

DATA RESOURCE LIST

The following data resource list is not meant to be an all-encompassing list to identify resources. There may be data available through other platforms and sources. This list is meant to aid in the identification of resources and the assessment of risk associated with trenchless technology methods. It is meant to be used in conjunction with the DEP's *Trenchless Technology Technical Guidance Document* (310-2100-003).

For more information, please visit the Bureau of Waterways Engineering & Wetlands <https://www.dep.pa.gov/Business/Water/Waterways/Pages/default.aspx> or visit the Trenchless Technologies webpage at <https://www.dep.pa.gov/About/Regional/PCO/Pages/Trenchless.aspx>.

Formatting Key:

Bold, Black Underline - Name of data resource

Bold - Sub-category name of data resource

Blue underline - Weblink to data resource (if available)

(Parenthesis) / **Black Underline** / *Italics* - (General listing of available data) / Major data Categories / *Sub-categories*

- **Municipality, Township and County Websites and Contacts** (Aerials, Topography, Tax / Parcel, Plats, Easements, Deed information, Hydrology, Hydrogeology, Manmade features, Geologic, Soil, Site specific impediments, Sewage service areas, private septic systems)

Note: Township has contact information for sewage utility to obtain sewage service areas. Township Sewage Enforcement Officers keep records of private septic systems, though older systems may lack any record.
- **United States Geological Survey (USGS)**
 - ❑ **Earth Explorer (EE)** - <https://earthexplorer.usgs.gov/> (Aerials, LIDAR or DEMS, Historic manmade features, Historic and current land uses)
 - ❑ **Historical Topographic Map Explorer (HT)** - <http://historicalmaps.arcgis.com/usgs/> (Historic topography, Historic manmade features, Historic and current land use)
 - ❑ **National Geologic Map Database (NGMDB) and Association of American State Geologist (AASG)** - https://ngmdb.usgs.gov/ngmdb/ngmdb_home.html (Geologic overview, Strike and dip, Fractures and faults, Karst, Subsurface voids, Caves, Subsidence features)
 - ❑ **Pennsylvania Water Science Center** - <https://pa.water.usgs.gov/infodata/groundwater.php> (Groundwater, Groundwater table, Well and spring locations)
- **National Water Quality Monitoring Council** - <https://www.waterqualitydata.us/portal/> (Groundwater table, Well and spring locations, USGS well water supply sampling)
- **Unites States Department of Agriculture Natural Resources Conservation Service (USDA)** - <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm> (Soil interfaces and unconsolidated material and soil drainage classes for potential wetlands [poorly drained and very poorly drained soils])

- **U.S. Fish and Wildlife Services (FWS)**
 - ❑ FWS - <https://www.fws.gov/gis/data/national/> (Critical habitat, Regional boundaries)
 - ❑ National Wetland Inventory (NWI) - <https://www.fws.gov/wetlands/> (Wetlands)

- **Federal Emergency Management Act (FEMA)**
 - ❑ National Flood Hazard Layer (NFHL) - <https://catalog.data.gov/dataset/national-flood-hazard-layer-nfhl> (Floodway, Floodplain)
 - ❑ NFHL Viewer - <https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd> (Floodway, Floodplain)

- **Pennsylvania Spatial Data Access (PASDA)**
 - ❑ PASDA - <https://www.pasda.psu.edu/> (Aerials; LIDAR or DEM; Topography; County boundaries; Municipalities; Tax and Parcel information; Rivers; Streams; existing and designated stream uses; stream attainment status; Wetlands; Springs; Geologic overview; Soil interfaces; Geologic Contacts; Known contamination: *Beneficial land use, Captive hazardous waste operation, Commercial hazardous waste operation, Erosion & sediment control facilitates, Land recycling cleanup locations, Municipal waste operations, Residual waste operations, Storage tanks locations active or inactive, Water pollution control facility, Water resources, Encroachment Locations related to water resources*; Subsurface voids; Unconsolidated material; Surface and deep mines: *Abandoned mine land inventory - points, polygons, sites, Active underground permit boundaries, Coal mining operations, Coal pillar mining, Coal pillar location oil & gas, Digitized mined areas, Industrial mineral mining operations, Longwall mining panels, Mine drainage treatment or Land recycling project*; Known oil and gas wells and related features - Active and abandon: *Conservation wells - plugged and unplugged, Encroachment locations for oil & gas, Oil Gas locations - conventional and unconventional, Oil & Gas Locations - wells, pits, land application, Oil & gas water pollution control facilities*; Public water supplier areas; Manmade features; Cultural and architecture features; Historic and Current land use)

Note 1: PASDA does not include all County or Municipality or Tax and Parcel boundary data in PA, if data is not listed on PASDA check specific County or Municipality website or contact.

