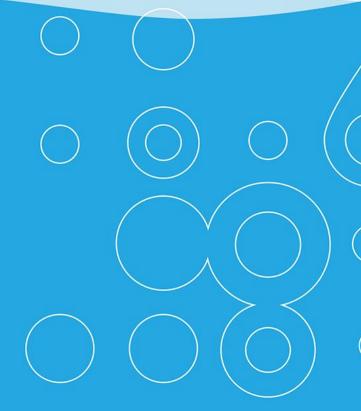


WPDx Ingestion Engine: Step-by-step guide for uploading data



Before you start...

- Review your data to determine which columns of your dataset match with the <u>WPDx Data Standard</u>. You may need to make some minor edits or combinations of columns within your dataset, depending on how your data is organized.
- The "Ingestion Notes" file may be useful to use to prepare for mapping your organization's data to the WPDx Data Standard.
- Have your data file or weblink to the dataset available.



Request Access:

- <u>upload.waterpointdata.org</u>
- Select "Login to the System"
- Requires a Google account





Login to the System



Uploading data: Options

There are two options for uploading data:

- Upload a physical file (.xlsx, .xls, .csv) from your computer
- Provide a web link to an API endpoint, Google Sheet, Dropbox or other online system



Uploading data: Web link

- Must provide web link with permissions
 - For **Akvo**, request an API endpoint from your program manager. For more details, please see here.
 - For mWater, create a datagrid formatted per the WPDx standard. This creates a permanent URL. Click on "Download as XLSX" and copy the download link. Use this in the direct URL box at the beginning of a new processing task. For more details, please see here.
 - For **Dropbox**, copy the download link and not the sharing link to use in the WPDx ingestion engine.
 - For Google Sheets, ensure that the document is shared publicly.
 - For custom data platforms, please <u>contact us</u> to determine how we can best connect.
- If the web link does not work, an alternative method is to simply download the source file and upload via the ingestion engine.
- Skip to slide 7



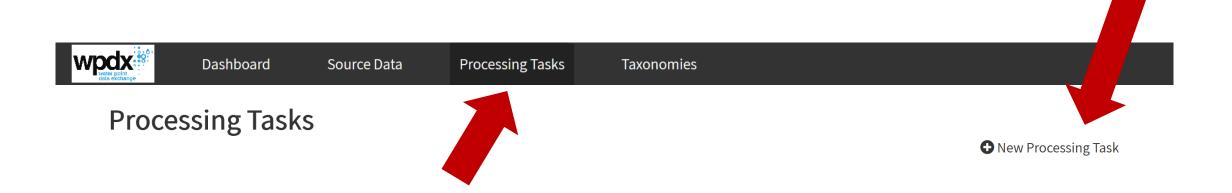
Uploading data: Source Data tab

- Select "Source Data" tab
- Before you upload the file, to help keep the repository organized, please rename the file using the following format:
 - OrgName_Country_MonthYear
 - i.e., GWC_Uganda_Jan2020
- Select "+Upload Data File" and browse to datafile and click "Open"
- "File Upload Successful" message will appear at top of screen



Uploading data: Processing Tasks tab

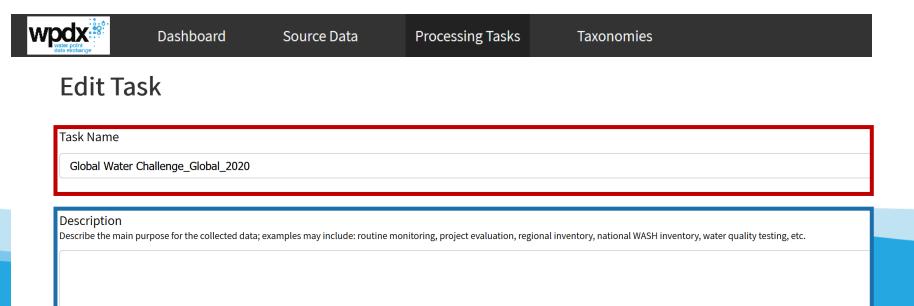
- Select "Processing Tasks" tab
- Select "+ New Processing Task"





Processing Task: Task Name and Description

- Enter Task Name in the following format:
 - OrgName_Country/Region_Month/Year of data
 - For example, Global Water Challenge_Global_2019
- Processing tasks can be edited if additional information becomes available
- Provide the main purpose for the collected data under Description





Processing Task: Metadata

- Complete the metadata prompts to provide a detailed overview of the data within your dataset.
- The metadata will be visible on the data page for your dataset within the WPDx data catalog.

