Web Portal Usability Study for the Nevada Climate Change Portal

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Overview

1. Project Background
2. Project Goals
3. Standards
4. Measurements
5. Discussion
6. Acknowledgements

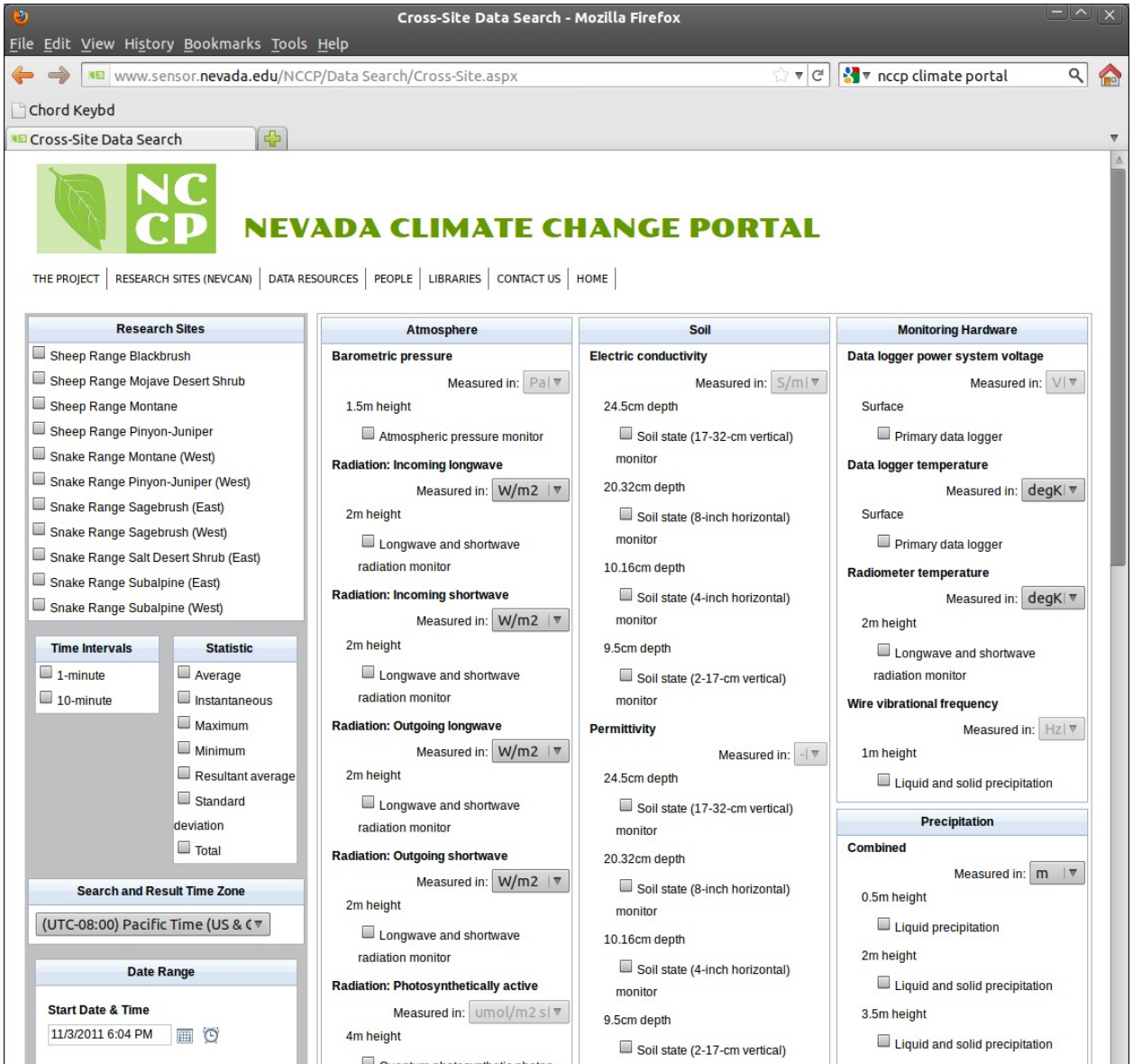
Project Background

Project Background

NCCP is a work by several people involved in the 2008-2013 NSF EPSCoR project.

