

Plan Overview

A Data Management Plan created using DMPTool

Title: Surficial Deposit Mapping of the Waynesboro East 7.5' Quadrangle, Virginia

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Surficial Deposit Mapping of the Waynesboro East 7.5' Quadrangle, Virginia

1. Project and Contact Information

What is the name of the project?

Include any identifiers related to the project (e.g. Project ID, Funding ID etc).

Surficial Deposit Mapping of the Waynesboro East 7.5' Quadrangle, Virginia

What is the name of the USGS Center/Program that oversees the project?

Include contact information (email, phone, address).

The Educational Component of the National Cooperative Geologic Mapping Program

Department of the Interior

Geological Survey

Summary description of the project.

Include reason why the data is being collected.

The primary goal of the project to produce a refined 1:24000 surficial deposit map of the Waynesboro East quadrangle (WEQ) in west central Virginia. The justification for the project is to 1) train undergraduate students in surficial deposits mapping, 2) refine the geologic map of WEQ that lacks detail in surficial deposits. A surficial deposits map will help in identifying zones that have higher susceptibility for debris flows and other slope movements. It will also help identify sites of sand/gravel and ground water resources.

The data that will be collected will include spatial distribution of various surficial deposits and their detailed descriptions. The main data product will be a hard and soft copy of the surficial deposits map accompanied by a geological report. Shapefiles of surficial deposits will also be produced.

What is the project start date?

Start date.

2017-03-01

What is the project's expected end date?

Estimated end date. This field can be updated as needed.

2018-02-28

Are there additional information available?

Include any web links with more information related to the project, if applicable.

Question not answered.

Who is the main point of contact for the project and its data?

Also list any alternate points of contact, if any.

Yonathan Admassu

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Are there collaborating/funding agencies and organizations?

Who are they and who are the main points of contact?

Question not answered.

2. Plan and Acquire

How will the data be acquired?

Are they newly collected or using existing datasets?

The data to be collected include spatial distribution of surficial deposits and their detailed geological descriptions. The data will be collected in the field using topographic base maps and GPS units as location aids.

If acquiring existing datasets, include more information.

Include the name, format, a persistent identifier, and source citation, if any. Are there any restrictions or agreements such as Memorandum of Understandings (MOUs) for use and storage?

A previous geological map of Wayneboro East quadrangle by Gathright et al. (1977) will be used as a reference. The Waynesboro East geological map is published by the Virginia Department of Mines, Minerals and Energy.

Gathright, T, Henika, W., Sullivan, J., 1977. Geology of the Waynesboro East and Waynesboro West quadrangles, Virginia. Virginia Division of Geology and Mineral Resources-Publication 3, 53 p.

If collecting new data, include more information.

Are there special processes or procedures for collecting the data (e.g. licenses, permissions, equipment, software)?

The new data, spatial distribution of surficial deposits and their detailed descriptions will be collected in the field. Spatial extent and location of the different surficial deposits will be recorded on a topographic base map.

Geologic descriptions of each unit will be recorded in field notebooks. Photographs of outcrops of surficial deposits will be documented.

**What is the estimated volume of the data collected, transformed, and/or generated?
For example in megabyte (MB), GB, TB, or PB.**

The estimated data size will be anywhere between 2-3GB.

Will the data be static or frequently updated?

If frequent updates, describe how frequent (e.g. Continuously, weekly, annually, irregular etc)

The data once published will be static.

**Are the appropriate equipment and staff resources accounted for in the budget?
Include estimated time and cost for such data management activities.**

The equipment needed for data collection are freely available topographic maps in hard and soft copies, geologic hammers, pencils, field notebooks, and compasses. There is virtually no cost attached with any of these equipment.

3. Describe/Metadata and Manage Quality

How many new datasets will be created?

List the anticipated title of each dataset.

- 1) Spatial distribution of surficial deposits
- 2) Geologic description of surficial deposits with photographs

What are the data types and formats, in which the data will be maintained?

Open data formats such as csv, tiff, mp3, are required.

- 1) GeoTiff for spatial distribution of surficial deposits
- 2) .txt for geologic description of surficial deposits, .csv for any tabulated data and .tiff for the accompanying photographs

**Briefly describe the data processing steps or provide the scientific workflow.
Also identify any software or technology needs where applicable.**

- 1) Describing surficial deposits in the field and plotting their spatial extent on a topographic map in the field.
- 2) Convert field data into digital formats.
- 3) Compile field data digitally and produce a surficial deposits map in open data format
- 4) Convert the digital geological report into an open data format

How will the metadata for each dataset be created?

Who will be responsible for the metadata creation and update? Include their contact information.

