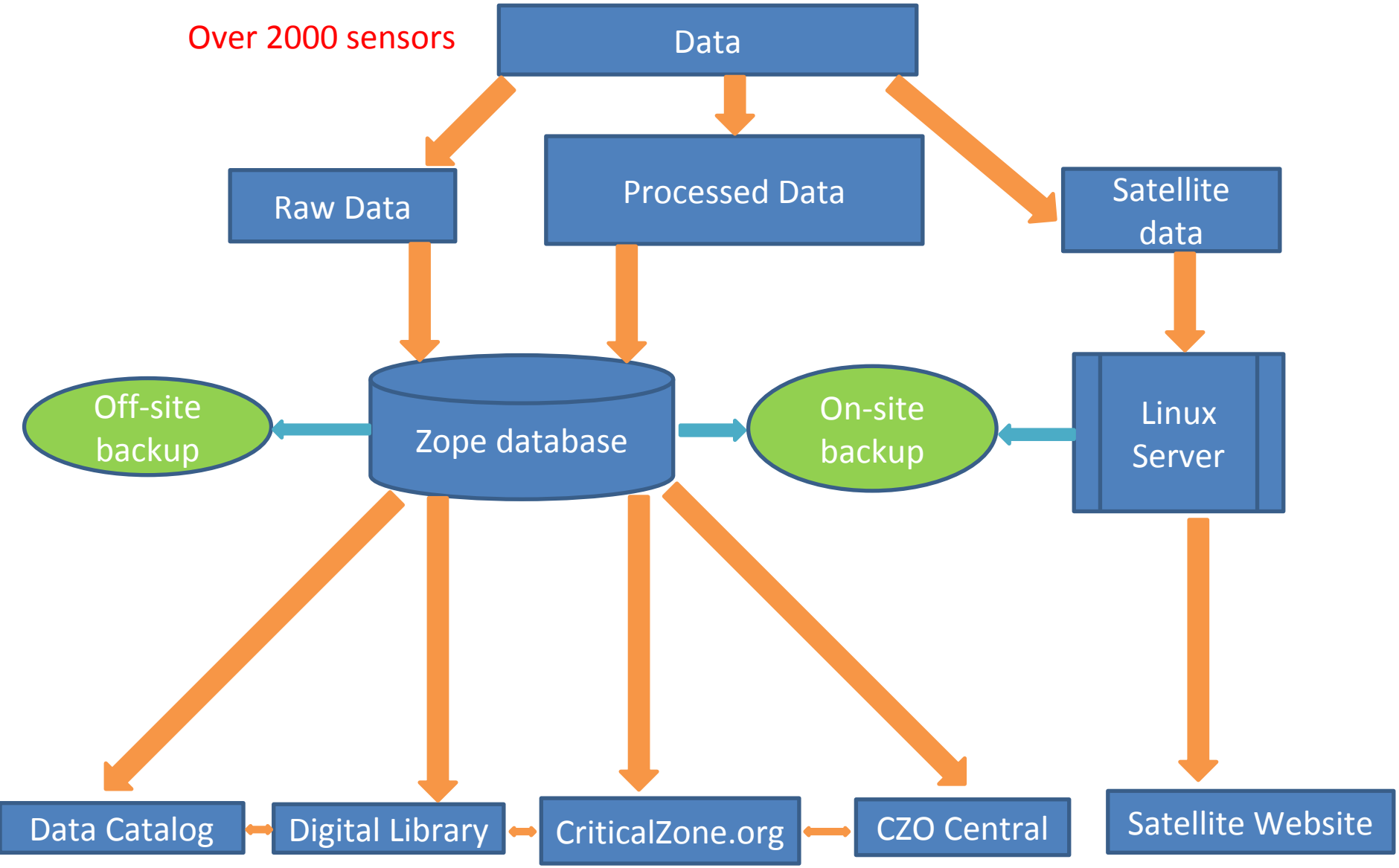
SSCZO Data Management

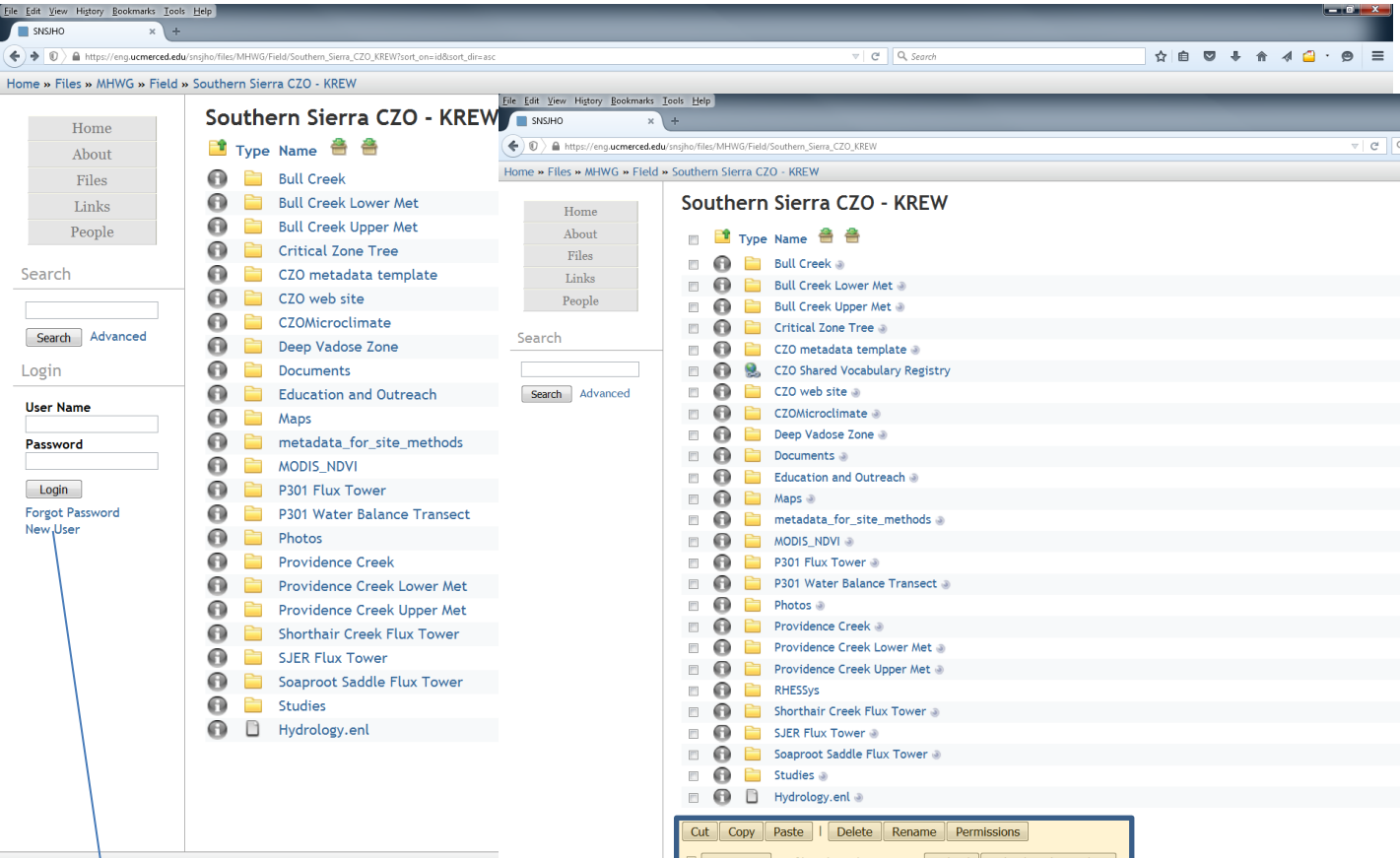
Data Management Infrastructure



SSCZO Digital Library

https://eng.ucmerced.edu/snsjho/files/MHWG