**Range Site Type Interpretation of**

**Undifferentiated Soil Landscape Models in AGRASID**

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# INTRODUCTION

LandWise Inc. conducted a project for the Alberta Biodiversity Monitoring Initiative (ABMI) to convert Soil Landscape Model (SLM) polygons in the Agricultural Region of Alberta Soil Information (AGRASID) to the most likely Grassland Vegetation Inventory (GVI) site types. This work was completed for the agricultural regions of Alberta in 2012. Undifferentiated SLM polygons (ZUN and other undifferentiated SLMs starting with Z), were not included as more detail and a thorough investigation is required.

LandWise Inc. received a follow-up request from ABMI to convert approximately 400 undifferentiated SLM polygons to the most likely GVI site types, through the use tools and other information. This work was conducted with Daiyuan Pan of ABMI between January and April, 2013 with the final edits in January of 2014. The project goal was to obtain a complete pre-European picture of GVI site types in the AB agricultural region.

# METHODS

Approximately 400 undifferentiated AGRASID SLM polygons throughout the agricultural region of Alberta were assessed to determine the most probable GVI site types represented. Various sources of information were available, and the most appropriate information source or sources were used for each undifferentiated polygon. Site-type conversions for most of the undifferentiated AGRASID SLMs are contained in Appendix 1, along with the information sources used and rationale and/or comments.

## Information Sources

Site-type interpretations for this project were based on several sources of information. Published information sources used for this project are listed at the end of the text.

### Published Soils Information

* Historic soil surveys were particularly valuable for many of the polygons including Alberta’s large urban centers, such as Calgary and Edmonton, and they were also used for smaller cities and towns and other undifferentiated polygons. Historic soil surveys generally include information on texture, soil classification and drainage, which provides information used to deduce potential site types.

* AGRASID was useful for locations that lack detailed soil survey information. AGRASID was sometimes used to identify the most likely site type for developed areas, based on the “nearest neighbour” principle. For example, the town of Coaldale was assigned the Clayey (Cy) site type because Cy surrounds the town.
* Detailed soil surveys provide more detail and less homogenization. For example, the minimum polygon size in AGRASID is 64 ha, compared to 20 ha in a 1:50,000 scale soil survey. For example, the Beaver Soil Survey (1988) was used to assist with interpretation in the towns of Viking and Ryley, which were assigned to the Blowout site type (BlO). The villages of Rosemary and Patricia were assigned to the Clayey (Cy) and Sands (Sa) site types respectively, based on information in the Soil Survey for the County of Newell (1983). The author of this report provided the majority of field work on detailed soil surveys for the County of Forty Mile, County of Warner, Canadian Forces Base (CFB) Suffield and CFB Wainwright.

### Imagery Interpretation

Imagery interpretation was largely based on SPOT (Satellite Pour l’Observation de la Terre – Earth Observation Satellite). Examples of specific site type information obtained from imagery interpretation are contained in Table 1.

Table 1. Examples of site type information obtained from imagery interpretation.

|  |  |  |
| --- | --- | --- |
| **Observed on Image** | **Interpreted GVI Site Type and Symbol** | **Example in this work** |
| Terraces or fans | Overflow (Ov) | Lee Creek Valley near Cardston |
| Dunes | Choppy Sandhills (CS) | SW of Rio Terrace in Edmonton |
| Sand plains and possibly subtle longitudinal ridges | Sands (Sa) | North of Medicine Hat near river |
| Shallow bedrock; also slumping | Thin Breaks (TB) | Wintering Hills escarpment |
| Vivid eroded softrock expression and lack of vegetation | Badlands (BdL) | Softrock slopes at Drumheller |
| Stationary wetlands | Lentic (Len) | Loch Lomond north of Cochrane |
| Flowing streams or rivers | Lotic (Ltc) | Manning and Okotoks |
| Poor drainage | Subirrigated (Sb) | Lowlands immediately east of Wabamun Lake |
| Gravel pits | Gravels (Gr) or Shallow to Gravel (SwG) | Calgary northwest |

Imagery was also used to distinguish distinct vegetation types, such as communities dominated by herbaceous, shrub, coniferous, or deciduous cover. These vegetation types were then used to isolate specific Lotic and Lentic site types.

### Digital Elevation Model

A 2-m digital elevation model (DEM) was used to identify slope breaks, and to distinguish steep slopes from less steep and gentle slopes. Contrasting slopes allowed for precise line placement for further subdivision of certain AGRASID polygons. For example, slopes can be used to distinguish Thin Breaks (TB) and Badlands (BdL) from Limy (Li), Sandy (Sy), and to distinguish Loamy (Lo) from Overflow (Ov) site types. The 2-m digital elevation model was extremely useful in cities including Edmonton, Calgary and Red Deer and towns or villages including Athabasca, Manning and Fort Vermilion, each of which include plains above rivers, scarps, and multi-level terraces.

### Local Knowledge

The author has visited or investigated the majority of locations in Alberta throughout his career. In some locations local knowledge was used to validate or refine existing published soils information. For example, pits identified during imagery interpretation could be identified as Gravel (Gr), Shallow to Gravel (SwG), Sands (Sa), Sandy (Sy), or Thin Breaks (TB) (for coal) based on local knowledge.

## Documentation of Methods for Specific Locations

### Edmonton

The City of Edmonton expanded from an area of 1.53 townships (Soil Survey of Edmonton 1962) to 8.39 townships (AGRASID 1998) in 36 years, or an increase of 5.5 times. The size in 1998 includes the cities of Ft. Saskatchewan, St. Alberta and Namao. The 1962 Soil Survey was used to interpret site types for the area of Edmonton covered by city in 1998, as outlined in the following steps.

