

Government of Alberta;

Know your land suitability rating

Alberta Soil Information Viewer

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Introduction

This document details how to learn as much as possible about the [Land Suitability Rating System \(LSRS\) rating for Spring Seeded small grains \(SSSG\)](#) as well as for brome grass, alfalfa, and canola through a working example:

Use case

Someone has asked for a map graphic and screen captures of the detail soils description of soil polygons within or touching the boundaries of an area of interest. For the purposes of this use case, the area of interest will be for a township near Balzac Alberta.

1. Open a browser, go to the [Government Alberta website](#), search for “Alberta Soil Information Viewer” Left mouse click on the first available link that says “Alberta Soil Information Viewer | Alberta.ca” and scroll to the button:



2. Left mouse click or tap the button:



to get started on the Alberta Soil Information Viewer.


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3. Left mouse click or tap the maximize viewer button  in the top right corner of banner for the viewer.

Area of Interest

1. For the purposes of this “How To” they area of interest is Section 23 Township 26 Range 29 West of 4 east of “Balzac”, the geographic coordinates area 51.22782, -113.94742.
 - a. Enter “Balzac” in the search box of the viewer and left click, tap the magifying glass icon to begin the search. Tapping the “done” button , or pressing enter key if available. will also initiate the search.
 - b. Holding the left mouse button or making contact with the screen drag and move the map area so that area of interest is centered in the map area. Each Township in the mapped area will have a label  and each Section has a label as well that is in the center of the section of interest. Quarter sections NW, NE, SW, and SE are inferred by the quarter section line work that is layered on top of each section polygon.
2. If a Legal land description, or latitude longitude coordinate, or AGRASID polygon number is available enter these into the search box and repeat step 1b.
3. Zooming may be accomplished by any or a combination of methods :
 - a. left mouse clicking or tapping the plus and minus icon in the top right corner of the map area for the viewer.
 - b. Pinch or spread (pinch out) hand gestures.
 - c. Utilizing roller wheel if available on a mouse.

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4. **Basemap** Change the basemap choice to:

a. SPOT6 2020 – 500cm



or

b. Imagery with labels.



For the purposes of this “How To” **choose the “Image with Labels”** option.

c. Close the basemap tool



Labeling

There are two approaches that may be of use in Labeling a map with the polygon id number and the LSRS rating.

The automated approach labels the soil polygons in the map display by:

1. Pressing the Soil Polygon Labeling functioning mode button:

Soil Polygon Labeling

Display specific attributes on the map.

2. Check marking Polygon ID and LSRS Value (for spring seeded small grains)

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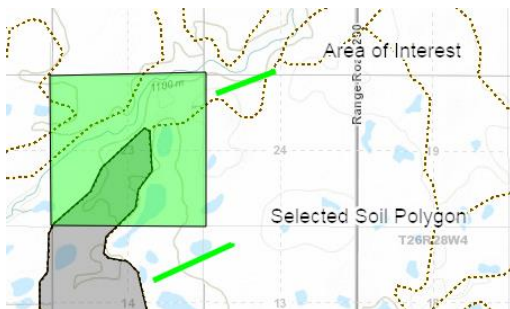
Soil Polygon Labeling

Select the attributes you want to label on the map

- Polygon ID
- Map Unit Name
- LSRS Value

The manual approach may be preferable in cases where soil polygon labeling is taking a long time to display or the label's insertion point inside the soil polygon is not currently on screen because only a portion of the polygon is displayed. In this case:

1. Choose the General land functional Mode from the left side window.
2. With the cursor choose a soil polygon associated with the area of interest.



3. Highlight and copy the POLY_ID Value

Variable	Value
POLY_ID	11031
Map Unit Name	ADRK4/H1I
Landform	H1I - hummocky - low relief
LSRS Rating (Spring Grains)	3HT(10)

4. Open the Markup tool:



Markup

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5. Paste the POLY_ID Value in the “Place Label” text box Open the Markup tool:

Enter text to write on map

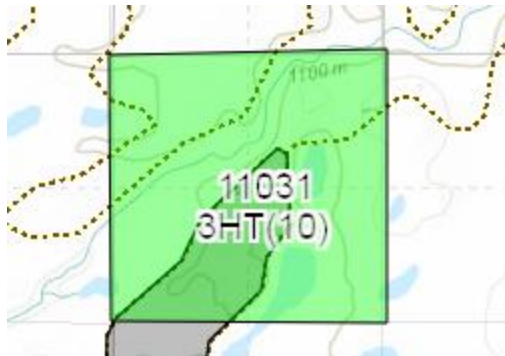


6. Left mouse click or tap the “activate text drawing” tool  and then “Place the Label” , if possible inside the displayed and selected soil polygon.