Note 2: Pennsylvania DEP public records search to obtain soil and groundwater contamination area delineations.

- ❑ **Pennsylvania Imagery Navigator (PSIEE) -**
<https://maps.psiee.psu.edu/ImageryNavigator/> (Aerials - Limited areas of PA)
- **Pennsylvania Department of Conservation & Natural Resources (DCNR) -**
<https://www.dcnr.pa.gov/Pages/default.aspx> or <http://data-dcnr.opendata.arcgis.com/>
 - ❑ **Pennsylvania GEOlogic Data Exploration (PaGEODE) -**
<http://www.gis.dcnr.state.pa.us/> (Topography, Groundwater, Groundwater table, Geologic overview, Geologic mapping, Strike and dip, Formation identification, Fractures and Faults, Subsurface voids, Karst, Caves, Subsidence features, Wells and springs)
 - ❑ **Open Data Portal -** <http://data-dcnr.opendata.arcgis.com/> (Aerials, DEM or LIDAR, Groundwater, Groundwater table, Geologic overview, Geologic mapping, Formation identification, Fractures and Faults, Soil interfaces and geologic contacts, Subsurface voids, Karst, Caves, Subsidence features, Unconsolidated material)
 - ❑ **Pennsylvania Groundwater Information System (PAGWIS) -**
<https://www.dcnr.pa.gov/Conservation/Water/Groundwater/PAGroundwaterInformationSystem/Pages/default.aspx> (Well and spring locations, Private well supply locations, Well construction, Groundwater table)
- **Department of Environmental Protection (DEP) -**
<https://www.dep.pa.gov/Pages/default.aspx> and
<https://www.dep.pa.gov/DataandTools/Pages/GIS.aspx>
 - ❑ **eMapPA -** <https://gis.dep.pa.gov/emappa/> (Web application for interactive mapping of: Complaints; Federal EPA sites; Regulated facilities and related information: *Air, Land reuse, Mining, Oil and gas, Radiation, Sample information system, Streams and water resources, Storage tanks, Waste, Water including public water service areas and public supply well listings*; Areas POI - geological; Areas POI - Environmental; Areas POI - General; Boundaries)

Note 1: See eMapPA attachment for obtaining a detailed listing of: Public supply wells, Sewage discharge, Sewage treatment plant and Surface water intakes within a search radius. For related location information, wellhead protection area delineations and source water assessment reports, must include public records search or contact the water or sewer authority.

Note 2: Web application data layers available for download via: PASDA, PaGEODE, DCNR, DEP Open Portal.

- ❑ **DEP Environmental Site Assessment Search Tool -** <https://www.depgis.state.pa.us/esaSearch/> (Web application for interactive mapping of: Air emissions, Known contamination, Surface and deep mines, Known oil and gas wells, and related subcategories)

Note: Data layers available for download on PASDA or DEP OPEN DATA.

- ❑ **DEP Activity and Use Limitations Registry (AUL) -** <http://www.depgis.state.pa.us/pa-aul/> (Activity and use limitations: including not limited to Fencing, Groundwater use prohibition, Groundwater treatment, Health and safety plan, Leachate collection system, Maintenance of cap, Municipal ordinance, Non-residential use, Other engineering control, Other institutional control, Maintenance of point-of-entry treatment systems, Slab on grade construction, Slurry wall, Soil management, Stormwater management, Vapor barrier, Vapor mitigation, Vapor investigation, Groundwater use monitoring)

Note: Pennsylvania AUL provides direct links to AUL documents associated with a particular property (Document examples: Administrative Orders, EPA Consent Decrees, Consent Orders and Agreements, Deed restrictions, Environmental Covenants, Military master plans, Municipal ordinances, Post-remediation care plans)

- **Example water sample plans** that may be used as a template can be found on DEP's Pennsylvania Pipeline Portal webpage.

