Member Node Description: Nevada Research Data Center

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General

Name of resource:	Nevada Research Data Center (NRDC)
URL(s):	http://sensor.nevada.edu
Institutional affiliation(s):	University of Nevada, Reno
Primary geographic location:	Reno, NV
Project Director & contact info:	Sergiu Dascalu, dascalus@cse.unr.edu
Technical Contact & contact info:	Eric Fritzinger, ericf@cse.unr.edu
Age of resource:	Since 2011
Funding support:	NSF EPSCoR
Proposed Unique Identifier:	urn:node:NRDC

Content

Content description/collection policy (1 paragraph, domain and spatial/temporal coverage, uniqueness of content, exclusions, as applicable):

We manage a variety of hydroclimate data gathered from some of the more remote parts of Nevada. In addition, we have pan/tilt/zoom webcams at each of our sites capable of streaming video and taking hourly images of preset views. We maintain a near-real-time import process of data, allowing us to import data every 5 minutes, with a temporal resolution as low as 1-minute in many cases.

Types of data (complex objects, text, image, video, audio, other):

We maintain only observed data at this time (i.e. single points in space at a single moment), of which we have more than 1.6 billion data points across 4 years. Furthermore, our webcam image archive is also extensive, containing more than 2 million images taken at a minimum of 640x480 resolution for the past 4 years.

Data and metadata availability (rights, licensing, restrictions):

Our data is free to use for anyone, as long as there is a reference to our organization in the study.

Option for embargo (yes/no, duration):

The datasets we make available here currently have no embargo on them.

Size of holdings (number and size of datasets, mean and median granules (files) per dataset):

We maintain aggregate files of all the properties recorded in the database. It is organized by project, site, aggregation interval (currently only monthly), and the logger and table it was recorded on (meteorological, vegetation, etc.). The smaller datasets are a few MB or less per file, while the larger ones (with more frequent measurements) are typically around 45-50MB.

Please describe recent usage statistics, if known, including information on annual data product downloads, annual number of users, annual number of data products used in publications:

We have had 2534 users in the past year browse our website.

User interactions

How does a user contribute data? (what can be deposited, how are data prepared, are specific software required, documentation/support available)

Users do not contribute data at this time.

How does a user acquire / access data?

The users can use our FTP site, our web-based data search interfaces, or directly use our web services in their own client applications.

What user support services are available (both for depositing and accessing/using data)?

The Web-based data search interfaces have tutorial videos for guiding the user through the process of making a query. In addition, the emails of the people maintaining the NRDC are available for people to contact.

How does the resource curate data at the time of deposit?

The aggregated data files are maintained daily, with a background process updating the files to include any missing data points from the previous day.

Technical characteristics and policies

Software platform description, incl. data search and access API(s):

Currently there is no API documentation for the web services. The data back-end is currently being reworked, which will likely change data access web services. Currently, the most reliable way would be to go through FTP and the data search interfaces.

Service reliability (including recent uptime statistics, frequency of hardware refresh, if known):

The services and websites are available more than 95% of the time. There are backup systems in place to handle failover of the critical parts of the back-end, capable of being brought up and working within minutes of a failure.

Preservation reliability (including replication/backup, integrity checks, format migration, disaster planning):

The data files are imported into a database, and then the files are archived where a distributed file system maintains a live backup of the raw files. In addition, the database goes through daily backups, and the aggregated datasets maintain a daily update.

User authentication technology (incl. level of create/modify/delete access by users):

Currently, all read access to the data is public and anonymous.

Data identifier system and data citation policy, if available:

Metadata standards (including provenance):

ISO 19115

Capacity/services to DataONE

At what functional tier will you initially be operating? (see http://bit.ly/MNFactSheet for definitions)
☒ **Tier 1: Read only, public content**
☐ **Tier 2: Read only with access control**
☐ **Tier 3: Read/write using client tools**
☐ **Tier 4: Able to operate as a replication target**

If you can host data from other member nodes, what storage capacity is available?
Not at this time

Can you provide computing capacity to the broader network? If so, please describe.
Not at this time

Other Services

What other services or resources (such as expertise, software development capacity, educational/training resources, or software tools) can be provided of benefit to the broader network?
Nothing more at this time