About the Data
Data Source
bata source
Name of the organization that owns the data
Congraphical scope
Geographical scope
or 'sampling frame' of data collection (e.g. particular region, whole country etc.)
Turns of water sources included
Types of water sources included
e.g. improved water sources only, handpumps only, water systems of a certain age, functional water points only, etc.
Sampling strategy
e.g. comprehensive census, simple random sampling, stratified random sampling, cluster random sampling, purposive sampling, convenience sampling, quota sampling etc.
Frequency of data collection



Processing Task: Point of Contact

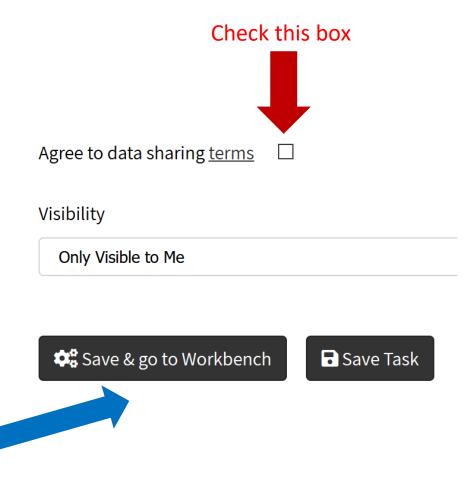
- Complete Point of Contact details for dataset.
- To protect privacy, one option is to use an organizational level email (i.e., data@name.org) which can be forwarded by your organization to relevant contacts.

Point of Contact	
roint-of-contact information to be displayed on the dataset page We recommend using organizational level contact information and not personal.	
Full Name	
Email Address	



Processing Task: Agree to Data Sharing Terms

- Check box to agree to <u>Data Sharing</u>
 <u>Terms</u>
- Leave visibility as "Only Visible to Me"
- Select: Save & go to Workbench

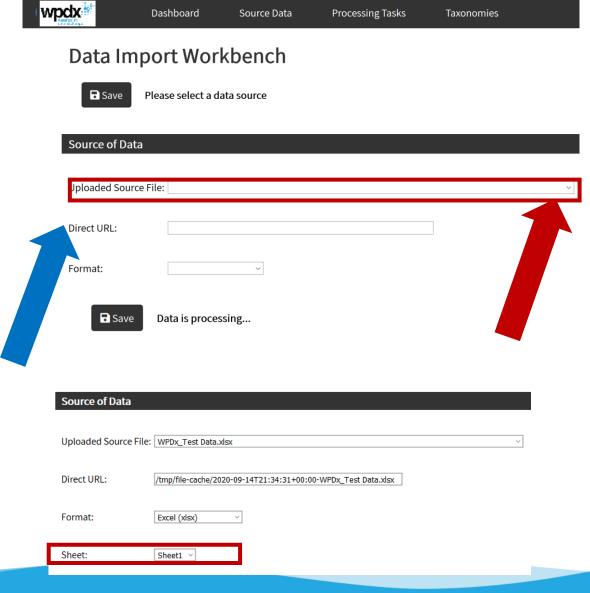


Then press this button



Data Import Workbench

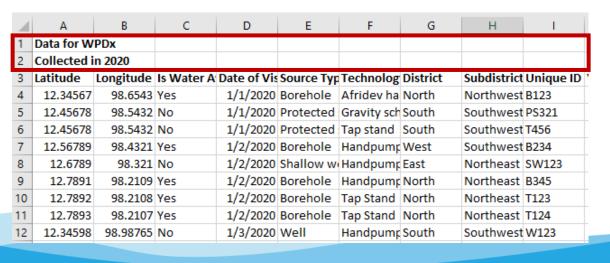
- Select source file from dropdown
- Allow data to process (this may take a few minutes). The Direct URL and format boxes will auto-populate.
- If there are multiple sheets in your file, make sure the correct one is selected.
- Scroll down to continue (the "Data is Processing" message may still appear)
- If using a web address, enter directly in Direct URL text box and select the appropriate format option.
 - For JSON formats, be sure to leave the JSON Path field blank.





Data Structure

- If your dataset is formatted to include only the column headers and the data, leave Skip Rows/Columns as "0"
- If there are additional rows or columns which should be skipped (i.e., additional headers or title cells) enter the number of rows/columns to skip.



