

Government of Alberta

Run the Alberta soil information viewer

Navigation and Operation

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Introduction

What follows is a detailed description of all the functions and tools available on the latest version of the Alberta Soil Information Viewer. The viewer is a web page optimized to run on several types of web Browser’s including Google Chrome, Firefox, Safari, and Internet Explorer or Microsoft Edge.

This means that personal computers (PCs), Apple, UNIX, and Android platforms may view and interact with this web page. The functionality on a desktop and laptop may change or reduce somewhat if the application is used on a tablet or smartphone device and the essentials of the website’s functions remain.

On supported devices, this webpage is also geographically aware and can support:

- simple markup points, lines and polygons,
- buffering,
- measurement,
- query extract and
- import and export operations

as they relate to the use of digital soil information in the Agricultural area of the province of Alberta.

How to use this Document

The document starts with a numbered diagram of the main areas of interaction and a brief description of each area of interaction. Each numbered area represents a numbered section located further down in the document where the numbered section describes the numbered area in more detail.

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Getting Started

In order to start using this application please refer to the How to use the viewer section of the

[Alberta Soil Information Viewer Landing Page](#)



Browser Requirements

This application works best using Apple Safari, Google Chrome, Mozilla Firefox, or Microsoft's Internet Explorer & Edge, browsers.

Areas of Interaction

There are several areas that a client may wish to interact on the Alberta, soil information viewer application:

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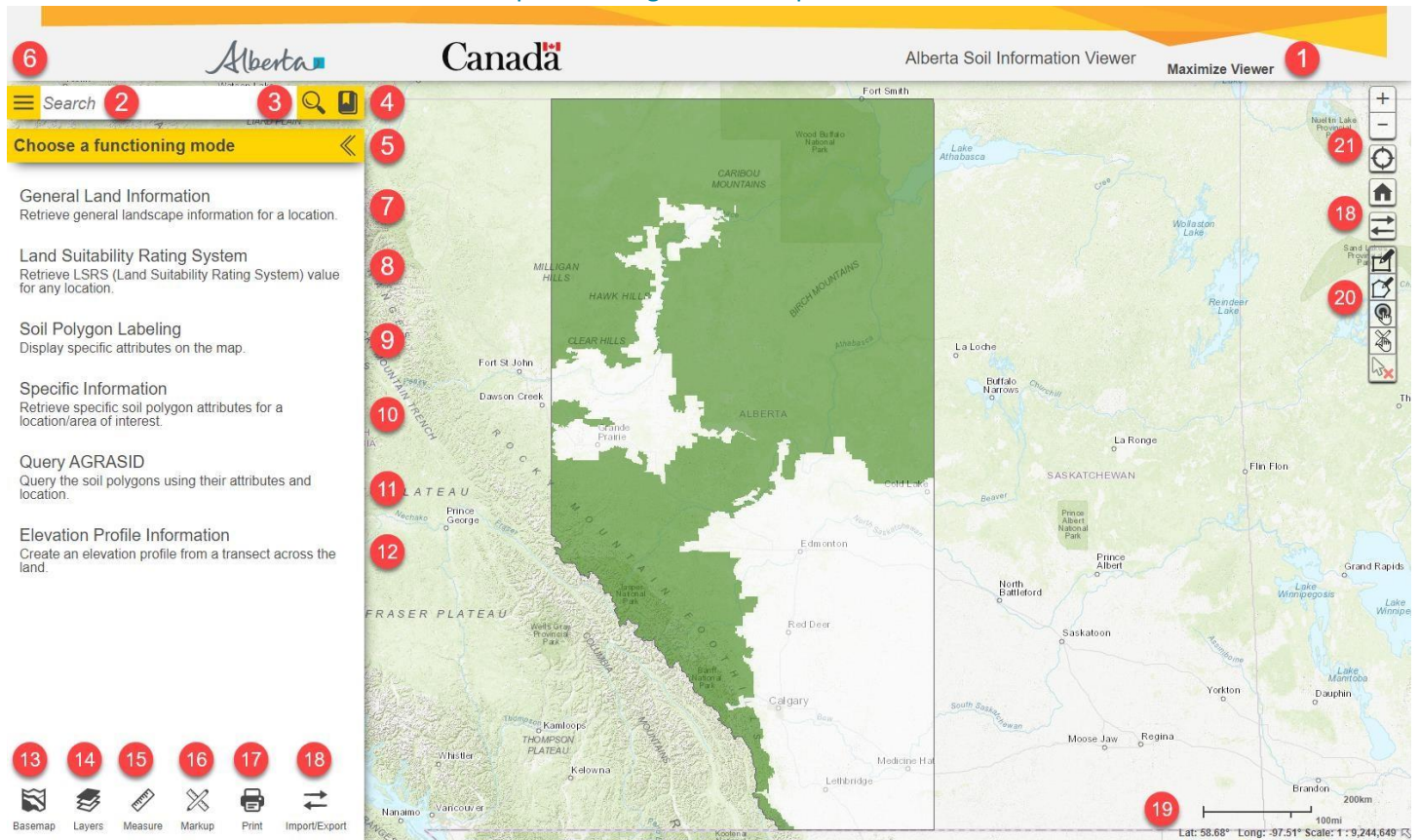


Figure 1: Main Areas of interaction.

