

### Legend

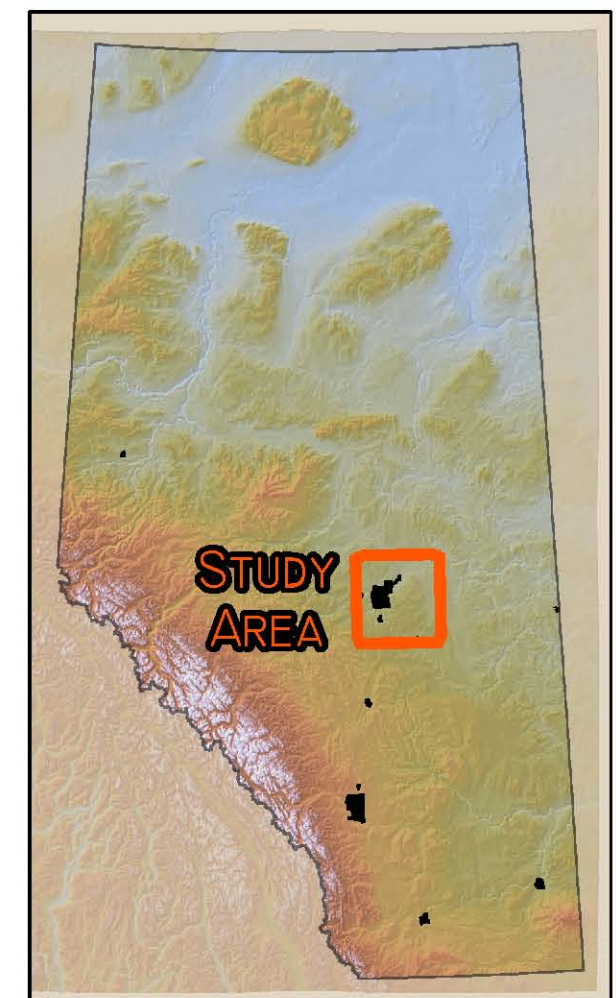
Land System	Land System Description	Major Soils	Minor Soils	Acidification Sensitivity
Battle River Valley 05.00.09 <sup>2</sup>	Valley bottom with some confined floodplain. Regosols developed on undifferentiated material. Minor soils include coarse textured soils. Significant eroded soils present.	Miscellaneous Eroded	Milk River-AA (Cumulic Regosol)	Low - 51% Cultivated - 20% Wetland - 29% Other - 4%
Big Hay Plain 05.3d.26	Undulating landscape with some level - closed basin. Black Chernozems and Black Solonetz developed on medium textured till and fine textured water-laid sediments. Minor soils include Gleysols.	Angus Ridge (Eluvial Black Chernozem) Wetaskwin (Black Solonized Solonetz)	Malmu (Eluvial Black Chernozem) Gleysols/Water	Low - 42% Cultivated - 54% Wetland - 3% Other - 1%
Bigstone Plain 05.3d.30	Undulating landscape with some duned. Black Chernozems developed on coarse textured sediments and medium textured material over medium textured till. Minor soils include Gleysols.	Peace Hills (Orthic Black Chernozem) Hobbema (Eluvial Black Chernozem)	Ponoka (Eluvial Black Chernozem) Gleysols/Water	Low - 20% Cultivated - 80%
Calmar Plain 05.3d.21	Undulating landscape. Black Chernozems developed on fine textured water-laid sediments.	Malmu (Eluvial Black Chernozem)	Ponoka (Eluvial Black Chernozem) Looma (Orthic Dark Gray Chernozem)	Low - 9% Cultivated - 88% Other - 3%
Caves Plain 05.3d.10	Undulating landscape. Black Chernozems developed on medium textured till.	Angus Ridge (Eluvial Black Chernozem)	Hobbema (Eluvial Black Chernozem) Rolly View (Orthic Dark Gray Chernozem)	Low - 16% Cultivated - 83% Other - 1%
City of Edmonton 05.3d.14	City of Edmonton.	Disturbed Lands		Low - 19% Cultivated - 27% Wetland - 2% Other - 52%
Eldreda Plain 06.2a.11	Undulating landscape with some duned. Black Chernozems and Brunisols developed on coarse textured sediments.	Peace Hills (Orthic Black Chernozem) Primula (Eluvial Eutric Brunisol)	Manatoken-AA (Teric Mesisol) Mundare (Orthic Black Chernozem)	Low - 39% Moderate - 25% Sensitve - 17% Cultivated - 18%
Falun Plain 06.1c.12	Undulating landscape. Dark Gray Luvisols and Dark Gray Chernozems developed on medium textured till. Minor soils include Organic.	Benalo (Dark Gray Luvisol) Falun (Orthic Dark Gray Chernozem)	Bretton (Orthic Gray Luvisol) Organics	Low - 41% Cultivated - 55% Wetland - 2%
Ferlow Plain 05.3d.27	Hummocky landscape. Black Chernozems developed on medium textured till. Minor soils include Gleysols.	Angus Ridge (Eluvial Black Chernozem)	Rolly View (Orthic Dark Gray Chernozem) Gleysols/Water	Low - 34% Cultivated - 65% Wetland - 1%
George Lake Plain 06.1d.02	Hummocky landscape with some numerous water bodies. Gray Luvisols and Gray Solonetz developed on medium textured till. Minor soils include Gleysols.	Cooking Lake (Orthic Gray Luvisol) Diblat (Gray Solonized Solonetz)	Nakamun (Solonchic Gray Luvisol) Gleysols/Water	Low - 64% Cultivated - 36%
Gramina Plain 05.3d.20	Undulating landscape with some duned. Dark Gray Luvisols developed on coarse textured sediments. Minor soils include Organic.	Elk Point (Dark Gray Luvisol) Tiger Lily (Orthic Gray Luvisol)	Organics	Low - 57% Cultivated - 42% Wetland - 1%
Halfway Lake Dunfield 06.2a.09	Undulating landscape. Brunisols and Dark Gray Chernozems developed on coarse textured sediments. Minor soils include Organic and Gleysols.	Primula (Eluvial Eutric Brunisol) Hellwell (Orthic Dark Gray Chernozem)	Organics Gleysols/Water	Low - 36% Moderate - 38% Sensitve - 17% Cultivated - 3%
