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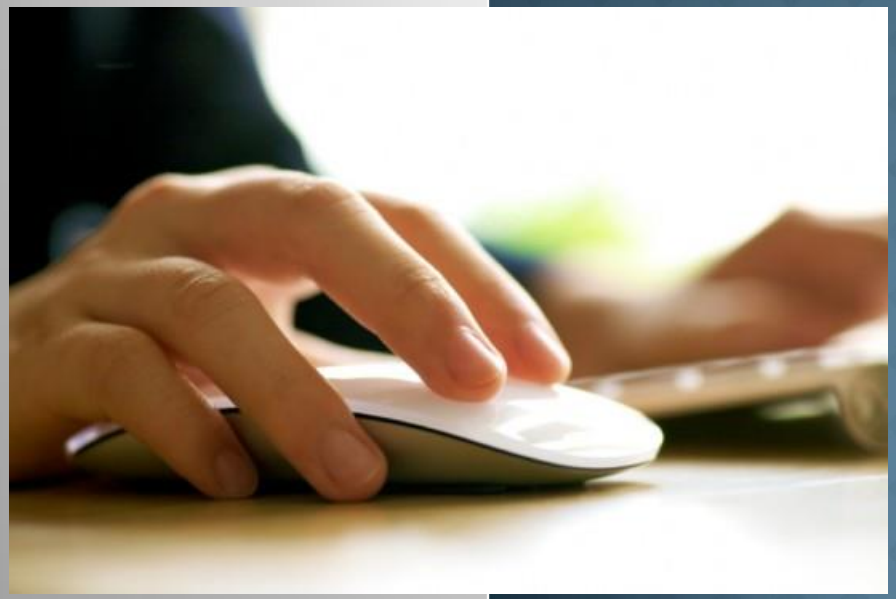
SCIENCEBASE DATA RELEASE LANDING PAGES USABILITY STUDY



Madison Langseth

November 2016

Slides prepared by Nina Chkhenkeli

2015 Hydrologic and soil data collected in limestone cedar glades at Stones River National Battlefield, Tennessee

Go to ▾ View ▾

This collection of geospatial datasets includes 16 point feature class files and associated FGDC-compliant metadata representing data collected in 2012 and 2013 as part of a study of the hydrology and soil biology of limestone cedar glades. Data was collected at quadrat locations within 12 study glades at Stones River National Battlefield outside Murfreesboro, Tennessee. The ground surface was characterized by assessing quadrat percentages of gravel, cobbles, flagstones, bare soil, exposed bedrock, graminoids, forbs, shrubs, trees, lichens, and Nostoc cyanobacteria. Canopy coverage was estimated using zonal analysis of digital photographs. Observations of soil water content were made using portable time-domain reflectometry (TDR) probes and by collecting soil samples for thermogravimetric analysis. Temperature and relative humidity were measured at the ground surface and soil temperature was measured at 4 cm depth. Soil respiration (Co2 efflux) was measured with a Li-Cor Infrared Gas Analyzer. Precipitation values were spatially interpolated based on precipitation measurements from four rain gages installed at Stones River National Battlefield. Soil samples were collected for laboratory analysis of soil pH, soil organic matter as determined by loss-on-ignition, and soil nitrate levels. Additionally, soil samples were used to perform plate-dilution frequency assays (to generate a most probable number of culturable heterotrophic microbes per gram of dry soil) and were inoculated onto BiologTM EcoPlates (to derive substrate utilization profiles for soil microbial communities). Based on community level physiological profiling (CLPP), average well color development (AWCD) was calculated as an overall indicator of

... show more ...

Map

- View in Interactive Mapper

Communities

- USGS Data Release Products
- USGS Lower Mississippi-Gulf Water Science Center

Related Items

Parent Item

USGS Lower Mississippi-Gulf Water Science Center

Child Items : (16)

- Average Well Color Development (AWCD) data based on Community Level Physiological Profiling (CLPP) of soil samples from 120 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee
- Ground-surface characterization data for 150 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee
- Ground-surface temperature data for 120 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee
- Interpolated precipitation data (first interval) for 120 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee
- Interpolated precipitation data (second interval) for 120 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee
- Plate Dilution Frequency Assay (PDFA) data for soil samples from for 120 point locations within limestone cedar glades at Stones River National Battlefield near Murfreesboro, Tennessee

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CORE UX ISSUES WITH LANDING PAGES BASED ON THE USABILITY TEST & HEURISTIC PRINCIPLES

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1) "CLUTTERED" SCREEN LAYOUT= UNNECESSARY COGNITIVE LOAD

In the words of test participants:

- Too many words
- Hard to focus
- Very lengthy descriptions
- Abstract info is too detailed
- Save details for later
- Too many elements on the page presented like they all have equal importance

