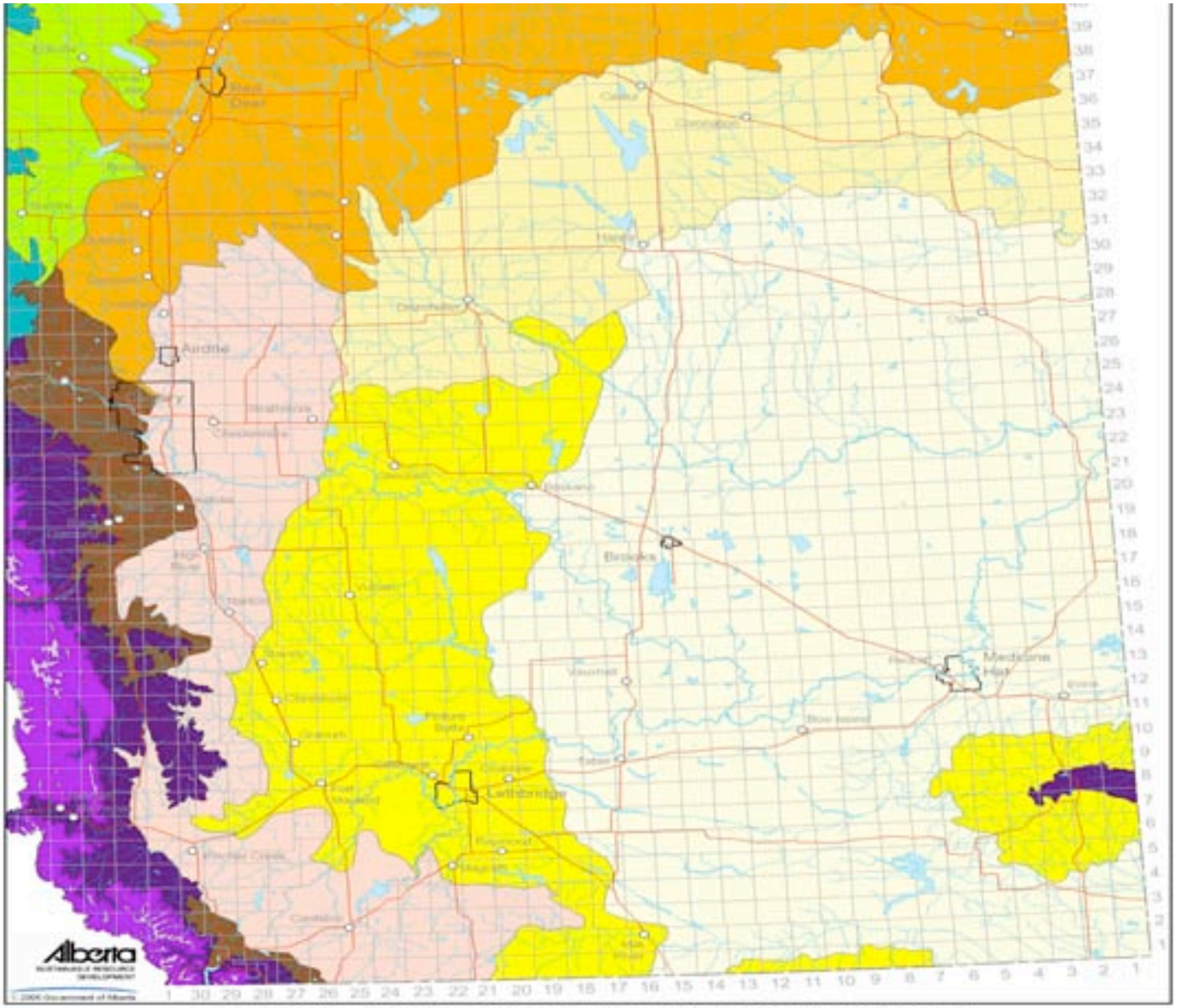
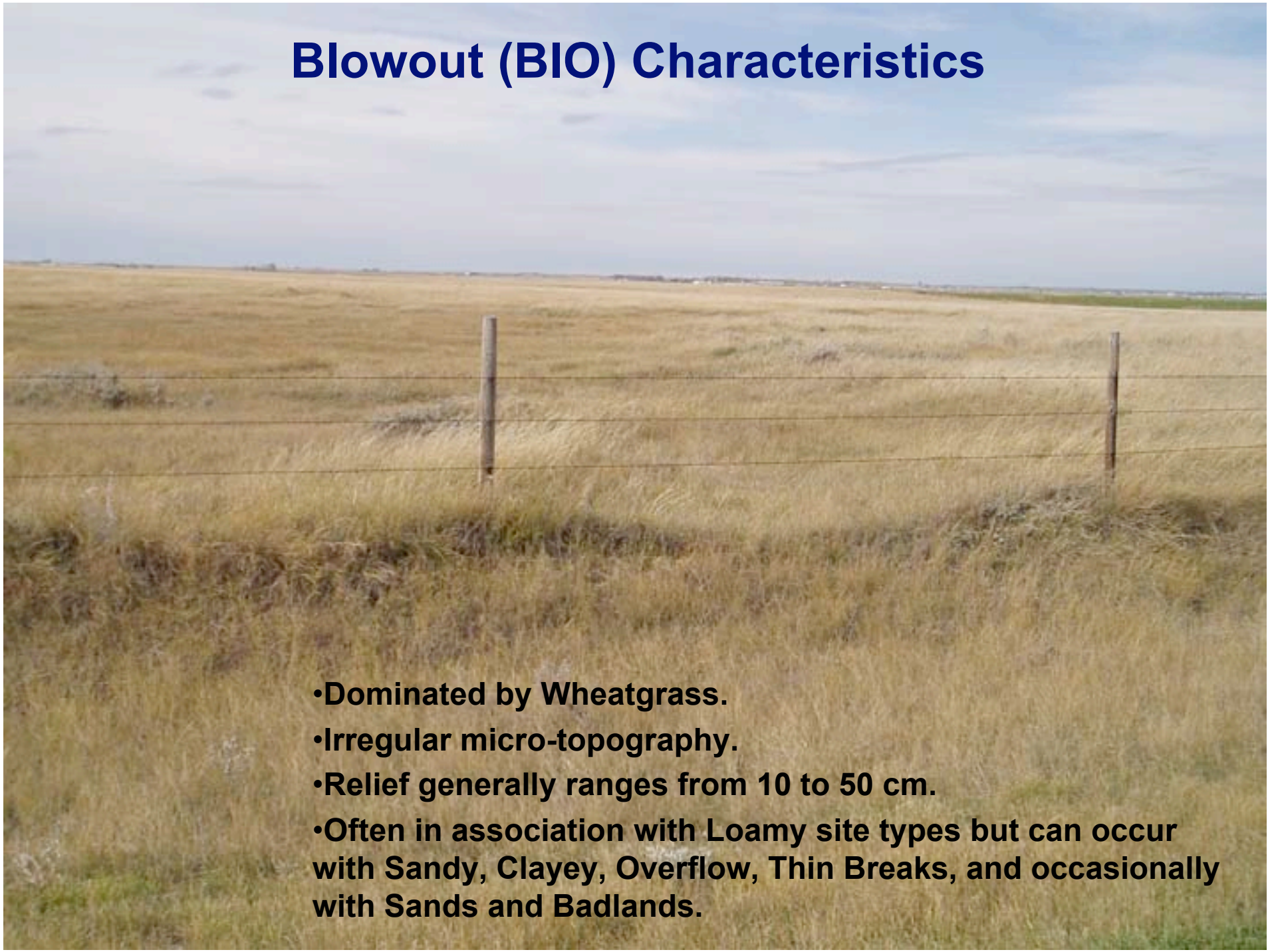


NATURAL SUBREGIONS OF SOUTHERN ALBERTA
2005

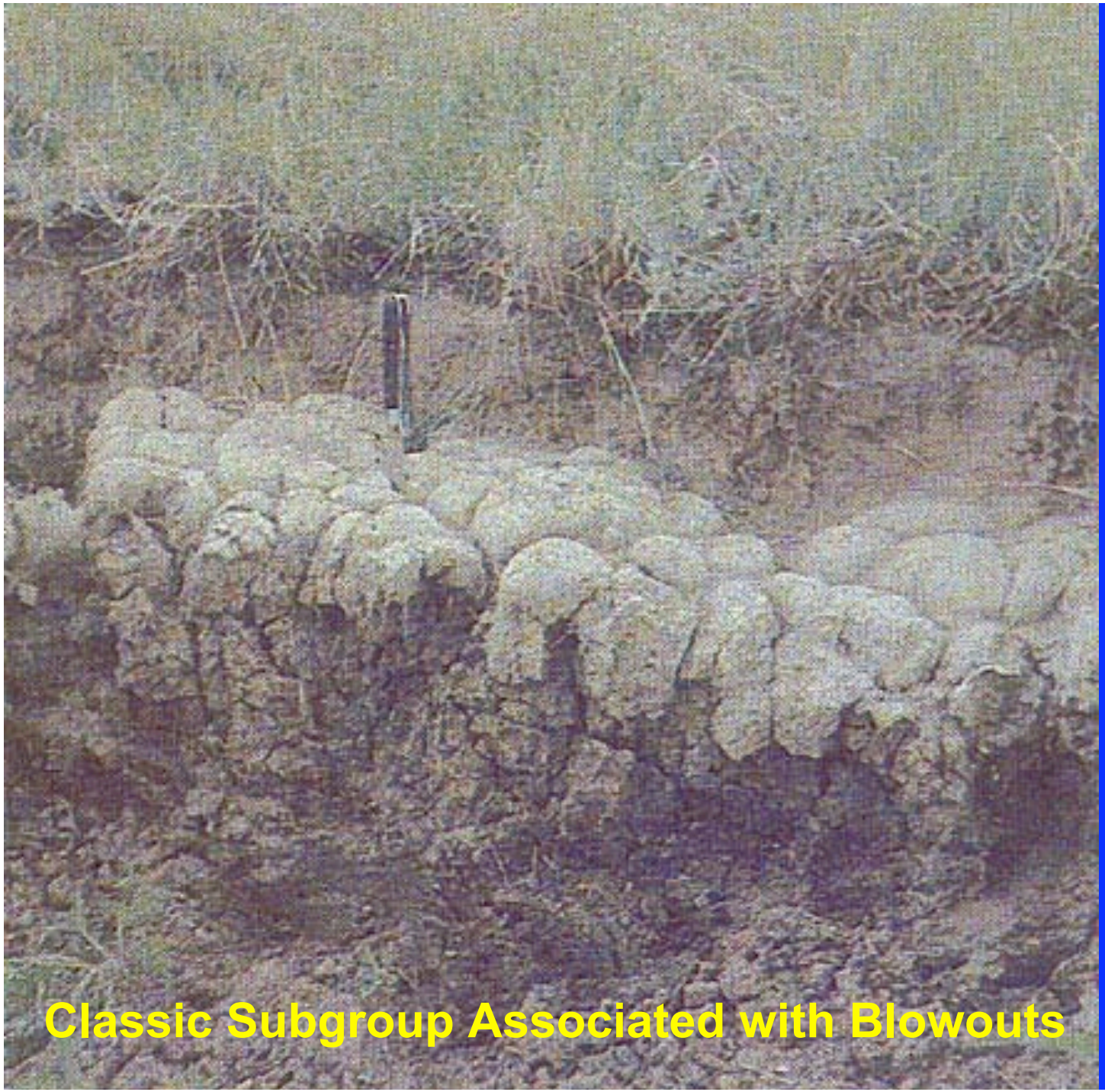
- Dry Mixedwood
- Lower Foothills
- Central Parkland
- Foothills Parkland
- Alpine
- Subalpine
- Montane
- Dry Mixedgrass
- Foothills Fescue
- Northern Fescue
- Mixedgrass

Blowout and Loamy Range Site Association; Dry Mixedgrass

Blowout (BIO) Characteristics



- Dominated by Wheatgrass.
- Irregular micro-topography.
- Relief generally ranges from 10 to 50 cm.
- Often in association with Loamy site types but can occur with Sandy, Clayey, Overflow, Thin Breaks, and occasionally with Sands and Badlands.



Classic Subgroup Associated with Blowouts

Brown Solodized Solonetz

Ah

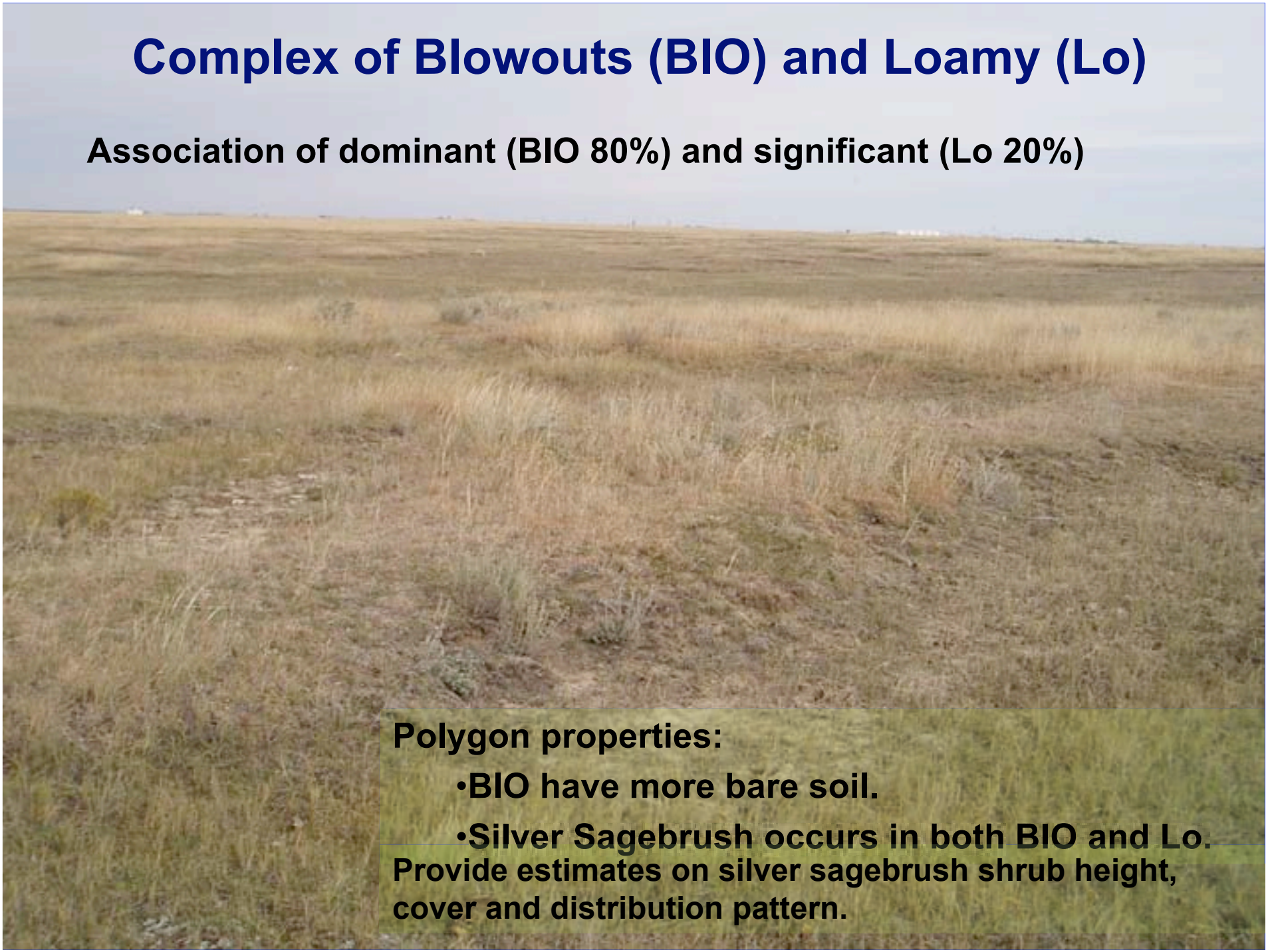
Ae

Bnt

BCks

Complex of Blowouts (BlO) and Loamy (Lo)

Association of dominant (BlO 80%) and significant (Lo 20%)



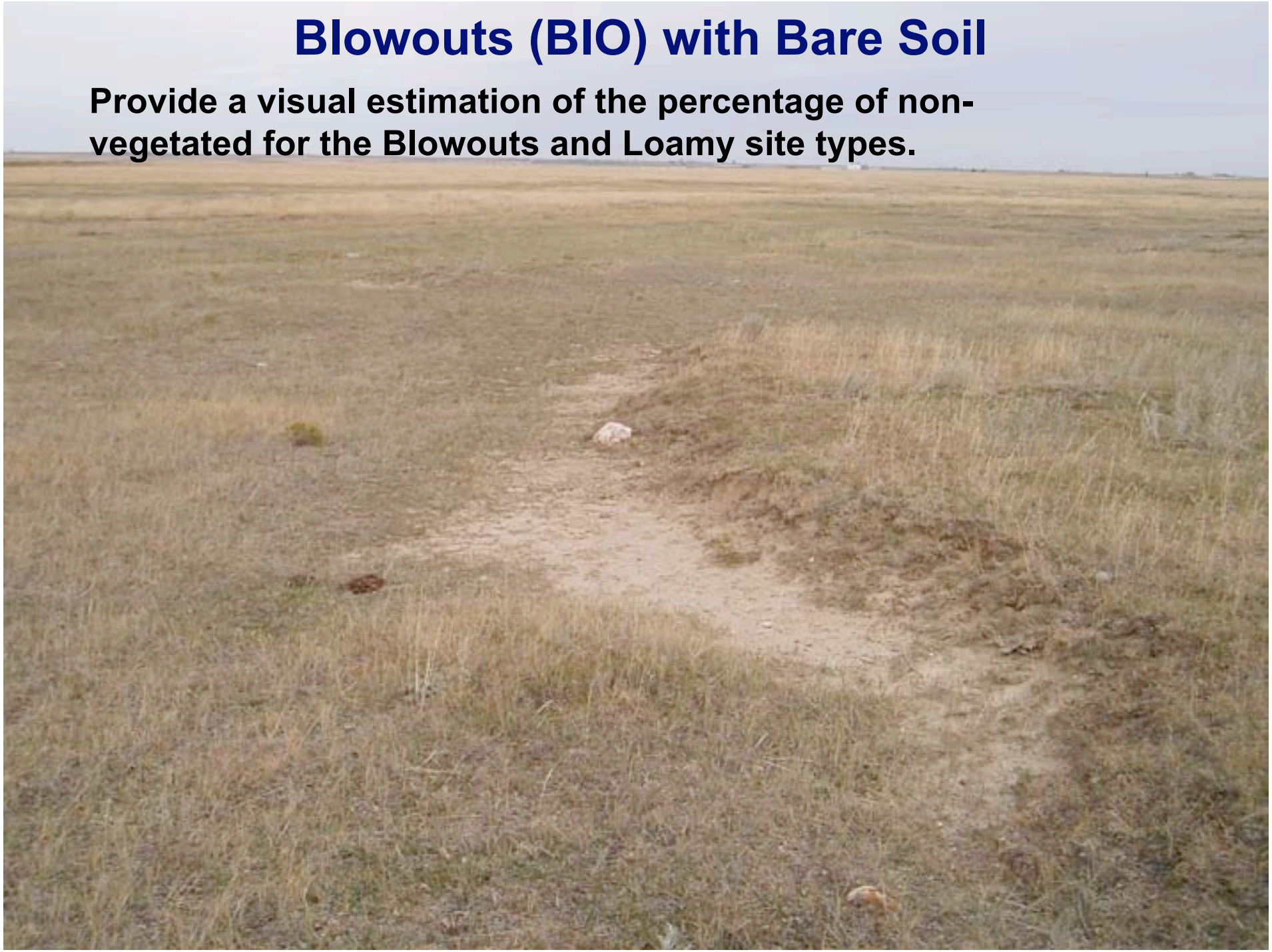
Polygon properties:

- **BlO have more bare soil.**
- **Silver Sagebrush occurs in both BlO and Lo.**

Provide estimates on silver sagebrush shrub height, cover and distribution pattern.

