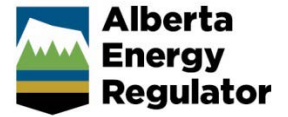


Import Digital Spatial Data into OneStop – Water Activities



» Intended User: Water Act Applicants

Overview

To apply for a water approval, applicants **must** upload the proposed Water Act activity area shapefile, as well as the applicable proposed Dam, Pond, Reservoir or Wetland shapefiles.

All shapefiles submitted to the AER must be submitted as polygon features, and must conform to shapefile standards outlined in the ESRI white paper.

[ESRI Shapefile Technical Description](https://www.esri.com/library/whitepapers/pdfs/shapefile.pdf).
(<https://www.esri.com/library/whitepapers/pdfs/shapefile.pdf>)

This quick reference guide (QRG) is an overview of the use of shapefiles for Water Act approval applications. For specifics on how each shapefile is used for the four different types of water act applications (dam, pond, reservoir, wetland, water approval, other), please see the corresponding quick reference guide.

All shapefile templates are available from the AER by contacting the Customer Contact Centre. Templates are also available for download within OneStop.

Water Polygon Topology Rules

1. Log into OneStop.
2. The Water Act activity area polygon data represents the **overall area** of the individual activities associated with the Water Act approval application.
 - a) The Activity area polygon is used by OneStop to determine the quarter sections that are to be included in corresponding Public Notice of Application.
 - b) When the Activity takes place on Public Land, it should align with the associated public lands disposition(s).

Important:

When creating your polygon files, be aware that they **must not intersect or self-overlap**.

Users should check the validity of their shapefile submissions against these parameters before uploading them to OneStop.

For a Wetland Activity, the additional wetland polygon submission represents **the same wetland delineation** as described in the Alberta Wetland Identification and Delineation Directive.

Important:

The AER **does not accept** the shapefile template described in the aforementioned Directive. The shapefile template described in this quick reference guide is required.

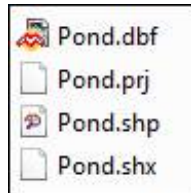
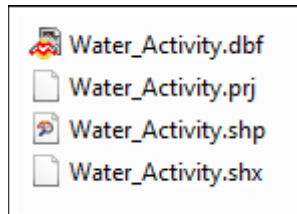
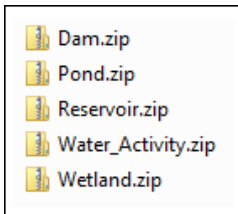
3. The additional dam polygon(s) and associated pond polygon represent the individual features in a dam safety activity.
 - a) The dam polygon represents the berm and associated outside toe of each dam.
 - b) The pond polygon represents the surface area of the pond at full supply level.
 - c) See the Business Rules section below to understand the topological relationship between the dam and pond polygons.
4. For a Reservoir activity, the additional Reservoir polygon represents the total area of the water at full supply level and, when present, includes all of the berms.
 - a) Only **one** reservoir polygon feature will be accepted in each shapefile activity submission.
5. For the 'Other' Activity, see #2 above. There are no additional shapefile requirements for this activity.

Digital Spatial Data

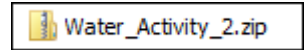
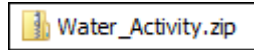
Digital spatial data is uploaded as a shapefile. This file contains spatial location data and consists of several files, collectively uploaded as a zip file.

The name of the shapefiles must conform to the naming convention described in the activity QRG. The name of your individual zip file folders may be named in accordance with your own business rules for naming.

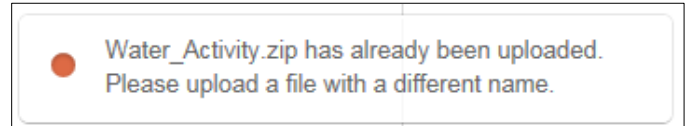
For example: the zip folder you set up to house these files can have any name that follows your company's naming conventions:



When you attach zip folders, ensure the folder name has not been previously attached to the activity. All zip folders must have a unique name.



When the name is not unique, you receive this error message.



Upload the Water Activity Area as Digital Spatial Data (shapefile)

1. Log into OneStop.
2. From the dashboard, use the search criteria to find the required application.
3. Click **Initiate > New Application**.
4. From the left menu bar, select **Authorization**.
5. Select **General Application**.
6. Select **Attach File**.
Shapefiles **must** be loaded **before** loading .csv files.
7. The **Attach File** button appears.