Project Background

Provide data search and download to research scientists. In the future, provide education for the public.



Project Goals

1. Increase the accessibility of the Nevada Climate Change Portal (NCCP)
2. Evaluate the NCCP with respect to other portals
3. Enable the maintainability of the NCCP with regards to accessibility

Standards

1. Hardware and software accessibility overview
2. Compliance with World Wide Web Consortium (W3C) HyperText Markup Language (HTML) standards
3. Compliance with W3C Cascading Style Sheets (CCS) standards
4. Compliance with W3C standards for mobile web viewers
5. Disabled user accessibility overview
6. Compliance with W3C Web Content Accessibility Guidelines (WCAG)
7. Readability of the text

Hardware and Software Accessibility

Use Case	Platform				Display Size		
	Mac OS X	**Windows**	**BSD**	**Linux**	**Large**	**Small**	**Tiny (Mobile)**
Get Data	X	X	X	X	X		
Upload Data	X	X	X	X	X		
Search Data	X	X	X	X	X		
Read Article	X	X	X	X	X		
Watch Video	X	X	X	X	X		
Make Simulation	X	X			X		
Run Simulation	X	X			X		
View Sim. Results	X	X			X		

HTML and CSS Compliance

Site	HTML Valid?	Valid Pages	CSS Valid?	Error Count
Portal A	Y	83%	Y	0
Portal B	N	0%	Y	0
Portal C	N	0%	N	22
Portal D	N	0%	N	92
Portal E	N	0%	N	41
NCCP	Y	75%	N	1

Mobile Web Compatibility

Site	Failures Critical	Failures Severe	Failures Medium	Failures Low
Portal A	0	3	4	3
Portal B	1	3	2	6
Portal C	3	5	2	4
Portal D	0	1	1	7
Portal E	3	3	0	4
NCCP	1	0	1	5

Disabled User Accessibility Overview

Use Case	User			
	Abled	**Visually Disabled**	**Blind**	**Computer Script**
Get Data	X			
Upload Data	X			
Search Data	X			
Read Article	X			
Watch Video	X			
Make Simulation	X			
Run Simulation	X			
View Simulation Results	X			

Web Content Accessibility Guidelines Compliance

Site	WCAG 1.0 Priority 1	Priority 2	Priority 3
Portal A	0	9	2
Portal B	3	16	2
Portal C	0	3	5
Portal D	0	2	1
Portal E	0	58	0
NCCP	0	34	1

Readability Evaluation

Site	CSS Color Contrast	Gunning Fog Ease	Flesch Reading Ease	Flesch-Kincaid Grade
Portal A	Y	10	40	9
Portal B	N	14	33	11
Portal C	N	8	45	7
Portal D	N	11	51	7
Portal E	Y	14	28	11
NCCP	N	13	36	9

Color Contrast

Test 4 Sites
India Environment Portal
Climate Change Scenarios GIS Portal
Georgia Coastal Ecosystems
NOAA Climate Data Center

Discuss Results

India Environmental Portal

Managed by the Centre for Science and Environment | Promoted by the Na

India Environment Portal
KNOWLEDGE FOR CHANGE

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Search

Browse by subject

- Environment
- Water Pollution
- Air Pollution
- Forests
- Land
- Agriculture
- Animal Care
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- Mining
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- Dams/ Irrigation
- Fisheries
- Atmosphere And Ozone Layer

SPECIALS

System of green clearances not working for environment and people

This new study by Centre for Science and Environment finds unprecedented scale of clearances being given by the Ministry of Environment & Forests (MoEF) to industrial projects from 2007 till August 2011.