7. Press the save button in the “edit, load and save tools”

Save

8. Repeat steps 2. through 7. for the LSRS Rating (Spring Grains) value in the General Information **General Information** window.



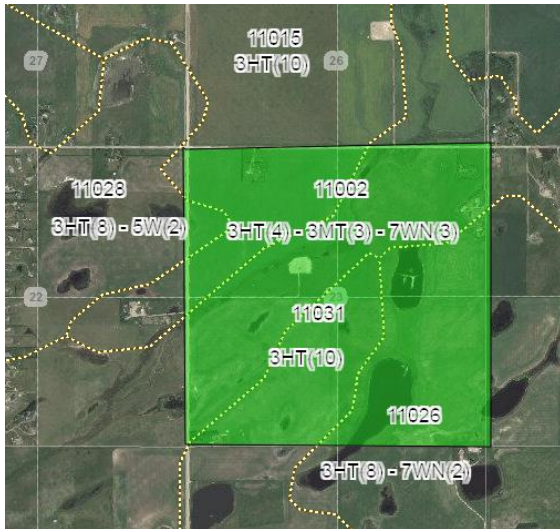
until all soil polygons associated with the area of interest have all been appropriately labeled.

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Printing



Print

1. Activate the Print tool
2. Go to the "Screenshot Options" in the Print **Print** window.



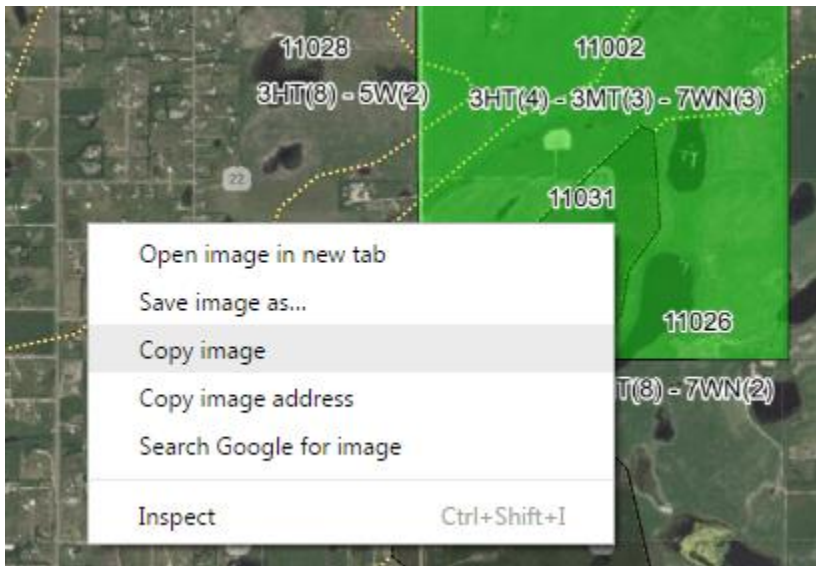
3. Left mouse click or tap the screen shot icon.
4. Right mouse click or tap and then copy the resulting jpg, png, or pdf image into a work document.

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5. Paste the image into a word document and adjust the size of the image:



Selecting Soil Polygons

Up until this point the example, the area of interest already existed. This section will show how to create an area of interest for three of the four quarters associated with 23-026-29-4 (i.e. NW-23-026-29-4 and NE-23-026-29-4 and NE-23-026-29-4).

1. Activate the polygon drawing tool and draw the area of interest in the map area of the viewer.



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2. Begin constructing a multi-segmented polygon markup by left mouse click or tapping a series of vertex points in a clock-wise or counter clock-wise path outlining the shape of the three quarter sections of interest in this “How To”:



3. Navigate to the top right corner of the mapping area of the viewer and choose the “select using markup layer”



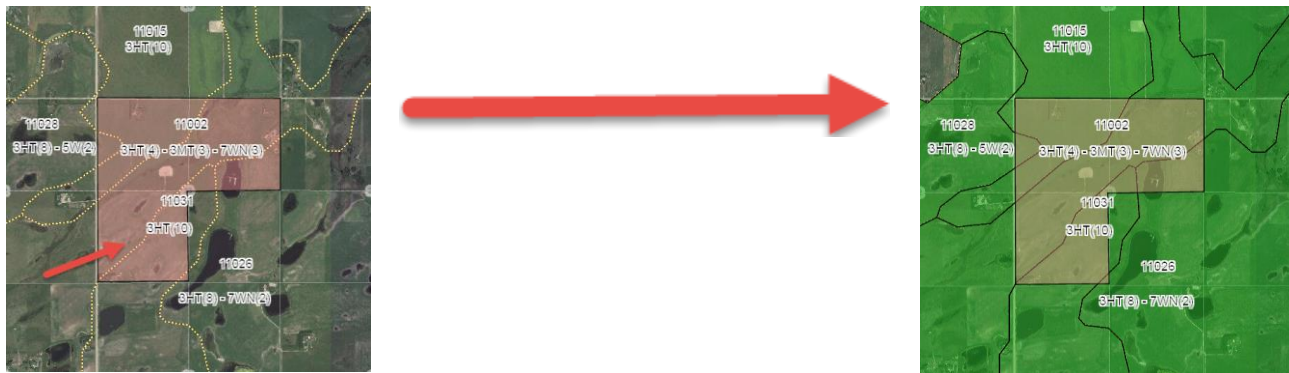
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4. Left mouse click or tap to choose the “area of interest” markup built earlier as the markup to select soil polygons:



Build Results File

1. Choose the “General Land Information” **General Information** functioning mode for the side window.
2. In the “**Select polygons on the map**” area of the **General Information** side window:
 - a. For each POLY_ID value, left mouse click or tap the value in the list.
 - b. Then left mouse click the “Export to PDF” button at the bottom of the **General Information** window to export the following items for each POLY_ID value to an adobe reader file:
 - i. A Table,
 - ii. Landscape Model Description,
 - iii. Image (if available),
 - iv. Landform Model (if available), and
 - v. Landform Profile if available.
3. Move all the adobe reader (PDF) files from the default browser download location to a more accessible file folder.

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- Using Adobe Acrobat or an open source alternative like inkscape to merge the PDF file together or
- Use screen capture software to cut and paste the content from all PDF export files into a word processing document.

-  Exit the **General Information** functioning mode of the side window.

Extract Other LSRS Ratings

Extract Other LSRS ratings for brome grass, alfalfa, and canola production by:



- Choosing the “**Query AGRASID**” **Query AGRASID** functioning mode.
- Then in the “**Construct query and press Search**” area of the Query AGRASID side window:
 - Choose the “**Soil Landscape Polygons**” table as the:
Table to query: 
 - Sub-select the related records of the LSRS Rating (Spring Grains) table {see item three for an explanation of climate normals currently used to compute LSRS (Spring Grains)}.

Table to query: 

<input type="checkbox"/>	Landform
<input type="checkbox"/>	Landform Modifier
<input type="checkbox"/>	LSRS Rating (Spring Grains)
<input type="checkbox"/>	LSRS Rating 2012 (Spring Grains)
<input type="checkbox"/>	Map Unit Name
<input type="checkbox"/>	POLY_ID
<input type="checkbox"/>	Shape_Area
<input type="checkbox"/>	Shape_Length
<input type="checkbox"/>	SLC3

- and press the search button.

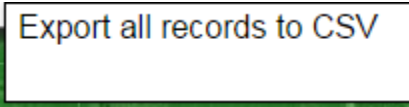
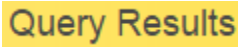

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Export all records to CSV

- d. Export all the records to a csv file  from the “Query Results”  window by left mouse clicking or tapping the  button. Further clean up of the CSV file may be conducted in microsoft Excel spreadsheet environment.
 - e. The resulting Map graphic, merged PDF or micorsoft Word document and accompanying Microsoft Excel compatible CSV text file represent all that may be known about LSRS for selected AGRASID soil polygons.
3. In December 2019 Agriculture and Agri-food Canada presented updated the land suitability rating for spring seeded small grains to Alberta Agriculture, Forestry and Rural Economic Development for rain fed agriculture, labeled as LSRS (Spring Grains) in the Alberta Soil Information Viewer. The LSRS (Spring Grains) values use data similar to their December 2012 counterparts except the climate normal data is different. LSRS (Spring Grains) values use climate normal data computed for the 30-year interval between 1981 and 2010. The previous land suitability rating, published in 2012, for spring seeded small grains for rain fed agriculture, labeled as LSRS 2012 (Spring Grains). The LSRS 2012 (Spring Grains) values use 30-year climate normal data between 1961 and 1990. These 2012 values are still accessible in the Alberta Soil Information Viewer through the Query AGRASID functioning mode the field name is LSRS Rating 2012 (Spring Grains).
 4. For a detailed descriptions of how to do other tasks: return to the [About soil information in Alberta topic page](#) and browse the [Alberta soil information viewer](#) “How to use the viewer section”.

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