Hset Upland 05.6.01	Hummocky landscape. Dark Gray and Dark Gray Luvisols developed on medium textured till. Minor soils include Gleysols, Chernozems and fine textured soils.	Cooking Lake (Orthic Gray Luvisol) Uncas (Dark Gray Luvisol)	Gleysols/Water Mico (Orthic Dark Gray Chernozem)	Low - 65% Cultivated - 21% Wetland - 1%
Longhurst Plain 05.3d.19	Undulating landscape with some peatlands. Dark Gray Chernozems developed on medium textured water-laid sediments. Minor soils include Organic and coarse textured soils.	Winterburn (Orthic Dark Gray)	Redwester (Orthic Dark Gray Chernozem) Organics	Low - 26% Cultivated - 71% Wetland - 1%
Looma Upland 05.3d.50	Hummocky landscape. Dark Gray Chernozems and Dark Gray Luvisols developed on medium textured till. Minor soils include Gleysols and fine textured soils.	Uncas (Dark Gray Luvisol) Diblat (Dark Gray Luvisol)	Mico (Orthic Dark Gray Chernozem) Gleysols/Water	Low - 57% Cultivated - 42% Wetland - 1%
Mink Lake Plain 06.1d.20	Hummocky landscape. Gray Luvisols developed on medium textured water-laid sediments.	Glory (Orthic Gray Luvisol) Highvale (Orthic Gray Luvisol)	Carvel (Dark Gray Luvisol) Keephills (Dark Gray Luvisol)	Low - 53% Cultivated - 47%
Morville Plain 05.3d.01	Undulating landscape. Black Solonetz developed on medium textured till and fine textured water-laid sediments. Minor soils include Chernozems and Gleysols.	Camrose (Black Solonized Solonetz) Dugg (Black Solonetz)	Angus Ridge (Eluvial Black Chernozem) Gleysols/Water	Low - 32% Cultivated - 67% Wetland - 1%
Namoo Plain 05.3d.07	Undulating landscape. Black Chernozems developed on fine textured water-laid sediments and medium textured water-laid sediments.	Malmu (Eluvial Black Chernozem) Ponoka (Eluvial Black Chernozem)	Angus Ridge (Eluvial Black Chernozem) Mico (Orthic Dark Gray Chernozem)	Low - 27% Cultivated - 69% Wetland - 1% Other - 2%
North Saskatchewan River Valley 06.00.03	Landscape is inclined <10% exposed bedrock with some numerous water bodies and undulating.	Miscellaneous Eroded		Low - 54% Cultivated - 29% Wetland - 16% Other - 1%
Onoway Upland 06.1d.08	Hummocky landscape. Gray and Dark Gray Luvisols developed on medium textured till. Minor soils include Organic and Chernozems.	Cooking Lake (Orthic Gray Luvisol) Uncas (Dark Gray Luvisol)	Organics Miscellaneous Coarse Textured Soils	Low - 67% Cultivated - 30% Wetland - 3%
Pakan Plain 06.2b.17	Undulating landscape. Black Chernozems developed on medium textured water-laid sediments. Minor soils include Solonetz.	Ponoka (Eluvial Black Chernozem)	Hobbema (Eluvial Black Chernozem) Kavanagh (Black Solonized Solonetz)	Low - 69% Cultivated - 27% Other - 4%
Partridge Plain 05.3d.09	Undulating landscape. Black Chernozems developed on medium textured till. Minor soils include Gleysols.	Angus Ridge (Eluvial Black Chernozem)	Rolly View (Orthic Dark Gray Chernozem) Gleysols/Water	Low - 28% Cultivated - 72%
Pemberton Hill Plain 06.1d.21	Undulating landscape. Dark Gray Luvisols developed on very fine textured water-laid sediments and areas of moderately fine textured till. Minor soils include Gleysols.	Macola (Dark Gray Luvisol)	Boscombe (Gleyed Dark Gray Luvisol) Gleysols/Water	Low - 72% Cultivated - 28%
Pigeon Lake 06.1b.03	Large water body.	N/A	N/A	Water - 100%