1. The 1962 Edmonton Soil Survey was scanned and georectified.
2. The Edmonton city boundary shown on AGRASID in 1998 was overlain on the 1962 soil survey product.
3. The 1962 Soil Survey was used to delineate contrasting polygons including:
   * Blowouts (BlO) site type in the north (representing the WKN, DAU and KVG soil series),
   * Sandy (Sy) site type in the northeast near Fort Saskatchewan (representing the PHS SL soil series),
   * Loamy (Lo) site type, representing WBN L soil, from Sandy (Sy) site type (WBN fSL, SL, LIH, and CVL soils) in West Edmonton.
   * Former wetlands (organic) that were infilled and became urban were assigned as Lentic Semi-Permanent to Permanent (LenSP).
   * CUL LS on moderate topography was assigned to Choppy Sandhills (CS) site type in southwest Edmonton.
4. A 2-m DEM was used to delineate locations of Lotic River (LtcR) in areas currently covered by the City of Edmonton, and mapped in the 1962 Soil Survey. These included the following.
   * The Saskatchewan River valley, Blackmud Creek, Whitemud Creek, Mill Creek and several unnamed creek valleys.
   * For less distinct areas on the 1962 soil survey, the 2-m DEM was used to distinguish parts of the valley as Thin Breaks (TB) or Lotic River (LtcR).
   * Overflow (Ov) terraces were identified where they were of sufficient size, and generally occur between Thin Breaks (TB) and Lotic River (LtcR).
5. Undifferentiated upland polygons that were within the urbanized 1.5-township area of Edmonton in 1962 were delineated based on the author’s general knowledge of Edmonton, and on verbal communication with other pedologists (Tony Brierley, Wayne Pettapiece and Andy Kjearsgaard). Site types were inferred as follows.
   * Polygon lines such as Blowouts (BlO) were extended north by inference from Millwoods to the area of the Bonnie Doon Mall where Solonetzic soils also occur.
   * The Clayey (Cy) site type was inferred to cover the area of the Malmo District to the University of Alberta and appreciable areas of downtown to north Edmonton, including Kingsway and the central airport.
   * Wetland locations were inferred in West Edmonton near Mayfield Road.
   * Most remaining areas were identified as Loamy (Lo).

### Calgary

The soil survey for Blackfoot and Calgary (1960) mapped the entire City of Calgary in a numbered classification system at a scale of 1:190,080. It was difficult, but not impossible, to infer applicable site types based on this classification, but the method was less effective and less reliable than that used for the City of Edmonton. The soil survey of the Calgary Urban Perimeter (1987) excluded an area of approximately 4 townships for the City of Calgary, and was completed at a scale of 1:50,000. AGRASID (1998) excluded an area of 4.37 townships for Calgary. The soil survey of the Calgary Urban Perimeter (1987) was therefore used to obtain more detailed information regarding site types in the area of 0.37 townships excluded from AGRASID. The following process was used to interpret the undifferentiated polygon of Calgary.

1. A combination of a 2-m DEM and imagery was used to define the entire Bow River valley as the Lotic River (LtcR) site type. Benches were identified as Overflow (Ov) or Shallow to Gravel (SwG) using information from the Blackfoot – Calgary (1960) soil survey.
2. The 2-m DEM and imagery were also used to define tributary valleys, including:
   1. Elbow River below Glenmore Reservoir as Lotic Deciduous (LtcD),
   2. Nose Ck. Valley as Overflow (Ov) in trough with Limy (Li) sideslopes,
   3. Fish Creek Canyon was identified as Lotic Deciduous (LtcD) and Lotic Coniferous (LtcC) based on imagery interpretation.
3. Nose Hill and Broadcast Hill were interpreted as Loamy (Lo) on the tops and Thin Breaks (TB) on the flanks, based on the 2-m DEM.
4. Five distinct areas of Calgary remained for classification, and they were classified using the Blackfoot Calgary Soil Survey as a reference. The working version range site type classification of Calgary is shown in Figure 1.
   1. Based mainly on the 2-m DEM, the area north of downtown was interpreted to be mostly Loamy (Lo) in upper areas, Sandy (Sy) on the lowest areas, and Shallow to Gravel (SwG) on mid-level terraces.
   2. East of Nose Creek and the Bow River on the airport bench interpreted to be almost entirely Loamy (Lo).
   3. The dominant site type for the area south of the Bow River, and north and west of the Elbow River to Broadcast Hill, was interpreted to be Loamy (Lo) with Shallow to Gravel (SwG) north of the Elbow River and Sandy (Sy) in the lower areas of Mount Royal.
   4. The area west of the Bow River, east of the Sarcee Reserve, and south and east of the Elbow River contained the largest variety of site types. Sources used for this area included the Blackfoot Calgary Soil Survey (1960), the 2-m DEM and imagery interpretation. Site types include Overflow (Ov), Sands (Sa), Sandy (Sy), Shallow to Gravel (SwG) and Loamy (Lo).
   5. South of Fish Creek Canyon interpreted as Loamy (Lo) and Sandy (Sy) based on the Blackfoot Calgary Soil Survey (1960).