/Field/Southern_Sierra_CZO_KREW

Before log in

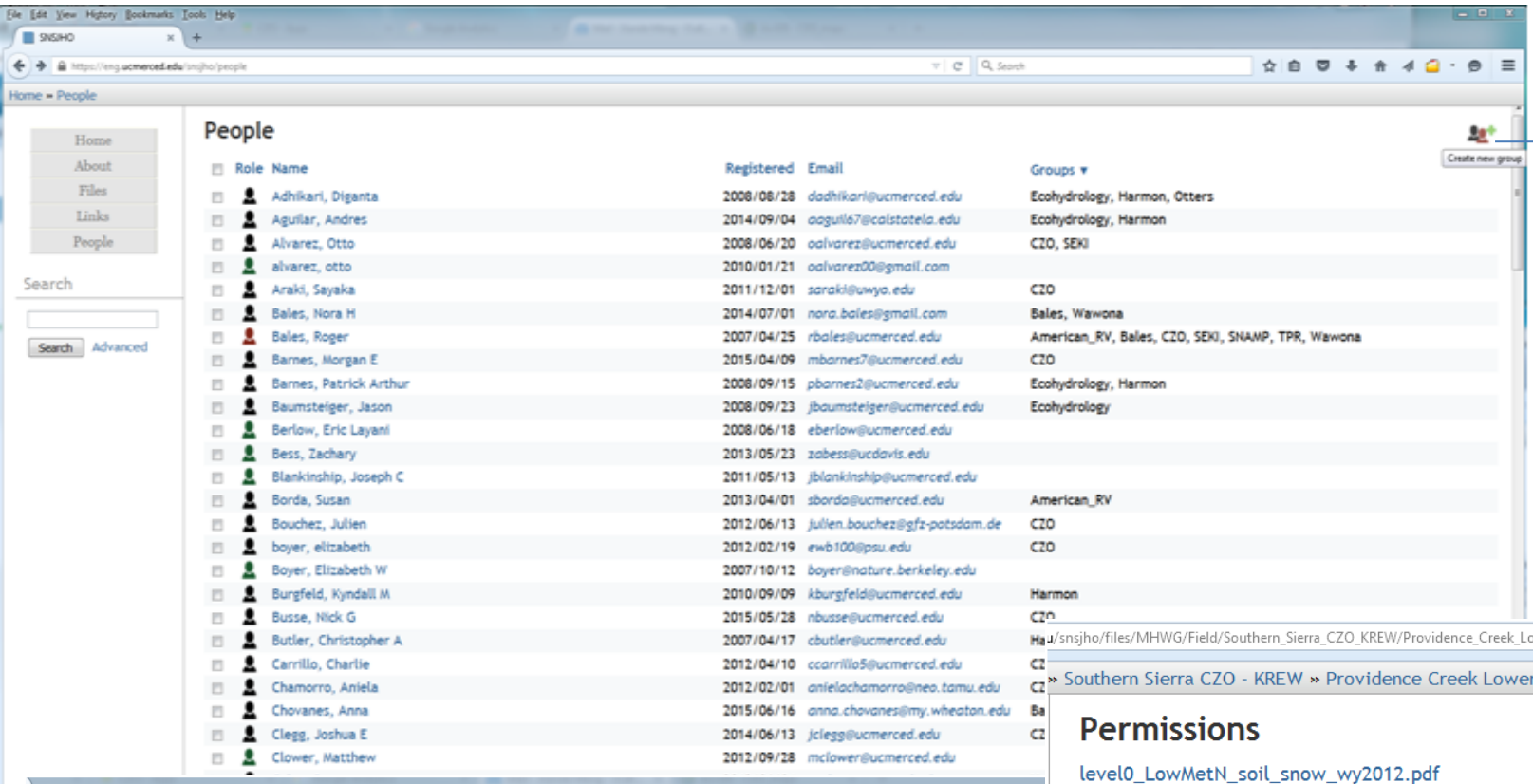


After

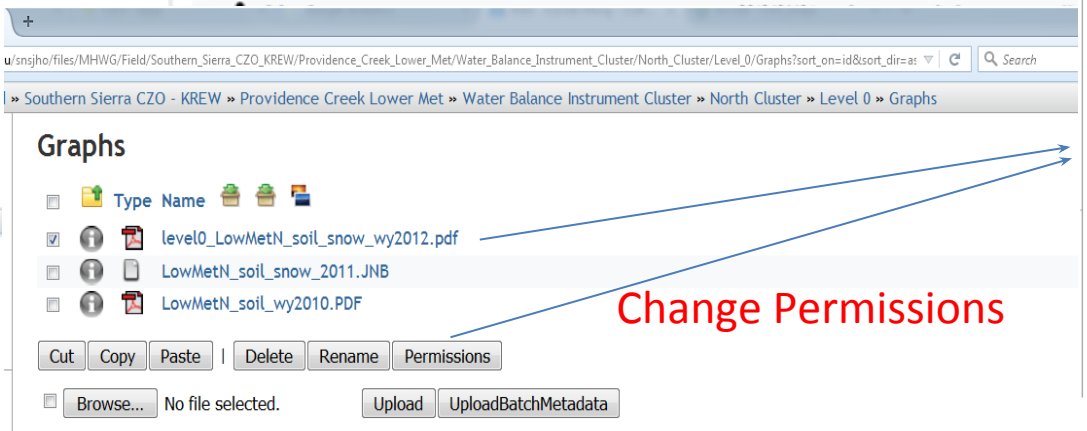
New User Registration

Upload New File(s), Edit and Move File(s)