Data Structure					
If the file headers are not located on the first row and column, set the following values to skip some rows or column					
Skip Rows:	0	For sample data shown,			
Skip Columns:	0	enter "2" in Skip Rows. Leave Skip Columns at "0"			



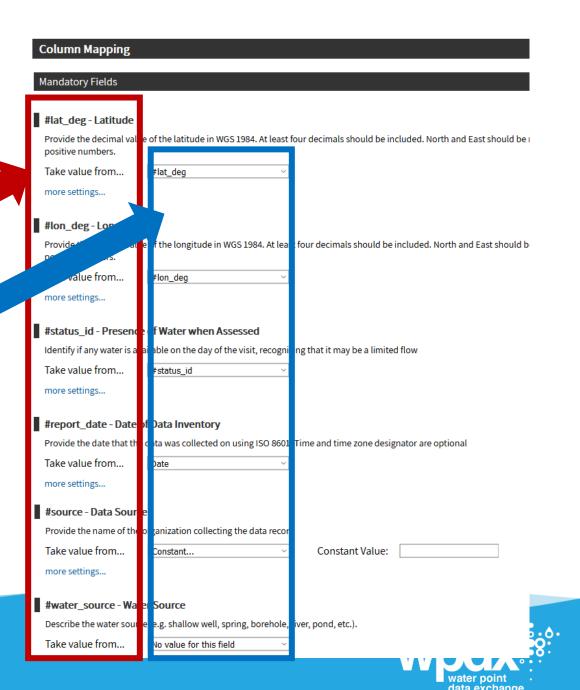
Data Taxonomy

- Leave Taxonomy as WPDx
- For "Empty Values"
 - If your dataset includes terms for blank/unknown values which should be ignored (i.e., Unknown, N/A, etc.), please enter those terms in the text box.
 - Use a comma as a separator between terms. Do **NOT** include any blank spaces between commas and terms.
 - For example: "unknown,Unknown,N/A,0,null,blank"

Data Taxonomy	
The detected data taxonomy for this dataset -	
Taxonomy: WPDx ~	
By default, only empty cells will be considered as empty. If other values need to be ignored as well, add them here in a comma separated list.	
Empty Values: unknown,Unknown	

Data Mapping

- This section allows you to map your organization's data to the WPDx Data Standard.
- The WPDx Data Standard parameters are in bold on the left
- The dropdown menus contains your organization's data column headers from the source file.



Data Mapping: Getting Started

There are two methods to complete the data mapping process:

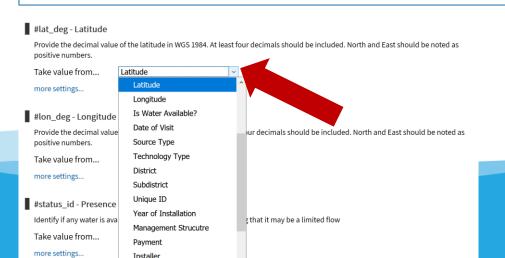
Primary method..

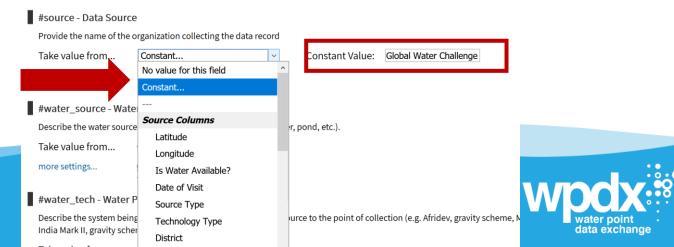
- Using the dropdown menu, scroll to select the column header from your dataset which matches the WPDx standard.
- Some parameters may pre-populate, especially if your dataset is labeled with the WPDx #titles. Verify these selections.
- Note: you cannot map the same column to two different standard parameters.

Optional method..

If there is a parameter which is not in your dataset, but for which a common value can be applied to all datapoints, Select "Constant..." from the dropdown.

- Examples
 - #source Data Source → Constant: Name of Org
 - #country_id Country → Constant: "UG" or "GH"
 - #orig_lnk Public Data Source URL → Constant: URL

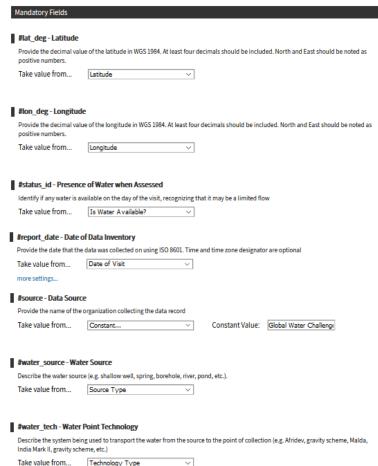




Data Mapping: Required Fields

There are 6 mandatory parameters:

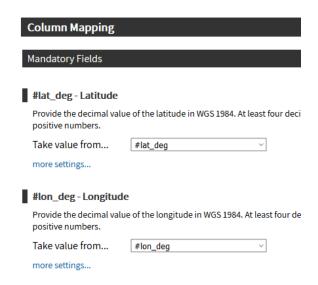
- #lat_deg Latitude
- #lon_deg Longitude
- #status_id Presence of Water when Assessed
- #report_date Date of Data Inventory
- #source Organization providing data
- #water_source Water Source AND/OR
- #water_tech Water Point Technology

