

How to Use the SERVICES_Retrieve Excel File to Download Data from ATTAINS

Version: 5/15/2019

Purpose: A Microsoft Excel file has been set up to query ATTAINS Web Services and retrieve assessment decisions about an Organization such as a State, Territory or Tribe. This file can only retrieve Assessment data for one Organization and Cycle at a time. This document explains what types of data the Excel File provides, and how to adjust the query input parameters.

Here are some examples of the data this file can be used to query:

- Query for a list of all the Assessment Unit IDs in the state and their associated water types
- Query for the overall EPA IR Category for each Assessment in a state
- Query for all the Assessments where EPA IR Category = 5 in a specific Assessment Cycle (the CWA Section 303(d) List for that Integrated Reporting cycle)
- Query for all the Uses that are Not Supporting
- Query for all the waters that were assessed for a specific Use
- Query for all the parameters that were Causes of Impairment and the Associated Uses

Audience: Anyone who wants to query ATTAINS for Assessment decisions for an Organization using the predefined SERVICES_Retrieve Excel file. The file connects directly to ATTAINS Web Services and downloads the data into a predefined tabular format. Excel 2016 or newer, or the Power Query extension, is required to use this file.

For information about the ATTAINS Web Services, please refer to the “How to Access and Use ATTAINS Web Services” document.

General Information About the File

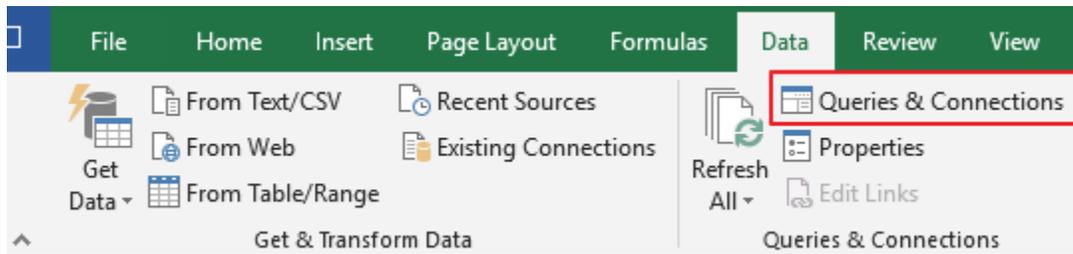
This predefined Excel file contains five spreadsheet tabs. General information is provided here, but more detailed information about the columns in each tab are provided at the end of this document.

1. **AssessmentUnits** – This tab contains information about the definition of the Assessment Units, such as the Assessment Unit Identifier, Assessment Unit Name, the Water Type, the Water Size, and whether the Assessment Unit Status is ‘Active’ or ‘Retired’.
2. **Assessments_General** – This tab contains information about the overall Assessment decision of the Assessment Unit (one row per Assessment Unit). It includes the overall EPA IR Category for the water, any rationale text that was provided, the Cycle Last Assessed and the Year Last Monitored.
3. **Uses** – This tab provides Assessment decision data about each Assessment Unit and Use combination. So, there can be multiple rows per Assessment Unit in this tab.
4. **Parameters** – This tab provides Assessment decision data about each Assessment Unit and monitored parameter combination. So, there can be multiple rows per Assessment Unit in this tab.
5. **Organizations** – Most queries require the Organization ID for the state, territory or tribal Organization. This tab provides the crosswalk between state abbreviation (in the “name” and “code” columns) and Organization ID (in the “context” column).