Tags: Environment, Industry, EIA, MoEF, CSE, Mining, Coal, Cement Industry, Forests

See Also

- In-Parliament: Clearance to projects.
- In-Parliament: Environmental clearance to coal projects. August 2011.
- Report: High powered committee on statutory clearances.
- Report: Statutory clearances for industrial projects in India.
- Letter: CSE's letter to PC and comments on the report of expert group.
- Notification: EIA notification 2009.
- Report: ToR for EIA report for projects requiring environmental clearance.
- Report: Environmental Pollution Index.

FOREST & ENVIRONMENT CLEARANCES

Problems for economic growth or

Daily Ne

Delhi Metro gets UN ce
Source: Hindu (New Delhi)
Tags: Delhi Metro Rail Cor
House Gases, Pollution, Cl
(CDM), Kyoto Protocol, Mu
Transport, Vehicles, Energ

Indian People's Tribuna
Source: Daily News Analy
Tags: Jaitapur, Nuclear Po
Impact Assessment (EIA),
People, Maharashtra

Climate change to affe
Source: Indian Express (C
Tags: CSE, Sunita Narain,
NGO, Pollution, Sustainabl
Hydroelectricity, Himachal

India Environmental Portal

Both color difference and color brightness **do not** meet the recommended standard for *1%* of the total text.

(invisible text)

Climate Change Scenarios GIS Portal

Getting Started: Welcome!

Welcome to NCAR's GIS Initiative Climate Change Scenarios GIS data portal. This portal is intended to serve a community of GIS users interested in climate change. The free datasets of climate change projections can be viewed on-line and/or downloaded in a common GIS (shapefile) or text file format. Many 2D variables from modeled projected climate are available for the atmosphere and land surface. These climate change projections were generated by the NCAR Community Climate System Model, or CCSM, for the 4th Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

New:

- In addition to global CCSM climate projections, downscaled projections of monthly mean temperature and total precipitation for the contiguous United States are now available. The downscaled dataset was produced using a statistical downscaling method.
- Climate change projections from the Community Climate System Model (CCSM-3) are generated on a Gaussian grid, which is commonly used in scientific modeling. With a Gaussian grid, each grid point can be uniquely accessed by one-dimensional latitude and longitude arrays (i.e. the coordinates are orthogonal). In the CCSM model output, distributed here, the longitudes are equally spaced at 1.40625º, while the latitudes vary in spacing from 1.389º to 1.400767º. Due to irregular nature of the gridded CCSM model output this portal distributes the datasets in a point shapefile format, where each point represents a centroid of a corresponding CCSM grid cell. To more accurately represent a continuous surface of global climate, we are providing a global /polygon /dataset for use with the CCSM modeled climate projections. This polygon layer was derived using the 4 corner coordinates, based on latitude and longitude, for each grid cell of the CCSM outputs. This creates irregular, rectangular polygons, as in a Gaussian grid of the original model output. Click here for more information.
- A tutorial on how to analyze climate projections from the CCSM in a GIS is now available. In this demonstration, we compare model output of a present-day climate simulations with future climate projections. To download the tutorial, click here.

To access data, you must register, login and accept data disclaimer. Please read data disclaimer carefully.

Thank you for visiting GIS Climate Change Scenarios website. This GIS portal is complimentary to other IPCC data distributing portals (e.g., Program for Climate Model Diagnosis and Intercomparison (PCMDI), and the Earth System Grid (ESG)), where complete data archive is available in common atmospheric data formats

Climate Change Scenarios GIS Portal

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Climate Change Scenarios GIS Portal