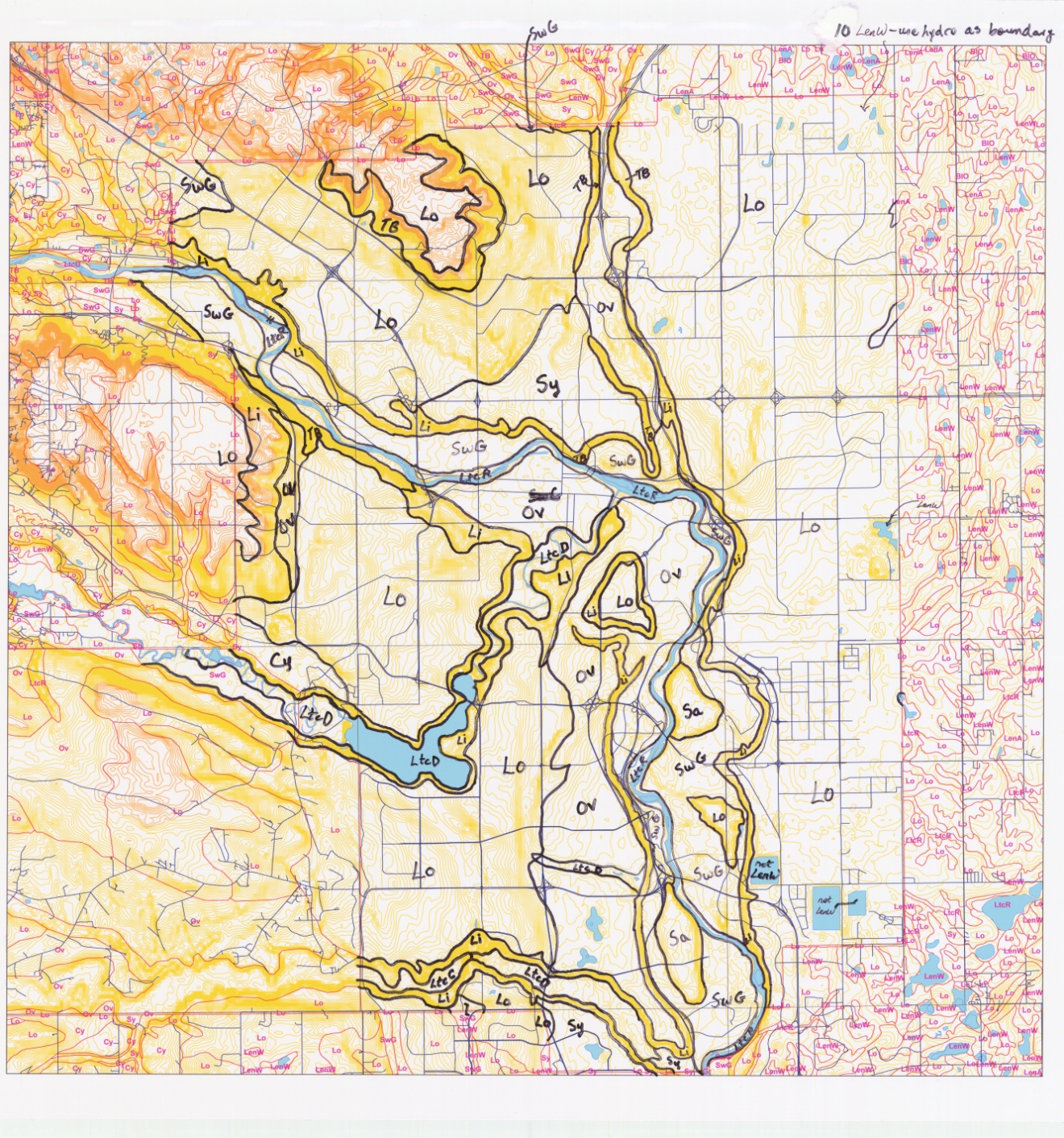


Figure 1. Interpretation of GVI Site Types within the City of Calgary.

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# APPENDIX 1: SITE-TYPE CONVERSIONS FOR UNDIFFERENTIATED AGRASID SLM POLYGONS

