UTAH GEOLOGICAL SURVEY DATA MANAGEMENT PLAN

ACQUIRE

Provide the basic identification information for each dataset (e.g., title, description, source, point of contact).

Title[1]	Description	Source	Point of Contact
Monitoring_Locations	Site information for the monitoring sites in the UGS network	UGS	Paul Inkenbrandt
Monitoring_Phy_Chem_Results	Measured values and parameter metadata for water chemistry and flow measured at the Monitoring_Locations	Field parameters fromUGS; results from U.S. EPA Lab, Utah State Lab, and the U. of Utah SURFR Lab	Paul Inkenbrandt
LITHOLOGY	Driller's description of geologic material	From well drillers' logs from the Utah Division of Water Rights	Paul Inkenbrandt
CASING	Well casing construction information for sites in Monitoring_Locations	From well drillers' logs from the Utah Division of Water Rights	Paul Inkenbrandt
SCREEN	Well screen information for sites in Monitoring_Locations	From well drillers' logs from the Utah Division of Water Rights	Paul Inkenbrandt
Wells	Hourly depth to water measured by transducers in monitoring wells	UGS	Paul Inkenbrandt

[1]Each dataset is prefixed by UGGP.UGGPADMIN.UGS_NGWMN_

Describe the purpose of each dataset in context of the project.

Title[1]	Purpose
Monitoring_Locations	Describes the location and site status for sites in the NGWMN
Monitoring_Phy_Chem_Results	Water quality data represented in the NGWMN Portal provided by the UGS
LITHOLOGY	Provides construction and aquifer information on wells in the NGWMN; provided as web services
CASING	
SCREEN	
Wells	Will provide transboundary water level information

[1]Each dataset is prefixed by UGGP.UGGPADMIN.UGS_NGWMN_

Identify any inherent restrictions on use of any dataset.

Data are open to redistribute and use freely with citation of our agency: Utah Geological Survey, 2018, Groundwater Monitoring Data: geology.utah.gov, date of access

Identify the format of each dataset.

All data are housed in an ESRI ArcGIS SDE database (Microsoft SQL Server). Station data are feature classes. Other data are geodatabase tables. Many to one relationship with stations (joined to stations using station identification number and parameter per row format).

Identify storage requirements for each dataset.

Data are held on web servers managed by Utah Department of Technology Services. Total estimated storage space is about 13 gigabytes.

PROCESS AND ANALYZE

Capture the data transformations, synthesis actions, or other processing steps to produce the datasets. If possible, use workflow software such as VisTrails or others.

Minimal processing to create datasets. Each point was manually digitized either in the field or using aerial photography. Each table was manually populated.

Describe technologies, capabilities, or models that will be used for data processing.

ArcGIS software products and Python scripting will be applied to transfer, check, and manipulate the data.

For models, software, and code, list data inputs and data outputs and calibration details.

No current models or software are currently being applied for this purpose.

PRESERVE

Document **who** has the responsibility for ensuring that data preservation is provided for all approved data releases.

Marshall Robinson, Nathan Payne, and Paul Inkenbrandt

State **what open data formats you plan** to use when submitting your data for preservation.

OGC Web Feature Services for site data; OGC WaterML 2.0 for water level data; WQX schema delivered to the EPA for water quality data

Include the **estimated storage volume** of the approved data releases.

Less than 13 gigabytes

Identify where your approved data releases will be **stored for long term preservation**. State which trusted digital repository you plan to use. List any other websites that will provide the approved data, software, model, or code.

CUAHSI HIS Hydroserver (or similar) for some of the data; EPA WQX and NGWMN Portal for other data

Publish/Share

UGS has no intention of publishing NGWMN data in a published document format. Some of the data will be shared via web services and through various federal government portals.

Describe/Metadata

Describe the tools or process that will be used to create metadata.

ArcGIS and Python, as well as tools provided by CHUASI and the WQX will be used to attribute metadata.

Identify the person responsible for creating metadata files.

Paul Inkenbrandt, Rich Emerson, and Nathan Payne will be responsible for populating metadata

Manage Quality

Document project team roles and operational procedures. Reference Science Center policy or other standard operating procedures if applicable.

Station point data will be regularly checked for correct location by all of the UGS geologists working in the field.

Each chemical result goes through a charge balance check before being uploaded into the chemistry database.

The Portal for the WQX schema checks each result uploaded into the website

All data are regularly reviewed to ensure data consistency

Backup and Secure

Identify location of internal storage resources that provide replication and backup capability, and will be used to store acquired data during processing and analysis.

ArcGIS SDE servers are redundant and regularly backed up by the Utah DTS.

Identify the contact person for the storage resource that will be used.

Marshall Robinson

If known, describe the records disposition schedule for the data.

Managed by Utah DTS (not known)