "Current NEXRAD". At the bottom of the interface, there are links for "NOAA's Weather and Climate Toolkit - (Launch Now)" and "NDMC Data Download". The status bar at the bottom left shows "Done" and the bottom right shows "2 Errors".



Zoom in, add map layers

The screenshot displays the U.S. Drought Portal's map viewer interface. At the top, the browser window shows the URL http://www.drought.gov/portal/server.pt/community/drought.gov/map_viewer. The page header includes the NIDIS logo, the text "National Integrated Drought Information System", and "U.S. Drought Portal www.drought.gov". Navigation links for "HOME", "WHAT IS NIDIS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", and "RESEARCH" are visible. A search bar and a "LOCAL FORECAST" dropdown are also present.

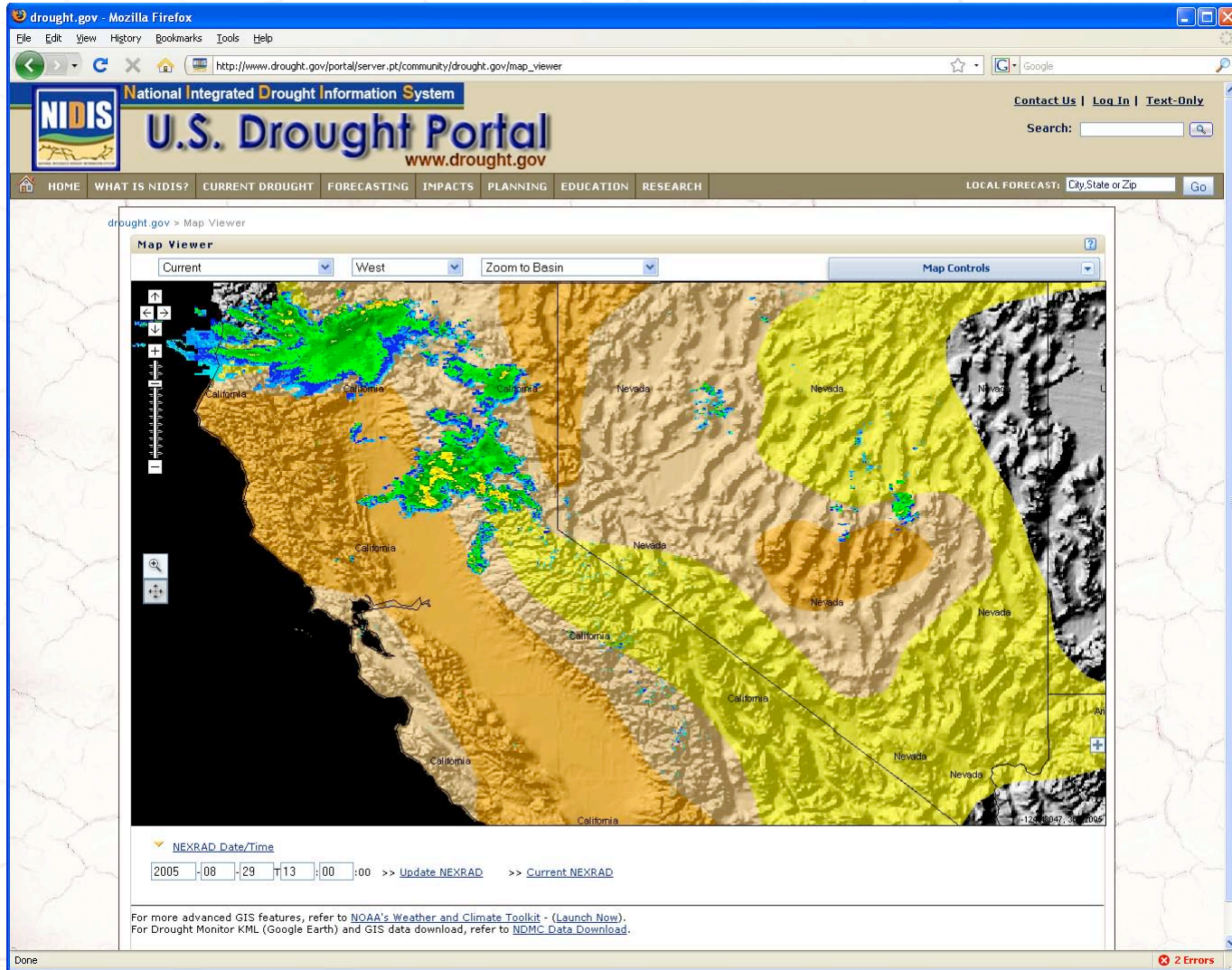
The main content area is titled "Map Viewer" and features a map of the United States. The map is currently set to "Current" data, "US CONUS" region, and "Zoom to Basin" view. A "Layer Selector" panel on the right allows users to toggle various map layers, including "Soil moisture" (with sub-options for SM-Daily-Anom, SM-Daily-Perc, SM-Daily-Total, SM-Monthly-Anom, SM-Monthly-Perc, and SM-Monthly-Total), "Impacts" (Drought Information Statements), and "Boundaries" (States, Counties, Climate Divisions, and Hydrologic Regions). "Transparency Controls" are also available for the selected layers.

