

Major Land Resource Area 063A

Northern Rolling Pierre Shale Plains

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Ecological site keys

MLRA 63A - Northern Rolling Pierre Shale Plains. (Run-off, Run-in, Normal and Other Landscape Positions)

I. RUN-OFF LANDSCAPE POSITIONS (Upland, normally convex short slopes > 6 percent, Shoulder)

A. Is the site on a steep slope, escarpment, river break or slump area with (15-60% slope), exposed bedrock at or near the surface, with soils generally calcareous and of various depths, and deciduous trees and shrub almost always present?

1 Yes. ... R063AY026SD – Thin Breaks

2 No. Dig hole to a depth of 20 inches minimum. Is there root restrictive layer within 10 inches of the soil surface?

i. Yes. ... R063AY016SD – Very Shallow

ii. No. Is there a root restricting layer within 10-20 inches of the surface?

a. Yes. Is the soil derived from shale with numerous (up to 50%) weathered shale chips throughout the soil profile and the soil is acid (non-calcareous)?

1) Yes. ... R063AY025SD – Shallow Porous Clay

2) No. Is the soil derived from shale with weathered shale chips below 4" in the soil profile and the soil is calcareous? Clayey surface texture (2-3 inch ribbon)?

a) Yes. ... R063AY017SD – Shallow Clay

b) No. Is there a gravelly subsurface layer within 20 inches of the surface?

(1) Yes. ... R063AY014SD – Shallow To Gravel

(2) No. Is the soil surface 10 -20 inches or less with a Clay loam, Silty clay loam, Sandy clay loam, Sandy loam or Silty texture?

(a) Yes. ... R063AY024SD – Shallow

(b) No. See "Normal Landscape Positions"

b. No. Is the soil > 20 inches in depth but has a thin loamy or sandy loam surface layer (< 3") and effervesce at or near the surface (within 6")?

1) Yes. ... R063AY012SD – Thin Upland

2) No. Thin Calcareous clayey surface texture?

a) Yes. ... R063AY030SD – Limy Clay

b) No. See "Normal Landscape Positions"

II. NORMAL LANDSCAPE POSITIONS (Upland, slopes normally linear, 1-6 percent except sandy/sands sites can have complex slopes, Back slope, Summit, Foot slope)

A. Dig hole to 20 inches. Are there visible salts within 16 inches of the surface?

1 Yes. Is there a claypan within 16 inches of the surface?

i. Yes. See "Other Landscape Positions"

2 No. What is the surface and subsoil texture? Clay, Silty Clay (40 to 55% clay) or Loamy Surface (1.75 –3.0" ribbon) with Clayey Subsoil

i. Yes. Is the site an old stream terrace?

a. Yes. ... R063AY032SD – Clayey Terrace

b. No. ... R063AY011SD – Clayey

ii. No. Clay or Silty Clay (> 55% clay). (> 3.0" ribbon) Bare ground will be common

a. Yes. ... R063AY018SD – Dense Clay

b. No. Loam, Silt loam, Silty, Clay loam, Clay Loam, Sandy clay loam, Very fine sandy loam (0.5–1.75" ribbon)

1) Yes. Is the site an old stream terrace?

a) Yes. ... R063AY022SD – Loamy Terrace

b) No. ... R063AY010SD – Loamy

2) No. Sandy loam, Fine sandy loam, Loamy very fine sand (0.25-0.5" ribbon)

a) Yes. Is the site an old stream terrace?

(1) Yes. Sandy Terrace This ES will replace Sands In Progress

(2) No. ... R063AY009SD – Sandy

III. RUN-IN LANDSCAPE POSITIONS (Bottomlands, Drainageways, etc., not depressions, Toe slope)

A. Observe the soil to a depth of 60 inches. Is there evidence of a permanent water table within 1-2 feet of the surface and the site is dominated by hydrophytes?

1 Yes. ... R063AY002SD – Wet Land

2 No. Is there evidence of a permanent water table within 2 to 5 feet of the surface?

i. Yes. ... R063AY003SD – Subirrigated

ii. No. Does water flow into and over/through the site?

a. Yes. Are there visible salts within 16 inches of the surface and permanently moist soil at 4 to 5 feet?

1) Yes. ... R063AY007SD – Saline Lowland

2) No. Does the site occasionally flood and have a clayey or silty clay surface texture?

a) Yes. ... R063AY021SD – Clayey Overflow

b) No. ... R063AY020SD – Loamy Overflow

b. No. See "Other Landscape Positions"

IV. OTHER LANDSCAPE POSITIONS (Basin, Depression, Normal, Run-off and/or Run-in, All Hillslope Positions except Shoulder)

A. Dig a hole to 20 inches. Does the soil have a claypan within 16 inches?

1 Yes. Is it in a closed depression?

i. Yes. ... R063AY019SD – Closed Depression

ii. No. Is the claypan within 4 inches of the surface?

a. Yes. ... R063AY015SD – Thin Claypan

b. No. ... R063AY013SD – Claypan

2 No. Is the area in a basin or closed depression with no outlet?

i. Yes. Does the site pond water until early to mid summer and have high organic matter content?

a. Yes. ... R063AY001SD – Shallow Marsh

b. No. All other closed depressions or basins that pond water briefly after snowmelt or heavy rain or during abnormally wet years.

1) Yes. ... R063AY019SD – Closed Depression

ii. No. Re-think your position and start again!