

Reynolds Creek CZO Data Management



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History

- Reynolds Creek Experimental Watershed has been managed by the USDA-ARS Northwest Watershed Research Center since the 60s.
- There is a very large, and rich, body of data collected by the USDA.
 - Weather, climate, hydrology, soil, vegetation, grazing, etc.
- Steve VanVactor is the USDA data manager.
 - Time-series climactic data harvested daily via telemetry.
 - All data is QA/QC'ed, organized in SAS databases, and served via ftp (USDA, internally) or virtual directory (CZO, publicly) on the web.
 - Data is updated annually for the public, and more frequently as needed internally.
- Steve rocks at his job, and the USDA isn't going anywhere. There is no need to interfere in this operation.
- As such, CZO resources are best used to extend the USDA's operations at RCEW and to manage new, CZO-specific datasets.

<http://reynoldscreekczo.org>

- Virtual directories with USDA-ARS data.
- CZO databases
 - Time series data
 - Observation data
 - Metadata

<http://gis.reynoldscreekczo.org>

- Enterprise geodatabase/
GIS Server
 - Vectors
 - Rasters
 - Metadata

<http://info.reynoldscreekczo.org>

- Informational Wiki and data discovery interface

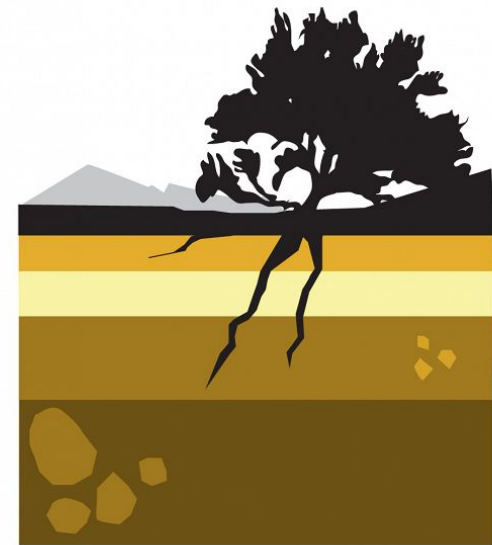
reynolds@isu.edu (Google Drive)

- Back-up workspace
- Collaborative environment for documents, preliminary datasets, literature, etc.

Our Best “Working” Resource: The Wiki

<http://info.reynoldscreekczo.org/dokuwiki/doku.php?id=start>

- Information
- Protocols
- Data
- Steve VanVactor, Sue Parsons, and Emma McCorkle currently edit it.
 - Everyone sees it.



Reynolds Creek
Critical Zone Observatory

Re: Data Discovery Websites

- CMS does a good job with providing a text search engine and cross-CZO data discovery.
 - <http://criticalzone.org/reynolds/data/datasets/>
- Data visualization portal is not useful.
 - <http://viz.criticalzone.org/Reynolds>
 - Submitted data layers months ago-but not included on this page.
 - Data managers cannot edit or directly contribute to this.
 - Wiki and Steve's Google Earth maps are our solution.
- Experimenting with ArcGIS Online to supplement Steve's Wiki resources.
 - <http://arcg.is/1GE9MQV>

Re: ODM2/YODA files...they are a good idea

- Reynolds Creek CZO is a good candidate for an ODM2 guinea pig, given the USDA support.
 - Long term datasets already being capably managed.
 - New, CZO-specific datasets as ODM2/YODA “proofs of concept.”
- Heavy on metadata-which we need to collect anyway.
- Help contribute to development of CZOData-sanctioned schema/data management practices.



But....YODA files are not working



- Excel templates are buggy.
 - See Nick's example (and GitHub example)
 - Limited support for trouble-shooting
 - Not very "human-readable."
- ODM2 database tools have not been developed and/or show-cased.
 - No incentive to stand-up our own ODM2 database.
 - Better to create a metadata database with a web interface.
 - Shifted focus to this.
 - Still ODM2/YODA compatible, if/when that becomes a parsimonious option.

Example of how NKN is leveraging metadata...

<https://nkn-dev.nkn.uidaho.edu/metadata>

- Something like this could work for creating YODA files and building a centralized ODM2 metadata database.

Edit Existing Create New Save Draft Load MILES Defaults Please fix errors to publish to NKN Portal

New Metadata Record:

Basic Information

Title
A brief description of your data; include 'what,' 'where,' and 'when'.
Examples:

- LIDAR data for Clear Creek Watershed, Idaho (2009)
- Water clarity for Lake Coeur d'Alene from IDEQ source data, Idaho (2005-2014)

Summary
Describe your data for someone who knows very little about your field of study. Be sure to include what the data set is, what variables it describes over what spatial extent, why it was created, and if there are any major use restrictions.
REMEMBER MANY PEOPLE MAY NOT READ PAST THIS DESCRIPTION.

Date (dataset)
What is the most recent date that the data was published or updated?
10/26/2015

Data Format Details

Data Format
In what formats are your data available for distribution? Use the command key (on a Mac) or the control key (on a PC) to select multiple categories.

ASCII
csv
DLG
docx
DRG
DWG
eps

Detailed Information

Place Keywords
List comma-separated keywords related to the geographic area covered by your data. Example: Idaho, Clear Creek Watershed, USA.

Thematic Keywords
List comma-separated keywords that will help others discover your data through an intuitive search. In addition to subject-based keywords, you may also want to include the grant numbers and funding sources associated with creation of the data. If you are part of an NKN-supported project and thematic keywords have been pre-loaded for you, please do NOT delete or modify these, simply add to the list.

Topic
Select as many of these high level categories as apply to your dataset. This is a set list of categories established by international standards. Use the command key (on a Mac) or the control key (on a PC) to select multiple categories.

biota
boundaries
climatology/Meteorology/Atmosphere
economy
elevation
environment

Update Status
What is the status of your dataset? For example, is it complete (you anticipate no further work and consider it final) or is it ongoing (continually being updated)?

Update Frequency
Please select the frequency with which changes (any modifications and deletions) are or will be made to your data after it is produced. Please select a value from below. Options are available if you do not plan to update your data or do not know the specific frequency of updates.

Data Type

Looking ahead....

- BSU is working on creating polished image services for their LiDAR
 - Once completed, these will be registered with the CMS.
- I'd like to compile a comprehensive list of discipline-specific repositories issuing DOIs, IGSNs, etc. (ie. SESAR, CUAHSI, OpenTopography).
 - Provide links/templates/guidance on submitting to these repositories.
 - Register those links with the CMS.
- Work with Steve at the USDA-ARS to enhance the Wiki's functionality to provide a metadata database-generating interface, similar to what the NKN has done.
- Explore using ArcGIS Online as a way to create and share visualizations with data download capability.
- Continue to work with graduate students, post-docs, and faculty to get complete metadata and datasets.