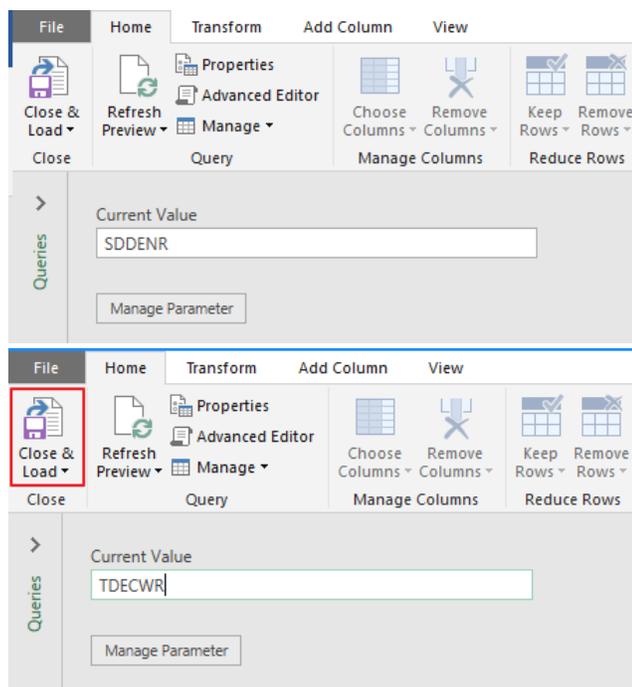
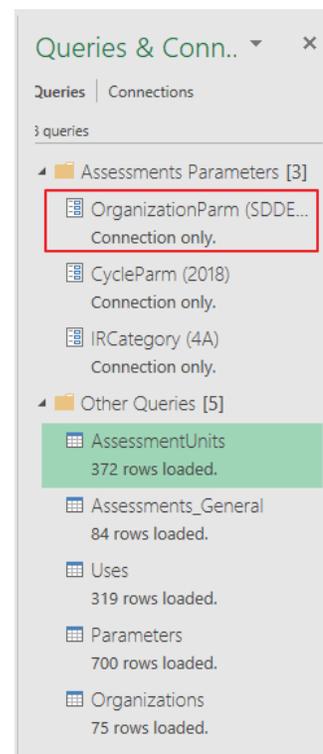
How to Query for a Different Organization and Integrated Reporting Cycle

This SERVICES_Retrieve Excel file is initially set to query for South Dakota's information (state code = "SD" or Organization ID = "SDDENR").

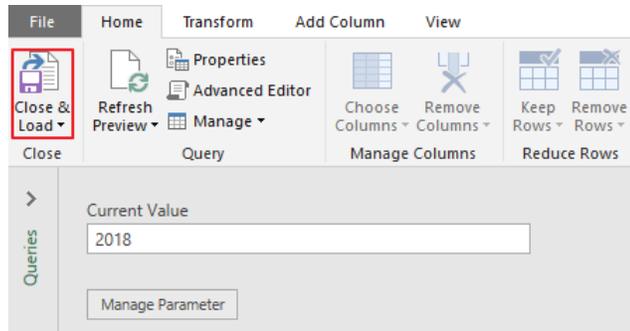
1. To edit the file to retrieve a different Organization's data, first look up the Organization ID which is found in the "context" field of the Organizations tab. You will need this information. For this example, we will use Tennessee's data (Org ID: TDECWR).
2. Go to the "Data" tab in Excel. Then click on "Queries & Connections".



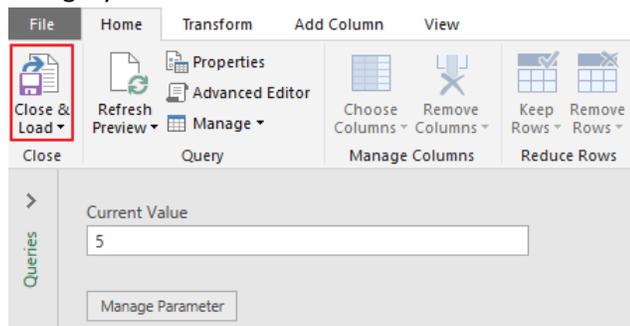
3. That opens the "Queries and Connections" sidebar. At the top, under the "Assessments Parameters" folder, there are three "Connection Only" items. This file is set to query for Organization, Cycle, and IR Category. The values in parentheses show the currently set values.
 - a. **REQUIRED:** Double-click on the "OrganizationParm" item (see the image on the right). That opens the Power Query Editor (see image below) and shows you the current value (in this example, 'SDDENR'). It is looking for the Organization ID of the data to be queried (in this case, 'TDECWR'). Change the value to 'TDECWR' and click the "Close & Load" button.