Locations: 1, 5, 6 and 20

Locations 1, 5, 6 and 20 are the common areas of Interaction with the viewer. These areas:

- Maximize the map window
- Open and close the functioning mode window, and
- Provide Spatial selections tools.

Locations 2, 3, and 4 Establish and Move to the Area of Interest through:

- searching,
- zooming and

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- c. Bookmarking of favorite locations.

Locations 7 through 12: List functioning mode choices for the viewer's side window:

- a. Potential functional modes **Choose a functioning mode** or
- b. Work scenarios to which the soil information viewer can configure.

Locations 13 through 18: House the Following Standard Tools



- a. **Basemap** Managing the choice of base map, backdrop information shown with the soil information.



- b. **Layers** Managing spatial information layers designed to provide the client with visual context.



- c. **Measure** Measurement of distance and area.



- d. **Markup** Graphical sketching, markup, labeling and buffering of areas of interest.



- e. **Print** Image and scaled map generation and printing in graphical and adobe reader file formats.



- f. **Import/Export** Import and export of sketched and soil polygon information.






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Location 19: Update the Current Map Area Scale and Cursor Position Status

- a. The current scale at which the spatial objects are being presented on the map area of the viewer, and
- b. The current latitude and longitude coordinates (in decimal degrees) of the cursor in the mapped area.


Location 20: Provide Alternatives for Selecting Soil Polygons

- a.  “Select (soil polygons)” by dragging a rectangle using the mouse or gestures. Selection of the soil polygons touching the drawn selection rectangle occurs in the map area of the viewer.
- b.  “Select (soil polygons)” by drawing a multi-segmented polygon using the mouse or gestures. Selection of soil polygons touching all, or a portion of the drawn selection polygon, occurs in the map area of the viewer.
- c.  “Select (soil polygons)” by a buffer (see markup tools Location15 for further information on buffer creation). To select by the buffer polygon, left mouse click or tap the “select by buffer tool”, and then left mouse click or tap the preferred buffer polygon. Selection of all soil polygons that touch the buffer polygon will occur.
- d.  “Select (soil polygons)” by a markup polygon (see markup tools Location15 for further information on point line and polygon markup creation). By left mouse clicking or tapping the “select by markup tool”, and then left mouse clicking or tapping the preferred markup point line or polygon all soil polygons that touch the buffer polygon will be selected.
- e.  “Clear selected (soil polygons)” by left mouse clicking or tapping on this icon.





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- f.  On a final note, the ability to select individual soil polygons may be done with or without initiating the “the select (soil polygon) tool bar” an individual soil polygon may be selected by moving the cursor to the preferred location in the map area of the viewer and then left mouse clicking or tapping.

Location 21: Enable Global Zooming Capabilities

- g.  zoom in on level.
- h.  zoom out level.
- i.  If the device is location aware, zoom to the current position of the device running the application. If the device is a desktop or laptop located in an office, other private, or public location the selection of this icon will zoom to a general, and less exact position close to the desktop or laptop.
- j.  Zoom to full extent of Alberta Soil Information Viewer.

Detailed Description of Icons Tools and Functional Modes

This section describes each functioning mode location in further detail.

Location 1: Maximizing the Viewer Map Area

Maximize Viewer

Hide the website Banner to increase the map viewing space. **Location**

2: Defining and Moving to the Area of Interest



Define a location of interest by:

- A quarter section Legal Land Description (e.g., qq-ss-ttt-rr-m),
- A township Legal Land Description (e.g., ttt-rr-m),

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- c. A latitude “N,” “+” or longitude “W,” “-” coordinate pair in decimal degrees,
- d. An Agricultural Regions of Alberta Soil Inventory Database (AGRASID) polygon number,
- e. Any Place Name in Alberta (e.g., Edmonton)

Location 3: Initiating the Search to the Area of Interest



Search and zoom to the previously defined area of interest.

Location 4: Saving the Area of Interest for Future Sessions



Activate the bookmark window to choose or create favorite map locations.

Created map locations are available between sessions if purging of the temporary browser files does not occur.

Location 5: Increasing the Visible Map Area of the Application



Close the “functioning mode” panel.

Location 6: Choosing a Function Mode for Viewer



Open the “functioning mode” panel.