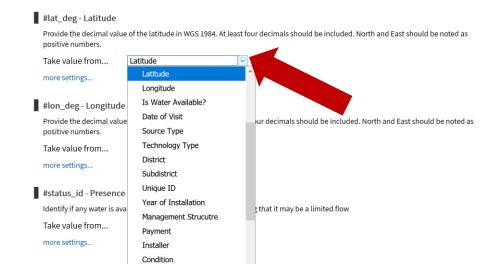




Data Mapping: #lat_deg and #lon_deg

- Latitude and longitude must be in decimal degrees in WGS84.
- Select the appropriate column header which matches with #lat_deg.
- Go the next dropdown and make the selection to match #lon_deg

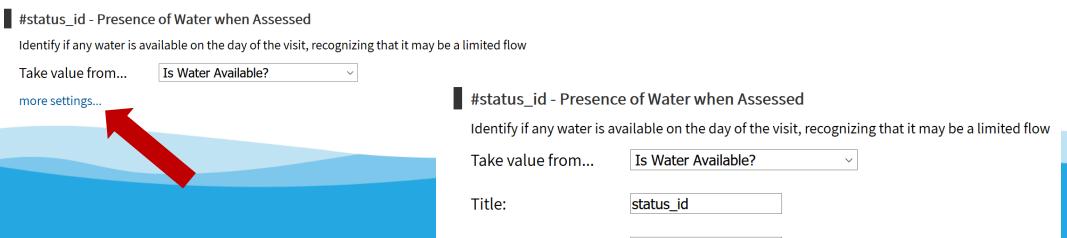






Data Mapping: #status_id

- Select the appropriate column header from the dropdown
- Default values include Yes/No. "Unknown" values (see slide 14) will be converted to a blank cell in the WPDx Global Data Repository
- If your dataset does not include Yes/No, but instead terms such as "Functional/Partial/Non-functional" select "more settings.." and enter those terms.
 - True Values = terms which indicate the water point IS functional
 - False Values = terms which indicate the water point is NOT functional
 - Do not leave any spaces between terms, just a comma (i.e., Yes, functional)



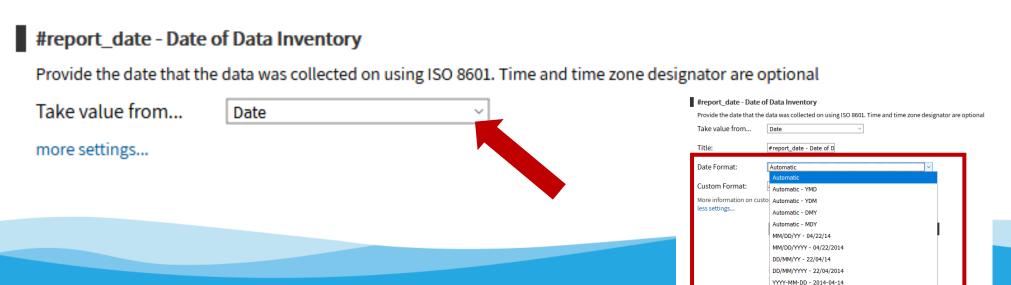
True Values:

Functional, Partial



Data Mapping: #report_date

- Select the appropriate column header from the dropdown
- The system will automatically detect the format of the dates in your dataset
- If there are errors indicated, select "more settings..." and choose a specific format. (This should only be an issue in rare circumstance)





Data Mapping: #source

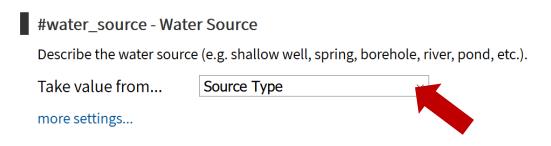
- Provide the name of the organization providing the data.
- If your dataset includes data from multiple sources, please map the parameter to the appropriate column header.
- Otherwise, the entry for Data Source in the About the Data section will be applied to all uploaded records.

#source - Data Source	te
	organization collecting the data record. If your dataset includes data from multiple sources, please map the riate column header here. Otherwise, the entry for Data Source in the About the Data section will be applied to
Take value from	#source Y



Data Mapping: #water_source & #water_tech

- At least one of #water_source or #water_tech must be mapped for the upload to proceed.
- Select the appropriate column header/s from the dropdown
- If the information is constant for all values, you can instead select "Constant.." and enter in the appropriate value in the text box.



#water_tech - Water Point Technology

Describe the system being used to transport the water from the source to the point of collection (e.g. Afridev, gravity scheme, Malda, India Mark II, gravity scheme, etc.)

Take value from...