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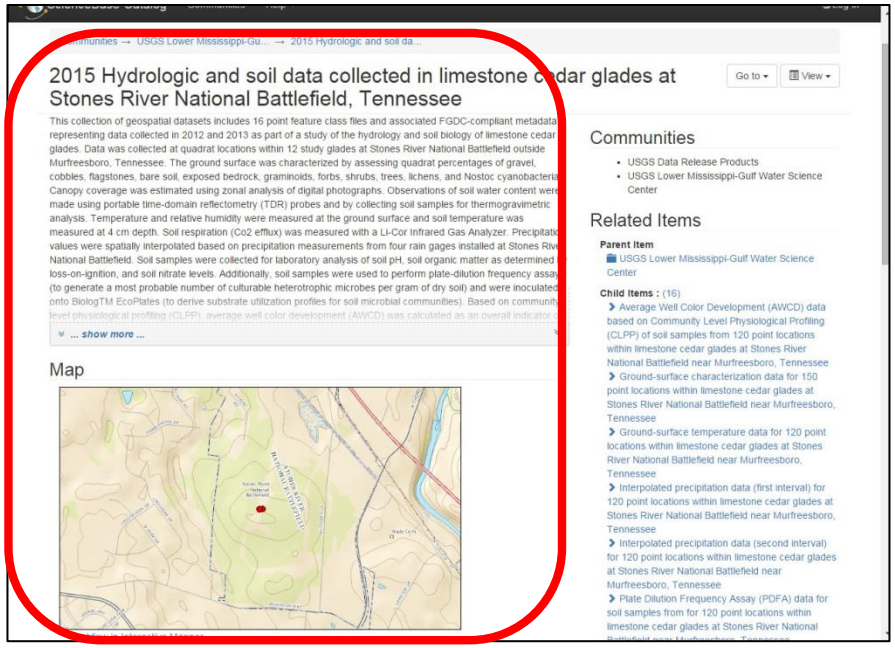
2) WHERE IS THE DATA? RELATED ITEMS VS. ATTACHED FILES

- Participants tended to focus on the left-side column as the container for most important, primary information

Heuristic Principle: Consistency & standards



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3) NON-DESCRIPTIVE, GENERIC LABELING

Heuristic Principle: Match between system & real world

- Related Items does not convey the meaning of the content grouping:
  - Related in what sense? By what criteria?
  - How closely related? Sounds a little too remote for child items that are part of the study, described in the project-level landing page.
- Attached files vs Related Child Items – both answer to the question "where can I find the data" associated with the parent item
  - Download All – only attached
  - "Download" is a "trigger" word, a keyword matching mental schema of users, users scan text for this word when they search for data on a screen
- Map – too generic, it's not "a random map"
- Provenance - Item History
  - Item provenance vs data provenance
- Alternative Formats – only for the current record not for the metadata of the dataset attached.

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4) MAP FUNCTIONALITY

Heuristic Principle: Aesthetic & minimalist design

- Visually map is competing (and winning) with Related Items list
- It is placed too prominently for an element that provides so little value to the understanding of the data release
- Participants expected the map to be interactive
- Users who clicked on *View interactive map* were disappointed as it was of little help as well:
  - no legend;
  - data points are not clickable;
  - no additional information provided on each of them.

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RECOMMENDATIONS

- Reduce the “noise” in text and features.
- Re-arrange content buckets in accordance with their importance (informational value) and the eye-tracking patterns.
- Make labels more descriptive, less generic.
- Find a way to present nested items within one release/collection more prominently and facilitate navigation between child and parent items.
- More clarity and consistency in formatting.

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LANDING PAGE MOCKUP

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ScienceBase-Catalog Communities Help ▾ Log in

System › USGS Data Release Products › ... Airborne Geophysical...

Airborne Geophysical Surveys over the 2011 Mineral, Virginia, Earthquake Area

Go to View as

Dates

Publication date: 2014-11-24

Citation

Shah, A., 2014, Airborne Geophysical Surveys over the 2011 Mineral, Virginia, Earthquake Area: US Geological Survey Data Release, http://dx.doi.org/10.5066/F78K773V.

Items in this release

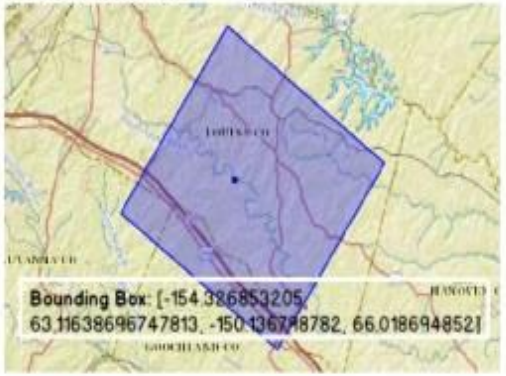
- Airborne Geophysical Surveys over the 2011 Mineral, Virginia, Earthquake Area
  - Background Information and Analysis Results
  - Gravity Data
    - Grid Files (grid exchange Format)
    - Image Files (GeoTiff and kmz)
    - Line Data (zipped csv file)
  - Magnetic Data
  - Radiometric Data
  - Survey Technical Report

Summary

The 2011 moment magnitude (Mw) 5.8 central Virginia earthquake was felt by millions of people and caused significant damage in the eastern United States. As part of efforts to better understand the faults and geologic features associated with the earthquake, the U.S. Geological Survey commissioned airborne geophysical surveys over the epicentral area. Here we present the data from those surveys and summarize research results based on those datasets.