Location 7: General Land Information Discovery

General Land Information





Configure the viewer to retrieve “General Soil Information” about one or more AGRASID polygons in this “functioning mode” **a functioning mode** :

- a. A list of the currently selected AGRASID Polygon(s) takes place.
- b. A table listing the
 - i. “POLY_ID (AGRASID Polygon Number to use in the viewer Search window)”,
 - ii. AGRASID “MAP Unit Name”, iii. AGRASID “Landform”, and

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- iv. Land Suitability Rating System Rating for spring seed small grains “LSRS Rating (Spring Grains)” for the currently highlighted AGRASID polygon number from the grouping of selected AGRASID polygons.
- c. **Landscape Model Descriptions:** An Expanded definition of the “Map Unit Name” and “Landform” values.
- d. If available an image of:
 - v. A typical real worldview of the highlighted soil landscape. 
 - vi. A typical view of what the elevation topography of the land may look like. 
 - vii. A profile graph of the wavelength (slope length) and amplitude (relief) of the landform found in the currently highlighted AGRASID polygon. 
- e.  Export all the information displayed for a highlighted polygon in this “functioning mode” in an adobe reader (pdf) file format.



Exit from the General Land Information “functional” mode.

Location 8: Land Suitability Rating System Information Discovery


Land Suitability Rating System Configure the viewer to retrieve “Land Suitability Rating System Ratings” for one or more AGRASID polygons in this “functioning mode”:

- f. A table listing:
 - viii. The currently highlighted or selected AGRASID Polygon(s),
 - ix. The Land Suitability Rating System Rating for spring seed small grains “LSRS Rating (Spring Grains)”,
 - x. The Amount of Area that an AGRASID polygon covers expressed in user defined:

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- a Metric Units: Hectares (default), Square metres, square kilometers; or
 - b Imperial Units: Acres, Square Feet, Square Miles, Square miles.
- g. A Metric or Imperial “Polygon Area Unit” selection may be made.
- h.  An Automated Email may be sent for:
- xi. All (Up to ten [10]) selected AGRASID polygons or
 - xii. One (1) highlighted AGRASID polygon.



Exit from the General Land Information “functional” mode.

Location 9: Automated Soil Polygon Labeling

Soil Polygon Labeling

Configure the viewer for “Labeling” of AGRASID Soil Polygons “functioning mode” Soil Polygons may be any one or combination of the following Labels associated with each AGRASID Soil Polygon:

- a. “POLY_ID (AGRASID Polygon Number to use in the viewer Search window)”
- b. “Map Unit Name, a soil scientist code that summarizes the major soils series as well as the expected landform that may be found in a particular AGRASID polygon”
- c. The Land Suitability Rating System Rating for spring seed small grains “LSRS Rating (Spring Grains)”
- d. The metric or imperial Area of the AGRASID soil polygon.
- e. The metric or imperial perimeter of the AGRASID soil polygon.



Exit from the General Land Information “functional” mode.

Location 10: Specific Soil Information Discovery

Specific Information

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Configure the viewer for a “functioning mode” that provides “More detailed or specific” information about a highlighted or group of selected AGRASID Soil Polygons.

- As an aid to the structure of the soil information contained within each AGRASID polygon. Think of each polygon as a collection of landforms and a collection of soil series. Each landform component occupies a specific percentage of the area contained within an AGRASID polygon. Soil series are expected or have a high probability of being found at one or more of potentially four generalized slope positions classifications (components):
 - o upper slope,
 - o mid slope,
 - o lower slope, and
 - o depression
- Each Soil series in turn can have general characteristic described about the series or descriptions of more detailed characteristics on a layer-by-layer basis.

Organization of specific information records happens in four kinds of reporting tables in the Specific Information “function mode” window:

1. **Soil Polygon** tables, **Component** tables, **Soil** (series) tables, and (soil) **Layer** tables. The relationship of tables reporting various kinds of soil information occurs as follows:
 - o A **Soil Polygon** table record may be associated with one or more **Component** reporting table records.
 - o A **Component** reporting table record may be associated with one or more **Soil** (series) reporting table records.
 - o A **Soil** (series) reporting table record may be associated with one or more soil **Layer** reporting table records.
2. Each **Soil Polygon** reporting table in a specific information record contains information referring to:
 - a. The AGRASID polygon number **POLY_ID**
 - b. The **Map Unit Name**

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- c. **Landform**
 - d. **LSRS Rating** for **Spring Seeded small Grains**.
 - e. The **Area** of the AGRASID polygon in hectares (**ha**)
 - f. The **Area** of the AGRASID polygon in acres (**ac**)
3. Each (landform) **Component** reporting table contains information on:
- a. The **Component Number** assigned to particular (landform) **Component**.
 - b. **Landform Position** (profile) classification associated with each **Component** identified in the AGRASID polygon.
 - c. The aerial **Extent** expressed as a percentage that a particular landform **Component** occupies in a highlighted or selected AGRASID **Soil Polygon**.
 - d. The expected **Slope Gradient** expresses the slope (as a percentage). The slope is the expected slope at a position eighty percent (**80 %**) from the bottom of a path characterised by the representative **Landform Position Profile** associated with a particular landform **Component**.
 - e. The total **Slope Length** expressed in meters (**m**) of the representative **Landform Position Profile** associated with a particular landform **Component**.
4. Each **Soil** series reporting table contains information on:
- a. A **Soil Code**; a three-letter uppercase soil series abbreviation.
 - b. A **Soil Series** name
 - c. A **Drainage** classification for the **Soil Series**
 - d. A **Parent Material Texture** code and short definition of the texture code.
 - e. A Canadian System of Soil Classification **Soil Subgroup** code and short definition of the code.
 - f. A **Parent Material Code** and short definition of the code.
5. Each (soil horizon) **Layer** reporting table contains information on:

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- a. A **Horizon Number** is an integer number that ensures maintenance of that horizon's topological order, for each soil series. Smaller horizon numbers are shallower (soil horizon) **Layers** while larger horizon numbers occur deeper.
- b. A **Horizon Master** Classification code and short definition.
- c. A **Horizon Suffix** classification code.
- d. An **Upper Depth (cm)** a measure of the vertical distance in centimeters from the surface of the soil series to the top of the (soil horizon) **layer**.
- e. A Lower Depth (cm) a measure of the vertical distance in centimeters from the surface of the soil series to the bottom of the (soil horizon) **layer**.
- f. A **Texture Classification** code and short definition of the (soil horizon) **Layer**.
- g. A percentage estimate of the total sand content (**Total Sand (percentage)**) contained within a specific (soil horizon) **Layer**.
- h. A percentage estimate of the total silt content (**Total Silt (percentage)**) contained within a specific (soil horizon) **Layer**.
- i. A percentage estimate of the total clay content (**Total Clay (percentage)**) contained within a specific (soil horizon) **Layer**.
- j. Further details on the specific soil information displayed in this “functional” mode may be found by downloading the metadata found at the [Soil Information Site](#) Uniform Resource Locator (URL) in the **Query AGRASID** window of this application.



Exit from the General Land Information “functional” mode.

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Location 11: Digital Soil Inventory Database Query and Extract for Alberta's Agricultural Area

Query AGRASID Configure the viewer for a functioning mode that provides the ability to do the following:

1. Query and export the AGRASID database attributes of a limited number of pre-selected soil information polygons; (up to approximately 1000 records). These queries can be performed on one of five tables to query:

- a. Table to query: ⓘ based on any of the following database attributes from this table:

CMP_ID
Component Number
Extent (%)
Landform Position
POLY_ID
Slope Gradient (50%)
Slope Gradient (80%)
Slope Length (m)
Surface Stoniness

Table to query: ⓘ

- b. Based on any of the following database attributes from this table:

Landform
Landform Modifier
LSRS Rating (Spring Grains)
Map Unit Name
POLY_ID
Shape_Area
Shape_Length
SLC3

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Table to query: 

c. Based on any of the following database attributes from this table:

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Base Saturation (%)
Bulk Density (g/cm ³)
Calcium Carbonate Equivalent (%)
Cation Exchange Capacity (Meq/100g)
Coarse Fragments (%)
Dominant Sand Fraction
Electrical Conductivity (mS/cm)
Horizon Lithological Discontinuity
Horizon Master
Horizon Modifier
Horizon Number
Horizon Suffix
LAYER_ID
Lower Depth (cm)
OBJECTID
Organic Carbon (%)
pH in Calcium Chloride
pH in Water
Saturated Hydraulic Conductivity (cm/h)
SOIL_ID
Texture Class
Total Clay (%)
Total Sand (%)
Total Silt (%)
Upper Depth (cm)
Very Fine Sand (%)
Von Post
Water Retention (0 kP)
Water Retention (10 kP)
Water Retention (1500 kP)
Water Retention (33 kP)
Woody Material (%)

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Table to query: 

- c. Based on any of the following database attributes from this table:

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Calcareousness
Drainage
Kind of Material
Mode of Deposition (1) - NSDB
Mode of Deposition (2) - NSDB
Mode of Deposition (3) - NSDB
MODIFIER
Parent Material Chemistry (1) - NSDB
Parent Material Chemistry (2) - NSDB
Parent Material Chemistry (3) - NSDB
Parent Material Code
Parent Material Genesis (1)
Parent Material Genesis (2)
Parent Material Texture (1)
Parent Material Texture (1) - NSDB
Parent Material Texture (2)
Parent Material Texture (2) - NSDB
Parent Material Texture (3) - NSDB
Profile Type
Province - NSDB
Root Restricting Layer
Root Restriction
Salinity
Soil Correlation Area
Soil Correlator Notes
Soil Great Group
Soil Order
Soil Series
Soil Subgroup
Soil Subgroup Phase
Soil Survey Report
SOIL_CODE
SOIL_ID
Watertable Characteristics

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Table to query: 

e. Based on any of the following database attributes from this table:

CMP_ID
Primary
SOIL_ID
SoilProfileID

2. Search for similarly attributed AGRASID polygons that match one selected polygon based on the following database attributes:

Landform
Landform Modifier
LSRS Rating (Spring Grains)
Map Unit Name
SLC3

3. Download AGRASID soil information using the [Soil Information Site](#) Uniform Resource Locator (URL) address for the download of AGRASID soil information.
4. For further information concerning the **selection** of soil polygon information, please skip to the sections in this document called **Location section 20**.