Technology Type



Data Mapping: Optional Fields

- The "Optional Fields" are not required, but they do help to provide a more robust dataset for understanding the status of the local water sector. **Please** map as many of the WPDx parameters as possible.
- For any parameters which do not align with your dataset, you can select "No value for this field" (this is the default selection) and go on to the next parameter.
- For example, if your dataset does not include any information on payment:
 - #pay Payment for Water

Provide the payment amount and basis (e.g. monthly, per jerry can, when broken, etc.). If no amount is provided, the basis can be provided alone. An amount without a payment basis cannot be included.

Take value from...

No value for this field ~



Data Mapping: #adm1 and #adm2

- #adm1 and #adm2 are official administrative division designations
 - If you have questions, look at GADM.org (see tutorial on next slides) or statoids.com to determine the appropriate designations.

#adm1 - Primary Adr	ninistrative Division
	primary administrative division. The correct unit can be found at http://www.statoids.com. This corresponds to evel" administrative units at http://Geonames.org and http://www.gadm.org respectively
Take value from	District
more settings	
#adm2 - Secondary /	Administrative Division
	secondary administrative division. The correct unit can be found at http://www.statoids.com. This corresponds Second Level" administrative units at http://Geonames.org and http://www.gadm.org respectively
Take value from	Subdistrict



GADM.org: Check administrative divisions

1. Go to GADM.org and Select "Maps"



2. Click on country of interest

GADM Maps Data About

Browse maps by country

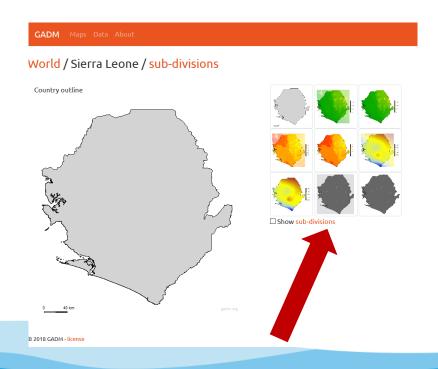
(GADM version 2.8)

Afghanistan, Akrotiri and Dhekelia, Åland, Albania, Algeria, American Samoa, Andorra, Angola, Anguilla, Antigua and Barbuda, Argentina, Armenia, Aruba Australia, Austria, Azerbaijan Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Benin, Bermuda, Bhutan, Bolivia, Bonaire, Saint Eustatius and Saba, Bosnia and Herzegovina, Botswana, Bouvet Island, Brazil, British Indian Ocean Territory, British Virgin Islands, Brunei, Bulgaria, Burkina Faso, Burundi Cambodia, Cameroon, Canada, Cabo Verde, Caspian Sea, Cayman Islands, Central African Republic, Chad, Chile, China, Christmas Island, Clipperton Island, Cocos Islands, Colombia, Comoros, Cook Islands, Costa Rica, Côte d'Ivoire, Croatia, Cuba, Curação, Cyprus, Czechia Democratic Republic of the Congo, Denmark, Diibouti, Dominica, Dominican Republic Ecuador, Egypt, El Salvador, Eguatorial Guinea, Eritrea, Estonia, Ethiopia Falkland Islands, Faroe Islands, Fiii Finland, France, French Guiana, French Polynesia, French Southern Territories Gabon, Gambia, Georgia, Germany, Ghana, Gibraltar, Greece, Greenland, Grenada, Guadeloupe, Guam, Guatemala, Guernsey, Guinea, Guinea-Bissau, Guyana Haiti, Heard Island and McDonald Islands, Honduras, Hong Kong, Hungary Iceland, India, Indonesia, Iran, Iraq, Ireland, Isle of Man, Israel, Italy Jamaica, Japan, Jersey, Jordan Kazakhstan, Kenya, Kiribati, Kosovo, Kuwait, Kyrgyzstan Laos, Latvia, Lebanon, Lesotho, Liberia, Libya, Liechtenstein, Lithuania, Luxembourg Macao, Macedonia, Madagascar, Malawi, Malaysia, Maldives, Mali, Malta, Marshall Islands, Martinique, Mauritania, Mauritius, Mayotte, Mexico, Micronesia, Moldova, Monaco, Mongolia, Montenegro, Montserrat, Morocco, Mozambigue, Myanmar Namibia, Nauru, Nepal, Netherlands, New Caledonia, New Zealand, Nicaragua, Niger, Nigeria, Niue, Norfolk Island, North Korea, Northern Cyprus, Northern Mariana Islands, Norway Oman Pakistan, Palau, Palestine, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Pitcairn Islands, Poland, Portugal, Puerto Rico Oatar Republic of the Congo, Réunion, Romania, Russia, Rwanda Saint-Barthélemy, Saint-Martin, Saint Helena, Ascension and Tristan da Cunha, Saint Kitts and Nevis, Saint Lucia, Saint Pierre and Miguelon, Saint Vincent and the Grenadines, Samoa, San Marino, São Tomé Taiwan, Taiikistan, Tanzania, Thailand, Timor-Leste, Togo, Tokelau, Tonga, Trinidad and Tobago, Tunisia, Turkey, Turkmenistan, Turks and Caicos Islands, Tuvalu Uganda, Ukraine, United Arab Emirates, United Kingdom, United States, United States Minor Outlying Islands, Uruguay, Uzbekistan Vanuatu, Vatican City, Venezuela, Vietnam, Virgin Islands, U.S. Wallis and Futuna, Western Sahara Yemen Zambia, Zimbabwe