Below the map, there is a "NEXRAD Date/Time" section with a date and time selector set to "2005-08-29 13:00:00". Buttons for "Update NEXRAD" and "Current NEXRAD" are provided. A note at the bottom of the map viewer area states: "For more advanced GIS features, refer to NOAA's Weather and Climate Toolkit - (Launch Now). For Drought Monitor KML (Google Earth) and GIS data download, refer to NDMC Data Download."

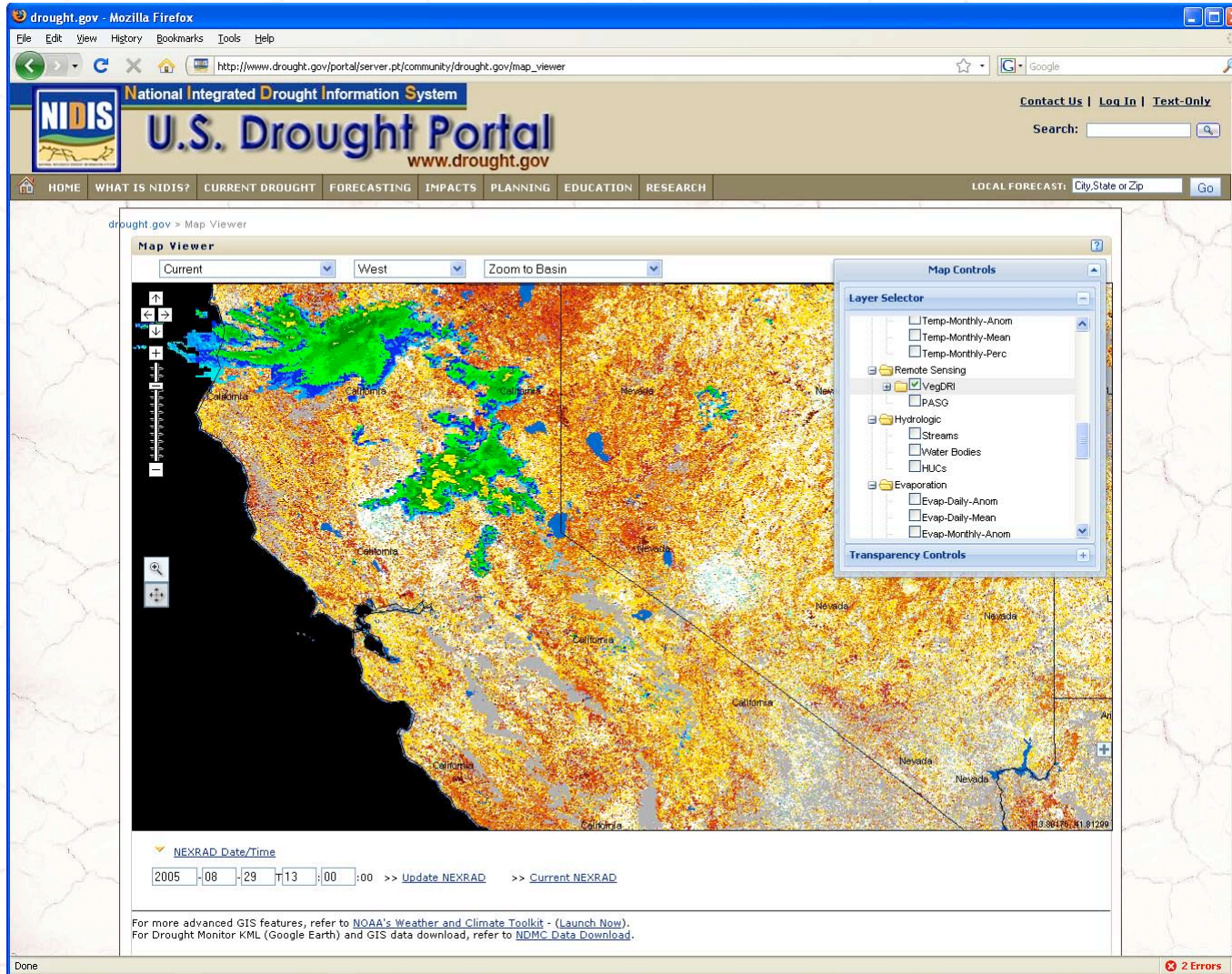
The browser status bar at the bottom of the window shows "2 Errors".