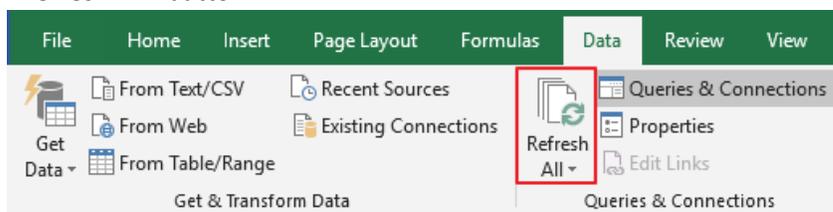
- b. **REQUIRED:** Double-click on the “CycleParm” item. In the Power Query Editor window that opens, change the value to the four-digit Integrated Reporting Cycle year (formatted as YYYY) that you would like to query for the selected Organization. (For our example, we will use ‘2018’.) Then click on the “Close & Load” button.



- c. **OPTIONAL:** You may query for a specific EPA Integrated Reporting (IR) Category, or you may leave this blank and retrieve all the Assessments, regardless of IR Category. Double-click on the “IRCategory” item. In the Power Query Editor window that opens, change the value to the IR Category that you would like to query or clear the value if you would like to retrieve Assessments for all IR Categories. For our example, we will change the value to query for EPA IR Category = 5.



4. Once you have set the query input parameters for your query, go to the Data tab and click on the “Refresh All” button.



5. **Wait for the data to load.** This may take awhile, depending on how much data are being returned by the query because it needs to compile the data, transfer the potentially large file over the internet and parse it into the Excel file. **Please be patient.** In the “Queries & Connections” panel, the status of the data download will show under the “Other Queries” folder. Each entry represents a different tab in this file, and it will show a number of rows returned when it completes the download.
6. Go to each tab, and use Excel’s column filters to further refine the data.

Appendix

AssessmentUnits Tab – Contents

Column Name	Column Contents	Comment
organizationIdentifier	The unique identifier of the Organization. An Organization can be a state or territorial agency, or a tribe.	The list of Organization IDs can be found in the “context” column of the “Organizations” tab in the file.
organizationName	The name of the Organization. This is typically the state, territory, or tribal name.	
assessmentUnitIdentifier	The unique identifier for the water or section of water.	This is provided by the state. It typically starts with the state, territory or tribal abbreviation.
assessmentUnitName	The name associated with the Assessment Unit ID.	
locationDescriptionText	The description of the location, as provided by the Organization.	
stateCode	The state, territory, or tribe abbreviation.	
statusIndicator	The status indicates whether the Assessment Unit is Active or Retired.	<ul style="list-style-type: none"> • A = Active • R = Retired
waterTypeCode	The water type associated with the Assessment Unit.	
waterSizeNumber	The size of the Assessment Unit for the Water Type, as provided by the Organization.	
unitsCode	The units associated with the Water Size Number.	

Assessments_General Tab – Contents

Column Name	Column Contents	Comment
assessmentUnitIdentifier	The unique identifier for the water or section of water.	This is provided by the state. It typically starts with the state, territory or tribal abbreviation.
agencyCode	This indicates the Organization that made the Assessment.	<ul style="list-style-type: none"> • S = State • T = Tribe • E = EPA
trophicStatusCode	This represents the trophic status for the Assessment Unit.	
rationaleText	This is the rationale for the assessment conclusion.	