Exit from the General Land Information “functional” mode.

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Location 12: Elevation magnitude discovery along transects drawn with a line in the map area of the viewer.


Elevation Profile Information

Configures the viewer into a functioning mode that generates a series of geographic coordinate pairs with an associated elevation value express as meters above sea level, where:

- The linear distances are the same between coordinate pairs along a drawn transect.
- The maximum number of points generated by this functioning mode ranges between 1000 and 1500 coordinate pairs.
- The interval between coordinate pairs along a drawn transect can be set by default or manually specified.
- Interpolation of elevation values for the coordinate pairs uses a nearest neighbor approach from a protected provincial bare earth grid service of elevation primarily composed of the LiDAR 15 data.

The Elevation Profile Information “functional” mode” window requires:


1. A transect to extract and interpolate a series of coordinate locations and elevation values:

a.  **Selecting or tapping on the “Draw a line” icon** and then digitizing a multipoint line in the map area is one way of acquiring a transect.

b.  **Selecting or tapping a previously constructed linear markup**



See **figure 1**, ¹⁶ for the location of the mark up icon: Markup. Drawing of transects in the map, area occurs using either:

1. The Linear mark ups are drawn with the **Polyline drawing markup tool**  or

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2. The **Freehand, polyline drawing, markup tool**.

Sampling Interval:

Best
25 metres
50 metres
100 metres
1000 metres

2. A transect sampling interval:

- a. Best provides as many elevation profile values as possible for a given transect distance.
- b. Sampling intervals selection of 25, 50, 100 or 1000 meters are also available.

3. Selecting or tapping the go button initiates the extraction of the elevation values and geographic coordinates along the transect provided earlier and when completed provides:

- a. A two-dimensional graph of elevation in meters on the y axis and distance along the transect on the x-axis in meters:



- b. This graph may be printed from a portable network graphics (png) file when the print button is selected



- c. It is also possible to export a comma delimited csv file of the elevation and coordinate data, from a drawn transect, by selecting or tapping the export button




4. Selecting or tapping:

- a. The button cancels the elevation, coordinate extraction, graphing process.

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- b. The  button clears the drawn transect drawn on the map area of the viewer.



Exit from the Elevation Profile Information “functional” mode.

Location 13: Base Maps Selection and Display



Basemap

There are six possible basemap choices that when selected become the backdrop to the soil information in the map area of the viewer:



1.

SPOT6 2020 - 500cm



2.

Imagery with labels



3.

Terrain with labels



4.

Topography



5.

Streets



6.

National Geographic

These base maps are “**as is**” and may not be altered in any way.



Left mouse click, or tap the “close tool window” icon to close the basemap tool window.

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Location 14: Layer Visibility Control



Layers

Up to 11 vector layers and 2 image layers of visual context information are controlled and managed from the Layers icon. These layers may be:

1. Turned on or off by adding a check mark or removing a checkmark to the check box to the left of each layer and
2. Transparency of some layers may be increased or decreased by:
 - a. Moving the slider control to the left for more transparency, and



- b. To the right for less transparency.



Left mouse click or tap the “close tool window” icon to close the layers tool window.

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Location 15: Linear and Area Measurement



Measure



1. Activate the distance measuring icon to measure and label a single or multi-segmented “line measurement graphic” in the map area of the viewer. Anyone of the following measurement units is available for measurement:

Metres
Kilometres
Miles
Feet
Yard



2. Activate the area-measuring icon to measure and label a multi-sided “area graphic” in the map area of the viewer. Anyone of the following measurement units is available for measurement:

Square metres
Square kilometres
Hectares
Acres
Square feet
Square miles
Square yards

3. Clearing the distance and area graphics occurs by re-pressing the distance or area measurement graphics again upon completion of a measurement or by pressing the clear button in the **Measure** window.
4. To retain the most recent measurements cut and paste the values from the “Result:” section of the **Measure** window.

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Left mouse click, or tap the “close tool window” icon to close the measure tool window.

Location 16: Graphical Markup, Label Placement and Buffering



Markup

Activating the Markup icon enables the drawing of:

- Labeling.
- Editing, loading, and saving of markup graphics.
- Buffering of mark up graphics and selected soil polygons within the mapping area of the viewer.

Drawing Tools

Each drawing tool follows the same two or in three-step process:

1. Activate one of the seven icons in the “Drawing Tools” section of the **Markup** window.
2. Begin drawing in the map area of the Alberta Soil Information Viewer.

In the case of the “Create point by latitude longitude coordinate”, there is a step for manually entering a **decimal degree, negative longitude, geographic, coordinate pair** in between the previously stated drawing steps.

3. There are seven different ways that mark ups (graphical points, lines and polygons) may be placed in the map area of the Alberta Soil Information Viewer:



Point drawing – a point is placed by moving and zooming the cursor to a desired location in the map area of the application and then left clicking or tapping to place the point.