Zoom to West



View VegDRI – remote sensing product



ArcGIS REST Web Mapping Services

The screenshot displays the U.S. Drought Portal web application running in a Mozilla Firefox browser. The browser's address bar shows the URL: `http://nids-d.ncdc.noaa.gov/portal/server.pt/gateway/PTARG5_0_2_244_201_0_43/http%3B/nids-d.ncdc.noaa.gov%3B8080/FlexViewer/`. The page header includes the NIDS logo, the text "National Integrated Drought Information System", and "U.S. Drought Portal www.drought.gov". Navigation links for "HOME", "WHAT IS NIDS?", "CURRENT DROUGHT", "FORECASTING", "IMPACTS", "PLANNING", "EDUCATION", "RESEARCH", and "RECOVERY" are visible. A search bar and a "LOCAL FORECAST" input field are also present.

The main content area features a map of the United States with a color-coded overlay representing drought conditions. A "Live Maps" panel on the right side of the map lists the following layers:

- North American Drought Monitor
- U.S. Drought Monitor
- NEXRAD
- U.S. Drought Outlook

At the bottom of the browser window, a status bar indicates "Transferring data from nids-d.ncdc.noaa.gov...".



Multi Graph Prototype

The screenshot shows a Mozilla Firefox browser window titled "Colorado River Pilot - Mozilla Firefox". The address bar contains the URL http://midis-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205. The page header includes a welcome message for "Jason.Symonds" and navigation links for "Administration", "My Account", "Help", and "Log Off". A search bar is set to "Everywhere" with a "Search" button and a link to "Advanced Search". Below the header are tabs for "My Profile", "My Pages", "My Communities", and "Directory". The main content area shows "Colorado River Pilot > Home" and a "Home" link. There are also links for "Unsubscribe from this community", "Create Page", and "Edit Page".

The main content area is divided into two portlets:

- NADMDataViewer Portlet:** This portlet contains a map of the United States with a blue dot indicating a station location in the western United States. Below the map are several dropdown menus and a checkbox for filtering data:
 - Select State: Select State...
 - Select Start Year: 1980
 - Select End Year: 2008
 - Parameter: Select a variable...
 - 2nd Parameter: Select a variable... (optional)
 - Long Term Mean?A "View Graph" button is located at the bottom of the portlet.
- MultiGraph Portlet:** This portlet is currently empty.



Multi Graph Prototype

The screenshot displays a web browser window titled "Colorado River Pilot - Mozilla Firefox" with the URL http://ndis-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205. The page features a navigation menu with options like "Administration", "My Account", "Help", and "Log Off". A search bar is set to "Everywhere" with a "Search" button and a link to "Advanced Search". Below the navigation, there are tabs for "My Profile", "My Pages", "My Communities", and "Directory". The main content area shows "Colorado River Pilot" and "Home" tabs, along with a "Welcome, Jason.Symonds" message and "Unsubscribe from this community" link. Two portlets are visible: "NADMDDataViewer Portlet" and "MultiGraph Portlet". The "NADMDDataViewer Portlet" contains a map of the eastern United States with a highlighted region in orange. Below the map, there are several form fields for data selection: "Select State: North Carolina", "Select Divisional Data: [checked] or Station Data [unchecked]", "Select Climate Division: Select Climate Division...", "Select Start Year: 1980", "Select End Year: 2008", "Parameter: Select a variable...", "2nd Parameter: Select a variable... (optional)", and "Long Term Mean? [unchecked]". The "MultiGraph Portlet" is currently empty.