| **AGRASID SLM Polygon Location** | **Conversion to Range Site / GVI Site Type** | **Information Source(s) used** | **Rationale and/or Comments** |
| --- | --- | --- | --- |
| Grimshaw | BlO | SLMs in the surrounding area | Would prefer if town was totally PRPkld, but will not change |
| Peace River | W bench above river is SwG & further W TB | Local knowledge | Used 2-m contour density to isolate line |
| Fairview | Lo | SLMs in the surrounding area |  |
| Rycroft | Cy | SLMs in the surrounding area |  |
| Grande Prairie | Airport - Cy | GP & Sturgeon Lake SS 1956 |  |
| Grande Prairie | West mostly Lo | Grande Prairie and Sturgeon SS (1956) and 2m contour to confirm. | NW portion Cy and ties to airport polygon. |
| Grande Prairie  East side of Bear Ck. | SE 26 & S and E with Sy to S in Peoria-La & Cy to N in La unit. | Grande Prairie and Sturgeon Soil Survey (1956) | Used soil texture differences as provided on 1956 soil survey |
| Wembley | Cy | Matches surrounding units |  |
| Sexsmith | Cy | Matches surrounding units |  |
| Spruce Grove | Lo | Matches surrounding units | Cy to East |
| Acheson | Lo | Edmonton Soil Survey 1962 |  |
| Morinville | Lo | Edmonton Soil Survey 1962 | BlO to W and Sb to N |
| Carbondale | Lo | Edmonton Soil Survey 1962 | In 24-55-25-W4 |
| SW 24 near St Albert | Lo | Edmonton Soil Survey 1962 | In ToL |
| Gibbons | BlO in N and Lo in S | Edmonton Soil Survey 1962 |  |
| Bruderhiem | BlO in NE and remainder Lo | Edmonton Soil Survey 1962 |  |
| Lamont | BlO | Edmonton Soil Survey 1962 |  |
| Vegreville | BlO | Edmonton Soil Survey 1962 | All assigned BlO |
| Millet | BlO at N & Sy 70% remainder | Edmonton Soil Survey 1962 |  |
| Blackmud Coulee | Sides are TB | Edmonton Soil Survey 1962 | Sideslopes E of Millet |
| Devon | Sy for all | Edmonton Soil Survey 1962 |  |
| YEG (Edm IntAirport) | Lo | Edmonton Soil Survey 1962 |  |
| Nisku-Leduc | BlO | Edmonton Soil Survey 1962 |  |
| Beaumont | Lo | Edmonton Soil Survey 1962 |  |
| Wetaskiwin | Sa at W in arc. Remainder Sb | Peace Hills Soil Survey 1947 | Sb applies to NvL units |
| Camrose | BlO | Peace Hills Soil Survey 1947 |  |
| Dried Meat E. side | N is Sy, S is TB | Peace Hills Soil Survey 1947 |  |
| Bawlf | BlO | Peace Hills Soil Survey 1947 |  |
| Hobbema | Lo | Peace Hills Soil Survey 1947 |  |
| Ponoka | Sy for majority, SwG at SW natural parcel | Peace Hills Soil Survey 1947 and SPOT imagery. |  |
| Bentley | Lo | Matches surrounding units | Local knowledge |
| Gull Lake Pr. Park | Sb | Matches surrounding units | Local knowledge |
| Lacombe | Sb at east and Lo remainder | Red Deer Soil Survey 1951 | Local knowledge and soil survey |
| Sylvan Lake S end | Lo and remainder Sb | Rocky Mtn House Soil Survey | Local knowledge |
| Red Deer (valley) | LtcD of valley | Red Deer Soil Survey 1951 | 2m DEM & local knowledge |
| Red Deer (upland) | Lo at W and E | Red Deer Soil Survey 1951 | Local knowledge |
| Red Deer Gasoline Alley | Sb | Red Deer Soil Survey 1951 | Local knowledge as Sb is dom. (also Sy, Len) |
| Joffree Gas Plant | Lo | Red Deer Soil Survey 1951 | Local knowledge |
| Alix | S ¼ is Lo; remainder Lo | Red Deer Soil Survey 1951 | Soils interpretation |
| Stettler | BlO | Matches surrounding units | AGRASID |
| RDR Valley S of Erskine | TB on both valley sides | 2m DEM and imagery | Imagery interpretation |
| Penhold airport | BlO chosen as SS had >50% | Red Deer Soil Survey 1951 | Neighbour polygons are more Lo, Cy & Sb |
| Penhold | Sb from local knowledge | Red Deer Soil Survey 1951 has > 30% PeM which is gleyed | Due to lowland nature and high wt. |
| Innisfail | BlO at N; Sy at W & Lo to E | Red Deer Soil Survey 1951 | Soils interpretation & local knowledge |
| RD – Medicine River confluence | S&E as Sb & N&W is SwG | Matches surrounding units | Local knowledge |
| Bowden | Lo matches Urban LenW to west | Red Deer Soil Survey 1951 | Soils interpretation & local knowledge |
| Valley E of Bowden | Trough is Ov; to S sides are TB | Red Deer Soil Survey 1951, SPOT Imagery & 2m DEM | Soils interpretation & local knowledge |
| Olds | W BlO; E as Lo | Rosebud Banff Soil Survey 1943 | Also local knowledge |
| Didsbury and Carstairs | Lo | Rosebud Banff Soil Survey 1943 | Local knowledge |
| Madden | Dominant LtcD for creek valley | Rosebud Banff Soil Survey 1943 | Knowledge of Balsam Poplar with Willows |
| Crossfield | Lo | Rosebud Banff Soil Survey 1943 | Matches 3 Lo polygons |
| Airdrie | Became 8 polys of Lo, Ov, Sb | Rosebud Banff Soil Survey 1943 | Ck. as Ov; Sb in 2 W areas; remainder Lo |
| Loch Lomond | LenW and to E LenSP | Rosebud Banff Soil Survey 1943 | Spot Imagery and local knowledge |
| Cochrane | SwG and LtcR for Bow River | Rosebud Banff Soil Survey 1943 | Spot Imagery |
| Wetlands N of Calgary | LenW and LenSP | Rosebud Banff Soil Survey 1943 | Small polys in Spy Hill area as LenSP |
| Chestermere Lake | LenW & edges as SL & 2 LenS | Blackfoot Calgary Soil Survey 1960 | Spot Imagery and local knowledge |
| Strathmore | Sy at E; wetland LenSP at west | Blackfoot Calgary Soil Survey 1960 | Spot Imagery and local knowledge |