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Create a point by Longitude, and Latitude coordinate pair – a point is placed by manually entering negative longitude, and positive latitude coordinate pairs which appear in the map area once the place point

button is left mouse clicked or tapped

Place Point



Polyline drawing tool – Drawing a single or multiple segmented line occurs by:

1. Moving and zooming the cursor in the mapped area to the desired starting location, and then,
2. Left mouse clicking or tapping at the beginning and end of each line segment being placed, and then,
3. Double left mouse clicking or double tapping to end the line placement.

Update and display of the cumulative line segment distance and the unit of measure occurs for each placement of a line segment. Placement of the total distance and units of measure as a label occurs upon completion of the polyline.



Freehand polyline drawing tool Draw a line by following the path of the cursor or finger.

1. When the left mouse button is pressed, and held, or once the finger contacts the screen of a smart device the mapped area of the application:
 - a. the line completes when the left mouse button no longer pressed or
 - b. Finger contact breaks from the screen.
2. As in the case of the Polyline drawing tool:
 - a. The free hand polyline drawing tool displays the cumulative line distance and the units of measure are updated and displayed until the freehand line is completed at which point
 - b. Placement of the total distance and units of measure occur as a label for the completed freehand polyline.



Circle drawing tool – draw a circle by:

- a. Moving the cursor or pointing to the desired center of the circle and
- b. Pressing and holding the left mouse button or by keeping finger contact with the device screen, the center point of the circle is set.

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- c. Dragging the circle out to the desired radius to establish the size of the circle. (Update of the desired radius occurs on screen, **along with the units of measure**, in real time until the circle is completed).
- d. Stop pressing the left mouse button or breaking finger contact, (Update of the radius occurs and a area with units of measure appears).



Polygon drawing tool – draw a multiple segmented polygon by:

- a. Moving and zooming the cursor in the mapped area and then left clicking or tapping at the beginning and end of each polygon side being placed in the mapped area, and then,
- b. Double clicking or double tapping to end the polygon placement.

Update and display of the cumulative area and the unit of measure displays as the third and following sides of the polygon appear. Placement of the total area and units of measure appear as a label for the completed polygon.



Freehand polygon drawing tool - Draw a freehand polygon by following the path of the cursor or finger.

1. Pressing or holding the left mouse button, or
2. Making finger contact with the screen in the mapped area of the application until the polygon is completed, then:
 - a. No longer press the left mouse button, or
 - b. Break finger contact.
3. As in the case of the polygon, drawing tool, the freehand polygon drawing tool displays the area and units of measure label upon finishing, the freehand polygon drawing.

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Text Tool



Entry of text in the map area of the viewer occurs with the following steps:

1. Enter the text intended for the label in the text box to the left of the text drawing tool 



2. Left mouse click or tap the text-drawing tool.
3. Place the entered text on the mapped area by left mouse clicking or tapping the intended location in the map area of the viewer.

Edit, Load and Save Tools

The next section of the markup window allows for movement, deletion and editing of all markups placed in the mapped area. All manually placed or automatically placed labels may move or be deleted.

Finally, the last version of mark ups and labels may be saved temporarily and reloaded into the mapped area of the viewer.



Moving a Markup (or Label) – move a mark up or label by:

1. Left mouse clicking or tapping the “moving a markup” icon.
2. As a point of information: Grabbing a mark up (or label) by left mouse clicking or tapping takes patients. The payoff is custom placement of these objects).



Delete a Selected Markup (or Label) – delete a mark up or label by:

1. Left mouse clicking or tapping the “delete a markup” icon.
2. Left mouse clicking or tapping a mark up or label.

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Edit a Selected Markup – edit a selected mark up by:

1. Left mouse clicking or tapping the “Edit a selected markup” icon.
2. Left mouse clicking or tapping on the desired markup that requires modification.

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3. Left mouse clicking or tapping and then dragging a highlighted vertex point of the markup to a new location on the map area of the viewer.

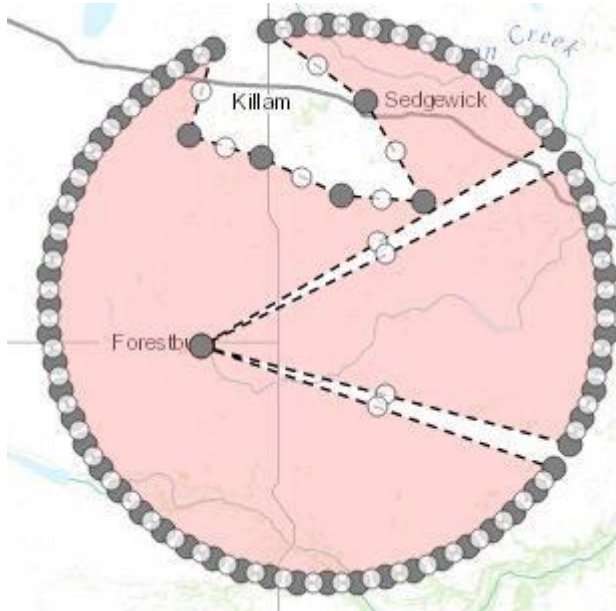


Figure 2. An example of edited markup vertices.