Pipstone Upland 05.3d.28	Undulating landscape with some duned. Black Chernozems developed on coarse textured sediments and medium textured water-laid sediments. Minor soils include Gleysols.	Peace Hills (Orthic Black Chernozem) Ponoka (Eluvial Black Chernozem)	Gleysols/Water	Low - 43% Cultivated - 55% Wetland - 1% Other - 1%
Pointe-aux-Pins Plain 05.3d.11	Undulating landscape. Black Chernozems developed on fine textured water-laid sediments.	Malmu (Eluvial Black Chernozem)	Angus Ridge (Eluvial Black Chernozem) Looma (Orthic Dark Gray Chernozem)	Low - 25% Cultivated - 72% Other - 3%
Redwater Plain 06.2a.05	Undulating landscape with some duned. Black Chernozems developed on coarse textured sediments. Minor soils include Brunisols.	Mundare (Orthic Black Chernozem)	Primula (Eluvial Eutric Brunisol) Peace Hills (Orthic Black Chernozem)	Low - 28% Moderate - 34% Sensitve - 7% Cultivated - 31%
Ryley Plain 05.4a.15	Undulating landscape. Black Solonetz developed on medium textured till. Minor soils include Chernozems and Gleysols.	Camrose (Black Solonized Solonetz)	Norma (Solonchic Black Chernozem) Gleysols/Water	Low - 35% Cultivated - 56% Wetland - 9%
Samson Lake Plain 05.3d.31	Undulating landscape. Black Chernozems developed on fine textured water-laid sediments. Minor soils include Solonetz and Gleysols.	Malmu (Eluvial Black Chernozem)	Gleysols/Water	Low - 41% Cultivated - 58% Wetland - 1%
Spruce Grove Plain 05.3d.18	Undulating landscape with some peatlands. Dark Gray Chernozems developed on medium textured water-laid sediments. Minor soils include Organic and fine textured soils.	Winterburn (Orthic Dark Gray)	Organics Malmu (Eluvial Black Chernozem)	Low - 36% Cultivated - 53% Wetland - 7% Other - 4%
Thorhild Plain 06.2c.25	Undulating landscape. Dark Gray Luvisols and Dark Gray Chernozems developed on medium textured till. Minor soils include Gleysols.	Spedden (Orthic Dark Gray Chernozem) Kebwin (Dark Gray Luvisol)	La Corey (Orthic Gray Luvisol) Gleysols/Water	Low - 46% Cultivated - 54%
Walete Plain 05.3d.22	Undulating landscape. Black Chernozems and Black Solonetz developed on medium textured till and medium textured softrock.	Angus Ridge (Eluvial Black Chernozem) Kavanagh (Black Solonized Solonetz)	HBM Rolly View (Orthic Dark Gray Chernozem)	Low - 20% Cultivated - 76% Other - 4%
Yeoford Plain 06.1b.02	Undulating landscape with some rolling and hummocky. Dark Gray and Gray Luvisols developed on medium textured till. Minor soils include Chernozems.	Benalo (Dark Gray Luvisol) Bretton (Orthic Gray Luvisol)	Falun (Orthic Dark Gray Chernozem) Keephills (Dark Gray Luvisol)	Low - 44% Cultivated - 56%

Major Road: ———  
 Railway: —+—+—+—  
 River: ~~~~~  
 Lakes: [Blue Area]  
 Townships: [Black Outline]  
 Land System Boundary: [Red Outline]

**Land Cover Type**  
 Grassland: [Green Hatched]  
 Shrubs: [Blue Hatched]  
 Trees: [Brown Hatched]  
 Cultivated Lands, Other Land: [White]

**Sensitivity to Acid Inputs**  
 Low: [Light Green]  
 Low-Moderate-Sensitive Mix: [Pink]

Soil information from the AGRASID 3.0 database (Alberta Soil Information Centre 2007), and land cover information from the Prairie Farm Rehabilitation Administration.



**Alberta Environment**  
**ALBERTA RESEARCH COUNCIL**

**LAND SYSTEMS, LAND COVER AND SOIL SENSITIVITY TO ACID INPUTS IN THE EDMONTON 83H WEST HALF GRID CELL**

DATE: SEPTEMBER 2007  
 JOB No: EE311631  
 GIS FILE: ARC\_83H\_EDMWESTHALF  
 PDF FILE: ARC\_83H\_EDMWESTHALF

PROJECTION: UTM ZONE 12  
 DATUM: NAD83

PREPARED BY: amec