- ❑ An example of a "Well and Spring Monitoring Plan" is available here: http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/AtlanticSunrise/August_2017/20170817_Well%20and%20Spring%20Monitoring%20Plan.pdf
- ❑ An example of a "Water Supply Assessment, PPC Plan" is available here: <http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/MarinerEastII/Water%20Supply%20Assessment,%20Preparedness,%20Prevention%20and%20Contingency%20Plan%20w%20appendices%20-%20Revised%20080817.pdf>
- ❑ **DEP Water Attribute Viewer for the Enterprise (WAVE) -** <http://www.depgis.state.pa.us/wave/> (Web application for interactive mapping of: Water Resources and related features: *Discharge; Groundwater withdrawal; Interconnection; Surface water withdrawal; Storage; Water pollution control facility*; Marcellus gas well water source, Mine orphan discharges, Public Water Supply service area) Note: Data layers available for download on PASDA or DEP OPEN DATA.
- ❑ **DEP OPEN DATA -** <https://data-padep-1.opendata.arcgis.com/> (Abandoned mine lands, air quality, coal mining, general, hazardous waste, industrial minerals)

mining, land recycling, oil & gas, public water supply, radiation, streams & lakes, waste management, water pollution control, water resources) Note: PASDA has search tool and offers same data layers for download.

- ❑ **DEP Reports -**
<https://www.dep.pa.gov/DataandTools/Reports/Pages/default.aspx> (Oil and gas reports, Land recycling reports, Radiation protection reports, Water reports, Laboratory reports, Hazardous sites cleanup reports, Grants and loans reports, Mining reports, Waste reports, Wastewater reports, Air quality reports)
- ❑ **DEP Public Records -**
<https://www.dep.pa.gov/Citizens/PublicRecords/Pages/default.aspx> - (Link for completing an informal public records review request)
- ❑ **DEP eLibrary -**
<http://www.depgreenport.state.pa.us/elibrary/?aspxerrorpath=/elibraryredirect/dsw eb/HomePage> (Environmental laws of Pennsylvania, Forms, Permit and authorization packages, Publications, Source water assessment summary reports, Technical guidance draft documents, Technical guidance final documents)
- **Pennsylvania Historical & Museum Commission -**
<http://www.phmc.state.pa.us/bah/dam/rg/di/r17-114CopiedSurveyBooks/r17-114MainInterfacePage.htm> (Surveyed drawing - shows the name of the individual for whom the tract was surveyed, the acreage, the courses and distances and the names of adjoining property owners, and occasionally other significant geographical features of the landscape) Note: Not all parcels in Pennsylvania are included.
- **Pennsylvania Utility Commission (PUC) -** <http://www.puc.state.pa.us/> (Existing utilities Pennsylvania one call and survey markings and contact PUC for data)
- **Pennsylvania Department of Transportation (PennDOT)**
 - ❑ **General Site -** <https://www.penndot.gov/Pages/default.aspx> (Municipalities, Tax / Parcel Information in PDF or contact for GIS or CAD layers)
 - ❑ **Open Portal for GIS data download -** <https://data-pennshare.opendata.arcgis.com/> (Manmade features and cultural or architectural features)
 - ❑ **PennDOT online map viewer -** <https://www.dot7.state.pa.us/onemap/>
- **Delaware River Basin Commission**
 - ❑ **DRBC GIS -** <https://www.state.nj.us/drbc/basin/map/GIS.html> (Municipalities, Water resources, Geologic overview, Rivers, Streams, Wetlands)

- **DRBC SE PA Ground Water Protected Area GIS** - <https://www.nj.gov/drbc/programs/project/pr/gwpa-data.html> (Municipalities, Water resources, Geologic overview, Rivers, Streams, Wetlands)
- **Susquehanna River Basin Commission**
 - **SRBC Map Viewer** - <https://www.srbc.net/portals/susquehanna-atlas/projects-map/> (Municipalities, Water resources, Geologic overview, Rivers, Streams, Wetlands)
 - **SRBC Data Request** - <https://services.srbc.net/request-data/> (surface water and groundwater withdrawals, consumptive use facilities, oil and gas) Note: PASDA has search tool and offers a subset of data layers for download for free.
- **Environmental Protection Agency**
 - **Operating Procedure - Groundwater Sampling (3/6/2013)** - <https://www.epa.gov/sites/production/files/2015-06/documents/Groundwater-Sampling.pdf>
- **U.S. Office of Surface Mining Reclamation and Enforcement**
 - **Well Purging Procedures for Obtaining Valid Water Samples from Domestic and Monitoring Wells (5/21/2012)** - https://www.arcc.osmre.gov/about/techDisciplines/hydrology/docs/techGuidance/2012/tsd-wggb-Well_Purging.pdf