The PI of the project, Dr. Yonathan Admassu will create the metadata.

The USGS metadata wizard will be used to create the metadata for the geospatial data.

<https://www.sciencebase.gov/catalog/item/50ed7aa4e4b0438b00db080a>

Which metadata standard will be used to describe each dataset?

For USGS, FGDC-CSDGM or ISO 19115 series are required.

The format to be used will be the USGS FGDC-CSDGM.

What procedures will be used for ensuring data quality (QA/QC)?

If using a known standard or protocol, include the citation source.

- 1) Before data collection

Formats of geologic description of surficial deposits will be designed to maintain consistency during field data collection. Clear geologic descriptors, codes of geologic units and

measurement units will be decided upon.

2) Field Data collection

Data will be collected on field notebooks adhering to the formats decided before data collection. Data plotting on maps will also strictly use the geologic codes decided before data collection.

3) Quality Control

The PI and Co-PI will be responsible for quality control by performing field checking for accurate descriptions and spatial information of surficial deposits.

4. Backup/Secure and Preserve

Where will the data be stored in the short-term?

Is it properly secured, backed up, and environmentally controlled?

The data will be backed up on an external hard drive.

What will be the approach for routine backup of the data?

Include the frequency, duration, software, and media information. Will the data be stored in multiple places and on different media types (recommended minimum of 3 copies with 1 stored in an offsite location)?

The data will be automatically backed up on an external hard drive.

Describe any potential access restrictions.

For example if the data contain Personally Identifiable Information (PII). Please include any practices to ensure access will be restricted.

The project will be a federally funded USGS data for which there will be no restrictions unless the data is not approved.

What will be the final format of the data product?

Will there be any software needs? Will the data format be appropriate for long-term preservation? Open data formats such as csv, tiff, mp3, are required.

The final data format will be in

- 1) .txt format for geologic descriptions of surficial deposits
- 2) Georeferenced Geotiff for the final map
- 3) .csv for any tabulated data

Where will the data and metadata be preserved in the long-term?

And which funding Program if in collaboration, will be responsible for the preservation of the data? Who will be the point of contact?

The PI, Dr. Yonathan Admassu will be in charge of preserving the data and metadata.

If costs are associated with long-term storage, how will they be provided for?

Are there agreements made for the preservation of the data and metadata?

There will be no cost associated for long term storage of data.

5. Publish and Share

How will the data be shared and made available to the public?

For example a web page, system or application, data portal, repository, USGS Data Series, etc. Are there data release policies that need to be followed?

The approved surficial deposits map with its accompanying descriptions will be shared at the USGS store website: [https://store.usgs.gov/b2c_usgs/b2c/start/\(xcm=r3standardpitrex_prd\)/.do](https://store.usgs.gov/b2c_usgs/b2c/start/(xcm=r3standardpitrex_prd)/.do)

Once approved by the USGS, raw data such as shapefiles with metadata, and geologic report will be shared on <http://sparcopen.org>

Will there be access or use restrictions on the data?

For example for sensitive data, restricted data, privacy, software with license restrictions, etc. Provide justification for the restriction citing any policies or legal reasons.

The data is owned by the USGS and according to the USGS policy under IM OSQI 2015-03, the USGS should provide timely public access to scientific data, information, and technologies developed by the Bureau's information and research programs. Until they are approved for release, data are considered provisional or preliminary and subject to change and must be noted as such with a disclaimer statement.

How can someone overcome any access restrictions?

For example are the following required? Fees, non-disclosure statements, special authorization, data embargo or hold, MOUs/MOAs.

There will be no restriction on an approved USGS data that was federally funded.

Identify any anticipated publications or electronic outlets resulting from the data.

For example, peer-reviewed articles, information/fact sheets, web pages. If a USGS publication, indicate type (e.g. Open File Report, Provisional Release etc).

There is no anticipated publication other than what will be made available on [https://store.usgs.gov/b2c_usgs/b2c/start/\(xcm=r3standardpitrex_prd\)/.do](https://store.usgs.gov/b2c_usgs/b2c/start/(xcm=r3standardpitrex_prd)/.do)

Where will metadata be stored to enable data discovery by the public?

USGS requires that your metadata must be available for harvest by the USGS Science Data Catalog. Contact sciencedatacatalog@usgs.gov for more information.

Once approved by the USGS, raw data such as shapefiles with metadata, and geologic report will be shared on <http://sparcopen.org>

How and where will you obtain a digital object identifier (DOI) for the data?

USGS provides a Digital Object Identifier Creation Tool available at <https://www1.usgs.gov/csas/doi/>

The USGS will assign a doi (digital object identifier) for published USGS documents using the CrossRef system,