| Rockyford | Lo | Rosebud Banff Soil Survey 1943 | Local knowledge |
| Standard | Lo high & BlO surround | Rosebud Banff Soil Survey 1943 | Local knowledge |
| Near Kathryn, Irricana | SwG in Rosebud Valley | Rosebud Banff Soil Survey 1943 | Spot Imagery and local knowledge |
| Near Bieseker SW | 6 polys of SwG | Rosebud Banff Soil Survey 1943 | Spot Imagery & local knowledge |
| Wintering Hills escarpment | TB | Rosebud Banff Soil Survey 1943 | Spot Imagery and local knowledge |
| Drumheller and Midale | Ov | Rosebud Banff Soil Survey 1943 | Spot Imagery and local knowledge |
| Three Hills | Lo | Rosebud Banff Soil Survey 1943 | Cy at lower elev to west |
| Trochu | Lo | Rosebud Banff Soil Survey 1943 | Local knowledge |
| near Gartly | TB | Rosebud Banff Soil Survey 1943 | Valley sides |
| Carbon slopes | TB | Rosebud Banff Soil Survey 1943 | Valley sides |
| Hanna | BlO | Oyen Soil Survey 1988 | Sb adj to LenW only |
| Youngstown | BlO | Oyen Soil Survey 1988 | And local knowledge |
| Coronation | BlO | Paintearth Soil Survey 1988 | And local knowledge |
| Ribstone valley | TB on sides | Paintearth Soil Survey 1988 | NE of Coronation |
| Consort | Lo | Matches surrounding units | And local knowledge |
| Provost | Lo | Matches surrounding units | And local knowledge |
| Twp 57-14 W4 | TB | SPOT imagery only | Interpretation; Ov |
| Twp 55-10 W4 | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Imagery interpretation and soils |
| Twp 56-6 W4 | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Imagery interpretation and soils |
| Twp 56-4 W4 | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Imagery interpretation indicates slumping |
| Twp 55-3 W4 N side of valley | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Imagery interpretation and soils |
| Twp 55-5 W4 at Primula | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Imagery interpretation and soils |
| Twp 52-10 W4 | TB (separated from following entry) | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Separated on basis of SPOT |
| Twp 52-10 W4 | Lo (separated from preceding entry) | SPOT imagery; Wainwright Vermilion Soil Survey 1944 |  |
| N of Birch Lake | Sb | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | Visible high watertable presence, and Sy soils |
| W of Birch Lake | TB | SPOT imagery; Wainwright Vermilion Soil Survey 1944 | With numerous drainage channels |
| SE of Meeting Ck | TB | SPOT imagery | With ~10-20% BdL |
| Twp 41-17 W4 | TB | SPOT imagery | Imagery & soils |
| Battle Valley Side | TB | SPOT imagery | Also made a small BdL within TB |
| 3-41-16 W4 | TB | SPOT imagery | Imagery interpretation |
| 31-40-15 W4 | BdL | SPOT imagery | Imagery interpretation |
| Paintearth Mine Area | BlO | SPOT imagery and 2m contour | Imagery & slopes |
| S of Paintearth Mine Area | BlO | SPOT imagery | Imagery & local knowledge |
| N side Battle N of Mine area | Lo | SPOT imagery | Imagery interpretation |
| NW of Paintearth mine | TB | SPOT imagery | Imagery interpretation |
| 14-40-14 W4 | TB | SPOT imagery | Imagery interpretation |
| 22-39-15 W4 | TB | SPOT imagery | Imagery interpretation |
| 24-39-15 W4 | TB | SPOT imagery | Imagery interpretation |
| 24-39-15 W4 | BlO | SPOT imagery | Applied in general highland polygon |
| Twp 39-13 W4 | TB for highland ridge | SPOT imagery | adjacent to coulee |
| 8-39-12 W4 | TB | SPOT imagery | Imagery interpretation |
| 17-39-11 W4 | TB | SPOT imagery | Two polygons |
| S of Hardisty | TB | SPOT imagery | Three polygons of Battle Valley |
| N of Wainwright | TB | SPOT imagery | Several of Battle Valley |
| NE of Wainwright | TB | SPOT imagery | Several at and near SK border |
| Viking | BlO | County of Beaver Soil Survey 1988 | KLM soil units |
| Ryley | BlO | County of Beaver Soil Survey 1988 | CMO soil units |
| Irma | Lo | Wainwright Vermilion SS 1944 | Local knowledge |
| Wainwright and hqtrs. of Cdn. Forces Base | Sa at base; Lo town | Wainwright Vermilion Soil Survey 1944 | 2 polygons & local knowledge |
| Edgerton | Sa | Wainwright Vermilion SS 1944 | Local knowledge |
| Castor | BlO | SPOT image & Paintearth SS 1988 | Local knowledge |
| Empress | Sa | SPOT and Oyen Soil Survey 1988 | Local knowledge |
| Carseland W Fertilizer | Lo | SPOT & Blackfoot Calg. SS 1960 | Local knowledge |
| Carseland | Lo | SPOT & Blackfoot Calg. SS 1960 | Local knowledge |
| Carseland E pits | SwG | SPOT & Blackfoot Calg. SS 1960 | Local knowledge |
| Gliechen | Sy | Blackfoot Calgary Soil Surv. 1960 | Local knowledge |
| Hidden Valley Resort | LtcD | SPOT imagery & local knowledge | In Bow River valley |
| Bassano | Lo | County of Newell Soil Survey 1983 | Local knowledge |
| South of Barkenhouse | Gr | County of Newell Soil Survey 1983 | Former pit |
| Crawling Valley | Gr | County of Newell Soil Survey 1983 | Former pit |
| Rosemary | Cy | County of Newell Soil Survey 1983 | Local knowledge |
| Spring Hill area | BlO | County of Newell Soil Survey 1983 | Local knowledge |
| Duchess | Lo | County of Newell Soil Survey 1983 | Local knowledge |
