

Instructions: How to Upload Geospatial Files in ATTAINS

Version: 6/29/2019

Purpose: This document explains how to upload geospatial (or GIS) files representing Assessment Unit locations and extents to ATTAINS for processing. The uploaded files will be processed to National Hydrography Dataset Plus (NHDPlus) catchments using an automated Catchment Indexing Process (CIP) Tool. The relationship between each Assessment Unit and associated catchment(s) will be provided in an output table (catchment crosswalk table), that can then be used in conjunction with geospatial analyses.

Things to Know Before You Get Started

The geospatial files that are uploaded to ATTAINS must meet some requirements. Shapefiles and Geodatabase files are allowed, but they must be zipped for upload. The Catchment Indexing Process uses shapefiles, so any geodatabase feature classes will be converted to shapefiles before processing. Only one zipfile is allowed per form submission. If multiple zipfiles need to be submitted, submit one form for each zipfile.

Tribes may provide a .CSV file or Excel table of Latitude and Longitude coordinates and Assessment Unit IDs to represent point Assessment Units if they do not have geospatial files. Zip the file and upload the zipfile using the Upload GIS form. EPA will convert the Latitude/Longitude coordinates to point features before processing them to catchments.

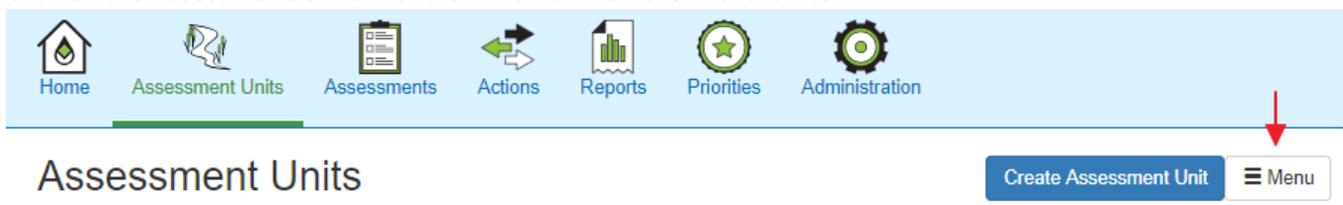
For the first new cycle, please submit geospatial files representing all the Assessment Units in the state. For future cycles, you may submit geospatial representations for either the full state, or you may choose to submit just the Assessment Units that have changed (new Assessment Units, or Assessment Units that have changed lengths from the prior cycle, or been split or merged).

1. Each Assessment Unit needs a geospatial representation (i.e., its location and extent) in ATTAINS.
 - a. Streams should be represented as linear features.
 - b. Lakes, reservoirs and ponds, should be represented as polygon features. For this type of file, on the submission form, select that it is a waterbody polygon.
 - c. For watershed Assessment Units represented as polygons (where the assessment conclusions apply to **all the waters** in the land area boundary), select the land area type polygon submission.
 - d. The waterbody and land area type polygon files must be submitted using separate form submissions because these two types of polygon files are processed differently.
2. **Assessment Unit Identifier:** Each geospatial file (shapefile or feature class) must contain a **single column** that contains the **full Assessment Unit ID**, and that identifier **must exactly match the Assessment Unit ID used in ATTAINS**. (If the IDs do not match, it will not be loaded to ATTAINS.) The user must designate the **exact name** of the column in the geospatial file that contains the Assessment Unit ID, so that the files can be processed correctly and connected to attribute data in ATTAINS.
 - a. If the geospatial file contains most of the Assessment Unit ID except the state prefix, but ATTAINS has a state prefix for the Assessment Unit ID, those do not exactly match. Add a column to the geospatial data and calculate it to include the state abbreviation so that the full Assessment Unit ID is contained in a single column before you submit the geospatial data.
 - b. For geodatabase files: The Assessment Unit ID column must be inside the feature class itself. It cannot be stored in a related table.

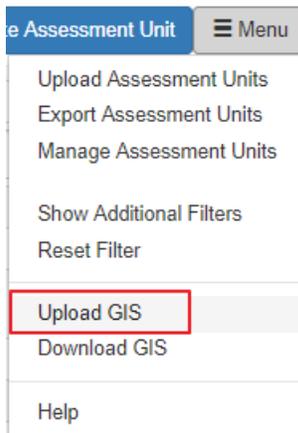
3. **Only state/territory/tribal users with Assessment Units Administrator privileges or an EPA Regional user** with appropriate privileges may upload geospatial data.
4. Determine who the contact should be if there are questions while processing the geospatial data. That contact could be the person who is uploading the geospatial data, or an alternate contact.

Uploading Geospatial Files

1. Login to production ATTAINS (<https://attains.epa.gov/attains>). To upload geospatial (GIS) data, you must be a state, territory, or tribal user who has Administrator privileges for the Assessment Units module or an EPA Regional user with appropriate privileges.
2. Click on the **Assessment Units** module. Then click on the **Menu** button.