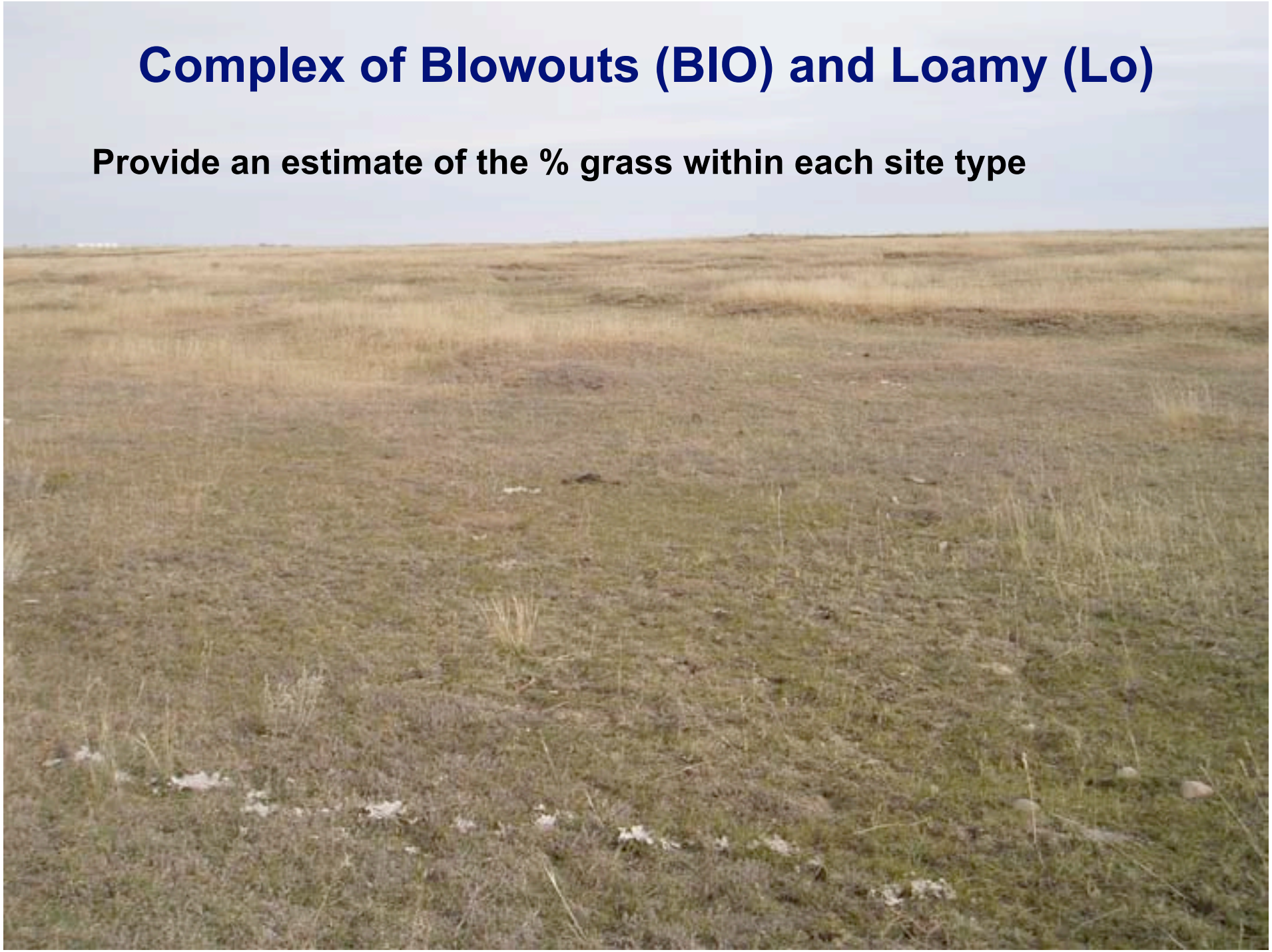
Blowouts (BlO) with Bare Soil

Provide a visual estimation of the percentage of non-vegetated for the Blowouts and Loamy site types.



Complex of Blowouts (BlO) and Loamy (Lo)

Provide an estimate of the % grass within each site type



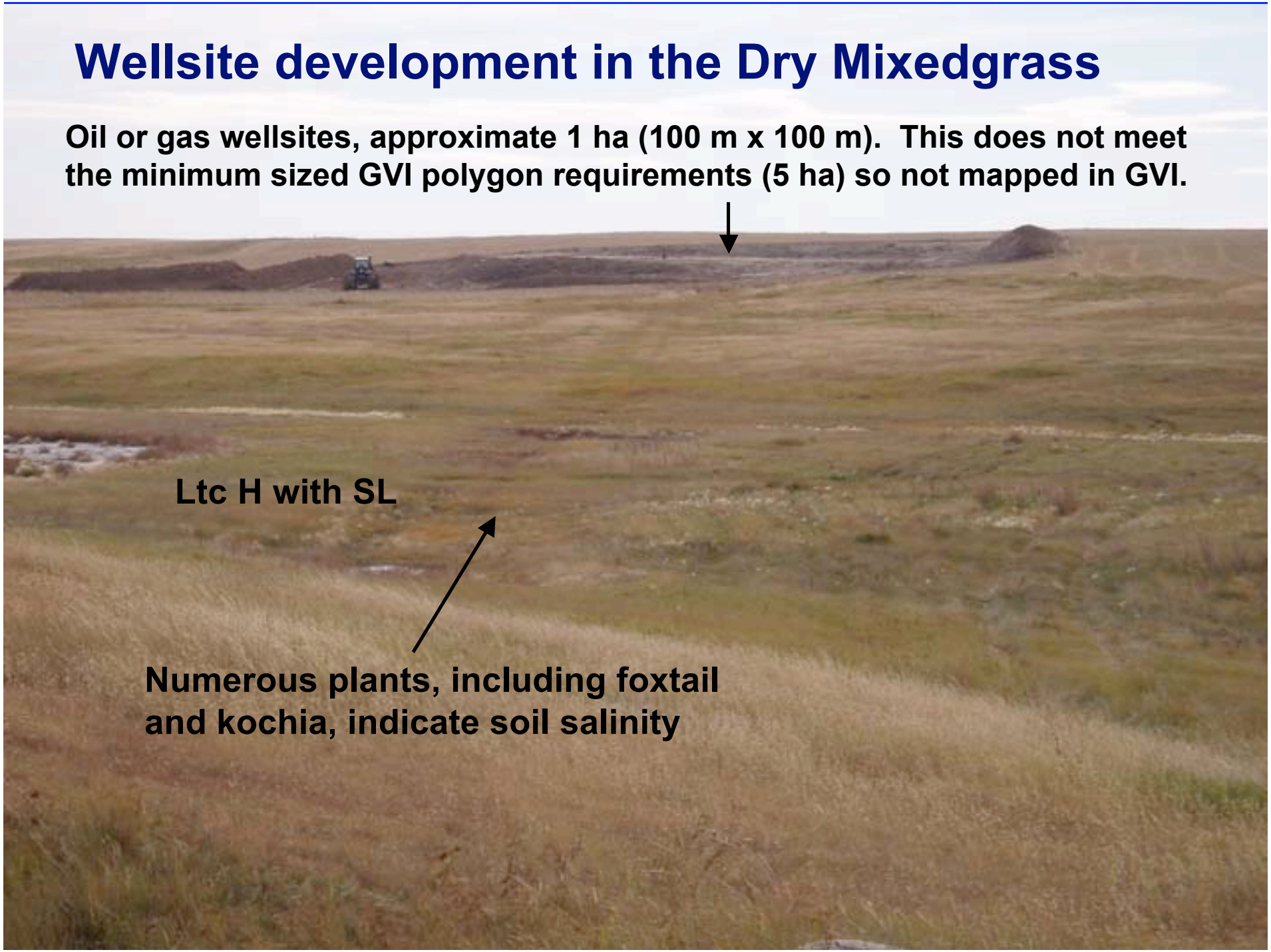
Blowout site types (BlO) may hold water after precipitation and/or runoff events

How to deal with the temporal differences that may occur due to seasonal or annual differences? Answer: Base on image assessment

DMG: Developed, Oil and Gas (Dev-OG). Tributary to Sage Ck.


Primary Class: Anthropogenic
Land Class: Industrial
Site Type: Developed (Dev)
Modifier: Oil or Gas Facilities (OG)
Facilities must be ≥ 5 ha

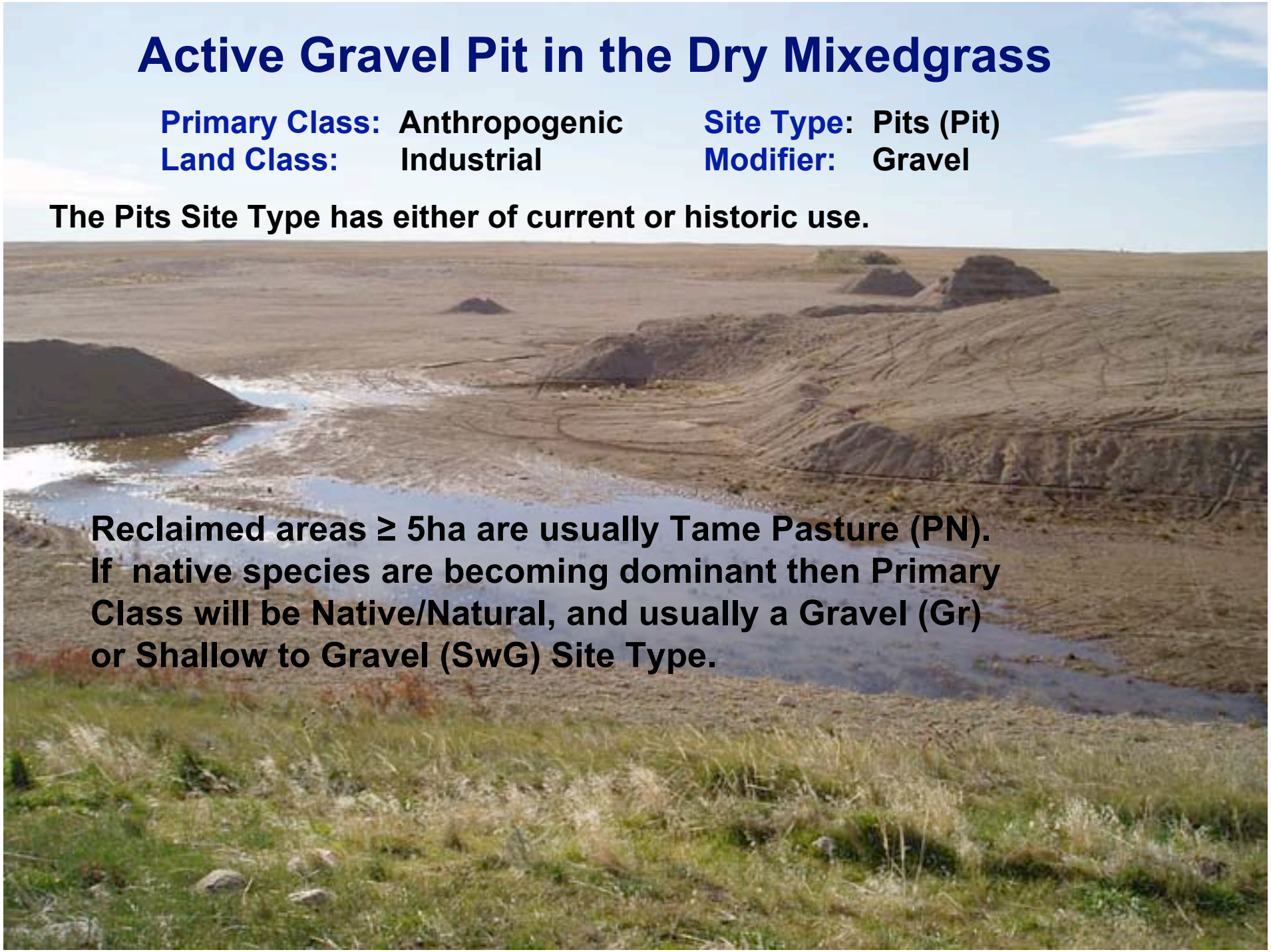
Wellsite development in the Dry Mixedgrass



Active Gravel Pit in the Dry Mixedgrass

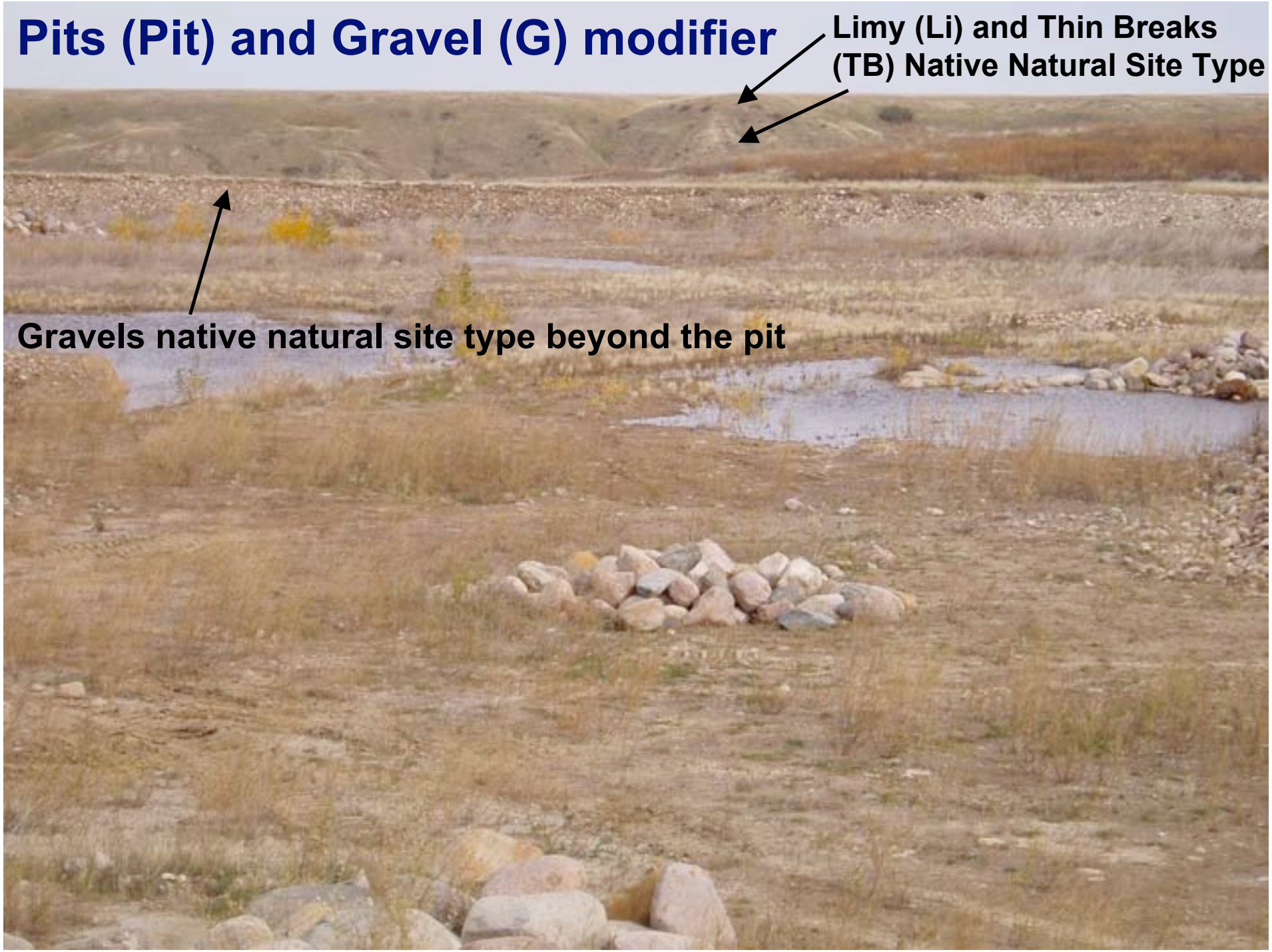
Primary Class: Anthropogenic
Land Class: Industrial
Site Type: Pits (Pit)
Modifier: Gravel

The Pits Site Type has either of current or historic use.



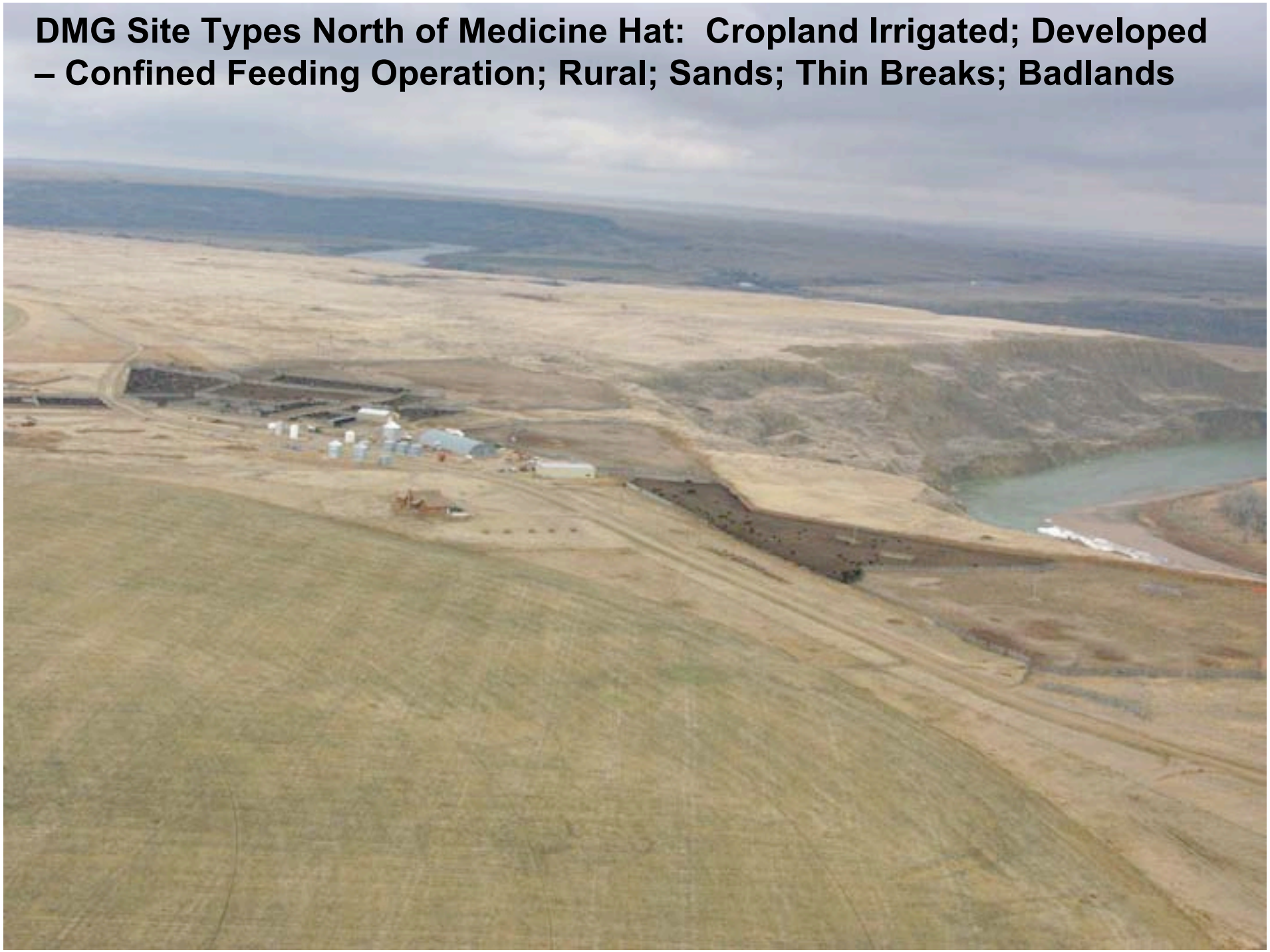
Reclaimed areas ≥ 5ha are usually Tame Pasture (PN). If native species are becoming dominant then Primary Class will be Native/Natural, and usually a Gravel (Gr) or Shallow to Gravel (SwG) Site Type.