| Rock Lake E | BlO | County of Newell Soil Survey 1983 | Local knowledge |
| Matzhiwin Creek – Red Deer River mouth | LtcR | SPOT Imagery | Best match; Also includes Ov |
| Patricia | Sa | County of Newell Soil Survey 1983 | Local knowledge |
| Brooks | Sy at N Lo major | County of Newell Soil Survey 1983 and SPOT Imagery | Made into 2 polygons; Local knowledge |
| Bow City | SwG | SPOT & County of Newell SS 1983 | Local knowledge |
| NE of Bow City | BlO | SPOT & County of Newell SS 1983 | Surrounded by BlO |
| Tilley | Lo | County of Newell Soil Survey 1983 | Local knowledge |
| Rolling Hills | Sy | SPOT & County of Newell SS 1983 | Local knowledge |
| E of Hays | TB at E; SwG in valley | SPOT Imagery | Local knowledge |
| Suffield Dept Nat. Defence hqtrs. | L at E; BlO at W | SPOT and local knowledge | Local knowledge |
| Ralston | BlO | SPOT and local knowledge | Local knowledge |
| Historic Suffield mine | Lo | SPOT and local knowledge | Local knowledge |
| Medicine Hat N near River | 4 polygons with main one as Sa | SPOT and local knowledge | Includes Ov, TB, Lo at W and Sa |
| Medicine Hat Central and W | 5 polgons with main one as Sy | SPOT and local knowledge | Includes Lo at West; Sy, LtcD, and 2 Ov |
| Medicine Hat South | Mostly Sy with Lo in SW | SPOT and local knowledge |  |
| Dunmore | 2 polygons with SwG at SW | SPOT and local knowledge | Sy to E and N |
| Seven Persons | Lo | SPOT Imagery and Med. Hat SS | Local knowledge |
| Bow Island | Lo | Forty Mile Soil Survey 1994 | Local knowledge |
| Burdett | Lo | Forty Mile Soil Survey 1994 | Local knowledge |
| Grassy Lake former Coal Mine | Lo at N; SwG at S | Forty Mile Soil Survey 1994 | Lead author of this soil survey |
| Etzikom | Lo | Forty Mile Soil Survey 1994 | Local knowledge |
| Foremost | Lo | Forty Mile Soil Survey 1994 | Local knowledge |
| Wrentham | Lo | Forty Mile Soil Survey 1994 | Local knowledge |
| Etzikom coulee pit | SwG | Forty Mile Soil Survey 1994 | Local knowledge |
| Coutts N waterbody W | SwG | County of Warner Soil Survey 1984 | Local knowledge |
| Taber as 3 polygons | Lo at S; Sy at E and Sa to N | SPOT and local knowledge | Also used nieghbour AGRASID polygons |
| Taber NW | Sa | SPOT and local knowledge |  |
| Coaldale | Cy | Matches surrounding polygons |  |
| Warner | Lo | County of Warner Soil Survey 1984 | Local knowledge |
| New Dayton | SL at E and Lo at W | County of Warner Soil Survey 1984 | Local knowledge |
| New Dayton NW | SL | County of Warner Soil Survey 1984 | Local knowledge |
| Side of Dam | Sb | County of Warner Soil Survey 1984 |  |
| Raymond | Lo | County of Warner Soil Survey 1984 | Local knowledge |
| NE of Raymond | Sb | County of Warner Soil Survey 1984 | Local knowledge |
| NW of Raymond | Lo | County of Warner Soil Survey 1984 | Local knowledge |
| Lethbridge airprt. YQL | Lo | Matches surrounding polygons | Local knowledge |
| Magrath Pothole Ck | LtcD | Local knowledge | Valley in rural is LtcS |
| Magrath | Cy | Cardston County Soil Survey 1991 | Local knowledge |
| Stirling | Lo | County of Warner Soil Survey 1984 | Local knowledge |
| Milk River | Sy | SPOT and local knowledge |  |
| Coutts | Lo | County of Warner Soil Survey 1984 |  |
| Cardston | Cy at W; Lo remainder | Cardston County Soil Survey 1991 |  |
| Lee Ck Valley | Ov | SPOT Imagery & local knowledge |  |
| Former Twin Butte N plant | Lo | Pincher Ck Crowsnest Pass Soil Survey 1991 | Local knowledge |
| Waterton Dam | LtcR | Local knowledge |  |
| Stand Off | Lo | Matches local polygons |  |
| St. Mary Resvr. E side | Sb | Adjacent to valley floor |  |
| Lundbreck | Li at S and Gr at N | Local knowledge | Added polygon line |
| Cowley | Li | Pincher Ck Crowsnest P. SS 1991 | Li trumps Cy |
| NE of Cowley | TB | Pincher Ck Crowsnest P. SS 1991 | Slopes to Oldman Res. |
| Pincher Ck airport | Li | Pincher Ck Crowsnest P. SS 1991 | Li trumps Cy |
| Pincher Station | Li | Pincher Ck Crowsnest P. SS 1991 | Li trumps Cy |
| Pincher Ck | Li at N; Lo at S; LtcD valley | Pincher Ck Crowsnest P. SS 1991 | Local knowledge |
| N of Pincher Station | TB | Pincher Ck Crowsnest P. SS 1991 |  |
| Brocket | Li | Pincher Ck Crowsnest P. SS 1991 |  |
| Fort MacLeod | SwG | Local Knowledge |  |
| Granum | Lo | Matches polygons |  |
| Oldman Valley W of Coalhurst | SwG | Local Knowledge |  |
| Coalhurst | Lo | Local Knowledge |  |
| West Lethbridge | Lo | Local Knowledge | Separated River Valley of TB and LtcR |
| Lethbridge | Lo | Local Knowledge |  |
| Claresholm | Lo | Matches surrounding polygons | Local Knowledge |
| Claresholm airport | Two polygons; Sy W and Lo E |  | General knowledge and match |
| Barons | Lo | Matches surroundings | Local Knowledge |
| Nobleford | Lo | Matches surroundings | Local Knowledge |
| Feedlots of Picture B. | Lo | Matches surroundings |  |
| Picture Butte N end | SL |  | Local Knowledge |
| Iron Springs pits | SwG |  | Local Knowledge |
| Feedlots near Iron Springs | Sy |  | Local Knowledge |
| Iron Springs | Sy at S; Lo at N | Matches surroundings | Local Knowledge |
