

SEMP Data Repository Annual Report
01 October 2001 – 30 September 2002
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SEMP Data Repository

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Background

The SEMP data repository was designed to provide data access and exchange among the SEMP study partners and to serve as a stable, long-term data archive platform to protect the SERDP investment. The repository is Internet-based and operates as a simple, functional, stand-alone archive that can be accessed by other more complicated modeling or data systems. It is a file-based repository, organized using a directory structure based on the Spatial Data Standards for Facility, Infrastructure and Environment (SDSFIE) entity set.

The SEMP Data Repository is located at <http://206.166.205.173/>. See Figure 1.



Figure 1. SEMP Data Repository Home Page

Summary of Activities FY02

Repository Use

Repository logins/passwords are distributed to members of the SEMP community upon request. Seventeen (17) new passwords were issued in FY02. The total number of registered users is 62.

Monthly activity reports are generated to capture statistics on Repository use. The Repository averaged five (5) hits per day in FY02. Figure 2 shows the monthly activity for FY02.

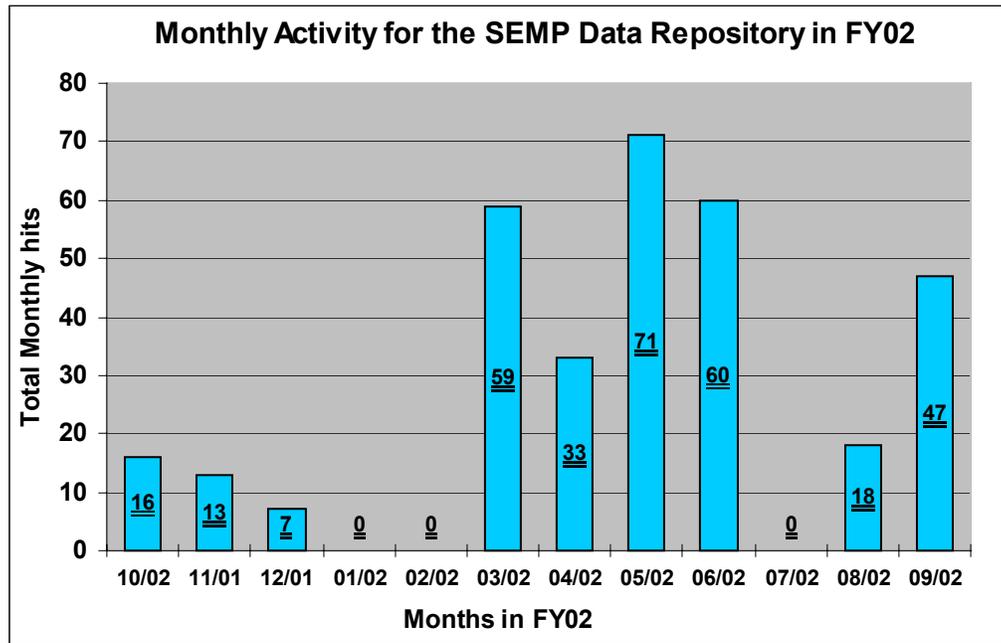


Figure 2. Monthly Activity on the SEMP Data Repository in FY02

Repository Contents

The SEMP data repository contains important baseline geospatial data for Fort Benning and the surrounding region as well as data collected under the monitoring and research efforts underway at Fort Benning. Each research team has contributed data/metadata to the repository, and it is expected that the rate of research data submissions will increase as the original research projects near completion. The volume of new data contributed to the repository in FY02 was 36 megabytes. These contributions occurred in a four-month period as shown in Table 1. A summary of the entire repository data holdings as of October 2002 is given, by category, in Table 2. This table also gives the contributing agency and the number of data sets in the category.

Table 1. Volume of data contributed to the Repository by month for FY02.

MONTH	AMOUNT (Megabytes)
March	14.30
April	4.32
May	6.29
June	10.70
Total FY02 Data	35.61

Repository Modifications in FY02

Minor modifications to the SEMP data repository were made during FY02. The changes are as follows:

1. Monthly notifications to all SEMP Data Repository registered users. New Data Updates.
 - a. This online feature is an area named “new data”. This area has a direct link to all data that has been uploaded within the last month.
 - b. E-mail notification that there have been new data uploaded to the site. This announcement includes a hyperlink to the new data area allowing for quick/easy access to encourage more usage of the repository.
2. Upload notifications
 - a. Users uploading data on the repository will receive notification whether or not the upload was successful.
 - b. If the upload was indeed a success, an automatic e-mail is sent to the user, indicating it was a successful upload, the system administrator has the data, and will have it uploaded and available for download with 24 – 48 hours.
 - c. Once the data is available online, another e-mail goes out the contributor, notifying them that their data is available for download.
3. Links activated from Data Repository
 - a. SEMP and SERDP logo icons were placed on the home page of the SEMP Data Repository; these logos are hyperlinked back to the main SEMP and SERDP web sites.

Significant Findings

After one year of full functionality it has been determined that the usability of the repository can be improved by upgrades in several specific areas. The following usability issues were identified and will be addressed in FY03.

Repository Access:

1. WEB LINKS. Activate a link between the repository and the SEMP main site. Discuss the link between the Fort Benning web pages and the repository site with Fort Benning staff and if agreeable to the installation, active the link.

2. PUBLIC ACCESS. Develop a plan to provide a public access segment (unrestricted) of the repository in coordination with Fort Benning staff, SEMP researchers and SEMP program management.