Column Name	Column Contents	Comment
epalRCategory	This refers to the single overall EPA Integrated Reporting Category. A brief explanation is provided in the Comment column. Please see the EPA Integrated Reporting Guidance for a full explanation of the different categories.	<ul style="list-style-type: none"> • 1 = All Uses have been assessed and all are supporting Water Quality Standards. • 2 = All assessed Uses are supporting Water Quality Standards, but may have one or more Uses that were Not Assessed. • 3 = Insufficient Information to make an assessment decision, or Not Assessed. • 4a = impaired by a pollutant but already has a TMDL • 4b = impaired by a pollutant but doesn't need a TMDL since other pollution control measures are in place • 4c = impaired by something that is not a pollutant • 5 = impaired by a pollutant and still needs a TMDL
cycleLastAssessedText	The Integrated Reporting cycle that an Assessment decision was last made for the Assessment Unit.	This is a four-digit year in the YYYY format.
yearLastMonitoredText	The most recent year that monitoring data was collected for the Assessment Unit.	

Uses Tab – Contents

Column Name	Column Contents	Comment
assessmentUnitIdentifier	The unique identifier for the water or section of water.	This is provided by the state. It typically starts with the state, territory or tribal abbreviation.
useName	The name of the designated Use.	
useAttainmentCode	The water quality assessment decision about the Use.	<ul style="list-style-type: none"> • F = Fully Supporting • N = Not Supporting • I = Insufficient Information • X = Not Assessed

Column Name	Column Contents	Comment
threatenedIndicator	This indicates whether the water is considered "Threatened" under Clean Water Act Section 303(d). A Use that is Fully Supporting but also "Threatened" is considered part of the Section 303(d) List of impaired waters that need a TMDL.	<ul style="list-style-type: none"> • N = Not Threatened • Y = Threatened
trendCode	This is the code representing the water quality trend for this use.	
agencyCode	This indicates the Organization that made the Assessment.	<ul style="list-style-type: none"> • S = State • T = Tribe • E = EPA

Parameters Tab – Contents

Column Name	Column Contents	Comment
assessmentUnitIdentifier	The unique identifier for the water or section of water.	This is provided by the state. It typically starts with the state, territory or tribal abbreviation.
parameterStatusName	The assessment decision as to whether the monitored parameter was meeting standards or not.	<ul style="list-style-type: none"> • Cause = cause of impairment • Insufficient Information = monitored but there was not enough information to make an assessment determination • Meeting Criteria = monitored but found to be meeting standards • Meeting Threshold = monitored but found to be meeting thresholds. This is typically used if there are not actual water quality standard criteria for the parameter. • Not Assessed = this parameter was not assessed • Not Meeting Threshold = a parameter that does not have water quality criteria but that has accepted threshold limits was monitored and found not to be meeting the threshold

Column Name	Column Contents	Comment
parameterName	The parameter that was monitored and assessed.	Examples: pH, Temperature, Aluminum
associatedUseName	This is the designated use that is related to the parameter.	
parameterAttainmentCode	This is the code indicating the attainment status for this parameter for this specific Use.	<ul style="list-style-type: none"> • Insufficient Information = monitored but there was not enough information to make an assessment determination • Meeting Criteria = monitored but found to be meeting standards • Meeting Threshold = monitored but found to be meeting thresholds. This is typically used if there are not actual water quality standard criteria for the parameter. • Not Assessed = this parameter was not assessed • Not meeting criteria = Does not meet the water quality criteria • Not Meeting Threshold = a parameter that does not have water quality criteria but that has accepted threshold limits was monitored and found not to be meeting the threshold
cycleFirstListedText	This is the cycle that the Assessment Unit was first listed for this cause of impairment parameter.	
cycleScheduledForTMDLText	This is the cycle when the organization anticipates submitting the TMDL for EPA approval.	
CWA303dPriorityRankingText	This is the DWA 303(d) priority for developing a TMDL	<ul style="list-style-type: none"> • High • Medium • Low
associatedActionIdentifier	This is the unique code (Action ID) identifying the Action that corresponds to this cause of impairment.	

Column Name	Column Contents	Comment
pollutantIndicator	This is a flag indicating whether or not the cause of impairment is a pollutant.	<ul style="list-style-type: none">• Y = Yes, it is a pollutant• N = No, it is not a pollutant

Organizations – Contents

Column Name	Column Contents	Comment
name	State Code	
code	State Code	
context	Organization Identifier	