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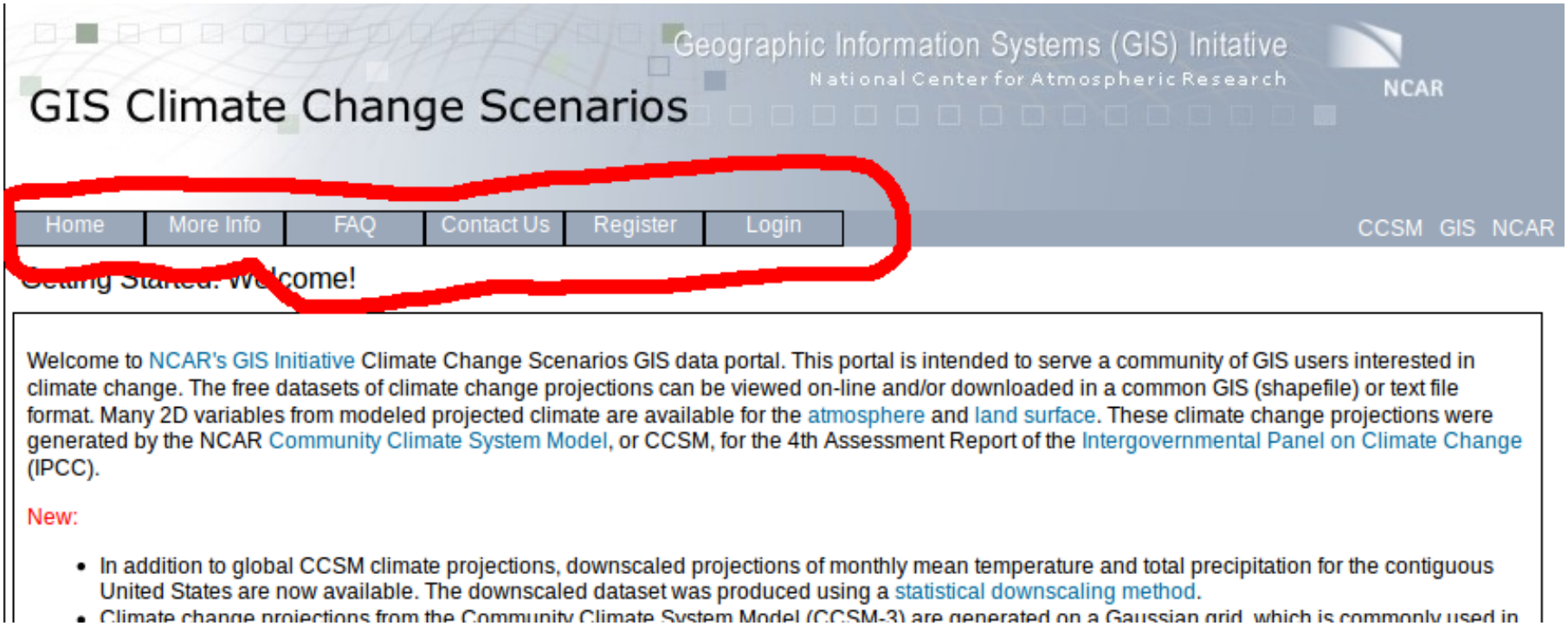