Re-Upload Shapefile

Attach Shapefile of Water Act activity area in .zip format

[Attach File...](#)

[Submit Shapefile](#)

8. Navigate to the stored location of the required file.



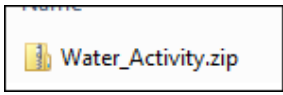
9. Double-click to select and upload the file.

Attach Shapefile of Water Act activity area in .zip format

[Water_Activity.zip](#) (4 KB)

[Submit Shapefile](#)

10. The shapefile displays in OneStop.



11. Click **Submit Shapefile**.

12. OneStop processes the file. This takes 10–30 seconds, depending the file size.



13. While the file is being processed, you can continue with the application.

14. Once the file is loaded into **Map Viewer**, the location information displays in the Activity Details LLD table.

LLD	Quarter	SEC	Township	Range	Meridian
	SW	31	87	7	5

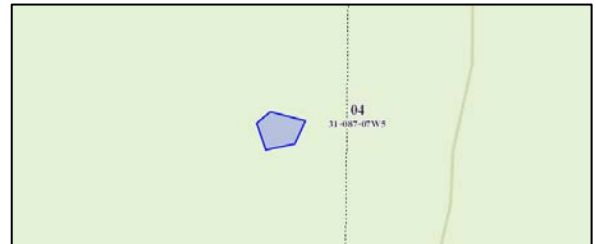
15. Move to the top of the window again.

16. Click the **View on Map** button.

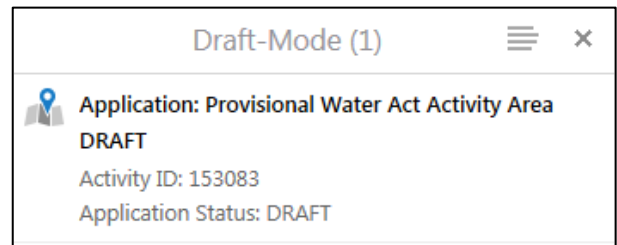


17. The AER logo displays as **Map Viewer** opens.

18. Once loaded, the shapefile area displays.



19. Use the **Map Viewer** tools to zoom in or out as required.



Important: When you need to change a shapefile that is currently attached to a draft authorization, upload the **new** file required.

OneStop overwrites the old file and enters the new file into **Map Viewer**.

Resources

For more detailed information on where to upload shapefiles for each type of water act application, please see the corresponding quick reference guide for that activity.

Operators or survey companies create the **Unique_ID** field themselves. It could be any numerical sequence you like, while it is in Draft form.

The **Unique_ID** of the polygon equates to the technical information provided in the application that describes that same polygon.

	FID	Shape	Unique_ID
▶	0	Polygon	1

OneStop Automated Shapefile Validations

For all shapefiles submitted, OneStop automatically checks to confirm that the following information is correct. OneStop provides the appropriate error message when these checks fail:

- a) the shapefile features fall within the geographic extents of the **Province of Alberta**;
- b) all **attributes** described in this QRG, including the order of the attribute fields, are included in the shapefile submission;
- c) all **mandatory fields**, as described in this QRG, are included in the shapefile submission;
- d) the shapefile **Coordinate system** has the same parameters as described later in this QRG;
- e) the reservoir shapefile contains one polygon feature.

Glossary of Terms

Key Term	Description
Shapefiles	<p>A shapefile is an ESRI vector data storage format for storing the location, shape, and attributes of geographic features. The data in a shapefile is stored as a set of related files and describes one set of data.</p> <p>The shapefile is an industry standard spatial data format that can be created using most Geographic Information System (GIS) or Computer Aided Design (CAD) software packages. The shapefile is a collection of separate files that are submitted to the AER in a single zip file.</p> <p>The IDA system requires, as a minimum, the following shapefile components the: .shp, .shx, .dbf, and .prj files. These files follow the standard naming conventions described in this document and are submitted as a single zip file.</p>
.CSV	<p>The comma-separated value standard or .csv is a simple data format for representing numeric and textual values. It is an example of a "Flat File" format. These files are often created in Excel or any text editing software.</p> <p>The columns of data in each row of the file are delimited (separated) by a comma. Individual rows are separated by a new line (character used to represent the end of a line of text).</p> <p>The .csv files can be used to create numerous rows of data that can then be uploaded as a single file.</p>