3. SEMP PROGRAMMATIC INFORMATION: Develop and implement a strategy for directing repository users to SEMP programmatic information as a means of providing a larger research context for the repository data. This will be accomplished by providing a thumbnail overview of the SEMP and the ECMI on the repository with links directly to appropriate pages and documents on the DENIX/SEMP site. These sites currently explain the entire SEMP program and provide detailed plans for all the research projects and the monitoring plan.

Repository Challenges:

4. FORT BENNING INTERNAL DATA SHARING: In coordination with Fort Benning staff, develop a plan to improve the direct, day to day utility of the SEMP data repository to installation management purposes. The focus is to involve the SEMP repository as a partner in the move, by Fort Benning, toward a more centralized scheme for storage and access of geospatial data in the Environmental Management Division. The repository comprehensive review (Ruiz and Kress, 2001) concluded that that ECMI/SEMP repository role as part of the research arm of Fort Benning is appropriate and should continue. In addition, the review recognized the efforts of the Ft. Benning EMD to move toward a more centralized scheme for storage and access of geospatial data. However, at the time of the review, the limited nature of the Fort Benning systems administration, network speed and reliability appeared to be an impediment to success.

5. SEMP RESEARCH TEAM DATA SUBMISSIONS: As an incentive for the early contribution of field data by the research teams, coordinate the adoption of the Ecological Society of America's "Code of Ethics for Access and Utilization of Archived Data (Bulletin of the ESA, January 2001 pg 90-91).

Repository User Interface:

6. DATA SEARCH: Improve the method of providing search results back to the user.

7. DATA ACCOUNTABILITY: Improve usability of the site by providing information about the data responsible party (originator and source) as part of the data catalog and search results.

Repository Milestones FY03:

<i>SEMP Data Repository</i>	
<i>Improved repository functions</i>	03/2003
<i>Develop technical report on repository operations</i>	05/2003
<i>Repository challenges plan complete</i>	06/2003

Table 2. SEMP Data Repository Holdings as of October 2002

Data Category	Data Holdings	Agency Responsible	#
Boundary			
	Counties	USAIC-FB / ERDC-EL	1
	Fort Benning Military Installation	USAIC-FB / ERDC-EL	1
	ECMI Management Units	ECMI / ERDC-EL	1
	Military Land Acquisition	CERL	1
Climate			
	ECMI Weather Station Data Files	ECMI / ERDC-EL	370
	ECMI Weather Station Summary Sheets	ECMI / ERDC-EL	370
Ecology			
	Ecological Units of the Eastern U S	ECMI / ERDC-EL	1
	Soil Microbial Data	University of Tennessee	1
	Stream Water Chemistry	ORNL-1 / Auburn Univ.	1
	Storm Stream Water Chemistry	ORNL-1 / Auburn Univ.	1
Flora			
	Prescribed Burn Units	USAIC-FB / ERDC-EL	1
	Forest Compartments - old version	USAIC-FB / ERDC-EL	1
	Forest Compartments - revised version	USAIC-FB / LMB	1
	Cover Data	ORNL	1
	Prescribed Burns	USAIC-FB / ERDC-EL	18
	Proposed Burns	USAIC-FB / ERDC-EL	17
	Wildfire Burns	USAIC-FB / ERDC-EL	18
Geology			
	1:250,000 Geology of Americus Quad	USAIC-FB / ERDC-EL	1
Hydrography			
	Lakes	USAIC-FB / ERDC-EL	1
	Streams	USAIC-FB / ERDC-EL	1
	Wetlands	USAIC-FB / ERDC-EL	1
	Watersheds	ECMI / ERDC-EL	6
	Groundwater Wells	ECMI / ERDC-EL	8
	Surface Water Labs	ECMI / ERDC-EL	160
	Water Quality Labs	ECMI / ERDC-EL	6
	Stream Profiles	ECMI / ERDC-EL	6
Data Category	Data Holdings	Agency Responsible	#
Imagery			
	SPOT Image	USAIC-FB / ERDC-EL	1
	DOQ's	USAIC-FB / ERDC-EL	80
	LANDSAT	ECMI / ERDC-EL	3
Land Form			
	1:24,000 Contour Lines	ECMI / ERDC-EL	1
	1:24,000 Digital Elevation Model GRID	ECMI / ERDC-EL	1
	Erosion & Deposition Data Files.	ECMI / ERDC-EL	70+
Land Status			
	Historical Witness Tree Data	ORNL	1
	Historical Witness Tree Data Document	ORNL	1
	Historical Land Cover Data	ORNL	1
	1999 Landcover Classification	ECMI / ERDC-EL	1
	NASA MODIS Products	CERL	24
	NASA MODIS Products	ECMI / ERDC-EL	1
Military Operations			
	Training Compartments	USAIC-FB / ERDC-EL	1
Soils			
	Soil Layer One	ECMI / ERDC-EL	1
	Soil Layer Two	ECMI / ERDC-EL	1
	Soil Layer Three	ECMI / ERDC-EL	1
	Historical Soil in Exclusion Zones	ECMI / ERDC-EL	1
	Surface Soil Texture	ECMI / ERDC-EL	1
	Soil Surface Texture	SREL	1
	Soil Biogeochemical Data	UFLG	1
	Soil Quality	ORNL	1
	Soil Samples along military use gradient	ORNL	1
Transportation			
	Road Network	USAIC-FB / ERDC-EL	1