Georgia Coastal Ecosystems

Georgia Coastal Ecosystems LTER

Member of the NSF Long Term Ecological Research Network




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Data File Formats

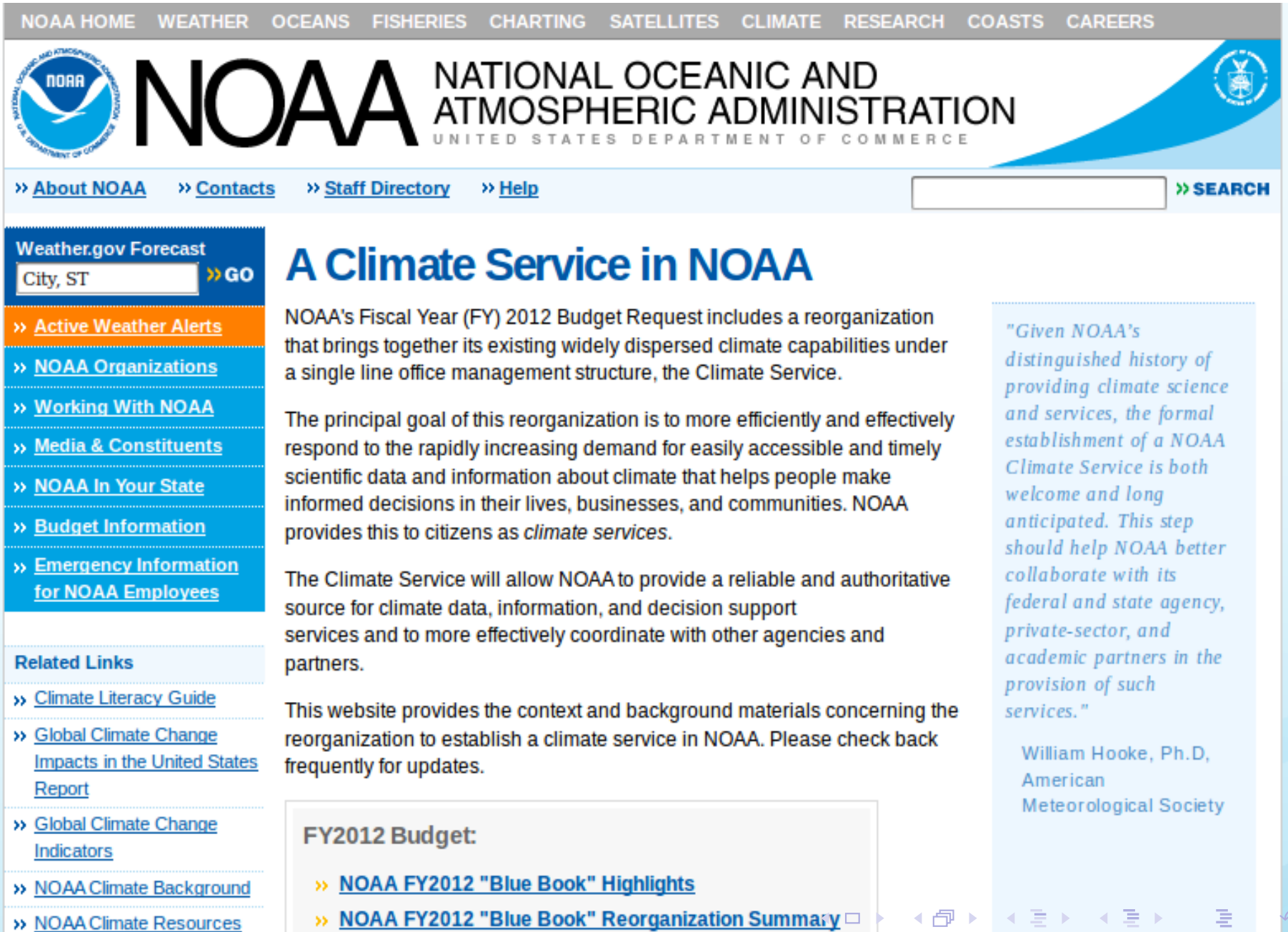
All data sets are provided in multiple file formats to suit various end-user requirements and software capabilities. The list below summarizes the main features of these formats and recommendations for common types of software.

- **Spreadsheet (CSV Text)** format (*.csv)
  - comma-delimited text file, containing a minimal file header listing the title, column names, column units, and column variable types (the metadata is provided separately - see below)
  - recommended for users of spreadsheet and database applications
- **Metadata for Spreadsheet** (*-meta.txt)
  - text files containing complete metadata only (no data table or statistics)
  - these files provide metadata for the corresponding ***.csv*** file (which only includes basic column descriptions)
  - metadata files can also be used to preview metadata stored in **.mat** and **.rpt** files prior to downloading the data (provided the file format descriptors are ignored)
- **Tab-delimited Text Report** format (*.rpt)
  - conventional text file containing a complete metadata header followed by a tab-delimited data table and one or more tab-delimited statistical reports
  - recommended for users of word processor and spreadsheet programs
- **GCE Data Toolbox** format (*.mat)
  - MATLAB files with data in GCE Data Structure format
  - recommended for MATLAB users who have downloaded the GCE Data Toolbox program
- **Standard MATLAB (variables)** format (*_vars.mat)