OneStop Spatial Data

The AER requires that all spatial data submissions be referenced to the NAD83 datum and projected to the following:

NAD 1983 10TM AEP Forest	NAD 1983 CSRS 10TM AEP Forest
<p>NAD_1983_10TM_AEP_Forest</p> <p>WKID: 3400 Authority: EPSG</p> <p>Projection: Transverse Mercator</p> <p>False Easting: 500000.0</p> <p>False Northing: 0.0</p> <p>Central Meridian: -115.0</p> <p>Scale Factor: 0.9992</p> <p>Latitude Of Origin: 0.0</p> <p>Linear Unit: Meter (1.0)</p> <p>Geographic Coordinate System: GCS_North_American_1983</p> <p>Angular Unit: Degree (0.0174532925199433)</p> <p>Prime Meridian: Greenwich (0.0)</p> <p>Datum: D_North_American_1983</p> <p style="padding-left: 20px;">Spheroid: GRS_1980</p> <p style="padding-left: 40px;">Semi-major Axis: 6378137.0</p> <p style="padding-left: 40px;">Semi-minor Axis: 6356752.314140356</p> <p style="padding-left: 40px;">Inverse Flattening: 298.257222101</p>	<p>NAD_1983_CSRS_10TM_AEP_Forest</p> <p>WKID: 3402 Authority: EPSG</p> <p>Projection: Transverse Mercator</p> <p>False Easting: 500000.0</p> <p>False Northing: 0.0</p> <p>Central Meridian: -115.0</p> <p>Scale Factor: 0.9992</p> <p>Latitude Of Origin: 0.0</p> <p>Linear Unit: Meter (1.0)</p> <p>Geographic Coordinate System: GCS_North_American_1983_CSRS</p> <p>Angular Unit: Degree (0.0174532925199433)</p> <p>Prime Meridian: Greenwich (0.0)</p> <p>Datum: D_North_American_1983_CSRS</p> <p style="padding-left: 20px;">Spheroid: GRS_1980</p> <p style="padding-left: 40px;">Semi-major Axis: 6378137.0</p> <p style="padding-left: 40px;">Semi-minor Axis: 6356752.314140356</p> <p style="padding-left: 40px;">Inverse Flattening: 298.257222101</p>

Water Act Authorization Data

Feature Name: Water Act Activity Area

Description: The Water Act activity area polygon data represents the overall area of the individual activities associated with the Water Act approval application.

- a) The Activity area polygon is used by OneStop to determine the quarter sections that are to be included in the corresponding Public Notice of Application.
- b) When the Activity takes place on public land, it should align with the associated public lands disposition.

Geometry: Polygon

Pipeline Segment Attributes:

Field name	Type	Allowable values	Length	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
Unique_ID	Long			Mandatory	A unique number to represent the activity area. Values must be greater than 0.

Business Rules

- 1. The Water Activity shapefile should contain all associated water approval shapefiles. The individual water approvals associated with the shapefile should not intersect or fall outside of the associated Activity area polygon.

Packaging

Water Act activity area shapefiles must be provided and named as described below:

- 1. Water_Activity.shp (required)
- 2. Water_Activity.shx (required)
- 3. Water_Activity.dbf (required)
- 4. Water_Activity.prj (required)

The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest

- 5. Water_Activity.sbn (optional)
- 6. Water_Activity.sbx (optional)
- 7. Water_Activity.shp.xml (optional)

Important: The Unique_ID or ID must be greater than 0, ex.1 for all water shapefile uploads.

Dam Data

Feature Name: Dam

Description: The Dam polygon(s) represents the individual features in a Dam Safety approval application.

- The dam polygon represents the berm and associated (outside toe) of the dam. It is aligned with the associated pond polygon feature as described in the Business Rules.

Geometry: Polygon

Dam Attributes:

Field name	Type	Allowable values	Length	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
ID	Long			Mandatory	Required user generated dam identification number. Must be numeric and unique.
Name	Text		40	Mandatory	Required user generated Name. Must be unique and can be up to 40 characters long.