Pits (Pit) and Gravel (G) modifier



DMG: Developed – Confined Feeding Operation.
Feedlot north of Medicine Hat

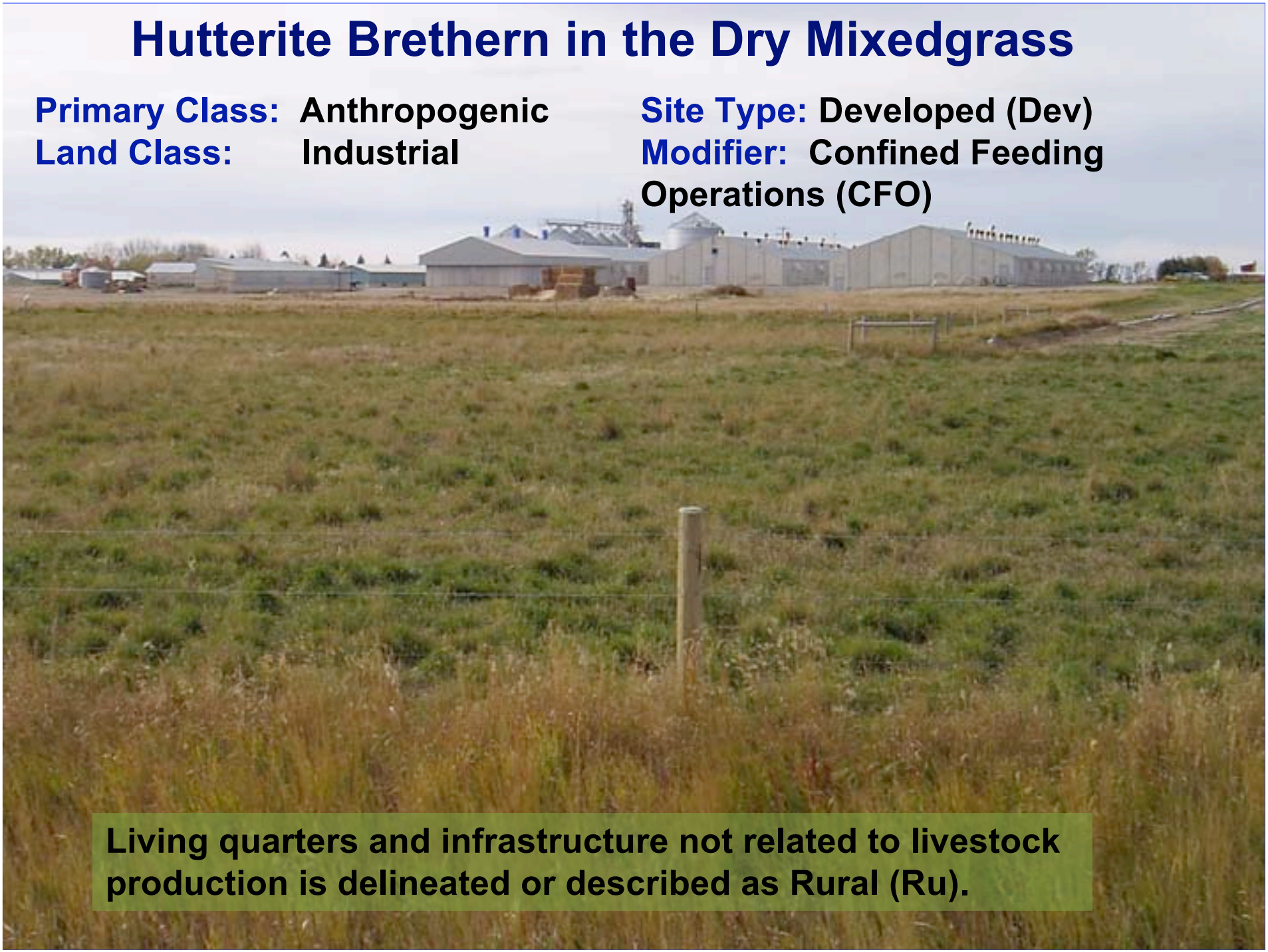
DMG Site Types North of Medicine Hat: Cropland Irrigated; Developed – Confined Feeding Operation; Rural; Sands; Thin Breaks; Badlands



Hutterite Brethern in the Dry Mixedgrass

Primary Class: Anthropogenic
Land Class: Industrial

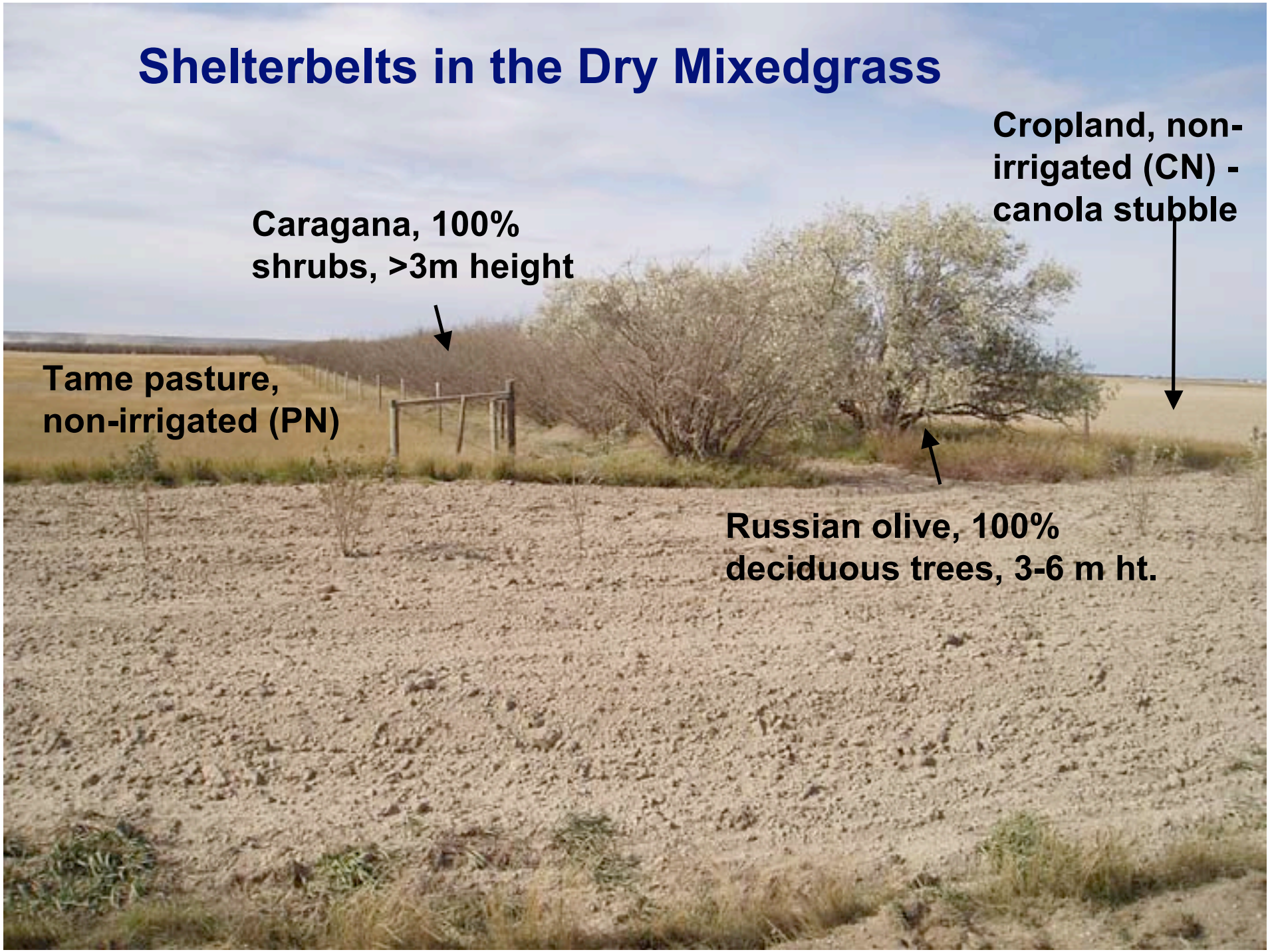
Site Type: Developed (Dev)
Modifier: Confined Feeding Operations (CFO)



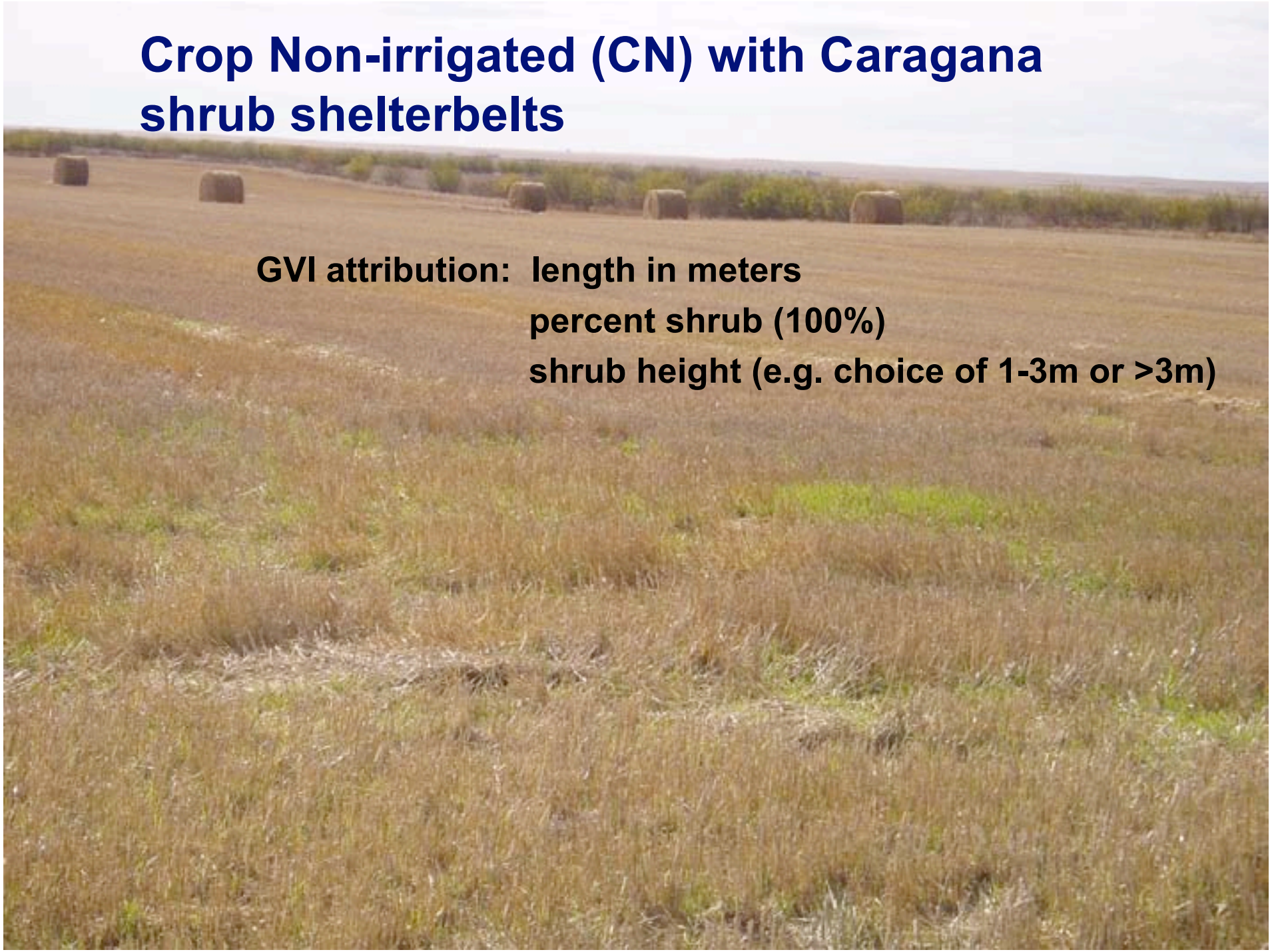
Living quarters and infrastructure not related to livestock production is delineated or described as Rural (Ru).

Crop Non-irrigated (CN) with Shrub Shelterbelts

Shelterbelts in the Dry Mixedgrass



Crop Non-irrigated (CN) with Caragana shrub shelterbelts



GVI attribution: length in meters
percent shrub (100%)
shrub height (e.g. choice of 1-3m or >3m)

Country Residential Holdings in the Dry Mixedgrass

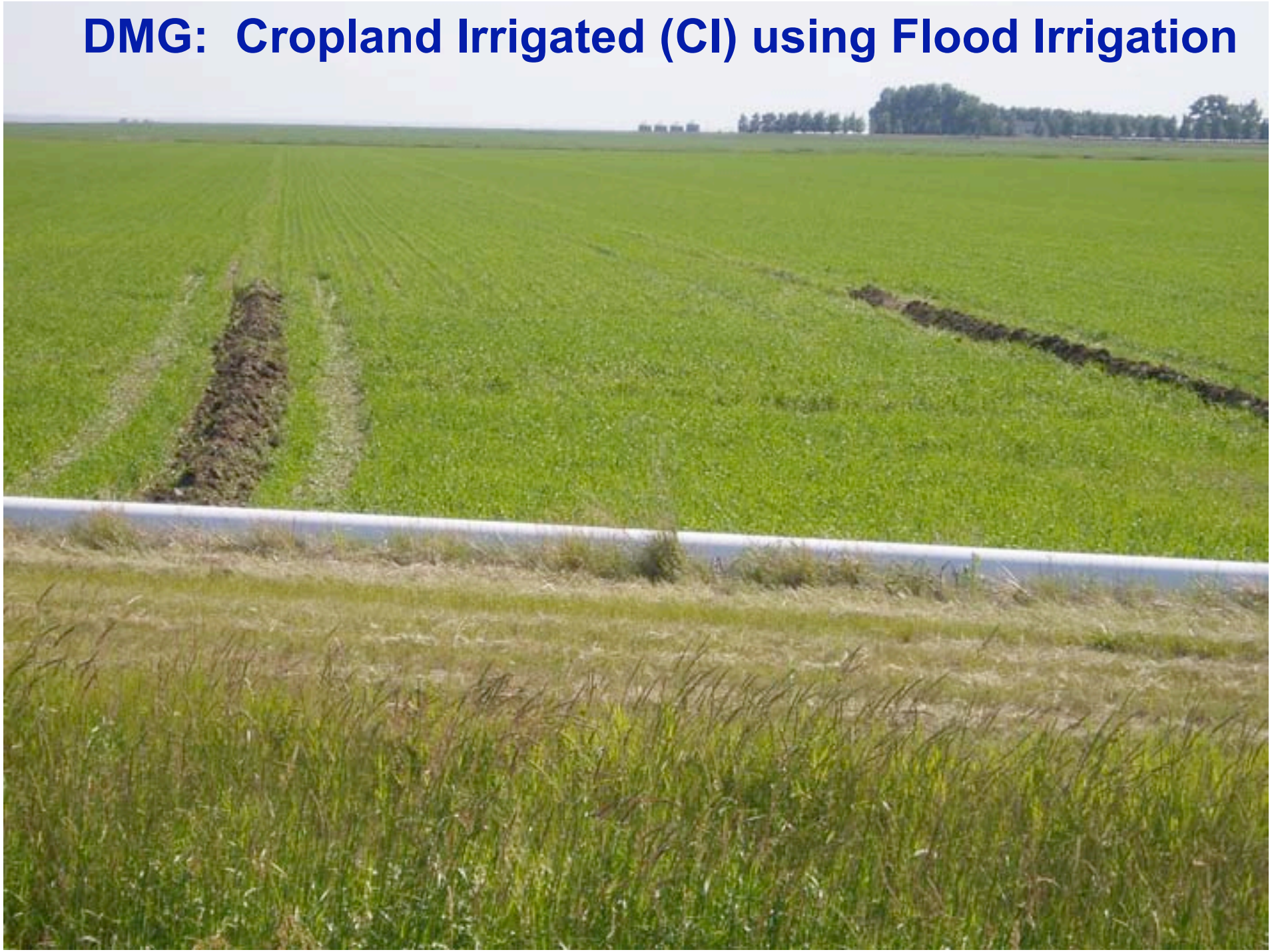
Primary Class: Anthropogenic
Land Class: Settled
Site Type: Rural (Ru) Country Residential
or Multi-Lot Subdivision


DMG: Settled, with both
Urban and Rural at Taber


DMG: Medicine Hat and Trans-Canada Highway
Urban; Developed – Transportation; Cropland Irrigated
Lentic Open Water

DMG: Developed; Modifier- Industrial Processing (Dev-IP)
Methanex Plant at Medicine Hat

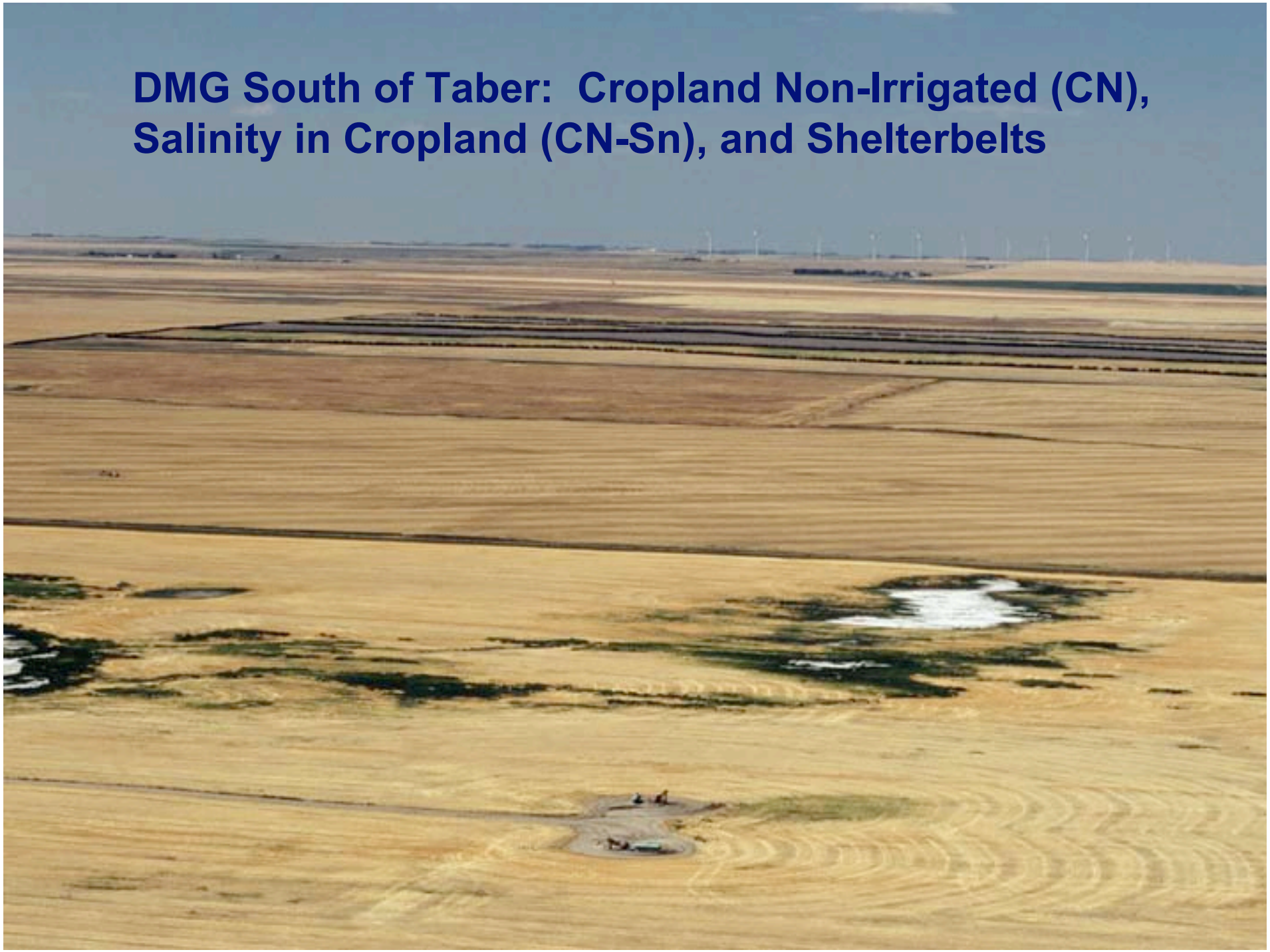
DMG: Cropland Irrigated (CI) using Flood Irrigation



Crop Non-Irrigated (CN)