4. Upon reaching the destination for the vertex, release the left mouse button or break finger contact.
5. Editing of labels is not possible. The work around is to delete and replace the label with revised text and a revised label location in the map area.



Save current (markup and label) drawing



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Save current drawings of labels and markups into a browser session clipboard by left mouse clicking or tapping the **Save** button.

Load saved (markup and label) drawing



Load saved drawings of marks and labels by clicking on the **Load** button.

Temporary Backup

The save  and load  buttons allow temporary back up during complex markup and label development onto a inter-session clipboard in the mapped area of the viewer. To start from the last temporarily saved set of mark ups and labels. The viewer keeps the last saved version of markups and labels between sessions when the browser cache files remain between browser sessions.

Buffer Creation

1. Creation of a buffer from a selected markup, drawn or imported, in the current browser session. The buffer appears by selecting the “Apply buffer on selected markup” radio button if selection of a markup has taken place.

Apply buffer on selected markup

Or,

2. From a selected soil polygon by selecting the “Apply buffer on selected soil polygon”.

Apply buffer on selected soil polygon

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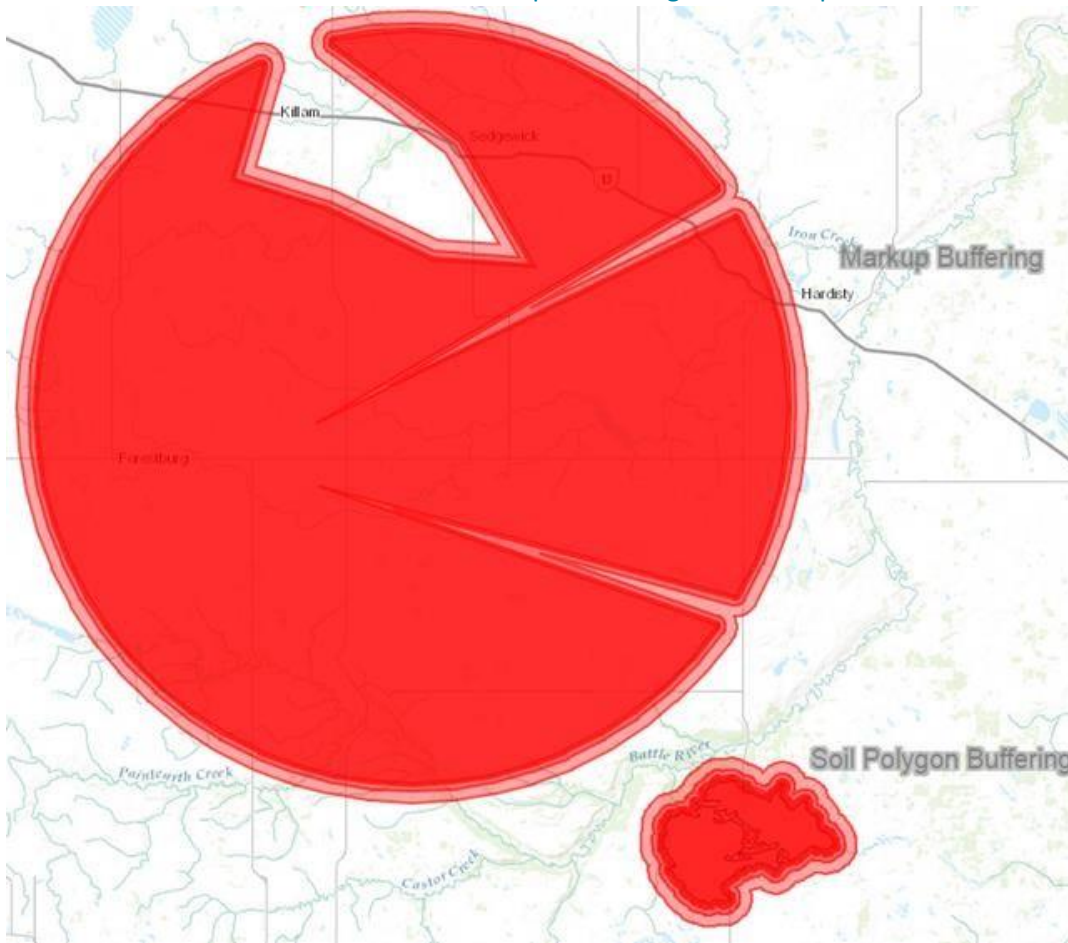



Figure 3. Demonstration of buffering on markups and a soil polygon at successive buffering distances of 200, 400, 800-meter intervals.

3. Once choice of a buffering method takes place, specify the distance in the Buffer Creation text box and pick the desired units of measure in the adjacent selection list box.