3. From the Menu, click on **Upload GIS**.



4. **Contact Information:** Provide a contact for questions that may arise when processing the geospatial files. The form asks: “Is the Contact for the GIS files **different** from the Assessment Unit Administrator?”
 - a. If you are the person who should be contacted about geospatial questions, then select “No” (the GIS contact is not different than the Assessment Unit Administrator).

Contact Information

Is the Contact for the GIS files No Yes
different from the Assessment Unit
Administrator?

- b. If the contact for geospatial questions is different than the user who is uploading the geospatial files, select “Yes” and provide the contact information for that person.

Contact Information

Is the Contact for the GIS files
different from the Assessment Unit
Administrator? No Yes

Name

Email

Phone

Contact Organization Organization EPA Region

5. **Geospatial File Information:** You may upload one zipfile per form submission. If you need to submit multiple zipfiles, then you will need to fill out the form once for each zipfile to be submitted. The zipfile may contain one or more geometry types. There are two types of Polygon files (polygons representing waterbodies such as lakes versus polygons representing land area such as watersheds or HUCs), and those polygon types cannot be submitted together because they are processed differently. Linear and Point features can be submitted with either type of Polygon submission.
- a. **Geometry Type(s):** You may select one or more geometry types that are included in the zipfile. Select the checkbox next to each type of geometry that applies to this form submission.

Geospatial File Information

Geometry Type(s) Linear Polygon Point

- b. **Column containing Assessment Unit ID:** For each geometry type selected, provide the name of the column in the geospatial file that contains the Assessment Unit ID. The ID contained in that field must EXACTLY MATCH the Assessment Unit ID in ATTAINS.
- i. **Linear:** If linear is selected, provide the name of the column in the linear file that contains the Assessment Unit ID.

Geometry Type(s) Linear Polygon Point

Provide the column in
the attribute table for
each geometry type that
contains the Assessment
Unit Identifier

Linear:

- ii. **Polygon:** If polygon is selected, indicate the type of polygon file (either it represents waterbodies like lakes, ponds or reservoirs, OR it represents land area boundaries such as a watershed, hydrologic unit or HUC). Then provide the name of the column in the polygon file that contains the Assessment Unit ID. If you have both types of polygon files, then use a separate form to submit each type of polygon file.

Geometry Type(s) Linear Polygon Point

All area/polygon files that are uploaded together must represent only one of these two types of files

Waterbodies (such as lakes, ponds, or reservoirs)

Land areas (such as watershed area, hydrologic units, or HUCs)

Provide the column in the attribute table for each geometry type that contains the Assessment Unit Identifier

Polygon:

- iii. **Point:** If point is selected, provide the name of the column in the point file that contains the Assessment Unit ID.

Geometry Type(s) Linear Polygon Point

Provide the column in the attribute table for each geometry type that contains the Assessment Unit Identifier

Point:

- iv. Multiple geometry types may be uploaded using the same form submission, as long as they meet both of these criteria: 1) they are included in the single zipfile, AND 2) they do not include both types of polygon files. To upload multiple geometry types using the same form submission, select all of the appropriate geometry types and provide the column containing the Assessment Unit IDs for each geometry type.

<p>Geometry Type(s)</p> <p>All area/polygon files that are uploaded together must represent only one of these two types of files</p> <p>Provide the column in the attribute table for each geometry type that contains the Assessment Unit Identifier</p>	<p><input checked="" type="checkbox"/> Linear <input checked="" type="checkbox"/> Polygon <input checked="" type="checkbox"/> Point</p> <p><input checked="" type="radio"/> Waterbodies (such as lakes, ponds, or reservoirs)</p> <p><input type="radio"/> Land areas (such as watershed area, hydrologic units, or HUCs)</p> <p>Linear: <input type="text" value="AU ID Column Name"/></p> <p>Polygon: <input type="text" value="AU ID Column Name"/></p> <p>Point: <input type="text" value="AU ID Column Name"/></p>
--	--

- c. **Select ZIP File for Upload:** Choose a zipfile to upload. This form only accepts a .zip file type. For shapefiles, be sure to include all the associated files (.shp, .shx, .dbf, .prj) in the zipfile.

Select ZIP File for Upload

No file chosen

- d. **Comments:** Provide any comments that may help as your geospatial files are processed.
Note: These comments will be displayed to anyone accessing the Download GIS page.

6. When you have completed the form, click the **Submit File** button.

Downloading Geospatial Files

The geospatial visualization (mapping) capabilities are not yet available in ATTAINS. However, geospatial files may be downloaded by any ATTAINS user who can view data for the organization.

To access the geospatial files that were uploaded, go to the Assessment Units module, and select the **Download GIS** option from the Menu. Initially, the files that were uploaded for the organization (state/territory/tribe) will be available. Once your files have been processed, the output files (“Post-CIP Standardized Shapefiles” and “Post CIP Catchment Assessment Unit Crosswalk File”) will also be available for download from the **Download GIS** option. Note: The output files correspond to the input files provided. If the input files were a subset of Assessment Units, then the output files will also contain a subset of Assessment Units.