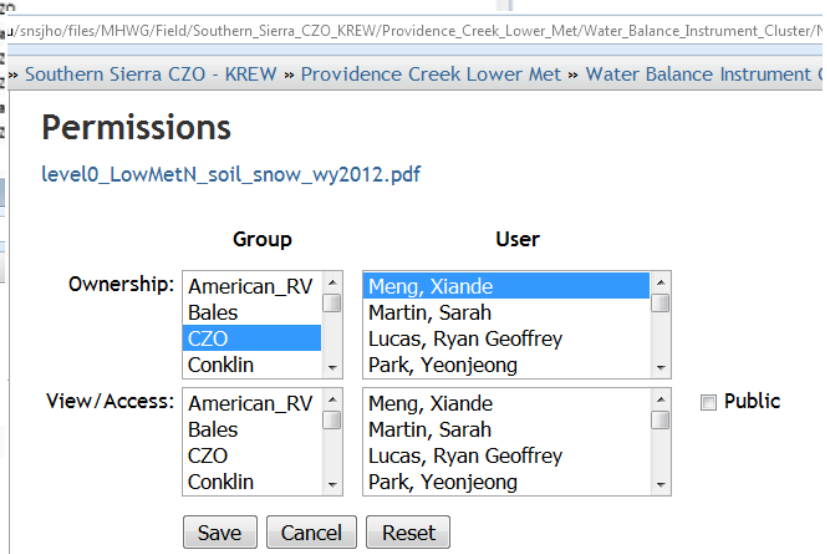
Data Sharing



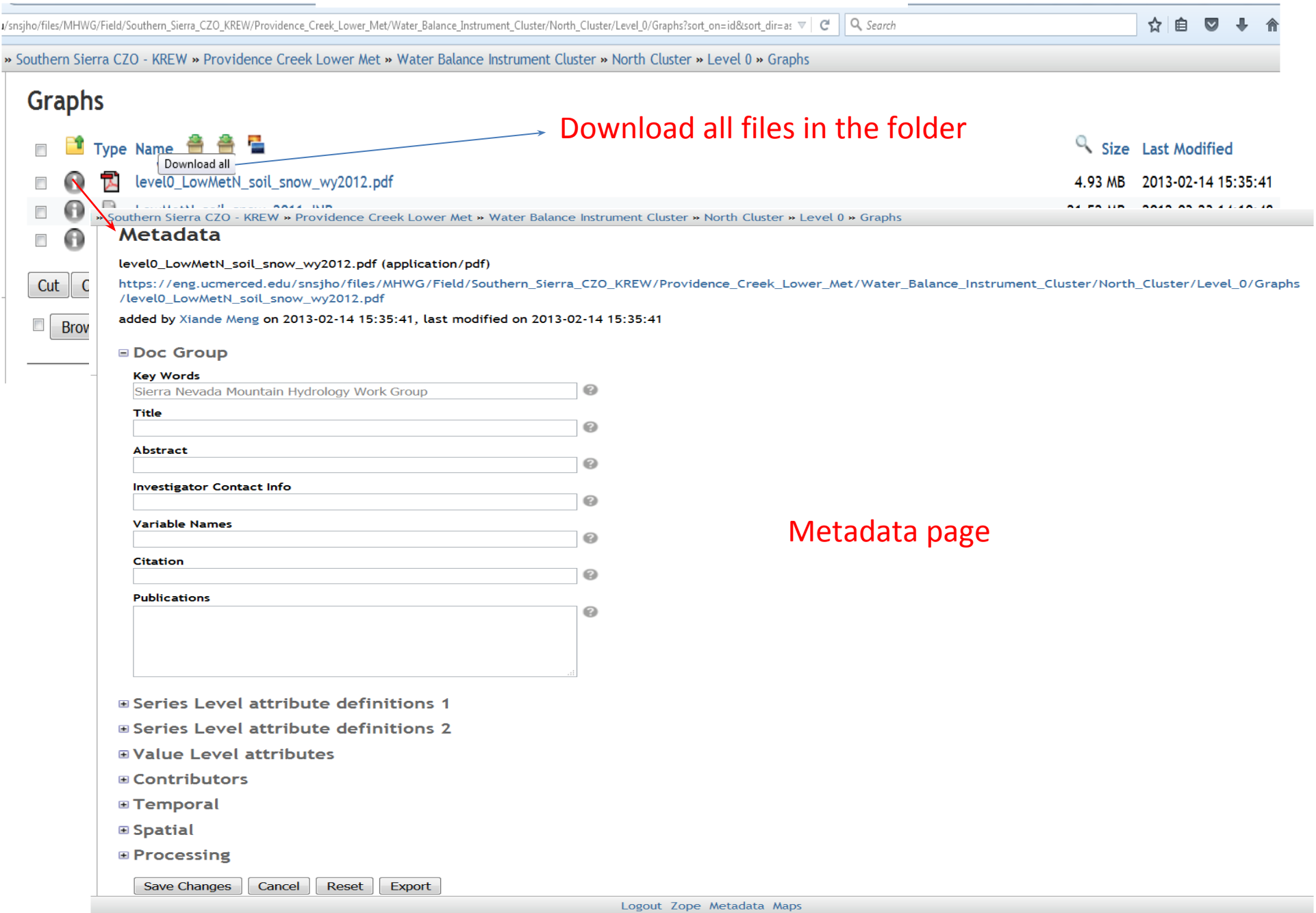
Create a New Group For Users



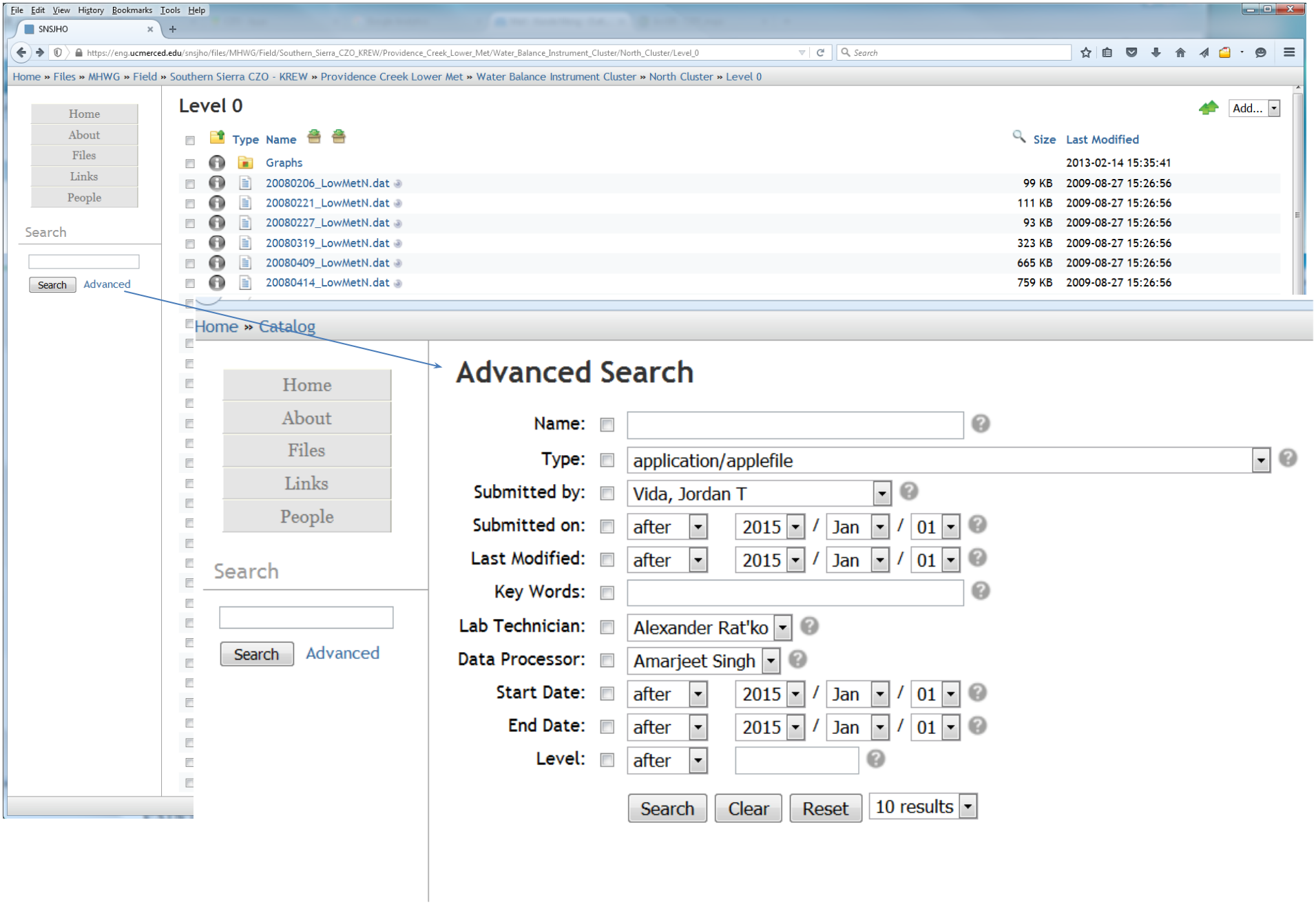
Change Permissions



Metadata and Tools



Search


File Edit View History Bookmarks Tools Help
SNSJHO
https://eng.ucmerced.edu/snsjho/files/MHWG/Field/Southern_Sierra_CZO_KREW/Providence_Creek_Lower_Met/Water_Balance_Instrument_Cluster/North_Cluster/Level_0
Search
Home » Files » MHWG » Field » Southern Sierra CZO - KREW » Providence Creek Lower Met » Water Balance Instrument Cluster » North Cluster » Level 0
Home
About
Files
Links
People
Search
Search
Advanced
Level 0
Add...
Type Name
Size
Last Modified
Graphs
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Advanced Search
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Vida, Jordan T
Submitted on:
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Key Words:
Lab Technician:
Alexander Rat'ko
Data Processor:
Amarjeet Singh
Start Date:
after
2015
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End Date:
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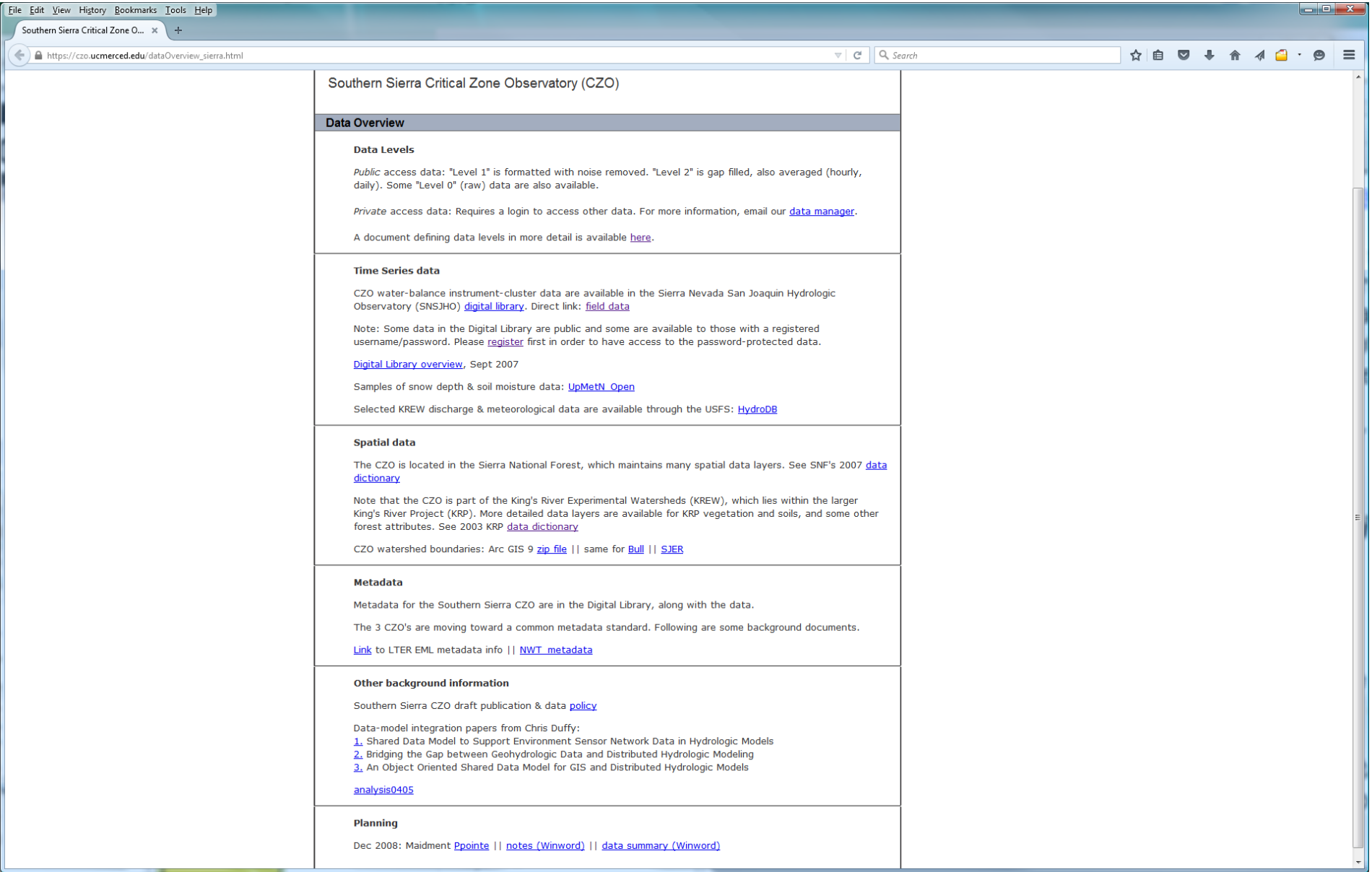
Level:
after
Search
Clear
Reset
10 results

Data Catalog



Southern Sierra Critical Zone Observatory (CZO)

Data Overview

Data Levels

Public access data: "Level 1" is formatted with noise removed. "Level 2" is gap filled, also averaged (hourly, daily). Some "Level 0" (raw) data are also available.

Private access data: Requires a login to access other data. For more information, email our data manager.

A document defining data levels in more detail is available here.

Time Series data

CZO water-balance instrument-cluster data are available in the Sierra Nevada San Joaquin Hydrologic Observatory (SNSJHO) digital library. Direct link: field data

Note: Some data in the Digital Library are public and some are available to those with a registered username/password. Please register first in order to have access to the password-protected data.

Digital Library overview, Sept 2007

Samples of snow depth & soil moisture data: UpMetN_Open

Selected KREW discharge & meteorological data are available through the USFS: HydroDB

Spatial data

The CZO is located in the Sierra National Forest, which maintains many spatial data layers. See SNF's 2007 data dictionary

Note that the CZO is part of the King's River Experimental Watersheds (KREW), which lies within the larger King's River Project (KRP). More detailed data layers are available for KRP vegetation and soils, and some other forest attributes. See 2003 KRP data dictionary

CZO watershed boundaries: Arc GIS 9 zip file || same for Bull || SJER

Metadata

Metadata for the Southern Sierra CZO are in the Digital Library, along with the data.

The 3 CZO's are moving toward a common metadata standard. Following are some background documents.