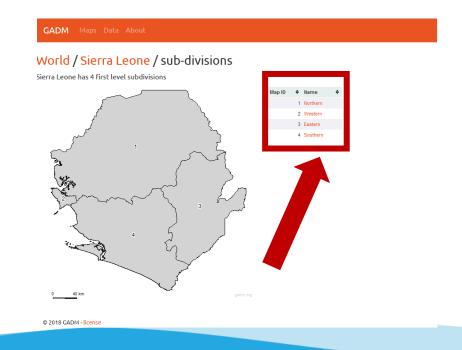


GADM.org: Check administrative divisions

3. Select "Show sub-divisions"



4. This creates a map and a list of first-level subdivisions





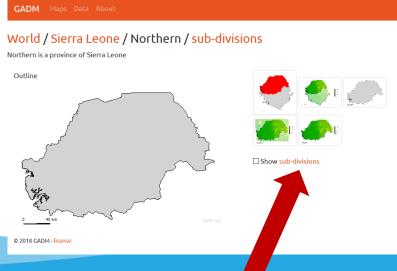
GADM.org: Check administrative divisions

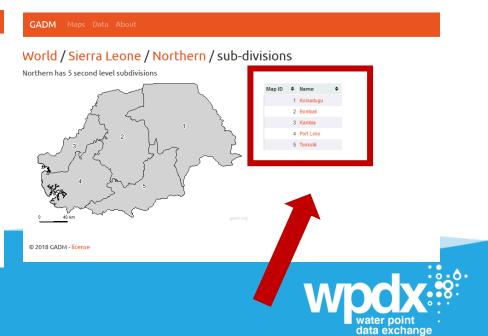
5. Click on one of the first level sub-divisions

6. Click on "Show sub-divisions

7. This creates a map and list of second level subdivisions







Data Mapping: #activity_id

- Select the appropriate column header from the dropdown
 - If a locally or globally recognized standardized identification number exists (i.e., a physical well ID number of barcode) within your dataset, please use that column, **OR**
 - If your organization has a unique id system which would allow water points to be matched within your organization over time, please use that column

#activity_id - Water Point ID

Provide the Unique ID for the specific water point infrastructure, as reported by data collector. This could be a physical ID on the water point or an internal system ID.

Take value from...

Unique ID



Data Mapping: #country_id

Select the ISO two letter country classification code, selected from a list of <u>all ISO country codes</u>.

- If your dataset includes entries from different countries, this information should be included in your data file. Select the appropriate column header from the dropdown menu.
- If your dataset only includes entries from a single file, you can select "Constant.." and enter a value to be applied to all rows.

#country_id - Count	ry			
Select the ISO two letter	country classification	code, selected from a l	ist of all ISO country co	odes.
Take value from	Constant	~	Constant Value:	



Data Mapping: #install_year

- Select the appropriate column header from the dropdown
- Note that this field accepts only a four-digit year, and not a full installation date.

#install_year - Installation Year

Provide the 4 digit installation year

Take value from...

Year of Installation



Data Mapping: #management

- Select appropriate column header from dropdown.
- Select the management classification of the entity that directly manages the water point. Example management types include:
 - Direct Government Operation
 - Private Operator/Delegated Management
 - Community Management
 - School
 - Healthcare Facility
 - Other Institutional Management
 - Other

#management - Management Structure

Select the classification of the entity that directly manages the water point.

Take value from...

Management Strucutre



Data Mapping: #pay

• Select appropriate column header from dropdown.

#pay - Payment for Water

Provide the payment amount and basis (e.g. monthly, per jerry can, when broken, etc.). If no amount is provided, the basis can be provided alone. An amount without a payment basis cannot be included.

Take value from...

No value for this field



Data Mapping: #installer

Select appropriate header from dropdown

#installer - Installer

Provide the name of the entity or entities that installed the water system. This should be the entities that completed or was directly responsible for the construction, rather than a donor or other involved stakeholder. If a system is rehabilitated, both the initial installer and rehabilitation entity can be listed if data is available.

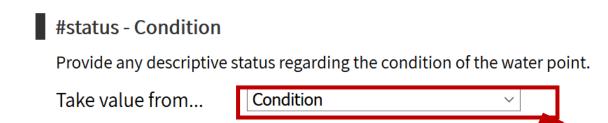
Take value from...