Annual Cereal

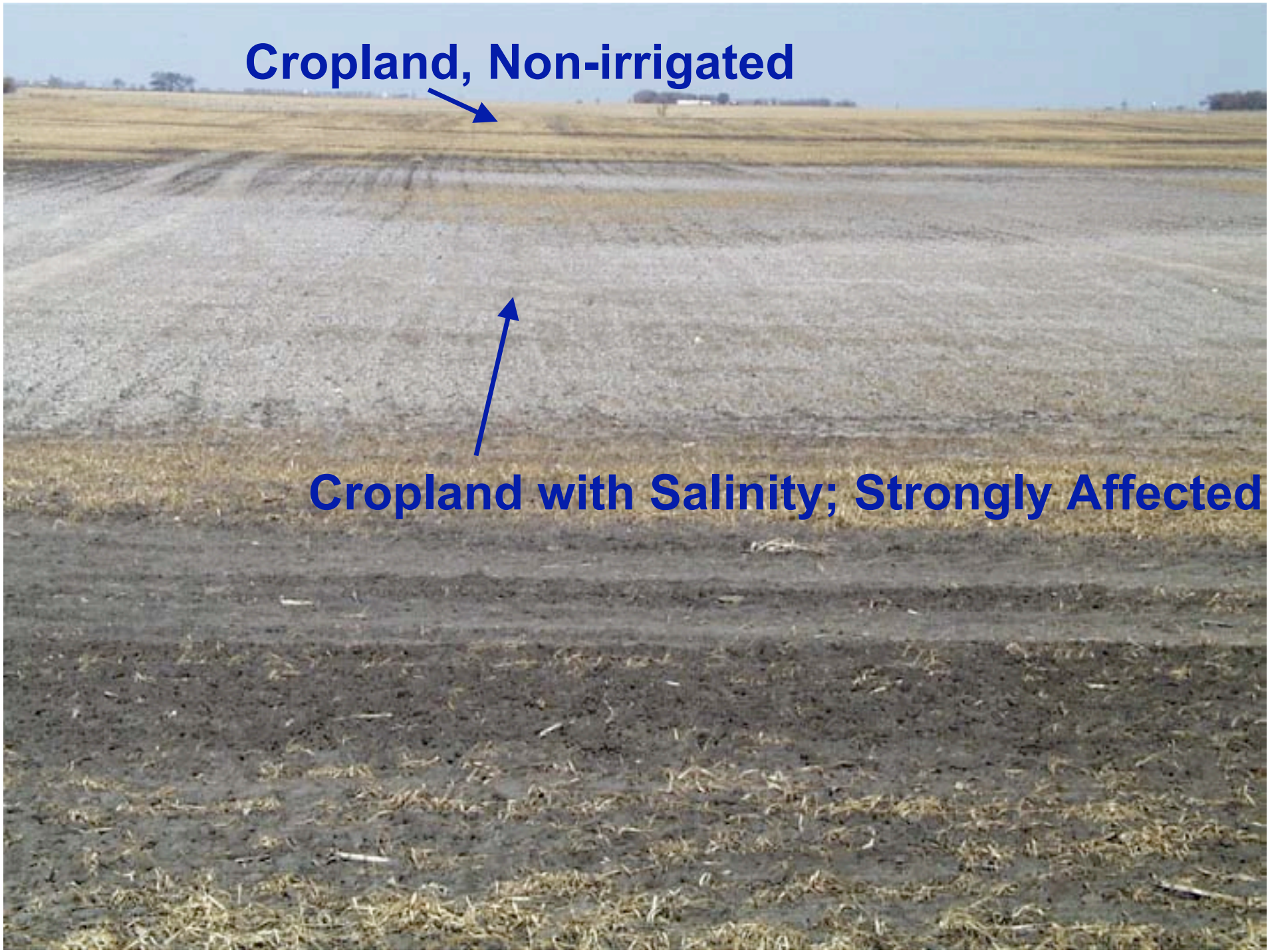
DMG South of Taber: Cropland Non-Irrigated (CN), Salinity in Cropland (CN-Sn), and Shelterbelts



MG: Soil Salinity in Cropland Non-Irrigated (CN-Sn)

Possible Steps to Delineate and Map this view:

1) **Delineate Cropland Non-irrigated (CN) areas that do not have salinity.**
2) **Delineate recognizable patterns of salinity >5 ha in cropland. Eg. Have separate polygons for dominant vs. significant salinity.**
3) **Describe the salinity distribution pattern for each CN-Sn polygon.**

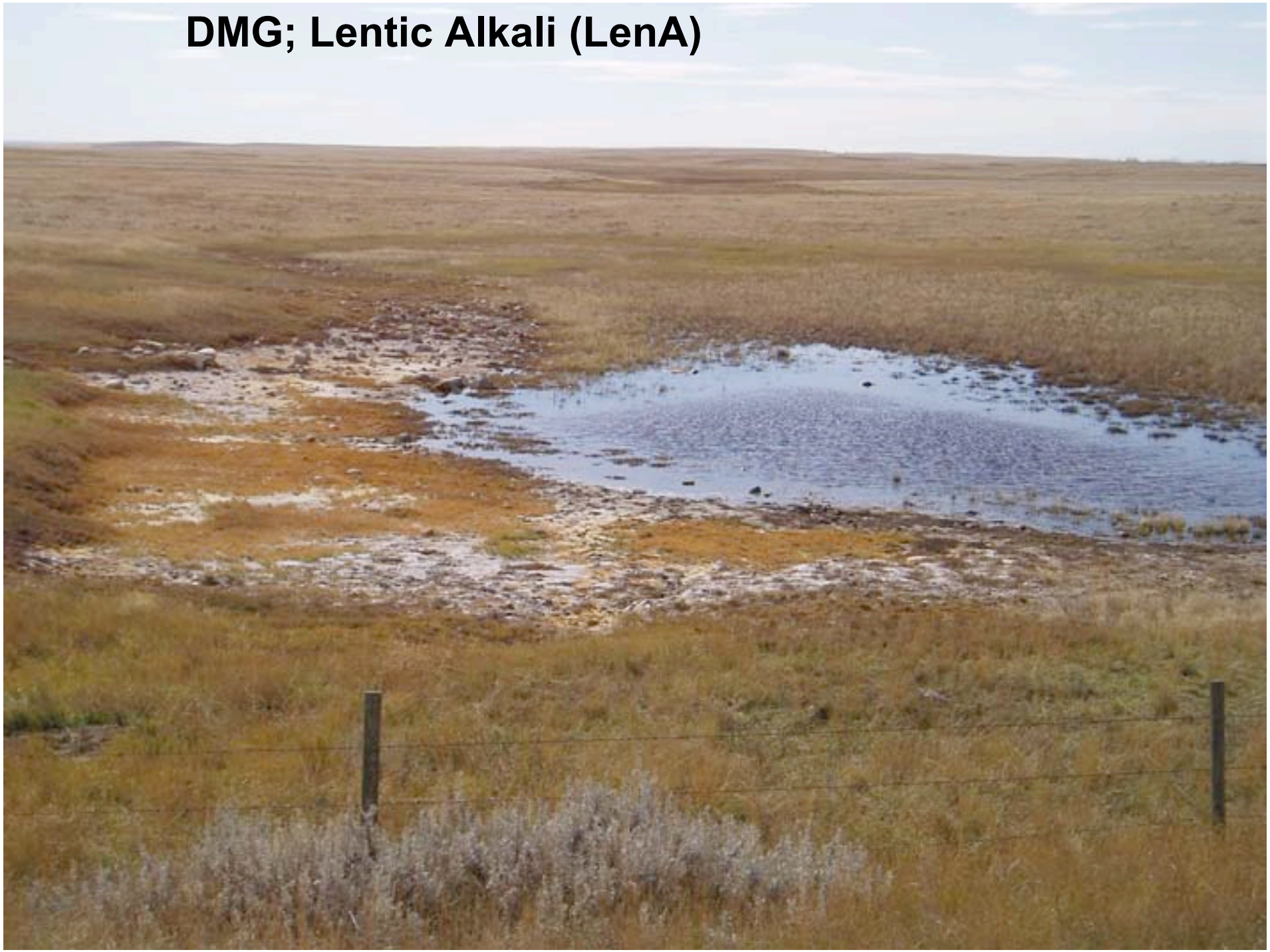

Cropland, Non-irrigated
Cropland with Salinity; Strongly Affected

MG: Salinity Patterns with Forage Fringe and Cropland

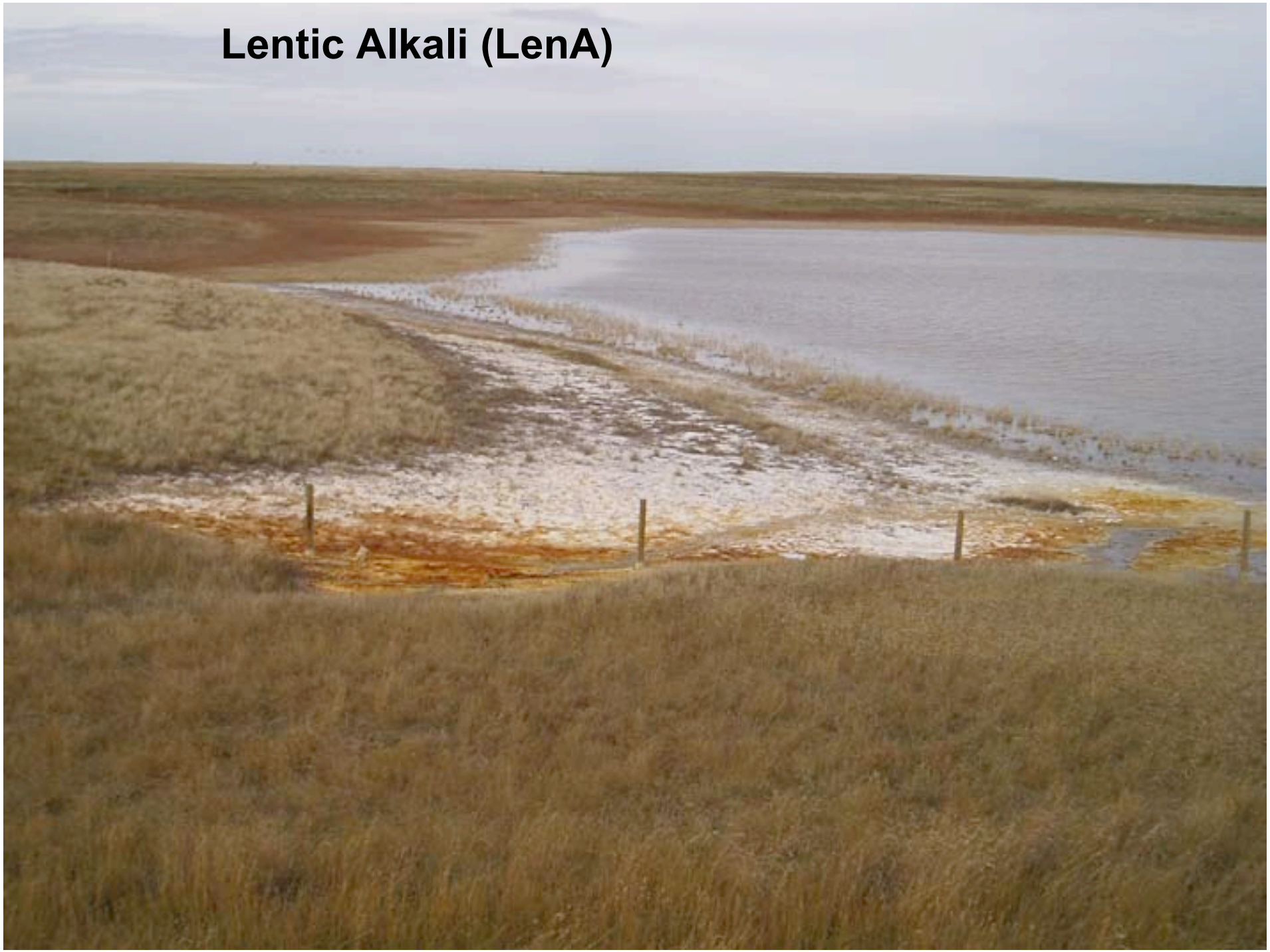
Possible Steps to Delineate and Map this view:

1) **Delineate Cropland Non-irrigated (CN) areas that do not have salinity.**
2) **Delineate the forage fringe as a separate polygon (described as PN-Sn) with possible Distribution Pattern 6 (a single patch plus several sporadic occurrences).**
3) **Describe the central area as Crop Non-Irrigated (CN-Sn) with dominant salinity, with possible Distribution Pattern 11.**

DMG; Lentic Alkali (LenA)



Lentic Alkali (LenA)



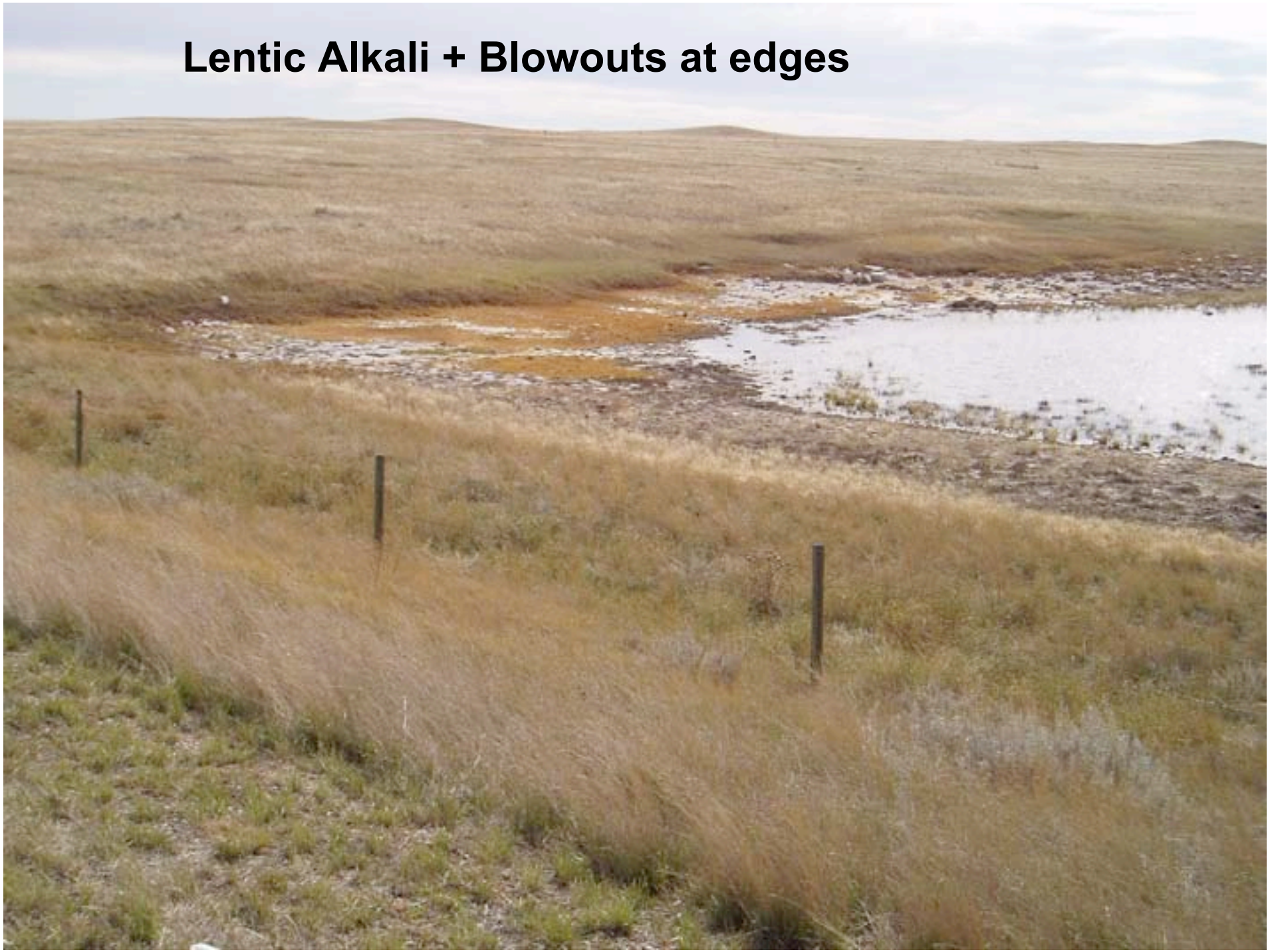
Lentic Alkali near Bare Creek, with 85% bare soil.

Strong correlation amongst mappers on site type and attributes.

Bare Creek

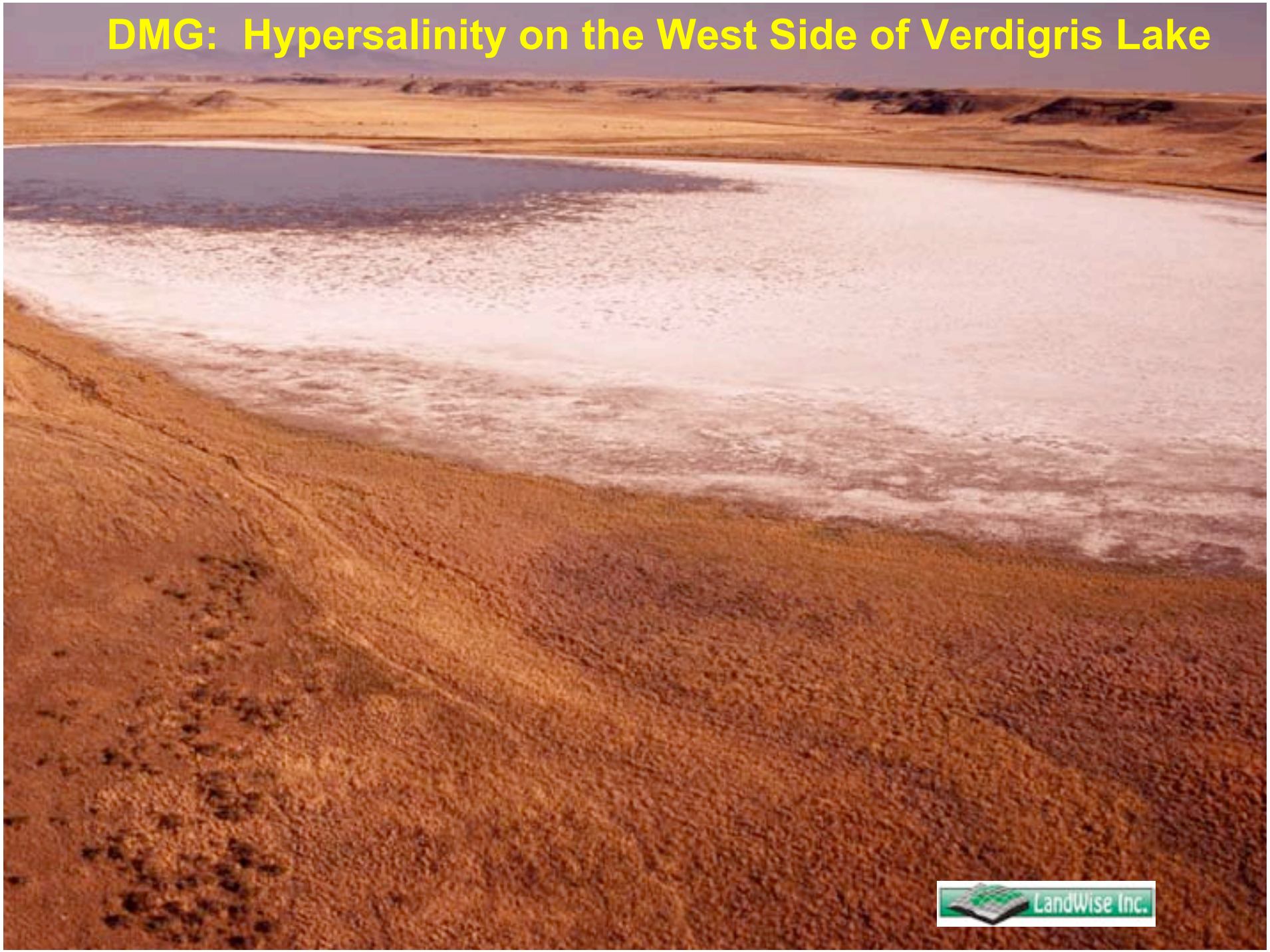
Line 6 # 178

Lentic Alkali + Blowouts at edges



Lentic Alkali Site Types in Background. Complex of Blowouts, Loamy and Lentic Semi to Permanent in Right Foreground. Badlands in background.