| Little Bow Valley | SwG | Matches surroundings |  |
| Turin Colony | Sy | Matches surroundings | Local Knowledge |
| Turin | Lo | Matches surroundings | Local Knowledge |
| S end of Travers Reservoir | Lo | Matches surroundings | Local Knowledge |
| Little Bow SwG | SwG | 4 polygons N of Turin |  |
| Litle Bow Side | Li |  |  |
| W of Stavely | Ov |  | Coulee |
| Champion | Cy |  | Matches with west |
| N of Nanton | LtcS |  | Imagery |
| High River | Sy at W; Lo at E |  |  |
| channel SE of Okotoks | LtcS |  | Imagery |
| Okotoks S | Ov | Blackfoot Calgary Soil Surv. 1960 | Local Knowledge |
| Okotoks N | Ov at S; Lo at N | Blackfoot Calgary Soil Surv. 1960 | Local Knowledge |
| Turner Valley | Lo | Blackfoot Calgary Soil Surv. 1960 | Local Knowledge |
| Black Diamond | Cy at E; Ov at W | Blackfoot Calgary Soil Surv. 1960 | Local Knowledge |
| SW of Calgary (7 polygons) | LenW | SPOT Imagery | Includes Lloyd Lake |
| Spruce Meadows Lake | LenW | SPOT Imagery |  |
| S of Midnapore | 2 SwG and one Sy | Calgary Urban Per. Soil Surv. 1987 |  |
| Okotoks Hwys. #2 and Sec. #552 Interchange | All Lo | Blackfoot Calgary Soil Surv. 1960 |  |
| S of Midnapore | LenSP | Calgary Urban Per. Soil Surv. 1987 | Used two SPOT years |
| S of Midnapore | SwG | Calgary Urban Per. Soil Surv. 1987 | And matches surroundings |
| Davisburg wetland | LenW | Blackfoot Calgary Soil Surv. 1960 | Imagery |
| Davisburg slope to Bow R | SwG | Blackfoot Calgary Soil Surv. 1960 | Local Knowledge |
| Highwood R valley | Ov | SPOT & Blackfoot Calg. SS 1960 | Local Knowledge |
| Blizzard Lake | LenW | SPOT & Blackfoot Calg. SS 1960 | Local Knowledge |
| Davisburg N ridge | Lo | SPOT and 2m DEM | Local Knowledge |
| Lower edge of Lucky Strike Upland | SL for two polygons | SPOT and Forty Mile Soil Survey 1994 | Local Knowledge |
| McKenzie Town at S Calgary | Lo | Calgary Urban Perimeter SS 1987 | Local Knowledge |
| Elbow R | LenR | Calgary Urban Perimeter Soil Survey 1987 and SPOT Imagery | Imagery |
| Wetlands Elbow R. S | LenS or LenSP | With one LenW and used SPOT | and one LenT to west |
| Subd. W of Calgary | Cy | Matches adjacent polygons | Cy at Springbank area |
| Bearspaw Calgary | SwG | Calgary Urban Perimeter SS 1987 | Soils interpretation |
| Bowness Calgary pit | SwG | Calgary Urban Perimeter SS 1987 | Soils interpretation |
| Bowness Calgary pit | SwG | Calgary Urban Perimeter SS 1987 | Soils interpretation |
| Happy Valley | Gr and SwG | Calgary Urban Perimeter SS 1987 | Two polygons |
| Bow River | LtcR | Calgary Urban Perimeter SS 1987 | Soils interpretation |
| Happy Valley pit wetlands | LenS | SPOT Imagery | Imagery interpretation of two small polygons |
| Happy Vly golf course | SwG | SPOT Imagery and inference | Imagery interpretation |
| Chestermere NE | LenW | Imagery | Imagery interpretation |
| NE of Calgary | LenT | Imagery | Imagery interpretation |
| E of Calgary | Lo | Matches surrounding AGRASID | Soils interpretation |
| Porcupine Hills | TB | Local knowledge and experience | Simplified as TB |
| SW of Fabyan | TB | Imagery | Local knowledge |
| W of Torrington | TB | Imagery | Imagery interpretation |
| Bashaw | Lo at N; Sy at S | Matches surrounding AGRASID | Soils interpretation |
| High Level | Some Len; Cy at N; Lo remainder | AGRASID neighbours KEptWP6/U1l-c; MGN2/U1l | Three polygons from soils interpretation |
| Fort Vermilion | N is SwG-Sa; central Lo; S is Sy (Lo) | AGRASID neighbours HLL1/U1h; SDLxg6/U1h; RLE5/U1l | Three polygons from soils interpretation |
| La Crete | All Sy | AGRASID neighbour PNT1/U1l | soils interpretation |
| Manning | Valley is Ltc; others are Sb, Len | AGRASID neighbour ENPH20/SC2 | from soils and imagery interpretation |
| Hines Creek | Cy | AGRASID neighbour ENW1/IUl | soils interpretation |
| Berwyn | Lo (Sb,Cy,Len) | AGRASID neighbour BYN18/U1l | soils interpretation |
| Grimshaw | BlO | AGRASID neighbour GMW1/U1l | soils interpretation |
| Peace River East side | SwG |  | Matches W terrace |
| High Prairie | Sb (Len) | AGRASID neighbour HPE1/U1l | soils interpretation |
| Hythe | Sb (Cy, BlO) | AGRASID neighbour AGES1/U1l | soils interpretation |
| Beaverlodge | Sb | AGRASID neighbour ESH1/IUl | soils interpretation |
| Evansburg | Cy (Len) | AGRASID neighbour HDR2/H1l | soils interpretation |
| Entwistle | Lo, Sy (Cy) | AGRASID neighbour KHZCzbl5/H1l | from soils interpretation |
| East of Entwistle | Lo, Sy (Len) | AGRASID neighbour KHZCzbl5/M1m-d | from soils interpretation |
| W Side Wabamun Lk. | Sb | Complex area; multiple range sites | Applied dominant |
| S Side Wabamun Lk. | TB | Dominant soils MDE & KVG | soils interpretation |
| N Side Wabamun Lk. | Lo | Dominant soil is COA | soils interpretation |
| Wabamun decommissioned plant | Sb | Evidence of locally high watertable | Local knowledge |
| East of Wabamun Lk. | Lo | Dominant soil is HVL | soils interpretation |
| E Wabamun L. & low | Sb | Imagery & contours | soils interpretation |
| Rocky Mtn House | Lo (LenSP) | Uplands are Lo and fens are LenSP | soils interpretation |