Installer



Data Mapping: #status

Select appropriate header from dropdown





Data Mapping: #orig_lnk

- If the data is available via a public link, select 'Constant' from the dropdown and enter it so that it can be applied to all rows.
- If there is to a public link, leave as 'No value for this field'

#orig_lnk - Public Data Source URL

Provide the public link to the data record for a specific water point or full data set, including any non-standard compliant data.

Take value from...

Constant...

Constant Value: http://www.mydatalink.

more settings...



Data Mapping: #photo_lnk

• Select appropriate column header from dropdown

#photo_lnk - Photograph

Provide the URL of a photograph of the water system. Multiple URLs can be included, with each URL separated by a comma.

Take value from... Photo



Data Mapping: #converted

- The #converted parameter is for internal use by WPDx to indicate when data has been interpreted by WPDx staff to fit within the standard.
- This only applies when WPDx staff have uploaded data on the behalf of another organization.



Data Mapping: #fecal_coliform_presence

- Select appropriate column header from the dropdown
- Default values include Present/Presence and Absent/Absence. If your dataset include other terms, select 'more settings...' and enter the terms into the True Value and False Value text boxes.
- Separate terms with a comma but do not include any spaces.
- Complete associated metadata questions

#fecal_coliform_presence - Fecal Coliform – Presence or Absence	#fecal_coliform_pre	sence - Fecal Coliform – Presence or Absence
Results of E. coli or thermotolerant coliform water quality test in a 100ml sample. Total coliform should not be included in this attribute. If thermotolerant, must be noted in the metadata. The water should be taken directly from the water point. Take value from No value for this field	Results of E. coli or thermotolerant coliform water quality test in a 100ml sample. Total coliform should not be included in this attribute. If thermotolerant, must be noted in the metadata. The water should be taken directly from the water point.	
more settings	Take value from	No value for this field
	Title:	fecal_coliform_presence
	True Values:	Present,Presence,preser

False Values:

less settings

Absent, Absence, absent,



Data Mapping: #fecal_coliform_value

- Select appropriate column header from dropdown
- Complete associated metadata questions

#fecal_coliform_value - Fecal Coliform – Value

Results of e. coli or thermotolerant coliform water quality test in a 100ml sample. Total coliform should not be included in this attribute. If thermotolerant, must be noted in the metadata. Value should represent the most probable number or colony forming units in 100ml. The water should be taken directly from the water point.

Take value from...

No value for this field



Data Mapping: #subjective_quality

• Select the appropriate column header from dropdown

#subjective_quality - Subjective Quality

Information regarding the perceived quality of the water including taste, appearance, and/or odor.

Take value from...

Overall Water Quality



Data Mapping: #scheme_id

• Select the appropriate column header from dropdown

#scheme_id - Scheme Identification

The identifier for a small piped scheme that connects multiple individual water points.

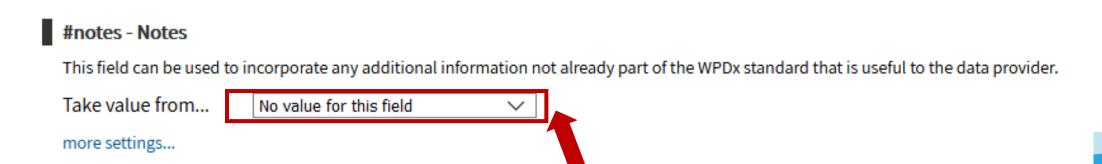
Take value from...

No value for this field



Data Mapping: #notes

- Select appropriate column from header or apply Constant value is appropriate.
- The #notes parameter can be used to enter custom data which the host country government or organization has selected.
 - For example, some organizations want to track seasonality, additional administrative districts, or some combination.
 - Multiple parameters can be included by creating a column that includes the parameters of interest, separated by a ";" or "..." delimeter.



Water Quality and Notes Metadata

• If you mapped the #fecal_coliform_presence, #fecal_coliform_value or #notes columns, please complete the additional metadata question section.

Water Quality Data
If your dataset includes water quality data, please indicate below the methodology used and the coliform type measured
Measurement unit
~
Sampling Methodology
· ·
Coliform Type
\sim
Coliform Incubation Method

If you manned the finates parameter, please include a brief description of what information is included, (e.g., Seasonality , months when water point is dry Multiple parameters can be included as
If you mapped the #notes parameter, please include a brief description of what information is included. (e.g., Seasonality - months when water point is dry. Multiple parameters can be included an
separated by "", e.g. Param1Param2Param3)