Georgia Coastal Ecosystems

0 Errors

NOAA Climate Data Center



NOAA HOME WEATHER OCEANS FISHERIES CHARTING SATELLITES CLIMATE RESEARCH COASTS CAREERS

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

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Weather.gov Forecast
City, ST » GO

» Active Weather Alerts
» NOAA Organizations
» Working With NOAA
» Media & Constituents
» NOAA In Your State
» Budget Information
» Emergency Information for NOAA Employees

Related Links
» Climate Literacy Guide
» Global Climate Change Impacts in the United States Report
» Global Climate Change Indicators
» NOAA Climate Background
» NOAA Climate Resources

A Climate Service in NOAA

NOAA's Fiscal Year (FY) 2012 Budget Request includes a reorganization that brings together its existing widely dispersed climate capabilities under a single line office management structure, the Climate Service.

The principal goal of this reorganization is to more efficiently and effectively respond to the rapidly increasing demand for easily accessible and timely scientific data and information about climate that helps people make informed decisions in their lives, businesses, and communities. NOAA provides this to citizens as *climate services*.

The Climate Service will allow NOAA to provide a reliable and authoritative source for climate data, information, and decision support services and to more effectively coordinate with other agencies and partners.

This website provides the context and background materials concerning the reorganization to establish a climate service in NOAA. Please check back frequently for updates.

FY2012 Budget:
» NOAA FY2012 "Blue Book" Highlights
» NOAA FY2012 "Blue Book" Reorganization Summary

"Given NOAA's distinguished history of providing climate science and services, the formal establishment of a NOAA Climate Service is both welcome and long anticipated. This step should help NOAA better collaborate with its federal and state agency, private-sector, and academic partners in the provision of such services."