Link to LTER EML metadata info || NWT_metadata

Other background information

Southern Sierra CZO draft publication & data policy

Data-model integration papers from Chris Duffy:
1. Shared Data Model to Support Environment Sensor Network Data in Hydrologic Models
2. Bridging the Gap between Geohydrologic Data and Distributed Hydrologic Modeling
3. An Object Oriented Shared Data Model for GIS and Distributed Hydrologic Models

analysis0405

Planning

Dec 2008: Maidment Ppointe || notes (Winword) || data summary (Winword)

Photos/Images

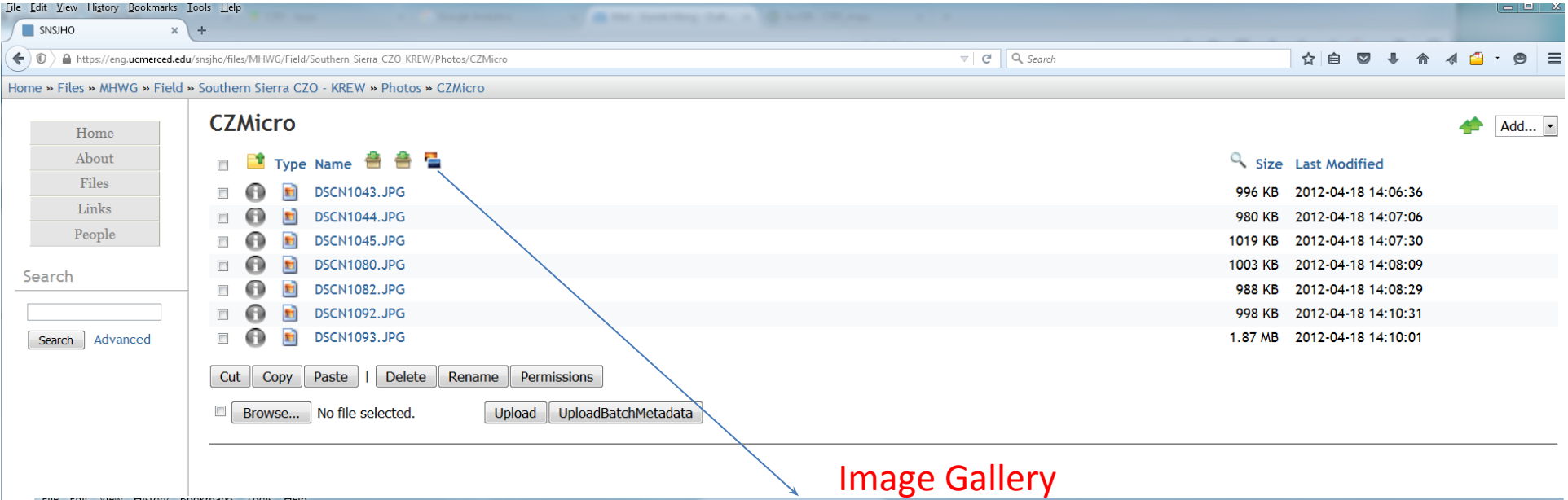
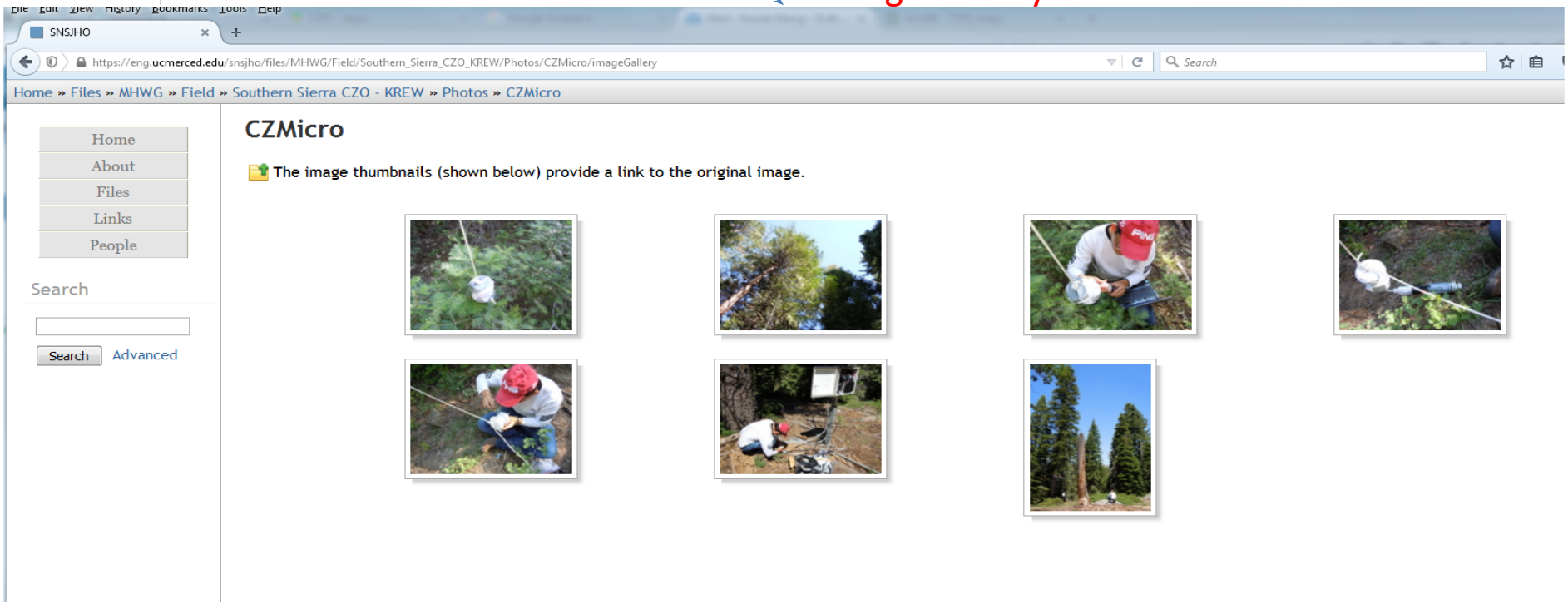
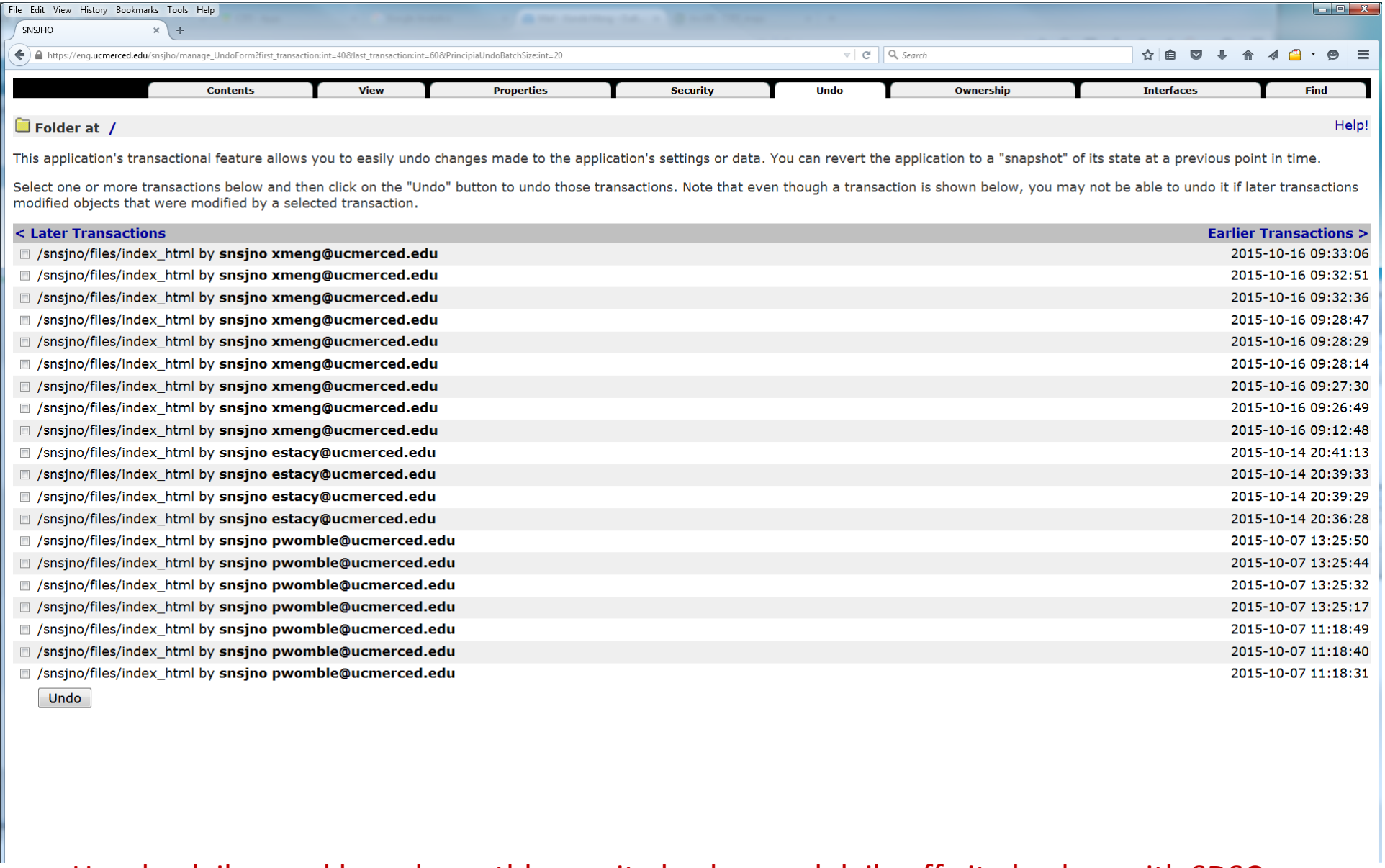