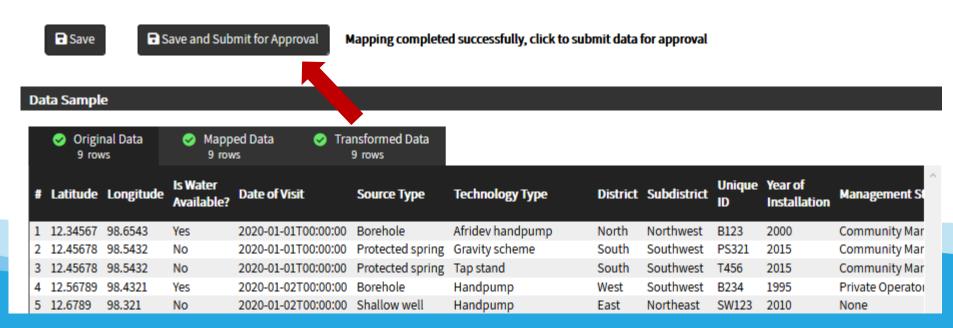


#notes	Field	Conte	nts
--------	-------	-------	-----

#notes Metadata

Once mapping is complete

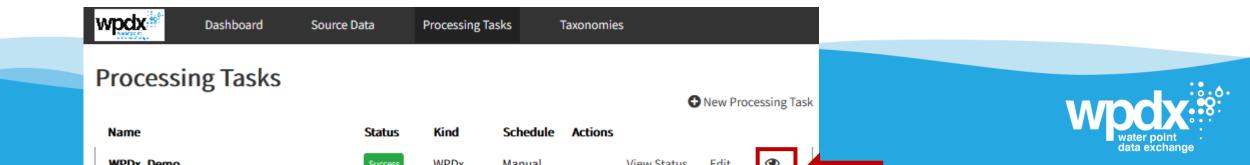
- Select "Save" or "Save and Submit for Approval"
 - Select Save and Submit for Approval when your data has been fully mapped and is ready for upload
- The status in the Processing Tasks tab will now show as "Pending"
- An administrator will be notified and will complete the uploading process
- Once approved, an email will be sent to the uploader's email address
- If the mapping was not successful, you will see an error message indicating which parameter was not mapped and explanation of why. Once the error has been fixed, you can submit the processing task for approval.





Successful upload

- Once the data upload has been completed by an administrator, the status in the Processing Task will be marked as "Success"
- You can view an overview of the dataset by clicking on the eye icon
- The overview page includes:
 - Metadata and contact details
 - Ingestion report summary statistics of the number of rows uploaded and any errors encountered.
 - Link to download source file
- Data will be visible on the WPDx data repository within 24 hours



Need to make changes?

- Users can edit their datasets and processing tasks to correct errors or make other additions (i.e., add a new column that was not previously mapped).
- To remove data from WPDx, please contact the administrator at info@waterpointdata.org with "Request to remove data from WPDx" in the subject headline. Include the name of the source file and the reason for the removal request.



Source Data: Update Contents or Delete

- If you realize you have made an error and need to edit or amend an existing dataset, select 'Update Contents' and upload a revised file.
- Once the file has been updated, go back to the associated Processing Task and check/edit the Processing Task content and data mapping and hit "Save and Submit" at the bottom of the Data Import Workbench page.
- Do not use 'Update Contents' to initiate a new dataset upload. Instead upload a new file and start a new Processing Task.

Source Data

✓ Sort Alphabetically | ☐ Sort by Update Date | ☐ Show only My Files

◆ Upload Data File

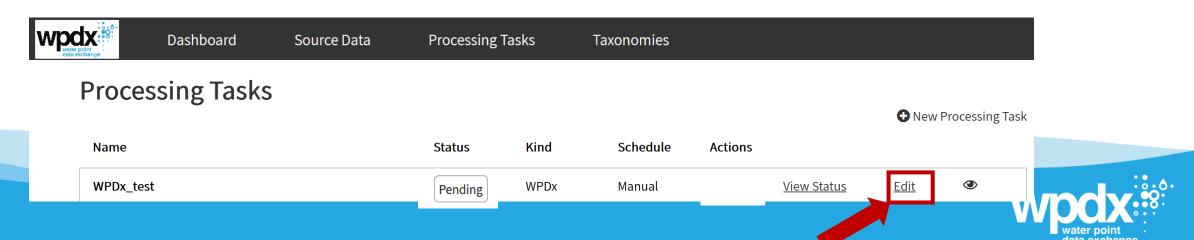
WPDx_Test Data.xlsx 11.10 KB 9/14/2020 Katy Sill Update Contents





Editing a Processing Task

- If you want to add/edit the metadata for your dataset or make changes to the way that the data is mapped to the standard, select "Edit" from the Processing Task tab.
- Make any changes and hit "Save and Submit" at the bottom of the Data Import Workbench page.
- An admin will be alerted of your update and will process the upload.





Questions?

Please contact info@waterpointdata.org