200	Metres ▾
	Metres
	Kilometres
	Miles
	Feet
	Yard

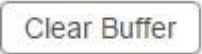

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4. Finally left mouse clicking or tapping the create buffer  button.

Tips and tricks:

5. The focus on the object for the buffering operation is automatic when:
 - a. Drawing a point, line, or polygon markup using the drawing tools in the previous session or
 - b. Selection of a soil polygon for buffering (*see section 19 and 20 earlier on in this document*).
6. If the **point, line or polygon markup** was drawn and the **focus is shifted away** and then returned to the markup session or markups are loaded  from a previously saved session , into the current session, reset of the focus on the desired markup to initiate a buffer process has occur reset with either:
 - a. The move a markup tool .
 - b. The edit a selected markup tool .
7. If the **focus is shifted away** and then returned after a **soil polygon** has been selected, the focus may be returned by moving the cursor over the required soil polygon and left mouse clicking or tapping on the polygon once again to return the buffer focus.
 - a. Buffers and Markups may be removed from the map area of the viewer by left mouse clicking or tapping:

- i. The clear buffer  button and
 - ii. The clear markup  button.



Left mouse click or tap the “close tool window” icon to close the markup tool window.

Location 17: Printing and Screen Capture



Print

The print tools icon enables ability to:

1. Print scaled and non-scaled maps in:
 - a. Letter (8" X 11") and
 - b. Tabloid (11"X 17") formats in both
 - c. Portrait and
 - d. Landscape layouts and to,
2. Generate image screen captures in the following industry standard graphic formats including:
 - a. Joint Photographic Experts Group (JPEG or in this case JPG for short)
 - b. 8-bit Portable Network Graphic (PNG8)
 - c. 32-bit Portable Network Graphic (PNG32)
 - d. Graphics Interchange Format (GIF)
 - e. Adobe Reader Portable Document Format (PDF)

Printing Options Area of the Print Window enables clients produce maps by:

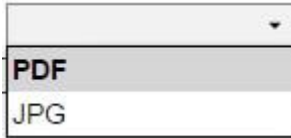
1. Choosing one of four distinct paper size and orientation options:



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2. Choosing one of two file formats:



3. Deciding on producing an un-scaled map Set Scale: or a scaled map Set Scale:

a. In the case of an unscaled map, no value is required in the text box if the client is satisfied with using the current scale of the mapped area of the viewer. The scale text box is left blank



b. In the case of a scaled map, a smaller or larger scale may be set then the current scale of the map area.

c. The printed map will reflect the set scale and will be centered on the current center of the mapped area:



Figure 4. Illustrates how to produce a 1:10,000 scale map from the soil viewer map area at displayed at a scale of 1:577,791

4. An appropriate title for the map may be placed on the title text box:



Figure 5. The Title text box.

5. An appropriate description for the map may be placed in the description text box:

Description:

An appropriate description.]

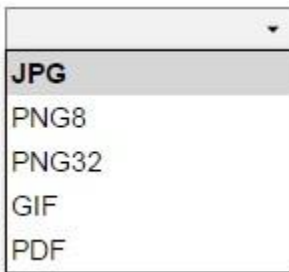
Figure 6 The Description text box.

6. After choosing the preferred printing options, print the map by left mouse clicking or tapping the print map



Screen Shot Options - allow for the generation of screen captures from the mapped area of the viewer by:

1. Selecting one of four image file formats:



2. Left mouse clicking or tapping on the screenshot icon.



Left mouse click or tap the “close tool window” icon to close the markup tool window.

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Location 18 Import and Export of Spatial Soil Information and Graphical Markups:



The **Import and Export tool** facilitates:

1. Export of geo-referenced graphical objects from both:
 - i The markup layer, and
 - ii The AGRASID version 4.1 soil polygon layer.

And

2. Import of geo-referenced graphical objects from
 - i A previous markup tool session,
 - ii A limited number of soil polygons that were previously exported, or
 - iii Geo-referenced points lines or polygons from an independent source such as waypoints from a global positioning system (GPS) receiver by turning on or off the various radio button options available in the “Choose an Option” and “Choose a Layer” areas of the “Import/Export Tools”

Import/Export Tools window.

Exporting data varies based on the radio button, choice combinations in the import export window. The list of choices associated with exporting spatial objects are as follows:

1. Export a Markup Layer:



2. Export Soil Polygons:

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The export initiates by left mouse clicking or tapping the Export  button.

Importing Data occurs on point, line, and polygon data. The format is the same as export markup objects. In addition, there is a generic [Global Positioning System \(GPS\) Exchange format \(GPX\)](#):

1. **KML** - a "[compressed Keyhole Markup Language file](#)", the file name and extension "<filename>.kmz"
2. **Shapefile** - as series of file known collectively as a "[esri® ArcGIS "shapefile"](#)".

Left mouse clicking or tapping the import  button initiates an import.



Left mouse click or tap the "close tool window" icon to close the markup tool window.

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