

APPENDIX A:
PROJECT AREA SOILS AND SELECTED
SOIL CHARACTERISTICS

Appendix A Project Area Soils and Selected Soil Characteristics.¹

Map Unit No. /Soil Type	Topographic Position	Depth, Drainage, and Permeability	Erosion Hazard	Typical Native Plants	Risk of Concrete Corrosion ²
Soil Types to be Impacted by Turbine Construction					
4 Altvan-Eckley sandy loams, 3-5% slopes	Gently sloping soils on upland ridges and sideslopes	Deep (>60 inches) and well-drained; moderate permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
5 Altvan-Eckley sandy loams, 5-9% slopes	Moderately sloping soils on upland ridges and side slopes	Deep (>60 inches) and well-drained; moderate permeability	High	Blue grama, buffalograss, western wheatgrass, sedge, sand dropseed, sand reedgrass, little bluestem, switchgrass, sand bluestem, needle-and-thread grass	Low
13 Badlands	Steep slopes	Steep and very steep barren land	Active erosion	Rocky Mountain juniper, eastern red cedar, yellow current, chokecherry, squawbush, wild current, wild plum	na
17 Canyon gravelly loam, 1-25% slopes	Floodplains and alluvial fans	Shallow (11 inches) and well-drained; rapid permeability	Slight to moderate (soil blowing)	Sand bluestem, blue grama, sand reedgrass, sand dropseed, needle-and-thread grass, switchgrass, sand sage	Low
20 Dacono loam	Upland tablelands	Deep (>60 inches) and well-drained; slow permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low
25 Dix-Eckley complex, 5-25% slopes	Moderately sloping to moderately steep soils on gravelly uplands	Deep (>60 inches) and excessively drained; gravelly to moderately well-drained; moderate to rapid permeability	High	Blue grama, side-oats grama, little bluestem, buffalograss, sedge	Low
43 Iliff loam	Upland tablelands	Moderately deep (34 inches); well-drained; slow permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low

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91 Platner-Rago-Dacono loams	Gently sloping soils on upland tablelands	Deep (>60 inches) and well-drained; slow permeability	Sight to moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
92 Rago loam	Concave upland flats, swales, and drainageways	Deep (>60 inches) and well-drained; slow permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low
96 Rosebud-Escabosa loams, 3-5% slopes	Gently sloping soils on upland ridges and sideslopes	Moderately deep (15 to 22 inches) and well-drained; slow to moderately slow permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
97 Rosebud-Escabosa loams, 5-9% slopes	Moderately sloping soils on hillslopes and convex ridges	Moderately deep (15 to 22 inches) and well-drained; moderately slow to moderate permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
98 Rosebud-Escabosa-Iliff loams, 0-3% slopes	Nearly level to gently sloping soils on upland tablelands	Moderately deep (22 to 34 inches) and well-drained; moderately slow to moderate permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low
Other Soil Types Occurring in the Project Area					
14 Bankard sand	Floodplains and low terraces	Deep (>60 inches) and somewhat excessively drained; rapid permeability	Slight to moderate	Sand bluestem, blue grama, sand reedgrass, sand dropseed, needle-and-thread grass, switchgrass, sand sage	Low
18 Chappell sandy loam	Floodplains and alluvial fans	Deep (>60 inches) and well drained; rapid permeability	Slight to moderate (soil blowing)	Sand bluestem, sand reedgrass, sand dropseed, little bluestem, blue grama, needle-and-thread grass, switchgrass, sand sage	Low
24 Dix-Altvan complex, 9-25% slopes	Strongly sloping to moderately steep soils on gravelly uplands	Deep (>60 inches); somewhat excessively drained to well-drained; moderate to rapid permeability	Moderate to high	Blue grama, side-oats grama, little bluestem, buffalograss, western wheatgrass, sedge	Low

Appendix A (Continued)

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61 Manter sandy loam, 0-3% slopes	Upland flats, terraces, and alluvial fans	Deep (>60 inches) and well-drained; moderately rapid permeability	Slight to moderate (soil blowing)	Sand bluestem, sand reedgrass, sand dropseed, little bluestem, blue grama, needle-and-thread grass, switchgrass, sand sage	Low
62 Manter sandy loam, 3-5% slopes	Upland hills and ridges	Deep (>60 inches) and well-drained, moderately rapid permeability	Moderate (soil blowing)	Sand bluestem, sand reedgrass, sand dropseed, little bluestem, blue grama, needle-and-thread grass, switchgrass, sand sagebrush.	Low
86 Peetz gravelly sandy loam, 5-25% slopes	Upland ridges and knobs	Deep (>60 inches) and well-drained; rapid permeability	Moderate (soil blowing)	Side-oats grama, little bluestem, blue grama, buffalograss, and sedge	Low
89 Platner loam, 1-3% slopes	Upland tablelands	Deep (>60 inches) and well-drained; slow permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low
90 Platner loam, 3-5% slopes	Upland hills and ridges	Deep (>60 inches) and well-drained; slow permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
100 Satanta loam, 1-3% slopes	Terraces and upland flats	Deep (>60 inches) and well- drained; moderate permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low
101 Satanta loam, 3-5% slopes	Upland ridges and hills	Deep (>60 inches) and well-drained; moderate permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
112 Ustic torriorthents	Strongly sloping to steep soils bordering intermittent drainageways, gullies, and escarpments	Shallow (n.a.) ³ and well-drained; variable	High	Sparsely vegetated; side-oats grama, little bluestem, blue grama, western wheatgrass, needle-and-thread grass	na
118 Wages loam, 0-3% slopes	Nearly level to gently sloping soils on upland flats	Deep (>60 inches) and well-drained; moderate permeability	Slight	Blue grama, buffalograss, western wheatgrass, sedge	Low

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119 Wages loam, 3 - 5% slopes	Upland ridges and hills	Deep (>60 inches) and well-drained; moderate permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
120 Wages loam, 5-9% slopes	Moderately sloping soils on upland sideslopes and ridges	Deep (>60 inches) and well-drained; moderate permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge	Low
122 Wages-Manter complex, 3-9% slopes	Gently sloping soils on upland ridges and hills	Deep (>60 inches) and well-drained, moderate to moderately rapid permeability	Moderate	Blue grama, buffalograss, western wheatgrass, sedge, sand dropseed, sand reedgrass, little bluestem, switchgrass, sand bluestem, needle-and-thread grass	Low
130 - Intermittent Water	--	--	--	--	--
132 - Intermittent Water	--	--	--	--	--

¹ Source: Amen et al. (1977).

² na = not available.

³ Depth varies.