Business Rules

- The dam feature should share the same vertices as the associated pond shapefile feature.
- The dam feature should intersect (touch) the pond feature boundary.
- The dam feature should not cross within the boundary of the pond feature boundary.

Packaging

Dam shapefiles must be provided and named as described below:

- Dam.shp (required)
- Dam.shx (required)
- Dam.dbf (required)
- Dam.prj (required)

The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest

- Dam.sbn (optional)
- Dam.sbx (optional)
- Dam.shp.xml (optional)

Pond Data

Feature Name: Pond

Description: The Pond polygon represents the individual pond feature in a Dam Safety approval application. It is aligned with the associated Dam polygon feature as described in the Business Rules.

Geometry: Polygon

Dam Attributes:

Field name	Type	Allowable values	Length	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
ID	Long			Mandatory	Required user generated pond identification number. Must be numeric and unique.
Name	Text		40	Mandatory	Required user generated Name. Must be unique and can be up to 40 characters long.

Business Rules

1. The pond feature should represent the area of the pond at full supply level.
2. The pond feature should share the same vertices as the associated dam shapefile feature.
3. The pond feature should intersect (touch) the dam feature boundary.
4. The pond feature should not cross within the boundary of the dam feature boundary.

Packaging

Dam shapefiles must be provided and named as described below:

- 1) Pond.shp (required)
- 2) Pond.shx (required)
- 3) Pond.dbf (required)
- 4) Pond.prj (required)

The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest.

- 5) Pond.sbn (optional)
- 6) Pond.sbx (optional)
- 7) Pond.shp.xml (optional)

Reservoir Data

Feature Name: Reservoir

Description: The Reservoir polygon represents the individual feature in a reservoir approval application/ When present, it includes all berms in the polygon.

Geometry: Polygon

Dam Attributes:

Field name	Type	Allowable values	Length	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
ID	Long			Mandatory	Required user generated reservoir identification number. Must be numeric and unique.
Name	Text		40	Mandatory	Required user generated Name. Must be unique and can be up to 40 characters long.

Business Rules

1. The Reservoir polygon represents the total area of the water at full supply level and the berms.
2. Only one reservoir polygon feature will be accepted in each shapefile activity submission.

Packaging

Dam shapefiles must be provided and named as described below:

- 1) Reservoir.shp (required)
- 2) Reservoir.shx (required)
- 3) Reservoir.dbf (required)
- 4) Reservoir.prj (required)

The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest

- 5) Reservoir.sbn (optional)
- 6) Reservoir.sbx (optional)
- 7) Reservoir.shp.xml (optional)

Wetland Data

Feature Name: Wetland

Description: The Wetland polygon submission represents the same wetland delineation as described in the Alberta Wetland Identification and Delineation Directive.

NOTE: The AER **will not accept** the shapefile template described in the aforementioned Directive. The shapefile template described in this quick reference guide is required.

Geometry: Polygon

Dam Attributes:

Field name	Type	Allowable values	Value description	Mandatory or optional	Definition
FID	Object ID	System Defined		Mandatory	Unique identifier
Shape	Geometry	System Defined		Mandatory	The spatial feature
ID	Long			Mandatory	Required user generated wetland identification number. Must be numeric and unique.
Name	Text		40	Mandatory	Required user generated Name. Must be unique and can be up to 40 characters long.

Business Rules

1. See the Alberta Wetland Identification and Delineation Directive.
2. The Name Field matches the technical information, included in the csv file, or typed into the application, that describes the individual wetland.

Packaging

Dam shapefiles must be provided and named as described below:

- 1) Wetland.shp (required)
- 2) Wetland.shx (required)
- 3) Wetland.dbf (required)
- 4) Wetland.prj (required)

The spatial reference must be NAD 1983 10TM AEP Forest or NAD 1983 CSRS 10TM AEP Forest

- 5) Wetland.sbn (optional)
- 6) Wetland.sbx (optional)
- 7) Wetland.shp.xml (optional)

Important:

Please submit **separate** zip files for OneStop spatial information.

A combined submission of multiple shapefiles as one zip file will **not** be handled by OneStop.

Only one file is processed at a time.

Users must submit each file separately.