DMG: Hypersalinity on the West Side of Verdigris Lake



DMG: Hypersalinity features on the salt and mud flats of Verdigris Lake.

Lentic Alkali

DMG: Verdigris L.; Lentic Alkali & Saline Lowland Discharge

DMG: Complex Patterns in Verdigris Lake

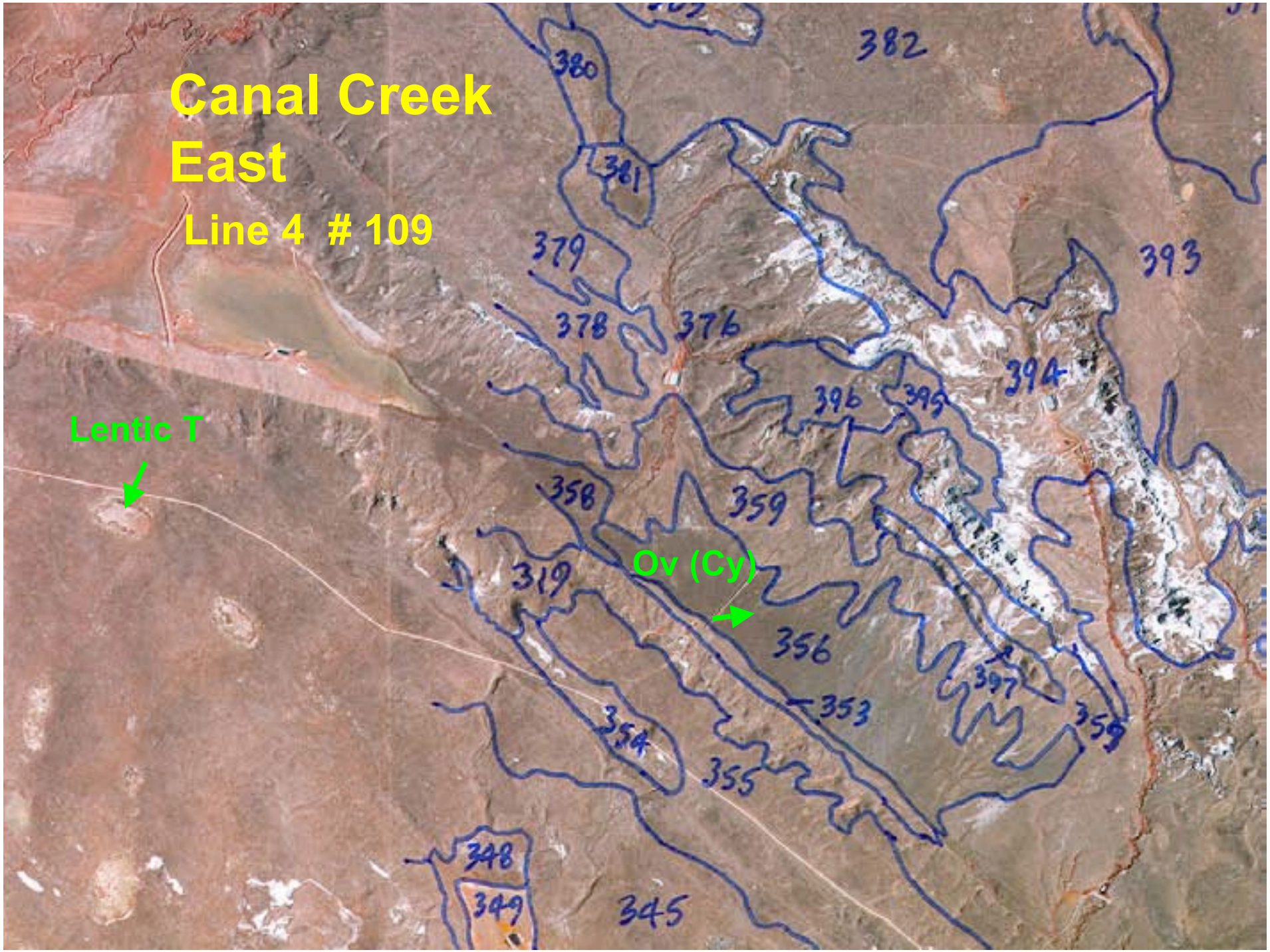
Lentic Temporary (Len T) in a Native Natural Site Type

Provide estimates for shrub %, shrub height class, shrub cover, and distribution pattern for the upland Native Natural site type.

Lentic Temporary near Canal Ck. area– *Hordeum jub.* and *Agrostis sp*. Moderate degree of correlation.

Issue: Possible overlap to Lentic Seasonal

Decision: Supply tables & figures for mappers on Lentic separation.


Canal Creek
East
Line 4 # 109
Lentic T
Ov (Cy)
382
380
381
379
378
376
393
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358
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319
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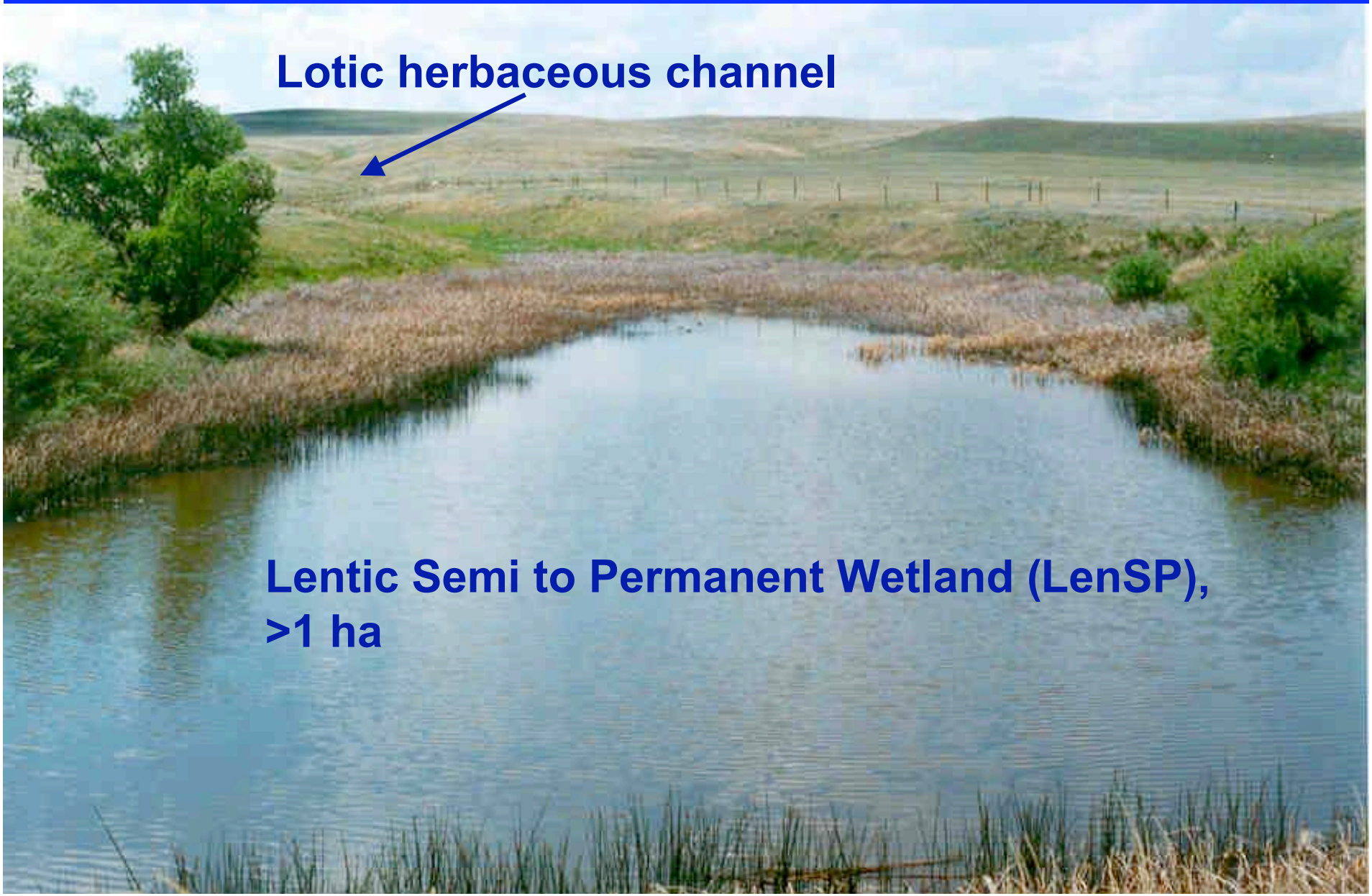
345

DMG: Lentic Seasonal (Len S) North of Lost River Ranch

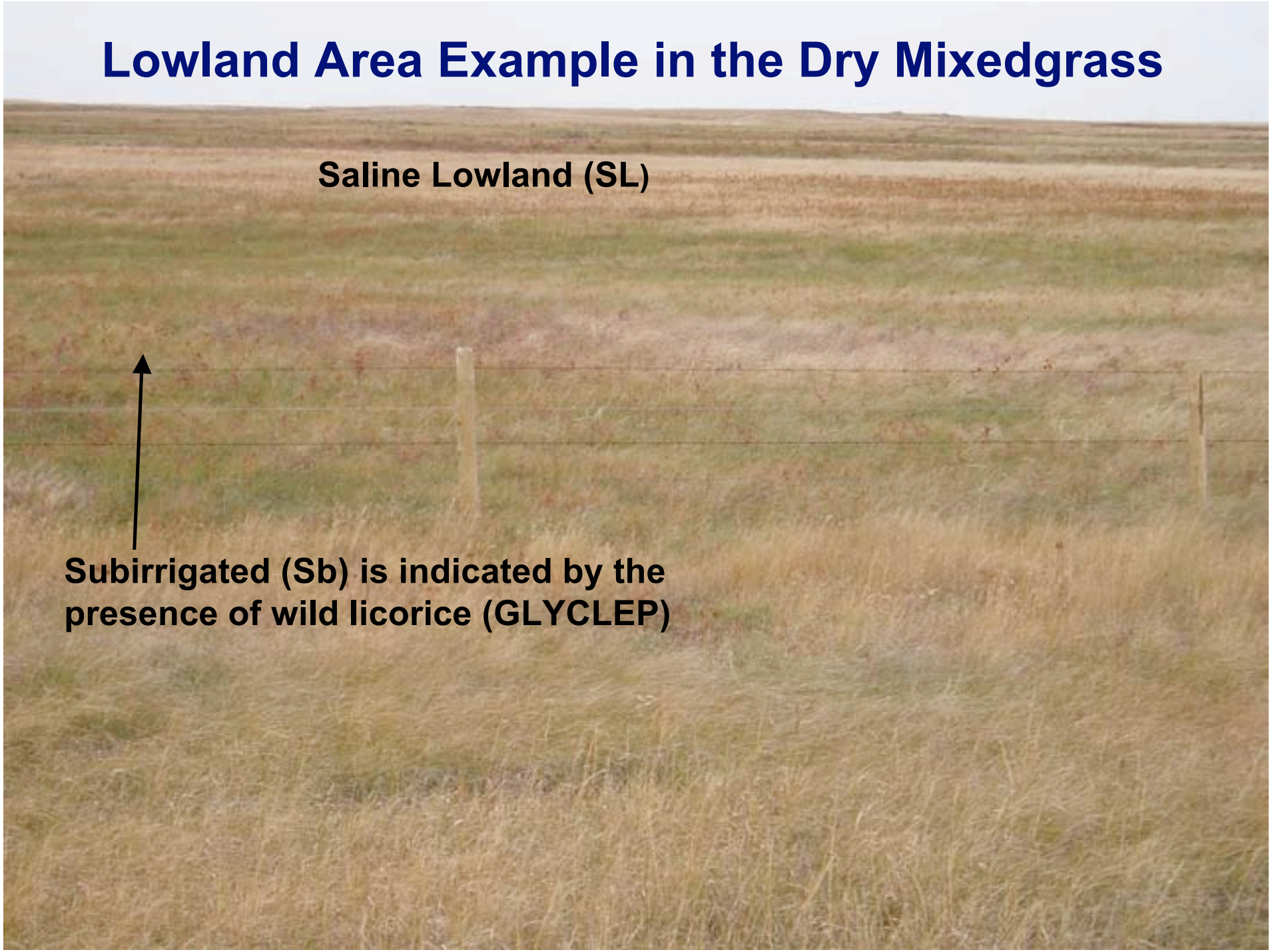
Dry Mixedgrass: Wetland Site Types



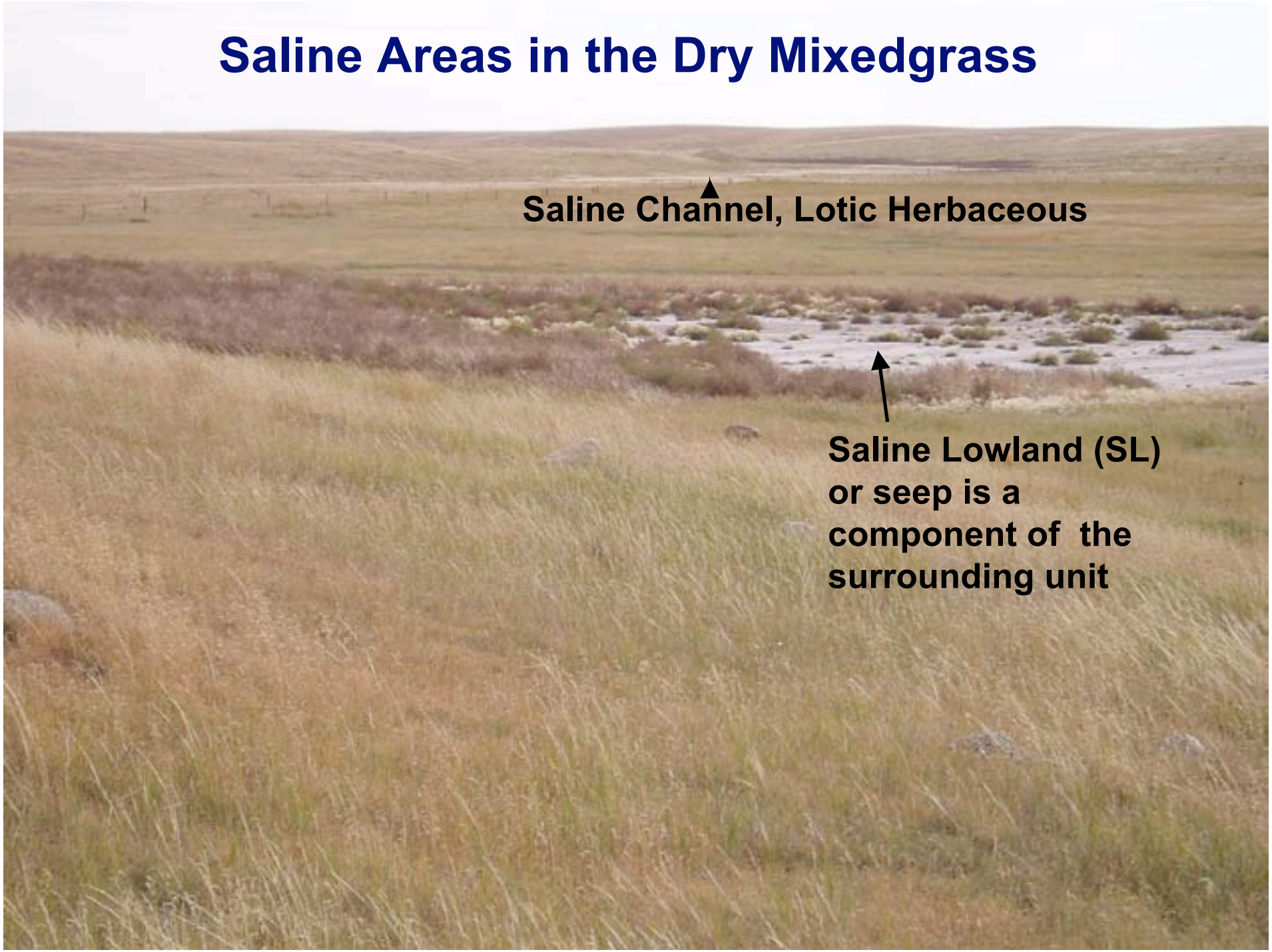
DMG: Lentic Semi to Permanent Habitats S. of Murray Lake

DMG: Shrub edge South of Murray Lake

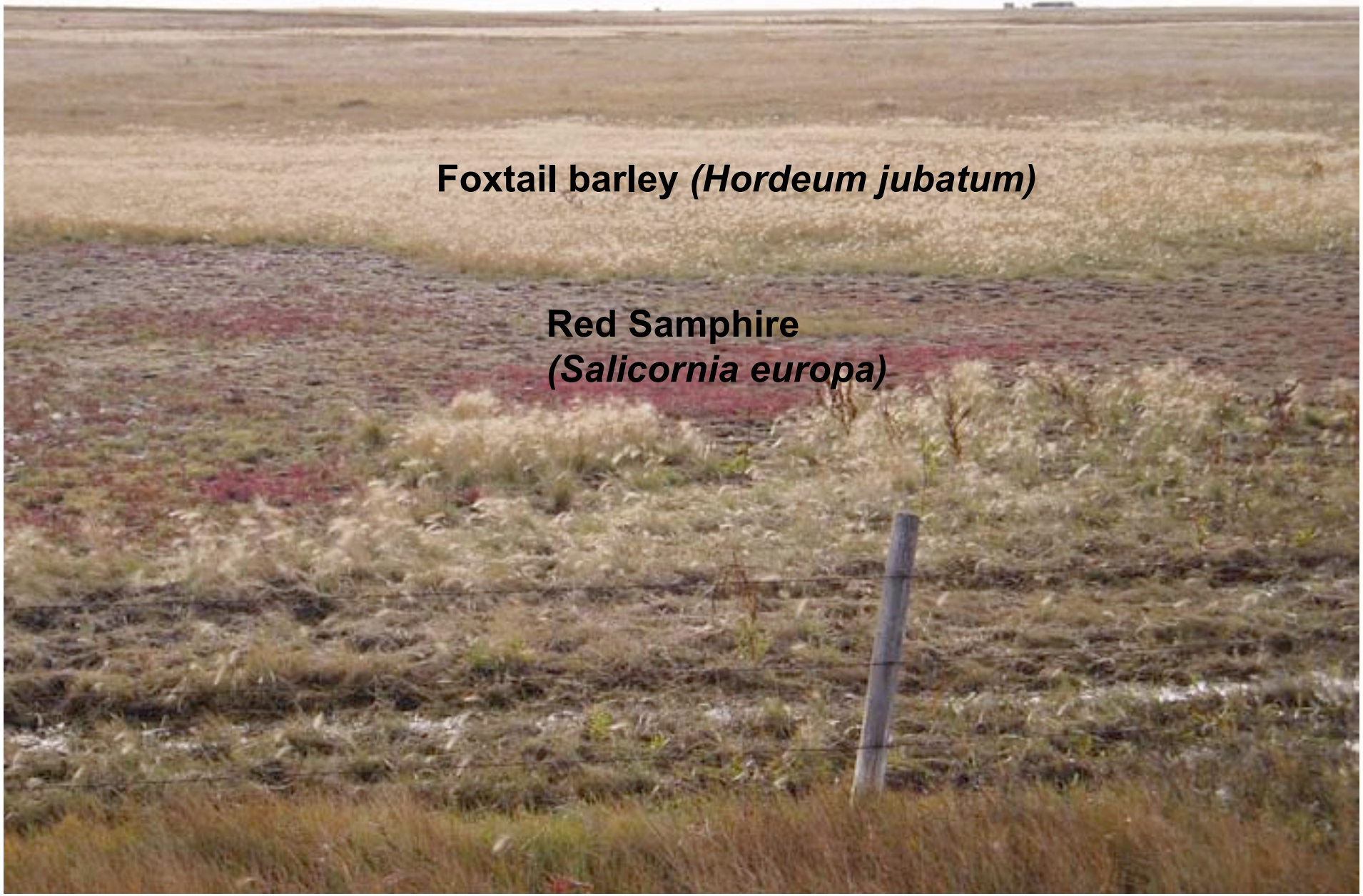
Lowland Area Example in the Dry Mixedgrass