Multi Graph Prototype

Colorado River Pilot - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://ndis-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205

My Profile My Pages My Communities Directory

Colorado River Pilot Home

Colorado River Pilot > Home | Unsubscribe from this community

Create Page Edit Page

NADMDDataViewer Portlet MultiGraph Portlet

Stations
Select a Climate Division from the Map or by Selecting from the List.

Select State: North Carolina

Select Divisional Data: or Station Data

Select Climate Division: SOUTHERN MOUNTAINS

Select Start Year: 2003

Select End Year: 2008

Parameter: Select a variable...

2nd Parameter: Palmer Hydrological Drought Index (optional)

Long Term Mean?
Palmer Z Index
Palmer Modified
SPI 1 Month
SPI 2 Month
SPI 3 Month
SPI 6 Month
SPI 9 Month
SPI 12 Month
SPI 24 Month

Done



Multi Graph Prototype

The screenshot shows a Mozilla Firefox browser window displaying the Colorado River Pilot community page. The browser's address bar shows the URL: http://nids-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205. The page features a navigation menu with options like 'My Profile', 'My Pages', 'My Communities', and 'Directory'. Below the navigation, there are links for 'Create Page' and 'Edit Page'. The main content area is divided into two portlets: 'NADMDataViewer Portlet' and 'MultiGraph Portlet'. The 'NADMDataViewer Portlet' contains a map of the Eastern United States with a blue and orange shaded region. Below the map, there are several dropdown menus and checkboxes for selecting data parameters and years. The 'MultiGraph Portlet' is currently empty.

Colorado River Pilot - Mozilla Firefox

File Edit View History Bookmarks Tools Help

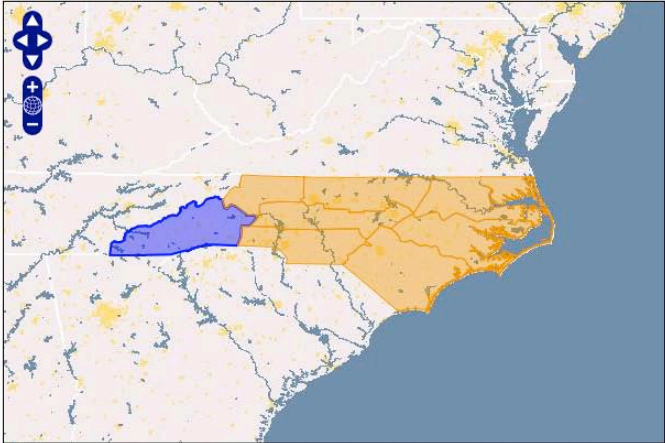
http://nids-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205 Google

My Profile My Pages My Communities Directory

Colorado River Pilot Home

Colorado River Pilot > Home | Unsubscribe from this community Create Page Edit Page

NADMDataViewer Portlet MultiGraph Portlet



Stations
Select a Climate Division from the Map or by Selecting from the List.

Select State: North Carolina

Select Divisional Data: or Station Data

Select Climate Division: SOUTHERN MOUNTAINS

Select Start Year: 2003

Select End Year: 2008

Parameter: Palmer Hydrological Drought Index

2nd Parameter: Palmer Z Index (optional)

Long Term Mean?

View Graph

Done



Multi Graph Prototype

The screenshot shows a Mozilla Firefox browser window displaying the NOAA National Climatic Data Center website. The browser title is "Colorado River Pilot - Mozilla Firefox" and the address bar shows the URL "http://nids-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205". The page has a navigation menu with "My Profile", "My Pages", "My Communities", and "Directory". Below the menu, there are links for "Colorado River Pilot" and "Home", and a "Create Page" / "Edit Page" button.