William Hooke, Ph.D, American Meteorological Society

NOAA Climate Data Center

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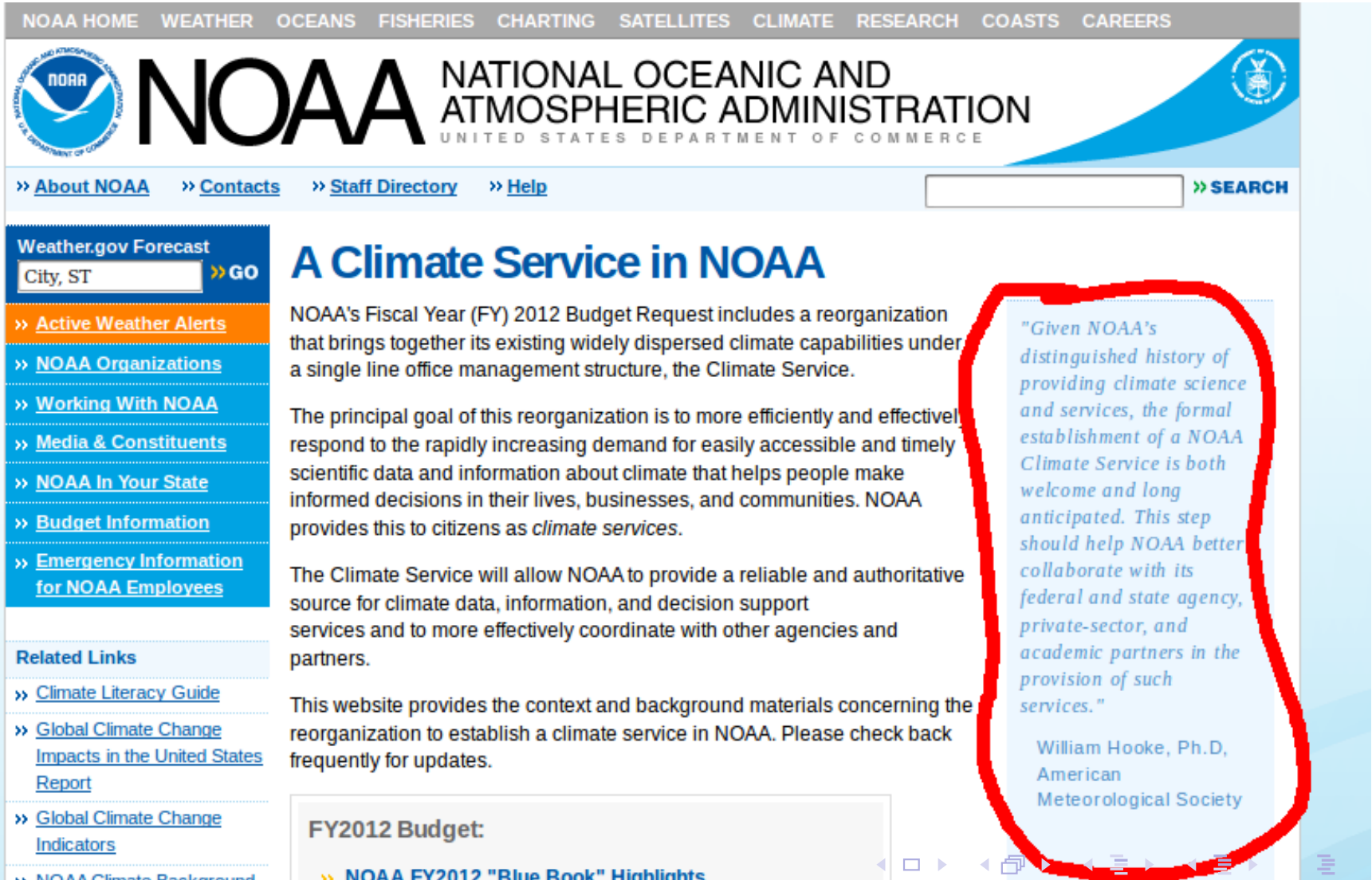
NOAA Climate Data Center

74% Error Rate



Competitive Comparison

Site	Download Data?	Multiple Formats?	Data Search?
Portal A	Y	Y	Y
Portal B	Y	Y	Y
Portal C	Y	Y	Y
Portal D	Y	Y	N/A
Portal E	N	N/A	N/A
NCCP	Y	Y	Y

Statistical Comparisons

Site	Size	Page Count	Data Path Length
Portal A	2600 M	4000	2
Portal B	0.6 M	10	3
Portal C	20000 M	1500	3
Portal D	3 M	20	1
Portal E	400 M	300	2
NCCP	20 M	20	3

Pilot User Tests

Table: ASQ Results

	Mean	**Std Dev**	**Min**	**Max**
Q1	5.1	1.7	2	7
Q2	5.5	1.7	2	7
Q3	5.2	2.0	2	7

Pilot User Tests

Table: SUS Results

	Mean	**Std Dev**	**Min**	**Max**
Q1	3	1.2	1	4
Q2	2.8	1.5	1	5
Q3	2.8	1.5	1	5
Q4	1.5	0.5	1	2
Q5	3.5	1.1	1	5
Q6	1.5	0.5	2	2
Q7	3.5	0.9	1	4
Q8	2.5	1.5	2	5
Q9	3.5	0.9	1	4
Q10	1.8	0.8	1	3

Pilot User Tests

Table: AAI Results

	Lower Education Level	**Higher Education Level**
Q1		low value
Q2		
Q3	sunny	rainy
Q4		
Q5	scientist	
Q6		

Acknowledgements

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