Saline Areas in the Dry Mixedgrass

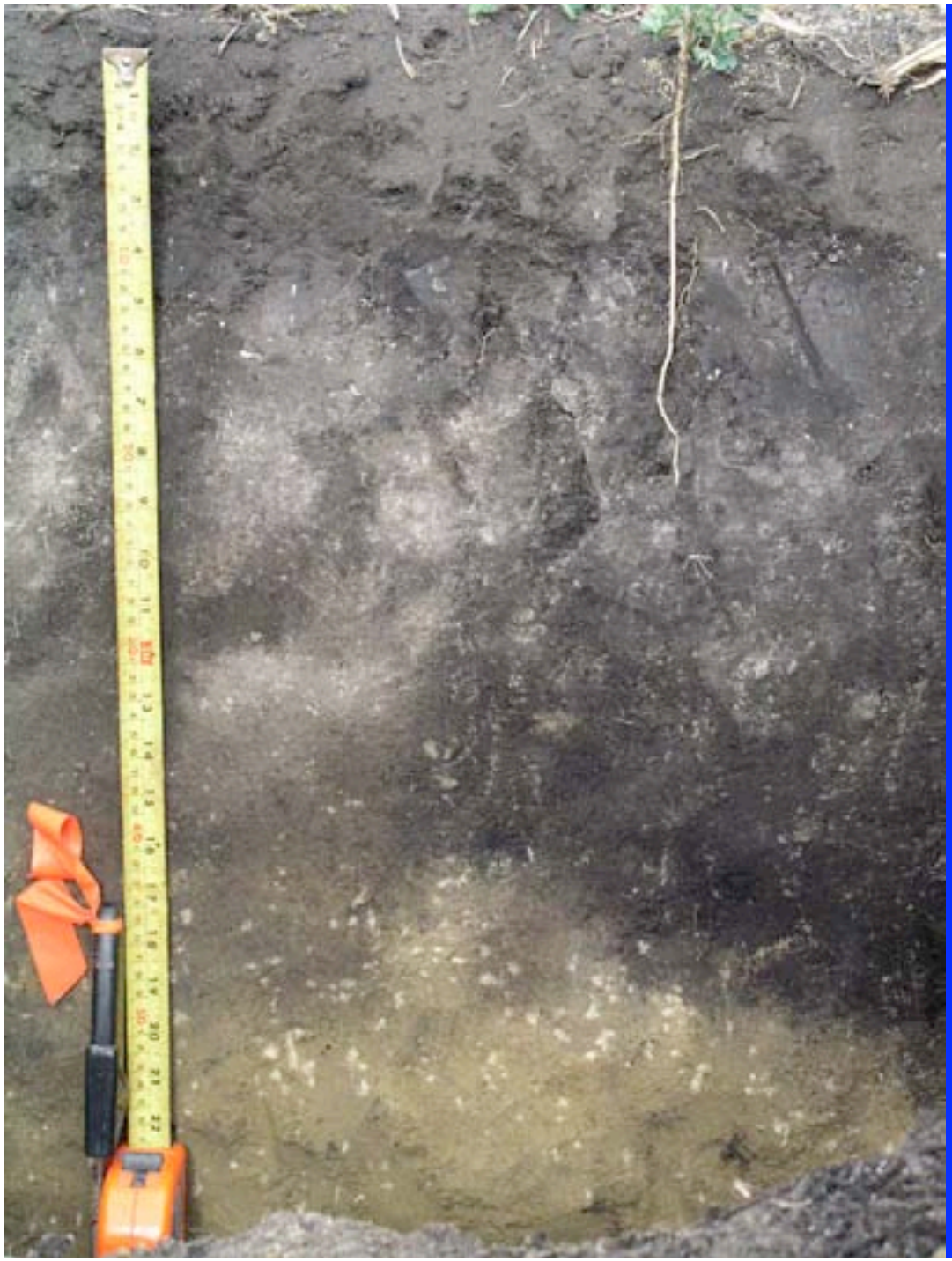


Saline Lowland (SL) Example in the Dry Mixedgrass



Saline Lowland (SL)

Foxtail Barley or other salophytes



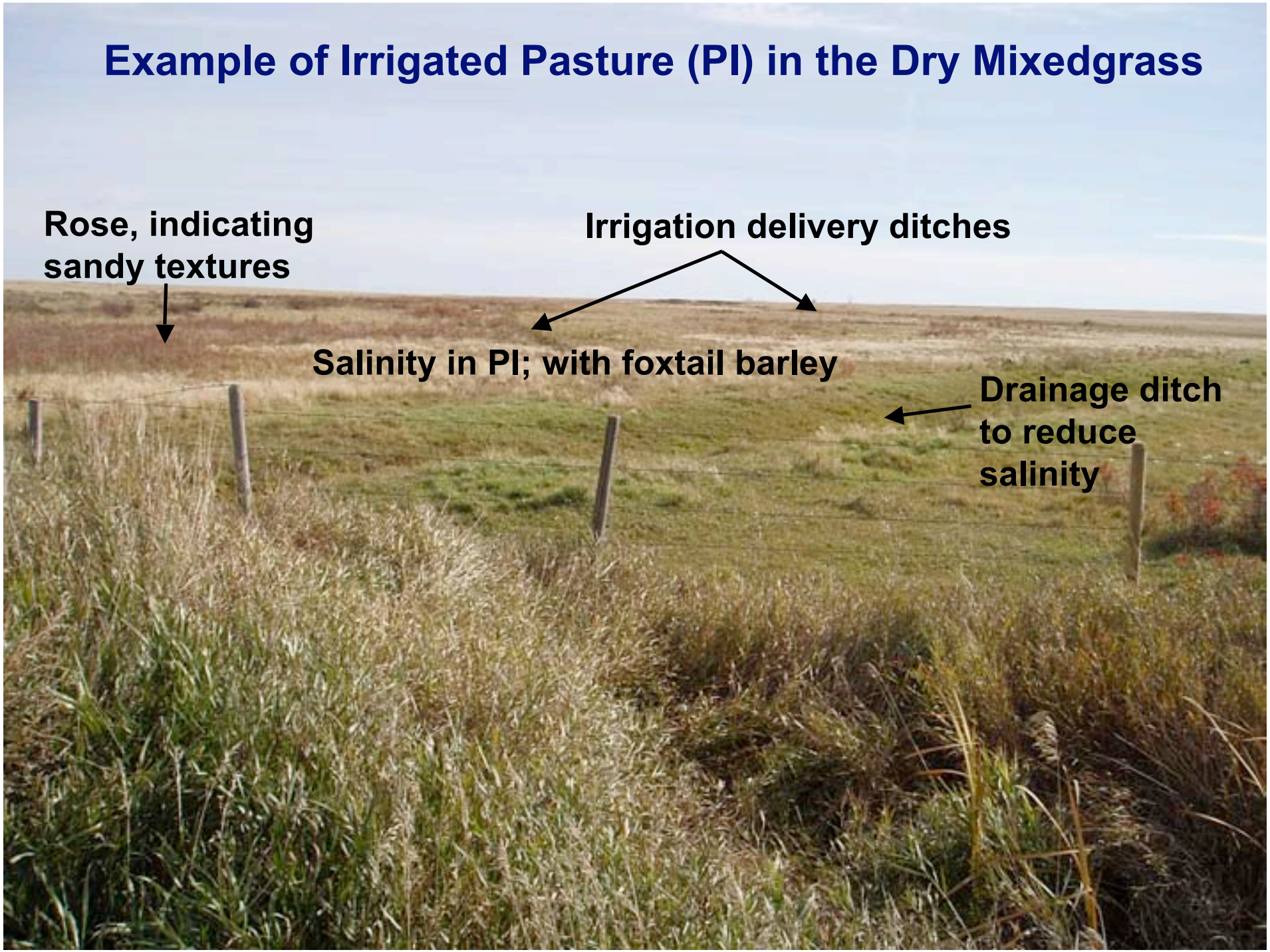
Saline Orthic Humic Regosol

Organic staining;
salt and carbonate enriched

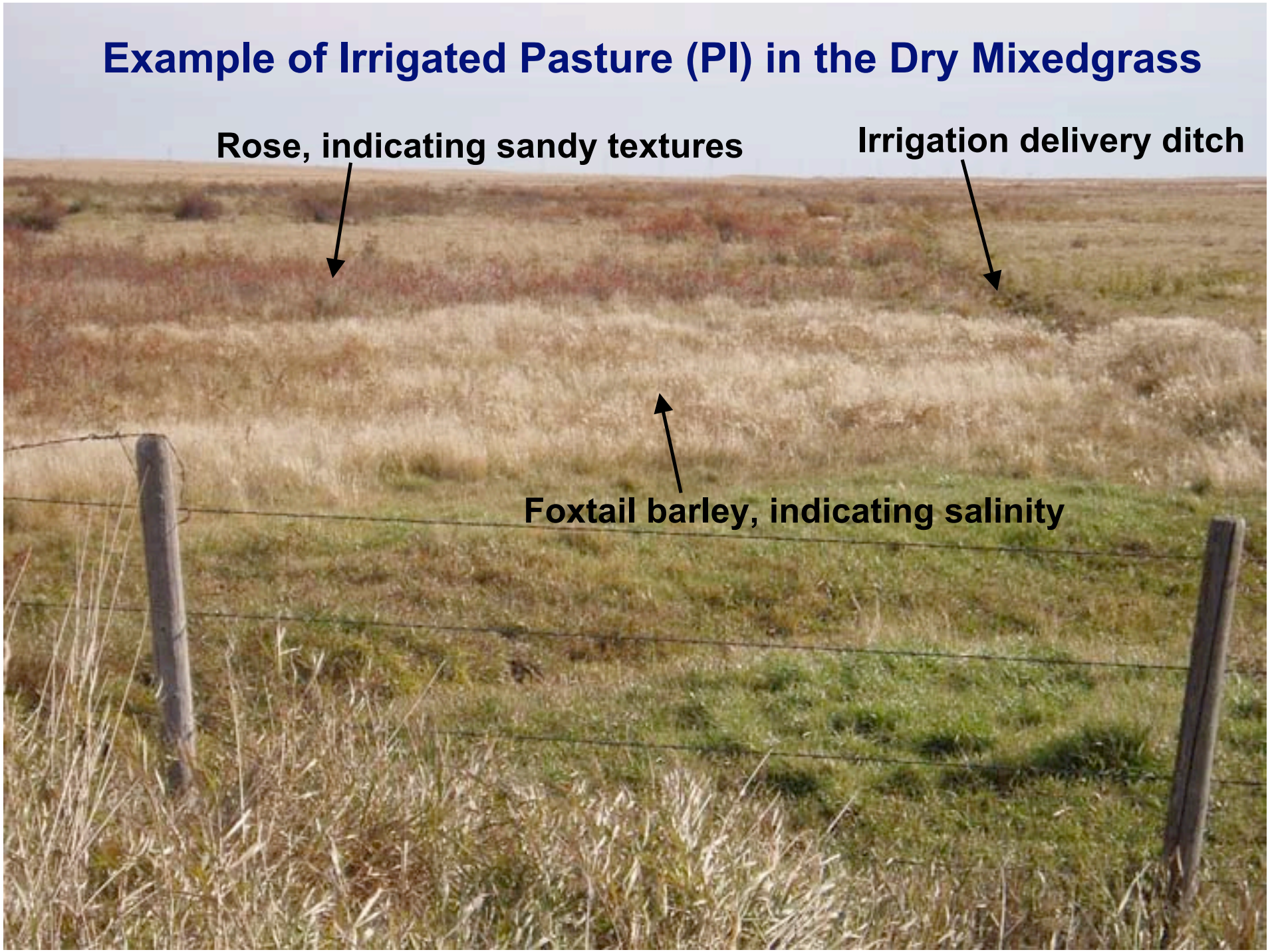
Saline Lowland (SL) if native vegetation

LandWise Inc.

Example of Irrigated Pasture (PI) in the Dry Mixedgrass



Example of Irrigated Pasture (PI) in the Dry Mixedgrass



DMG: Saline Lowland Dominated by Salophytes

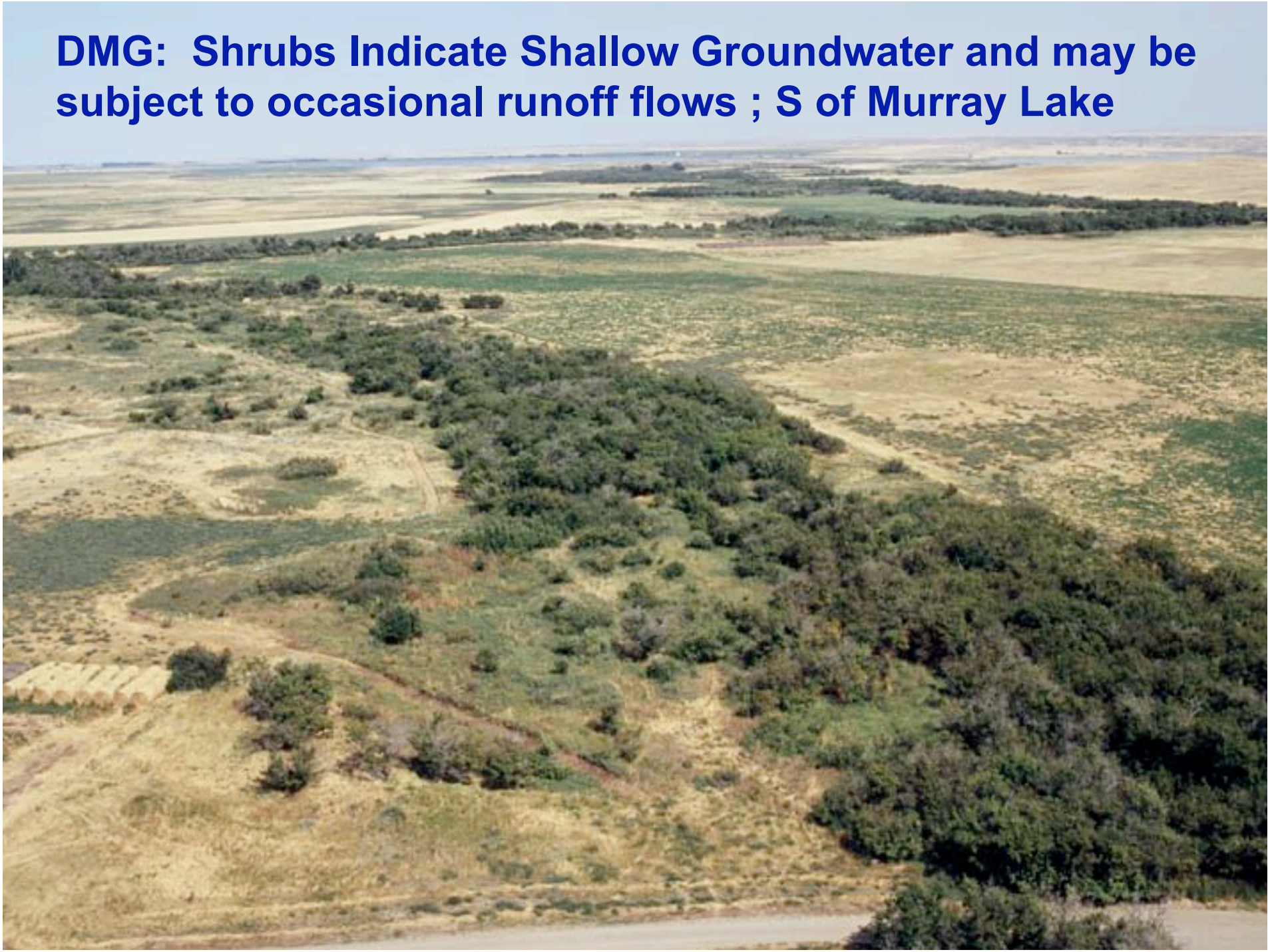
DMG: Saline Lowland with Areas of 100% Bare Soil


DMG: Lentic Alkali, Saline Lowland and Overflow in Milk River Valley NW of Aden

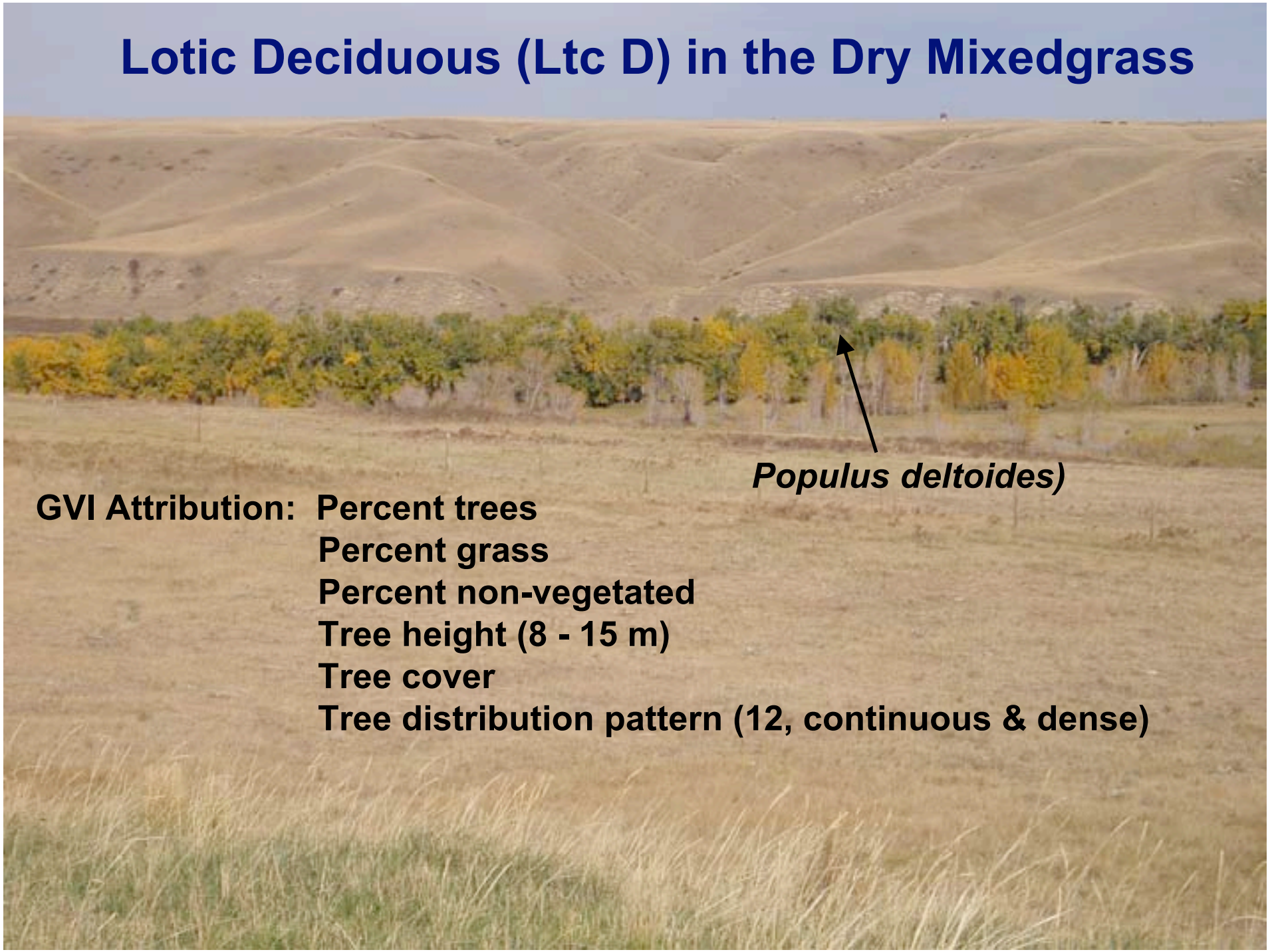
DMG: Saline Flows from West into Verdigris Valley

DMG: Lotic Herbaceous, Overflow & Blowouts in Verdigris

DMG: Shrubs Indicate Shallow Groundwater and may be subject to occasional runoff flows ; S of Murray Lake