The main content area is divided into two portlets:

- NADMDataViewer Portlet:** Contains a map of the Eastern United States with a highlighted region in North Carolina. Below the map are search filters:
 - Stations: Select a Climate Division from the Map or by Selecting from the List.
 - Select State: North Carolina
 - Select Divisional Data: or Station Data
 - Select Climate Division: SOUTHERN MOUNTAINS
 - Select Start Year: 2003
 - Select End Year: 2008
 - Parameter: Palmer Hydrological Drought Index
 - 2nd Parameter: Palmer Z Index (optional)
 - Long Term Mean?
 - View Graph button
- MultiGraph Portlet:** Displays a line graph with two y-axes. The x-axis is labeled "Year/Month" and ranges from 2003 12 to 2007 12. The left y-axis is "Palmer Hydrological Drought Index" and the right y-axis is "Palmer Z Index", both ranging from -14.00 to 11.00. The graph shows two data series: a blue line with circular markers and a green line with triangular markers. Both series show seasonal fluctuations, with a notable peak in early 2004.

At the bottom of the browser window, a status bar indicates "Transferring data from nids-d.ncdc.noaa.gov..."



Multi Graph Prototype

The screenshot displays a web browser window titled "Colorado River Pilot - Mozilla Firefox" with the URL http://nids-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205. The page features a navigation menu with "My Profile", "My Pages", "My Communities", and "Directory". Below this, there are tabs for "Colorado River Pilot" and "Home". A search bar is present with the text "Everywhere" and a "Search" button. The main content area is divided into two panels: "NADMDataViewer Portlet" and "MultiGraph Portlet".

The "NADMDataViewer Portlet" shows a map of the Colorado River region with a highlighted area in orange and blue. Below the map, there are several dropdown menus and checkboxes for selecting data parameters and time periods:

- Select State: North Carolina
- Select Divisional Data: or Station Data
- Select Climate Division: SOUTHERN MOUNTAINS
- Select Start Year: 2004
- Select End Year: 2008
- Parameter: Palmer Hydrological Drought Index
- 2nd Parameter: Palmer Z Index (optional)
- Long Term Mean?

The "MultiGraph Portlet" displays a line graph with two y-axes. The left y-axis is labeled "Palmer Hydrological Drought Index" and ranges from -14.00 to 11.00. The right y-axis is labeled "Palmer Z Index" and ranges from -9.00 to 11.00. The x-axis is labeled "Year/Month" and shows data points from 1993 12 to 2005 12. The graph shows two data series: a blue line representing the Palmer Hydrological Drought Index and a green line representing the Palmer Z Index. Both series show significant fluctuations over the period shown.

At the bottom of the browser window, a status bar indicates "Transferring data from nids-d.ncdc.noaa.gov...".



Multi Graph Prototype

The screenshot displays the NOAA Colorado River Pilot website interface. The browser window title is "Colorado River Pilot - Mozilla Firefox". The address bar shows the URL: http://nids-d.ncdc.noaa.gov/portal/server.pt/community/colorado_river_pilot/205. The user is logged in as Jason Symonds. The page features a navigation menu with options like "My Profile", "My Pages", "My Communities", and "Directory". Below the navigation, there is a search bar and a "Create Page" / "Edit Page" link.

The main content area is divided into two portlets:

- NADMDataViewer Portlet:** Contains a map of the Colorado River basin. Below the map, there are selection options for "Stations", "State" (North Carolina), "Climate Division" (SOUTHERN MOUNTAINS), "Start Year" (2004), "End Year" (2008), "Parameter" (Palmer Hydrological Drought Index), "2nd Parameter" (Palmer Z Index), and "Long Term Mean?" (checked).
- MultiGraph Portlet:** Displays a dual-axis line graph. The x-axis is labeled "Year/Month" and ranges from 1993 12 to 2005 12. The left y-axis is labeled "Palmer Hydrological Drought Index" and ranges from -9.00 to 16.00. The right y-axis is labeled "Palmer Z Index" and ranges from -19.00 to 6.00. The graph shows two data series: a green line with markers representing the Palmer Hydrological Drought Index and a blue line with markers representing the Palmer Z Index.

At the bottom of the browser window, a status bar indicates: "Transferring data from nids-d.ncdc.noaa.gov..."



Summary

- NIDIS identified the need for leveraging web services early on
- It was reflected in the COTS solution acquired
- NIDIS utilizes existing web services to access relevant data
- NIDIS continues to develop web services in support of ongoing content and data integration
- NIDIS will be working with other upcoming projects to help them leverage work done and lessons learned – i.e. NCS