| Caroline | Lo and Len | AGRASID neighbour CAZG1/U1h | soils interpretation |
| Sundre | SwG | Evidence of shallow gravels | Local knowledge |
| Redwater | Sy | Simplified based on dominant | soils interpretation |
| Redwater plant & pile | Sy to E & Lo to W | AGRASID PHS5/U1h & HBPO2 | soils interpretation |
| Scotford | Sy | Sy based on mid-point of Sa & Lo | Sa & Lo also occur |
| Thorsby | Cy | AGRASID neighbour MCML2/U1h-d | Lo also occurs |
| Warburg | Sb | AGRASID neighbour ANR2/U1h | soils interpretation |
| Rimbey | Lo | AGRASID neighbour RMY1/U1h | Local knowledge |
| Eckville | Lo | AGRASID neighbour RMY6/U1h | Local knowledge |
| Benalto | Lo | AGRASID neighbour FLU1/U1h | Local knowledge |
| 4 Mi S of Grande Prairie | Sa, LenSP | AGRASID neighbour MCMS1/U1h | soils interpretation |
| Immediately S of Grande Prairie | Sa, LenSP | AGRASID neighbour HRKN1/D2l & east is EGHR1/D2l | soils interpretation |
| Mayerthorpe | Cy | AGRASID neighbour MCML2/H1l | soils interpretation |
| ALPAC Plant NE of Athabasca | Sy | AGRASID neighbour mainly as CSTGaa1/U1h | soils interpretation |
| Lac la Biche | Lo, Cy | AGRASID neighbour LCVE2/U1h | soils interpretation |
| Grande Centre | Lo (Len) | AGRASID neighbour LCSP2/U1h | soils interpretation |
| Athabasca East high | Sy | AGRASID neighbour TNW5/U1h | soils interpretation |
| Athabasca South high | Sy | AGRASID neighbour TNW2/R2m | soils interpretation |
| Athabasca town main | Sy | AGRASID neighbour TNW2/H1l | Soils and imagery |
| Athabasca town S. cen. | TB | AGRASID neighbour ZUN2/SC3 | Imagery interpretation |
| Athabasca E slopes | TB | AGRASID neighbour ZUN/I3h | Soils and imagery |
| Medley near Cold Lk. | Lo | AGRASID neighbour LCSP2/U1h | soils interpretation |
| Westlock east | BlO | AGRASID neighbour VVG1/U1l | soils interpretation |
| Westlock remainder | Lo | AGRASID neighbour UCS2/U1l | soils interpretation |
| Bonnyville west | Lo | AGRASID neighbour KHW2/U1l | soils interpretation |
| Bonnyville remainder | Lo | AGRASID neighbour FRY1/U1l | soils interpretation |
| Barrhead | Cy | AGRASID neighbour MLA2/U1h | soils interpretation |
| St. Paul | Lo, Sb | AGRASID neighbour AGPI2/U1h | soils interpretation |
| Thorhild | Lo | AGRASID neighbour LCSP2/U1h | soils interpretation |
| South of Keephills | LenW | AGRASID neighbour ZUN2/DL | Imagery interpretation |
| Valley S of Keephills | Ov | AGRASID neighbour ZUN16/U1h | Imagery interpretation |
| Downstream of Rocky Rapids & Drayton Vly. | SwG, Ov, LtcC SE of Tomahawk | AGRASID neighbour ZUN1/U1h | Imagery & interpretation |
| W of Rocky Mtn Hse. | Ov |  | Imagery interpretation |
| Sunrise beach area, Sandy Lake | Sb |  | Imagery & interpretation |
| South of Onoway | Lo at N; Sb at S |  | soils interpretation |
| S of Keephills in N SK valley | SwG |  | Imagery & interpretation |
| NE of Lindale; S of river | TB at N; Sy at S |  | soils interpretation and imagery |
| W of Bowden & E of Redlodge Pr. Park | SwG |  | Imagery & local knowledge |
| W of Tulliby Lake on terrace above river | SwG |  | Imagery & interpretation |
| SE of Burnstick Lake | creek edges are LtcC; upland Lo |  | Imagery & soils interpretation |
| E of Rocky Rapids | Terrace is SwG | AGRASID ZUN1/FP3 | Imagery |
| SW of Keephills | SwG (largest) at N; LenW centre; Gr at S. | AGRASID ZUN1/FP3 | Three polygons with Imagery & interp. |
| Peace River valley at Ft. Vermilion | SwG on low terraces | AGRASID ZUN1/FP3 | Imagery & interpretation |
| 8 mi downstream of Ft. Vermilion | Lo on upper terrace | AGRASID ZUN1/FP3 | Imagery & interpretation |
| Carcajou land breaking | Sy | AGRASID ZUN1/FP3 | soils interpretation |
| Peace Vy at Notikewin | Sy on terraces | AGRASID ZUN1/FP3 | soils interpretation |
| Peace E of Manning | Sy at river; TB at W | AGRASID ZUN1/FP3 | Imagery interpretation |
| E of Manning | Sy at river; SwG as mid; Cy at W&S | AGRASID ZUN1/FP3 | Imagery & interpretation |
| Upstream of Ft. Vermilion | SwG with Sy & TB at terrace near mill | AGRASID ZUN1/FP3 | Imagery & interpretation |
| SW of Cleardale | Ov below softrock | AGRASID ZUN1/FP3 | Imagery interpretation |
| Smoky Valley W of Marie Reine | Ov with Sb at springs | AGRASID ZUN1/FP3 | Imagery interpretation |
| Smoky Valley N of Bezanson | Ov | AGRASID ZUN1/FP3 | Imagery & interpretation |
| Valley N of Sundre; 4 polygons NW aspect | TB | AGRASID ZUN1/I3h | Imagery & interpretation |
| N SK valley N of Brosseau | TB to E; BdL to W | AGRASID ZUN1/I3h | Imagery & interpretation |
| E of Elk Point at valley | TB | AGRASID ZUN1/I3h | Imagery interpretation |
| SW of Muriel Lake | TB | AGRASID ZUN1/I3h | Imagery interpretation |
| Lea Park jct of N SK & Vermilion Rivers | TB | AGRASID ZUN1/I3h | Imagery & interpretation |
| W of AB Pacific mill in Athabasca valley | TB | AGRASID ZUN1/I3h | Imagery & interpretation |
| N SK River N side near SK boundary | BdL | AGRASID ZUN1/I3h | Imagery & interpretation |
| W of Ft. Vermilion | CS in dunes & 5 polygons of TB | AGRASID ZUN1/I3m | Imagery & interpretation |
| SE of Keephills | Sy | AGRASID ZUN1/U1l | Soils & imagery |