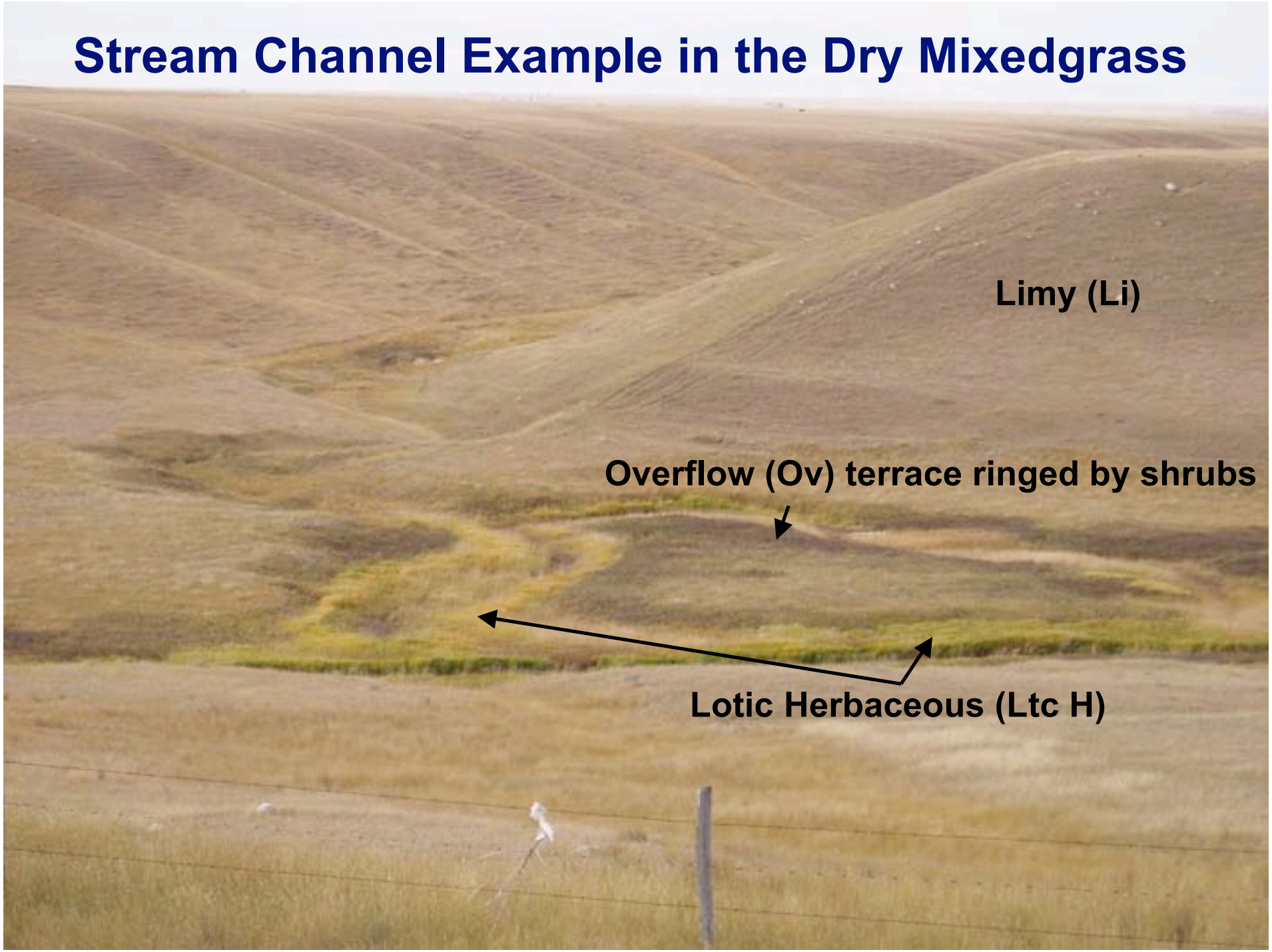


Lotic Deciduous (Ltc D) in the Dry Mixedgrass

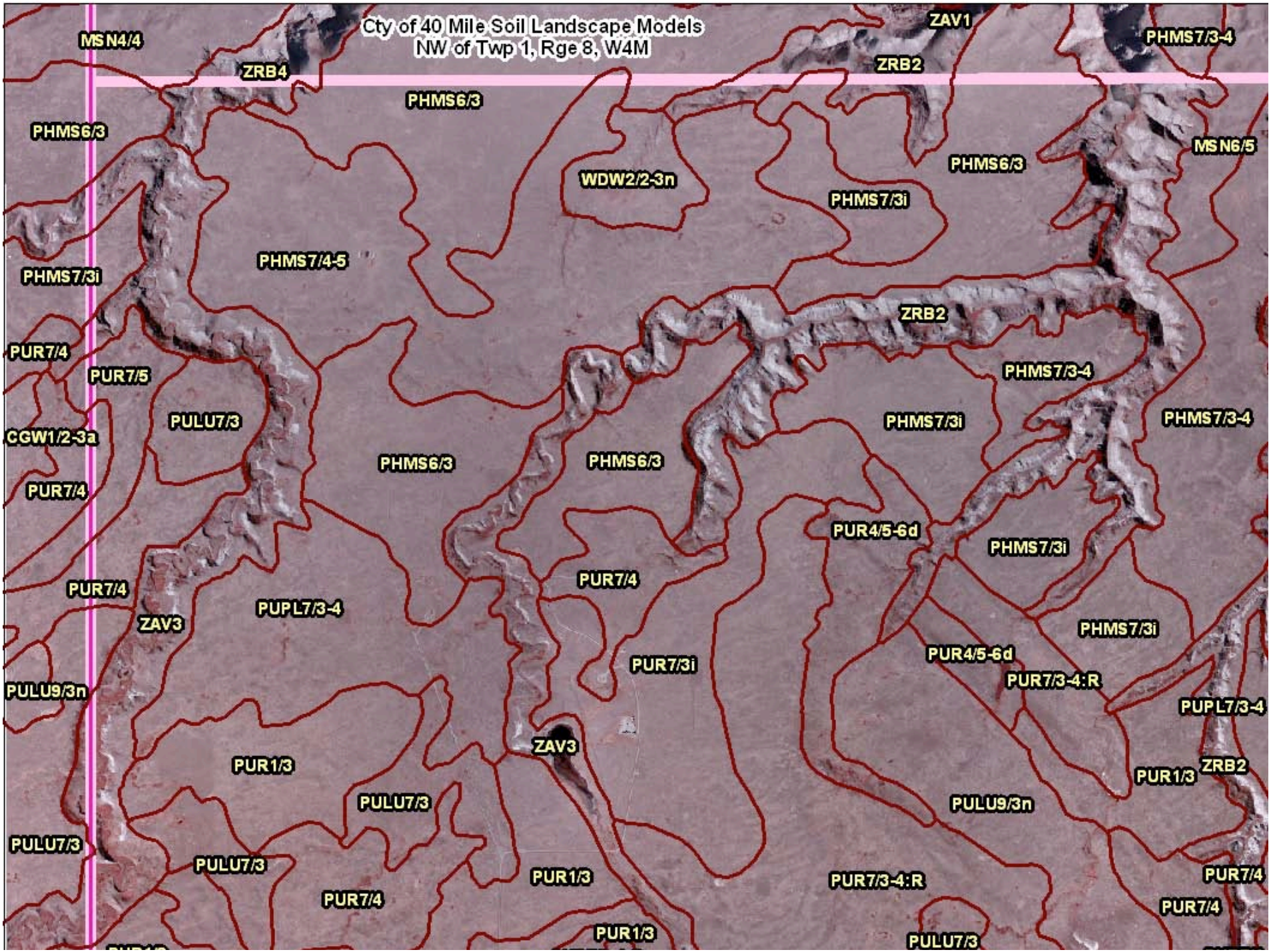


GVI Attribution: **Percent trees**
Percent grass
Percent non-vegetated
Tree height (8 - 15 m)
Tree cover
Tree distribution pattern (12, continuous & dense)

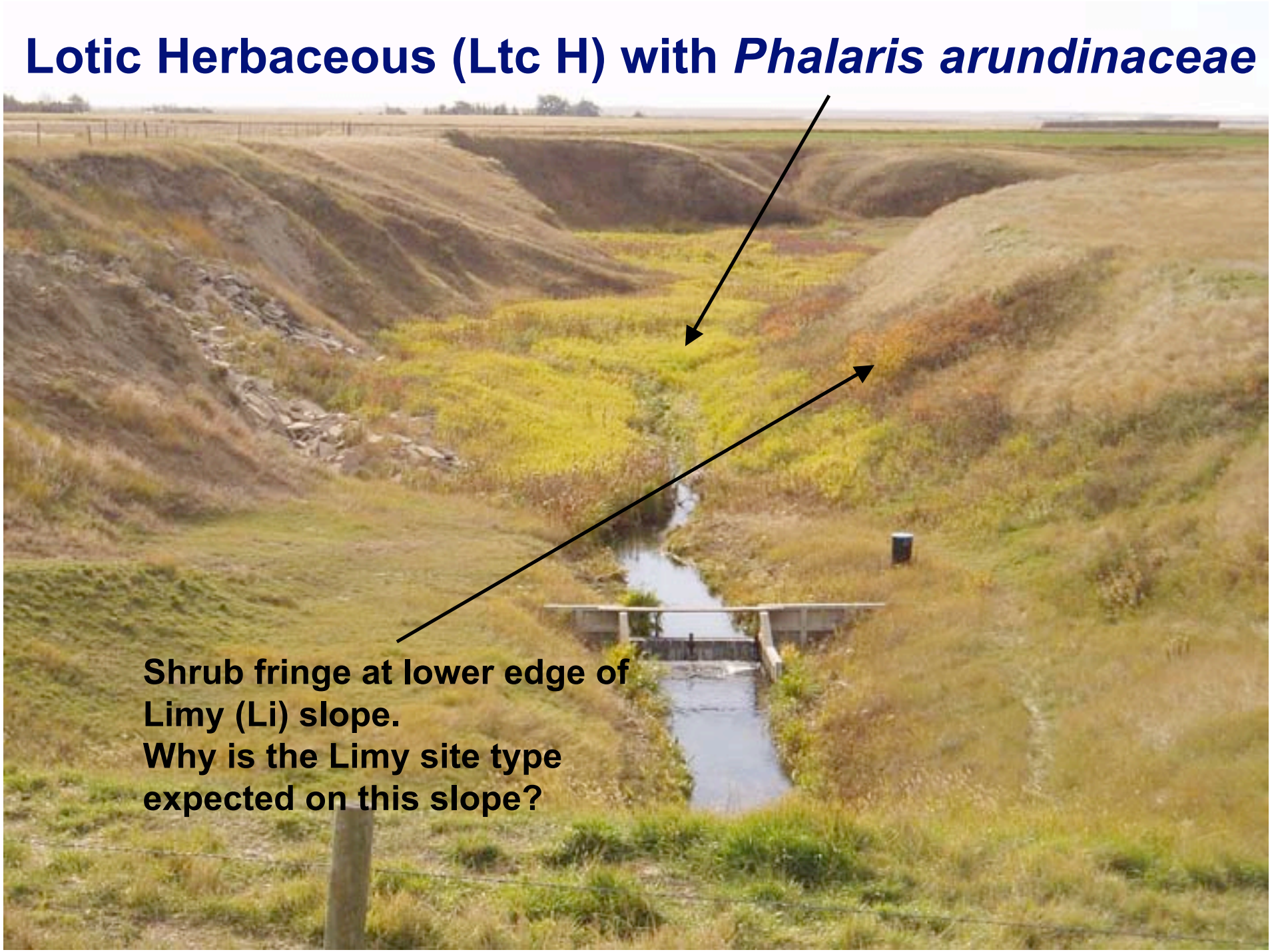
Stream Channel Example in the Dry Mixedgrass



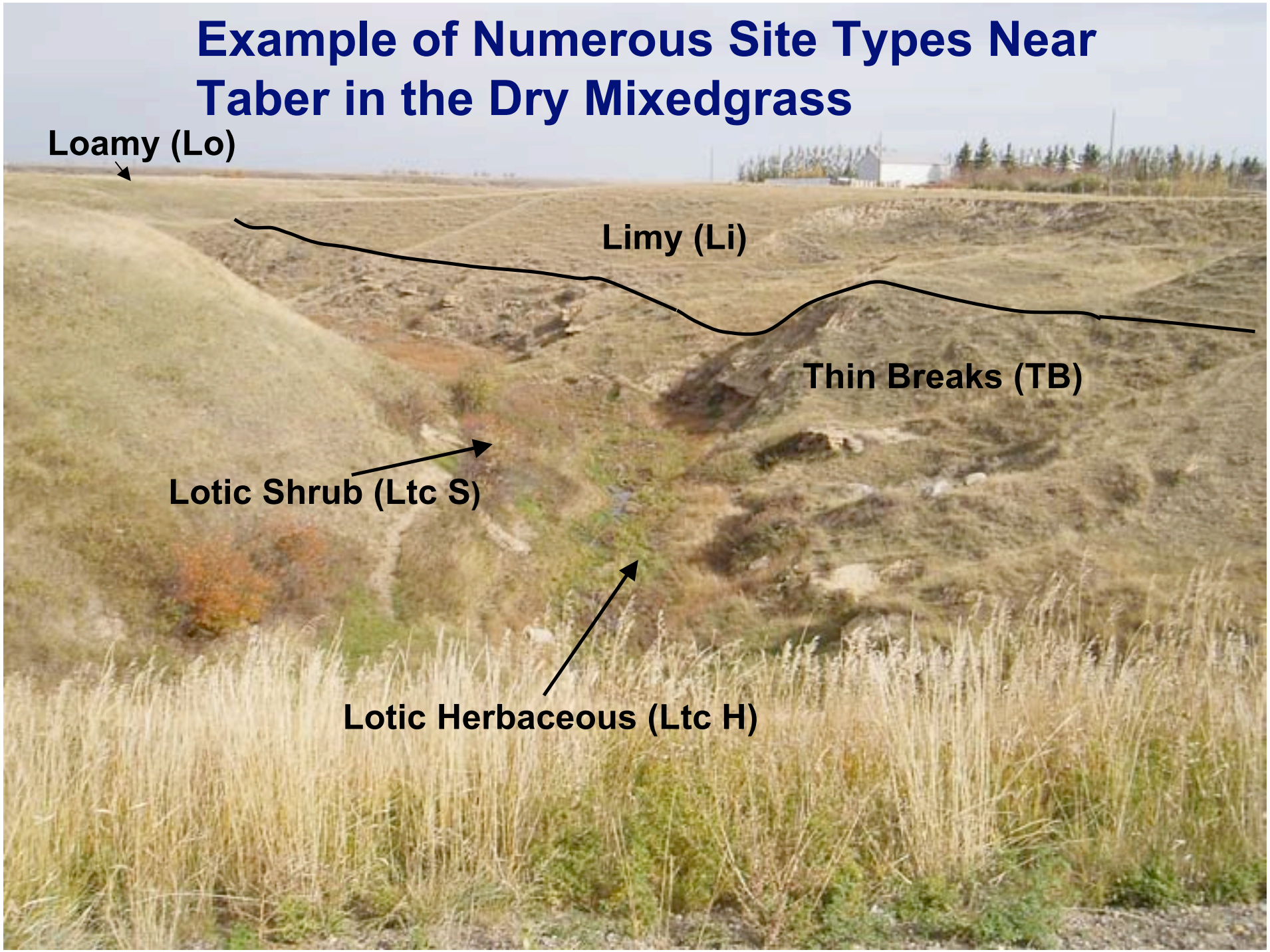
Lotic Herbaceous (Ltc H) in the Dry Mixedgrass


Cty of 40 Mile Soil Landscape Models
NW of Twp 1, Rge 8, W4M
MSN4/4
ZRB4
PHMS6/3
PHMS6/3
ZAV1
ZRB2
PHMS7/3-4
MSN6/5
PHMS6/3
WDW2/2-3n
PHMS7/3i
PHMS7/4-5
PHMS7/3i
ZRB2
PUR7/4
PUR7/5
PHMS7/3-4
PULU7/3
PHMS7/3i
PHMS7/3-4
CGW1/2-3a
PHMS6/3
PHMS6/3
PUR7/4
PUR4/5-6d
PHMS7/3i
PUR7/4
PUPL7/3-4
ZAV3
PHMS7/3i
PUR4/5-6d
PUR7/3i
PUR7/3-4:R
PULU9/3n
PUPL7/3-4
ZAV3
PUR1/3
ZRB2
PUR1/3
PULU7/3
PULU9/3n
PULU7/3
PULU7/3
PUR1/3
PUR7/3-4:R
PUR7/4
PUR7/4
PUR7/4
PUR1/3
PULU7/3