Image Gallery



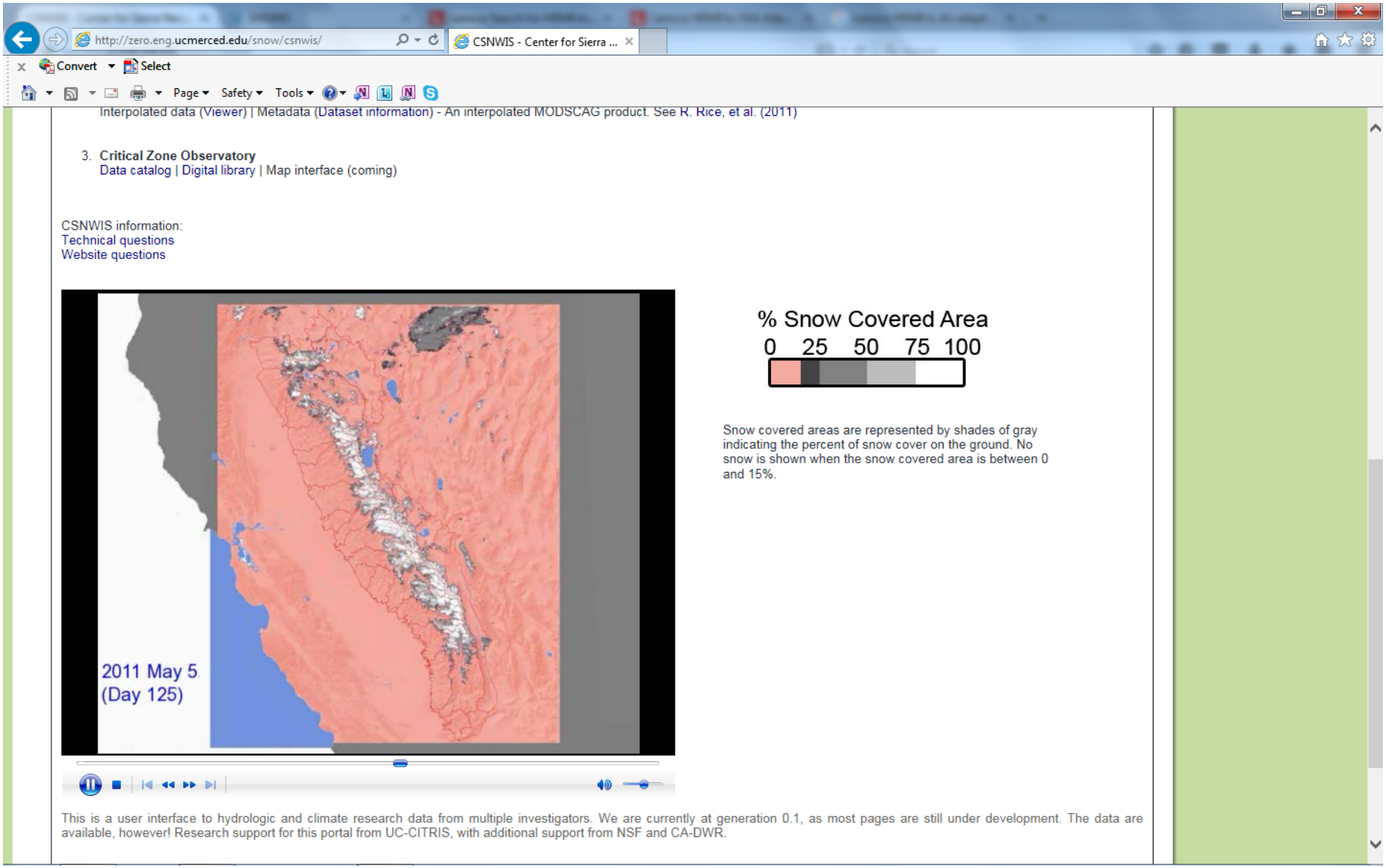
Data Recovery and Backup

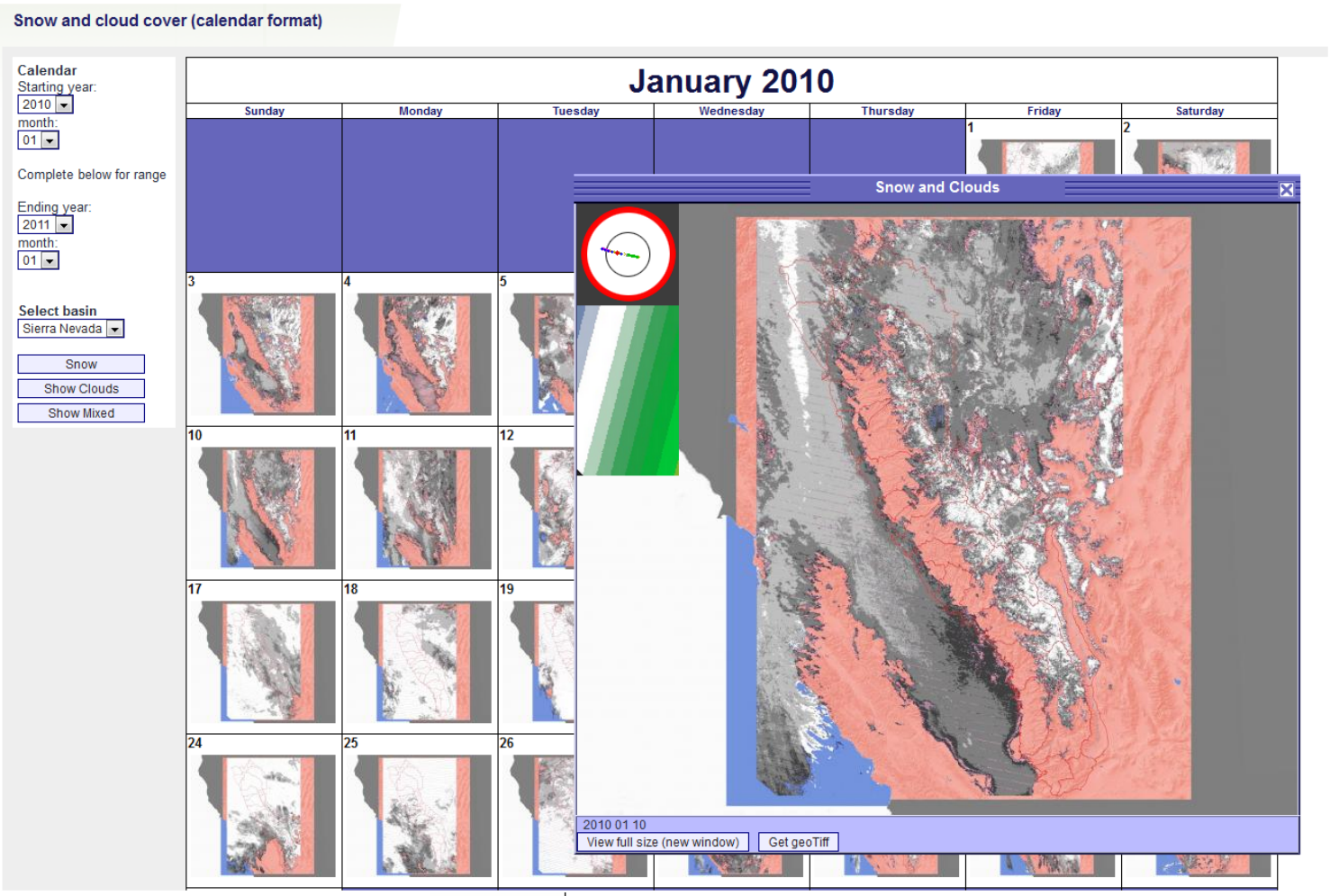


Hourly, daily, weekly and monthly on-site backup and daily off-site backup with SDSC

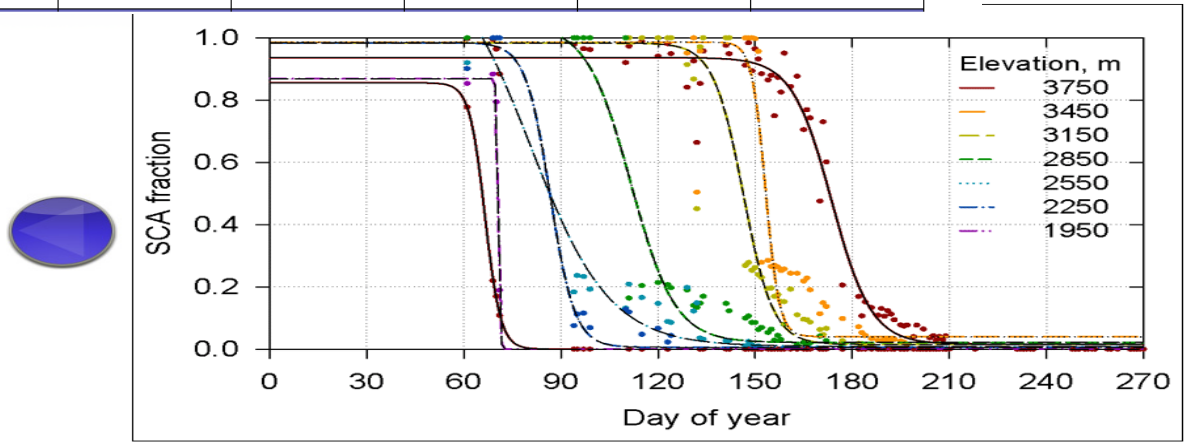
Satellite Data System

(http://zero.eng.ucmerced.edu/snow/csnwis/)





