

# Major Land Resource Area 063B Southern Rolling Pierre Shale Plains

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## Ecological site keys

### MLRA 063B - Southern Rolling Pierre Shale Plains (Run-off, Run-in, Normal and Other Landscape Positions)

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#### 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 (25-60% slope), exposed bedrock at or near the surface, with soils generally calcareous and of various depths? Deciduous trees and shrub almost always present on this site.

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

i. Yes. ... R063BY016SD – Very Shallow

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

a. Yes. Site not Described in MLRA 63B.

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. ... R063BY012SD – Thin Upland

iii. Yes. 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. ... R063BY017SD – Shallow Clay

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

1) Yes. Site not Described in MLRA 63B.

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. ... R063BY024SD – Shallow

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? Is there a claypan within 16 inches of the surface?

1 Yes. See "Other Landscape Positions"

2 Is the surface texture Clay or Silty Clay (40 to 55% clay) (1.75 – 3.0" ribbon) with Clayey Subsoil?

i. Yes. ... R063BY011SD – Clayey

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

a. Yes. ... R063BY018SD – Dense Clay

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

1) No. See "Other Landscape Positions"

2) No. ... R063BY010SD – Loamy

**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. Site not Described in MLRA 63B.**

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

**i. Yes. Site not Described in MLRA 63B.**

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

**a. No. See “Other Landscape Positions”**

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

**1) Yes. ... R063BY007SD – Saline Lowland**

**2) No. Does the site rarely flood and have an abundance of trees?**

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

**(1) Yes. ... R063BY021SD – Clayey Overflow**

**(2) No. ... R063BY020SD – Loamy Overflow**

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

**a. Yes. ... R063BY015SD – Thin Claypan**

**b. No. ... R063BY013SD – Claypan**

**ii. Yes. ... R063BY019SD – Closed Depression**

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

**i. No. Re-think your Landscape Position and start again!**

**ii. Yes. Is the site a closed depressions or basins that pond water briefly after snowmelt or heavy rain or during abnormally wet years?**

**a. Yes. ... R063BY019SD – Closed Depression**