Lotic Herbaceous (Ltc H) with *Phalaris arundinaceae*

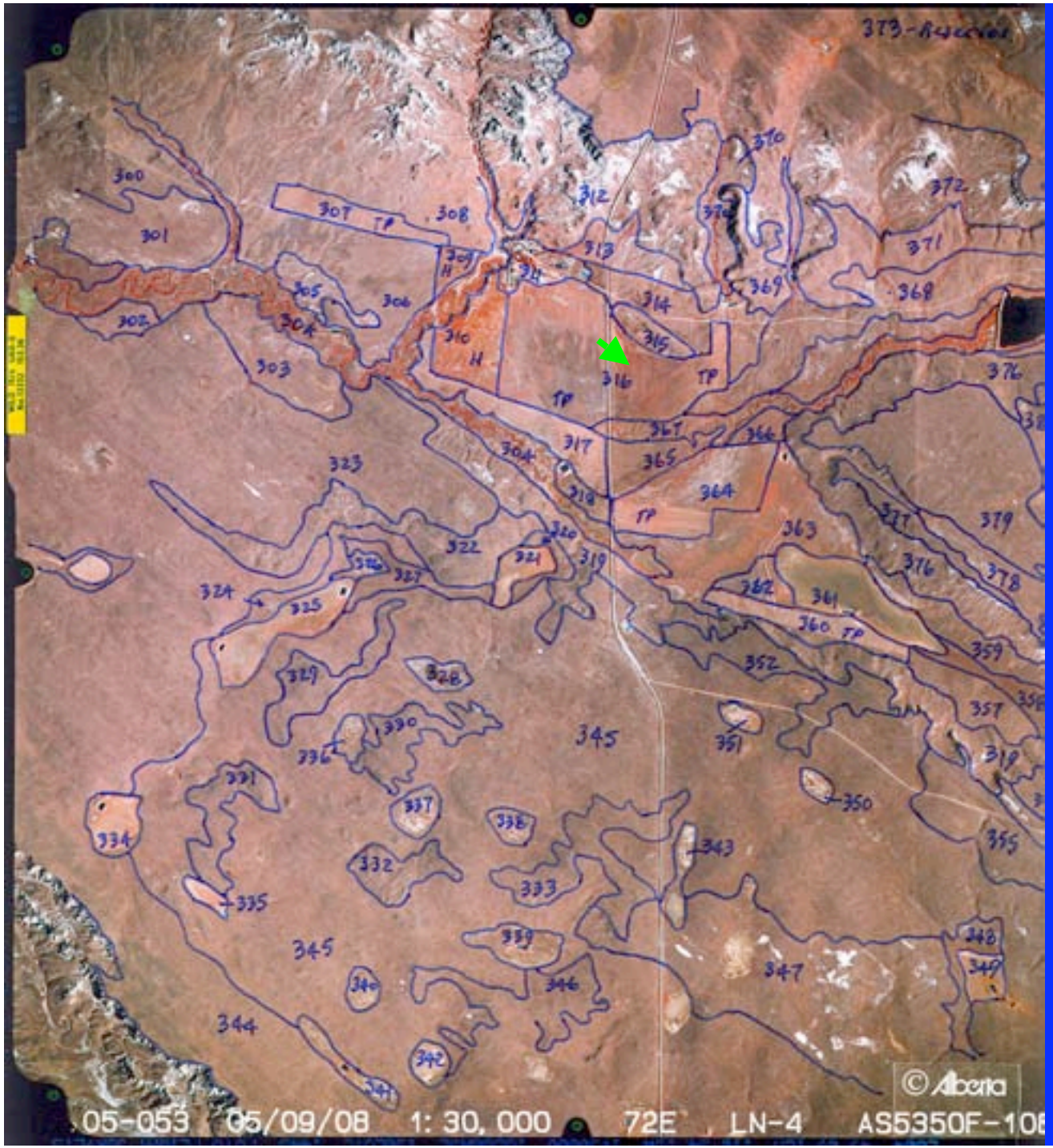


Example of Numerous Site Types Near Taber in the Dry Mixedgrass



Canal Ck area. Ov with each of Lotic-H and Lotic-S

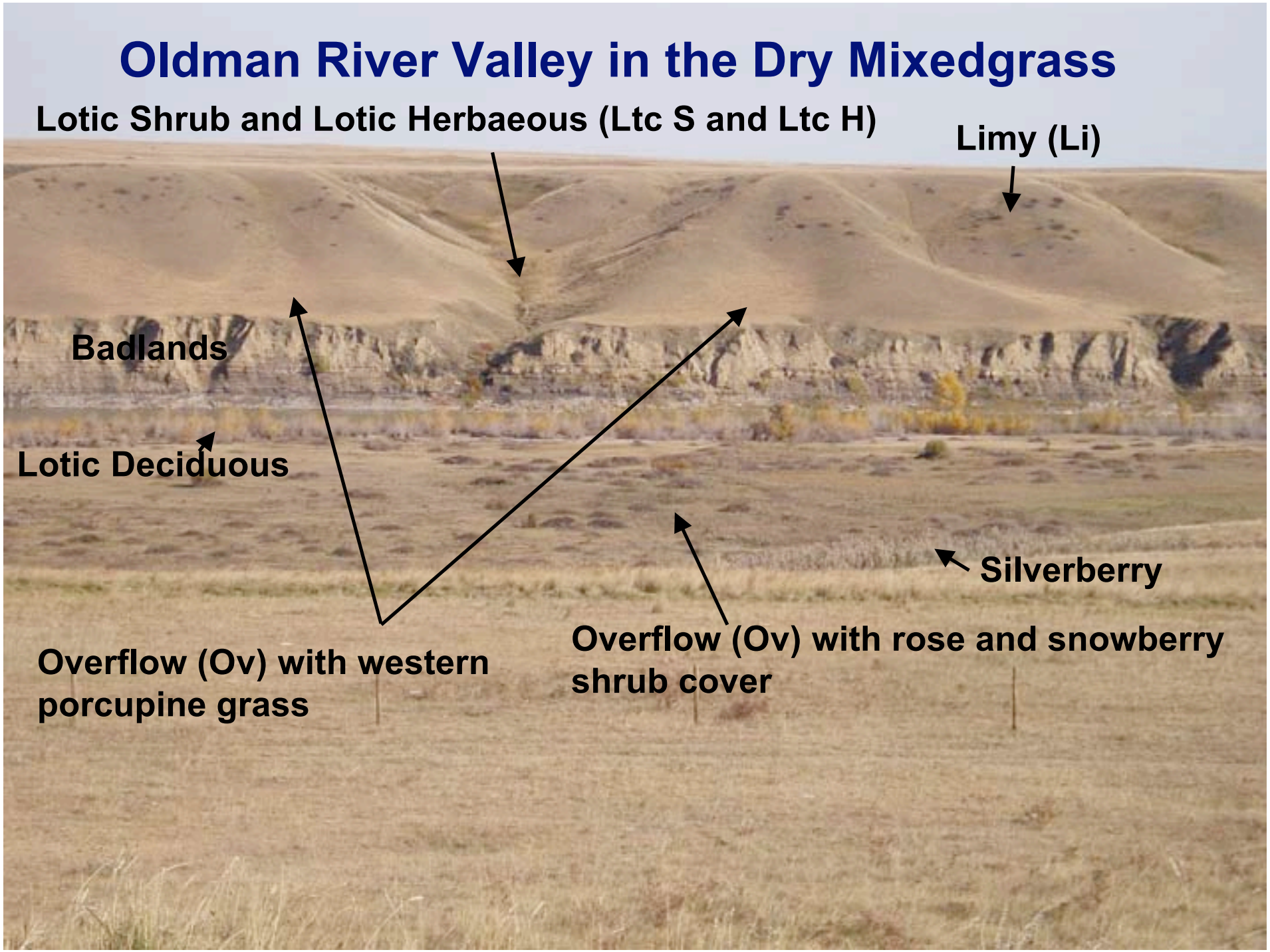
Issue: Consistency between mappers to be stressed.



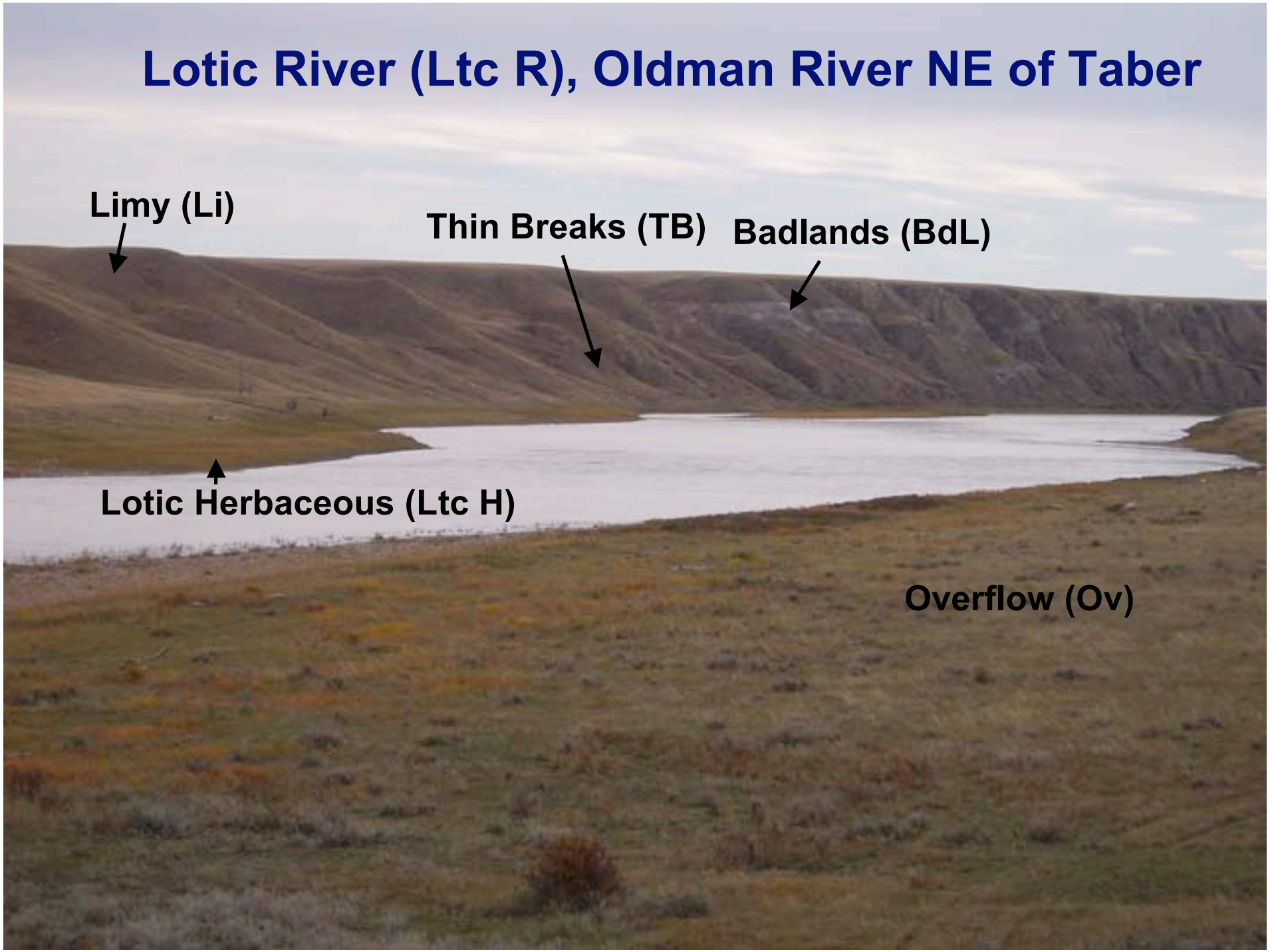
Canal Creek Central (Lost River Ranch)

Line 4 # 108

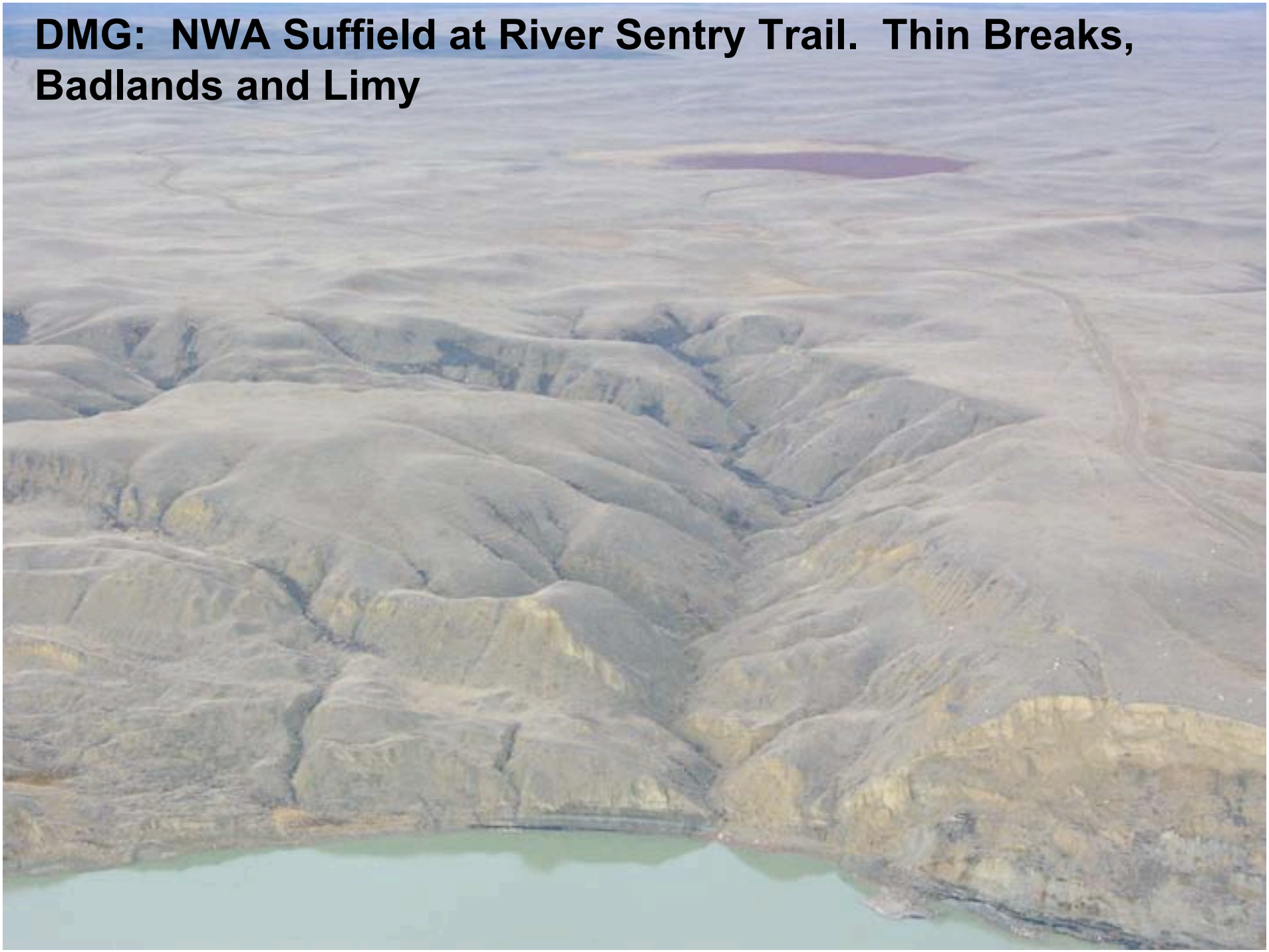
Oldman River Valley in the Dry Mixedgrass



Lotic River (Ltc R), Oldman River NE of Taber

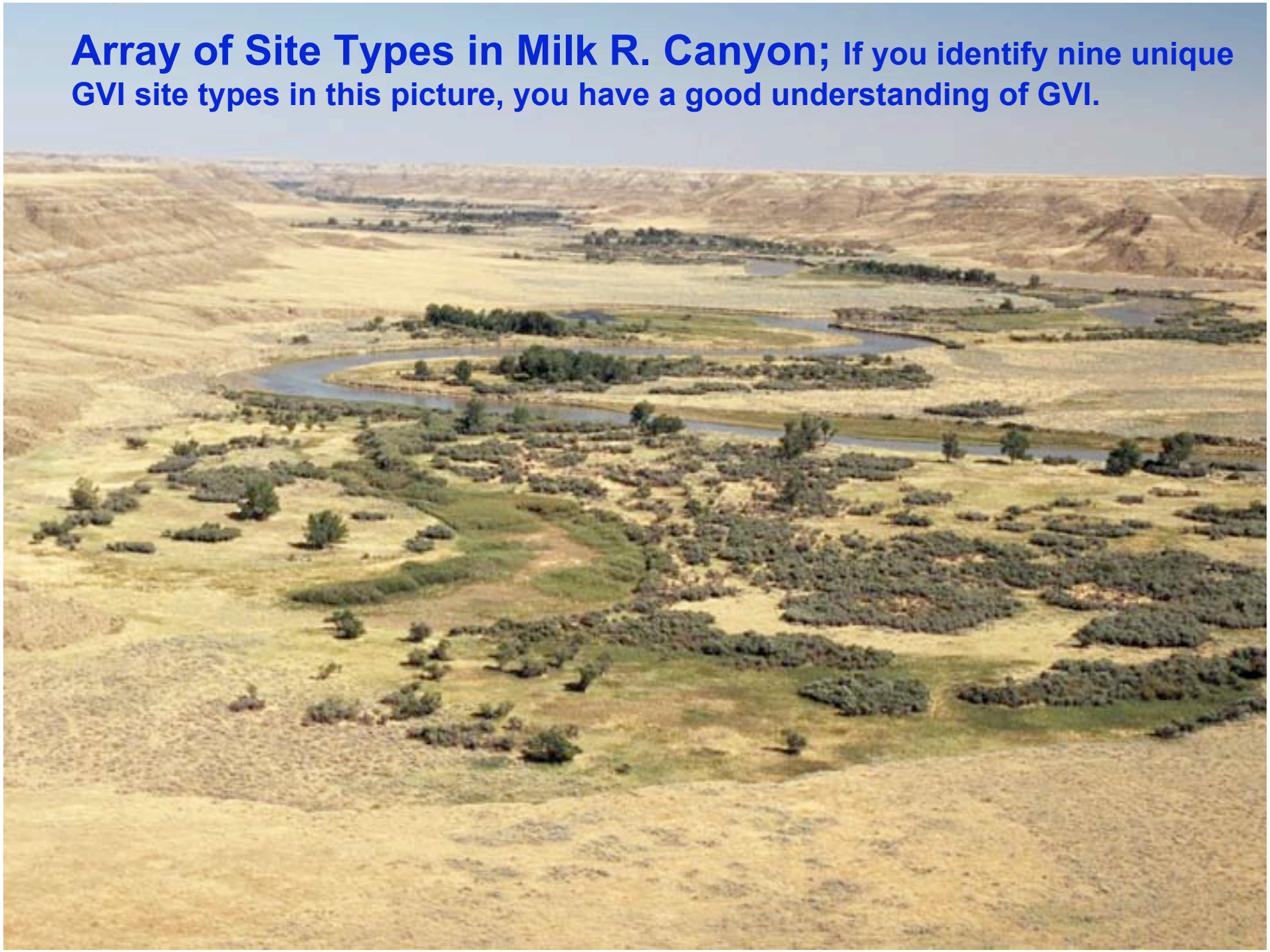


DMG: NWA Suffield at River Sentry Trail. Thin Breaks, Badlands and Limy



DMG: Lotic and Upland Site Type Complex in Western Part of Milk River Canyon

Array of Site Types in Milk R. Canyon; If you identify nine unique GVI site types in this picture, you have a good understanding of GVI.



DMG: Oxbow and Lentic ? in the Milk River Canyon

Lost River Overflow and Saline spring

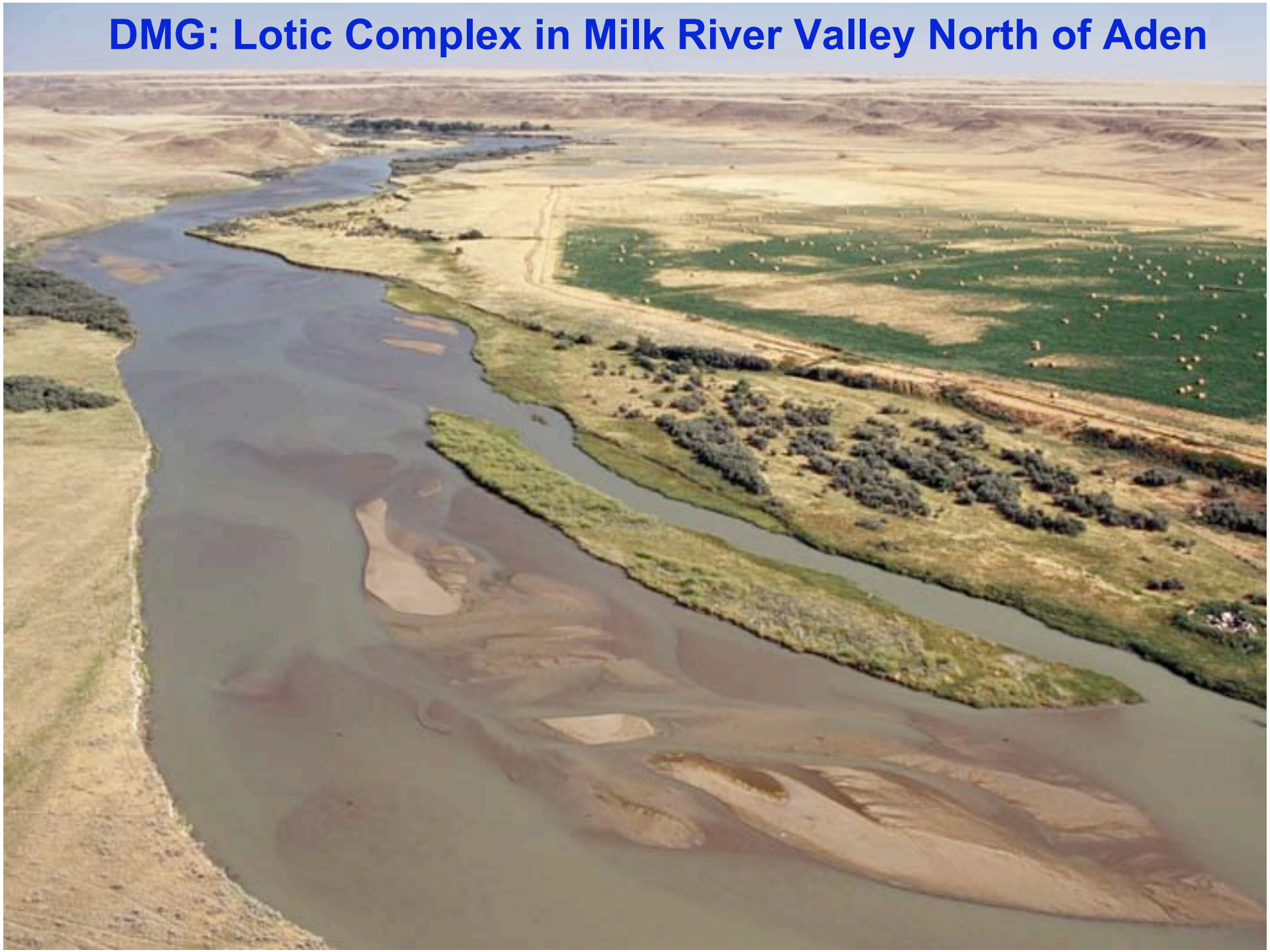
Issues- SL or Lotic H; OR point symbol?

Agreed on Ltc H as springs are an origin for flow.

Lost River Overflow area with springs or seeps;
What site types? Agreed on Ov 65, TB 20, LtcH 15.

DMG: Lotic and Upland Site Type Complex in Oldman River Valley North of Purple Springs

DMG: Lotic Complex in Milk River Valley North of Aden



DMG: Landscape Patterns in the Milk River Canyon

DMG, Milk River Canyon Overflow (Ov) in Twp. 2, Rge. 6 with Lotics near river

DMG: Police Coulee at the Junction with the Milk River