Detailed View/
Download

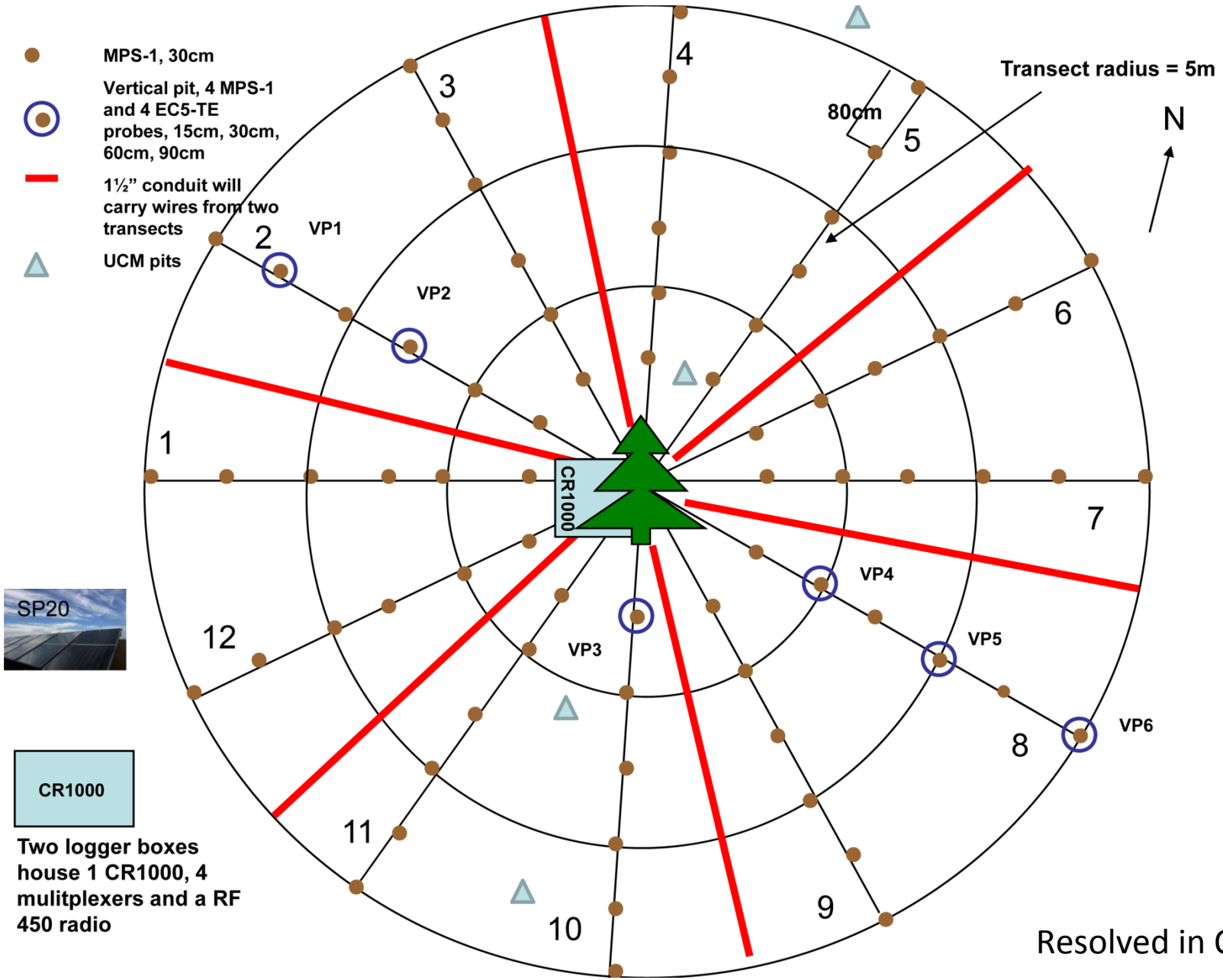


Analysis Results

Data Types from SSCZO

- text/csv, spreadsheets, binary files (climate, soil, sap flow, stream flow and etc.)
- spatial layers (DEM, boundaries and sensor location)
- images/photos (satellite data and photos)
- model results (RHESSys)
- video files
- reports and software/programs for data collection and processing
- Total about 30GB yearly, plus satellite images

Some problems with ODM database harvest



CR1000

Two logger boxes house 1 CR1000, 4 mulitplexers and a RF 450 radio

Resolved in ODM2

Help find right terms for the highlighted variables from CZO controlled vocabularies

HEADERS FOR CALIFORNIA EDDY COVARIANCE DATA

	Header	Decription with units	Range typical min	Range typical max
1	'TIME'	date	1-Jan-06	31-Dec-13
2	'USTAR'	Friction velocity (m/s)	-0.2	4
3	'WDIR'	Wind Direction (degrees)	0	360
4	'WSPD'	Wind Speed (m/s)	0	15
5	'T_HMP'	Air temperature, actual (C)	-30	50
6	'TSONIC'	Sonic Temperature (°C)	-30	50
7	'TACTUAL'	Sonic temperature adjusted for water content (K)	243	323
8	'RAIN'	Total per 30 minutes (mm)	0	20
9	'RH'	Relative Humidity (fraction)	0	1
10	'H2O_HMP'	Water Vapor Concentration Measured by Relative Humidity Probe	0	30
11	'PAR_IN'	micromol photons /m2 /s	-50	2500
12	'PAR_OUT'	micromol photons /m2 /s	-50	1000
13	'SOLAR_IN'	Solar Radiation Incoming (W/m2)	-30	1600
14	'SOLAR_OUT'	Solar Radiation Reflected (W/m2)	-30	500
15	'RNET'	Radiation, net(W/m2)	-300	1000
16	'G'	Ground heat flux (W/m2)	-200	200
17	'SENSIBLE_HEAT'	Sensible heat flux(W/m2)	-400	1000
18	'LATENT_HEAT'	Latent Heat Flux(W/m2)	-600	1200
19	'CO2_FLUX'	micromol CO2 /m2/s	-40	30
20	'H2O_FLUX'	millimol H2O / m2/s	-15	30
21	'NDVI'	Normalized Difference Vegetation Index	0	1
22	'T_Soil_Surface'	Soil surface temperature (C)	-10	30
23	'Soil_Moisture_1'	Soil Moisture in top 30 cm (m3 water/m3 soil)	0	1
24	'Soil_Moisture_2'	Soil Moisture in top 30 cm (m3 water/m3 soil)	0	1
25	'Soil_Moisture_3'	Soil Moisture in top 30 cm (m3 water/m3 soil)	0	1
26	'Soil_Moisture_4'	Soil Moisture in top 30 cm (m3 water/m3 soil)	0	1
27	'StartT_5cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 5 cm Depth (C)	-10	30
28	'StartT_10cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 10 cm Depth (C)	-10	30
29	'StartT_25cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 25 cm Depth (C)	-10	30
30	'StartT_50cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 50 cm Depth (C)	-10	30
31	'StartT_100cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 100 cm Depth (C)	-10	30
32	'StartT_200cm'	Initial Temperature (before heating) Soil Matric Potential Sensor at 200 cm Depth (C)	-10	30
33	'DelT_5cm'	Temperature Change of Soil Matric Potential Sensor at 5 cm Depth (C)	0	4
34	'DelT_10cm'	Temperature Change of Soil Matric Potential Sensor at 10 cm Depth (C)	0	4
35	'DelT_25cm'	Temperature Change of Soil Matric Potential Sensor at 25 cm Depth (C)	0	4
36	'DelT_50cm'	Temperature Change of Soil Matric Potential Sensor at 50 cm Depth (C)	0	4
37	'DelT_100cm'	Temperature Change of Soil Matric Potential Sensor at 100 cm Depth (C)	0	4
38	'DelT_200cm'	Temperature Change of Soil Matric Potential Sensor at 200 cm Depth (C)	0	4
39	'USTAR_SOURCE_FLAG'	Diagnostic	1	3
40	'SENSIBLE_HEAT_SOURCE_FLAG'	Diagnostic	1	3
41	'LATENT_HEAT_SOURCE_FLAG'	Diagnostic	1	3
42	'CO2_FLUX_SOURCE_FLAG'	Diagnostic	1	3
43	'H2O_FLUX_SOURCE_FLAG'	Diagnostic	1	3

Questions

1. How can CZOData team help publish datasets to public archival data centers with DOI? The same type of data from all CZOs better goes to the same data center, and the YODA-file format should meet the data center needs.

2. what, where and how to publish level 1, level 2 data and the same level with different versions? (need cross-czo recommendations)

3. All CZOs should follow the same data level standard for the publications. Can CZOData team make the data level definitions for CZOs?

4. Preferred portals for data publications with some notes (not just a list), and need a sustainable archive and guidance on how to package the data, how big of a package (5 years, all data to date, etc.), how to add data? Should we publish one year at a time, by topic (all water balance together, e.g.)?

5. To improving access – need acompact data catalog with links into digital library, also compact cross-czo searcher-friendly instead of programmer friendly - one page catalog versus 20 page catalog.

6. Is there a way to organize photos, videos, publications through the data archive so one can view all photo albums at once like flicker? Same for all videos and talks? this is an issue for the data servers and web-based organization

Questions (Cont.)

7. How can we update the metadata which has been already harvested into the central CZO database (ODM1/ODM2)? (E.g., we got more accurate locations (lat/lon) of some sensors, how can we overwrite the old data with the more accurate data in the central CZO database?)

8. How can we provide an open access link to papers as well as the journal link?

9. are data sets associated with model inputs and outputs being archived/shared through the CZO system? E.g. RHESSys

10. Can the current data systems handle bioinformatical data (DNA/RNA sequence information) from microorganisms?