Denali National Park, Photo credit: Drew Ignizio

Area of interest



SUGGESTED INFORMATION ARCHITECTURE

Breadcrumbs (maybe only to item view)

Title

Date

Citation

Items in this collection
Current labels Parent Item, Child Items

Summary
Currently this content bucket has no label
Collapsible field: "show more"/"show less" options

Contacts

Attached Files
Links to attached files

- *Make the columns with date stamp and file type invisible to those who are not logged in*
- *Replace word "Extension" in front of compressed shape files with words "Compressed shaped file"*
- *Add size of the compresses shape file for user convenience and consistency in the presentation of a downloadable file link.*
- *Ordering of the attached files – original metadata first, image(s) last.*

Collapsible field: "show more"/"show less" options

Related external resource

Purpose

Rights

Additional Information
Collapsible field: "show more"/"show less" options

Action Items
Use Item
View Item as (alternate formats)
Save Items as (alternate formats)

Image (optional)
At a click on the image, a secondary pop-up window with the enlarged image appears.

Area of interest
Current label Map
Map image, which opens an Interactive Mapper at a click (in a pop-up window or in a new tab). Link to Open Google *Earth (KML) is on the Interactive Mapper.*

Spatial services
Link to SB WMS etc.

Associated ScienceBase items
Current label Communities and Related Items
Link(s) to parent community(-ies) (folder view)
Link to earlier or newer releases from the same project/program

Tags

Item History
Current label Provenance

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Geospatial database of the study boundary, sampled sites, watersheds, and riparian zones developed for the U.S. Geological Survey Midwest Stream Quality Assessment

Go to View Manage

Citation

Nakagaki, N., Qi, S.L., Frey, J.W., Button, D.T., Baker, N.T., Burley, T.E., and Van Metre, P.C., 2016, Geospatial database of the study boundary, sampled sites, watersheds, and riparian zones for U.S. Geological Survey Midwest Stream Quality Assessment: U.S. Geological Survey data release, http://dx.doi.org/10.5066/F7CN7202.

Summary

In 2013, the first of several Regional Stream Quality Assessments (RSQA) was done in the Midwest United States. The Midwest Stream Quality Assessment (MSQA) was a collaborative study by the U.S. Geological Survey (USGS) National Water Quality Assessment (NAWQA), the USGS Columbia Environmental Research Center, and the U.S. Environmental Protection Agency (USEPA) National Rivers and Streams Assessment (NRSA). One of the objectives of the RSQA, and thus the MSQA, is to characterize the relationships between water-quality stressors and stream ecology and to determine the relative effects of these stressors on aquatic biota within the streams (U.S. Geological Survey, 2012). To meet this objective, a framework of fundamental geospatial data was required to develop physical and anthropogenic characteristics of the study region, sampled sites and corresponding watersheds, and riparian zones. This dataset is composed of the four fundamental geospatial data layers that were developed for the Midwest study: 1) study boundary, 2) sampled sites, 3) watershed boundaries, and 4) riparian-zone boundaries.

References cited:

Nakagaki, N., Qi, S.L., and Baker, N.T., 2016, Selected environmental characteristics of sampled sites, watersheds, and riparian zones for the U.S. Geological Survey Midwest Stream Quality Assessment: U.S. Geological Survey data release, http://dx.doi.org/10.5066/F77W699S.

U.S. Geological Survey, 2012, The Midwest stream quality assessment: U.S. Geological Survey Fact Sheet 2012-3124, 2 p.

Child Items (4)

- Riparian-Zone Boundaries for the U.S. Geological Survey Midwest Stream Quality Assessment
- Sampled Sites for the U.S. Geological Survey Midwest Stream Quality Assessment
- Study Boundary for the U.S. Geological Survey Midwest Stream Quality Assessment
- Watershed Boundaries for the U.S. Geological Survey Midwest Stream Quality Assessment

Map »

Spatial Services

ScienceBase WMS :

https://www.sciencebase.gov/catal

Communities

- USGS California Water Science Center
  - Remove
- USGS Data Release Products

Associated Items

Associate an Item

Tags

Types : Map Service, OGC WFS Layer, OGC WMS Layer, OGC WMS Service